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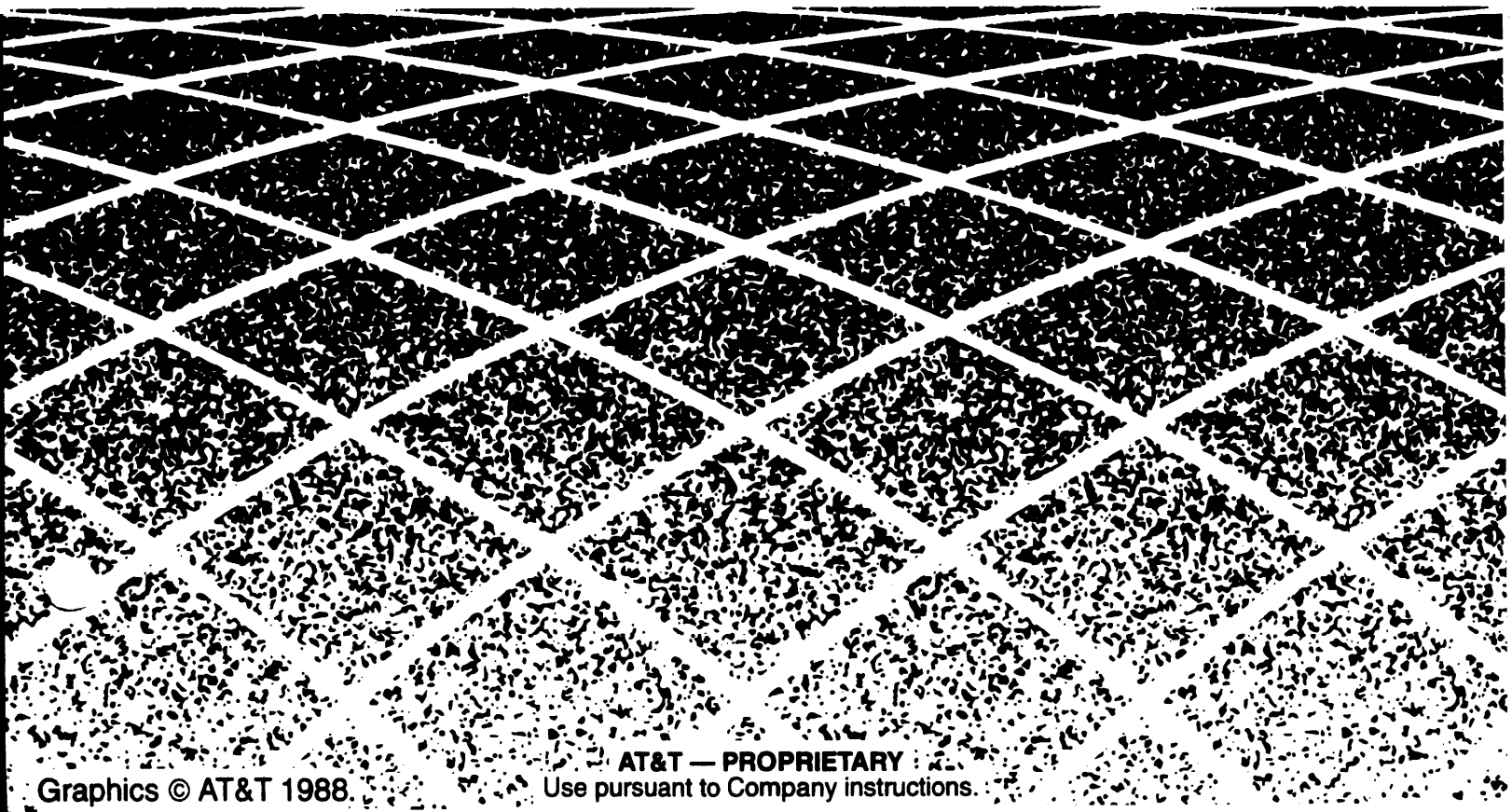
DEFINITY® Communications System

Generic 3 V3 Implementation Addendum



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Part 68: Answer-Supervision Signaling. Allowing this equipment to be operated in a manner that does not provide proper answer-supervision signaling is in violation of Part 68 rules. This equipment returns answer-supervision signals to the public switched network when:

- Answered by the called station
- Answered by the attendant
- Routed to a recorded announcement that can be administered by the CPE user

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- A call is unanswered
- A busy tone is received
- A reorder tone is received

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Acknowledgment

This document was prepared by the GBCS Product Documentation Development group, AT&T Bell Laboratories, Denver, CO 80234-2703.

ADDENDUM DESCRIPTION

This addendum includes necessary replacement and supplement pages to *DEFINITY Communications System Generic 3 V2 Implementation)* (555-230-653), dated July, 1993. Incorporate the addendum as instructed below to update your copy of the document to be current with the latest issue of the System 85 or DEFINITY Generic 2.1 Communications System. Then insert this addendum description into the document, behind the title page and before the table of contents. It will serve as a record that your document has been addended.

Nature of the Document Changes

The changes to your document cover many features.

Please replace and add pages as shown in the following table.

Chapter	Pages Replace	Pages to Add
2	2-1 to 2-12	2-1 to 2-12
3	none	3-17a and 3-17b
	3-51 and 3-52	3-51 and 3-52
	none	3-58a and 3-58b
	3-103 to 3-108	3-103 to 3-106 3-107 and 3-107a 3-107b and 3-108
	3-119 to 3-124	3-119 to 3-124
	3-141 to 3-144	3-141 to 3-144
	3-147 to 3-150	3-147 to 3-150
	3-271 and 3-272	3-271 and 3-272 3-272a and 3-272b
	3-313 to 3-316	3-313 to 3-316
	3-407 and 3-408	3407 and 3-407a 3-407b and 3-408

Chapter	Pages Replace	Pages to Add
	3-417 to 3-420	3-417 to 3-420 3-420a and 3420b
	none	3-432a to 3-432d
	3-453 to 3-456	3-453 to 3-456 3-456a - 3-456h
	3-481 and 3-482	3-481 and 3-481a 3-481b and 3-482
	3-491 to 3494	3-491 and 3-492 3-493 and 3-493a 3-493b and 3-493c 3-493d and 3-493e 3-493f and 3-494
4	4-41 to 4-44	4-41 to 4-44 4-44a and 4-44b
	4-63 to 4-72	4-63 to 4-72 4-72a to 4-72d
	4-75 and 4-76	4-75 and 4-76
	4-131 to 4-138	4-131 to 4-138
	4-155 to 4-200	4-155 to 4-198 4-199 and 4-199a 4-199b and 4-200
	4-207 to 4-236	4-207 to 4-236
	4-239 to 4-252	4-239 to 4-252 4-252a to 4-252d
	4-253 to 4-266	4-253 to 4-266
	4-279 to 4-294	4-279 to 4-294 4-294a and 4-294b
	4-327 to 4-330	4-327 to 4-330
	4-353 and 4-354	4-353 and 4-354
	4-375 to 4-396	4-375 to 4-396
5	5-35 to 5-54	5-35 to 5-54 5-54a and 5-54b

Chapter	Pages Replace	Pages to Add
	none	5-56a and 5-56b
	5-57 to 5-60	5-57 to 5-60
	5-87 to 5-90	5-87 to 5-90
	5-93 to 5-98	5-93 to 5-98 5-98a and 5-98b
	5-161 to 5-168	5-161 to 5-168
	5-175 to 5-202	5-175 to 5-182 5-183 and 5-183a 5-183b and 5-184 5-185 to 5-188 5-188a to 5-188d 5-189 to 5-202 5-202a and 5-202b
	5-207 and 5-208	5-207 and 5-208 5-208a and 5-208b
	5-209 to 5-222	5-209 to 5-220 5-221 and 5-221a 5-221b and 5-222
	5-233 to 5-238	5-233 to 5-238 5-238a to 5-238d
	5-243 to 5-246	5-243 to 5-246 5-246a and 5-246b
	5-247 to 5-250	5-247 to 5-250
	5-251 to 5-254	5-251 and 5-251a 5-251b and 5-251c 5-251d and 5-252 5-253 and 5-254
	5-259 to 5-264	5-259 and 5-259a 5-259b to 5-259e 5-259f and 5-260 5-261 to 5-264 5-264a and 5-264b
	5-267 to 5-296	5-267-5-294 5-295 and 5-295a 5-295b to 5-2950 5-295p and 5-296

Chapter	Pages Replace	Pages to Add
	5-313 to 5-316	5-313 to 5-316 5-316a and 5-316b
	5-409 to 5-418	5-409 to 5-418
	none	5-425 to 5442
	none	5-443 to 5462
C	C-5 and C-6	C-5 and C-6
D	D-29 to D-34	D-29 to D-32 D-32a to D-32z D-32aa to D-32af D-33 and D-34

Administration Commands

2

The following provides a description of the system's Command Line feature and a summary of the *administration* commands that support the feature. A user, via entry of a single command line on the DEFINITY Communications System Generic 3 Management Terminal (G3-MT), can easily communicate with the system to perform various tasks associated with the administration and implementation of the system.

The Command Line feature is divided into the following four categories:

- Administration — Used to administer data associated with terminals, facilities, and system parameters.
- Maintenance — Used to perform maintenance on objects such as trunks, terminals, ports, and system control modules. Also used to obtain displays of error and alarm logs. Refer to *DEFINITY Communications System Generic 3 V2 Maintenance,* 555-230-105, for information associated with maintenance commands.
- Measurements — Used to obtain displays of measurement reports for trunk groups, hunt groups, attendants, etc. Refer to *DEFINITY Communications System Generic 3 V2 System Reports,* 555-230-511, for information associated with measurement commands.
- System — Used to change passwords and administer the command authorization structure. Refer to Appendix D for information associated with system commands.

You must be logged on the system via the G3-MT before an administration command can be entered. Procedures on how to logon to and log off the system and descriptions of the various management tasks that can be performed are provided in Appendix D.

Command Structure

An administrative command is made up of multiple words that instruct the system to do a specific task. The command is made up of Action, Object, and, depending on the command type, Qualifier words.

The Action word is the first word entered on the command line and specifies the operation to be performed (such as, “add,” “change,” and “delete”). The Object word is the second phrase entered on the command line and specifies the specific object to be operated on, for example, a station, trunk group, or hunt group. Finally, the qualifier can be one or more key words or digits used to further identify or complete the object. The qualifier can be mandatory or optional, depending on the command or system configuration.

Only one command line can be entered at a time. For example, the command required to add a station with extension number 1212 is shown below:

add station 1212

In the above example, *add* is the Action word, *station* is the Object word, and *1212* is the Qualifier word.

Spaces must be used to separate the Action, Object, and Qualifier words on the command line.

The system provides an on-line Help function (by pressing the Help key) which can be used to obtain a list of commands or to provide information for completing commands. As stated earlier, maintenance, measurement, and system commands and their associated add/object/qualifier words are not covered here. Refer to the appropriate manual for that information.

Action Commands

Action commands are used to administer the system's features, functions, and services. The following provides a summary of the action words and their associated object words.

Add Commands

The associated object being added, such as "attendant," must not exist in the system for the *add* command to be accepted. The following object words are available for use with the *add* command. They can be displayed by pressing the Help key after entering the action word "add."

- abbreviated-dialing 7301A-buttons
- abbreviated-dialing enhanced
- abbreviated-dialing group
- abbreviated-dialing personal
- abbreviated-dialing system
- access-endpoint
- administered-connection
- agent-loginID
- attendant
- cabinet*
- coverage answer-group
- coverage path
- data-module
- ds1
- fiber-link*
- hunt-group
- intercom-group
- intra-switch-cdr*
- login-ID
- modem-pool
- personal-CO-line
- pri-endpoint
- pgate*
- pickup-group
- second-digit
- signaling-group
- station
- term-ext-group
- test-schedule
- trunk-group
- vdn

NOTE:

*G3r V2 and higher only.

Change Commands

The associated object being changed, such as circuit packs, must be currently administered in the system before the *change* command can be accepted. The *change* command cannot be used to identify a new objector to remove an existing object. The following object words are available for use with the *change* command. They can be displayed by pressing the Help key after entering the action word "change."

- aar analysis
- aar digit-conversion
- abbreviated-dialing 7103A-buttons
- abbreviated-dialing enhanced
- abbreviated-dialing group
- abbreviated-dialing personal
- abbreviated-dialing system
- access-endpoint
- adjunct-controlled-agent
- adjunct-names*
- administered-connection
- agent-loginID
- alias station
- alphanumeric-dial-table
- alternate-frl
- announcements
- ars analysis
- ars digit-conversion
- ars toll
- communication-interface hop-channels
- communication-interface processor-channels
- console-parameters
- cor
- cos
- coverage answer-group
- coverage path
- data-module
- dialplan
- digit-absorption
- display-messages
- ds1
- enp-number-plan
- feature-access-code
- fiber-link*
- hunt-group
- intercom-group
- intra-switch-cdr
- isdn cpn-prefix
- isdn network-facilities
- modem-pool
- mst
- node-routing
- paging code-calling-ids
- paging loudspeaker
- password
- permissions
- personal-CO-line
- pgate
- pickup-group
- pri-endpoint
- remote access
- report-scheduler
- rhnpa
- route-pattern
- second-digit
- signaling-group
- site-data
- station
- synchronization
- system-parameters features
- system-parameters hospitality

- bulletin board
- attendant
- authorization-code
- cabinet*
- call-screening
- circuit-packs
- communication-interface links
- ixc-codes
- listed-directory-numbers
- login-ID
- mct-group-extensions
- mess-selection
- term-ext-grwp
- terminal-parameters
- test-schedule
- time-of-day
- toll
- trunk-group
- trunk-group tac
- udp
- vdn
- vector
- vustats-display-format**

Notes:

* G3r V2 and higher only.

** G3V3 and higher only.

Display Commands

Allows viewing of parameters associated with a specific object/qualifier. If the command *display station 4444* is entered, for example, the voice terminal screen form currently administered for extension 4444 is displayed. If the "print" qualifier is entered, for example, *display station 4444 print,* the form is printed on the printer associated with the G3-MT. The following object words are available for use with the *display* command. They can be displayed by pressing the Help key after entering the action word "display."

- aar analysis
- aar digit-conversion
- abbreviated-dialing 7103A-buttons
- abbreviated-dialing enhanced
- abbreviated-dialing group
- abbreviated-dialing personal
- abbreviated-dialing system
- access-endpoint
- adjunct-controlled-agent
- adjunct-names*
- administered-connection
- agent-loginID
- alarms
- alias station
- alphanumeric-dial-table
- alternate-frl
- announcements
- ars analysis
- are digit-conversion
- ars toll
- attendant
- authorization-code
- bulletin board
- buttons-location-aca
- cabinet*
- call-screening
- capacity
- circuit-packs
- communication-interface links
- communication-interface hop-channels
- communication-interface processor-channels
- console-parameters
- cor
- cos
- coverage answer-group
- coverage path
- data-module
- dialplan
- digit-absorption
- disabled-tests
- display-messages
- ds1
- enp-number-plan
- errors
- events
- feature-access-code
- fiber-link"
- hunt-group
- initcauses
- intercom-group
- intra-switch-cdr
- isdn cpn-prefix
- isdn network-facilities
- ixc-codes
- listed-directory-numbers
- login-ID
- mct-group-extensions

- meas-selection
- modem-pool
- mst
- node-routing
- paging code-calling-ids
- paging loudspeaker
- permissions
- personal-CO-line
- pgate*
- pickup-group
- port
- pri-endpoint
- remote-access
- rhnpa
- route-pattern
- second-digit
- signaling-group
- sit-treatment
- site-data
- sit-treatment
- software
- station
- svn-button-location
- synchronization
- system-parameters features
- system-parameters hospitality
- term-ext-group
- terminal-parameters
- test-schedule
- time
- time-of-day
- toll
- trunk-group tac
- udp
- vdn
- vector
- vustats-display-format**

Notes:

* G3r V2 and higher only.

** G3V3 and higher only.

Duplicate Commands

Allows duplication of existing objects and must be used with qualifiers “extension numbers” to automatically establish service for multiple voice terminals and data modules. Only one data module can be duplicated at a time. Up to 16 voice terminals can be duplicated at one time. The objects that can be duplicated are: access-endpoint, administered-connection, data-modules, and stations.

List Commands

Displays parameters associated with groups of objects. This command is used to obtain a list of all, or a selected range of, voice terminals, trunks, and other features that have been administered. The list command and its associated qualifiers can be used to retrieve data for all the ports in the system, or for a specified subset of ports. The following object words are available for use with the *list* command. They can be displayed by pressing the Help key after entering the action word "list."

- aar analysis
- aar digit-conversion
- aar route-chosen
- abbreviated-dialing group
- abbreviated-dialing enhanced
- aca-parameters
- access-endpoint
- administered-connection
- agent-loginID
- ars
- authorization-code
- bcms
- bridged-extensions
- cabinet*
- configuration all
- configuration board
- configuration carrier
- configuration control
- configuration stations
- data-module
- disabled-mos
- do-not-disturb
- do-not-disturb group
- emergency
- extension-type
- fiber-link*
- groups-of-extension
- history
- hunt-group
- intercom-group
- intra-switch-cdr*
- isdn-testcall
- login-ID
- marked-ports
- met-history
- measurements-aca
- measurements-ds1
- measurements-ds1-log
- measurements-security-violations
- members trunk
- pickup-group
- pri-endpoint
- pms-down
- report scheduler
- route-pattern
- set-data
- signaling-group
- sys-link*
- station
- term-ext-group
- test-schedule
- testcalls
- toll all
- toll toll-list
- toll restricted-call
- toll unrestricted-call
- trunk-group
- udp
- unstaffed-agents
- usage
- vdn
- vector
- vustats-display-format**
- wakeup activity

- cofiguration software-version
- configuration trunks
- cor
- coverage answer-group
- coverage path
- modern-pool
- monitored-station
- mst
- node-routing
- partitioned-group
- performance
- personal-CO-line
- pgate*
- wakeup incomplete
- wakeup requests
- wakeup station
- wakeup summary
- wakeup sys-failure

Notes:

* G3r V2 and higher only.

** G3V3 and higher only.

Remove Commands

Displays the screen form for the associated object word. Pressing ENTER deletes the object from the system. Pressing CANCEL cancels the remove requested. The following object words are available for use with the *remove* command. They can be displayed by pressing the Help key after entering the action word “remove.”

- abbreviated-dialing 7103A-buttons
- abbreviated-dialing enhanced
- abbreviated-dialing group
- abbreviated-dialing system
- access-endpoint
- administered-connection
- agent-loginID
- attendant
- cabinet*
- coverage answer-group
- coverage path
- data-module
- ds1
- fiber-link*
- hunt-group
- intercom-group
- modem-pool
- personal-CO-line
- pgate*
- pickup-group
- pri-endpoint
- report scheduler
- second-digit
- signaling-group
- station
- term-ext-group
- test-schedule
- trunk-group
- update-file
- vdn

Note:

* G3r V2 and higher only.

Status Commands

Displays the operational status of the facility indicated by the object word. A complete description of all status commands is provided in *DEFINITY Communications System Genetic 3 V2 Maintenance,* 555-230-105. The following object words are available for use with the *status* command. They can be displayed by pressing the Help key after entering the action word “status.”

- access-endpoint
- administered-connection
- attendant
- audits
- bri-port
- cabinet*
- card-mem*
- cdr-link
- data-module
- hardware-group
- health
- interface**
- isdn-testcall
- journal-link
- link
- logins
- mst
- packet-control**
- packet-interface*
- periodic-scheduled
- pgate-port*
- pms-link
- pri-endpoint
- pnc*
- processor-channel
- signaling-group
- spe*
- sp-link
- station
- switch-node*
- synchronization
- sys-link*
- system
- trunk
- tsc-administered
- tti

Notes:

* G3r V2 and higher only.

** G3i V2 and higher only.

Add/Remove Skills

Administration

To implement this feature, the following form(s) or sections of the form(s) must be completed.

Form	Field	Form Instructions (Page #)
Class of Restriction (COR)	Add/Remove Agent Skills	5-93
Feature Access Codes	Add Agent Skills Access Code Remove Agent Skills Access Code	5-161
Language Translations	41-44 on Page 5	5-209

- Class of Restriction (COR) — Enter "y" or "n" at the Add/Remove Agent Skills field to enable or disable users from accessing the FAC to add and remove skills.
- Feature Access Codes — Enter the FAC users enter to add and remove skills.
- If you are using user-defined display text (for your voice terminals with displays), you must administer the Add/Remove Skills display messages.

Hardware Requirements

None.

Attendant Control of Trunk Group Access

Allows the attendant to control trunk groups and prevents voice terminal users from directly accessing a controlled trunk group. Attendant consoles can be administered to control different trunk groups if required.

Administration

To implement this feature, the following form(s) or sections of the form(s) must be completed depending on the console type.

Form	Field	Form Instructions (Page #)
Attendant Console	Feature Button Assignments -act-tr-grp -deact-tr-g -local-tgs -remote-tgs	5-39
Trunk Group	Busy Threshold	
Access		4-130
APLT		4-155
CO		4-178
CPE		4-200
DIOD		4-239
DMI-BOS		4-209
FX		4-253
ISDN-PRI		4-275
RLT		4-303
Tandem		4-324
Tie		4-349
WATS		4-375

- Attendant Console Form — A Control Activate (act-tr-grp) and a Control Deactivate (deact-tr-g) button (one each) must be assigned to one of the 24 programmable feature buttons on the attendant console Feature Button Assignments field. Trunk groups to be controlled are assigned via Attendant Direct Trunk Group Selection. Trunk group select buttons (that is, local-tgs or remote-tgs) must be assigned for each of the trunk groups to be controlled.
- Trunk Group Forms — Assign Busy Threshold field for trunks controlled by this feature.

Hardware Requirements

None.

Attendant Direct Extension Selection with Busy Lamp Field

Allows the attendant to place or extend calls to up to *2000* extension numbers using Hundreds Select buttons and a Direct Extension Selection (DXS) button, or to up to 99899 extension numbers using a Group Select button, dialing an extension group prefix followed by the # button, and then pressing a DXS button. In both cases, when the system is tracking a group of extensions, the attendant can place or extend subsequent calls to extensions in that group by pressing the DXS button, without having to reselect the group. Both of these capabilities eliminate the need to dial extensions.

NOTE:
An associated DXS lamp for a vector directory number (VDN) is always dark. The DXS button can be used to place a call to a VDN.

Administration

To implement this feature, the following form(s) or sections of the form(s) must be completed.

Form	Field	Form Instructions (Page #)
Attendant Console	Hundreds Select Button Assignments (1 -20)	5-37
	Display Module Button Assignment	3-42
	Feature Button Assignment	3-39

- Attendant Console Form — Assign up to 20 buttons in the Hundreds Select Button Assignments field. If the selector console has just eight Hundred Group Select buttons, assign just the first eight buttons on Page 1 of the form. If required, additional buttons can be assigned to Page 2 of the form.
- If you are using the Group Select feature button, “group-sel” must be entered in the Feature Button Assignment field.
- If you are using the Group Display button, it can be administered either as a feature button or a display area button. If it is administered as a feature button, “group-disp” must be entered in the Feature Button Assignment field. If it is administered as a display area button, “group-disp” must be entered in the Display Module Button Assignment field.

Hardware Requirements

A Selector Console is required. The 24A Selector Console is equipped with eight Hundred Group Select buttons and the 26A Seleotor Console is equipped with 20 Hundred Group Select buttons.

Attendant Room Status

Allows the attendant to see whether a room is vacant or occupied and what each room's housekeeping status is without having to use a Property Management System (PMS). This feature is available only if you have Enhanced Hospitality enabled on the System-Parameters Customer-Options form. (See your AT&T support representative for assistance with this form.) Only attendants can use this feature. The feature is not available for attendants connected to the switch by a distributed communications system (DCS). An attendant console must be used with this feature.

Check-In/Check-Out Status

Check-In/Check-Out Status is available by pressing the occ-rooms button on the attendant console. Rooms are shown as either occupied or vacant.

NOTE:
The occ-rooms (occupied rooms) button must be administered on the Attendant Console form.

The occupancy status normally updates as guests are checked in and out. Lamps on the attendant console are updated for any rooms that change status. Also, a message is displayed indicating that the console is in the Check-In/Check-Out mode. As with other display messages, this message can be administered for a specific language.

Maid Status

Maid status is available by pressing the Maid-Stat button on the attendant console. A room can be in one of six maid states (also known as housekeeping states). This function shows which rooms are in which maid state.

NOTE:
The maid-stat (maid status) button must be administered on the Attendant Console form. You cannot administer a maid-stat button unless Enhanced Hospitality is enabled on the System-Parameters Customer-Options form.

A room's cleaning status is updated when a maid or inspector dials from the room to change the status. When the console is in the Maid state, it automatically changes the lamps on the DXS module when a room's Maid state changes. That is, while the console and DXS lamps display rooms in one status, and a room changes to or from that status, the lamp for that room automatically changes.

If a console includes Hundreds buttons, the status of stations in hundreds groups can be viewed by pressing the appropriate Hundreds buttons.

The Maid status messages (which identify each of six states), are administered on the Hospitality form. As with other display messages, the prompts and status messages can be administered for a specific language.

Administration

To implement this feature, the following form(s) or sections of the form(s) must be completed.

Form	Field	Form Instructions (Page #)
Attendant Console	Feature Button Assignment	5-39
Hospitality	All of Page 3	5-184
System-Parameters Customer-Options	G3V3 Enhanced Hospitality	N/A
Language Translation Property Management	15-17 on Page 4	5-209

- Attendant Console Form — Enter “occ=rooms” to enable the Check-In/Check-Out display mode. Enter “maid-stat” to enable maid status (housekeeping status) display mode.
- System-Parameters Customer-Options Form — Enter “y.” See your AT&T support representative for assistance.
- System Parameters Hospitality Form — Enter display text for each of the six maid states on page 3 of the form.
- If necessary, enter translations for the following display messages on page 4 of the form:
  - “Occupied Rooms”
  - “Enter Desired Room State (1-6)”
  - “Undefined State, Enter number from 1-6”

Hardware Requirements

You must have a DXS module to use this feature.

Automatic Wakeup

Allows attendants, front-desk users, and guests to request that a wakeup call be placed automatically to a certain extension number at a later time. Wakeup requests may be placed from 5 minutes to 23 hours and 55 minutes in advance of the wakeup call.

For the attendant console and display-equipped voice terminals, messages may be administered to display in either English, Italian, French, Spanish, or in a "user-defined" language. Refer to the "Administrable Language Display" feature in this chapter for more information on display languages and administering a "user-defined" language.

NOTE:
A vector directory number (VDN) cannot be programmed to receive a wakeup call. However, a wakeup call can be from any valid extension on the PBX, including a VDN.

Automatic Wakeup calls can be setup in several ways:

- Using an external announcement source.

  This method requires hardware that is not part of the DEFINITY system (see "Hardware Requirements" at the end of this section).

- Using silence in place of a recorded announcement.

- Using an integrated announcement (G3V3 only).

  This method incorporates the system's TN750B announcement board (see "Hardware Requirements" at the end of this section).

- Using multiple integrated announcements (G3V3 only).

  This method also incorporates the system's TN750B announcement board. It allows you to have multiple wakeup announcements and to assign a default announcement. You may have a commonly used announcement and a number of other announcements that you are likely to require, such as wakeup announcements in other languages for the convenience of foreign visitors. You may have up to 256 different announcements for the entire system.

- Using Music-on-Hold.

- Using voice-synthesis (see "Hardware Requirements" at the end of this section).

NOTE:
(G3V3 only) If you use an integrated, multiple-integrated, or external type of wakeup announcement, you may also administer the announcement to repeat and to allow barge-in as a queue type. The benefit of repeating announcements and barge-in queues is that you do not need a separate port for each wakeup announcement call. Guests, when they go off-hook to receive an announcement at a particular time, will use only one port and the message repeats on that port until the last guest has gone on-hook.

Administration

To implement this feature, the following form(s) or sections of the form(s) must be completed.

Form	Field	Form Instructions (Page #)
Station (multi-appearance)	Button/Feature Button Assignment -Auto-wkup Display Language	5-287
Attendant Console	Feature Button Assignments -Auto-wimp Display Language	5-35
Class of Service	Console Perms	5-99
Feature Access Codes	Announcement Access Code Group Control Restrict Activation/Deactivation	5-161
Feature Access Codes for Hospitality Features	Automatic Wakeup Call Access Code Voice Do Not Disturb Access Code Verify Wakeup Announcement Code	5-161
Hospitality-Related System Parameters	Announcement Type Length of Time to Remain Connected to an Announcement Announcement Ports Auxiliary Board for Announcement Extension to Receive Failed Wakeup LWC Messages Extension of Journal/Schedule Printer Extension of PMS Log Printer Time of Scheduled Wakeup Activity Report Time of Scheduled Wakeup Summary Report Routing Extension on Unavailable Voice Synthesis	5-184

- Station Forms — Assign an “auto-wkup” button to 510,515, 7400-series, and 8400-series voice terminals equipped with a display. Specify the language in which the display messages will be presented. Options are English, French, Italian, Spanish and “user-defined.” Default is English.

NOTE:
The Display Language field will only be displayed if the voice terminal is equipped with a 40-character display.

- Attendant Console Form — Assign an “auto-wkup” button to the attendant console. Specify the language in which the display messages will be presented. Options are English, French, Italian, Spanish and “user-defined.” Default is English.
- Class of Service Form — Assign the comet console permissions so the attendant console can place wakeup requests for voice terminals.
- Feature Access Codes Form — Assign Announcement Access Code.
- Feature Access Codes for Hospitality Features Form — Assign Automatic Wakeup Call Access Code used for voice prompting. Assign Voice Do Not Disturb field, and Verify Wakeup Announcement codes.
- Hospitality-Related System Parameters Form — Assign the type of automatic wakeup announcement the hotel guest will receive.
  - — Assign the announcement ports if the voice synthesis was entered for the announcement type.
  - — Assign an auxiliary board for announcement if external is used for announcement type.
  - — Assign extension number to receive unsuccessful Wakeup LWC messages.
  - — Assign extension number to the journal/schedule printer.
  - — Assign extension number to the PMS log printer.
  - — Assign time to receive the scheduled wakeup activity report.
  - — Assign time to receive scheduled wakeup summary report.
  - — Assign length of time to remain connected to announcement.
  - — Assign extension number (or the attendant access code) to which a call will be placed during voice synthesis entry of a wakeup message request when a voice synthesis port is not available.

If you are going to use the integrated or multiple-integrated announcement types, you must administer the following:

- The G3V3 Option field on the System-Parameters Customer-Options form (contact your AT&T support representative for assistance).
- The G3V3 Enhanced Hospitality field on on the System-Parameters Customer-Options form (contact your AT&T support representative for assistance).

- The extensions that will be used for the announcements, administered on the Recoded Announcements form.
- Repeating announcements and barge-in queues, administered on the Recorded Announcements form.

Hardware Requirements

NOTE:

For installations outside the United States of America, refer to Appendix B, *Application Notes,* for the appropriate circuit packs.

If voice prompting is used, a TN725B Speech Synthesizer circuit pack is required. Each circuit pack has four ports to provide voice prompting. If speech synthesis is selected for wakeup call announcements, two ports must be reserved for wakeup announcements.

If recorded announcements using an external adjunct are used, you must have a model HQD614B recorder/announcer manufactured by the Audichron Company. For internally-recorded announcements, you must have the TN750B circuit pack. Each recorder/announcer requires four trunk ports that must be on the same TN763C auxiliary circuit pack.

Basic Call Management System

Basic Call Management System (BCMS) provides a subset of the external Call Management System (CMS) applications within the System's digital switch. BCMS provides real-time and historical reports that help you to manage individual agents, Automatic Call Distribution (ACD) splits, and members of measured hunt groups, trunk groups, and vector directory numbers (VDNs).

BCMS reports can be accessed and displayed on the Administration terminal and can be scheduled to print on a dedicated asynchronous printer associated with the system's report scheduler. Printout intervals and associated schedules are assigned using report scheduler administration commands on the Administration terminal. (Refer to the "Report Scheduler" coverage for administration information associated with the report scheduler and its dedicated system printer interface.)

BCMS allows for tracking agent activity by agent extension or login ID. Tracking by login ID allows viewing activity for each individual agent, independent of what voice terminals they use. This is useful when agents on different shifts share a voice terminal or when one agent uses multiple terminals. Tracking by login ID is also required for BCMS in an Expert Agent Select (EAS) environment. The EAS feature allows for the use of agent login IDs for call processing features. EAS is a vectoring feature that allows for skills preference on VDNs to be matched to agents with one of the VDN skills. If you are using BCMS and EAS, you have the ability to track call center activity by the login IDs, and to show agent status by login ID on the BCMS Agent Status reports.

NOTE:
ACD and BCMS options must be set to "y" to have BCMS function. If you want BCMS to track service levels, you must enable service levels. If you want BCMS to track agents by login IDs, you must enable Login IDs. Vectoring and Vectoring features are optional. If you are using EAS, you must enter "y" in the Login ID field on the Agent Login ID form.

If the BCMS/VuStats Login ID is set to "y" on the System-Parameters Customer-Options form, both BCMS and CMS use the same login ID for an agent. The login IDs are restricted to up to five digits if you are using EAS and up to nine digits if you are not using EAS.

Vustats

VuStats is a G3V3 feature that provides real-time call center measurements to voice terminals equipped with displays. This feature can be used in conjunction with CMS release 3 or BCMS to supplement the number of individuals receiving real-time information on call center performance. This feature can also be used without BCMS. Refer to "Considerations" at the end of this section for more information.

Administration

NOTE:
For G3s V2 and V3 ABP, the BCMS feature is only available as part of the Basic Call Center Option. This option bundles the ACD and BCMS features and they must be purchased together.

To implement this feature, the following form(s) or sections of the form(s) must be completed.

Form	Field	Form Instructions (Page #)
Agent Login ID	All	5-25
BCMS/VuStats Login ID	Login ID, Name	5-56a
Feature-Related System Parameters	BCMS Parameters -Measurement Interval	5-168
	BCMS/VuStats Abandoned Call Trier	
Hunt Groups	Measured	5-189
	BCMS Acceptable Service Level	
System-Parameters Customer-Options	Version	N/A
	BCMS/VuStats Login ID	
Trunk Groups	Measured	4-123
VDN	Measured	5-262
	BCMS Acceptable Service Level	

- Agent Login ID Form — If you are using EAS and BCMS, enter each agent's login ID and name.
- BCMS/VuStats ID Form — If you are not using EAS, enter the login ID and name of each agent to be tracked by BCMS. If you are using EAS (whether you use BCMS or not), enter the login IDs and names on the EAS login form instead of the BCMS/VuStats ID form.

Feature-Related System Parameters Form — Assign either “hour” or “half-hour" in the Measurement Interval field associated with the BCMS Parameters to indicate the interval to be used in polling and reporting measurement data. Assign the extension of the system printer in the System Printer field. Assign the number of lines printed on each page by the system printer in the Lines Per Page field. At the BCMS/VuStats Abandon Call Timer field, enter a number from 1 to 10 (or leave the field blank to accept the default of 0) to specify the maximum number of seconds of talk time for a call to be considered abandoned as an abandoned call in the BCMS report.

- Hunt Group, Trunk Group, and VDN Forms — Assign the Measured field on the Hunt Group, Trunk Group, and VDN forms as one of the following:
  - — internal — measured by BCMS only (internal to the G3 digital switch)
  - — external — measured by CMS adjunct only (external to the G3 digital switch)
  - — both — measured by both BCMS and the CMS adjunct
  - — none— not measured (system default).

  If Measured is “internal” or “both” on the Hunt Group or VDN forms, enter the number of seconds within which calls should be answered in the BCMS Acceptable Service Level field.

  Also, on the Hunt Group form, you must specify either “y” or “n” in the BCMS Historical and Real-time Reports field. If this field contains “y,” historical and real-time reports are available.

- System-Parameters Customer-Options Form — “V3" must be entered in the G3 Version field. If you are using EAS with BCMS, “n” must be entered in the BCMS/VuStats Login ID field. If you want BCMS to track agents based on login IDs, “y” must be entered in the BCMS/VuStat Login ID field. Contact an authorized AT&T representative to change the System Parameters Customer Options Form.

  NOTE:
  It is recommended that all agents log off before any changes are made to the BCMS/VuStats Login ID field. This field cannot be accessed with CMS release 2 administered or if the ACD Login Length field on the Feature-Related System Parameters form is administered as “O” (zero).

  NOTE:
  Turning off login IDs can have unexpected results.

Hardware Requirements

None (refer to the “Report Scheduler" coverage for associated printer interface requirements).

Bridged Call Appearance — Multi-Appearance Voice Terminal

Allows multi-appearance voice terminal users to have an appearance of another user's primary extension number. The bridged call appearance can be used to originate, answer, and bridge onto calls to or from the other user's primary extension number.

Administration

To implement this feature, the following form(s) or sections of the form(s) must be completed.

Form	Field	Form Instructions (Page #)
Station (multi-appearance)	Bridged Call Alerting Button/Feature Button Assignments -brdg-appr	5-287

- Station Forms — Assign "brdg-appr" to a 2-lamp button. In the BTN field, enter the button number of the call appearance on the principal voice terminal that is being bridged. Enter the principal's extension in the "Ext." field. Enter "y" or "n" in the Bridged Call Alerting field to enable or disable the audible signal on bridged call appearances. One button must be assigned for each bridged appearance. If the principal has three call appearances, the bridging extension must have three bridged appearances assigned in order to emulate the principal's extension. Less than a full complement of bridged extensions can be assigned, but call appearance emulation (tracking) is on a one-for-one basis.

Hardware Requirements

None.

Call Detail Recording (CDR)

NOTE:
This section deals with Call Detail Recording (CDR). For information on measuring internal calls, refer to the "Intra-switch CDR" section in this chapter.

Records detailed call information on all incoming and outgoing calls on specified trunk groups and sends this information to a CDR output device. The CDR output device provides a detailed printout that can be used by the System Manager to compute call costs, allocate charges, analyze calling patterns, and keep track of unnecessary calls.

Figure 3-8 provides typical system CDR connections and Figure 3-9 provides typical CDR connections to a 3B2 Messaging Server adjunct.

NOTE:
The following information regarding system access ports (SAPS) applies only to the G3r V2 configuration. G3i V2 and G3s V2 do not use SAPS.

The system knows of one set of SAPS for both incoming and outgoing features. The following features that use SAPS (the number of SAPS that can be potentially used by the feature is in brackets [ ]):

Incoming:

Remote Administration [5]
temporary — used for the duration of the remote administration session (that is, until the administrator logs out).

Outgoing:

CDR [2]
primary and secondary
permanent — established at system restart and never taken down

Property Management System Interface [3]
PMS adjunct, PMS log printer, Wakeup journal printer
permanent — established at system restart and never taken down

Recorded Announcements [1]
(for announcement circuit pack save and restore to mass storage).
temporary — only used while announcement circuit pack is uploading or downloading announcements

Report Scheduler and System Printer [1]
temporary — only used while report is printing

Incoming features can be restricted to using particular SAPS by placing only the desired SAPS in a hunt group and then always dialing that hunt group's extension for incoming features.

Outgoing features always choose from the full set of administered SAPS. Therefore, placing fewer than the full complement of administered SAPS in a hunt group for incoming access is counterproductive in that one or more of those SAPS (in the hunt group) might get chosen for an outgoing application, thus making them unusable for incoming applications. Also, there is no guarantee that those SAPS left out of the hunt group will be used for outgoing applications, and, since they are unusable for incoming applications, they might not be used at all.

Administration

The system forms listed in the first table below must be completed to assign CDR. In addition, depending on the CDR output device connection to the digital switch, system forms as listed in the tables that follow must be completed.

Form	Field	Form Instructions (Page #)
Trunk Groups:	CDR Reports	
Access	Answer Supervision Timeout	4-130
APLT	Disconnect Supervision	4-155
CO	PPM	4-176
CPE	Frequency	4-200
DMI-BOS		4-209
DID		4-230
FX		4-253
RLT		4-303
Tandem		4-324
Tie		4-349
WATS		4-375
Personal Central Office Line Groups (PCOLGs)	CDR Reports	4-295
Loudspeaker Paging and Code Calling Access	CDR	5-224
System Parameters CDR	CDR Parameters (all fields)	5-69
System-Parameters Customer-Options	VDN Return Destination	N/A
Inter-Exchange Carrier (IXC) Codes	All	5-205
Feature Access Codes	CDR Account Code Access Code	5-161

NOTE:
If you want CDR to track VDNs with Return Destination, you must have VDN Return Destination enabled on the System-Parameters Customer-Options form. VDN Return Destination also requires administration on the Feature-Related System-Parameters and VDN forms. Refer to the VDN section for information on administering VDN Return Destination.

CDR Output Device Connected To MPDM/MTDM:

Form	Field	Form Instructions (Page #)
Netcon Data Module (G3s V2, G3i V2 only)	All	5-133
SAP Data Module (G3r V2 only)	All	5-139
MPDM/MTDM Data Module	All	5-128

CDR Output Device Connected To Messaging Server Adjunct:

Form	Field	Form Instructions (Page #)
Processor Interface Data Module	All	5-136
MPDM/MTDM Data Module	All	5-128
Processor Channel Assignment	All	4-101 or 4-105
Interface Links	All	4-91

CDR Output Device Connected to DCE Jack on the Control Carrier

Form	Field	Form Instructions (Page #)
System Parameters CDR	EIA Device Bit Rate Primary Output Layout Secondary Output Layout Primary/Secondary Output Extension	5-69

CDR Output Device Connected To Data Line Circuit Pack and Asynchronous Data Unit (ADU):

Form	Field	Form Instructions (Page #)
Data Line Data Module	All	5-111
Netcon Data Module (G3s V2, G3i V2 only)	All	5-133
SAP Data Module (G3r V2 only)	All	5-139

CDR Output Device Connected To 212A-type Modem:

Form	Field	Form Instructions (Page #)
Modem Pool Group (integrated)	All, if not already assigned; otherwise, verify that a circuit pack assignment has been made.	5-229
Station-2500 type	All	5-303

- Trunk Group Forms — complete CDR Reports field. Enter a number (0 to 250) in the Answer Supervision Timeout field. This field specifies the amount of time in seconds at which the System will assume it received answer supervision for a call. This interval begins as soon as the outgoing trunk is seized. Make entries in the Disconnect Supervision, PPM, and Frequency fields as required.
- PCOL Groups Form — Complete CDR Reports field.
- Loudspeaker Paging and Code Calling Access Form — Complete CDR field.
- System Parameters CDR Form — Complete all CDR Parameters fields as required.
- Inter-Exchange Carrier (IXC) Codes Form — Assign IXC codes where applicable to allow identification of the IXC on the CDR report. If no carriers are specified, the CDR record will contain a "0" in the IXC code field on the CDR printout.
- Feature Access Codes Form — Complete CDR Account Code Access Code field.
- System-Parameters Customer-Options Form — The VDN Return Destination field must contain "y" before you can use VDN Return Destination with CDR.

Complete the following forms if the CDR output device is connected to MPDM/MTDM:

- Netcon Data Module Form (G3s V2, G3i V2 only) — Complete all fields as required. This form activates a physical channel on the TN777 Network Control circuit pack. An associated MPDM/MTDM Data Module form must also be completed to assign the associated MTDM interface from the CDR output device to the switch.
- System Access Port Data Module Form (G3r V2 only) — Complete all fields as required. This form activates a physical channel on the TN726B that connects via software to the TN553 (packet bus). The system chooses one of the free SAPS to use to connect the data module connected directly to the CDRU. The SAP chosen is unpredictable.

- MPDM/MTDM Data Module Form — complete all fields if a 700A-type modular processor data module (MPDM) is to be used. The 700A-MPDM/MTDM form can be used to connect the CDR output device to a port on a TN754B Digital Line circuit pack.
- System Parameters CDR Form — Complete the Primary/Secondary Output Layout and Primary/Secondary Output Extension fields.

Complete the following forms if the CDR output device is connected to a Messaging Server adjunct:

- Processor Interface Data Module — Complete all fields as required.
- MPDM/MTDM Data Module Form — Complete all fields if a 700B modular trunk data module is to be used. The 700B-MTDM can be used to connect the CDR output device to a port on a TN754B Digital Line circuit pack.
- Processor Channel Assignment Form — Complete the required fields to assign a processor channel for the CDR output device.
- Interface Links Form — Complete required fields to assign the CDR output device interface link.

Complete the following form if the CDR output device is connected to the DCE jack on the back of the control carrier.

- System Parameters CDR Form — complete the EIA Device Bit Rate, Primary/Secondary Output Layout, and Primary/Secondary Output Extension fields.

Complete the following forms if the CDR output device is connected to a TN726B Data Line circuit pack via a 23A ADU.

- Netcon Data Module (G3s V2, G3i V2 only) — Complete all required fields.
- System Access Port Data Module (G3r V2 only) — Complete all required fields.
- Data Line Data Module Form — Complete all fields as required. The Data Line circuit pack provides an alternative to MPDM and 21 2A-type modems for interconnection to CDR output devices and is the preferred method. A Data Line circuit pack must be assigned using the Circuit Pack Administration form as described in “Circuit Pack Administration” in Chapter 5 of this manual. Up to eight ports are provided. A 23A asynchronous data unit (ADU) is required at the CDR output device.

Complete the following forms if the CDR output device is connected to an integrated modem pool.

- Modem Pool Group Form — Complete all fields. Do not fill out this form if the CDR output device is connected to an MPDM. This is used with the TN758 Pooled Modem circuit pack.

- Station Form — Complete the required fields for a 2500-type voice terminal. This is used with the TN742, TN746B, or TN769 Analog Line circuit pack and provides a dial-up extension for the associated 21 2-type modem.
- System Parameters CDR Form — Complete the Primary/Secondary Output Layout, and Primary/Secondary Output Extension fields.

Hardware Requirements

NOTE:
For installations outside the United States of America, refer to Appendix B "Application Notes," for the appropriate circuit packs.

The type of data module required depends on how the CDR output device is connected to the digital switch.

- A modular processor data module (MPDM) must be connected to a port on a TN754B Digital Line circuit pack if the CDR output device is a printer.
- A modular trunk data module (MTDM) must be connected to a port on a TN754B Digital Line circuit pack if the CDR output device is a host computer or a 94A local storage unit (LSU).
- If the CDR output device is connected to a conventional modern, a TN758 Pooled Modem circuit pack and a TN742, TN746B, or TN769 Analog Line circuit pack must be installed.
- If the CDR output device is connected to a data line data module, a TN726B Data Line circuit pack is required.
- If the CDR output device is connected to the DCE jack on the back of the control carrier, the appropriate 50-foot cable is required.
- A TN726B and TN553 are required to equip the SAPS.

Call Vectoring

Provides a flexible way to process network and internal calls. Call Vectoring is used to control the type of call processing an incoming network or internal call receives. Vectoring allows calls to be directed to on-premises or off-premises destinations, to a hunt group or split, or to a treatment such as announcement, forced disconnect, forced busy, or delay.

Optional capabilities also exist for collecting digits from the user, routing calls to a destination specified by those digits and/or doing conditional processing according to those digits (see Call Prompting feature).

NOTE:
If BRI sets will be accessing vectors, it is recommended that an announcement step or a "wait time 2 sec with ringback" step be executed *before* collecting digits.

A vector step may also request routing instructions from an adjunct (see Outbound Call Management feature). In addition, the Lookahead Interflow feature makes use of Call Vectoring for its operation.

Vectors are accessed by Vector Directory Numbers (VDNs). A VDN maps to one vector; however, several VDNs may map to the same vector. VDNs are "soft" switch extension numbers that ***are not*** assigned to a physical equipment location. The VDN determines which vector is activated when a call terminates to the VDN. When a call enters a Call Vector, its routing and treatment will be determined by up to a maximum of 32 vector commands.

NOTE:
It is not recommended that you change a vector while it is processing calls since calls already in the vector could experience problems. Instead, add a new vector and change the VDN to point to the new vector.

An answering party's display-type terminal can be used to display information (for example, Parts Dept) associated with the VDN and, thus, the user can respond to a call with knowledge of the called number. This operation provides a "Dialed Number Identification Service."

The five primary ways that a VDN can be used to access a vector are as follows:

- **Internal Call** — Dialing the VDN extension from a station
- **CO Trunk—** A CO trunk may be mapped to a VDN (that is, as an incoming destination or night service extension)
- **Non-CO Trunk—** An incoming DID call may be routed to a VDN extension
- **Listed Directory Numbers** (LDN) — A VDN may be a night destination for a LDN
- **From another Vector** — Through the "route-to number <VDN-ext> if _" step (see below). This is similar to an internal call.

Refer to *DEFINITY Communications System Generic 3 V2 Feature Description, 555-230-204,* or *DEFINITY Communications System Genetic 3 Call Vectoring Guide,* 555-230-520, for a complete description of Call Vectoring and associated features.

Administration

NOTE:
The Call Vectoring feature is not supported by the G3s V2 ABP configuration.

The Vectoring (Basic) and/or Vectoring (Prompting) options must be enabled on the System-Parameters Customer-Options form before associated forms and fields on forms can be administered.

To implement this feature, the following form(s) or section(s) of the forms must be completed.

Form	Field	Form Instructions (Page #)
Vector Directory Number	All	5-262
Announcements	All	5-108
Hunt Group	Vector	5-189
	ACD	
Call Vector	All	5-76
Trunk Group (All)	Incoming Destination	4-123
	Night Service	
	Trunk Member (Night)	
Feature-Related System Parameters	Music-On-Hold Port	5-168
	Music (or Silence) On Transferred Trunk Calls	

- Vector Directory Number Form — Complete a VDN form for each Call Vector to be defined.
- Announcement Form — Enter the extension that will provide "announcement in queue" treatment for the vector.
- Hunt Group Form — Enter "y" in the Vector field in each Hunt Group and Split (that is, ACD Hunt Group) to be vector controlled. For calls being redirected to a split, make sure to assign a queue length greater than zero. If this is not done, calls that cannot be served immediately will be lost.
- Call Vector Form — Complete a Call Vector form for each Call Vector to be defined.

- Trunk Group Forms — lining Destination, Night Service, and Trunk Member Night fields may be directed to a VDN extension. Administer as required.
- Feature-Related System Parameters Form — Enter a port number for Music-On-Hold Port field. This is required for the "Wait_ seconds Hearing Music" Call Vector command. Enter a port number for the Music (or Silence) On Transferred Trunk Calls field.

NOTE:
You cannot change this field if TT1/Voice is enabled. You can disable TTI/Voice on page 2 of this form, set the Maximum Number of Administrable VDNs, and then re-enable TT1/Voice.

Hardware Requirements

NOTE:
For installations outside the United States of America, refer to Appendix B, *Application Notes,* for the appropriate circuit packs.

The announcement capabilities of the Call Vectoring feature will require either

- A TN750 Integrated Announcement circuit pack

or

- An external announcement facility (analog announcements).

NOTE:
Each analog announcement requires a port on a TN742, TN746B, or TN769 Analog Line circuit pack. Each announcement may also require a port on an analog line circuit pack for remote recording capability.

- Music source connected to a port on a TN763C Auxiliary Trunk circuit pack.

NOTE:
See also "Call Prompting" hardware requirements elsewhere in this chapter.

Call Waiting Termination

Provides for calls to busy single-line voice terminals to wait and sends a distinctive call waiting tone to the called party.

Administration

To implement this feature, the following form(s) or sections of the form(s) must be completed.

Form	Field	Form Instructions (Page #)
Station (single-line)	Call Waiting Indication	5-303

- Station Forms — Complete Call Waiting Indication field for single-line voice terminals.

Hardware Requirements

None.

CallVisor Adjunct-Switch Application Interface

Supports an Integrated Services Digital Network (ISDN) Basic Rate Interface (BRI) link between the switch and associated adjuncts (see Figure 3-10). The feature provides "building blocks" for implementing adjunct-based features such as Inbound Call Management. Specifically, the interface allows adjunct-based capabilities access to switch features, and allows the adjunct to supply routing information to the switch.

NOTE:
For more detailed information on CallVisor ASAI, refer to *DEFINITY CallVisor ASAI Protocol Reference,* 555-230-221, *DEFINITY CallVisor ASAI Technical Reference,* 555-230-220, and *DEFINITY Communications System Generic 3 V2 Feature Description,* 555-230-204.

The following functionality between associated adjuncts and the switch is supported:

- The adjunct can make requests to the switch for call originations and dropping calls to local endpoints. With each call, call progress information and event reporting are transmitted across the interface.
- The adjunct can manipulate active calls in which the adjunct is not a party on the calls (that is, third party). It can place calls on hold, reconnect calls, transfer calls, conference calls, and drop selected parties from a call.
- The adjunct has the ability to activate certain switch features (such as, Call Forwarding).
- The adjunct can query the switch for information associated with a particular item. For example, the adjunct can request the number of agents logged into a split.
- The adjunct can supply routing information for an "adjunct-route" step in a VDN.

When the System is configured with an Expansion Cabinet (with or without duplication), it is recommended that the ASAI resources home on the switch's Processor Cabinet.

ASAI Feature Administration

NOTE:
The CallVisor ASAI feature is not supported by the G3s V2 ABP configuration.

To use any ASAI capability, the ASAI Interface option must first be enabled on the System-Parameters Customer-Options form. This action causes Page 2 of the form ("ASAI Capability Groups") to be displayed (see below).

```
change system-parameters customer-options                  Page 2 of 2
                              ASAI CAPABILITY GROUPS
              Adjunct Call Control Group? y
                   Adjunct Routing Group? y
                    Domain Control Group? y
                 Event Notification Group? y
                    Request Feature Group? y
                          Set Value Group? y
                           AT&T-ASAI Link? y
```

The above capabilities are defaulted to ''y," but can be disabled by entering ''n." A brief explanation of each of the capability groups follows:

- Adjunct Call Control Group — Allows the associated adjunct to invoke Third Party Call Control capabilities, such as Third Party Selective Hold, Third Party Reconnect, Third Party Merge, and soon, that can be used in either of the Third Party Call Control cluster subsets: Call Control and Domain Control. These capabilities enable the adjunct to place, monitor, control, and end calls as they move through the switch.
- Adjunct Routing Group — Allows the associated adjunct to provide adjunct routing information to the switch for incoming calls.
- Domain Control Group — Allows an adjunct to control calls and receive event reports for station sets and receive logout event reports for adjuncts in a given ACD split.
- Event Notification Group — Allows the associated adjunct to request incoming call notification and enables the switch to send event reports about such calls.
- Request Feature Group — Allows the associated adjunct to request features such as “change work modes,” “login,” "logout,” “sac,” and “fwd.”
- Set Value Group — Allows the adjunct to request status changes for Message Waiting lamps (that is, control the on/off state of the lamps).
- AT&T ASAI Link — Allows an AT&T adjunct to activate a proprietary link.

The following table shows which capabilities are automatically enabled when ASAI is enabled on the System-Parameters Customer-Options form.

Table 3-2. Automatically Enabled ASAI Capabilities

Capability	Adjunct Call Control Group	Adjunct Routing Group	Domain Control Group	Event Notif. Group	Request Feature Group	Set Value Group
Event Reports	x		x	x		
Agent Logout			x			
Alerting	x		x	x		
Answered	x		x			
Busy	x		x	x		
Call Ended Event (FAC messages)				x		
Call Initiated			x			
Call Offered to Domain				x		
Call Redirected			x	x		
Call Conferenced	x		x	x		
Connected	x		x	x		
Cut-Through	x		x	x		
Denial/Reorder	x		x	x		
Dropped	x		x	x		
Hold	x		x	x		
Queued	x					
Reconnected	x		x	x		
Call Transferred	x		x	x		
Trunk Seized	x		x	x		
Notification Request				x		
Notification Cancel				x		
Notification Ended				x		
Request Feature					x	
Route End		x				
Route Request		x				
Route Select		x				
Set Value						x
Stop Call Notification				x		

Table 3-2. Automatically Enabled ASAI Capabilities *(continued)*

Capability	Adjunct Call Control Group	Adjunct Routing Group	Domain Control Group	Event Notif. Group	Request Feature Group	Set Value Group
Third Party Answer			x			
Third Party Auto Dial			x			
Third Party Call Ended	x					
Third Party clear call	x					
Third Party Domain Control			x			
Third Party Domain Control Ended			x			
Third Party Make Call	x					
Third Party Merge	x		x			
Third Party Reconnect	x		x			
Third Party Relinquish Control	x		x			
Third Party Selective Hold	x		x			
Third Party Selective Drop	x		x			
Third Party Take Control	x					

NOTE:
By enabling the CallVisor ASAI option(s) on Page 1 of the form, the following capabilities are automatically enabled as well, regardless of the groups selected on Page 2: Value Query (includes Response Continued Capability), Abort, Heart Beat, Restart Procedure, Suspend/Resume AIarm).

The capabilities shown here correspond to the operation values given in the "Operation Value/Error Value Coding" table of *DEFINITY CallVisor ASAI Protocol Reference,* 555-230-221.

For CallVisor ASAI adjuncts, an alarm severity option can be assigned via the *set options* command to each of the following categories:

- Major on-board ASAI adjunct alarms
- Major off-board ASAI adjunct alarms
- Minor on-board ASAI adjunct alarms
- Minor off-board ASAI adjunct alarms

The *set options* command is considered to be a maintenance command. Therefore, for more information on this command, refer to *DEFINITY Communications System Generic 3 V2 Maintenance,* 555-230-105.

Direct Inward Dialing

Connects calls from the public network directly to the dialed extension number without attendant assistance.

NOTE:
DID features are also supported over Main/Satellite TGU/TGE trunks.

Administration

To implement this feature, the following form(s) or sections of the form(s) must be completed.

Form	Field	Form Instructions (Page #)
Trunk Group (DID)	All	4-230
Feature-Related System Parameters	DID/Tie/ISDN Intercept Treatment	5-168
	DID Busy Treatment	

- Trunk Group (DID) Form — Verify or complete all fields.
- Feature-Related System Parameters Form — Complete the DID/Tie/ISDN Intercept Treatment and DID Busy Treatment fields to specify how to handle DID calls that are invalid or that terminate to a busy station.

Hardware Requirements

NOTE:
For installations outside the United States of America, refer to Appendix B, *Application Notes,* for the appropriate circuit packs.

Each Group Member Assignment (DID trunk) in the DID Trunk Group requires a port on a TN753 DID Trunk circuit pack. The following circuit packs, each of which provides eight ports, are available:

- TN753 (used in the United States)
- TN436 (used in Australia)
- TN459 (used in the United Kingdom)
- TN2139 (used in Italy)
- TN2146 (used in Belgium and the Netherlands)

Direct Inward and Outward Dialing (DIOD)

Allows calls from a local exchange to be made to a subscriber on a PBX system, without connecting through the attendant console. The Japanese version of DID, however, implies a 2-way service, with both inward and outward dialing features. DIOD is a combination of the DID feature and the CO feature.

An analog DIOD trunk type has the capability of being used in any of the following ways:

- DID trunk
- CO trunk — 2-way, 1-way, or 1-way outgoing CO trunk capability
- Direct Inward and Outward Dialing (DIOD) trunk with DID service and 1-way outgoing CO trunk capability

A digital DIOD trunk has the ability to be used with incoming DID operation and outgoing CO trunk operation. Analog DIOD requires either the TN429 (Japan) or TN2184 (Germany) circuit boards. The TN429 is an 8-port loop-start circuit pack. The TN2184 is a 4-port loop-start circuit pack that sends addressing information for incoming and outgoing calls and detects Periodic Pulse Metering (PPM) signals for metering outgoing calls.

Digital DIOD must be from a TN484D V2 (or later version) circuit board and must have a bit rate of 2.048 Mbps.

NOTE:

Individual countries must use specific boards and configurations. Refer to each country's "Application Notes" for the appropriate hardware and software requirements.

Administration

To implement this feature, the following form(s) or sections of the form(s) must be completed.

Form	Field	Form Instructions (Page #)
Trunk Group (DIOD)	All	4-239

- Trunk Group (DIOD) Form — Verify or complete all fields. The group type field must contain "diod."

Hardware Requirements

- One of the following circuit packs:
  - TN429 analog (Japan)
  - TN2184 analog with PPM detection (Germany)
  - TN464D V2 or later digital version for Mexico; TN464F for Germany.

Facility Test Calls

Hadware Requirements

None.

Fiber Link Administration

NOTE:
This feature applies only to G3r V2 configurations.

Port cabinets are connected via direct fiber link connections or through fiber link connections to a center stage switch (CSS) to provide the inter-port network connectivity required for voice/data information transfer. The CSS is composed of "switch node carriers" that are interconnected by fiber links, providing a network of up to 22 PNs for G3rV1 and V2 or 44 PNs for G3rV3. The CSS provides circuit switched connectivity among PNs for voice and data communications as well as packet-switched connectivity. Fiber Link administration creates the translation data defining these fiber link connections by identifying the endpoint pairs for each link. The two endpoints can be:

1. An expansion interface (EI) board in a port cabinet
2. A switch node interface (SNI) board in a switch node carrier

NOTE:
Only one G3-MT can administer fiber links at a time; others can display fiber link information.

Administration

The PNC Duplication option must be enabled on the System-Parameters Customer-options form before related fields on forms can be administered.

To implement this feature, the following form(s) or sections of the form(s) must be completed.

Form	Field	Form Instructions (Page #)
Circuit Pack	All	5-88
Fiber Link	All	4-75
System-Parameters Duplication Parameters	Enable Operation of PNC Duplication	5-157

Fiber Link administration interacts with or is dependent on other system features that must be administered before it. The order of administration is:

- Cabinet Form — Assign the system's cabinets and their carrier configurations (such as switch node carriers, port carriers, and processor carriers).
- Circuit Pack Form — Assign circuit packs into the carriers of the cabinets previously administered. Of those circuit packs, SNI, and optionally DS1 converter circuit packs are of importance.

Port network connectivity (PNC) has two different reliability configurations: simplex and duplex. The duplex configuration has three stages that the Fiber Link form can be in at any one time as described next.

Stage 1 — Simplex PNC

Provides the most cost-effective product with standard reliability. During stage 1, PNC Duplication is disabled on the System-Parameters Customer-Options form and Operation of Duplication is disabled on the System-Pararmeters Duplication Parameters form.

Stage 2 — Administration of Dedication

During stage 2, the PNC operates as a simplex system. PNC Duplication is enabled on the System-Parameters Customer-Options form and Operation of Duplication is disabled on the System-Parameters Duplication Parameters form. Duplication is not in operation during this stage but merely in the process of being administered. When PNC Duplication is enabled on the System-Parameters Customer-Options form, the following administration forms change:

- Cabinet Form — Additional fields appear to allow administration of switch nodes to A-PNC and B-PNC sides of the CSS. Pairing of switch nodes is also defined here.
- Fiber Link Form — Additional fields appear to allow administration of fiber links on the B-PNC side of the CSS. If an endpoint on the A-PNC side is administered as an SNI, its corresponding endpoint on the B-PNC side is determined (if Switch Nodes are paired in the cabinet form prior to this administration) and displayed. However, administration of the duplicate B-PNC link are not enforced until duplication is in full operation (stage 3).
- System-Parameters Duplication Parameters Form — An additional field appears to enable operation of PNC Duplication.

Stage 3 — Duplex PNC

During stage 3, Operation of Duplication is enabled on the System-Parameters Duplication Parameters form. To configure a dupticated system, the following administration must take place:

- System-Parameters Duplication Parameters Form — Enter “y” to enable the operation of PNC Duplication in the Enable Operation of PNC Duplication field.

NOTE:
Before operation of duplication can be enabled:

— All switch nodes must be paired with a duplicate

— All fibers that contain an EI board must be duplicated.

Once stage three is reached, duplication is in full operation and affects the following administration features in the following way:

- Cabinet Form — All switch nodes administered must have a duplicate administered.
- Fiber Link Form — All fiber links administered must have a duplicate administered. If a DS1 Converter Complex is administered, then it too must have a duplicate administered.

Hardware Requirements

With more than three PNs in the system, a CSS must be added. The CSS provides the interconnection facilities between PNs. With three or fewer PNs, interconnection facilities are provided by connecting each PN to other PNs via EI boards.

Pull Transfer

Enhances the existing Transfer feature by allowing either the calling party or the called party (the party to whom the held party will be transferred) to complete the transfer operation. Unlike the existing Transfer feature, Pull Transfer can only be used by a station user.

As with the Station Pull Transfer covered above, Pull Transfer also applies to satellite PBX stations via TGU/TGE trunks. Pull Transfer is always available on calls involving TGU/TGE trunks even if Station Pull Transfer is not administered on the system.

NOTE:
To avoid confusion, it is recommended that Station Pull Transfer be administered whenever TGU/TGE trunks are provided.

Administration

To implement this feature, the following form(s) or sections of the form(s) must be completed.

Form	Field	Form Instructions (Page #)
Feature-Related System Parameters	Pull Transfer	5-168
station	All (including a Hash or Transfer feature button)	5-287

- Feature-Related System Parameters Form — Enter “y” in the Pull Transfer field (page 2 of form) to enable the Pull Transfer feature on a system-wide basis. The default is “n.”
- Station — Assign a Flash feature button or a Transfer feature button (depending on the type of voice terminal) for each voice terminal.

Hardware Requirements

None.

QSIG Global Networking

Provides a private network protocol for true multivendor PBX-to-PBX connectivity. This platform meets requirements for the European Computer Manufacturers Association (ECMA) Private Network Generic Functional Procedures for Call-Related supplementary services. The platform is also consistent with the International Standards Organization (ISO) Private Network Supplementary Services platform that is currently a Draft international standard. (Supplementary services are services provided by the PBX beyond voice or data connectivity and number transport and display. Examples of supplementary services include Call Forwarding, Transfer, and Call Hold.)

DEFINITY's current release of QSIG Global Networking is a foundation for the ECMA supplementary services. It provides the Name and Number Identification supplementary service, as defined by ECMA Specification 165. Future releases will also provide features such as Call Forwarding (ECMA Specifications 173/174) and Call Transfer (ECMA Specifications 177/178).

Administration

To implement the QSIG Global Network and the Name and Number Identification supplementary services, the following forms or sections of the forms must be completed.

Form	Field	Form Instructions (Page #)
DS1 Trunk Service	All	4-64
Hunt Group	Group Name, Ext, Member Name	5-189
ISDN CPN-Prefix	Ext Len, Ext Code, CPN Prefix, Total CPN Length	4-60
Station	Name:	5-189
System-Parameters Customer-Options	ISDN-PRI	N/A
Terminating Extension Group	Group Name, Ext, ISDN Caller Disp	5-261
ISDN/PRI Trunk Group	Outgoing Display, Send Calling Number, Send Connected Number Send Name	4-275

Hardware Requirements

QSIG Global Networking does not require any hardware or software beyond what is required for normal ISDN-PRI connectivity. The TN767 circuit board is used for 24 channel applications and the TN464 with suffixes C and greater are used for both 24 channel and 32 channel applications.

Users must have display-equipped voices terminals for displaying the call identification information.

Queue Status Indications

Provides indications of queue status for Automatic Call Distribution (ACD) calls based on the number of calls in queue and time in queue. These indications are provided via lamps assigned to the terminals or consoles of split agents or supervisors. In addition, auxiliary queue warning lamps can be provided to track queue status. Also, display-equipped voice terminals and consoles can display the time in queue of a split's oldest call and the number of calls in that split's queue.

Administration

The Automatic Call Distribution (ACD) option must be enabled on the System-Parameters Customer-Options form before fields on associated forms can be administered.

NOTE:
For G3s V2 ABP configurations, the ACD feature is only available as part of the Basic Call Center option.

To implement this feature, the following form(s) or sections of the form(s) must be completed.

Form	Field	Form Instructions (Page #)
Hunt Groups	Queue Length Calls Warning Threshold Time Warning Threshold Time Warning Port Calls Warning Port	5-189
Station (multi-appearance)	Button/Feature Button Assignments q-calls -q-time	5-287
Attendant console	Feature Button Assignments -atd-qcalls -atd-qtime q-calls q-time	5-35

- Hunt Groups Form — Assign the thresholds to be reached before the System flashes the queue status buttons and the Auxiliary Warning lamp assigned to the hunt group/split.
  - — Assign the time a call can remain in the queue.
  - — Assign the number of calls that can be in the queue.
  - — Assign ports for the external Auxiliary Warning lamps.

Recall Signaling

Allows the user of an analog station to place a call on hold and consult with another party or activate a feature. After consulting with that third party, the user can conference the third party with the original party by another recall signal, or return to the original patty by pressing the Recall button twice or by flashing the switchhook twice.

Recall Signaling can be accomplished by pressing the flashhook, using a Ground key on a Rotary or DTMF station, or by using the Recall button on a DTMF station.

Administration

To implement this feature, the following form(s) or sections of the form(s) must be completed.

Form	Field	Form Instructions (Page #)
Feature-Related System-Parameters	Flashhook Interval Upper Bound Lower Bound	5-168
Station (Analog)	Switchhook Flash	5-303

- Feature-Related System-Parameters Form — Enter “y” in the Flashhook Interval field to enable the feature. Enter the limits in the Upper Bound and Lower Bound fields to establish the length of time during which the System will recognize the press of the flashhook as recall signaling.
- Station (Analog) Forms — Enter “y” in the Switchhook Flash field to enable recall signaling on a per voice terminal basis.

Hardware Requirements

None.

Recorded Announcements

Allows any combination of integrated announcements or announcements recorded on external devices. The external devices must be connected to the switch via analog line or auxiliary trunk interfaces. Integrated announcements are recorded on the TN750B Announcement circuit pack. The external announcement devices are connected via TN742, TN746B, or TN769 Analog Line circuit packs or via a TN763 Auxiliary Trunk circuit pack.

Announcement administration allows the assignment of an extension to an announcement device at an analog or auxiliary trunk port or to an announcement on an integrated announcement circuit pack. A recoded message can be accessed by dialing the extension assigned the announcement. References to announcement extensions can be found on the following forms: Hunt Group, Coverage Path, Trunk Group (Incoming Destination), Call Vector, Recorded Announcement, Hospitality-Related System-Parameters, and Feature-Related System-Parameters (DID/Tie/lSDN Intercept Treatment and Controlled Restriction fields).

NOTE:
The following information regarding system access ports (SAPS) applies only to the G3r V2 and V3 configuration. G3i V2 and G3s V2 and V3 do not use SAPs.

The system knows of one set of SAPS for both incoming and outgoing features. The following features that use SAPS (the number of SAPS that can be potentially used by the feature is in brackets [ ]):

Incoming:

Remote Administration [5]
temporary — used for the duration of the remote administration session (that is, until the administrator logs out).

Outgoing:

CDR [2]
primary and secondary
permanent — established at system restart and never taken down

Property Management System Interface [3]
PMS adjunct, PMS log printer, Wakeup journal printer
permanent — established at system restart and never taken down

Recorded Announcements [1]
(for announcement circuit pack save and restore to mass storage).
temporary — only used while announcement circuit pack is uploading or downloading announcements

Report Scheduler and System Printer [1]
temporary — only used while report is printing

Incoming features can be restricted to using particular SAPS by placing only the desired SAPS in a hunt group and then always dialing that hunt group's extension for incoming features.

Outgoing features always choose from the full set of administered SAPS. Therefore, placing fewer than the full complement of administered SAPS in a hunt group for incoming access is counterproductive in that one or more of those SAPS (in the hunt group) might get chosen for an outgoing application, thus making them unusable for incoming applications. Also, there is no guarantee that those SAPS left out of the hunt group will be used for outgoing applications, and, since they are unusable for incoming applications, they might not be used at all.

Administration

NOTE:
(G3V3 only) If you use an integrated, multiple-integrated, or external type of announcement for the Automatic Wakeup feature, you can also administer the announcement to repeat and to allow barge-in as a queue type. The benefit of repeating announcements and barge-in queues is that you do not need a separate port for each wakeup announcement call. When guests go off-hook to receive an announcement at a particular time, they use only one port and the message repeats on the port until the last guest goes off-hook and the message reaches its conclusion.

To implement this feature, the following form(s) or sections of the form(s) must be completed.

Form	Field	Form Instructions (Page #)
Hospitality-Related System-Parameters	Extension of PMS Log Printer	5-184
	Extension of Journal/Schedule Printer	
	Time of Scheduled Wakeup Activity Report	
	Time of Scheduled Wakeup Summary Report	
	Time of Scheduled Emergency Access Summary Report	
	Announcement Type	
	Length of Time to Remain Connected to Announcement	
	Extension to Receive Failed Wakeup LWC Messages	
	Routing Extension on Unavailable Voice Synthesis	
	Display Room Information in Call Display	
	All fields on page 3	
Recorded Announcements	All	5-244
Data Module	All	
Netcon (G3s V2, G3i V2 only)		5-133
SAP (G3r V2 only)		5-139
Recorded Announcement (for Integrated Announcements)		5-108
Trunk Groups (All)	Incoming Destination	4-123
Feature-Related System-Parameters	DID Intercept Treatment	5-168
Feature Access Codes	Announcement Access Code	5-161
Call Coverage Paths	Point1, Point2, Point3	5-62
Hunt Groups	First and Second Announcement Extensions	5-189
station	COS	5-287
call vectoring	Announcement Command	5-76

- Hospitality-Related System-Parameters Form — Assign announcement types, extensions, and parameters.
- Recorded Announcements Form — Complete all fields as required.
- Recorded Announcement Data Module Form — Complete all fields for a recorded announcement data module.
- Netcon Data Module Form — Complete all fields for a Netcon data module. Provides for the upload/download (save/restore to/from disk/tape/memory card) of TN750 recorded announcements.

- SAP Data Module Form — Complete all fields for a SAP data module. Provides for the upload/download (store/restore to/from tape) of TN750 recorded announcements. The system chooses one of the free SAPS to use to contact the data module connected directly to the announcement device. The SAP chosen is unpredictable.
- CO, DMI-BOS, FX, WATS Trunk Group Forms — Assign a recorded announcement extension number to the Incoming Destination field, as required.
- Feature-Related System-Parameters Form — Assign a recoded announcement extension number to the DID Intercept Treatment field, as required.
- Feature Access Codes Form — Assign announcement access code.
- Call Coverage Path Form — Assign a recorded announcement extension number to a coverage point (Point1, Point2, Point3), as required.
- Hunt Groups Form — Assign a recorded announcement extension number to the First and Second Announcement Extension fields, as required.
- Station Forms — Verify that the voice terminal has a class of service (COS) that allows console permission (Perms) so that the user can enter an announcement.
- Call Vectoring Form — Assign announcements using the announcement command.

Hardware Requirements

NOTE:
For installations outside the United States of America, refer to Appendix B, *Application Notes,* for the appropriate circuit packs.

Each external announcement to be provided requires a port on a TN742, TN746B, or TN769 Analog Line circuit pack, or the TN763 Auxiliary Trunk circuit pack. The external recorded announcement equipment and music sources are not provided with the System. Each access of an integrated announcement requires a port on the TN750 Announcement circuit pack. Since the integrated announcement is recorded onto the TN750 circuit pack, no external announcement equipment is required.

Remote Call Coverage

Provides automatic redirection of certain calls to alternate answering positions in a Remote Call Coverage path for any valid dialed number up to 16 digits that begins with an Automatic Alternate Routing (AAR) or Automatic Route Selection (ARS) feature access code (FAC), outgoing trunk dial access code (TAC), or UDP/DCS extension. Once a remote call coverage point is administered for a user, calls to that user are directed to the remote coverage point when the user and any other coverage points are unavailable. The call may have been previously directed to up to two alternate answer points before being redirected to the remote call coverage point. Once a call is directed to the remote call coverage point, it cannot be picked up by the principal user and that user's bridged appearance lamp is extinguished. Calls redirected to a remote call coverage point do not timeout and go to a subsequent coverage point.

NOTE:
A vector directory number (VDN) can be administered as the last point in a coverage path. Refer to "VDN in a Coverage Path" in this chapter for more information.

There are three reports that provide measurement information about Remote Call Coverage:

- The Coverage Path Measurement Report describes coverage activity as it relates to the coverage paths.
- The Principal Coverage Measurement Report describes coverage activity as it relates to the principal extensions.
- SMDR will, or could show the outgoing trunk calls.

For each report, there is a selection form that lists the specific coverage paths or principal extensions to be measured. For more detailed information on these reports and their associated commands, refer to *DEFINITY Communications System Generic 3 V2 System Reports,* 555-230-511.

Administration

To implement this feature, the following form(s) or sections of the form(s) must be completed.

Form	Field	Form Instructions (Page #)
Call Coverage Paths	All	5-62
Feature-Related System Parameters	Coverage — Don't Answer Interval For Subsequent Redirection (rings)	5-168
	Coverage — Caller Response Interval (seconds)	
Feature Access Codes	Send All Calls Activation and Deactivation	5-161
	Transfer into AUDIX	
Remote Call Coverage	As appropriate	5-251a
Station (principals — the one to whom the call is first directed)	Coverage Path Redirect Notification Coverage Msg Retrieval Permission Button/Feature Button Assignments -goto-cover -send-calls (Type:_Grp:_)	5-267
Station (multi-appearance) (covering user — the one to whom the call redirects)	Button/Feature Button Assignments -consult -cov-cback -send-calls (Type:_Grp:_)	5-267
Station (multi-appearance) (where users will place calls that can redirect to coverage)	Button/Feature Button Assignments -goto-cover	5-267
Trunk Group	Internal Alert	
APLT		4-155
ISDN-PRI		4-88
Tie		4-349

- **Call Coverage Paths Form** — Establish desired coverage paths.
- **Feature-Related System Parameters Form** — Verify or complete Coverage Don't Answer Interval for Subsequent Redirection (rings), Keep Held SBA at Coverage Point, and Coverage-Caller Response Interval (secs) fields.
- **Feature Access Codes Form** — Verify or assign a "Send All Calls Activation and Deactivation" code, if desired. If required, enter the digits that must be dialed (one to three digits) to have the caller transferred to the called party's AUDIX mail.

- **Principal's Station Form**— (the one to whom the call was first directed):
  - — Assign a call coverage path.
  - — Complete Redirect Notification field (which causes the principal's voice terminal to receive a half ring on calls that redirect to coverage). This field is common to Call Coverage and Call Forwarding.
  - — Complete Coverage Msg Retrieval Permission field (which allows any user in the principal's call coverage path to retrieve the principal's Leave Word Calling messages).
- **Covering User's Station Form** — (the one to whom a call redirects) for the Remote Call Coverage feature, assign the Send All Calls button.
- **Station Form** — On voice terminals where users will place calls that can redirect to Coverage, assign a Go to Coverage (goto-cover) button, if desired.
- **APLT, ISDN-PRI, and Tie Trunk Group Forms** — Assign "y" to the Internal Alert field to specify that internal ringing and call coverage will be used for incoming calls on these trunk groups.

Hardware Requirements

None.

Ringer Cutoff

Allows users of multiappearance voice terminals to turn on or off certain audible ringing signals. Visual alerting is not affected by this feature.

When this feature is enabled, only Priority ringing, Intercom ringing, and Manual Signaling ringing will ring at the voice terminal. Internal, external, and redirection notification will not ring. When this feature is disabled, the voice terminal will have normal ringing.

Administration

To implement this feature, the following form(s) or sections of the form(s) must be completed.

Form	Field	Form Instructions (Page #)
Station (multiappearance)	Button/Feature Button Assignments -ringer-off	5-287

- Station Forms — Assign "ringer-off" to a voice terminal feature button. One button may be assigned per voice terminal.

Hardware Requirements

None.

Security Violation Notification

This feature is available on all versions of DEFINITY®. The Security Violation Notification (SVN) feature notifies a designated referral point (attendant console, display equipped voice terminals, or SVN referral call with announcements) of a security violation. The SVN feature provides the capacity to disable a remote login ID or remote access code following a security violation. The SVN feature also provides an audit trail containing information about each attempt to access the switch. If disabled, the login ID, or Remote Access feature remains disabled until re-enabled by a login ID with correct permissions.

Sequence of events with the SVN feature enabled and a security violation occurs:

1. SVN parameters are exceeded (the number of invalid attempts permitted in a specified time interval is exceeded).
2. A SVN referral call with announcements (announcement message identifying the violation) is placed to a designated point and the SVN feature provides an audit trail containing information about each attempt to access the switch.
3. The SVN feature disables a valid login ID or remote access barrier code following the security violation.
4. The login ID or Remote Access remains disabled until re-enabled by an authorized login ID, with the correct permissions.

SVN Enhancements

- Referral Call Activation/Deactivation

  Referral Call Placement is automatic with G3V3 software. SVN referral calls are placed by the system anytime a security threshold violation occurs. To stop placement of referral calls, activate these buttons.

  NOTE:
  Calls are placed if these buttons are not activated.

  - The login security violation feature button “lsvn-halt.”
  - The remote access security violation feature button “rsvn-halt.”
  - The authorization code security violation feature button “asvn-halt.”

  Repeated security violations can result in numerous referral calls being made in a short period of time.

- Login ID Kill After “N” Attempts

  The Login ID Kill After “N” Attempts feature provides the ability to disable a login ID when a login security violation is detected for a valid login ID (the number of invalid login attempts permitted in a specified time interval is exceeded). If the login security violation parameters are exceeded, the login ID is disabled until re-enabled by a login ID with re-activation

permissions. This feature is controlled by an administrable parameter and is optional on a per-login ID basis. The system default value is to disable a login ID if the SVN feature is active and a security violation occurs. Any attempt to access the switch using an login ID that has been disabled by the Security Violation Notification (SVN) feature fails, even if the correct login ID and password is entered. If the login ID is disabled while logged in on another session, once that session is terminated any subsequent attempt to log in using that login ID is prohibited. SVN referral calls are placed by the system each time a login security violation occurs. A disabled login ID remains disabled until it is re-enabled by a login ID with reactivation permissions.

A major alarm is logged whenever a security violation is detected involving an AT&T services login ID and that login ID has been disabled as a result of the security violation. AT&T is responsible for retiring the alarm.

- Remote Access Kill After "N" Attempts

  The Remote Access Kill After "N" Attempts SVN feature provides the ability to disable the Remote Access feature when a remote access barrier code security violation is detected (the number of invalid Remote Access attempts permitted in a specified time interval is exceeded), and the Disable Following a Security Violation field is enabled. Any attempt to use the Remote Access feature once it has been disabled fails, even if a correct barrier code or barrier code/authorization code combination is given. SVN referral calls are placed by the system any time a Remote Access security violation occurs. The Remote Access feature remains disabled until re-enabled by a login ID with re-activation permissions.

- Authorization Code Security Violation

  The Authorization Code Security Violation feature generates a referral call upon detection of a violation. An audit trail containing relevant information about each attempt is registered.

- SVN Referral Call with Announcement

  The SVN Referral Call with Announcement option has the capacity to provide a recorded message identifying the type of violation accompanying the SVN referral call. Using Call Forwarding, Call Coverage, or Call Vector Tree-of-Day Routing (to route to an extension or to a number off a switch), SVN referral calls with announcements can terminate to a point on or off the switch.

  Use of other means to route SVN referral calls to alternate destinations are not supported at this time. An attempt to use an alternate method to route SVN referral calls may result in a failure to receive the call or to hear the announcement.

- Monitor Security Violations Report

  The monitor security violations reports provide current status information for invalid Login, Remote Access (barrier code), or Authorization Code

attempts. The data displayed by these reports is updated every 30 seconds. A total of 16 entries is maintained for each type of violation. The oldest information is overwritten by the new entries a each 30-second update.

The security violations report is divided into three distinct reports:

- Login Violations
- Remote Access Barrier Code Violations
- Authorizations Code Violations

To access Monitor Security Violations reports, enter the command interface command **monitor security-violations <report name>.** The report names are “login,” remote-access,” and “authorization-code.”

The following fields are displayed on the Login violation report:

- **Date:** The date that the attempt occurred.
- **Time:** The time that the attempt occurred.
- **Login:** The login string that was entered as part of the login violation attempt. An invalid password may cause a security violation. If a valid login ID causes a security violation by entering an incorrect password, the Login Violation report displays the valid login ID.
- **Port:** The port on which the failed login session was attempted.

  The following abbreviations are used for G3i:

  + **MGR1:** The dedicated management terminal connection (the EIA connection to the maintenance board).
  + **NET-N:** A network controller dialup port (1-4).
  + **EPN:** The EPN maintenance EIA port.
  + **INADS:** The INADS port (Initialization and Administration system).
  + **EIA:** Other EIA ports.

  The following abbreviations are used for G3r:

  + **SYSAM-LCL:** Local administration to Manager 1.
  + **SYSAM-RMT:** Dial up port on SYSAM board, typically used by services for remote maintenance, and used by the switch to call out with alarm information.
  + **SYS-PORT:** System ports accessed through TDM bus.
  + **MAINT:** Ports on expansion port network maintenance boards, used as a local connection for onsite maintenance.
- **Ext:** The extension assigned to the network controller board that the failed login session was attempted on. This field is present only

in the case where the System Manager's SAT is administered through a network controller port.

The following fields are displayed on the Remote Access Violations report:

- **Date:** The date that the attempt occurred.
- **Time:** The time that the attempt occurred.
- **TG No:** The trunk group number associated with the trunk where the remote access attempt terminated.
- **Mbr:** The trunk group member number associated with the trunk where the remote access attempt terminated.
- **Ext:** The extension used to interface with the Remote Access feature.
- **Barrier Code:** The incorrect barrier code that resulted in the invalid attempt.

The following fields are displayed on the Authorization Code Violations report:

- **Date:** The date that the attempt occurred.
- **Time:** The time that the attempt occurred.
- **Originator:** The type of resource originating the call that generated the invalid authorization code access attempt. Originator types include:
  + Station.
  + Remote Access (when the invalid authorization code is associated with an attempt to invoke the Remote Access feature).
  + Attendant.
- **Auth Code:** The invalid authorization code entered.
- **TG No:** The trunk group number associated with the trunk where the attempt terminated. It appears only when an authorization code is used to access a trunk.
- **Mbr:** The trunk group member number associated with the trunk where the attempt terminated. It appears only when an authorization code is used to access a trunk.
- **Barrier Code:** The incorrect barrier code that resulted in the invalid attempt. It appears only when an authorization code is entered to invoke Remote Access.
- **Ext:** The extension associated with the station or attendant originating the call. It appears only when authorization code is entered from the station or attendant console.

Administration

To implement this feature the following form(s) or sections of the form(s) must be completed.

Form	Field	Form Instructions (Page #)
Feature-Related System Parameters	Security Violation Notification Parameters	5-168
Station (multiappearance)	Button/Feature Button Assignments (asvn-halt) (lsvn-halt) (rsvn-halt)	5-293

- Feature-Related System Parameters — Complete all appropriate Security Violation Notification Parameters on Page 2 of the form.

After completing Page 2 of the Feature-Related System Parameters form, you must then administer and activate any previously unadministered feature buttons as the “asvn-halt,” “lsvn-halt” and “rsvn-halt” buttons for the Referral Destination extension.

Administering SVN System Parameters

To activate SVN system features, three system level parameters must be administered:

- SVN Login Violation Notification
- SVN Remote Access Violation Notification
- SVN Authorization Code Violation Notification

Administering the SVN Login security Violation Notification Feature

To administer the login component of the SVN feature, enter the command **change system-parameters security.**

To administer system parameters for the login component of the SVN feature violation notification:

1. Access the System Parameter Security form by entering the **change system-parameters security** command from the command line interface.

2. When the SVN Login Violation Notification Enabled field is enabled, the following fields appear on the Security-Related System Parameters form:

   - Originating Extension

     This field requires the entry of an unassigned extension that is local to the switch and conforms to the dial plan for the purpose of originating and identifying SVN referral calls for login security violations.

     The originating extension initiates the referral call in the event of a login security violation. It also sends the appropriate alerting message or display to the referral destination.

   - Referral Destination

     This field requires an entry of an extension, assigned to a station, attendant console, or vector directory number (VDN) that receives the referral call when a security violation occurs. If a VDN is assigned the Time-of-Day routing capability, Call Vectoring may be used to mute the referral call to different destinations based on the time of day or the day of the week. The referral destination must be equipped with a display module unless the Announcement Extension is assigned. Administration of the Announcement Extension is also required if the referral destination is a VDN.

   - Login Threshold

     This field requires an entry of the minimum number of login attempts that are permitted before a referral call is made. The value assigned to this field, in conjunction with the Time Interval field, determines whether a security violation has occurred. The system default is 5.

   - Time Interval

     This field requires the entry of the time interval in which a login security violation must occur. The range for the time interval is one minute to eight hours (0:01 to 7:59), and is entered in the form "xx:xx." For example, if you want the time interval to be one minute, you enter 0:01. If you want the time interval to be seven and one-half hours, you enter 7:30. The system default is 0:03.

   - Announcement Extension

     This field requires an entry of a extension that is assigned to an SVN login violation announcement.

3. Administer an "lsvn-halt" button on any station/attendant console (maximum 1 per system). The SVN button location can be determined by entering the command **display svn-button location.**

Enable/Disable a Login ID

The Disable a Login ID Following a Security Violation field on the Login Administration form is used to set the SVN parameters for a single login. When set to “y” (yes) this SVN disables the specified login ID (system default is “y”). When set to “n” the SVN feature does not disable the specified login ID if a security violation is detected for the login ID. The Disable a Login ID Following a Security Violation field is dynamic and only appears on the Login Administration form when the login component of the SVN feature is enabled.

To enable a login ID that has been disabled by a security violation, or disabled manually with the command **disable login** the user must:

1. Log in to the switch using a login ID with the correct permissions.
2. Enter the command **enable login <login ID>.**

To disable a login ID, the user must:

1. Log in to the switch using a login ID with the correct permissions.
2. Enter the command disable login <login ID>.

List the Status of a Login ID

To list the status of a login ID, the user must:

1. Log in to the switch using a login ID with the correct permissions.
2. Enter the command **list login.**

You see a display indicating the status of the specified login ID. A login ID status can be listed as:

- Login ID status equals **disabled** indicating that the login ID was disabled manually using the **disable login** command.
- Login ID status equals **svn-disabled** indicating that a security violation was detected for that login ID and the login was disabled by the SVN feature.
- Login ID status equals **active** indicating that the login ID is currently logged in.
- Login ID status equals **inactive** indicating that the login ID is not logged in.

Administering Remote Access security Violation Notification Parameters

To administer the Remote Access component of the SVN feature:

1. *Access the System Parameter Security form by entering the* **change system-parameters security** command from the command line interface.
2. Enable the Remote Access component of the feature by entering a “y” in the SVN Remote Access Violation Notification field on the System Parameters Security Form.

3. When the SVN Remote Access Violation Notification Enabled field is enabled, the following additional fields appear on the Security-Related System Parameters form:

   - Originating Extension

     This field requires the entry of an unassigned extension that is local to the switch and conforms to the dial plan for the purpose of originating and identifying SVN referral calls for remote access barrier code violations.

     The originating extension initiates the referral call in the event of a Remote Access security violation. It also sends the appropriate alerting message or display to the referral destination.

   - Referral Destination

     This field requires an entry of an extension, assigned to a station, attendant console, or vector directory number (VDN) that receives the referral call when a security violation occurs. If a VDN is assigned the Time-of-Day routing capability, Call Vectoring may be used to mute the referral call to different destinations based on the time of day or the day of the week. The referral destination must be equipped with a display module unless the Announcement Extension is assigned. Administration of the Announcement Extension is also required if the referral destination is a VDN.

   - Barrier Code Threshold

     This field requires an entry of the minimum number of remote access barrier code attempts that are permitted before a referral call is made. The value assigned to this field, in conjunction with the Time Interval field, determine whether a security violation has occurred. The system default for Barrier code threshold is 10.

   - Time Interval

     This field requires the entry of the time interval in which the remote access barrier code attempts must occur. The range for the time interval is one minute to eight hours (0:01 to 7:59), and is entered in the form "xx:xx." For example, if you want the time interval to be one minute, you enter "0:01 ." If you want the time interval to be seven and one-half hours, you enter "7:30." The system default is 0:03.

   - Announcement Extension

     This field requires an entry of a extension that is assigned to the SVN remote access barrier code violation announcement.

4. Administer an "rsvn-halt" button on any station or attendant console (maximum 1 per system). The SVN button location can be determined by entering the command **display svn-button-location.**

Enable/Disable Remote Access Code

To enable a remote access code that has been disabled following detection of a remote access security violation, or disabled manually with the command **disable remote access,** the user must:

1. Log in to the switch using a login ID with the correct permissions.
2. Enter the command **enable remote access.**

To disable Remote Access, the user must:

1. Log in to the switch using a login ID with the correct permissions.
2. Enter the command **disable login.**

Administering Authorization Code Security Violation Parameters

To administer the Authorization Code component of the SVN feature, the user must:

1. Access the System Parameter Security form by entering the **change system-parameters security** command from the command line interface.
2. When the SVN Authorization Code Violation Notification Enabled field is enabled, the following additional fields appear on the Security-Related System Parameters form:

   - Originating Extension

     This field requires the entry of an unassigned extension that is local to the switch and conforms to the dial plan for the purpose of originating and identifying SVN referral calls for authorization code security violations.

     The originating extension initiates the referral call in the event of a authorization code security violation. It also sends the appropriate alerting message or display to the referral destination.

   - Referral Destination

     This field requires an entry of an extension, assigned to a station, attendant console, or vector directory number (VDN) that receives the referral call when a security violation occurs. If a VDN is assigned the Time-of-Day routing capability, Call Vectoring may be used to mute the referral call to different destinations based on the time of day or the day of the week. The referral destination must be equipped with a display module unless the Announcement Extension is assigned. Administration of the Announcement Extension is also required if the referral destination is a VDN.

   - Authorization Code Threshold

     This field requires an entry of the minimum number of invalid authorization code security violations attempts that are permitted

before a referral call is made. The value assigned to this field in conjunction with the Time Interval field, determines whether a security violation has occurred. The system default for authorization code security violations threshold is 10.

- Time Interval

  This field requires the entry of the time interval in which the authorization code security violations must occur. The range for the time interval is one minute to eight hours (0:01 to 7:59), and is entered in the form "x:xx." For example, if you want the time interval to be one minute, you enter "0:01 ." If you want the time interval to be seven and one-half hours, you enter "7:30." The system default is 0:03.

- Announcement Extension

  This field requires an entry of a extension that is assigned to an SVN authorization code announcement.

- The SVN button location can be determined by entering the command **display svn-button-location.**

Additional Considerations

When implementing the Security Violation Notification feature, bear in mind the following:

- A maximum of one Referral Destination may be administered per switch.
- The Call Coverage, Call Forwarding, and Call Pickup (such as within pickup group) features are not supported for SVN.
- CAS attendants will not receive referral calls from branch locations.
- Referral Destination must be local because SVN does not support a DCS network interface.
- Unlike ACA, Priority Calling is supported for the SVN feature.
- Unlike ACA, Speech Synthesis Circuit pack functionality currently is not supported for SVN.

Hardware Requirements

None.

Hardware Requirements

None.

VDN of Origin Announcement

The VDN of Origin Announcement (VOA) feature provides a short message for an agent to tell the agent about the caller's city of origin or requested service, based on the VDN used to process the call.

Administration

To implement this feature, the following form(s) or sections of the form(s) must be completed.

Form	Field	Form Instructions (Page #)
Attendant Console	Feature Button Assignments	5-35
Call Vectoring	Command Line	5-76
Class of Restriction (COR)	VDN of Origin Announcements	5-93
Recorded Announcements	All	5-244
System-Parameters Customer-Options	VDN of Origin Announcement	N/A
Vector Directory Number	Orig Ann	5-262
Voice Terminals	Feature Button Assignments	5-267

- Attendant Console — If you want the attendant to have a VOA Repeat button so that the attendant can replay a message, you must administer a VOA Repeat button as a feature button. You may not administer more than one VOA Repeat button on a single attendant console.
- Call Vectoring — The VDN for which you are administering a VOA must be in a vector command line.
- Class of Restriction (COR) — An agent's ability to receive VDN of Origin announcements is based on the class of restrictions. Therefore, you must administer one or more classes of restriction that enable agents to receive the VDN of Origin announcements.
- Recorded Announcements — Use this form to administer each VDN of Origin announcement you want to use. You can administer aux-trunk types with queue, without queue, and with barge-in. You can administer integrated types with queue and without queue. You cannot administer analog and integrated repeating announcement types as VDN of Origin Announcements.
- System-Parameters Customer-Options — To use the VDN of Origin Announcements feature, the feature must be enabled on the System-Parameters Customer-Options form, the G3 Version field must contain "V3," and vectoring must be optioned.
- Vector Directory Number — Use this form to specify which announcements you want to use with which vectors.

- Voice Terminals — If you want to have voice terminals equipped with a VOA Repeat button, which enables agents to replay messages, you must administer a VOA Repeat feature button using the appropriate station forms for the voice terminals. Each terminal may have only one VOA Repeat button.

Hardware Requirements

This feature requires the following circuit packs: TN7417, TN763C, or TN763D auxiliary trunk for external announcement devices, and/or the TN750B or later integrated announcernent board for internal announcements.

The feature can operate on any attendant terminal and any other voice terminal. If you want to use the VOA Repeat button, the voice terminals must be equipped with feature buttons. Because of the short length of the announcements, agents should use speakerphones or headsets.

Visually Impaired Attendant Service (VIAS)

Provides voice feedback in either Italian or British English to a visually impaired attendant. The language selected is automatically determined based on which voice synthesis circuit pack is installed in the System.

Each voice phrase is a sequence of one or more single-voiced messages.

Administration

To implement this feature, the following form(s) or sections of the form(s) must be completed.

Form	Field	Form Instructions (Page #)
Attendant Console	Feature Button Assignments VIAS Act/Deact Console stat display stat last oper last voice mess direct trunk group	5-35

- Attendant Console Form — Administer Feature Button Assignments as required.

Hardware Requirements

The TN457 circuit pack is required for British English voice feedback, and the TN433 will provide Italian voice feedback. The TN725 (American English) circuit pack cannot bused.

Voice Terminals

The following provide administrative guidelines for the system's voice terminals. Refer to the referenced forms for specific instructions associated with a voice terminal type.

Administration

To administer Voice Terminals, the following forms must be completed.

Form	Field	Form Instructions (Page #)
Station	All	
10-,20-, or 30-MET Voice Terminal		5-296
500 Voice Terminal		5-303
510D Personal Terminal		5-313
515 BCT		5-313
2500 Voice Terminal		5-303
7101A Voice Terminal		5-303
7102A Voice Terminal		5-303
7103A Voice Terminal		5-303
7104A Voice Terminal		5-303
7303S		5-324
7305S		5-324
7309H Voice Terminal		5-324
7313H Voice Terminal		5-324
7314H Voice Terminal		5-332
7315H Voice Terminal		5-332
7316H Voice Terminal		5-332
7317H Voice Terminal		5-332
7401D Voice Terminal		5-343
7401+ Voice Terminal		5-343
74030 Voice Terminal		5-343
7404D Voice Terminal		5-343
74050 Voice Terminal		5-356
74060 Voice Terminal		5-369
7406+ Voice Terminal		5-369
74070 Voice Terminal		5-369
7407+ Voice Terminal		3-369
7410D Voice Terminal		3-343
7410+ Voice Terminal		3-343

Form	Field	Form Instructions (Page #)
Station	All	
7434D Voice Terminal		5-381
7444D Voice Terminal		5-381
7505D Voice Terminal		5-392
7506D Voice Terminal		5-392
7507D Voice Terminal		5-392
8110 Voice Terminal		5-303
8403B Voice Terminal		5-455
8410B Voice Terminal		5-455
8410D Voice Terminal		5-463
8434D Voice Terminal		5-463
8503D Voice Terminal		5-392
8510D Voice Terminal		5-392
85120D Voice Terminal		5-392
602A1 CALLMASTER Digital Voice Terminal		5-409
603A1/603D1 CALLMASTER Voice Terminals		5-409
Constellation 6538/9 Voice/Data Terminals		5-425
CP9530 Cordless Voice Terminal		5-438
MDC9000/MDW9000 Cordless Voice Terminals		5-431
Terminal Parameters	All	
603A1/603D1 CALLMASTER Voice Terminals		5-443
8403B Voice Terminal		5-443
8410B Voice Terminal		5-443
84100 Voice Terminal		5-443
8434D Voice Terminal		5-443

- Station Forms — Verify or complete all fields as required.

Hardware Requirements

NOTE:
For installations outside the United States of America, refer to Appendix B, "Application Notes," for the appropriate circuit packs.

MET Sets (10-, 20- 30-MET)

A port in a TN735 circuit pack is required for each 10-,20-, or 30- multibutton electronic telephone (MET) to be assigned. A TN735 provides four ports.

Analog Voice Terminals (500, 2500, 7101A, 7102A, 7103A, 7104A)

A port is required on a TN742, TN746B, or TN769 analog line circuit pack, or a TN767 DS1 tie trunk for each analog voice terminal to be assigned. A TN742 and TN769 provides eight ports. The TN746B provides 16 ports for in-building use only. A TN767 provides 24 ports.

Hybrid Voice Terminals (7302H, 7303H, 7303S, 7305H, 7305S, 7309H)

A port is required in a TN762 hybrid line circuit pack for each hybrid voice terminal to be assigned. A TN762 provides eight ports.

Digital Voice Terminals [7401D, 7401+, 7403D, 7404D, 7406D, 7406D, 7406+, 7407D, 7407+, 7410D, 7410+, 7434D, 602A1, 7505D (BRI), 7506D (BRI), 7506D (BRI), 7507D (BRI), 8403B, 8503D (BRI), and 8510D (BRI)]

A port is required on a TN754 digital line circuit pack for each 7401D, 7401+, 7403D, 7404D, 7405D, 7406D, 7406+, 7407D, 7407+, 7410D, 7410+, 7434D, and 603A1 digital voice terminal to be assigned. in the case of the 7505D, 7506D, 7507D, 8503D, and 8510D lSDN-BRI voice terminals (digital, but non-DCP), a port is required on a TN556 ISDN-BRI Line circuit pack.

The 8400-series voice terminals connect to any of the following digital line boards:

- TN754 (4-wire, Mu-law)
- TN413 (4-wire, A-law)
- TN7543 (4-wire, A-law/Mu-law selectable)
- TN2177 (2-wire, 16-port, A-law/Mu-law selectable)
- TN2181 (2-wire, 16-port, A-law/Mu-law selectable)

The TN556 ISDN-BRI Line circuit pack provides12 ports. When administered in multipoint (passive bus) configuration, a port can be shared by two endpoints. Each endpoint can be a voice-only or stand-alone data endpoint. For ISDN-BRI applications, a TN778 Packet Control circuit pack is also required to provide ISDN-BRI connectivity. The Packet Control circuit pack provides ISDN signaling links with Link Access Protocol for the D-channel.

510D Personal Terminal and 515 Business Communications Terminal (BCT)

A port is required on a TN754 digital line circuit pack for each 510D or 515 BCT to be assigned. A TN754 provides eight ports.

603A1 and 603D1 CALLMASTER Voice Terminals

The 603-type voice terminals require one of the following digital line circuit boards:

- TN754 (4-wire, Mu-law)
- TN413 (4-wire, Mu-law)
- TN754B (4-wire, A-law/Mu-law selectable)

Constellation Voice/Data Terminal

The Constellation (6536) voice/data terminals require one of the following adjunct voice terminals:

- 7401D
- 7406D
- 602A1
- 603A1, 603D1

These terminals also require a TN754B or TN413 digital line board. The Constellation terminal also requires a 6544 cluster controller as the data connection to the host.

CP9530 Cordless Voice Terminal

The CP9530 cordless voice terminal terminates on any of the analog line boards that support Mu-law commanding modes.

MDC9000 and MDW9000 Cordless Voice Terminals

The MDC9000 and MDW9000 cordless voice terminals require a TN762 hybrid line board.

VuStats

Allows agents and supervisors to view, on voice terminals equipped with displays, a call center's real-time statistics. The display shows agent, split/skill, vector directory number (VDN), and trunk group report data without requiring additional Manager Call Management System (CMS) or Basic Call Management System (BCMS) terminals. This feature allows agents and supervisors to monitor their own progress and that of the call center. Agent-related data can be based on agent or VDN extension or on agent login IDs.

The real-time data displayed by VuStats is collected by BCMS, a feature which provides real-time and historical reports to assist you in managing individual agents and call center shifts. VuStats can be used in conjunction with BCMS. Although BCMS does not have to be enabled in order to use VuStats, certain forms and fields that are related to BCMS need to be administered. (BCMS can operate without VuStats.)

Administration

To implement this feature, the following form(s) or sections of the form(s) must be completed.

Form	Field	Form Instructions (Page #)
Agent Login ID*	All	*5-25*
Access Trunk Group	Measured	4-137
Attendant Console	Feature Button Assignments	5-35
BCMS/VuStats Login ID*	Login ID, Name	5-56a
Feature-Related System-Parameters	BCMS/VuStats Abandoned Call Trier Vustats	5-168
Hunt Group	ACD Acceptable Service Level Measured Objective	5-189
System-Parameters Customer-Options	ACD BCMSA/VuStats Login ID Version VuStats	N/A
Voice Terminals	Feature Buttons	5-267
VuStats Display Format	All	5-295a

* Dependent on whether you use Expert Agent selection (EAS) or BCMS. Refer to the following field explanations.

- Access Trunk Group Form — If you require information about one or more trunk groups, you must enter either "internal" or "both" in the Measured field for each trunk group you administer and want included in the reports. Note that you cannot enter these values unless either the BCMS option or

the VuStats option is enabled on the System-Parameters Customer-Options form.

- Agent Login ID Form — If you are using EAS (whether you are using BCMS or not) you must enter each agent login ID and name. If you are not using EAS and you want to track agent activity by login ID, enter the login ID on the BCMS/VuStats Login ID form. In the EAS environment, login IDs are limited in length to five digits and must be extensions in the dial plan for BCMS and VuStats; without EAS, login IDs can be up to nine digits in length.
- Attendant Console Form — Enter "vu-display" for one or more of the FEATURE BUTTON ASSIGNMENT fields.
- BCMS/VuStats Login ID Form — If you want to be able to track call center activity by agent login ID, but you are not using EAS, you must enter on this form the login ID and name of each agent you want tracked by BCMS or VuStats. If you are using EAS (whether you use BCMS or not), you must enter the login ID and name on the Agent Login ID form instead of on the BCMS/VuStats ID form. (Only agents using one of the administered login IDs can successfully log into a split measured by BCMS or VuStats.)

  NOTE:
  When agents administered for auto-available splits (AAS) are automatically logged in, login IDs are automatically generated for them, which are the physical extensions. These login IDs may or may not match the ACD Login Identification Length field. These special login IDs can be identified by their names, "auto-avail." You cannot remove or change these numbers unless you remove the agent extension from the associated hunt group, remove the hunt group from BCMS measurement, or make the hunt group non-AAS.

- Feature-Related System Parameters Form — At the BCMS Measurement Interval field, you can enter "half-hour' or "hour" if the BCMS or the VuStats option is enabled on the System-Parameters Customer-Options form. If neither of these features is optioned, and if you enter a value in the BCMS Measurement Interval field, the system displays an error message.

  You may choose to have phantom calls (calls of a very short time period) treated as abandoned calls on BCMS and VuStats. At the BCMS/VuStats Abandon Call Timer field, enter a number from 1 to 10 (or leave the field blank to accept the default 0) to specify the maximum number of seconds of talk time for a call be to considered abandoned and reported as an abandoned call in the BCMS report and VuStats display. For a split, the abandon time is the period from the time the call was queued until the agent or answering station hangs up. For VDN, the abandon call time is the period from the time the call encountered the VDN until the agent or answering station hangs up. For the trunk group, the abandon time is the period from the holding time for the trunk. Any time an agent spends on a call that is within the abandon call time is counted as "other" time,

therefore the agent does not have the call recorded. Any call that has been held, transferred, or conference is not considered a phantom call.

At the VuStats field, enter "y" to enable the VuStats feature. If you want to track call-center activity by login ID but you are not using EAS, you must specify the maximum login ID length (any number greater than zero) at the ACD Login Identification Length field. This step is required by the BCMS/VuStats Login ID form before you can enter agent login IDs.

- Hunt Group Form — The ACD field must contain "y." If you require VuStats information about one or more hunt groups, you must enter either "internal" or "both" in the Measured field for each hunt group you administer and want included in the displays. If neither of these features is optioned, and if you enter a value in the BCMS Measurement Interval field, the system displays an error message. (Note that the Measured field does not appear on the Hunt Group form unless the ACD field on the Hunt Group form contains a "y," which in turn requires that ACD be enabled on the System-Parameters Customer-Options form.) The Acceptable Service Level field does not appear on the Hunt Group form unless the BCMS Service Level option or the VuStats option is enabled on the System-Parameters Customer-Options form and either "internal" or "both" appears in the Measured field on the Hunt Group form. The Objective field contains a number representing the split or skill objective. The value is user-defined. You can use this value in a customized display format if the value in the Object Type field on the Display Format form is either "vu-agent," "vu-agent-extension," or "vu-split." The Objective field does not appear on the Hunt Group form unless VuStats is enabled on the System-Parameters Customer-Options form and either "internal" or "both" is entered in the Measured field on the Hunt Group form.

- System-Parameters Customer-Options Form — You must have "V3" in the G3 Version field. "ACD" must be enabled. At the VuStats field, enter "y" to enable VuStats. If you are using EAS with BCMS, you must enter "y" in the BCMS/VuStats Login ID field. Also, if you want BCMS to track agents based on login ID, you must enter "y" in the BCMS/VuStats Login ID field. Please contact an authorized AT&T representative to change the System-Parameters Customer-Options Form.

  NOTE:
  We recommend that all agents are logged off before you instigate any changes to the BCMS/VuStats Login ID field. Also, BCMS/VuStats login IDs cannot be optioned if the you have CMS release R2 administered. This field cannot be optioned if the ACD Login Identification Length on the Feature-Related System Parameters form is administered as "0" (zero).

- Voice Terminals Forms — Each voice terminal form is different. For those that allow displays, enter "vu-display" at a feature button field for each VuStats format display you want available on that terminal. Then, enter the number of the format display and, optionally, the ID of the information you want to display (split, trunk group, agent, or VDN extension).

- VuStats Display Format Form — This form enables you to specify the information you want to display and how you want it displayed. You can create up to 25 different display formats. Compete all the fields in the form for each format you want to create.

Hardware Requirements

VuStats is available for DCP and BRI terminals equipped with displays and for attendant consoles. It is also available for PC products that use a DCP or BRI protocol, such as PC/PBX and PC/ISDN.

Wide Area Telecommunications Service (WATS) Trunk Group

A WATS Trunk Group provides for trunk connections between the system and a WATS (or 800 service) office.

Administration

To assign a WATS trunk group, the following form must be completed.

Form	Field	Form Instructions (Page #)
Trunk Group (WATS)	All	4-375

- Trunk Group (WATS) Form — Complete all fields as required.

Hardware Requirements

NOTE:
For installations outside the United States of America, refer to Appendix B, *Application Notes,* for the appropriate circuit packs.

A port on a TN747B CO Trunk, or TN767 or TN464 DS1 Interface circuit pack is required for each WATS trunk to be assigned. A TN747 provides eight ports, a TN767 provides 24 ports, and a TN464D provides 32 ports.

AAR Analysis Table

This form is used to map customer-dialed numbers (dialed strings) to routing patterns, using up to 18 digits.

NOTE:
The Automatic Route Selection feature must be enabled on the System-Parameters Custom-Options form before associated ARS forms can be administered.

Administration Commands

The following administration commands can be used to access the ARS Analysis Table form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
change	ars analysis	Enter digits between 0-9, 'x' or 'X' (dialed string) ['part' 1-8] ['min' 1-MAXl
display	ars analysis	Enter digits between 0-9, 'x' or 'X' (dialed string) ['part' 1-8] ['min' 1-MAX] ['print' or 'schedule']
list	ars analysis	[start-dialed string] ['count' 1-MAX ['rp' 1-MAX or r1-r32] ['part' 1-8] ['node' (1-MAX], ['70-node'(1-MAX)] ['print' or 'schedule']
list	ars route chosen	Enter dialed number, [partition (1-8)], ['print' or 'schedule']

- Brackets [ ] indicate the qualifier is optional. Single quotes ('') indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered. MAX is the maximum number available in your system configuration. Refer to the Capacity Table in Appendix C.

Form Instructions

Make assignments as required for the following fields on the form.

- **Percent Full** — 3-character display-only field. Displays the percentage of the System's memory resources that have been used. A common pool of memory resources is shared between the ARS and AAR Analysis tables, the ARS and AAR Digit Conversion tables, and the Toll Analysis table.

  If this field display indicates that the System memory resources are in jeopardy of becoming full (100%), perform any of the following to "free-up" memory resources:

  — Delete unnecessary entries from any of the shared resources tables.

  — Utilize RHNPA tables for 6-digit ARS routing.

  — Reduce dialed string field entries to shortest posssible length that accomplishes the desired function.

■ **Partitioned Group Number** (PGN) — When completing a paper form, enter the PGN to be associated with this table. Default is 1.

■ **Dialed String** —Enter the dialed string of significant digits (do not use a toll prefix unless absolutely necessary). Up to 18 characters consisting of the digits 0 to 9 are allowed. A wildcard letter “x” or “X” may be used to substitute for any digit occurring in the string at the character position where used. Valid entries are 0 to 9, “x”, “X", or blank default is blank.

NOTE:

The user-dialed digits are matched to the Dialed String field entry that most closely matches the dialed number (referred to as the “longest match”). For example, if a user dials 957-1234 and the ARS Analysis Table has dialed string entries of 957-1 and 957-123, the match is on the 957-123 entry. In addition, an exact match is made on dialed string entries of the same number of digits in cases where wildcard characters (Xs) are used. For example, if 411 is dialed and the table has Dialed String entries of 411 and Xl 1, the match is on the 411 entry.

■ **Min** — Enter the minimum number of digits needed to validate and route the call. Default is blank.

■ **Max** — Enter the maximum number of digits needed to validate and route the call. Default is blank.

■ **Rte Pat** (Routing Pattern) — Enter the routing pattern number, a pointer to an associated Remote Home Number Plan Area (RHNPA) form (r1 to r32) to be used to route the call once all identifying digits have been received, “node” to use node number routing, “n/a” to indicate that routing is not applicable to this PGN, “deny” to block the call, or blank; default is blank.

- **Call Type** — Valid call types are:

Call Type	Description
emer*	emergency call (for MFE only at this time)
fnpa	10-digit NANP call(11 digits with Prefix Digit “1”)
hnpa	7-digit NANP call
int	international
iop	international operator
locl*	local service
lpvt*	local private
natl	non-NANP domestic call
npvt*	national private
nsvc*	national service
op	operator
svc	NANP service
unk	non-NANP domestic or international call

* Available for MFE only.

NOTE:
In the table above, NANP stands for *North American Numbering Plan.*

- **Node Num** — The number of the destination node for the dialed string, if node number routing is used.

Table 4-2 provides a listing of all ARS Analysis default translations.

NOTE:
Any dialed digit string not accounted for on the table is considered invalid and the call is routed to intercept. These default translations are used for call processing regardless of whether ARS has been optioned for on the switch.

The translations shown on Table 4-2 appear only once in the switch’s memory but are displayed in sorted order (including additions) on each of the eight possible ARS Analysis Table forms when displayed.

Table 4-2. ARS Analysis Default Translations

Dialed String	Total Digits Min.	Total Digits Max.	Route Pattern	Call Type	Node Num
0	1	1		op	-
0	8	8		op	-
0	11	11		op	-
00	2	2		op	-
01	10	23		iop	-
011	10	23		int	-
1	11	11		fnpa	-
10XXX0	6	6		op	-
10XXX0	16	16		op	-
10XXX00	7	7		op	-
10XXX01	15	23		iop	-
2	7	7	1	hnpa	-
3	7	7	1	hnpa	-
4	7	7	1	hnpa	-
5	7	7	1	hnpa	-
6	7	7	1	hnpa	-
7	7	7	1	hnpa	-
8	7	7	1	hnpa	-
9	7	7	1	hnpa	-
20	10	10		fnpa	
21	10	10		fnpa	
30	10	10		fnpa	
31	10	10		fnpa	
	.				
90	10	10		fnpa	
91	10	10		fnpa	
x11	3	3		svc	-

Legend:

fnpa - foreign number plan area (10-digit call)
hnpa -home number plan area (7-digit call)
int - international
iop - international operator
op - operator
svc - service
X - any digit (0 to 9)

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ARS DIGIT ANALYSIS TABLE
Partitioned Group Number: __ Percent Full: ____

Dialed String	Total Min	Total Max	Rte Pat	Call Type	Node Num	Dialed String	Total Min	Total Max	Rte Pat	Call Type	Node Num

Screen 4-7. ARS Analysis Table Form

Digit Absorption

```
                              DIGIT ABSORPTION                    Page  1 of 1

                            List Number: _
ABSORPTION TREATMENT INFORMATION (All selections must be from same group)
               Choice      Meaning
  Group I.       A        Digit not absorbed.
                 B        Digit absorbed repeatedly.
                 C        Digit absorbed once with no further absorption.
  Group II.      A        Digit not absorbed.
                 D        Digit absorbed only if it is the first digit.
                 E        Digit absorbed only if it is the second digit and
                          the first digit was already absorbed.
                 F        Digit absorbed only if it is the first or second digit.
ABSORPTION TREATMENT ASSIGNMENT (Select treatment (A-F) for each digit below)
        0: A          2: A          4: A          6: A          8: A
        1: A          3: A          5: A          7: A          9: A
```

Screen 4-12. Digit Absorption Form (Page 1 of 1)

DS1 Trunk Service

The maximum number of DS1 circuit packs (TN722, TN722B, TN767 [any suffix], TN464B, or TN464 [any suffix]) that may be administered in the system will vary depending on system configuration. Refer to the Capacity Table in Appendix C for maximum values.

Hardware Environment

DS1 Circuit Packs Scope of Usage

Both domestic and international DS1 circuit packs are supported in G3V3. These boards include those that provide both 24- and 32-channel operation.

Refer to Appendix B, *Application Notes,* for a complete listing of DS1 circuit packs and country support.

DS1 Circuit Pack Usage

- The TN722 and TN722B DS1 trunks may only be used for data and voice applications in non-ISDN capacity.
- The TN767 24-channel DS1 may be used for data and voice in non-ISDN and ISDN applications.
- The TN464B DS1 trunks may be used for data and voice in non-ISDN and ISDN 32-channel applications.
- TN464C (and later versions) DS1 trunks may be used for data and voice in non-ISDN and ISDN 24- and 32-channel applications.

Wideband Switching, and its associated Roll About Video feature, require the use of the TN464C (or later release) UDS1 circuit pack.

Roll About Video allows the sharing of video equipment between offices using wideband video rates. Two or more rooms are provisioned for video connectivity to the Switch but have no video equipment. A shared portable video unit is simply rolled into any of these rooms, plugged into the wall jack, and is operational.

Signaling Parameters

The following table lists some of the operational and signaling parameters for each DS1 interface. This is not a complete list of all the parameters; this is a list of ones which when grouped together make it easier to understand the DS1's capabilities and administrable choices. This table reflects the enforced combinations of these parameters.

DS1 Circuit Packs					
Board Code	**Allowed Trunk Members**	**Bit Rate**	**Companding**	**Signaling Mode**	**Trunk Type[1]**
TN722	1-23 1-24	1.544	mulaw	common-chan robbed-bit	Tie, DMI-BOS, CO[2] Tie
TN722B	1-23 1-24	1.544	mulaw	common-chan robbed-bit	Tie, DMI-BOS, CO[2] CO/DID/Tie
TN767D[6]	1-23 1-24 1-23 (24th is D-chan) 1-24	1.544	mulaw	common-chan robbed-bit isdn-pri[5] isdn-ext[5]	Tie, DMI-BOS, CO[2] CO/DID/Tie ISDN ISDN
TN464B[3]	1-30 1-31 1-31	2.046	alaw/mulaw[4] alaw	CAS isdn-pri isdn-ext	CO/DID/Tie ISDN ISDN
TN464C,D,E,F[6]	1-23 1-24	1544	mulaw	common-chan robbed-bit	Tie, DMI-BOS, CO[2] CO/DID/Tie
	1-23 (24th is D-chan) 1-31 (16th is D-chan)	1.544[5] 2.046	alaw/mulaw	isdn-pri	ISDN
	1-24 1-31	1.544[5] 2.048	alaw/mulaw	isdn-ext	ISDN
	1-30	2.048	alaw/mulaw	CAS	CO/DID/Tie

NOTES:

1. CO is any of the following trunk types: co, fx, wats.
   Tie is any of the following trunk types: access, tie, tandem, rit aplt.
2. Common-Chan DS1 boards used in 00 trunk groups must have a Trunk type of “auto/...”
3. The TN464B's Commanding is based upon the system level companding administered by the user.
4. ISDN-PRI calls are not guaranteed to work for the TN464B if the system’s Companding is set to mu-law.
5. Mixed Mods signaling is allowed. This means that if the Signaling Mode is “isdn-ext”, or “isdn-pri”, a port from that circuit pack may be used in any trunk group that allows “robbed-bit” signaling.
6. Integrated CSU functionality is only available with the TN767E and TN464F DS1 circuit boards. (integrated CSU is available in June, 1994,)

The DS1 interface board TN767 provides 24 ports that correspond to the 24 DS0 channels. A DS1 “frame” contains 193 bits (8 bits per channel times 24 channels plus 1 frame bit). The DS1 frame rate is the same as the switch frame rate, 8,000 frames per second.

The TN722, TN722B and TN767 allow all or a subset of the following signaling options. Each signaling option is described below.

- In the “common-channel” signaling mode, 23 channels are available for voice or data, including AVD and DMI services, and signaling information for all channels is multiplexed on the 24th-channel.
- In the “robbed-bit” mode, all 24 channels may be used for voice, and the least significant bit of the eight-bit channel codes is “robbed” in every sixth frame to transmit signaling status for the corresponding channels. This is known as in-band signaling.

- In the “isdn-pri" signaling mode, each DS1 circuit pack provides a maximum of 23 trunks (channels). Trunks of either Robbed Bit signaling or ISDN-PRI can be assigned to the same span resulting in mixed signaling types. For ISDN-PRI configuration the 24th channel is always reserved as an out-of-band signaling channel.
- In the “isdn-ext” signaling mode, the board still uses ISDN signaling, but the 24th channel on the board will be used as a B-channel (bearer channel) rather than as a D-channel. All trunks on this board will be signaled either using inband robbed-bit signaling or by an ISDN D-channel on another DS1 interface.

The DS1 interface boards TN464C and later releases provide 24 channels using the above signaling modes. The TN464B and later releases provide 32 channels using the following signaling options.

- In the “CAS" signaling mode, 30 channels are available. Channel 16 is reserved for the signaling, and channel 0 is reserved for framing; however, the user will administer from 1-30. The mapping to the correct channel will be made internally.
- In the “isdn-pri” signaling mode, each DS1 circuit pack provides a maximum of 30 trunks. For the ISDN-PRI 32-channel configuration, the 16th channel is always reserved as an out-of-band signaling channel.
- In the “isdn-ext” signaling mode, the board still uses ISDN signaling, but the 16th channel on the board will not be used as a D-channel, but it will be used as a B-channel (bearer channel). This will allow the total 31 channels to be used as B-channels. All trunks on this board will be signaled by an ISDN D-channel on another DS1 interface.

Other Circuit Packs

For ISDN capabilities the Processor Interface (PI) board is required. The PI board terminates layer 2 (LAPD) of the PRI protocol.

Administration Commands

The following administration commands can be used to access the DS1 Circuit Pack form. In some cases, just the most commonly used commands are shown. Refer to “Administration Commands” in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
add	ds1	[P]Css**
change	ds1	[P]Css(board)
display	ds1	[P]Css
list	measurements ds1	location
list	measurements ds1 -log	location
remove	ds1	[P]Css

* Brackets [ ] indicate the qualifier is optional.

** [P] — part of qualifier representing pnn
C — part of qualifier representing carrier (A-F)
ss — part of qualifier representing slot number

Form Instructions

Make assignments as required for the following fields on the form:

CAUTION:
Once administered it may not be possible to make changes to fields without removing associated translations.

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- **Location** — This is a display-only field when the form is accessed using an administration command such as *add* or *change.* Enter the DS1 Interface circuit pack port location when completing a paper form. Enter seven characters.

  The entry breaks down as follows:

Character	Meaning	Value
1-2	Cabinet Number	01 through 22 (G3r V2) 01 through 03 (G3i V2) 01 (G3s V2)
3	Carrier	A through E
4-5	Slot Number	01 through 20
6-7	Circuit Number	01 through XX (depending on circuit pack type)

  The location should also be identified for record purposes on the Port Assignment Record and the Circuit Pack Administration form.

- **Name** — Enter the name of the DS1 link (limit 15 characters). Typically, this is the destination of the link.

- **Bit Rate** — Enter "1 .544" for the 24-channel DS1 rate. Enter "2.048" for the 32-channel DS1 rate (TN464 only).

NOTE:
Once an *add ds1* operation is complete (that is, the DS1 form has been submitted) the Bit Rate field can not be changed. To change the Bit Rate, execute a *remove ds1* command followed by an *add ds1* command then readminister the DS1 form.

- **Line Coding** — Enter "b8zs" (bipolar eight zero substitution), "zcs" (zero code suppression), "hdb3" (high density bipolar 3) or "none". This method must match the method used on the other end of the link. This entry indicates which line coding format will be used to ensure that the data meets T1 carrier requirements. When the DS1 circuit pack is used for ISDN, the ISDN D-channel data is inverted when "zcs" is entered and not inverted when "b8zs" is used.

  Bipolar eight zero code suppression (b8zs) is an alternate line coding technique which uses a bipolar violation to ensure adequate "ones" density in a bit sequence. Eight zeros in an 8-bit sequence triggers the bipolar violation.

  Zero code suppression (zcs) is a line coding method that checks for all zeros in an 8-bit time slot, and if all zeros exist, bit 2 is changed from a 0 to a 1. This method of line coding ensures adequate timing recovery of regenerative 56 kbps or less digital facilities.

  High Density Bipolar 3 (hdb3) and "none" are only applicable when the Bit Rate field is "2.048".

- **Line Compensation** — Enter a number from 1 to 5 as follows (default is "1"):
  — For 22-gauge ABAM cable terminated on a DSX-1 cross-connect:

Compensation	Length (feet)
1	000-133
2	133-266
3	266-399
4	399-533
5	533-655

  — For 22-gauge ABAM cable terminated on DS1 terminal equipment such as a D4 Channel Bank or another System:

Compensation	Length (feet)
1	0000-0266
2	0266-0532
3	0532-0798
4	0798-1066
5	1066-1310

- **Framing Mode** — Enter “d4” or “esf” (default). This mode must match the method used on the other end of the link. The network diagram should indicate which choice for the particular DS1/T1-span. D4 is a framing format of 12 frames for analog representation on T1 carrier using DS1 signals.

- **Signaling Mode** — Enter “CAS,” “common-chan,” “robbed-bit,” “isdn-pri,” or “isdn-ext” (default is “common-chan”). This mode must match the method used on the other end of the link.

  Common Channel Signaling (common-chan) is an industry-standard signaling technique in which the signals on one facility control the operation of several facilities. When applied to DS1 operation, it is a signaling technique in which any 1 of the channels carries the signals for the other channels. AT&T implementation of common channel signaling uses the last channel for carrying the signals. This signaling technique is a much broader concept than 24th channel signaling and is not limited to DS1 facilities. When the system is configured for Facility Associated Signaling, the 24th channel signaling technique uses the 24th channel in a DS1 facility to carry signals for the remaining 23 channels; also known as “clear channel,” ”out-of-band,” or Alternate Voice Data (AVD) signaling.

  CAS is similar to common channel signaling, except that it is used only when the Bit Rate field is 2.048 (the trunk is used with a CEPT1 (El) interface). CAS provides framing on channel 0. Signaling for the 30 bearer channels is done on the 16th channel. This is a CCITT standard interface signaling mode.

  Robbed-Bit Signaling (robbed-bit) is a per-channel signaling technique for transmitting signaling bits within each band on each of the channels in a DS1 facility. The least significant bit in every sixth transmitted information frame is “robbed” and replaced by a signaling bit. Also called “in-band” signaling. For voice tie trunks, enter “robbed-bit” and “common-chan” for alternate voice data (avd) trunks.

  The choice of “isdn-pri” requires that the TN767 or TN464 (C or later) DS1 interface circuit pack be used. This choice enables ISDN-PRI signaling to be carried over the last channel of the DS1 interface, and causes the “DMl-BOS” field not to be displayed and the “Connect” field to be displayed on the form.

  The choice of “isdn-ext” also requires use of the TN767 or TN464 (C or later) DS1 interface circuit pack. This choice enables the TN767 or TN464 to use ISDN signaling, but the 24th channel will not be used as a D-channel. When the system is configured for Non-Facility Associated Signaling, all channels on a DS1 facility may be used for voice and/or data. The signaling for these channels is provided by the 16th channel (for 32-channel facilities) or the 24th channel (for 24-channel facilities) on another DS1 facility. The system may be configured for Facility and Non-Facility Associated Signaling at the same time. Refer to the “Facility and Non-Facility Associated Signaling” feature in Chapter 3.

■ **Interface** — Only displayed when the “Connect” field is “pbx.” Valid entries are “network,” “peer-master,” “peer-slave,” or “user” (system default). Specify whether the PBX corresponds to the “network” or “user” side of the interface, which is needed for the ISDN-PRI Layer 2 protocol and is also used at Layer 3 to handle glare conditions. For other cases, the required entry is inferred from the “Connect” field entry: a host connection implies a network interface, and a network connection implies a user interface.

NOTE:
When the far end is a DEFINITY Generic 3i or Generic 3r system, the “Interface” field on one end of the connection must be “user” and the other end must be translated as “network.”

For PRI private network protocol layer 2 operations, two other values are possible: “peer-master" and “peer-slave.” Entering either of these values causes two additional fields to appear: “Peer Protocol” and “Side.”

■ **Country Protocol** — Enter 1 to 18 to indicate the type of protocol and signaling that must be used on the line. These are determined by the country where the trunk terminates. Refer to Appendix B, *Application Notes,* for a complete listing of country codes.

■ **Peer Protocol** — This field is displayed if the value “peer-master” or “peer-slave” is chosen for the “Interface” field. This allows you to administer the PEER level protocol that will operate in the private network. At this time, “ecma” is the only possible value; it is the default value as well. The value “ecma” is necessary for implementing QSIG Global Network Basic Call.

■ **Protocol Version** —This field appears if the Country Protocol is “1” (USA) or “13” (Germany), the signaling mode is “isdn-pri,” Connect is “pbx” or “network,” and the Interface is “user” or “Network.” Enter “a” or “b" as appropriate using the following guidelines:

— If the Country Code is 1:

+ Enter “a” for the AT&T G3V2 protocol.

+ Enter “b” for the NI-2/Bellcore protocol (applicable in G3V3 and higher versions).

— If the Country Code is 13:

+ Enter “a” for the ITR6 protocol.

+ Enter “b" for the ETSI protocol.

WARNING:

The AT&T Switched Network Protocol does not support restricted displays of connected numbers. Therefore, if you administer the 1a country-protocol/protocol-version combination on the DS1 form, you cannot administer the "Send Connected Number" field to "r" (restricted) on the ISDN-PRI Trunk Group form as this causes display problems.

Refer to the section in this book on ISDN-PRI for more information.

■ **Side** — This field appears if the value "peer-master" or "peer-slave" is chosen as the "Interface" field value. This value is used for call collision (glare) resolution at layer 3. The default value of the field changes depending upon which value the "Peer Protocol" field contains. The default "a" is paired with "peer-master" and the default "b" is paired with "peer-slave." The reason for these defaults is that logically, side "a" is the "master" at layer 3, in that side "a" wins the contested trunk in call collision situations. However, it is critical that this administration correctly pairs with the far-end administration. If the far-end is administered as the "b" side, this field should beset to "a" regardless of whether layer 2 designation is peer-master or peer-slaved, and vice versa.

■ **Connect** — Only displayed when the "Signaling Mode" field is "isdn-pri." Specify what is on the far end of the PBX to control Layer 3 protocol properly. If "pbx" is entered, the "Interface" field is displayed. When "line-side" is entered, this implies that the switch is acting as the network side of the isdn-pri interface. This is required to support the Roll About Video capability. Valid entries are "network" (system default), "host," "line-side," and "pbx."

■ **Interconnect** — Enter "pbx" or "CO." If pbx is selected, the trunk operates as a tie trunk. If CO is selected, the trunk operates as a CO or DID trunk.

■ **CRC** — Enter "y" to indicate that a cyclic redundancy check is to be performed on transmissions that the board receives.

■ **Interface Commanding** — Enter "alaw" or "mulaw." This field is displayed only if the board is a TN464C or later.

■ **Idle Code** — Enter the 8-digit string to be sent out on idle DS0 channels. The string to be entered depends upon the country where the trunk terminates. Refer to the individual country coverage in Appendix B for valid entries in this field.

■ **DMI-BOS** — Only displayed when the Signaling Mode is "common-chan" and a TN722B or TN767 circuit pack has been installed. Enter "y" (default) to activate the Digital Multiplexed Interface Bit Oriented Signaling (DMI BOS) mode.

Digital Multiplexed Interface/Bit-Oriented Signaling (DM1/BOS) is a 24th channel signaling scheme using a DS1 facility that uses 23 message channels and 1 signaling channel (24th). DM1/BOS has greater capacity (ability to carry 64 kbps channels) than the 24th-channel Robbed-Bit

Signaling scheme. Entering “n” indicates the DS1 will provide the AT&T proprietary format; “y” indicates the DS1/DMI interface will provide the DMI format.

- **Slip Detection** — Enter “y” to enable the slip-rate status of this circuit pack to be used by maintenance software to determine whether an excessive frame slip rate exists. Enter “n” (default) when DMI is used or when testing is not required.

  NOTE:
  Those DS1/T1 facilities that are used to provide the primary and secondary synchronization references should be administered for slip detection “y.” Typically, those other DS1/T1 spans that are used for data applications and which are used as synchronization service should also be administered for slip detection. This excludes all T1-spans connecting channel banks, unless the channel bank is externally timed. Normally, those DS1/T1 spans that are used exclusively for voice and that are not designed as the primary or secondary synchronization source, should be administered for slip detection “n.” Refer to the network synchronization diagram to determine which option to choose.

  The digital switch maintains a slip count record for each DS1 interface. The slip count is used to determine if the T1-span is experiencing errors and, if so, the severity of the errors (type alarm). Option “y” enables switching between the primary, secondary, or internal high-accuracy clock.

  NOTE:
  If as many as 50 percent of those spans that are administered for slip detection are experiencing slips (with respect to the primary), then a decision is made to switch to the secondary.

- **Near-end CSU Loopback Test—** Displayed only if the Near-end CSU Type is “external.” Enter “y” to allow maintenance test 160 or “n” to deny testing. This test is not possible unless the DS1 is connected to appropriate equipment such as a DSX-1 cross-connect or a DMI interface. The response should be “n” (default) unless the testing is extremely important.

- **Near-end CSU Type** — Valid only when the Bit Rate is 1.544 and the Country Protocol is 1 (U.S.). Enter “external,” “integrated,” or “none” (default). The value “external” indicates the CSU is a wall-mounted or a non-AT&T product; this value causes the Near-end CSU Loopback Test field to appear. The value “integrated” indicates the CSU is a 120A1 CSU module attached to a TN464F or TN767E (or later version) DS1 circuit board (the CSU is integrated with the DS1 circuit board) and allows automatic and manual loopback testing to an integrated CSU module. The value “integrated” also requires that the G3 version be V3, and the DS1 board be TN767E (or greater) or TN464E (or greater), and that the CSU be plugged in. The value “none” indicates no CSU is attached to the DS1 facility.

- **Alarm When PRI Endpoint Detached** — Displayed only when the “Connect” field is “line-side.” Enter “y” if the UDS1 circuit pack is connected to Roll About Video equipment. Normally if the video equipment is disconnected, off-board alarms are raised to indicate the loss of connectivity from the system. By entering “y” in this field, when the UDS1 circuit pack detects a loss of signal, it is assumed the equipment was disconnected by the user and no alarms will be raised.

  Valid entries are “y” (default), and “n.”

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- **Network Management Protocol** — Appears only when the Framing Mode is “esf.” Enter “tabs” (default).

- **Send ANSI-T1.403 One-Second Performance Reports—** Appears only when the Framing Mode is “esf” and the Network Management Protocol is "tabs"

- **Far-end CSU Address** — Appears only when the Framing Mode is “esf” and the Network Management Protocol is “tabs.” This field administers the transmit direction address used for the **ESF data link** command. Enter “a” or “b” (default).

NOTE:
The following four fields appear only if the Near-end CSU Type is “integrated”:

- **Transmit LBO** — (Transmit Line Build-Out) The amount of fixed loss inserted in the transmit direction. Enter 0db (default), “-7.5db,” “-15db,” or “-22.5db.”

- **Receive ALBO** — (Receive Automatic Line Build-Out) The gain inserted automatically in the receive direction to compensate for line losses. Enter “26db" (default) or “36db.”

- **Upon DTE LOS** — identifies how the signal should be handled if the signal is lost (LOS) from the DTE. Enter “loopback” (default) for returning the network signal to the network, or enter “ais” to send an unframed all-ones signal to the network (the AIS or “Blue Alarm”).

- **Supply CPE Smart Jack Power** — Enter “y” if the DS1 board and ICSU should supply power to the CPE Smart Jack equipment. Otherwise, enter “n” (default).

```
                              DS1 CIRCUIT PACK

              Location: _____                          Name: _______________
              Bit Rate: _____                   Line Coding: _______
     Line Compensation: _                       Framing Mode: _______
        Signaling Mode: ___________
               Connect: _________                    Interface: ___________
          Interconnect: _                   Country Protocol: ________
                                                         Side: _ *
    Interface Commanding: _                               CRC? _
              Idle Code: _______
                DMI-BOS? _

                            MAINTENANCE PARAMETERS

         Slip Detection? _                  Near-end CSU Type: external
                                    Near-end CSU Loopback Test? n
```

Screen 4-13. DS1 Circuit Pack Form (Page 1 of 1)

***** The Side field appears when the Interface is ”peer-master” or “peer-slave.”

```
                              DS1 CIRCUIT PACK

               Location: _____                          Name: ________________
               Bit Rate: _____                     Line Coding: ____
    Line Compensation:                             Framing Mode: __
       Signaling Mode: __________
              Connect: _________                      Interface: ___________
         Interconnect: ____                       Peer Protocol: ________
                                                Protocol Version: _ *
  Interface Commanding: _____                             CRC? _
             Idle Code: ________
               DMI-BOS? __

                           MAINTENANCE PARAMETERS

       Slip Detection? _                    Near-end CSU Type: external
                                      Near-end CSU Loopback Test? n
```

Screen 4-13a. DS1 Circuit Pack Form (Page 1 of 1)

* The Protocol Version field appears when the interface is ''network" or ''user," the Signaling Mode is "isdn-pri," the Country Protocol is"1" or "13," and the Connect is "pbx."

```
                              DS1 CIRCUIT PACK

               Location: 01A07                          Name:
               Bit Rate: 1.544                     Line Coding: zcs
    Line Compensation: 1                           Framing Mode: esf
       Signaling Mode: CAS

         Interconnect: pbx                  Country Protocol: 1

  Interface Commanding: mulaw                             CRC? n
             Idle Code: 11111111


MAINTENANCE PARAMETERS

       Slip Detection? n                    Near-end CSU Type: integrated
```

Screen 4-13b. DS1 Circuit Pack Form (Page 1 of 2)

```
                              DS1 CIRCUIT PACK

ESF DATA LINK OPTIONS


                     Network Management Protocol: tabs
Send ANSI-T1.403 One-Second Performance Reports? n
                            Far-end CSU Address: b

INTEGRATED CSU OPTIONS
                                  Transmit LBO: 0db
                                  Receive ALBO: -26db
                                  Upon DTE LOS: loopback


CPE SMART JACK OPTIONS
                     Supply CPE Smart Jack Power? n
```

Screen 4-13c. DS1 Circuit Pack Form (Page 2 of 2)

Page 2 of the form appears only when the G3 version is''V3" or greater, the DS1 board is TN767E, TN464F, or later releases of these boards,and the Framing Mode is ''esf"or if the CSU type is ''integrated" and a CSU is attached.

Implementation Note:

The fields that appear on a particular screen vary depending upon the type of board being administered, the speed, signaling mode, and soon.

Fiber Link Administartion

This form is used to administer fiber links, each of which is identified by a fiber number.

NOTE:
Fiber link administration only applies to G3r configurations.

Port cabinets (PCs) are connected via direct fiber link connections or through a center stage switch (CSS) to provide the inter-port cabinet connectivity required for voice/data information transfer. The CSS is composed of "switch nodes" that can be interconnected in one or two levels to provide a network of up to 22 PCs for G3rV1 and V2 or 44 PCs for G3rV3. The CSS provides circuit-switched connectivity among PCs for voice and data communications as well as packet-switched connectivity. Fiber link administration permits an administration of translation data associated with a switch connection (such as optical fiber, metallic cable, or DS1C boards and DS1 facility links between two endpoints). The two fiber endpoints can be:

1. An expansion interface (EI) board in a PC
2. A switch node interface (SNI) board in a switch node carrier

NOTE:
Only one G3-MT can administer fiber links at a time; others can display fiber link information.

Administration Commands

The following administration commands can be used to access the Fiber Link Administration form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
add	fiber-link	link number or ['next']
change	fiber-link	link number
display	fiber-link	link number
list	fiber-link	link number
remove	fiber-link	link number

* Brackets [ ] indicate the qualifier is optional. Single quotes (") indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered.

Port network connectivity (PNC) has three different reliability configurations (one for each system reliability configuration) as follows:

System Configuration	PNC
Standard Reliability	Simplex Fibers
High Reliability	Simplex Fibers to EPNs and Simplex Fibers between PPN and EPN
Critical Reliability	Duplicated Fibers

Simplex PNC

For Simplex PNC, PNC Duplication is disabled on the System-Parameters Customer-Options form and Operation of Duplication is disabled on the System-Parameters Duplication Parameters form.

Administration of PNC Duplication

The PNC Duplication feature is enabled on the System-Parameters Customer-Options form and Operation of Duplication is enabled on the System-Parameters Duplication Parameters form. When PNC Duplication is enabled on the System-Parameters Customer-Options form, the following administration forms change:

- Cabinet Form — Additional fields appear to allow administration of switch nodes to A-PNC and B-PNC sides of the CSS. The B-PNC is the duplicated hardware for the A-PNC. Either the A-PNC or the B-PNC can provide full customized service. B-PNC cannot be used in a simplex PNC configuration. Pairing of switch nodes is also defined here.
- Fiber Link Form — Additional fields appear to allow administration of fiber links on the B-PNC side of the CSS. If an endpoint on the A-PNC side is administered as an SNI, its corresponding endpoint on the B-PNC side is determined (if switch nodes are paired in the cabinet form prior to this administration) and displayed. However, administration of the duplicate B-PNC link is not enforced until duplication is in full operation.
- System-Parameters Duplication Parameters Form — An additional field appears to enable operation of PNC duplication.

Form Instructions

Page 1 of the Form

Basic Fiber Link Administration

The following fields appear:

- **Fiber Link #** — Display-only field. From the command line, enter a 1-to 3-digit number to uniquely identify a switch connection in the system and its duplicate if appropriate.
- **Board Location** — Enter the cabinet, carrier, and slot that identifies the physical location of an SNI or EI board that is the first endpoint of the fiber link.

■ **TAC** — Enter the trunk access code (TAC) that must be dialed to access the trunk group. CDR also uses the TAC to identify the trunk group on associated CDR reports. A different TAC must be assigned to each trunk group. Valid entries are TACs that are compatible with the System Dial Plan (1 to 4 digits; 1 to 3 digits for DCS or to remotely control it).

■ **Direction** — Enter whether the trunk group is "incoming," "outgoing," or "two-way" (default). Note that the Direction administered will affect which timers will appear on the Administrable Timer page.

■ **Outgoing Display** — Specifies whether or not the trunk group name is displayed on a terminal placing an outgoing call. Valid entries are "y" or "n" (default).

■ **Trunk Signaling Type** — This field specifies the kind of signaling to use for members in the trunk group, and if administered to a non-blank value, severely restricts the ports that can be administered in the trunk group.

Valid values are "cont" (continuous), "dis" (discontinuous), or blank. Entering one of these values indicates that only ports fromaTN2140 Italian tie trunk may be administered as trunk group members. Entering one of these values will cause the Send Release Ack?, Receive Release Ack?, and Send Answer Supervision? fields to appear. If the field is blank (default), ports from any other Tie trunk circuit pack may be added as trunk group members.

NOTE:

The value in this field will also affect which timers will appear on the Administrable Timer Page.

■ **Dial Access** — Enter "y" to allow the trunk group to be accessed via a TAC. Access via the ARS feature is allowed regardless of this entry. Default is "n."

■ **Busy Threshold** — Enter the number of trunk group members that must be busy before the attendant is alerted by the Warning lamp on the Attendant Console.

■ **Night Service** — Enter the extension number assigned to Night Service. The extension number entered will receive all incoming calls when Night Service is activated and the individual trunk member Night field is not administered to override this group extension. Valid entries are an extension number (can be a VDN extension), the attendant group access code ("attd'), or leave blank if the Trunk Type (in/out) field is not "auto/..."

■ **Queue Length** — Enter the number of outgoing calls that can be held waiting. A "0" (default) indicates no calls will be held in queue. Enter "0" for DCS trunks. This field is turned off if the Direction field is "incoming."

■ **Incoming Destination** — Displayed when the Direction field is "incoming" or "two-way." Indicates where incoming calls will terminate. Valid entries are an extension number, the attendant group access code ("attd"), VDN, or leave blank if the Trunk Type (in/out) field is not "auto/..." If "attd" is entered, a call is treated as an LDN call.

■ **Comm Type** — Indicates if the trunk is to be used for voice, data, alternate voice-data (avd), or alternate voice/voice grade data and 56-kbps digital data (rbavd) calls. Valid entries are “avd,” “rbavd,” “voice” (default), or “data.” Type “rbavd" supports access to voice/data SDN service on robbed-bit transmission facilities.

NOTE:
Comm Types of “avd” and “rbavd’ require trunk member ports on a DS1 circuit pack. An “rbavd” type requires that the DS1 circuit pack be administered for robbed-bit, or (if mixed mode signaling is allowed on the DS1 circuit pack) ISDN-EXT, or ISDN-PRI. An “avd’ type requires that the DS1 circuit pack be administered for either common-chan or CAS signaling.

■ **Auth Code** — Only displayed if the Direction field is “incoming” or “two-way.” Enter “y” if an authorization code must be dialed to complete incoming calls on the trunk group. This field can only be “y” if the Authorization Codes feature is enabled on the System-Parameters Customer-Options form.

■ **Send Answer Supervision** — Appears when Trunk Signaling Type is “cont” or “dis” and only appliestoTN2140 ports. Enter “y” (default) if the switch should signal that the destination party has answered.

■ **Send Release Ack** — Appears when the Trunk Signaling Type is “cont” or “dis” and only applies toTN2140 ports. Enter “y” (default) if the switch must send a release acknowledgment in response to a forward or backward release signal.

■ **Receive Release Ack** — This field appears only when the Trunk Signaling Type has a value of either “cont” or “dis.” (Thus, this field only applies to TN2140 ports.) Enter "y" (default) if the switch should expect to receive a release acknowledgment in response to a forward or backward release signal.

■ **ITC** (Information Transfer Capability) — Displayed for non-ISDN trunk groups, and when Comm Type is “data,” “avd,” or “rbavd’ and BCC is not “0.” Used by the GRS feature and enables the system to route calls to restricted (default) or unrestricted facilities according to the endpoint’s information transfer capability. A trunk member is said to be restricted if the circuit pack it belongs to is administered as “zcs” in the Line Coding field of the DS1 form. A trunk member is said to be unrestricted if the circuit pack it belongs to is administered as “b8zs” or “hdb3” in the Line Coding field of the DS1 form. A restricted trunk member can carry only restricted calls. An unrestricted trunk member may carry restricted or unrestricted calls. A trunk group with a transfer capability of “unrestricted” may have only unrestricted trunk members.

■ **BCC** (Bearer Capability Class) — Displayed when ISDN — PRI is enabled on the System-Parameters Customer-Options form and Comm Type is “data,” “avd,” or “rbavd.” Used by the Generalized Route Selection feature and identifies the type of traffic on trunks in the group. The BCC entry is used by far-end tandem switches to select outgoing routing

facilities with equivalent BCC classes. Valid entries are 0,1,2,3, and 4. Default is 0 for “avd" and 2 for “data.”

NOTE:
Refer to “Generalized Route Selection” in *DEFINITY Communications System Generic 3 V2 Feature Description,* 555-230-204, for a detailed description of Bearer Capability Classes (BCCs) and their use to provide specialized routing for various types of voice and data calls.

- **Trunk Type (in/out)** — Identifies the physical type of incoming and outgoing trunks. The trunks may be automatic, immed-start, wink-start or delay-dial; additionally, they may be “cont” (continuous-seize-ack) if Trunk Signaling Type is “cont”; if the Trunk Signaling Type is “dis,” only “disc” (discontinuous-seize-ack is used instead of “wink”) and “immed” are allowed. It may differ for incoming and outgoing directions.

  When the Trunk Signaling Type is “dis,” the valid values are “immed” and “disc”:

  disc/disc disc/immed immed/disc immed/immed

  When the Trunk Signaling Type is “cont,” the valid values are:

auto/auto	auto/cont	auto/delay	auto/immed	auto/wink
cont/auto	cont/cont	cont/delay	cont/immed	cont/wink
delay/auto	delay/cont	delay/delay	delay/immed	delay/wink
immed/auto	immed/cont	immed/delay	immed/immed	immed/wink
wink/auto	wink/cont	wink/delay	wink/immed	wink/wink

  Otherwise, the valid values are:

auto/auto	auto/delay	auto/immed	auto/wink
delay/auto	delay/delay	delay/immed	delay/wink
immed/auto	immed/delay	immed/immed	immed/wink
wink/auto	wink/delay	wink/immed	wink/wink

  NOTE:
  For “immed/immed” trunks (on incoming trunks), the far-end PBX seizes the trunk and then sends digits without waiting for acknowledgment from the receiving PBX. When heavily loaded, the receiving PBX may incur a short delay in attaching a Touch Tone Receiver to this call and, therefore, cause it to lose digits. Using wink-start trunks or increasing the dial-guard timer value on the far-end PBX avoids this problem.

- **Incoming Rotary Timeout** (sec) — The timing interval required by the far-end that the system is connected to. If the system is connected to a Step-by-Step office, 18 seconds or more must be used; if the system is not connected to a Step-by-Step office, 5 seconds or more may be used. Valid entries are 5 through 99, or blank default is 5.

- **Outgoing Dial Type** — Identifies the type of pulsing required on an outgoing call. Valid entries are “tone” (default), “rotary,” or (if the Trunk Signaling Type is blank) "mf"

  NOTE:

  Multifrequency Signaling must be enabled on the System-Parameters Customer-Options form before a value of “mf” may be administered.

  Outgoing Dial Type may not be set to “mf” if the Used for DCS field (Page 2 of the form) is set to “y.”

- **Incoming Dial Type** — Indicates the type of pulses required on an incoming trunk group. Valid entries are “tone” (default), “rotary,” or (if the Trunk Signaling Type is blank), “mf.”

  NOTE:

  Multifrequency Signaling must be enabled on the System-Parameters Customer-Options form before a value of “mf” may be administered.

  Incoming Dial Type may not be set to “mf” if the Used for DCS field (Page 2 of the form) is set to “y.”

  The value in this field impacts the appearance of the Incoming Partial Dial Timer on the Administrable Timer Page.

- **Disconnect Timing (msec)** — Specifies the minimum time period in ms that is required for recognition of disconnect by the serving central office or far-end PBX. The time interval must be in increments of 10 (from 140 to 2550 ins); default is 500. This timer is not used for ports on a circuit pack that can receive the administrable Incoming Disconnect and Outgoing Disconnect timers. These latter two timers replace the former.

- **Digit Treatment** — Indicates if digits are to be absorbed or inserted. A blank indicates no digit absorption or insertion. Valid entries are “absorption” or “insertion,” or leave blank.

  NOTE:

  DCS features that use the remote-tgs button (on the remote switch) do not work when the local trunk group deletes or inserts digits on the incoming call. These buttons try to dial a local TAC. Adding or deleting digits defeats this operation and renders the remote feature inoperable. If digit manipulation is needed, use it on the outgoing side, based on the routing pattern. One reason for digit manipulation is insertion of the AAR feature access code (FAC).

- **Digits** — Indicates the digits to be inserted or number of digits to be absorbed. This field is used with the Digit Treatment field. No entry indicates no digit absorption or insertion is done. Valid entries are the number of digits to be absorbed (1 to 5) or the actual digits to be inserted (up to 5 digits including the characters “*” and “#”).

- **Sig Bit inversion** — This field allows the user to administer the signaling bit inversion (the A-bit and B-bit inversion) on a per-portibasis and applies only to TN464B or later circuit packs. The CCITT standards define on-hook to be ”1” in the A-bit and off-hook to be “0.” This definition is the opposite of the EIA definition. The default in the TN464 firmware for signaling bit inversion is to use the CCITT standard for 32-channel mode and to use the EIA standard for 24-channel mode. Valid entries are “A,” “B,” “A&B” and “none.”

- **Connected to Toll** — Enter “y” if connected to a CO toll office. This field is displayed when the Trunk Type field contains an entry of “auto/...,” “delay/...,” “wink/...,” or “immed/...”

- **Wink Timer (msec)** - Displayed when the trunk type for the “outgoing” side of the in/out field is "wink” or “delay.” Enter a number from 300 to 5000 in increments of 50; default is 300. This timer is sent only to TN760C (vintage 4 or later), TN767, and TN464C (or later) circuit packs.

  N O T E :

  This value is the same for each member of the trunk group where the timing is administered; that is, if members from TN760B ports are mixed with members from TN760C V4 ports, only the TN760C V4 ports are set to this value. (The TN760B ports use a default value on the circuit pack itself.)

  United States domestic requirements state that for a “wink” start trunk, the wink must begin within five seconds (the “wait-for-wink-to-start” time) and must end within 290 ms (the “wait-for-wink-to-end” time). For a “delay” dial trunk, the wink must begin within 140 ms (the “wait-for-wink-to-start” time). and end when the switch is ready to receive digits.

  The “wink” start “wait-for-wink-to-end” time and the “delay” dial “wait-for-wink-to-start” time are ***both*** administered through the use of this field.

- **STT Loss** (Satellite PBX Tie Trunk Loss) — Displayed when Connected to Toll is “n.” Specifies the loss plan to be used for the trunk group. Valid entries are “normal” (default) or “low.” This option affects the transmission performance of a private PBX network.

  Although the use of this option has wider applications, only for the simplest network arrangements should this field be administered without Network Engineering advise. The “low” option (described as the ISL digital low loss plan in *DEFINITY Communications System Generic 1 and System 75 and System 85 DS1/DMI/ISDN-PRI Reference,* 555-025-101) should be used when:

  1. Stations on the satellite PBX complain of too much loss on calls to the public network.
  2. The PBX network consists of **no more** than three PBXs: one main and one or two satellite PBXs.

3. All PBXs have the “low” option available.
4. The total DS1 trunk connection length is less than 100 miles.

If the preceding conditions are not met, obtain Network Engineering assistance. The field entry is based on the following:

- **normal** — Applies to AIU-TT (Analog Interface Unit at Customer Switching System for Tie Trunk — 4-wire E&M interface), and DIU-TT (Digital Interface Unit at Customer Switching System for Tie Trunk — voice or AVD DS1 interface) loss plans.
- **low** — Applies to AIU-TTS (same as AIU-TT, but suitable for private network connections that can be connected in tandem with public network connections) and DIU-TTS (same as DIU-TT, but suitable for private network connections that can be connected in tandem with public network connections). These interfaces were formerly referred to as DIU DTT ISL.

- **DTT to DCO Loss** (Digital Tie to Digital CO Trunk Loss) — Specifies the loss plan used for the trunk group that connects a DIU-CO (Digital Interface Unit at a Central Office) to a DIU-DTT (Digital Interface Unit for a Digital Tie Trunk Interface). Displayed when the Trunk Type field is “auto/..., “ “delay/...,” “wink/...,” or “immed/...”

  This option affects the transmission performance of public network access via a private PBX network. Choose the “low” option if private network users complain about too much loss on calls to the public network, otherwise, the “normal” option should be used. Valid entries are “normal” (default) and “low.” The entry is based on the following:

  - **normal** — Corresponds to a (0, -6) dB gain pair and is used as the default option. (This corresponds to the DTT/EIA DCO port to port configuration as described in *DEFINITY Communications System Generic 1 and System 75 and System 85 DS1/DMI/ISDN-PRI Reference, 555-025-101.)*
  - **low** — Corresponds to (+3, -3) dB gain pair. Low is used for internetwork applications in which no significant configuration will encounter echo, stability, or overload problems because of reduced loss. With the low gain pair, subscriber station DTMF signals transmitted through the digital class 5 office into the customer network may experience non-recoverable digit mutilation in secondary signaling applications (that is, DTMF signaling after the connection has been established). (This corresponds to the DIT/ISL DCO port to port configuration as described in *DEFINITY Communications System Generic 1 and System 75 and System 85 DS1/DMI/ISDN-PRI Reference,* 555-025-101.)

- **Incoming Dial Tone** — Indicates whether or not the trunk group will pass on incoming dial tone to the calling party. Valid entries are “y” or “n.”

■ **Bit Rate** — Displayed when Comm Type is “avd” or “rbavd.” It also appears if the Comm Type is “data,” but only if the option for ISDN-PRI is enabled on the System-Parameters Customer-Options form. Specifies the baud rate to be used by pooled modems. Valid entries are 300, 1200 (default), 2400, 4800, 9600, and 19200.

■ **Synchronization** — Displayed when Comm Type is “avd’ or “rbavd.” It also appears if the Comm Type is “data,” but only if the option for ISDN-PRI is enabled on the System-Parameters Customer-Options form. Enter whether the trunk group will use synchronous or asynchronous communications. Valid entries are “async” (default) and “sync.”

■ **Duplex** — Displayed when Comm Type is “avd” or “rbavd.” It also appears if the Comm Type is “data,” but only if the option for ISDN-PRI is enabled on the System-Parameters Customer-Options form. Specifies either full or half duplex for the trunk group. Valid entries are “full” (default) or “half.”

■ **Disconnect Supervision-In** — This field appears when the Direction is either “incoming” or “two-way.” The default is for the field is “y.” Internally, the field is set to “n” if the Direction is “outgoing.” Enter “y” to indicate that the far-end has the ability to release a trunk when the calling party releases from a call and the system is able to recognize the release signal.

■ **Disconnect Supervision-Out** — This field appears when the Direction is either “outgoing” or “two-way.” The default for the field is “n.” Internally, the field is set to “n” if the Direction is “incoming.” If the field is set to “y” a Warning Message appears to alert the user of possible trunk lockups. This field specifies whether trunks in this trunk group provide disconnect supervision when seized outgoing (that is, whether these trunks should be allowed to participate in outgoing trunk to outgoing trunk calls). This field is set independently of the trunk-to-trunk transfer system parameter, although both options must beset appropriately if outgoing trunk to outgoing trunk transfers are desired.

■ **Expected Digits** — Only displayed if the Trunk Signaling Type field is left blank, the Direction field is “incoming” or “two-way,” and the Incoming Dial Type field is “mf.” This field specifies the number of digits that the far-end sends for an incoming connection. Valid values are between 1 and 9 inclusive.

■ **Answer Supervision Timeout** —Used for analog port circuits to indicate the amount of time in seconds the system allows for a call to be answered before beginning a CDR record of a call. This internal begins as soon as the outgoing trunk is seized. Valid entries are 0 to 250; default is 10.

NOTE:
This timeout does not override answer supervision sent from the network or other firmware (DS1 port circuit timers). DS1 firmware-sent answer supervision is administered in the Outgoing End of Dialing field on Page 3 (Administrable Timers page) of the Trunk Group form.

- **Receive Answer Supervision** — Specifies whether or not the network provides answer supervision for the trunks. Answer supervision refers to notification from the far-end that the called party has gone off-hook to answer the call. When answer supervision is provided, the originating PBX can classify a call as answered using the Answer Supervision Timeout field entry (for domestic circuit packs) or, for circuit packs that take administrable timers, by using the Outgoing End of Dial timer. For trunks over which answer supervision is provided by the network, set this field to "y" and the Answer Supervision Timeout field to "0" so that the firmware timeout is disabled. The firmware timeout is automatically set to "0" on circuit packs that take the administrable Outgoing End of Dial timers. Receive Answer Supervision must be set to "n" (default) if the Direction field is "incoming."

Page 2 of the Form

- **ACA Assignment** — Specifies whether or not Automatic Circuit Assurance (ACA) measurements will be taken for this trunk group. Valid entries are "y" or "n" (default). If "y" is entered, complete the next three fields.

- **Long Holding Time (hours)** — Only delayed when ACA Assignment is "y." This field is the length (in hours) that the system will consider as being a long holding time. If "0" is entered, the system will not consider long holding calls. Valid entries are 0 to 10; default is 1.

- **Short Holding Tires (seconds)** — Only displayed when ACA Assignment is "y." Specifies the length (in seconds) that the system will consider as being a short holding time. If "0" is entered, the system will not consider short holding calls. Valid entries are 0 to 160; default is 10.

- **Short Holding Threshold**— Only displayed when ACA Assignment is "y." Number of times the system will record a short holding call before an attendant is alerted to the possibility of a faulty trunk. Valid entries are 0 to 30; default is 15.

- **Glare Handling** — Only displayed when the Direction field is "two-way" and the outgoing side of the Trunk Type field is either "wink" or "delay." This field determines how glare situations should be treated. Valid entries are "control," "backoff," or "none" (default).

  Warnings are generated if the field is changed to either "control" or "backoff" and ports for the trunk group are not capable of detecting glare.

- **Measured** — Indicates if the system will transmit data for this trunk group to the Call Management System (CMS). Valid entries are "internal," external," "both," or "none." Enter "internal" if the data can be sent to the Basic Call Management System (BCMS) [which is internal to the switch] the VuStats data display, or both. Enter "external" to send the data to the CMS adjunct. Enter "both" to collect data internally and to send the data to the CMS adjunct reports. Enter "none" (default) if trunk group measurement reports are not required. Note that you cannot "internal" and "both" unless either the BCMS option or the VuStats option is enabled on the System-Parameters Customer-Options form.

APLT Trunk Group

This form is used to provide access to and termination from private line networks. APLT trunks are used with a Common Control Switching Arrangement (CCSA) or Enhanced Private Switched Communications Service (EPSCS) network.

Administration Commands

The following administration commands can be used to access the APLT Trunk Group form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualified
add	trunk-group	1-MAX (or 'next')
change	trunk-group	1-MAX or TAC X...
display	trunk-group	1-MAX ['number' X]['to-number' X]['count' N] ['tac' assigned TAC]['print' or 'schedule']
list	trunk-group	['print' or 'schedule']
remove	trunk-group	1-MAX or TAC X...

* Brackets [ ] indicate the qualifier is optional. Single quotes (') indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered. MAX is the maximum number available in your system configuration. Refer to the Capacity Table in Appendix C.

Form Instructions

Make assignments as required for the following fields on each page of the form:

Page 1 of the Form

- **Group Number** — Enter a group number when completing a paper form. This is a display-only field when the form is accessed using an administration command such as *add* or *change.*
- **Group Type** — Enter "aplt" to identify the trunk group type.
- **CDR Reports** — Enter "y" (default) to provide a detailed Call Detail Recording (CDR) record of both incoming and outgoing calls made on all trunks in the trunk group.
- **Group Name** — Enter a unique name that identifies the trunk group. Up to 15 characters can be used; default is OUTSIDE CALL.
- **COR** — Enter a class of restriction (COR) number from 0 to 95 that reflects the desired restriction; default is 1.

■ **TAC** — Enter the trunk access code (TAC) that must be dialed to access the trunk group. CDR also uses the TAC to identify the trunk group on associated CDR reports. A different TAC must be assigned to each trunk group. Valid entries are TACs that are compatible with the System Dial Plan (1 to 4 digits; 1 to 3 digits for DCS or to remotely control it).

■ **Direction** — Enter whether the trunk group is “incoming,” “outgoing,” or “two-way” (default). Note that the Direction administered will affect which timers will appear on the Administrable Timer page.

■ **Outgoing Display** — Specifies whether or not the trunk group name is displayed on a terminal placing an outgoing call. Valid entries are “y” or “n” (default).

■ **Trunk Signaling Type** — This field specifies the kind of signaling to use for members in the trunk group and, if administered to a non-blank value, severely restricts the ports that can be administered in the trunk group.

Valid values are "cont” (continuous) or “dis” (discontinuous). Entering one of these values indicates that only ports from aTN2140 Italian tie trunk may be administered as trunk group members. Entering one of these values will cause the Send Release Ack?, Receive Release Ack? and Send Answer Supervision? fields to appear. If the field is blank (default), ports from any other tie trunk circuit pack may be added as trunk group members. Note that the value in this field will also affect which timers will appear on the Administrable Timer Page.

■ **Send Answer Supervision** — Appears when Trunk Signaling Type is “cont” or “dis” and only applies to TN2140 ports. Enter “y” (default) if the switch should signal that the destination party has answered.

■ **Send Release Ack** — This field appears only when the Trunk Signaling Type has a value of either “cont” or “dis” and only applies to TN2140 ports. Enter “y” (default) if the switch must send a release acknowledgment in response to a forward or backward release signal.

■ **Receive Release Ack** — This field appears only when the Trunk Signaling Type has a value of either “cont” or “dis” and only applies to TN2140 ports. Enter “y” (default) if the switch should expect to receive a release acknowledgment in response to a forward or backward release signal.

■ **Expected Digits** — This field only appears if the Trunk Signaling Type field is left blank, the Direction is “incoming” or “two-way,” and the Incoming Dial Type is "mf." This field specifies the number of digits that the far-end sends for an incoming connection. Valid values are between 1 and 18 inclusive.

■ **Dial Access** — Enter “y” to allow the trunk group to be accessed via a TAC. Access via the ARS feature is allowed regardless of this entry.

■ **Busy Threshold** — Enter the number of trunk group members that must be busy before the attendant is alerted by the Warning lamp on the Attendant Console.

- **Night Service** — Enter the extension number assigned to Night Service. The extension number entered will receive all incoming calls when Night Service is activated and the individual trunk member Night field is not administered to override this group extension. Valid entries are an extension number (can be a VDN extension), the attendant group access code (“attd”), **or** leave blank if the Trunk Type (in/out) field is not “auto/...”
- **Queue Length** — Enter the number of outgoing calls that can be held waiting. A “0" indicates no calls will be held in queue. Enter “0" (default) for DCS trunks. This field is not displayed if the Direction field is “incoming.”
- **Incoming Destination** — Indicates where incoming calls will terminate. Valid entries are an extension number, the attendant group access code (“attd’), VDN, or leave blank if the Trunk Type (in/out) field is not “auto/...” If “attd” is entered, a call is treated as an LDN call.
- **Auth Code** — Only displayed if the Direction field is “incoming” or “two-way.” Enter “y” if an authorization code must be dialed to complete incoming calls on the trunk group. This field can only be “y” if the Authorization Codes feature is enabled on the System-Parameters Customer-Options form.
- **BCC** (Bearer Capability Class) — Displayed when ISDN-PRI is enabled on the System-Parameters Customer-Options form and Comm Type is “data,” “avd,” or “rbavd.” Used by the Generalized Route Selection feature and identifies the type of traffic on trunks in the group. The BCC entry is used by far-end tandem switches to select outgoing routing facilities with equivalent BCC classes. Valid entries are 0, 1, 2, 3, and 4. Default is 0 for “avd" and 2 for “data.”

  NOTE:
  Refer to “Generalized Route Selection” in *DEFINITY Communications System Generic 3 V2 Feature Description,* 555-230-204, for a detailed description of Bearer Capability Classes (BCCs) and their use to provide specialized routing for various types of voice and data calls.

- **Trunk Type (in/out)** — Identifies the physical type of incoming and outgoing trunks. The trunks may be “automatic,” “immed-start,” “wink-start” or “delay-dial;” additionally, they may be “cont” (continuous-seize-ack) if Trunk Signaling Type is “cont;” if the Trunk Signaling Type is “dis,” only “disc” (discontinuous-seize-ack is used instead of “wink”) and “immed” are allowed. It may differ for incoming and outgoing directions.

  When the Trunk Signaling Type is “dis,” the valid values are “immed” and “disc”:

  disc/disc disc/immed immed/disc immed/immed

When the Trunk Signaling Type is “cont,” the valid values are:

auto/auto	auto/cont	auto/delay	auto/immed	auto/wink
cont/auto	cont/cont	cont/delay	cont/immed	cont/wink
delay/auto	delay/cont	delay/delay	delay/immed	delay/wink
immed/auto	immed/cont	immed/delay	immed/immed	
wink/auto	wink/cont	wink/delay	wink/immed	wink/wink

Otherwise, the valid values are:

auto/auto	auto/delay	auto/immed	auto/wink
delay/auto	delay/delay	delay/immed	delay/wink
immed/auto	immd/delay	immed/immed	immed/wink
wink/auto	wink/delay	wink/immed	wink/wink

NOTE:
For “immed/immed” trunks (on incoming trunks), the far-end PBX seizes the trunk and then sends digits without waiting for acknowledgment from the receiving PBX. When heavily loaded, the receiving PBX may incur a short delay in attaching a Touch Tone Receiver to this call and, therefore, cause it to lose digits. Using wink-start trunks or increasing the dial-guard timer value on the far-end PBX avoids this problem.

■ **Incoming Rotary Timeout (sec)** — The timing interval required by the far-end that the System is connected to. If the System is connected to a Step-by-Step office, 18 seconds or more must be used; if the System is not connected to a Step-by-Step office, 5 seconds or more may be used. Valid entries are 5 to 99, or leave blank default is 5.

■ **Outgoing Dial Type** — Identifies the type of pulsing required on an outgoing call. Valid entries are “tone” (default), “rotary,” or (if the Trunk Signaling Type is blank) "mf."

■ **Incoming Dial Type** — Indicates the type of pulses required on an incoming trunk group. Valid entries are “tone” (default), “rotary,” or "mf." The value in this field impact the appearance of the Incoming Partial Dial Timer on the Administrable Timer Page.

■ **Disconnect Timing (msec)** — Specifies the minimum time period in me that is required for recognition of disconnect by the serving central office or far-end PBX. The time interval must be in increments of 10 (from 140 to 2550 ins); default is 500. This timer will not be used for ports on a circuit pack that can receive the administrable Incoming Disconnect and Outgoing Disconnect timers. These latter two timers will replace Disconnect Timing.

■ **Sig Bit Inversion** — This field allows the user to administer the signaling bit-inversion (the A-bit and B-bit inversion) on a per-port basis and applies only to TN464B or later circuit packs. The CCITT standards define on-hook to be “1” in the A-bit and off-hook to be “0.” This definition is the opposite of the EIA definition. The default in the TN464 firmware for signaling bit inversion is to use the CCITT standard for 32-channel mode

and to use the EIA standard for 24-channel mode. Valid entries are “A,” “B,” “A&B,” and “none,”

- **Connected to Toll** — Enter “y” if connected to a CO toll office. This field is displayed when the Trunk Type field contains an entry of “auto/...”, “delay/...”, “wink/...”, or “immed/...”

- **Wink Timer (msec)** — Displayed when the trunk type for the “outgoing” side of the in/out field is “wink” or “delay.” Enter a number from 300 to 5000 in increments of 50; default is 300. This timer is sent only to TN760C (vintage 4 or later), TN767, and TN464C (or later) circuit packs.

  NOTE:
  This value is the same for each member of the trunk group where the timing is administered; that is, if members from TN760B ports are mixed with members from TN760C V4 ports, only the TN760C V4 ports are set to this value. (The TN760B ports use a default value on the circuit pack itself).

  United States domestic requirements state that for a “wink” start trunk, the wink must begin within five seconds (the “wait-for-wink-to-start” time) and must end within 290 ms (the “wait-for-wink-to-end" time). For a “delay” dial trunk, the wink must begin within 140 ms (the “wait-for-wink-to-start” time). and end when the switch is ready to receive digits.

  The “wink” start “wait-for-wink-to-end” time and the “delay” dial “wait-for-wink-to-start” time are ***both*** administered through the use of this field.

- **STT Loss** (Satellite PBX Tie Trunk Loss) — Displayed when the Connected to Toll field is “n.” Specifies the loss plan to be used for the trunk group. Valid entries are “normal” (default) or “low.” This option affects the transmission performance of a private PBX network.

  Although the use of this option has wider applications, only for the simplest network arrangements should this field be administered without Network Engineering advise. The “low” option (described as the ISL digital low loss plan in *DEFINITY Communications System Generic 1 and System 75 and System 85 DS1/DMI/ISDN-PRI Reference,* 555-025-101) should be used when:

  1. Stations on the satellite PBX complain of too much loss on calls to the public network.
  2. The PBX network consists of no more than three PBXs: one main and one or two satellite PBXs.
  3. All PBXs have the “low” option available.
  4. The total DS1 trunk connection length is less than 100 miles.

If the preceding conditions are not met, obtain Network Engineering assistance. The field entry is based on the following:

— **normal** — Applies to AIU-TT (Analog Interface Unit at Customer Switching System for Tie Trunk — 4-wire E&M interface) and DIU-TT (Digital Interface Unit at Customer Switching System for Tie Trunk — voice or AVD DS1 interface) loss plans.

— **low** — Applies to AIU-TTS (same as AIU-TT, but suitable for private network connections that can be connected in tandem with public network connections) and DIU-TTS (same as DIU-TT, but suitable for private network connections that can be connected in tandem with public network connections). These interfaces were formerly referred to as DIU DTT ISL.

- **DTT to DCO Loss** (Digital Tie to Digital CO Trunk Loss) — Specifies the loss plan used for the trunk group that connects a DIU-CO (Digital Interface Unit at a Central Office) to a DIU-DTT (Digital interface Unit for a Digital Tie Trunk Interface). Displayed when the Trunk Type field contains an entry of "auto/...", "delay/...", "wink/...", or "immed/..."

  This option affects the transmission performance of public network access via a private PBX network. Choose the "low" option if private network users complain about too much loss on calls to the public network, otherwise, the "normal" option should be used. Valid entries are "normal" (default) and "low." The entry is based on the following:

  — **normal** — Corresponds to a (0, -6) dB gain pair and is used as the default option. (This corresponds to the DTT/EIA DCO port to port configuration as described in *DEFINITY Communications System Genetic 1 and System* 75 *and System 85 DS1/DMI/ISDN-PRI Reference, 555-025-101.)*

  — **low** — Corresponds to (+3, -3) dB gain pair. Low is used for internetwork applications in which no significant configuration will encounter echo, stability, or overload problems because of reduced loss. With the low gain pair, subscriber station DTMF signals transmitted through the digital class 5 office into the customer network may experience nonrecoverable digit mutilation in secondary signaling applications (that is, DTMF signaling after the connection has been established). (This corresponds to the DTT/lSL DCO port to port configuration as described in *DEFINITY Communications System Generic 1 and System 75 and System 05 DS1/DMI/ISDN-PRI Reference,* 555-025-101.)

- **Incoming Dial Tone** — Indicates whether or not the trunk group will pass on incoming dial tone to the calling party. Valid entries are "y" or "n."

- **Disconnect Supervision—Out** — This field is displayed when the Direction field is either "outgoing" or "two-way." The default for the field is "n." Internally, the field is set to "n" if the Direction is "incoming." If the field is set to "y" a Warning Message appears to alert the user of possible trunk lockups. This field specifies whether trunks in this trunk group provide disconnect supervision when seized outgoing (that is, whether these

trunks should be allowed to participate in outgoing trunk to outgoing trunk calls). This field is set independently of the trunk-to-trunk transfer system parameter, although both options must be set appropriately if outgoing trunk to outgoing trunk transfers are desired.

- **Answer Supervision Timeout** — Used for analog port circuits to indicate the amount of time (in seconds) the System allows for a call to be answered before beginning a CDR record of a call. This interval begins as soon as the outgoing trunk is seized. Valid entries are 0 to 250; default is 10.

  NOTE:
  This timeout does not override answer supervision sent from the network or other firmware (DS1 port circuit timers). DS1 firmware-sent answer supervision is administered in the Outgoing End of Dialing field on Page 3 of the Trunk Group form (Administrable Timers page).

- **Receive Answer Supervision** — Specifies whether or not the network provide answer supervision for the trunks. Answer supervision refers to notification from the far-end that the called party has gone off-hook to answer the call. When answer supervision is provided, the originating PBX can classify a call as answered using the Answer Supervision Timeout field entry (for domestic circuit packs) or, for circuit packs that take administrable timers, by using the Outgoing End of Dial timer. For trunks over which answer supervision is provided by the network, set this field to "y" and the Answer Supervision Timeout field to "0" so that the firmware timeout is disabled. The firmware timeout is automatically set to "0" on circuit packs that take the administrable Outgoing End of Dial timers. Receive Answer Supervision must be set to "n" (default) if the Direction field is "incoming."

Page 2 of the Form

- **ACA Assignment** — Specifies whether or not Automatic Circuit Assurance (ACA) measurements will be taken for this trunk group. Valid entries are "y" (default) or "n." If "y" is entered, complete the next three fields.
- **Long Holding Time (hours)** — Is the length in hours that the System wiII consider as behg a bng holding time. If "0" is entered, the System will not consider long holding calls. Valid entries are 0 to 10; default is 1.
- **Short Holding Time (secs.)** — Specifies the length in seconds that the System will consider as being a short holding time. If "0" is entered, the System will not consider short holding calls. Valid entries are 0 to 160; default is 10.
- **Short Holding Threshold** — Is the number of times that the System will record a short holding call before an attendant or display-equipped voice terminal user is alerted to the possibility of a faulty trunk. Valid entries are 0 to 30; default is 15.

- **Measured** —Indicates if the System will transmit data for this trunk group to the Call Management System. Valid entries are “internal,” “external,” “both,” and “none.” Enter “internal” if the data is to be sent to the Basic Call Management System (internal to the switch) for subsequent measurement reports and “external” to send the data to the Call Management System Adjunct. Enter “both” to send the data to both systems for measurement reports. Enter “none” (default) if trunk group measurements are not required.
- **Internal Alert** — Specifies if internal ringing and coverage will be used for incoming calls. Valid entries are “y” or “n” (default).
- **Data Restriction** — Is used to prevent System features from generating tones on a data call that would cause erroneous data transmission. Valid entries are “y” or “n” (default).
- **Glare Handling** — Only displayed when the Direction field is “two-way” and the outgoing side of the Trunk Type field is either “wink” or “delay.” This field determines how glare situations should be treated. Valid entries are “control,” “backoff,” or “none.”

  Warnings are generated if the field is changed to either “control” or “backoff” and ports for the trunk group are not capable of detecting glare.
- **Suppress # Outpulsing** — Indicates end-to-end signaling begins with (and includes) the “#” when “y” is entered in this field. The final “#” is suppressed in cases where System would normally outpulse it. This field should be “y” when the Central Office (for example, rotary) or any other facility treats “#’ as an error; default is n.
- **Seize When Maintenance Busy** — This field is effective only for ports on TN760C (or later release), TN767, and TN464C (or later release) circuit packs. It indicates whether an outgoing seize is generated when a trunk is maintenance busied, and whether the far-end switch is administered to do likewise. This supports the Electronic Tandem Network Busyout feature. The intended use of this feature is to prevent the far-end PBX from reporting problems concerning a trunk which has been removed from service at the near end. The setting of this field has no effect on the behavior of the far-end machine; it controls the behavior of the near end switch and the *expected* far-end behavior.

  If the administered value of this field is either “near-end” or “both-ends,” an outgoing seize will be initiated whenever a trunk in this trunk group is maintenance busied. The seize is maintained until the maintenance busyout is released. This action will likely cause alarms at the far-end switch, perhaps leading to a far-end maintenance busy out, unless the far-end switch is administered to expect this behavior.

If the administered value of this field is either "far-end" or "both-ends," any abnormally long incoming seize[1] (including failure to drop from a completed call) is *assumed to be the result of a far-end maintenance busy condition.* Note that this assumption may be incorrect since the abnormally long seize may actually be due to a transient or permanent failure of the trunk circuit. Regardless of the cause of the abnormally long seize, the near end response is to:

1. Generate a warning alarm indicating the trunk is assumed to be maintenance busy at the far-end,
2. Remove the trunk from service, and
3. Keep the trunk out of service until a far-end disconnect is received.

The values allowed depend on the Direction field. When the Direction is "incoming," the valid values are "far-end" and "neither-end."

When the Direction is "outgoing," the valid values are "near-end' and "neither-end."

When the Direction is "two-way," the valid values are "both-ends," "far-end,"" near-end," and "neither-end."

- **Maintenance Tests** — Indicates whether or not hourly maintenance tests will be made on this trunk group. Valid entries are "y" (default) or "n."

Page 3 of the Form (Administrable Timers)

- **Incoming Disconnect (msec)** — A disconnect signal on an incoming call is considered valid only if it continues at least for the time specified by this timer. Valid entries are 50 to 2550 in increments of 10. The field cannot be blank default is 500. The field appears only for an "incoming" or "two-way" trunk group when the Trunk Signaling Type is either blank or "cont."
- **Incoming Dial Guard (msec)** — Enter the interval between the detection of an incoming seizure and the acceptance of the first digit. The PBX will not accept digits before this timer expires. This timer is administrable when the Trunk Signaling Type is blank. Valid entries are 10 to 2550 in increments of 10; default is 70.
- **Incoming Partial Dial (sec)** — Enter the time (in sec) allowed between digits. Valid entries are 5 to 255 in increments of 1; default is 18. This timer appears only if the Incoming Dial Type is "rotary."

1. When an incoming seize is detected, the normal behavior is to either immediately direct the call to an administered destination, or to wait for an administered period of time for incoming destination digits. If digits are expected but not received, the calling party receives the DID/TIE intercept treatment administered on the Feature-Related System Parameters form.

■ **Incoming Incomplete Dial Alarm (sec)** — Enter the maximum time (in sec) between incoming seizure and receipt of all digits. Intervals greater than this generate an inline error. Valid entries are 1 to 255 in increments of 1; default is 255. This timer is sent to the TN464C (or later), TN760Dv15 (or later), TN767, and TN2140 tie circuit packs.

■ **Outgoing Disconnect (msec)** — A disconnect signal on an outgoing call is considered valid only if it continues at least for the time specified by this timer. This timer begins timing when a disconnect signal has been detected on an outgoing call over the trunk, and resets when the signal is no longer detected. If the timer times out, the trunk is dropped. Valid entries are 50 to 2550 in increments of 10; default is 500. The field cannot be blank. This field only appears for "outgoing" or "two-way" trunk group when the Trunk Signaling Type is either blank or "cont."

■ **Outgoing Dial Guard (msec)** — This timer specifies the time between seizure acknowledgment of a trunk and the outpulsing of digits. For trunks that do not provide seizure acknowledgment, the timer specifies the minimum time between seizure and the outpulsing of digits. Any digit dialed by the station user after they lift the receiver, but before the timer times out, will not be outpulsed until the timer expires. Valid entries are 100 to 25500 in increments of 100. The field cannot be blank. Default is 1600.

■ **Incoming Glare Guard (msec)** — Enter the minimum time (in msec) between the time the incoming trunk is released and the same trunk can be seized for an outgoing call. This guard time will ensure the far-end has released all equipment after the incoming trunk is released. Valid entries are 100 to 25500 in increments of 100. The field cannot be blank. Default is 1500. This field only appears when the trunk group is "two-way."

■ **Outgoing Glare Guard (msec)** — Enter the minimum time (in msec) between the time an outgoing trunk is released and the same trunk can be seized for another outgoing call. This guard time will ensure that the far-end has released all equipment after the outgoing trunk is released. Valid entries are 100 to 25500 in increments of 100. The field cannot be blank. Default is 1500. This field only appears for outgoing and two-way trunk groups.

■ **Outgoing Rotary Dial Interdigit (msec)** — Enter the interval (in msec) between rotary dial digits being outpulsed by the system (that is, PBX). Valid entries are 150 to 2550 in increments of 10. The field cannot be blank. Default is 600. This field only appears when the Outgoing Dial Type is "rotary."

■ **Incoming Seizure (msec)** — Enter the minimum time (in msec) required for recognition of incoming ringing signal from the far-end. Valid entries are 20 to 2550 in increments of 10. The field cannot be blank. Default is 500. This field appears when the Trunk Signaling Type is "cont" and the Direction is "incoming" or "two-way." TN2140 ports are the only tie ports that can receive this timer.

- **Outgoing End of Dial (sec)** — Enter the maximum time (in sec) a trunk may wait for answer supervision after dialing an outgoing call. During cut through operation, timing begins after each outgoing digit is sent by the PBX and timing ceases after the far-end sends answer supervision. If the timer expires, the PBX acts as if it had received answer supervision. On slenderized operation, the timer begins after the last digit collected is sent by the PBX. The timer ceases when the far-end sends answer supervision. If the timer expires, the PBX acts as if it has received answer supervision. This field appears when Direction is "outgoing" or "two-way" and Receive Answer Supervision is "n." This field will not appear if the Receive Answer Supervision field is "y," but a zero (0) value will be sent down to the firmware to disable the timer. Valid entries are 1 to 254 in increments of 1. Default is 10.

  NOTE:
  This field controls the firmware answer-supervision timer on ports that take the administrable timers; the Answer Supervision Timeout field on Page 1 of the Trunk Group form controls answer supervision for ports that do not take administrable timers. This field and the value administered in the Answer Supervision Timeout field on the Trunk Group form should be the same value.

- **Outgoing Seizure Response (sec)** — Enter a maximum time (in sec) by which the PBX should receive the proceed-to-dial indication from the far-end after sending the seize signal. If the indication is not received in this time, a seizure failure response is uplinked. Valid entries are 1 to 255 in increments of 1. Default is 5 sec. This timer is sent to the TN464B (or later), TN767, TN439, TN458, TN760Dv15 (or later), and TN2140 tie circuit packs.
- **Programmed Dial Pause (msec)** — Enter the length (in msec) of a pause during abbreviated dialing, ARS outpulsing, and terminal dialing operations. This timer is administrable for all outgoing and two-way trunk groups. Valid entries are 100 to 25500 in increments of 100. Default is 1500 msec. This timer is sent to the TN464B (or later), TN1760Dv15 (or later), TN767, TN458, and TN2140 tie circuit packs.
- **Disconnect Signal Error (sec)** — Enter a maximum time (in sec) within which a disconnect signal from the far-end is expected after the internal party (a station or a tie trunk) goes on-hook. If the timer expires, the system can assume a disconnect failure and take an appropriate action (such as, an error message). Valid entries are 1 to 255 in increments of 1. Default is 240 sec.
- **Outgoing Last Digit (sec)** — Enter the maximum time (in seconds) to wait for the next digit dialed. After the timer expires, no more digits are accepted by the circuit pack. It will only be administrable if the Trunk Signaling Type is "dis" or "cont" and the trunk group Direction is "two-way" or "outgoing." Valid entries are 1-40; default is 10. Only TN2140 ports receive this timer.

Normal Outgoing Seize Send (msec) — Enter the number of milliseconds to ground the M-lead. Outgoing seizure is signaled by the calling switch momentarily grounding the M-lead for the duration specified by this timer. This field appears only if the Trunk Signaling Type is “dis” and the trunk group Direction is “two-way” or “outgoing.” Valid entries are 60 to 250 in increments of 10. Default is 70. Only TN2140 ports receive this timer.

Release Ack Send (msec) — Enter the duration (in msec) of the forward release acknowledgment signal. After receiving a forward release signal, the called switch must send the forward release acknowledgment signal. This signal is sent by grounding the M-lead for the duration specified by this timer. This field appears only if the Trunk Signaling Type is “dis” and the trunk group Direction is “incoming” or “two-way.” Valid entries are 500 to 1200 in increments of 100. Default is 600. Only TN2140 ports receive this timer.

Seize Ack Delay (msec) — Enter the maximum time (in msec) between receiving a seizure and the sending of seizure acknowledgment by the called switch. This field appears only if the Trunk Signaling Type is “dis” and the trunk group Direction is “incoming” or “two-way.” Valid entries are 40 to 120 in increments of 10. Default is 100. Only TN2140 ports receive this timer.

Answer Send (msec) — Enter the duration (in msec) of the answer signal pulse. This field appears only if the Trunk Signaling Type is “dis" and the trunk group Direction is “incoming” or “two-way.” Valid entries are 60 to 120 in increments of 10. Default is 80. Only TN2140 ports receive this timer.

Outgoing Disconnect Send (msec) — Enter the duration (in msec) of the M-lead ground at the calling switch during disconnect. Forward release is signaled by the calling switch by grounding the M-lead for the duration specified by this timer. It is only administrable if the Trunk Signaling Type is “dis” and the trunk group Direction is “two-way” or “outgoing.” Valid entries are 500 to 1200 in increments of 100. Default is 600. Only TN2140 ports receive this timer.

Seize Ack Send (msec) — Enter the duration (in msec) of the seize acknowledge pulse. This field appears only if the Trunk Signaling Type is “dis” and the trunk group Direction is “incoming” or “two-way.” Valid entries are 40 to 120 in increments of 10. Default is 60. OnlyTN2140 ports receive this timer.

Incoming Disconnect Send (msec) — Enter the duration (in msec) of the M-lead ground at the called switch during disconnect. Calls may be cleared by either the calling switch (forward release) or the called switch (backward release). Backward release is signaled by the called switch by grounding the M-lead for the duration specified by this timer. It is only administrable if the Trunk Signaling Type is “dis” and the trunk group Direction is “incoming” or “two-way.” Vaild entries are 500 to 1200 in increments of 100. Default is 800. Only TN2140 ports receive this timer.

- **Glare** — Enter the minimum time (in msec) between sending an outgoing seizure and receiving a seizure acknowledgment. If seizure acknowledgment is received before expiration of the timer, a glare condition is assumed. It is only administrable if the Trunk Signaling Type is "cont" and the trunk group Direction is "two-way" or "outgoing." Valid entries are 40 to 100 in increments of 10. Default is 40. OnlyTN2140 ports receive this timer.
- **Tone (msec)** — Enter the length of a DTMF tone sent in response to a button depression at a hybrid station set. Valid entries are 20 to 2550 in increments of 10; default is 350. Only administered if the Trunk Signaling Type is blank.
- **Pause (msec)** — Enter the minimum length of a pause between tones being sent in response to button depressions at a hybrid station set. Only administrable if the Trunk Signaling Type is blank. Valid entries are 20 to 2550 in increments of 10; default is 150.
- **PPS** — Enter either "10" or "20" to specify the PPS (pulses per second) assigned to rotary dial pulse trunk groups. Valid entries are"10" or "20." Default is "10."

  NOTE:
  The TN439, TN458, and TN767 circuit packs can only do 10pps.

- **Make (msec)** — Enter the duration of the make interval (the pause between pulses) while the system is outpulsing digits using dial pulse signaling.

  If the PPS field is"10" the sum of the Make and Break fields must equal 100. Valid entries are 20 to 80 in increments of five. The field cannot be blank. The default is 40.

  If the PPS field is "20," the sum of the Make and Break fields must equal 50. Valid entries are 10 to 40 in increments of five. The field cannot be blank. The default is 20.

- **Break (msec)** — Enter the duration of the break interval (the pulse duration) while the system is outpulsing digits using dial pulse signaling.

  If the PPS field is "10," the sum of the Make and Break fields must equal 100. Valid entries are 20 to 80 in increments of five. The field cannot be blank. The default is 60.

  If the PPS field is "20," the sum of the Make and Break fields must equal 50. Valid entries are 10 to 40 in increments of five. The field cannot be blank. The default is 30.

Page 4 of the Form (ATMS Threshold)

NOTE:
This form appears when the Direction field on Page 1 is "outgoing" or "two-way" and ATMS is enabled on the Feature-Related System Parameters form.

■ **TTL Type** — Specifies the type of TTL selected for testing trunks. The TTL type determines what ATMS tests can be completed and thus which threshold values need to be administered. The different TTLs supported are 105 with return loss (105-w-rl) (default), 105 without return bss(105-wo-rl), high-level tone source (high-level-tone), low-level tone source (low-level-tone), 100-type (100), and 102 type (102). The following table explains the differences between TTL Types:

Type TTL	Description	Example
105-w-rl	Full range of 18 measurements or some defaults for return loss used (56A)	TN771B, ZLC12 and SN261B circuit packs and new 58A mini-responder
105-wo-rl	Cannot return default values for far-end return loss	Older 56A mini-responder
high-level-tone	Sends a fixed sequence of tones at 0 dBm	ZLC12 and SN261B circuit packs
low-level-tone	Sends a fixed sequence of tones at -16dBm	SN261B circuit pack
100	Up to 5 measurements that sends a 1004 Hz tone then a quiet termination	
102	One measurement that sends a 1004 Hz tone	

The far-end switch containing the TTL may be any of the following:

- System 85 R3 PBX equipped with the Maintenance/Test Board (TN771B);
- System 75 R1V2 and beyond, all of which contain the circuitry required to perform the TTL function;
- System 85 R2 PBX equipped with the Analog/Digital Facility Test Circuit (ADFTC,SN261)
- DIMENSION FP8 equipped with the Analog Facility Test Circuit (AFTC, ZLC-12);
- Central Office switches equipped with various TTL equipment that provide 100,102, or 105 test line capabilities (56A).

Other vendor PBXs *may* be supported if compatible test lines are provided by these switches.

Four different versions of the ATMS Threshold Administration page can occur depending upon the measurements allowed by the TTL type selected. The four possibilities are:

1. 105-w-rl and 105-wo-rl — All thresholds appear.
2. high-lts and low-lts — All thresholds (except maximum C-notched noise) appear.

3. 100 — All thresholds (except maximum c-notched noise, 404Hz loss, and 2804 Hz loss) appear.
4. 102 — Only 1004 Hz loss threshold appears.

```
                                    ATMS THRESHOLDS
TTL Type: 105-w-rl_____          Far End Test No: _____________________
TTL Vendor: _____________        TTL Contact: _____________________
Trunk Vendor: _____________      Trunk Contact: _____________________
Trunk Length: ____________

                        MARGINAL          UNACCEPTABLE
                        Min   Max           Min   Max
          1004 Hz Loss: -2 21              -2     21
                        -Dev +Dev          -Dev   +Dev
           404 Hz Loss: 9     9             9      9
          2804 Hz Loss: 9     9             9      9

Maximum C Message Noise:     55                  55
Maximum C Notched Noise:     74                  74
         Minimum SRL-HI:     0_                  0_
         Minimum SRL-LO:     0_                  0_
            Minimum ERL:     0_                  0_

     Allow ATMS Busyout, Error Logging and Alarming? y
  Maximum Percentage of Trunks Which Can Be Removed from Service by ATMS: 0_
```

Screen 4-37. ATMS Thresholds Form

- **Far-EndTest No.** — Enter the access number (1 to 20 digits) dialed to reach the TTL.
- **TTLVendor** — Enter the 0 to 22 alphanumeric character TTL vendor name (the name of the vendor supplying the terminating test line); default is blank.
- **TTL Contact** — Enter the 0 to 25 alphanumeric character TTL vendor contact (the name and or telephone number of someone from the TTL vendor who can be contacted in the event of problems with the TTL); default is blank.
- **Trunk Vendor** — Enter the 0 to 22 alphanumeric character trunk vendor name (who to notify in the event of problems with the trunks); default is blank.
- **Trunk Contact** — Enter the 0 to 25 alphanumeric character trunk vendor contact (the name and/or telephone number of someone from the trunk vendor who can be contacted in the event of problems with the trunks); default is blank.

- **Trunk Length** — Enter 0 to 4 digits followed by “k” (for kilometers) or “m” (for miles) showing the length of trunk. This field is not required, since it is not used by the (G3-MT. It has been included for the G3-MA adjunct to use in aiding with threshold establishment, since noise on a trunk increases with the length of the trunk. The default is “Om.”
- **Marginal Threshold — Minimum 1004 Hz Loss** — Enter -2 (default), -1, or 0 to 21 to indicate the minimum signal loss for a 1004 Hz test tone (in dB) allowed before reporting a trunk as out of tolerance. A larger dB value is more restrictive.
- **Marginal Threshold — Maximum 1004 Hz Loss** — Enter the maximum signal loss (0 to 21) for a 1004 Hz test tone (in dB) allowed before reporting a trunk as out of tolerance; default is 21. A smaller dB value is more restrictive.
- **Unacceptable Threshold — Minimum 1004 Hz Loss** — Enter -2 (default), -1, or 0 to 21 to indicate the minimum signal loss for a 1004 Hz test tone (in dB) allowed before reporting a trunk as unacceptable. A larger dB value is more restrictive.
- **Unacceptable Threshold — Maximum 1004 Hz Loss** — Enter the maximum signal loss (0 to 21) for a 1004 Hz test tone (in dB) allowed before reporting a trunk as unacceptable; default is 21. A smaller dB value is more restrictive.
- **Marginal Threshold — 404 Hz Loss Negative Deviation** — Enter the maximum negative deviation of measured loss (0 to 9) at 404 Hz from the 1004 Hz test tone noise level (in dB) allowed before reporting a trunk as out of tolerance; default is 9. Smaller dB values are more restrictive.
- **Marginal Threshold — 404 Hz Loss Positive Deviation** — Enter the maximum positive deviation of measured loss (0 to 9) at 404 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk as out of tolerance; default is 9. Smaller dB values are more restrictive.
- **Unacceptable Threshold— 404 Hz Loss Negative Deviation** — Enter the maximum negative deviation of measured loss (0 to 9) at 404 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk unacceptable; default is 9. Smaller dB values are more restrictive.
- **Unacceptable Threshold — 404 Hz Loss Positive Deviation** — Enter the maximum positive deviation of measured loss (0 to 9) at 404 Hz from the 1004 Hz test tone loss level (in dB) allowed before repotting a trunk unacceptable; default is 9. Smaller dB values are more restrictive.
- **Marginal Threshold — 2804 Hz Loss Negative Deviation** — Enter the maximum negative deviation of measured loss (0 to 9) at 2804 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk as out of tolerance; default is 9. Smaller dB values are more restrictive.

■ **Marginal Threshold — 2804 Hz Loss Positive Deviation** — Enter the maximum positive deviation of measured loss (0 to 9) at 2804 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk as out of tolerance; default is 9. Smaller dB values are more restrictive.

■ **Unacceptable Threshold— 2804 Hz Loss Negative Deviation** — Enter the maximum negative deviation of measured loss (0 to 9) at 2804 Hz from the 1004 Hz test tone loss level (in dB) allowed before repotting a trunk unacceptable; default is 9. Smaller dB values are more restrictive.

■ **Unacceptable Threshold— 2804 Hz Loss Positive Deviation** — Enter the maximum positive deviation of measured loss (0 to 9) at 2804 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk unacceptable; default is 9. Smaller dB values are more restrictive.

■ **Marginal Threshold — Maximum C Message Noise** — Enter the maximum C-message noise interference (15 to 55) in dBmC above reference noise terminating on a voice terminal as measured within the voice band frequency range (500 to 2500 Hz) allowed before repotting a trunk as out of tolerance. The default is 55. Smaller values are more restrictive.

■ **Unacceptable Threshold — Maximum C Message Noise** — Enter the maximum C-message noise interference (15 to 55) in dBmC above reference noise terminating on a voice terminal as measured within the voice band frequency range (500 to 2500 Hz) allowed before reporting a trunk as unacceptable. The default is 55. Smaller values are more restrictive.

■ **Marginal Threshold — Maximum C Notched Noise** — Enter the maximum C-notched signal dependent noise interference (34 to 74) in dBmC allowed before reporting a trunk as out of tolerance. The default is 74. Smaller values are more restrictive.

■ **Unacceptable Threshold— Maximum C Notched Noise** — Enter the maximum C-notched signal dependent noise interference (34 to 74) in dBmC allowed before reporting a trunk as unacceptable. The default is 74. Smaller values are more restrictive.

■ **Marginal Threshold — Minimum SRL-HI** — Enter the minimum high-frequency signaling return loss (0 to 40) in dB allowed before reporting a trunk as out of tolerance. The default is 0. Larger values are more restrictive.

■ **Unacceptable Threshold— Minimum SRL-HI** — Enter the minimum high-frequency signaling return loss (0 to 40) in dB allowed before reporting a trunk as unacceptable. The default is 0. Larger values are more restrictive.

■ **Marginal Threshold — Minimum SRL-LO** — Enter the minimum low-frequency signaling return loss (0 to 40) in dB allowed before repotting a trunk as out of tolerance. The default is 0. Larger values are more restrictive.

■ **Unacceptable Threshold — Minimum SRL-LO** — Enter the minimum low-frequency signaling return loss (0 to 40) in dB allowed before reporting a trunk as unacceptable. The default is 0. Larger values are more restrictive.

■ **Marginal Threshold — Minimum ERL** — Enter the minimum low-frequency echo return loss (0 to 40) in dB allowed before reporting a trunk as out of tolerance. The default is 0. Larger values are more restrictive.

■ **Unacceptable Threshold — Minimum ERL** — Enter the minimum low-frequency echo return loss (0 to 40) in dB allowed before reporting a trunk as unacceptable. The default is 0. Larger values are more restrictive.

■ **Allow ATMS Busyout, Error Logging and Alarming** — Enter "y" to allow ATMS error logging and alarming (subject to filtering depending on the service organization used to deal with alarms); default is n.

■ **Maximum Percentage of Trunks Which Can Be Removed From Service by ATMS** — Enter the highest percentage of trunks from the trunk group (0 to 100) that can be removed from service at one time because of unacceptable transmission measurement results; default is 0.

Pages Y through X of the Form (Group Member Assignments)

NOTE:
The total number of pages, and the first page of the Group Member Assignments, will vary depending on whether the Administrable Timers and ATMS Thresholds pages are displayed.

■ **Administered Members (min/max)** — Indicates the minimum and maximum member number that has been administered for the particular trunk group. This field is displayed on all member pages.

■ **Total Administered Members** — Indicates the total number of members administered in the trunk group. This field will appear on all trunk group member pages.

■ **Port** — Enter seven characters. The first two characters identify the cabinet (01 to 22 [G3r V2], 01 to 03 [G3s V2, G3i V2]); the third character identifies the carrier (A through E); the fourth and fifth identify the slot number in the carrier (01 to 20 for multi-carrier cabinets or 01 to 18 for single-carrier cabinets); the last two characters identify the circuit number (01 to 31).

■ **Code** — Display-only field. Displays the type of circuit pack physically installed or logically administered at the location to which this member has been assigned. If a circuit pack is neither installed nor administered at the member's location, the field is blank.

■ **Sfx** — Displays the type of circuit pack (suffix only) physically installed at the location to which this member has been assigned. Field is blank if a circuit pack has not been physically installed.

■ **Name** — Enter up to ten characters to identify the member of the trunk group. The name can be a 7-digit telephone number or a 10-digit Trunk Circuit Identification number (provided by trunk supplier).

NOTE:
Previously, Generic 1 Night Service and Balance/Loss information was entered in the Name field as “NT#...” and “TT#)...” This information must now be entered in the Night field (below) or the STT Loss field on Page 1 of the form, as applicable.

■ **Night** — Enter the extension of the night destination for the trunk. This individual night destination overrides the group night service destination on the first page of the trunk group form. Incoming calls are routed to this destination when the system is placed in night service mode. (If “attd” is entered, night service will be to the attendant.)

■ **Mode** — Specifies the signaling mode used on Tie Trunks with TN722A (or later release), TN760B (or later release), TN767, TN464 (any suffix), TN437, TN439, TN458, or TN2140 circuit packs. Valid entries are “e&m” (interface), “simplex” (phantomed), or “protected.” This entry must correspond to associated dip switch settings on the circuit pack.

■ **Type** —Specifies the signaling type to be used. This field should only be used with TN760B (or later release), TN722 (with any suffix), TN767, TN2140 (when the Trunk Signaling Type field is “cont”), TN437, TN439, TN464 (with any suffix), or TN458 circuit packs. The Type field appears with the Trunk Signaling Type field is "cont” or blank.”

The value of “t5 rev” is allowed only for the TN760D vintage 10 or later. When the Type field is “t5 rev,” the Mode field must be “e&m.”

Valid entries are "t1 stan,” “t1 comp,” “t5rev,” or “type 5.” Default is blank.

■ **Ans Delay** — Specifies the length of the wait for answer supervision delay in ms for Trunks using the TN722A (or later), TN760 (B, C, or D), TN767, TN464 (any suffix), TN437, TN439, TN458, or TN2140 circuit packs. Valid entries are 20 to 5100 in increments of 20; default is blank and internally treated as a zero. This delay serves two purposes:

1. Used to ensure that the answer supervision signal is valid and not a secondary delay-dial or wink-start signal.
2. Used to bridge over momentary off-hook signals resulting from connections made off-network through certain No. 5 Crossbar CCSA switches as the connection is being established.

```
                                TRUNK GROUP                 Page 1 of X

Group Number: 1              Group Type: aplt        CDR Reports? y
  Group Name: OUTSIDE CALL          COR: 1                   TAC :____
   Direction: two-way  Outgoing Display? n Trunk Signaling Type: ____
 Dial Access? y          Busy Threshold: 99        Night Service: _____
Queue Length: 0                                Incoming Destination: _____
                               Auth Code? n


TRUNK PARAMETERS
Trunk Type(in/out): _____________          Incoming Rotary Timeout: 5
Outgoing Dial Type: tone                        Incoming Dial Type: tone
                                           Disconnect Timing(msec): 500
                                                 Sig Bit Inversion: none
         Incoming Dial Tone? y
Disconnect Supervision- Out? n
 Answer Supervision Timeout: 10         Receive Answer Supervision? n
```

Screen 4-38. Advanced Private Line Termination Trunk Group Form (Page 1 of X)

Implementation Notes:

BCC is displayed when the Comm Type is “avd’’ or when ISDN-PRI is optioned on the System-Parameters Customer-Options form and Comm Type is ’’avd," “data," or ’’rbavd.”

Connected to Toll and DTT to DCO Loss are displayed when Trunk Type is “auto/... “, “delay/...”, “immed/...”, or “wink/...”

STT Loss is displayed when Connected to Toll is ’’n.”

Wink Timer is displayed when the outgoing side of theTrunk Type is ’’wink” or "delay.”

Queue Length is displayed when the Direction is ’’outgoing’’ or "two-way.”

Night Service, Incoming Destination and Auth Code are displayed when Destination is ’’incoming” or ’’two-way.”

Send Release Ack, Receive Release Ack, and Send Answer Supervision are displayed when Trunk Signaling Type is “cont’’or ’’dis.”

Bit Rate, Synchronization, and Duplex are displayed when Comm Type is “avd” or “rbavd.”

ITC is displayed when Comm Type is “data,” “avd,” or “rbavd” and BCC is not “0.”

The Expected Digits field appears if the Direction is “incoming” or “two-way,” the Trunk Signaling type is blank, and the Incoming Dial Type is "mf."

```
                                                                  Page 2 of X
                                  TRUNK GROUP
TRUNK  FEATURES
         ACA Assignment? n           Measured: none
                                  Internal Alert? n
                                Data Restriction? n
                                                       Maintenance Tests? y

  Suppress # Outpulsing? n
                  Seize When Maintenance Busy: neither-end
```

Screen 4-39. Advanced Private Line Termination Trunk Group Form (Page 2 of X)

Implementation Note:

Long HoldingTime (hours), Short Holding Time (seconds), and Short Holding Threshold are displayed when ACA Assignment is “y.”

Glare Handling is displayed when the Direction field is “two-way” and the outgoing side of the Trunk Type field is “wink’ or “delay.”

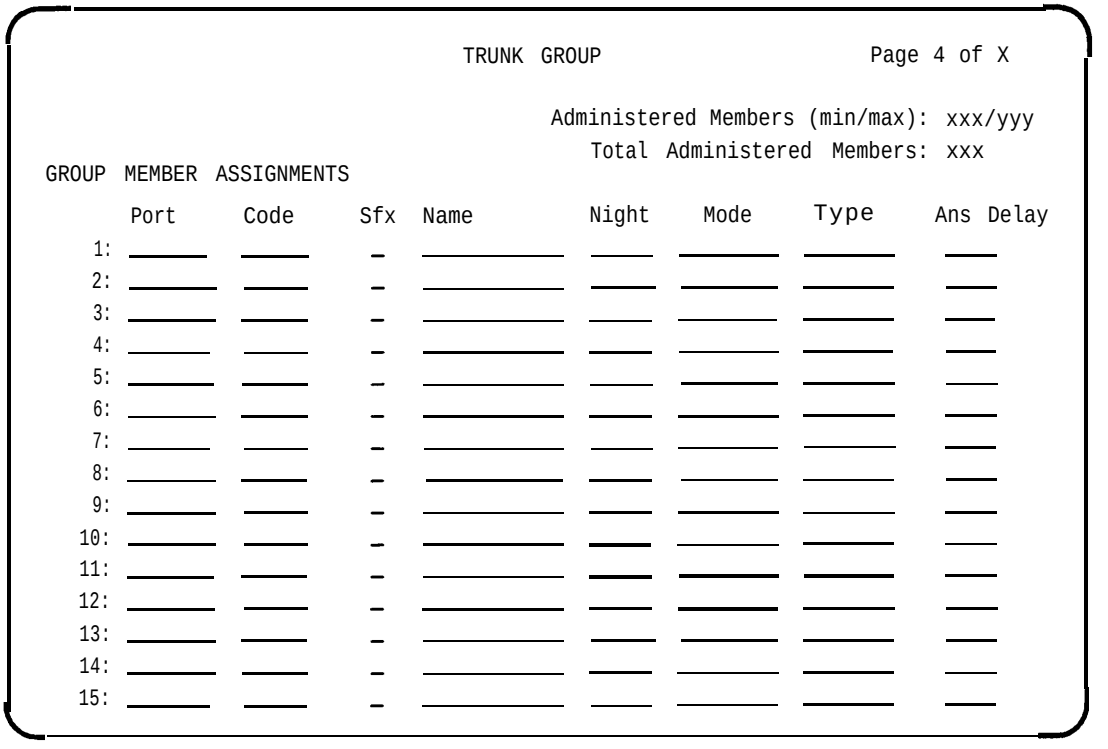
```
                                                          Page 3 of X
                                TRUNK  GROUP
ADMINISTRABLE  TIMERS
    Incoming Disconnect (msec): 500              Outgoing  Disconnect(msec):  500
    Incoming Dial Guard(msec): 70                Outgoing  Dial  Guard(msec):  1600
   Incoming Glare Guard(msec): 1500             Outgoing  Glare  Guard(msec):  1500

                                   Outgoing Rotary Dial Interdigit(msec) : 800_

  Outgoing End of Dial (sec): 10         Outgoing  Seizure  Response  (sec):  5
Programmed Dial Pause (msec): 1500          Disconnect  Signal  Error(sec):  240
                                      Incoming  Incomplete  Dial  Alarm(sec):  255

END  TO  END  SIGNALING
    Tone (msec): 350      Pause (msec): 150

OUTPULSING  TIMING
      PPS: 10        Make (msec): 40      Break (msec): 60
```

Screen 4-40. Access Trunk Group Administrable Timers Form (Page 3 of X)

Implementation Note:

The Incoming Partial Dial field is only displayed when the Incoming Dial Type field from Page 1 is ''rotary."

The Outgoing End of Dial field is displayed if the Receive Answer Supervision field from Page 1 is "n."



```
                                TRUNK GROUP                    Page 4 of X

                                          Administered Members (min/max): xxx/yyy
                                             Total Administered Members: xxx
GROUP  MEMBER  ASSIGNMENTS
       Port      Code      Sfx  Name          Night    Mode      Type      Ans Delay
   1:  _______   _____     _    ____________  _____    ________  ________  ____
   2:  _______   _____     _    ____________  _____    ________  ________  ____
   3:  _______   _____     _    ____________  _____    ________  ________  ____
   4:  _______   _____     _    ____________  _____    ________  ________  ____
   5:  _______   _____     _    ____________  _____    ________  ________  ____
   6:  _______   _____     _    ____________  _____    ________  ________  ____
   7:  _______   _____     _    ____________  _____    ________  ________  ____
   8:  _______   _____     _    ____________  _____    ________  ________  ____
   9:  _______   _____     _    ____________  _____    ________  ________  ____
  10:  _______   _____     _    ____________  _____    ________  ________  ____
  11:  _______   _____     _    ____________  _____    ________  ________  ____
  12:  _______   _____     _    ____________  _____    ________  ________  ____
  13:  _______   _____     _    ____________  _____    ________  ________  ____
  14:  _______   _____     _    ____________  _____    ________  ________  ____
  15:  _______   _____     _    ____________  _____    ________  ________  ____
```

Screen 4-41. Advanced Private Line Termination Trunk Group Form (Pages 4 through X)

Implementation Notes:

To reduce repetition, the remaining pages are not shown. For a complete set of forms, refer to the “Blank Forms Package.”

The Type Column does not appear if the Trunk Signaling Type field on Page 1 is “dis.”

Central Office Trunk Group

This form is used to connect the System to the public telecommunications network via a local CO.

Administration Commands

The following administration commands can be used to access the CO Trunk Group form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
add	trunk-group	1-MAX (or 'next')
change	trunk-group	1-MAX or TAC X...
display	trunk-group	1--MAX ['number' X]['to-number' X]['count' N] ['tac' assigned TAC]['print' or 'schedule']
list	trunk-group	['print' or 'schedule']
remove	trunk-group	1-MAX or TAC X...

* Brackets [ ] indicate the qualifier is optional. Single quotes (') indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered. MAX is the maximum number available in your system configuration. Refer to the Capacity Table in Appendix C.

Form Instructions

Make assignments as required for the following fields on each page of the form:

Page 1 of the Form

- **Group Number** — Enter a group number when completing a paper form. This is a display-only field when the form is accessed using an administration command such as *add* or *change.*
- **Group Type** — Enter "co" to identify the trunk group type.
- **CDR Reports** — Enter "y" (default) to provide a detailed Call Detail Recording (CDR) record of both incoming and outgoing calls made on all trunks in the trunk group.
- **Group Name** — Enter a unique name that identifies the trunk group. Up to 15 characters can be used; default is OUTSIDE CALL.
- **COR** — Enter a class of restriction (COR) number from 0 to 95 that reflects the desired restriction; default is 1.
- **TAC** — Enter the trunk access code (TAC) that must be dialed to access the trunk group. CDR also uses the TAC to identify the trunk group on associated CDR reports. A different TAC must be assigned to each trunk group. Valid entries are TACs that are compatible with the System Dial Plan (1 to 4 digits; 1 to 3 digits for DCS or to remotely control it).

■ **Direction** — Enter whether the trunk group is “incoming,” “outgoing,” or “two-way” (default). The Direction administered affects which timers appear on the Administrable timers page.

■ **Outgoing Display** — Specifies whether or not the trunk group name is displayed on a terminal placing an outgoing call. Valid entries are “y” or “n” (default).

■ **Dial Access** — Enter “y” to allow the trunk group to be accessed via a TAC; otherwise, enter “n” (default). Access via the ARS feature is allowed regardless of this entry.

■ **Busy Threshold** — Enter the number of trunk group members that must be busy before the attendant is alerted by the Warning lamp on the Attendant Console.

■ **Night Service** — Enter the extension number assigned to Night Service. The extension number entered will receive all incoming calls when Night Service is activated and the individual trunk member Night field is not administered to override this group extension. Valid entries are an extension number (can be a VDN extension), the attendant group access code (“attd”), or leave blank if the Trunk Type (in/out) field is not “auto/...”

■ **Queue Length** — Enter the number of outgoing calls that can be held waiting. A “0” indicates no calls will be held in queue. Enter “0" (default) for DCS trunks. This field is not displayed if the Direction field is “incoming.”

■ **Country** — This field specifies the country code for each subscriber line. Valid values are any number between 1 and 18, inclusive. The value of this field, in conjunction with the values of the Trunk Termination and Trunk Gain fields, will determine the input and trans-hybrid balance impedance requirements for TN465B, TN2146, and TN2147 ports.

Refer to the “Country Code Assignments” table in Appendix B for a complete list of country codes.

■ **Incoming Destination** — Displayed only if the Direction field is “incoming” or “two-way.” Indicates where incoming calls will terminate. Valid entries are an extension number, the attendant group access code (“attd”), VDN, or leave blank if the Trunk Type (in/out) field is not “auto/...“ If “attd” is entered, a call is treated as an LDN call.

■ **Comm Type** — Indicates if the trunk is to be used for voice, data, alternate voice-data (avd), or alternate voice/voice grade data and 56-kbps digital data (rbavd) calls. Valid entries are “avd,” “rbavd,” "voice" (default), or “data.” Type “rbavd” supports access to voice/data SDN service on robbed-bit transmission facilities.

NOTE:
Comm Types of “avd” and “rbavd” require trunk member ports on a DS1 circuit pack. An “rbavd’ type requires that the DS1 circuit pack be administered for robbed-bit, or (if mixed mode signaling is allowed on the DS1 circuit pack) ISDN-EXT, or ISDN-PRI signaling. An “avd” type requires that the DS1 circuit pack be administered for

either common-chan or CAS signaling.

■ **Auth Code** — Displayed if the Direction field is “incoming” or “two-way.” Enter “y” if an authorization code must be dialed to complete incoming calls on the trunk group. This field can only be “y” if the Authorization Codes feature is enabled on the System-Parameters Customer-Options form.

■ **Digit Absorption List** — Enter a digit list absorption number, if required, when this trunk group terminates at a step-by-step office. This field specifies the type of absorption as specified on the System Digit Absorption form. Up to five different forms (lists 0 to 4) may be administered in the System.

■ **Prefix-1** — Specifies if the prefix 1 is required for N(0/1)X calls. Valid entries are “y” and “n” (default).

■ **Trunk Flash** — Enter “y” or “n” (default) to indicate if access to customized services provided by a far-end (such as Central Office) is permitted for this trunk group. The PBX must be directly connected to a far-end that provides such services via an analog or digital 2-wire trunk.

■ **Toll Restricted** — Enter “y” (default) if this trunk group is to be toll restricted. This field only applies for outgoing TAC calls if the originating party is toll restricted. Trunks with an Outgoing Dial Type of “automatic” should have this field set to “n.”

■ **BCC** (Bearer Capability Class) — Displayed when the Integrated services Digital Network-Primary Rate Interface is optioned for on the System-Parameters Customer-Options form and the Comm Type field is “data,” “avd,” or “rbavd.” Used by the Generalized Route Selection feature and identifies the type of traffic on trunks in the group. The BCC entry is used by far-end tandem switches to select outgoing routing facilities with equivalent BCC classes. Valid entries are 0,1,2,3, and 4; default is 0 for “avd” and 2 for “data.”

NOTE:
Refer to “Generalized Route Selection” in *DEFINITY Communications System Generic 3 V2 Feature Description,* 555-230-204, for a detailed description of Bearer Capability Classes (BCCs) and their use to provide specialized routing for various types of voice and data calls.

■ **ITC** (Information Transfer Capability) — Displayed for non-ISDN trunk groups when the Comm Type field is “data,” “avd,” or “rbavd’ and the BCC field is not “0.” Used by the GRS feature and enables the system to route calls to restricted or unrestricted facilities according to the endpoint’s information transfer capability. Default is restricted. A trunk member is said to be unrestricted if the circuit pack it belongs to is administered as “b8zs” or “hdb3” in the Line Coding field of the DS1 form. A restricted trunk member can carry only restricted calls. An unrestricted trunk member may carry restricted or unrestricted calls. A trunk group with a transfer capability of unrestricted may have only unrestricted trunk

members.

■ **Trunk Type** — Identifies the physical type of CO trunk. It may differ for incoming and outgoing types. Valid entries are “ground-start,” “loop-start,“ “auto/auto,””auto/delay,“ “auto/immed,” and “auto/wink.” If the Country is “15” (C.I.S.), additional valid entries are “2-wire-ac,” “2-wire-dc,” and “3-wire.” These three trunk types mustbeonaTN2199 circuit board.

■ **ANI Upon Seizure** — This field appears only if the Direction is “outgoing” or “two-way” and the Country is”15“ (C.I.S.). Enter “y” (default) when an ANI request is expected after the trunk is *seized* enter “n” when an ANI request is expected after the trunk is *answered.*

■ **Outgoing Dial Type** — Identifies the type of pulsing required on an outgoing call. Valid entries are “automatic,” “mf,” “tone” (default), or “rotary.”

NOTE:
Multifrequency Signaling must be enabled on the System-Parameters Customer-Options form before a value of “mf” may be administered.

■ **Cut-Through** — This field appears only when the Outgoing Dial Type is either “rotary” or "tone." Enter “y” to allow “cut-through” to the CO trunk.

If the dialed digits are restricted:

— The connection to the CO trunk is dropped

— Intercept treatment is applied.

Enter “n” (default) and the user will receive PBX dial tone. Instead of digits being sent to the CO as they are dialed, they are collected, checked for restrictions, and, if there are no restrictions, the digits are sent to the CO.

■ **Trunk Termination** — Specifies how the trunk group is terminated. Valid entries are “600ohm” or "rc“ (default). Enter “600ohm” when the PBX trunk port is connected to terminal equipment (for example, SLC® carrier or compensators optioned for 600 ohms input impedance) and the distance to the terminal equipment from the System is less than 3000 feet.

■ **Disconnect Timing (msec)** — Specifies the minimum time period in ms that is required for recognition of disconnect by the serving central office or far-end PBX. The time interval must be in increments of 10 (from 140 to 2550); default is 500. This timer is not used for ports on a circuit pack that can receive the administrable Incoming Disconnect and Outgoing Disconnect timers. These latter two times will replace Disconnect Timing.

■ **Analog Gain** — This field appears only if the Country is “15” (C.I.S.) and the Trunk Type is “2-wire-ac,“ “2-wire-dc,” or “3-wire.” This field allows you to specify a boost in analog gain for theTN2199 port in the direction toward the PBX. Enter “a” (-3dB gain boost), “b" (-6dB gain boost), “c” (-8dB gain boost), or “none” (default). This applies *only* to the TN2199 port.

■ **Auto Guard** — Enter “y” to prevent repeated seizures of a defective trunk. This field is effective only for TN438B, TN465B, and TN2147 ports. TN438B ports have hardware support for detecting a defective trunk. TN465B and TN2147 ports consider a trunk defective if no dial tone is detected on an outgoing call, and the Outpulse Without Tone? field is set to “n” on the Feature-Related System Parameters form. The default is no.

■ **Call Still Held** — Enter “y” to prevent call collisions by not allowing an outgoing seizure for a period of not less than 140 seconds. This field is used only at the end of an incoming call where the disconnect is initiated by the PBX, and it will effectively extend the Incoming Glare Guard timer by 140 seconds. This field is effective only for TN438B, TN465B, and TN2147 ports. Default is “n.”

■ **Sig Bit Inversion** — This field allows the user to administer the signaling bit inversion (the A-bit and B-bit inversion) on a per-port basis. This field applies only to TN464B or later suffixed circuit packs. The CCITT standards define on-hook to be”1” in the A-bit and off-hook to be “0.” This definition is the opposite of the EIA definition. The default in the TN464 firmware for signaling bit inversion is use the CCITT standard for 32-channel mode and to use the EIA standard for 24-channel mode. Valid entries are “A,” “A&B,” “B,” and “none” (default).

■ **Connected to Toll** — Enter “y” if connected to a CO toll office. This field is displayed when the Trunk Type field contains an entry of “auto/...”

■ **Terminal Balanced** — Displayed when the Trunk Type field is “ground-start,” “hop-start,” “immed-start,” or “wink-start.” Enter “y” for terminally balanced trunks or “n” (default) for unbalanced trunks. Typically, a Trunk Termination field of “600ohm” signifies a balanced trunk group and a field of “rc” signifies a non-balanced trunk group. If the trunks in this group pass the Low Frequency Return Loss test requirements, then they are terminally balanced, and this field should be “y.”

■ **STT Loss** (Satellite PBX Tie Trunk Loss) — Displayed when Connected to Toll is “n.” Specifies the loss plan to be used for the trunk group. Valid entries are “normal” (default) or “low.” This option affects the transmission performance of a private PBX network.

Although the use of this option has wider applications, only for the simplest network arrangements should this field be administered without Network Engineering advise. The “low” option (described as the ISL digital low loss plan in *DEFINITY Communications System Generic 1 and System* 75 *and System* 85 *DS1/DMI/ISDN-PRI Reference,* 555-025-101) should only be used when:

1. Stations on the satellite PBX complain of too much loss on calls to the public network.
2. The PBX network consists of no more than three PBXs: one main and one or two satellite PBXs.
3. All PBXs have the "low" option available.
4. The total DS1 trunk connection length is less than 100 miles.

If the preceding conditions are not met, obtain Network Engineering assistance. The field entry is based on the following:

- **normal** — Applies to AIU-TT (Analog Interface Unit at Customer Switching System for Tie Trunk — 4-wire E&M interface), and DIU-TT (Digital Interface Unit at Customer Switching System for Tie Trunk — voice or AVD DS1 interface) loss plans.
- **low** — Applies to AIU-TTS (same as AIU-TT, but suitable for private network connections that can be connected in tandem with public network connections) and DIU-TTS (same as DIU-TT, but suitable for private network connections that can be connected in tandem with public network connections). These interfaces were formerly referred to as DIU DTT ISL.

- **RA Trunk Loss** (Remote Access Trunk Loss) — Displayed when the Terminal Balanced entry is "n." Specifies the type of dB loss to be applied to non-terminally balanced trunks. If unsatisfactory echo performance (hollowness) is experienced, the field should be changed to 2dB. Valid entries are "0db" (default) and "2db."

- **DTT to DCO Loss** (Digital Tie to Digital CO Trunk Loss) — Specifies the loss plan to be used for the trunk group for interconnections from a DIU-CO (Digital Interface Unit at a Central Office) to a DIU-DIT (Digital Interface Unit for a Digital Tie Trunk Interface). This field is displayed when the Trunk Type field contains an entry of "auto/..."

  This option affects the transmission performance of public network access via a private PBX network. Choose the "low" option when private network users complain about too much loss on calls to the public network; otherwise, the "normal" option should be used. Valid entries are "normal" (default) and "low." The entry is based on the following:

  - **normal** — Corresponds to a (0, -6) dB gain pair and is used as the default option. (This corresponds to the DTT/EIA DCO port to port configuration as described in *DEFINITY Communications System Generic 1 and System 75 and System 85 DS1/DMI/ISDN-PRI Reference,* 555-025-101.)
  - **low** — Corresponds to (+3, -3) dB gain pair. Low is used for internetwork applications in which no significant configuration will encounter echo, stability, or overload problems because of reduced loss. With the low gain pair, subscriber station DTMF signals transmitted through the digital class 5 office into the customer network may experience nonrecoverable digit mutilation in secondary signaling applications (that is, DTMF signaling after the

connection has been established). (This corresponds to the DTT/ISL DCO port to port configuration as described in *DEFINITY Communications System Generic 1 and System 75 and System 85 DS1/DMI/ISDN-PRI Reference,* 555-025-101.)

Trunk Gain — This field specifies the gain of the trunk, and can be "high" (default) or "low." The value of this field, in conjunction with the values of the Trunk Termination and Country fields, will determine the input and trans-hybrid balance impedance forTN465B, TN2146, TN2147, and TN2184 ports. All other CO circuit packs will be automatically set to "high."

Bit Rate — Displayed when Comm Type is "avd' or "rbavd." It also appears if the Comm Type is "data," but only if the option for ISDN-PRI is enabled on the System-Parameters Customer-Options form. Specifies the baud rate to be used by pooled modems. Valid entries are 300, 1200 (default), 2400, 4800, 9600, and 19200.

Synchronization — Displayed when Comm Type is "avd' or "rbavd." It also appears if the Comm Type is "data," but only if the option for ISDN-PRI is enabled on the System Parameters Customer Options form. Enter whether the trunk group will use synchronous or asynchronous communications. Valid entries are "async" (default) and "sync."

Duplex — Displayed when Comm Type is "avd' or "rbavd." It also appears if the Comm Type is "data," but only if the option for ISDN-PRI is enabled on the System-Parameters Customer-Options form. Specifies either full or half duplex for the trunk group. Valid entries are "full" (default) or "half."

Disconnect Supervision-In — This field appears when the Direction is either "incoming" or "two-way." Internally, the field is set to "n" if the Direction is "outgoing." Enter "y" (default) to indicate that the far-end has the ability to release a trunk when the calling party releases from a call and the system is able to recognize the release signal.

Disconnect Supervision-Out — This field appears when the Direction is either "outgoing" or "two-way." Internally, the field is set to "n" if the Direction is "incoming." If the field is set to "y," a Warning Message appears to alert the user of possible trunk lockups. This field specifies whether trunks in this trunk group provide disconnect supervision when seized outgoing (that is, whether these trunks should be allowed to participate in outgoing trunk to outgoing trunk calls). This field is set independently of the trunk-to-trunk transfer system parameter, although both options must beset appropriately if outgoing trunk to outgoing trunk transfers are desired.

Cyclical Hunt – Displayed when Direction is "two-way" and Trunk Type is "hop-start." Enter "y" (default) if a preferential hunting algorithm is to be used. Otherwise, a linear hunting algorithm will be used.

■ **Disconnect Type** — This field appears only if the Country is "15" (C.I.S.) and the Trunk Type is "2-wire-ac," "2-wire-dc," or "3-wire." This field indicates which side or user controls the disconnect, where A refers to the *calling* party and B refers to the called party. Enter "A and B" or "A or B" (default). This applies *only* to the TN2199 port.

■ **Answer Supervision Timeout** — Used for analog port circuits to indicate the amount of time in seconds the System allows for a call to be answered before beginning a CDR record of a call. This interval begins as soon as the outgoing trunk is seized. Valid entries are 0 to 250; default is 10.

NOTE:
This timeout does not override answer supervision sent from the network or other firmware (DS1 port circuit timers). DS1 firmware-sent answer supervision is administered in the Outgoing End of Dialing field on Page 3 of the Trunk Group form (Administrable Timers page).

■ **Receive Answer Supervision** — Specifies whether or not the network provides answer supervision for the trunks. Answer supervision refers to notification from the far-end that the called party has gone off-hook to answer the call. When answer supervision is provided, the originating PBX can classify a call as answered using the Answer Supervision Timeout field entry (for domestic circuit packs) or, for circuit packs that take administrable timers, by using the Outgoing End of Dial timer. For trunks over which answer supervision is provided by the network, set this field to "y" and the Answer Supervision Timeout field to "0" so that the firmware timeout is disabled. The firmware timeout is automatically set to "0" on circuit packs that take the administrable Outgoing End of Dial timers. Receive Answer Supervision must be set to "n" (default) if the Direction field is "incoming."

Page 2 of the Form

■ **ACA Assignment** — Specifies whether or not Automatic Circuit Assurance (ACA) measurements will be taken for this trunk group. Valid entries are "y" or "n" (default). If "y" is entered, complete the next three fields.

■ **Long Holding Time (hours)** — Only displayed if ACA Assignment is "y." Is the length in hours that the System will consider as being a long holding time. if "0" is entered, the System wiII not consider long holding calls. Valid entries are 0 to 10; default is 1.

■ **Short Holding Time (secs.)** — Only displayed if ACA Assignment is "y." Specifies the length in seconds that the System will consider as being a short holding time. If "0" is entered, the System will not consider short holding calls. Valid entries are 0 to 160; default is 10.

■ **Short Holding Threshold** — Only displayed if ACA Assignment is "y." Number of times the System will record a short holding call before an attendant is alerted to the possibility of a faulty trunk. Valid entries are 0 to 30; default is 15.

■ **Measured** — Indicates if the System will transmit data for this trunk group to the Call Management System. Valid entries are “internal,” “external,” “both,” “none.” Enter “internal” if the data is to be sent to the Basic Call Management System (internal to the switch) for subsequent measurement reports and “external” to send the data to the Call Management System Adjunct. Enter “both” to send the data to both systems for measurement reports. Enter “none” if trunk group measurements are not required. System default is none.

■ **Data Restriction** — Used to prevent System features from generating tones on a data call that would cause erroneous data transmission. Valid entries are "y" or “n” (default).

■ **Abandoned Call Search** — Administered when the Trunk Type is “ground-start.” Enter “y” if this trunk group will conduct an Abandoned Call Search to identify a ghost call.

NOTE:
Abandoned Call Search is designed to work with CO trunks (ground start - analog) that *do not* provide disconnect supervision. Central offices that provide disconnect supervision do not require use of the Abandoned Call Search feature. The CO must support Abandoned Call Search for the feature to work properly.

■ **Suppress # Outpulsing** — Indicates end-to-end signaling begins with (and includes) the “#" when “y” is entered in this field. The final “#" is suppressed in cases where System would normally outpulse it. This field should be “y” when the Central Office (for example, rotary) or any other facility treats “#” as an error; default is n.

■ **Maintenance Tests** — Indicates whether or not hourly maintenance tests will be made on this trunk group. Valid entries are “y” (default) or “n.”

Page 3 of the Form (Administrable Timers)

NOTE:
Different fields appear on the form depending on whether the trunk Direction is “incoming,” “outgoing,” or “two-way.”

■ **Incoming Disconnect (msec)** — A disconnect signal on an incoming call is considered valid only if it continues at least for the time specified by this timer. Valid entries are 50 to 2550 in increments of 10. The field cannot be blank default is 500. This timer is sent to ground-start and loop-start trunks that are “incoming” or “two-way.” The only “incoming” or “two-way” hop-start circuit packs that receive this timer are the TN2138, TN2147, and TN2184.

■ **Outgoing Disconnect (msec)** — A disconnect signal on an outgoing call is considered valid only if it continues at least for the time specified by this timer. This timer begins timing when a disconnect signal has been detected on an outgoing call over the trunk, and resets when the signal is no longer detected. If the timer times out, the trunk is dropped. Valid entries are 50 to 2550 in increments of 10. The field cannot be blank

default is 500. This timer is sent to ground-start and loop-start trunks that are “outgoing” or “two-way.” The only "outgoing” or “two-way” loop-start circuit packs that receive this timer are the TN2138, TN2147, and TN2184. This timer is also sent if the Direction is “outgoing” or “two-way,” the Country is “15” (C. I. S.) and the Trunk Type is “2-wire-ac,” “2-wire-dc,” or “3-wire.”

■ **Outgoing Dial Guard (msec)** — This timer specifies the time between seizure acknowledgment of a trunk and the outpulsing of digits. For trunks that do not provide seizure acknowledgment, the timer specifies the minimum time between seizure and the outpulsing of digits. Any digit dialed by the station user after they lift the receiver, but before the timer times out, will not be outpulsed until the timer expires. Valid entries are 100 to 25500 in increments of 100. The field cannot be blank; default is 1600.

■ **Incoming Glare Guard (msec)** — Enter the minimum time between the time an incoming trunk is released and the same trunk can be seized for an outgoing call. This guard time will ensure the far-end has released all equipment after the incoming trunk is released. Valid entries are 100 to 25500 in increments of 100. The field cannot be blank default is 1500. This field only appears when the trunk group is “two-way.”

■ **Outgoing Glare Guard (msec)** — Enter the minimum time between the time the outgoing trunk is released and the same trunk can be seized for another outgoing call. This guard time will ensure that the far-end has released all equipment after the outgoing trunk is released. Valid entries are 100 to 25500 in increments of 100. The field cannot be blank default is 1500. This field only appears when the trunk group is “outgoing” or “two-way.”

■ **Outgoing Rotary Dial interdigit (msec)** — Enter the interval between rotary dial digits being outpulsed by the system (that is, PBX). Valid entries are 150 to 2550 in increments of 10. The field cannot be blank; default is 800. This field only appears when the Outgoing Dial Type is “rotary.”

■ **Ringing Monitor (msec)** — Enter the minimum time required to determine if the trunk is disconnected. If the ringing signal disappears for a duration longer than the time specified in this field, the call will be assumed to be disconnected. Valid entries are 200to51000 in increments of 200. The field cannot be blank; default is 5200. This timer is sent to TN464C (or later), TN767, TN438 (all), TN447, TN465 (all), TN2138, TN2147, TN2184, and TN2199 CO circuit packs.

■ **Incoming Seizure (msec)** — Enter the minimum time required for recognition of incoming ringing signal from the serving CO. Valid entries are 20 to 2550 in increments of 10. The field cannot be blank; default is 500. This timer is sent to TN464C (or later), TN767, TN429, TN438 (all), TN447, TN465 (all), TN2138, TN2147, TN2184, and TN2199 CO circuit packs.

■ **Outgoing End of Dial (sec)** — Indicates the maximum time (in sec) a trunk waits for answer supervision after dialing an outgoing call. During

cut-through operation, timing begins after each outgoing digit is sent by the PBX and timing ceases after the far-end sends answer supervision. If the timer expires, the PBX acts as if it had received answer supervision. On senderized operation, the timer begins after the last digit collected is sent by the PBX. The timer ceases when the far-end sends answer supervision. If the timer expires, the PBX acts as if it has received answer supervision. This field appears when Direction is "outgoing" or "two-way" and Receive Answer Supervision is "n." This field will not appear if the Receive Answer Supervision field is "y" but a zero (0) value will be sent down to the firmware to disable the timer. Valid entries are 1 to 254; default is 10.

NOTE:

This field controls the firmware answer-supervision timer on ports that take the administrable timers; the Answer Supervision Timeout field on Page 1 of the Trunk Group form controls answer supervision for ports that do not take administrable timers. This field and the value administered in the Answer Supervision Timeout field on the Trunk Group form should be the same value.

■ **Outgoing Seizure Response (sec)** — Enter the time (in sec) by which the PBX should receive the proceed-to-dial indication from the far-end after sending the seize signal. If the indication is not received in this time, a seizure failure response is uplinked. This timer is sent to TN464B (or later), TN767, TN438B, TN447, TN465B, and TN2147 CO circuit packs. Valid entries are 1 to 255 in increments of 1; default is 5.

■ **Programmed Dial Pause (msec)** — Enter the length of a pause during abbreviated dialing, ARS outpulsing, and terminal dialing operations. This timer is administrable for all outgoing and two-way trunk groups. Valid entries are 100 to 25500 in increments of 100; default is 1500.

■ **Disconnect Signal Error (sec)** — Enter the time (in sec) within which a disconnect signal from the far-end is expected after the internal party (a station or a tie trunk) goes on-hook. If the timer expires, the system can assume a disconnect failure and take an appropriate action (such as, error message). This field appears for ground-start trunk groups. It also appears if the Country is "15" (C.I.S.) and the Trunk Type is "2-wire-ac," "2-wire-dc," or "3-wire." Valid entries are 1 to 255 in increments of 1; default is 240.

■ **Flash Length (msec)** — Specifies the length of the flash signal to be generated toward the Central Office. Valid entries are 10 to 2550 in increments of 10; default is 540. This timer is sent to TN464C (or later), TN465B, TN2147, and TN2184 circuit boards.

■ **Outgoing Seizure (msec)** — This field appears only if the Country is "15" (C.I.S.), the Direction is "outgoing" or "two-way," and the Trunk Type is "2-wire-ac," "2-wire-dc," or "3-wire." This timer specifies the duration (in milliseconds) of the outgoing seizure signal. Enter a number between 20 and 2550 in an increment of 10; default is 200. This timer is sent *only* to the TN2199 circuit board.

■ **Tone (msec)** — Enter the length of a DTMF tone sent to the public network in response to a button depression at a hybrid station set. Valid entries are 20 to 2550 in increments of 10 default is 350.

■ **Pause (msec)** — Enter the minimum length of a pause between tones being sent in response to button depressions at a hybrid station set. Valid entries are 20 to 2550 in increments of 10; default is 150.

■ **PPS** — Enter either “10" or “20” to specify the PPS (pulses per second) assigned to rotary dial pulse trunk groups. Valid entries are ”10" (default) or “20.”

NOTE:
The TN767 and TN747Bv12 (or later) circuit packs can do only ”10“ PPS.

■ **Make (msec)** — Enter the duration of the make interval (the pause between pulses) while the system is outpulsing digits using dial pulse signaling.

If the PPS field is “10,” the sum of the Make and Break fields must equal 100. Valid entries are 20 to 80 in increments of 5. The field cannot be blank; default is 40.

If the PPS field is “20,” the sum of the Make and Break fields must equal 50. Valid entries are 10 to 40 in increments of 5. The field cannot be blank default is 20.

■ **Break (msec)** — Enter the duration of the break interval (the pulse duration) while the system is outpulsing digits using dial pulse signaling.

If the PPS field is ”10,” the sum of the Make and Break fields must equal 100. Valid entries are 20 to 80 in increments of 5; the field cannot be blank. default is 60.

If the PPS field is “20,” the sum of the Make and Break fields must equal 50. Valid entries are 10 to 40 in increments of 5. The field cannot be blank default is 30.

■ **PPM** — Appears for outgoing and two-way CO trunks. Enter “y” if Periodical Pulse Metering (PPM) pulses should be collected from the public network to determine call cost. If this field is “y," the Frequency field is displayed.

■ **Frequency** — Displayed if the Direction is “outgoing” or “two-way” and the PPM field is “y.” Identifies the PPM pulse frequency(ies). Circuit packs can listen for up to three different frequencies, (12kHz, 16kHz, and 50Hz), plus two frequency combinations,(50Hz/12kHz and 50Hz/16kHz). Valid entries are”12k,” "16k,” “50,” “50/12k” (default), and “50/16k.” This field is sent to the TN465B, TN2138, and TN2184 circuit packs.

NOTE:

The TN465B (or later) and TN2184 can only detect 12k and 16kHz PPM. Therefore, if “50/12k” or”12k” is administered, the circuit pack will be set to detect 12kHz. If “16k,” “50,” or “50/16k” is administered, the circuit pack will be set to detect 16kHz.

Page 4 of the Form (ATMS Thresholds)

This form appears when the Direction field on Page 1 is “outgoing” or “two-way” and ATMS is enabled on the Feature-Related System Parameters form.

- **TTL Type** — Specifies the type of TTL selected for testing trunks. The TTL type determines what ATMS tests can be completed and thus which threshold values need to be administered. The different TTLs supported are 105 with return loss (105-w-rl) (default), 105 without return loss(105-wo-rl), high-level tone source (high-level-tone), low-level tone source (low-level-tone), 100-type (100), and 102 type (1 02). The following table explains the differences between TTL Types:

Type TTL	Description	Example
105-w-rl	Full range of 18 measurements or some defaults for return loss used (58A)	TN771B, ZLC12 and SN281 B circuit packs and new 58A mini-responder
105-wo-rl	Cannot return default values for far-end return loss	Older 58A mini-responder
high-level-tone	Sends a fixed sequence of tones at 0 dBm	ZLC12 and SN281B circuit packs
low-level/tone	Sends a fixed sequence of tones at -16dBm	SN261B circuit pack
100	Up to 5 measurements that sends a 1004 Hz tone then a quiet termination	
102	One measurement that sends a 1004 Hz tone	

The far-end switch containing the TTL may be any of the following:

— System 65 R3 PBX equipped with the Maintenance/Test Board (TN771B)

— System 75 R1V2 and beyond, all of which contain the circuitry required to perform the TTL function

— System 85 R2 PBX equipped with the Analog/Digital Facility Test Circuit (ADHC,SN261)

— DIMENSION FP8 equipped with the Analog Facility Test Circuit (AFTC, ZLC-12)

— Central Office switches equipped with various TTL equipment that provide 100,102, or 105 test line capabilities (56A)

Other vendor PBXs *may* be supported if compatible test lines are provided by these switches.

Four different versions of the ATMS Threshold Administration page can occur depending upon the measurements allowed by the TTL type selected. The four possibilities are:

1. 105-w-l and 105-wo-rl — All thresholds appear.
2. high-Its and Iow-Its — All thresholds (except maximum C-notched noise) appear.
3. 100 — All thresholds (except maximum c-notched noise, 404Hz loss, and 2804 Hz loss) appear.
4. 102 — Only 1004 Hz loss threshold appears.

■ **Far End Test No.** — Enter the access number (1 to 20 digits) dialed to reach the TTL.

■ **TTL Vendor** — Enter the 0 to 22 alphanumeric character TTL vendor name (the name of the vendor supplying the terminating test line); default is blank.

■ **TTL Contact** — Enter the 0 to 25 alphanumeric character TTL vendor contact (the name and/or telephone number of someone from the TTL vendor who can be contacted in the event of problems with the TTL); default is blank.

■ **Trunk Vendor** — Enter the 0 to 22 alphanumeric character trunk vendor name (who to notify in the event of problems with the trunks); default is blank.

■ **Trunk Contact** — Enter the 0 to 25 alphanumeric character trunk vendor contact (the name and/or telephone number of someone from the trunk vendor who can be contacted in the event of problems with the trunks); default is blank.

■ **Trunk Length** — Enter 0 to 4 digits followed by “k” (for kilometers) or “m” (for miles) showing the length of trunk. This field is not required, since it is not used by the G3-MT. It has been included for the G3-MA adjunct to use in aiding with threshold establishment, since noise on a trunk increases with the length of the trunk. The default is “Om.”

■ **Marginal Threshold** — Minimum 1004 Hz Loss — Enter -2 (default), -1, or 0 to 21 to indicate the minimum signal loss for a 1004 Hz test tone (in dB) allowed before reporting a trunk as out of tolerance. A larger dB value is more restrictive.

■ **Marginal Threshold** — Maximum 1004 Hz Loss — Enter the maximum signal loss (0 to 21) for a 1004 Hz test tone (in dB) allowed before reporting a trunk as out of tolerance; default is 21. A smaller dB value is more restrictive.

■ **Unacceptable Threshold** — Minimum 1004 Hz Loss — Enter-2 (default), -1, or 0 to 21 to indicate the minimum signal loss for a 1004 Hz test tone (in dB) allowed before reporting a trunk as unacceptable. A larger dB value is more restrictive.

■ **Unacceptable Threshold — Maximum 1004 Hz Loss** — Enter the maximum signal loss (0 to 21) for a 1004 Hz test tone (in dB) allowed before reporting a trunk as unacceptable; default is 21. A smaller dB value is more restrictive.

■ **Marginal Threshold — 404 Hz Loss Negative Deviation** — Enter the maximum negative deviation of measured loss (0 to 9) at 404 hz from the 1004 Hz test tone noise level (in dB) allowed before reporting a trunk as out of tolerance; default is 9. Smaller dB values are more restrictive.

■ **Marginal Threshold — 404 Hz Loss Positive Deviation** — Enter the maximum positive deviation of measured loss (0 to 9) at 404 hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk as out of tolerance; default is 9. Smaller dB values are more restrictive.

■ **Unacceptable Threshold — 404 Hz Loss Negative Deviation** — Enter the maximum negative deviation of measured loss (0 to 9) at 404 hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk unacceptable; default is 9. Smaller dB values are more restrictive.

■ **Unacceptable Threshold — 404 Hz Loss Positive Deviation** — Enter the maximum positive deviation of measured loss (0 to 9) at 404 hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk unacceptable; default is 9. Smaller dB values are more restrictive.

■ **Marginal Threshold — 2804 Hz Lose Negative Deviation** — Enter the maximum negative deviation of measured loss (0 to 9) at 2804 hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk as out of tolerance; default is 9. Smaller dB values are more restrictive.

■ **Marginal Threshold — 2804 Hz Loss Positive Deviation** — Enter the maximum positive deviation of measured loss (0 to 9) at 2804 hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk as out of tolerance; default is 9. Smaller dB values are more restrictive.

■ **Unacceptable Threshold — 2804 Hz Loss Negative Deviation** — Enter the maximum negative deviation of measured loss (0 to 9) at 2804 hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk unacceptable; default is 9. Smaller dB values are more restrictive.

■ **Unacceptable Threshold — 2804 Hz Loss Positive Deviation** — Enter the maximum positive deviation of measured loss (0 to 9) at 2804 hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk unacceptable; default is 9. Smaller dB values are more restrictive.

■ **Marginal Threshold — Maximum C Message Noise** — Enter the maximum C-message noise interference (15 to 55) in dBmC above reference noise terminating on a voice terminal as measured within the voice band frequency range (500 to 2500 Hz) allowed before reporting a trunk as out of tolerance. The default is 55. Smaller values are more restrictive.

■ **Unacceptable Threshold — Maximum C Message Noise** — Enter the maximum C-message noise interference (15 to 55) in dBmC above reference noise terminating on a voice terminal as measured within the voice band frequency range (500 to 2500 Hz) allowed before reporting a

trunk as unacceptable. The default is 55. Smaller values are more restrictive.

■ **Marginal Threshold — Maximum C Notched Noise** — Enter the maximum C-notched signal dependent noise interference (34 to 74) in dBmC allowed before reporting a trunk as out of tolerance. The default is 74. Smaller values are more restrictive.

■ **Unacceptable Threshold — Maximum C Notched Noise** — Enter the maximum C-notched signal dependent noise interference (34 to 74) in dBmC allowed before reporting a trunk as unacceptable. The default is 74. Smaller values are more restrictive.

■ **Marginal Threshold — Minimum SRL-HI** — Enter the minimum high-frequency signaling return loss (0 to 40) in dB allowed before reporting a trunk as out of tolerance. The default is 0. Larger values are more restrictive.

■ **Unacceptable Threshold— Minimum SRL-HI** — Enter the minimum high-frequency signaling return loss (0 to 40) in dB allowed before reporting a trunk as unacceptable. The default is 0. Larger values are more restrictive.

■ **Marginal Threshold — Minimum SRL-LO** — Enter the minimum low-frequency signaling return loss (0 to 40) in dB allowed before reporting a trunk as out of tolerance. The default is 0. Larger values are more restrictive.

■ **Unacceptable Threshold — Minimum SRL-LO** — Enter the minimum low-frequency signaling return loss (0 to 40) in dB allowed before reporting a trunk as unacceptable. The default is 0. Larger values are more restrictive.

■ **Marginal Threshold — Minimum ERL** — Enter the minimum low-frequency echo return loss (0 to 40) in dB allowed before reporting a trunk as out of tolerance. The default is 0. Larger values are more restrictive.

■ **Unacceptable Threshold — Minimum ERL** — Enter the minimum low-frequency echo return loss (0 to 40) in dB allowed before reporting a trunk as unacceptable. The default is 0.

■ **Allow ATMS Busyout, Error Logging and Alarming** — Enter "y" to allow ATMS error logging and alarming (subject to filtering depending on the service organization used to deal with alarms); default is n.

■ **Maximum Percentage of Trunks Which Can Be Removed From Service by ATMS** — Enter the highest percentage of trunks from the trunk group (0 to 100) that can be removed from service at one time because of unacceptable transmission measurement results; default is 0.

```
                                                              Page 4 of X
                                ATMS THRESHOLDS
TTL Type: 105-w-rl_____          Far End Test No: _____________________
TTL Vendor: _____________        TTL Contact: _____________________
Trunk Vendor: ___________        Trunk Contact: ___________________
Trunk Length: ___________

                        MARGINAL          UNACCEPTABLE
                        Min   Max           Min   Max
          1004 Hz Loss: -2  21              -2     21

                        -Dev  +Dev          -Dev   +Dev
           404 Hz Loss: 9     9             9      9
          2804 Hz Loss: 9     9             9      9

Maximum C Message Noise:     55                   55
Maximum C Notched Noise:     74                   74
         Minimum SRL-HI:     0_                   0_
         Minimum SRL-LO:     0_                   0_
            Minimum ERL:     0_                   0_

     Allow ATMS Busyout, Error Logging and Alarming? y
  Maximum Percentage of Trunks Which Can Be Removed from Service by ATMS: 0_
```

Screen 4-42. ATMS Thresholds Form

Pages Y through X of the Form (Group Member Assignments)

NOTE:
The total number of pages for the form, and the first page of the Group Member Assignments, will vary depending on whether the Administrable Timers and ATMS Thresholds pages are displayed.

- **Administered Members (min/max)-** Indicates the minimum and maximum member number that has been administered for the particular trunk group. This field is displayed on all member pages.
- **Total Administered Members—** Indicates the total number of members administered in the trunk group. This field will appear on all trunk group member pages.
- **Port** — Enter seven characters. The first two characters identify the cabinet (01 to 22 [G3r V2], 1 to 3 [G3s V2, G3i V2]); the third character identifies the carrier (A through E); the fourth and fifth identify the slot number in the carrier (01 to 20 for multi-carrier cabinets or 01 to 18 for single-carrier cabinets); the last two characters identify the circuit number (01 to 31).

■ **Code** — Display-only field. Displays the type of circuit pack physically installed or logically administered at the location to which this member has been assigned. If a circuit pack is neither installed nor administered at the member's location, the field is blank.

■ **Sfx** — Displays the type of circuit pack (suffix only) physically installed at the location to which this member has been assigned. Field is blank if a circuit pack has not been physically installed.

■ **Name** — Enter up to ten characters to identify the member of the trunk group. The name can be a 7-digit telephone number or a 10-digit Trunk Circuit Identification number (provided by trunk supplier).

NOTE:
Previously, Generic 1 Night Service and Balance/Loss information was entered in the Name field as "NT#..." and "TT#)..." This information must now be entered in the Night field (below) or the STT Loss field on Page 1 of the form, as applicable.

■ **Night** — Enter the extension of the night destination for the trunk. This individual night destination overrides the group night service destination on the first page of the trunk group form. Incoming calls are routed to this destination when the system is placed in night service mode. (If "attd' is entered, night service will be to the attendant.)

■ **Mode** — Specifies the signaling mode used on Tie Trunks with TN722A or later release, TN760B or later release, TN767, TN464 (any suffix), TN437, TN439, TN458, or TN2140 circuit packs. Valid entries are "e&m" (interface), "simplex" (phantomed), or "protected." This entry must correspond to associated dip switch settings on the circuit pack.

■ **Type** — Specifies the signaling type to be used. This field should be used only with TN760B (or later release), TN722 (with any suffix), TN767, TN2140 (when the Trunk Signaling Type field is "cont"), TN437, TN439, TN464 (with any suffix), or TN458 circuit packs. The Type field appears with the Trunk Signaling Type field is "cont" or blank.

The value of "t5 rev" is only allowed for the TN760D vintage 10 or later. When the Type field is "t5 rev," the Mode field must be "e&m."

Valid entries are "t1 stan," "t1 comp," "t5rev," or "type 5." Default is blank.

- **Ans Delay** — Specifies the length of the wait for answer supervision delay (in ms) for Trunks using the TN722A, TN722B, TN760 (B, C, or D), TN767, TN464 (any suffix), TN437, TN439, TN458, or TN2140 circuit packs. Valid entries are 20 to 5100 in increments of 20; default is blank and internally treated as a zero. This delay serves two purposes:
  1. Used to ensure that the answer supervision signal is valid and not a secondary delay-dial or wink-start signal.
  2. Used to bridge over momentary off-hook signals resulting from connections made off-network through certain No. 5 Crossbar CCSA switches as the connection is being established.

```
                                                              Page 1 of X
                              TRUNK GROUP

Group Number: xxx                Group Type: co            CDR Reports? y
  Group Name: OUTSIDE_CALL_            COR : 1_                     TAC :____
   Direction:  two-way_      Outgoing Display? n
 Dial Access? n                Busy Threshold: 99_         Night Service: _____
Queue Length: 0_                      Country: 1_   Incoming Destination: _____
   Comm Type: voice                 Auth Code? n   Digit Absorption List: _
    Prefix-1? y                  Trunk Flash? n         Toll Restricted? y

TRUNK PARAMETERS
            Trunk Type: _____________
    Outgoing Dial Type: tone_____                              Cut -Through ? n
     Trunk Termination: rc____                 Disconnect Timing (msec) : 500_

            Auto Guard? n    Call Still Held? n     Sig Bit Inversion: none

                                 Trunk Gain: high

 Disconnect Supervision - In? y Out? n
 Answer Supervision Timeout: 10_           Receive Answer Supervision? n
```

Screen 4-43. Central Office Trunk Group Form (Page 1 of X)

```
                                                                Page 1 of X
                                TRUNK GROUP

Group Number: xxx                  Group Type: co            CDR Reports? y
  Group Name: OUTSIDE_CALL_             COR: 1_                     TAC :____
   Direction: two-way_       Outgoing Display? n
 Dial Access? n                 Busy Threshold: 99_         Night Service:_____
Queue Length: 0_                       Country: 15    Incoming Destination:_____
   Comm Type: voice                  Auth Code? n    Digit Absorption List: _
    Prefix-1? y                    Trunk Flash? n          Toll Restricted? y

TRUNK PARAMETERS
            Trunk Type: 3-wire_____                  ANI Upon Seizure? y
    Outgoing Dial Type: tone _____                        Cut-Through? n
     Trunk Termination: rc____                Disconnect Timing(msec): 500_
                                    Analog Gain: none
            Auto Guard? n    Call Still Held? n     Sig Bit Inversion: none
     Terminal Balanced? n                             RA Trunk Loss: 0db
                                    Trunk Gain: high

 Disconnect Supervision - In? y Out? n               Disconnect Type: AorB_
 Answer Supervision Timeout: 10_           Receive Answer Supervision? n
```

Screen 43a. Central Office Trunk Group Form (Page 1 of X)

Implementation Notes:

The BCC field is displayed when ISDN-PRI is optioned for on the System-Parameters Customer-Options form and the Comm Type field is “avd,” “data,” or “rbavd.”

The ITC field is displayed when the Comm Type is “data,” “avd,” or “rbavd,” and BCC is not “0.”

The Connected to Toll and DTT to DCO Loss fields are displayed when the Trunk Type field is “auto/...”

The Cyclical Hunt field is displayed when the Direction is “two-way” and the Trunk Type is “loop-start.”

The STT Loss field is displayed when the Connected to Toll field is “n.”

The Cut-Through field is displayed when the Outgoing Dial Type field is “rotary” or “tone.”

The Terminal Balanced field is displayed when the Trunk Type field is “ground-start,” “loop-start,” “immed-start,” or “wink-start.”

The RA Trunk Loss field is displayed when the Terminal Balanced field is “n.”

The Incoming Destination, and Auth Code fields are displayed when the Direction is “incoming” or “two-way.”

The Disconnect Supervision In field is displayed when the Direction is “incoming” or “two-way.”

The Disconnect Supervision Out field is displayed when the Direction is “outgoing” or “two-way.”

The Bit Rate, Synchronization, and Duplex fields are displayed when the Comm Type field is “avd” or “rbavd.” Also displayed if Comm Type is “data” if the ISDN-PRI option is enabled on the System-Parameters Customer-Options form.

```
                                                                Page 2 of X
                              TRUNK  GROUP
TRUNK FEATURES
         ACA Assignment? n                        Measured:  none
                                            Data Restriction? n
  Abandoned Cal 1 Search? n
  Suppress # Outpulsing? n                Maintenance Tests? y
```

Screen 4-44. Central Office Trunk Group Form (Page 2 of X)

Implementation Note:

The Long Holding Time (hours), Short Holding Time (seconds), and Short Holding Threshold fields are displayed when the ACA Assignment field is “y.”

```
                                                                Page 3 of X
                                  TRUNK GROUP
ADMINISTRABLE TIMERS
   Incoming Disconnect (msec) : 500            Outgoing Disconnect (msec): 500
                                               Outgoing Dial Guard(msec): 1600
  Incoming Glare Guard(msec): 1500             Outgoing Glare Guard(msec): 1500

                                  Outgoing Rotary Dial Interdigit (msec): 800
      Ringing Monitor (msec): 5200               Incoming Seizure (msec): 500
  Outgoing End of Dial (sec): 10**       Outgoing Seizure Response (sec): 5
Programmed Dial Pause (msec): 1500          Disconnect Signal Error(sec): 240
         Flash Length (msec): 540*


END TO END SIGNALING
   Tone (msec): 350                      Pause (msec): 150

OUTPULSING INFORMATION
   PPS: 10    Make (msec): 40 Break (msec): 60 PPM? y Frequency: 50/12k
```

Screen 4-45. Timers Page for Ground Start CO Type Trunk Group (two-way) with PPM

```
                                                                Page 3 of X
                                  TRUNK  GROUP
ADMINISTRABLE TIMERS
   Incoming Disconnect (msec) : 500            Outgoing Disconnect (msec): 500
                                                Outgoing Dial Guard(msec): 1600
  Incoming Glare Guard(msec): 1500            Outgoing Glare Guard(msec): 1500

                                 Outgoing Rotary Dial Interdigit (msec): 800
      Ringing Monitor (msec): 5200              Incoming Seizure (msec): 500
  Outgoing End of Dial (sec): 10**      Outgoing Seizure Response (sec): 5
Programmed Dial Pause (msec): 1500
         Flash Length (msec): 540*


END TO END SIGNALING
   Tone (msec): 350                    Pause (msec): 150

OUTPULSING INFORMATION
   PPS: 10    Make (msec): 40 Break (msec): 60 PPM? n
```

Screen 4-46. Timers Page for Loop Start CO Type Trunk Group (two-way)

Implementation Notes:

The Outgoing End of Dial field is not displayed if the Receive Answer Supervision field is ''y."

```
                                TRUNK GROUP                    Page Y of X

                                        Administered Members (min/max): xxx/yyy
                                           Total Administered Members: xxx
GROUP  MEMBER  ASSIGNMENTS
       Port      Code     Sfx  Name          Night    Mode      Type      Ans Delay
   1:
   2:
   3:
   4:
   5:
   6:
   7:
   8:
   9:
  10:
  11:
  12:
  13:
  14:
  15:
```

Screen 4-47. Central Office Trunk Group Form (Pages Y through X)

To reduce repetition, the remaining pages are not shown. For a complete set of forms, refer to the “Blank Forms Package.”

CPE Trunk Group

This form is used to provide access between the System and customer-provided equipment.

Administration Commands

The following administration commands can be used to access the CPE Trunk Group form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
add	trunk-group	1-MAX (or 'next')
change	trunk-group	1-MAX or TAC X...
display	trunk-group	1-MAX ['number' Xl['to-number' X]['count' N] ['tac' assigned TAC]['print' or 'schedule']
list	trunk-group	['print' or 'schedule']
remove	trunk-group	1-MAX or TAC X...

* Brackets [ ] indicate the qualifier is optional. Single quotes (") indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered. MAX is the maximum number available in your system configuration. Refer to the Capacity Table in Appendix C.

Form instruction

Make assignments as required for the following fields on each page of the form:

Page 1 of the Form

- **Group Number** — Enter a group number when completing a paper form. This is a display-only field when the form is accessed using an administration command such as adder change.
- **Group Type** — Enter "cpe" to identify the trunk group type.
- **CDR Reports** — Enter "y" (default) to provide a detailed Call Detail Recording (CDR) record of both incoming and outgoing calls made on all trunks in the trunk group.
- **Group Name** — Enter a unique name that identifies the trunk group. Up to 15 characters can be used; default is OUTSIDE CALL.
- **COR** — Enter a class of restriction (COR) number from 0 to 95 that reflects the desired restriction; default is 1.
- **TAC** — Enter the trunk access code (TAC) that must be dialed to access the trunk group. CDR also uses the TAC to identify the trunk group on associated CDR reports. A different TAC must be assigned to each trunk group. Valid entries are TACs that are compatible with the System Dial Plan (1 to 4 digits; 1 to 3 digits for DCS or to remotely control it).

■ **Total Administered Members** — Indicates the total number of members administered in the trunk group. This field appears on all trunk group member pages.

■ **Port** — Enter seven characters. The first two characters identify the cabinet (01 to 22 [G3r V2], 1 to 3 [G3s V2, G3i V2]); the third character identifies the carrier (A through E); the fourth and fifth identify the slot number in the carrier (01 to 20 for multi-carrier cabinets or 01 to 18 for single-carrier cabinets); the last two characters identify the circuit number (01 to 31).

■ **Code** — Display-only field. Displays the type of circuit pack physically installed or logically administered at the location to which this member has been assigned. If a circuit pack is neither installed nor administered at the member's location, the field is blank.

■ **Sfx** — Displays the type of circuit pack (suffix only) physically installed at the location to which this member has been assigned. Field is blank if a circuit pack has not been physically installed.

■ **Name** — Enter up to ten characters to identify the member of the trunk group. The name can be a 7-digit telephone number or a 10-digit trunk circuit identification number (provided by the trunk supplier).

NOTE:
Previously, Generic 1 Night Service and Balance/Loss information was entered in the Name field as "NT#..." and "TT#)...". This information must now be entered in the Night field (below) or the STT Loss field on Page 1 of the form, as applicable.

```
                                                              Page 1 of X
                                TRUNK GROUP

Group Number: xxx              Group Type: cpe          CDR Reports? y
  Group Name: OUTSIDE_CALL_         COR : 1_                   TAC :____
                          Outgoing Display? n
 Dial Access? n             Busy Threshold: 99
Queue Length: 0_

TRUNK PARAMETERS
                                              Disconnect Timing (msec) : 500_
      End-to-End Signaling: 60_
Answer Supervision Timeout: _10
```

Screen 4-49. Customer-Provided Equipment Trunk Group Form (Page 1 of X)

For G3V3, for trunks that do not receive real answer supervision, a "connect" Event report is sent when the Answer Supervision Timeout occurs.

```
                                                              Page 2 of X
                              TRUNK GROUP
TRUNK  FEATURES
         ACA Assignment? n                Measured: none
                                   Data Restriction? n
   Suppress # Outpulsing? n       Maintenance Tests? y
```

Screen 4-50. Customer-Provided Equipment Trunk Group Form (Page 2 of X)

Implementation Note:

The Long Holding Time (hours), Short Holding Time (seconds), Short Holding Threshold fields are displayed when the ACA Assignment field is “y”.

```
                                                              Page Y of x
                                  TRUNK GROUP

                                          Administered Members (min/max) : xxx/yyy
                                             Total Administered Members: xxx
GROUP  MEMBER  ASSIGNMENTS
         Port      Code      s f x  Name
     1:  _______   _____      _    _____________
     2:  _______   _____      _    _____________
     3:  _______   _____      _    _____________
     4:  _______   _____      _    _____________
     5:  _______   _____      _    _____________
     6:  _______   _____      _    _____________
     7:  _______   _____      _    _____________
     8:  _______   _____      _    _____________
     9:  _______   _____      _    _____________
    10:  _______   _____      _    _____________
    11:  _______   _____      _    _____________
    12:  _______   _____      _    _____________
    13:  _______   _____      _    _____________
    14:  _______   _____      _    _____________
    15:  _______   _____      _    _____________
```

Screen 4-51. Customer-Provided Equipment Trunk Group Form (Pages Y through X)

To reduce repetition, the remaining pages are not shown. For a complete set of forms, refer to the “Blank Forms Package.”

Digital Multiplexed Interface (DMI) — BOS Trunk Group

This form is used to allow communications to/from the system using DMI-BOS protocol.

Administration Commands

The following administration commands can be used to access the DMI-BOS Trunk Group form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
add	trunk-group	1-MAX (or 'next')
change	trunk-group	1-MAX or TAC X...
display	trunk-group	1-MAX ['number X]['to-number' X]['count' N] ['tac' assigned TAC]['print' or 'schedule']
list	trunk-group	['print' or 'schedule']
remove	trunk-group	1-MAX or TAC X...

* Brackets [ ] indicate the qualifier is optional. Single quotes (') indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered. MAX is the maximum number available in your system configuration. Refer to the Capacity Table in Appendix C.

Form Instructions

Make assignments as required for the following fields on each page of the form:

Page 1 of the Form

- **Group Number** — Enter a group number when completing a paper form. This is a display-only field when the form is accessed using an administration command such as adder *change.*
- **Group Type** — Enter "dmi-bos" to identify the trunk group type.
- **CDR Reports** — Enter "y" (default) to provide a detailed Call Detail Recording (CDR) record of both incoming and outgoing calls made on all trunks in the trunk group.
- **Group Name** — Enter a unique name that identifies the trunk group. Up to 15 characters can be used; default is OUTSIDE CALL.
- **COR** — Enter a class of restriction (COR) number from 0 to 95 that reflects the desired restriction; default is 1.
- **TAC** — Enter the trunk access code (TAC) that must be dialed to access the trunk group. CDR also uses the TAC to identify the trunk group on associated CDR reports. A different TAC must be assigned to each trunk group. Valid entries are TACs that are compatible with the System Dial Plan (1 to 4 digits; 1 to 3 digits for DCS or to remotely control it).

- **Direction** — Enter whether the trunk group is “incoming,'' “outgoing,” or “two-way” (default). Note that the Direction administered will affect which timers will appear on the Administrable Timer page.
- **Outgoing Display** — Specifies whether or not the trunk group name is displayed on a terminal placing an outgoing call. Valid entries are “y” or “n” (default).
- **Dial Access** — Enter “y” to allow the trunk group to be accessed via a TAC. Access via the ARS feature is allowed regardless of this entry.
- **Busy Threshold** — Enter the number of trunk group members that must be busy before the attendant is alerted by the Warning lamp on the Attendant Console.
- **Night Service** — Enter the extension number assigned to Night Service. The extension number entered will receive all incoming calls when Night Service is activated and the individual trunk member Night field is not administered to override this group extension. Valid entries are an extension number (can be a VDN extension), the attendant group access code (“attd”), **or** leave blank if the Trunk Type (in/out) field is not “auto/...”
- **Incoming Destination** — Indicates where incoming calls wiII terminate. Valid entries are an extension number, the attendant group access code (“attd”), VDN, or leave blank if the Trunk Type (in/out) field is not “auto/... ”
- **Auth Code** — Enter “y” if an authorization code must be dialed to complete incoming calls on the trunk group. This field can only be “y” if the Authorization Codes feature is enabled on the System-Parameters Customer-Options form.
- **Trunk Type (in/out)** — Identifies the physical type of incoming and outgoing trunks. The trunks can be “automatic,” “immed-start,” “wink-Start” or “delay-dial.”

  The valid values are:

auto/auto	auto/delay	auto/immed	auto/wink
delay/auto	delay/delay	delay/immed	delay/wink
immed/auto	immed/delay	immed/immed	immed/wink
wink/auto	wink/delay	wink/immed	wink/wink

  NOTE:
  For “immed/immed” trunks (on incoming trunks), the far-end PBX seizes the trunk and then sends digits without waiting for acknowledgment from the receiving PBX. When heavily loaded, the receiving PBX may incur a short delay in attaching a Touch Tone Receiver to this call and, therefore, cause it to lose digits. Using wink-start trunks or increasing the dial-guard timer value on the far-end PBX avoids this problem.

- **Incoming Rotary Timeout (sec)** — Is the timing interval required by the central office that the system is connected to. If the system is connected

to a Step-by-Step office, 18 seconds or more must be used; if the system is not connected to a Step-by-Step office, 5 seconds or more can be used. Valid entries are 5 to 99, or leave blank; default is 5.

- **Outgoing Dial Type** — Identifies the type of pulsing required on an outgoing call. Valid entries are “mf,” "tone” (default), or “rotary.”

  NOTE:
  Multifrequency Signaling must be enabled on the System-Parameters Customer-Options form before a value of “mf” can be administered.

- **Incoming Dial Type** — indicates the type of pulses required on an incoming trunk group. Valid entries are “mf ,“ "tone” (default), or “rotary.”

  NOTE:
  Multifrequency Signaling must be enabled on the System-Parameters Customer-Options form before a value of “mf” can be administered.

- **Wink Timer (msec)** — Displayed when the Trunk Type for the “outgoing” side of the in/out field is “wink” or “delay.” Enter a number from 300 to 5000 in increments of 50; default is 300. This timer is sent only to TN760C (vintage 4 or later), TN767, and TN464C (or later) circuit packs.

  NOTE:
  This value is the same for each member of the trunk group where the timing is administered; that is, if members from TN760B ports are mixed with members from TN760C V4 ports, only the TN760C V4 ports are set to this value. (The TN760B ports use a default value on the circuit pack itself).

  United States domestic requirements state that for a “wink” start trunk, the wink must begin within five seconds (the “wait-for-wink-to-start” time) and must end within 290 ms (the “wait-for-wink-to-end" time). For a “delay” dial trunk, the wink must begin within 140 ms (the “wait-for-wink-to-start” time). and end when the switch is ready to receive digits.

  The “wink” start “wait-for-wink-to-end” time and the “delay” dial “wait-for-wink-to-start” time are ***both*** administered through the use of this field.

- **Disconnect Timing (msec)** — Specifies the minimum time period (in ms) that is required for recognition of disconnect by the serving central office or far-end PBX. The time interval must be in increments of 10 (from 140 to 2550 ins); default is 500. This timer is not used for ports on a circuit pack that can receive the administrable incoming Disconnect and Outgoing Disconnect timers. These latter two timers replace Disconnect Timing.
- **Digit Treatment** — indicates if digits are to be absorbed or inserted. A blank indicates no digit absorption or insertion. Valid entries are

"absorption" or "insertion," or leave blank.

■ **Digits** — Indicates the digits to be inserted or number of digits to be absorbed. This field is used with the Digit Treatment field. No entry indicates no digit absorption or insertion is done. Valid entries are the number of digits to be absorbed (1 to 5) or the actual digits to be inserted (up to 5 digits including the characters '*' and '#').

■ **Expected Digits** — Only appears when the Direction is "incoming" or "two-way," and the Incoming Dial Type is "ref." This field specifies the number of digits that the far-end sends for an incoming connection. Valid values are between 1 and 18 inclusive.

■ **Sig Bit Inversion** — This field allows the user to administer the signaling bit inversion (the A-bit and B-bit inversion) on a per-port basis. This field applies only to TN464B or later. The CCITT standards define on-hook to be "1" in the A-bit and off-hook to be "0." This definition is the opposite of the EIA definition. The default in the TN464 firmware for signaling bit inversion is use the CCITT standard for 32-channel mode and to use the EIA standard for 24-channel mode. Valid entries are "A," "A&B," "B," and "none" (default).

■ **Connected to Toll** — Enter "y" if connected to a CO toll office. This field is displayed when the Trunk Type field contains an entry of "auto/...", "delay/...", "wink/...", or "immed/..."

■ **STT Loss** (Satellite PBX Tie Trunk Loss) — Displayed when Connected to Toll is "n." Specifies the loss plan to be used for the trunk group. Valid entries are "normal" (default) or "low." This option affects the transmission performance of a private PBX network.

Although the use of this option has wider applications, only for the simplest network arrangements should this field be administered without Network Engineering advice. The "low" option (described as the ISL digital low loss plan in *DEFINITY Communications System Generic 1 and System 75 and System 85 DS1/DMI/ISDN-PRI Reference,* 555-025-101) should be used when:

1. Stations on the satellite PBX complain of too much loss on calls to the public network.
2. The PBX network consists of **no more** than three PBXs: one main and one or two satellite PBXs.
3. All PBXs have the "low" option available.
4. The total DS1 trunk connection length is less than 100 miles.

If the preceding conditions are not met, obtain Network Engineering assistance. The field entry is based on the following:

— **normal** — Applies to AIU-TT (Analog Interface Unit at Customer Switching System for Tie Trunk — 4-wire E&M interface), and DIU-TT (Digital Interface Unit at Customer Switching System for Tie Trunk — voice or AVD DS1 interface) loss plans.

— **low** — Applies to AIU-TTS (same as AIU-TT, but suitable for private network connections that can be connected in tandem with public network connections) and DIU-TTS (same as DIU-TT, but suitable for private network connections that can be connected in tandem with public network connections). These interfaces were formerly referred to as DIU DTT ISL.

■ **DTT to DCO Loss** (Digital Tie to Digital CO Trunk Loss) — Specifies the loss plan used for the trunk group that connects a DIU-CO (Digital Interface Unit at a Central Office) to a DIU-DTT (Digital Interface Unit for a Digital Tie Trunk Interface). Displayed when the Trunk Type field is "auto/.. .", "delay/...", "wink/...", or "immed/..."

This option affects the transmission performance of public network access via a private PBX network. Choose the "low" option if private network users complain about too much loss on calls to the public network; otherwise, the "normal" option should be used. Valid entries are "normal" (default) and "low." The entry is based on the following:

— **normal** — Corresponds to a (0, -6) dB gain pair and is used as the default option. (This corresponds to the DTT/EIA DCO port to port configuration as described in *DEFINITY Communications System Generic 1 and System 75 and System 85 DS1/DMI/ISDN-PRI Reference,* 555-025-101.)

— **low** — Corresponds to (+3, -3) dB gain pair. Low is used for internetwork applications in which no significant configuration will encounter echo, stability, or overload problems because of reduced loss. With the low gain pair, subscriber station DTMF signals transmitted through the digital class 5 office into the customer network may experience nonrecoverable digit mutilation in secondary signaling applications (that is, DTMF signaling after the connection has been established). (This corresponds to the DTT/ISL DCO port to port configuration as described in *DEFINITY Communications System Generic 1 and System 75 and System 85 DS1/DMI/ISDN-PRI Reference,* 555-025-101.)

■ **Incoming Dial Tone** — Indicates whether or not the trunk group will pass on incoming dial tone to the calling party. Valid entries are "y" (default) or "n."

■ **Bit Rate** — Specifies the baud rate to be used by pooled modems. Valid entries are 300, 1200 (default), 2400,4800,9600, and 19200.

■ **Synchronization** — Enter whether the trunk group will use synchronous or asynchronous communications. Valid entries are "async" (default) and "sync."

■ **Duplex** — Specifies either full or half duplex for the trunk group. Valid entries are "full" (default) or "half."

■ **Disconnect Supervision-Out** — This field appears when the Direction is either "outgoing" or "two-way." Internally, the field is set to "n" if the direction is incoming. If the field is set to "y," a Warning Message appears to alert the user of possible trunk lockups. This field specifies

whether trunks in this trunk group provide disconnect supervision when seized outgoing (that is, whether these trunks should be allowed to participate in outgoing trunk to outgoing trunk calls. This field is set independently of the trunk-to-trunk transfer system parameter, although both options must be set appropriately if outgoing trunk to outgoing trunk transfers are desired.

- **Answer Supervision Timeout** — Used for analog port circuits to indicate the amount of time in seconds the system allows for a call to be answered before beginning a CDR record of a call. This interval begins as soon as the outgoing trunk is seized. Valid entries are 0 to 250; default is 10.

  NOTE:
  This timeout does not override answer supervision sent from the network or other firmware (DS1 port circuit timers). DS1 firmware-sent answer supervision is administered in the Outgoing End of Dialing field on Page 3 of the Trunk Group form (Administrable Timers page).

- **Receive Answer Supervision** — Specifies whether or not the network provides answer supervision for the trunks. Answer supervision refers to notification from the far-end that the called party has gone off-hook to answer the call. When answer supervision is provided, the originating PBX can classify a call as answered using the Answer Supervision Timeout field entry (for domestic circuit packs) or, for circuit packs that take administrable timers, by using the Outgoing End of Dial timer. For trunks over which answer supervision is provided by the network, set this field to “y” and the Answer Supervision Timeout field to “0" so that the firmware timeout is disabled. The firmware timeout is automatically set to “0” on circuit packs that take the administrable Outgoing End of Dial timers. Receive Answer Supervision must be set to “n” (default) if the Direction field is “incoming.”

Page 2 of the Form

- **ACA Assignment** — Specifies whether or not ACA measurements will be taken for this trunk group. Valid entries are “y” or “n” (default). If “y" is entered, complete the next three fields.

- **Long Holding Time (hours)** — Only displayed if ACA Assignment is “y.” Is the length in hours that the system will consider as being a long holding time. If “0” is entered, the system will not consider long holding calls. Valid entries are 0 to 10; default is 1.

- **Short Holding Time (secs.)** — Only displayed if ACA Assignment is “y.” Specifies the length in seconds that the system will consider as being a short holding time. If “0" is entered, the system will not consider short holding calls. Valid entries are 0 to 160; default is 10.

- **Short Holding Threshold** — Only displayed if ACA Assignment is “y.” is the number of times that the System will record a short holding call before an attendant or display-equipped voice terminal user is alerted to the possibility of a faulty trunk. Valid entries are 0 to 30; default is 15.

- **Measured** — Indicates if the system will transmit data for this trunk group to the Call Management System. Valid entries are “internal,” “external,” “both,” or “none.” Enter “internal” if the data is to be sent to the Basic Call Management System (internal to the switch) for subsequent measurement reports and “external” to send the data to the Call Management System Adjunct. Enter “both” to send the data to both systems for measurement reports. Enter “none” if trunk group measurements are not required. System default is “none.”
- **Internal Alert** — Specifies if internal ringing and coverage will be used for incoming calls. Valid entries are “y” or “n” (default).
- **Data Restriction** — Is used to prevent System features from generating tones on a data call that would cause erroneous data transmission. Valid entries are “y” or “n” (default).
- **Glare Handling** — Only displayed when the Direction field is “two-way” and the outgoing side of the Trunk Type field is either “wink” or “delay.” This field determines how glare situations should be treated. Valid entries are “control,” “backoff,” or “none.”

  Warnings are generated if the field is changed to either “control” or "backoff” and ports for the trunk group are not capable of detecting glare.
- **Maintenance Tests** — Indicates whether or not hourly maintenance tests will be made on this trunk group. Valid entries are “y” (default) or “n.”
- **Suppress # Outpulsing** — Indicates end-to-end signaling begins with (and includes) the “#” when “y” is entered in this field. The final “#” is suppressed in cases where System would normally outpulse it. This field should be “y” when the Central Office (for example, rotary) or any other facility treats “#’ as an error; default is n.
- **Seize When Maintenance Busy** — This field is effective only for ports on TN760C (or later release), TN767, and TN464C (or later release). It indicates whether an outgoing seize is generated when a trunk is maintenance busied, and whether the far-end switch is administered to do likewise. This supports the Electronic Tandem Network Busyout feature. The intended use of this feature is to prevent the far-end PBX from reporting problems concerning a trunk that has been removed from service at the near-end. The setting of this field has no effect on the behavior of the far-end machine; it controls the behavior of the near-end switch and the *expected* far-end behavior.

  If the administered value of this field is either “near-end’ or “both-ends,” an outgoing seize will be initiated whenever a trunk in this trunk group is maintenance busied. The seize is maintained until the maintenance busyout is released. This action will likely cause alarms at the far-end switch, perhaps leading to a far-end maintenance busy out, unless the far-end switch is administered to expect this behavior.

If the administered value of this field is either “far-end” or “both-ends,” any abnormally long incoming seize[1] (including failure to drop from a completed call) is *assumed to be the result of a far-end maintenance busy condition.* Note that this assumption may be incorrect since the abnormally long seize may actually be due to a transient or permanent failure of the trunk circuit. Regardless of the cause of the abnormally long seize, the near-end response is to:

1. generate a warning alarm indicating the trunk is assumed to be maintenance busy at the far-end,
2. remove the trunk from service, and
3. keep the trunk out of service until a far-end disconnect is received.

The values allowed depend on the Direction field. When the Direction is “incoming,” the valid values are “far-end” and “neither-end.”

When the Direction is “outgoing,” the valid values are “near-end” and “neither-end.”

When the Direction is “two-way,” the valid values are “both-ends,” “far-end,”” near-end,” and “neither-end.”

Page 3 of the Form (Administrable Timers)

■ **Incoming Disconnect (msec)** — A disconnect signal on an incoming call is considered valid only if it continues at least for the time specified by this timer. Valid entries are 50 to 2550 in increments of 10. The field cannot be blank; default is 500. This field only appears for “incoming” or “two-way” trunk groups.

■ **Incoming Dial Guard (msec)** — Enter the interval between the detection of an incoming seizure and the acceptance of the first digit. The PBX will not accept digits before this timer expires. Valid entries are 10 to 2550 in increments of 10; default is 70.

■ **Incoming Partial Dial (sec)** — Enter the time (in sec) allowed between digits on rotary trunks. Valid entries are 5 to 255 in increments of 1; default is 18. This timer only appears if the Incoming Dial Type is “rotary.”

■ **Incoming Incomplete Dial Alarm (sec)** — Enter the maximum time (in sec) between incoming seizure of a trunk and receipt of all digits. Intervals greater than this generate an inline error. Valid entries are 1 to 255 in increments of 1; default is 255. This timer is sent to the TN464C (or later), TN767, and TN760DV15 (or later release) circuit packs.

1. When an incoming seize is detected, the normal behavior is to either immediately direct the call to an administered destination, or to wait for an administered period of time for incoming destination digits. If digits are expected but not received, the calling party receives the DID/TIE intercept treatment administered on the feature rotated system parameters form.

■ **Outgoing Disconnect (msec)** — A disconnect signal on an outgoing call is considered valid only if it continues at least for the time specified by this timer. This timer begins timing when a disconnect signal has been detected on an outgoing call over the trunk, and resets when the signal is no longer detected. If the timer times out, the trunk is dropped. Valid entries are 50 to 2550 in increments of 10. The field cannot be blank. Default is 500. This field only appears for "outgoing" or "two-way" trunk groups.

■ **Outgoing Dial Guard (msec)** — This timer specifies the time between seizure acknowledgment of a trunk and the outpulsing of digits. For trunks that do not provide seizure acknowledgment, the timer specifies the minimum time between seizure and the outpulsing of digits. Any digit dialed by the station user after they lift the receiver, but before the timer times out, will not be outpulsed until the timer expires. Valid entries are 100 to 25500 in increments of 100. The field cannot be blank. Default 1600.

■ **Incoming Glare Guard (msec)** — Enter the minimum time (in msec) between the time the incoming trunk is released and the same trunk can be seized for an outgoing call. This guard time will ensure the far-end has released all equipment after the incoming trunk is released. Valid entries are 100 to 25500 in increments of 100. The field cannot be blank. Default is 1500. This field only appears when the trunk group is "two-way."

■ **Outgoing Glare Guard (msec)** — Enter the minimum time (in msec) between the time an outgoing trunk is released and the same trunk can be seized for another outgoing call. This guard time will ensure that the far-end has released all equipment after the outgoing trunk is released. Valid entries are 100 to 25500 in increments of 100. The field cannot be blank. Default is 1500. This field only appears for "outgoing" and "two-way" trunk groups.

■ **Outgoing Rotary Dial Interdigit (msec)** — Enter the interval (in msec) between rotary dial digits being outpulsed by the system (that is, PBX). Valid entries are 150 to 2550 in increments of 10. The field cannot be blank. Default is 800. This field only appears when the Outgoing Dial Type is "rotary."

■ **Outgoing End of Dial (sec)** — Enter the maximum time (in sec) a trunk may wait for answer supervision after dialing an outgoing call. During cut-through operation, timing begins after each outgoing digit is sent by the PBX and timing ceases after the far-end sends answer supervision. If the timer expires, the PBX acts as if it had received answer supervision. On slenderized operation, the timer begins after the last digit collected is sent by the PBX. The timer ceases when the far-end sends answer supervision. If the timer expires, the PBX acts as if it has received answer supervision. This field appears when Direction is "outgoing" or "two-way" and Receive Answer Supervision is "n." This field will not appear if the Receive Answer Supervision field is "y," but a zero (0) value will be sent down to the firmware to disable the timer. Valid entries are 1 to 254 in increments of 1. Default is 10.

NOTE:
This field controls the firmware answer-supervision timer on ports that take the administrable timers; the Answer Supervision Timeout field on Page 1 of the Trunk Group form controls answer supervision for ports that do not take administrable timers. This field and the value administered in the Answer Supervision Timeout field on the Trunk Group form should be the same value.

- **Outgoing Seizure Response (sec)** — Enter a maximum time (in sec) by which the PBX should receive the proceed-to-dial indication from the far end after sending the seize signal. If the indication is not received in this time, a seizure failure response is uplinked. Valid entries are 1 to 255 in increments of 1. Default is 5 sec. This timer is sent to the TN464B (or later), TN767, TN439, TN458, and TN760Dv15 (or later) tie circuit packs.
- **Programmed Dial Pause (msec)** — Enter the length (in msec) of a pause during abbreviated dialing, ARS outpulsing, and terminal dialing operations. This timer is administrable for all outgoing and two-way trunk groups. Valid entries are 100 to 25500 in increments of 100. Default is 1500 msec. This timer is sent to the TN464B (or later), TN760Dv15 (or later), TN767, and TN458 tie circuit packs.
- **Disconnect Signal Error (sec)** — Enter a maximum time (in sec) within which a disconnect signal from the far-end is expected after the internal party (a station or a tie trunk) goes on-hook if the timer expires, the system can assume a disconnect failure and take an appropriate action (such as, display an error message). Valid entries are 1 to 255 in increments of 1. Default is 240 sec.
- **PPS** — Enter either “10” or “20” to specify the PPS (pulses per second) assigned to rotary dial pulse trunk groups. Default is ”10.”

  NOTE:
  The TN439, TN458, and TN767 circuit packs can only perform at 10pps.

- **Make (msec)** — Enter the duration of the make interval (the pause between pulses) while the system is outpulsing digits using dial pulse signaling.

  If the PPS field is “10,” the sum of the Make and Break fields must equal 100. Valid entries are 20 to 80 in increments of five. The field cannot be blank. The default is 40.

  If the PPS field is “20,” the sum of the Make and Break fields must equal 50. Valid entries are 10 to 40 in increments of five. The field cannot be blank. The default is 20.

- **Break (msec)** — Enter the duration of the break interval (the pulse duration) while the system is outpulsing digits using dial pulse signaling.

  If the PPS field is ”10,” the sum of the Make and Break fields must equal 100. Valid entries are 20 to 80 in increments of five. The field cannot be blank. The default is 60.

If the PPS field is "20," the sum of the Make and Break fields must equal 50. Valid entries are 10 to 40 in increments of five. The field cannot be blank. The default is 30.

- **Tone (msec)** — Enter the length of a DTMF tone sent to the public network in response to a button depression at a hybrid station set. Valid entries are 20 to 2550 in increments of 10; default is 350.
- **Pause (msec)** — Enter the minimum length of a pause between tones being sent in response to button depressions at a hybrid station set. Valid entries are 20 to 2550 in increments of 10; default is 150.

Page 4 of the Form (ATMS Thresholds)

This form appears when the Direction on Page 1 is "outgoing" or "two-way" and ATMS is enabled on the Feature-Related System Parameters form.

- **TTL Type** — Specifies the type of TTL selected for testing trunks. The TTL type determines what ATMS tests can be completed and thus which threshold values need to be administered. The different TTLs supported are 105 with return loss (105-w-rl) (default), 105 without return loss (105-wo-rl), high-level tone source (high-level-tone), low-level tone source (low-level-tone), 100-type (100), and 102 type (102). The following table explains the differences between TTL Types:

Type TTL	Description	Example
105-w-rl	Full range of 18 measurements or some defaults for return loss used (56A)	TN771B, ZLC12 and SN261B circuit packs and new 56A mini-responder
105-wo-rl	Cannot return default values for far-end return loss	Older 56A mini-responder
high-level-tone	sends a fixed sequence of tones at 0 dBm	ZLC12 and SN261B circuit packs
low-level-tone	Sends a fixed sequence of tones at -16dBm	SN261B circuit pack
100	Up to 5 measurements that sends a 1004 Hz tone then a quiet termination	
102	One measurement that sends a 1004 Hz tone	

The far-end switch containing the TTL can be any of the following:

— System 85 R3 PBX equipped with the Maintenance/Test Board (TN771B)

— System 75 R1V2 and beyond, all of which contain the circuitry required to perform the TTL function

— System 85 R2 PBX equipped with the Analog/Digital Facility Test Circuit (ADFTC,SN261)

— DIMENSION FP8 equipped with the Analog Facility Test Circuit (AFTC, ZLC-12)

— Central Office switches equipped with various TTL equipment that provide 100,102, or 105 test line capabilities (56A)

Other vendor PBXs *may* be supported if compatible test lines are provided by these switches.

Four different versions of the ATMS Threshold Administration page can occur depending upon the measurements allowed by the TTL type selected. The four possibilities are:

1. 105-w-rl and105-wo-rl — All thresholds appear.
2. high-its and low-Its — All thresholds (except maximum C-notched noise) appear.
3. 100 — All thresholds (except maximum c-notched noise, 404Hz loss, and 2804 Hz loss) appear.
4. 102 — Only 1004 Hz loss threshold appears.

```
                                  ATMS  THRESHOLDS
TTL Type: 105-w-rl_____             Far End Test No:_____________________
TTL Vendor: _____________           TTL Contact:_____________________
Trunk Vendor: ___________           Trunk Contact: _____________________
Trunk Length: ___________

                        MARGINAL          UNACCEPTABLE
                        Min   Max           Min   Max
          1004 Hz Loss: -2 21               -2     21

                        -Dev  +Dev          -Dev   +Dev
           404 Hz Loss: 9     9              9      9
          2804 Hz Loss: 9     9              9      9

Maximum C Message Noise:     55                   55
Maximum C Notched Noise:     74                   74
         Minimum SRL-HI:     0_                   0_
         Minimum SRL-LO:     0_                   0_
            Minimum ERL:     0_                   0_

      Allow ATMS Busyout, Error Logging and Alarming? y
  Maximum Percentage of Trunks Which Can Be Removed from Service by ATMS: 0_
```

Screen 4-52. ATMS Thresholds Form

■ **Far End Test No.** — Enter the access number (1 to 20 digits) dialed to reach the TTL.

■ **TTL Vendor** — Enter the 0 to 22 alphanumeric character TTL vendor name (the name of the vendor supplying the terminating test line); default is blank.

■ **TTL Contact** — Enter the 0 to 25 alphanumeric character TTL vendor contact (the name and/or telephone number of someone from the TTL vendor who can be contacted in the event of problems with the TTL); default is blank.

■ **Trunk Vendor** — Enter the 0 to 22 alphanumeric character trunk vendor name (who to notify in the event of problems with the trunks); default is blank.

■ **Trunk Contact** — Enter the 0 to 25 alphanumeric character trunk vendor contact (the name and/or telephone number of someone from the trunk vendor who can be contacted in the event of problems with the trunks); default is blank.

■ **Trunk Length** — Enter 0 to 4 digits followed by “k” (for kilometers) or “m” (for miles) showing the length of trunk. This field is not required, since it is not used by the G3-MT. It has been included for the G3-MA adjunct to use in aiding with threshold establishment, since noise on a trunk increases with the length of the trunk. The default is "0m.”

■ **Marginal Threshold — Minimum 1004 Hz Loss** — Enter -2 (default), -1, or 0 to 21 to indicate the minimum signal loss for a 1004 Hz test tone (in dB) allowed before reporting a trunk as out of tolerance. A larger dB value is more restrictive.

■ **Marginal Threshold — Maximum 1004 Hz Loss** — Enter the maximum signal loss (0 to 21) for a 1004 Hz test tone (in dB) allowed before reporting a trunk as out of tolerance; default is 21. A smaller dB value is more restrictive.

■ **Unacceptable Threshold — Minimum 1004 Hz Lose** — Enter -2 (default), -1, or 0 to 21 to indicate the minimum signal loss for a 1004 Hz test tone (in dB) allowed before reporting a trunk as unacceptable. A larger dB value is more restrictive.

■ **Unacceptable Threshold — Maximum 1004 Hz Loss** — Enter the maximum signal loss (0 to 21) for a 1004 Hz test tone (in dB) allowed before reporting a trunk as unacceptable; default is 21. A smaller dB value is more restrictive.

■ **Marginal Threshold — 404 Hz Loss Negative Deviation** — Enter the maximum negative deviation of measured loss (0 to 9) at 404 Hz from the 1004 Hz test tone noise level (in dB) allowed before reporting a trunk as out of tolerance; default is 9. Smaller dB values are more restrictive.

■ **Marginal Threshold — 404 Hz Loss Positive Deviation** — Enter the maximum positive deviation of measured loss (0 to 9) at 404 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk as out of tolerance; default is 9. Smaller dB values are more restrictive.

■ **Unacceptable Threshold — 404 Hz Loss Negative Deviation** — Enter the maximum negative deviation of measured loss (0 to 9) at 404 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk unacceptable; default is 9. Smaller dB values are more restrictive.

■ **Unacceptable Threshold — 404 Hz Loss Positive Deviation** — Enter the maximum positive deviation of measured loss (0 to 9) at 404 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk unacceptable; default is 9. Smaller dB values are more restrictive.

■ **Marginal Threshold — 2804 Hz Loss Negative Deviation** — Enter the maximum negative deviation of measured loss (0 to 9) at 2804 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk as out of tolerance; default is 9. Smaller dB values are more restrictive.

■ **Marginal Threshold — 2804 Hz Loss Positive Deviation** — Enter the maximum positive deviation of measured loss (0 to 9) at 2804 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk as out of tolerance; default is 9. Smaller dB values are more restrictive.

■ **Unacceptable Threshold— 2804 Hz Loss Negative Deviation** — Enter the maximum negative deviation of measured loss (0 to 9) at 2804 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk unacceptable; default is 9. Smaller dB values are more restrictive.

■ **Unacceptable Threshold — 2804 Hz Loss Positive Deviation** — Enter the maximum positive deviation of measured loss (0 to 9) at 2804 Hz from the 1004 Hz test tone loss level (in dB) allowed before repotting a trunk unacceptable; default is 9. Smaller dB values are more restrictive.

■ **Marginal Threshold — Maximum C Message Noise** — Enter the maximum C-message noise interference (15 to 55) in dBmC above reference noise terminating on a voice terminal as measured within the voice band frequency range (500 to 2500 Hz) allowed before reporting a trunk as out of tolerance. The default is 55. Smaller values are more restrictive.

■ **Unacceptable Threshold— Maximum C Message Noise** — Enter the maximum C-message noise interference (15 to 55) in dBmC above reference noise terminating on a voice terminal as measured within the voice band frequency range (500 to 2500 Hz) allowed before reporting a trunk as unacceptable. The default is 55. Smaller values are more restrictive.

■ **Marginal Threshold — Maximum C Notched Noise** — Enter the maximum C-notched signal dependent noise interference (34 to 74) in dBmC allowed before reporting a trunk as out of tolerance. The default is 74. Smaller values are more restrictive.

■ **Unacceptable Threshold — Maximum C Notched Noise** — Enter the maximum C-notched signal dependent noise interference (34 to 74) in dBmC allowed before reporting a trunk as unacceptable. The default is 74. Smaller values are more restrictive.

■ **Marginal Threshold — Minimum SRL-HI** — Enter the minimum high-frequency signaling return loss (0 to 40) in dB allowed before reporting a trunk as out of tolerance. The default is 0. Larger values are more restrictive.

■ **Unacceptable Threshold— Minimum SRL-HI** — Enter the minimum high-frequency signaling return loss (0 to 40) in dB allowed before reporting a trunk as unacceptable. The default is 0. Larger values are more restrictive.

■ **Marginal Threshold — Minimum SRL-LO** — Enter the minimum low-frequency signaling return loss (0 to 40) in dB allowed before reporting a trunk as out of tolerance. The default is 0. Larger values are more restrictive.

■ **Unacceptable Threshold— Minimum SRL-LO** — Enter the minimum low-frequency signaling return loss (0 to 40) in dB allowed before reporting a trunk as unacceptable. The default is 0. Larger values are more restrictive.

■ **Marginal Threshold — Minimum ERL** — Enter the minimum low-frequency echo return loss (0 to 40) in dB allowed before reporting a trunk as out of tolerance. The default is 0. Larger values are more restrictive.

■ **Unacceptable Threshold— Minimum ERL** — Enter the minimum low-frequency echo return loss (0 to 40) in dB allowed before reporting a trunk as unacceptable. The default is 0. Larger values are more restrictive.

■ **Allow ATMS Busyout, Error Logging and Alarming** — Enter "y" to allow ATMS error logging and alarming (subject to filtering depending on the service organization used to deal with alarms); default is n.

■ **Maximum Percentage of Trunks Which Can Be Removed From Service by ATMS** — Enter the highest percentage of trunks from the trunk group (0 to 100) that can be removed from service at one time because of unacceptable transmission measurement results; default is 0.

Pages Y through X of the Form (Group Member Assignments)

NOTE:
The total number of pages, and the first page of the Group Member Assignments, will vary depending on whether the Administrable Timers and ATMS Thresholds pages are displayed.

■ **Administered Members (min/max)** — Indicates the minimum and maximum member number that is administered for the particular trunk group (displayed on all member pages).

■ **Total Administered Members** — Indicates the total number of members administered in the trunk group (appears on all trunk group member pages).

■ **Port** — Enter seven characters. The first two characters identify the cabinet (01 to 22 [G3r V2], 1 to 3 [G3s V2, G3i V2]); the third character identifies the carrier (A through E); the fourth and fifth identify the slot number in the carrier (01 to 20 for multi-carrier cabinets or 01 to 18 for single-carrier cabinets); the last two characters identify the circuit number (01 to 31).

■ **Code** — Display-only field. Displays the type of circuit pack physically installed or logically administered at the location to which this member has been assigned. If a circuit pack is neither installed nor administered at the member's location, the field is blank.

■ **Sfx** — Displays the type of circuit pack (suffix only) physically installed at the location to which this member has been assigned. Field is blank if a circuit pack has not been physically installed.

■ **Name** — Enter up to ten characters to identify the member of the trunk group. The name can be a 7-digit telephone number or a 10-digit Trunk Circuit Identification number (provided by trunk supplier).

NOTE:
Previously, System 75 Night Service and Balance/Loss information was entered in the Name field as "NT#..." and "TT#)..." This information must now be entered in the Night field (below) or the STT Loss field on Page 1 of the form, as applicable.

■ **Night** — Enter the extension of the night destination for the trunk. This individual night destination overrides the group night service destination on the first page of the trunk group form. Incoming calls are routed to this destination when the system is placed in night service mode. (If "attd' is entered, night service will be to the attendant.)

■ **Mode** — Specifies the signaling mode used on Tie Trunks with TN722A or later release, TN760B or later release, TN767, TN464 (any suffix), TN437, TN439,ThJ458,orTN2140 circuit packs. Valid entries are "e&m" (interface), "simplex" (phantomed), or "protected." This entry must correspond to associated dip switch settings on the circuit pack.

■ **Type** — Specifies the signaling type to be used. This field should only be used with TN760B (or later release), TN722 (with any suffix), TN767, TN2140 (when the Trunk Signaling Type field is "cont"), TN437, TN439, TN464 (with any suffix), or TN458 circuit packs. The Type field appears with the Trunk Signaling Type field is "cont" or blank.

The value of "t5 rev" is only allowed for the TN760D vintage 10 or later. When the Type field is "t5 rev," the Mode field must be "e&m."

Valid entries are "t1 stan," "t1 comp," "t5rev," or "type 5." Default is blank.

- **Ans Delay** — Specifies the length of the wait for answer supervision delay (in ms) for Trunks using the TN722A, TN722B, TN760 (B, C, or D), TN767, TN464 (any suffix), TN437, TN439, TN458, or TN2140 circuit packs. Valid entries are 20 to 5100 in increments of 20; default is no entry (blank) and internally treated as a zero. This delay serves two purposes:

  1. Used to ensure that the answer supervision signal is valid and not a secondary delay-dial or wink-start signal.

  2. Used to bridge over momentary off-hook signals resulting from connections made off-network through certain No. 5 Crossbar CCSA switches as the connection is being established.

```
                                                          Page 1 of X
                                TRUNK GROUP

Group Number: 1              Group Type: dmi-bos         CDR Reports? y
  Group Name: OUTSIDE_CALL_      COR: 1_                       TAC :____
   Direction: two-way_ Outgoing Display? n
 Dial Access? n          Busy Threshold: 99            Night Service:_____
                                                 Incoming Destination: _____
                             Auth Code? n


TRUNK PARAMETERS
Trunk Type(in/out): _____________       Incoming Rotary Timeout: 5_
Outgoing Dial Type: tone ____                Incoming Dial Type: tone_
                                       Disconnect Timing(msec): 500_
   Digit Treatment: _________                          Digits:_____
Incoming Dial Tone? y                        Sig Bit Inversion: none

          Bit Rate: 1200_   Synchronization:  async        Duplex: full

Disconnect Supervision- Out? n
Answer Supervision Timeout: _10       Receive Answer Supervision? n
```

Screen 4-53. Digital Multiplexed Interface Trunk Group Form (Page 1 of X)

Implementation Notes:

The Connected toToll and DIT to DCO Loss fields are displayed when the Trunk Type field is “auto/...,” “delay/...,” “wink/... ,“ or “immed/...”

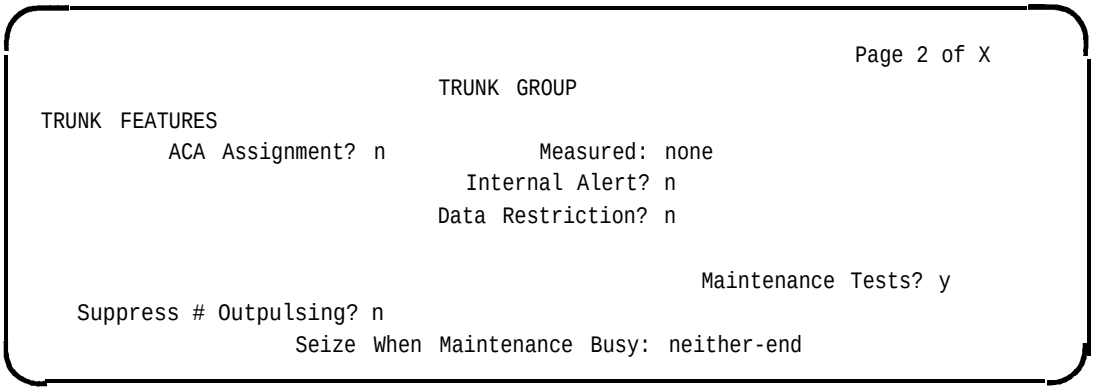
The STT Loss field is displayed when the Connected to Toll field is ’’n.”

The Disconnect Supervision Outfield is displayed when the Direction field is “outgoing’’ or ’’two-way.”

The Wink Timer field is only displayed when the Trunk Type (in/out) field Outgoing side is ’’wink...’’ or ’’delay.”

The Expected Digits field is only displayed when the Direction field is ’’incoming” or ’’two-way’’ and the lncoming Dial Type field is ’’mf.”

For G3V3, for trunks that do not receive real answer supervision, a “connect” Event report is sent when the Answer Supervision Timeout occurs.



Screen 4-54. Digital Multiplexed Interface Trunk Group Form (Page 2 of X)

Implementation Note:

The Long Holding Time (hours), Short Holding Time (seconds), and Short Holding Threshold fields are only displayed when the ACA Assignment field is "y".

The Glare Handling field is only displayed when the Direction field is "two-way" and the outgoing side of the Trunk Type (in/out) field is "wink" or "delay."

```
                                                                Page 3 of X
                                  TRUNK GROUP
ADMINISTRABLE  TIMERS
   Incoming Disconnect (msec) : 500             Outgoing Dial Guard (msec) : 500
   Incoming Dial Guard (msec) : 70               Outgoing Dial Guard (msec) : 1600
 Incoming Glare Guard (msec) : 1500            Outgoing Glare Guard (msec): 1500
 Incoming Partial Dial(sec): 18

                                  Outgoing Rotary Dial Interdigit (msec): 800

  Outgoing End of Dial (sec): 10        Outgoing Seizure Response (sec): 5
Programmed Dial Pause (msec): 1500         Disconnect Signal Error(sec): 240
                                     Incoming Incomplete Dial Alarm(sec): 255

END TO END SIGNALING
   Tone (msec): 350     Pause (msec): 150

OUTPULSING  TIMING
     PPS: 10       Make (msec): 40     Break (msec): 60
```

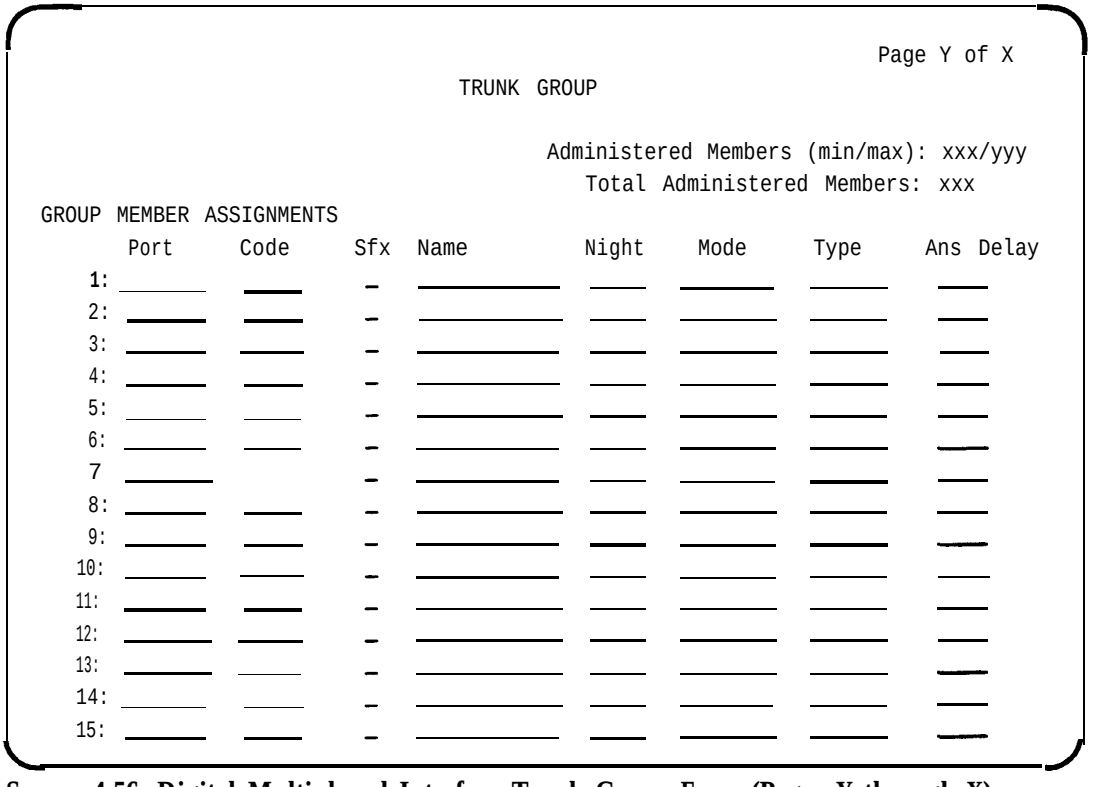
Screen 4-55. Administrable Timers Form (Page 3 of X)

Implementation Notes:

The Incoming Partial Dial field only appears if the Incoming Dial Type field is “rotary.”

The Outgoing Rotary Dial Interdigit field only appears if the Outgoing Dial Type field on Page 1 is set to “rotary.”

The Outgoing End of Dial field only appears if the Receive Answer Supervision field is “y.”



```
                                                                Page Y of X
                                    TRUNK GROUP

                                              Administered Members (min/max): xxx/yyy
                                                 Total Administered Members: xxx
GROUP MEMBER ASSIGNMENTS
      Port      Code     Sfx  Name          Night    Mode      Type      Ans Delay
   1:
   2:
   3:
   4:
   5:
   6:
   7
   8:
   9:
  10:
  11:
  12:
  13:
  14:
  15:
```

Screen 4-56. Digital Multiplexed Interface Trunk Group Form (Pages Y through X)

To reduce repetition, the remaining pages are not shown. For a complete set of forms, refer to the “Blank Forms Package.”

Direct Inward Dialing (DID) Trunk Group

This form is used to allow an incoming call from the exchange network to reach a specific extension number directly without attendant intervention.

Administration Commands

The following administration commands can be used to access the DID Trunk Group form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
add	trunk-group	1-MAX (or 'next')
change	trunk-group	1-MAX or TAC X...
display	trunk-group	1-MAX ['number' X]['to-number' X]['count' N] ['tac' assigned TAC]['print' or 'schedule']
list	trunk-group	['print' or 'schedule']
remove	trunk-group	1-MAX or TAC X...

* Brackets [ ] indicate the qualifier is optional. Single quotes (") indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered. MAX is the maximum number available in your system configuration. Refer to the Capacity Table in Appendix C.

Form Instructions

Make assignments as required for the following fields on each page of the form:

Page 1 of the Form

- **Group Number** — Enter a group number when completing a paper form. This is a display-only field when the form is accessed using an administration command such as *add* or *change.*
- **Group Type** — Enter "did" to identify the trunk group type.
- **CDR Reports** — Enter "y" (default) to provide a detailed Call Detail Recording (CDR) record of both incoming and outgoing calls made on all trunks in the trunk group.
- **Group Name** — Enter a unique name that identifies the trunk group. Up to 15 characters can be used; default is OUTSIDE CALL.
- **COR** — Enter a class of restriction (COR) number from 0 to 95 that reflects the desired restriction; default is 1.

■ **TAC** — Enter the trunk access code (TAC) that must be dialed to access the trunk group. CDR also uses the TAC to identify the trunk group on associated CDR reports. A different TAC must be assigned to each trunk group. Valid entries are TACs that are compatible with the System Dial Plan (1 to 4 digits; 1 to 3 digits for DCS or to remotely control it).

■ **Country** — This field specifies the country code for each subscriber line. Valid values are any number between 1 and 18, inclusive. The value of this field, in conjunction with the values of the Trunk Termination and Trunk Gain fields, will determine the input and trans-hybrid balance impedance requirements for TN465B, TN2146, andTN2147 ports.

Refer to the "Country Code Assignments" table in Appendix B for a complete listing of assigned country codes.

■ **CO Type** — Only displayed when Country is set to "14" (Czechoslovakia) and is only applicable if the trunk group members are administered on a TN464D vintage 2 or greater. This field specifies the type of CO the trunk group is attached to. Valid entries are "analog" (default) and "digital."

■ **Protocol Type** — Only displayed when Country is set to "15" (C.I.S.) and is only applicable if the trunk group members are administered on a TN464D vintage 3 or greater. This field specifies the type of line signaling protocol (Incoming Local or Incoming Toll) to be used. Valid entries are "inloc" (default) and "intoI."

■ **Auth Code** — Enter "y" if an authorization code must be dialed to complete incoming calls on the trunk group. This field can only be "y" if the Authorization Codes feature is enabled on the System-Parameters Customer-Options form.

■ **Trunk Type** — Identifies the physical type of trunk. Valid entries are "loop-start," "immed-start," and "wink-start." Trunk types of "loop-start"" must use aTN429orTN2184 circuit board. When the Country is "15" (C.I.S.), additional valid entries are "2-wire-ac," "2-wire-dc," and "3-wire." These three trunk types must be on a TN2199 circuit board.

■ **Incoming Rotary Timeout (sec)** — Is the timing interval required by the central office that the system is connected to. If the system is connected to a Step-by-Step office, 18 seconds or more must be used; if the system is not connected to a Step-by-Step office, 5 seconds or more can be used. Valid entries are 5 to 99, or leave blank; default is 5.

■ **Incoming Dial Type** — Indicates the type of pulses required on an incoming trunk group. Valid entries are "mf," "tone" (default) or "rotary."

NOTE:
Multifrequency Signaling must be enabled on the System-Parameters Customer-Options form before a value of "mf" can be administered.

■ **Trunk Termination** — Specifies how the trunk group is terminated. Valid entries are “600ohm” or “rc” (default). Use “600ohm” when the PBX trunk port is connected to terminal equipment (for example, SLC carrier or compensators optioned for 600 ohms input impedance) and the distance to the terminal equipment from the system is less than 3000 feet.

■ **Disconnect Timing (msec)** — Specifies the minimum time period (in ms) that is required for recognition of disconnect by the serving central office or far-end PBX. The time interval must be in increments of 10 (from 140 to 2550); default is 500. This timer is not used for ports on a circuit pack that can receive the administrable Incoming Disconnect and Outgoing Disconnect timers. These latter two timers replace Disconnect Timing.

■ **Digit Treatment** — Indicates if digits are to be absorbed or inserted. A blank indicates no digit absorption or insertion. Valid entries are “absorption” or “insertion,” or leave blank.

■ **Digits** — Indicates the actual digits to be inserted or number of digits to be absorbed. This field is used with the Digit Treatment field. No entry indicates no digit absorption or insertion is done. Valid entries are the number of digits to be absorbed from the beginning of the dialed number (1 to 5) or the actual digits to be inserted into the beginning of the dialed number (1 to 5 digits including the characters “*” and “#”).

■ **Expected Digits** — Enter the number of digits the Central Office sends for incoming call connections. If the Incoming Dial Type is “mf,” this field must be completed. Default is blank. Valid values are between 1 and 18 inclusive.

■ **Analog Gain** — This field appears only if the Country is”15“ (C.I.S.) and the Trunk Type is “2-wire-ac,“ “2-wire-dc,” or “3-wire.” This field allows you to specify a boost in analog gain for theTN2199 port in the direction toward the PBX. Enter “a” (-3dB gain boost), “b” (-6dB gain boost), “c” (-8dB gain boost), or “none” (default). This applies *only* to the TN2199 port.

■ **Sig Bit Inversion** — This field allows the user to administer the signaling bit inversion (the A-bit and B-bit inversion) on a per port basis. This field applies only to TN464B or later suffixed circuit packs. The CCITT standards define on-hook to be ”1” in the A-bit and off-hook to be “0.” This definition is the opposite of the EIA definition. The default in the TN464 firmware for signaling bit inversion is use the CCITT standard for 32-channel mode and to use the EIA standard for 24-channel mode. Valid entries are “A,” “A&B,” “B,” and “none” (default).

■ **Terminal Balanced** — Displayed when the Trunk Type field is filled in. Enter “y” for terminally balanced trunks or “n” (default) for unbalanced trunks. Typically, a Trunk Termination field of “600ohm” signifies a balanced trunk group and a field of “m” signifies a non-balanced trunk group. If the trunks in this group pass the Low Frequency Return Loss test requirements, then they are terminally balanced and this field should be “y.”

■ **RA Trunk Loss** — (Remote Access Trunk Loss) Displayed when the Terminal Balanced field is “n.” Specifies the type of dB loss to be applied

to terminally unbalanced trunks. If unsatisfactory echo performance (hollowness) is experienced, the field should be changed to 2dB. Valid entries are “0db” (default) and “2db.”

■ **Extended Loop Range—** This field appears only on a DID trunk group and only for the TN459A circuit pack. Enter “y” or “n” (default) depending on the distance between the central office and the PBX. If greater than the required distance, then the field should be set to “y.”

■ **Trunk Gain** — This field specifies the gain of the trunk, and can have the values of “high” or “low.” The value of this field, in conjunction with the values of the Trunk Termination and Country fields, will determine the input and trans-hybrid balance impedance forTN465B,TN2146, TN2147, and TN2164 ports. All other CO and DID circuit packs will be automatically set to “high”.

■ **Drop Treatment** — Setting this field set to “intercept” indicates that intercept tone is applied on the talk path of DID calls dropped by the terminating party when the originating party is still on the call. Entering “busy” indicates busy tone will be applied, and “silence” indicates no tone will be applied. Default is “silence.”

NOTE:
In Italy, Drop Treatment must be administered as “intercept” for all DID trunk groups.

■ **Disconnect Supervision-In** — Enter “y” (default) to indicate that the far end has the ability to release a trunk when the calling party releases from a call and the system is able to recognize the release signal.

Page 2 of the Form

■ **ACA Assignment** — Specifies whether or not Automatic Circuit Assurance (ACA) measurements will be taken for this trunk group. Valid entries are “y” or “n” (default). If “y” is entered, complete the next three fields.

■ **Long Holding Time (hours)** — Only displayed when ACA Assignment is “y.” Is the length in hours that the system will consider as being a long holding time. If “0” is entered, the system will not consider long holding calls. Valid entries are 0 to 10; default is 1.

■ **Short Holding Time (secs.)** — Only displayed when ACA Assignment is “y.” Specifies the length in seconds that the system will consider as being a short holding time. If “0" is entered, the system will not consider short holding calls. Valid entries are 0 to 160; default is 10.

■ **Short Holding Threshold** — Only displayed when ACA Assignment is “y.” Is the number of times that the System will record a short holding call before an attendant or display-equipped voice terminal user is alerted to the possibility of a faulty trunk. Valid entries are 0 to 30; default is 15.

■ **Measured** —Indicates if the system will transmit data for this trunk group to the Call Management System. Valid entries are “internal,” “external,” “both,” and “none.” Enter “internal" if the data is to be sent to the Basic

Call Management System (internal to the switch) for subsequent measurement reports and “external” to send the data to the Call Management System Adjunct. Enter “both" to send the data to both systems for measurement reports. Enter “none” if trunk group measurements are not required. System default is none.

- **Data Restriction** — Is used to prevent System features from generating tones on a data call that would cause erroneous data transmission. Valid entries are “y” or “n” (default).
- **Suppress # Outpulsing** — indicates end-to-end signaling begins with (and includes) the “#” when “y” is entered in this field. The final “#’is suppressed in cases where System would normally outpulse it. This field should be “y” when the Central Office (for example, rotary) or any other facility treats “#’ as an error; default is n.
- **Maintenance Tests** — Indicates whether or not hourly maintenance tests will be made on this trunk group. Valid entries are “y” (default) or “n.”

Page 3 of the Form (Administrable Timers)

- **Incoming Disconnect (msec)** — A disconnect signal on an incoming call is considered valid only if it continues at least for the time specified by this timer. Valid entries are 50 to 2550 in increments of 10. The field cannot be blank; default is 500.
- **Flash Length** — Specifies the length (in ms) of the flash signal to be generated toward the Central Office. This field is sent to TN436B, TN459B, TN464C (or later), andTN2146 ports. Valid entries are 10 to 2550 in increments of 10; default is 540.
- **Incoming Dial Guard (msec)** — Enter the interval between the detection of an incoming seizure and the acceptance of the first digit. The PBX will not accept digits before this timer expires. Valid entries are 10 to 2550 in increments of 10; default is 70.
- **Incoming Partial Dial (sec** — Enter the time (in sec) allowed between digits on rotary trunks. Valid entries are 5 to 255 in increments of 1; default is 18. This timer appears only if the Incoming Dial Type field is “rotary.”
- **Incoming Seizure (msec** This field appears only if the Country is “15” (C.I.S.) and the Trunk Type is “2-wire-ac” 2-wire-dc,” or “3-wire.” These three trunk types must be on a TN2199 circuit board.
- **Disconnect Signal Error (sec)** — Enter the time (in seconds) within which a disconnect signal from the far-end is expected after the internal party (a station or a tie trunk) goes on-hook. If the timer expires, the system can assume a disconnect failure and take an appropriate action (such as error message). This field appears for ground-start trunk groups. This field also appears if the Country is “15” (C.I.S.), and the Trunk Type is “2-wire-ac” “2-wire-dc” or “3-wire.” Valid entries are 1 to 255 in increments of 1; default is 240.
- **Flash Length (msec)** — Specifies the length of the flash signal to be generated toward the Central Office. Valid entries are 10 to 2550 in

increments of 10; default is 540. This timer is sent to TN464C (or later), TN436B, TN459B, TN2146, TN2184, and TN2199 circuit boards.

■ **Incoming Incomplete Dial Alarm (sec)** —Enter the maximum time (in sec) between incoming seizure of a trunk and receipt of all digits. Intervals greater than this generate an inline error. Valid entries are 1 to 255 in increments of 1; default is 255. This timer is sent to TN464C (or later), TN767, TN436 (all), TN459 (all), TN2184, TN2199, and TN2146 circuit packs.

■ **Answer Send (msec)** — This field appears only if the Country is "15" (C.I.S.), and the Trunk Type is "2-wire-ac," "2-wire-dc," or "3-wire." This timer specifies the length of the answer signal pulse. The timer is sent only to theTN2199 circuit board.

■ **Tone (msec)** — Enter the length of a DTMF tone sent to the public network in response to a button depression at a hybrid station set. Valid entries are 20 to 2550 in increments of 10; default is 350. This timer is sent to TN464B (or later), TN767, TN436B, TN459B, TN2146, TN429, TN2199, and TN2184 circuit packs.

■ **Pause (msec)** — Enter the minimum length of a pause between tones being sent in response to button depressions at a hybrid station set. Valid entries are 20 to 2550 in increments of 10; default is 150. This timer is sent to TN464B (or later), TN767, TN436B, TN459B, TN2146, TN429, TN2199 and TN2184 circuit packs.

Pages Y through X of the Form (Group Member Assignments)

NOTE:
The total number of pages, and the first page of the Group Member Assignments, will vary depending on whether the Administrable Timers page is displayed.

■ **Administered Members (min/max)** — Indicates the minimum and maximum member number that has been administered for the particular trunk group. This field is displayed on all member pages.

■ **Total Administered Members** —Indicates the total number of members administered in the trunk group. This field will appear on all trunk group member pages.

■ **Port** — Enter seven characters. The first two characters identify the cabinet (01 to 22 [G3r V2], 1 to 3 [G3s V2, G3i V2]); the third character identifies the carrier (A through E); the fourth and fifth identify the slot number in the carrier (01 to 20 for multi-carrier cabinets or 01 to 18 for single-carrier cabinets); the last two characters identify the circuit number (01 to 31).

■ **Code** — Display-only field. Displays the type of circuit pack physically installed or logically administered at the location to which this member has been assigned. If a circuit pack is neither installed nor administered at the member's location, the field is blank.

- **Sfx** — Displays the type of circuit pack (suffix only) physically installed at the location to which this member has been assigned. Field is blank if a circuit pack has not been physically installed.
- **Name** — Enter up to ten characters to identify the member of the trunk group. The name can be a 7-digit telephone number or a 10-digit Trunk Circuit Identification number (provided by trunk supplier).

NOTE:
Previously, System 75 Night Service and Balance/Loss information was entered in the Name field as ''NT#..." and ''TT#)..." This information must now reentered in the Night field (below) or the STT Loss field on Page 1 of the form ,as applicable.

```
                                                          Page 1 of X
                              TRUNK GROUP

Group Number: xxx              Group Type: did          CDR Reports? y
  Group Name: OUTSIDE_CALL_          COR: 1_                   TAC : ____

                                 Country: 14              CO Type: analog_
                               Auth Code? n

TRUNK PARAMETERS
            Trunk Type: ____________     Incoming Rotary Timeout(sec): 5_
                                                 Incoming Dial Type: tone_____
     Trunk Termination: rc ____              Disconnect Timing(msec): 500_
       Digit Treatment: ___________                          Digits: ____
       Expected Digits: _                          Sig Bit Inversion: none

   Extended Loop Range? n         Trunk Gain: high     Drop Treatment: silence_

 Disconnect Supervision - In? y
```

Screen 4-57. Direct Inward Dialing Trunk Group Form (Page 1 of X)

Implementation Notes:

The CO Type field is displayed when the Country field is “14” and only applies if the trunk group members are administered on a TN454D vintage 2 or greater.

The Protocol Type field is displayed when the Country field is “15” and only applies if the trunk group members are administered on a TN464D vintage 3 or greater.

The Terminal Balanced field is displayed when the Trunk Type field has been filled in.

The RA Trunk Loss field is displayed when the Terminal Balanced field is “n.”

Direct Inward and Outward Dialing Trunk Group

NOTE:
The TN429 DIOD Trunk circuit pack is used in Japan, theTN2184 is used in Germany, and the TN464D is used in certain other countries. See "Direct Inward and Outward Dialing (DIOD)" in Chapter 3 for more information.

This form is used to assign a Direct Inward and Outward Dialing (DIOD) trunk group and associated trunk ports. The TN429 andTN2184 DIOD trunk circuit packs allow calls from a local exchange to be made to a subscriber on a PBX system without connecting through the attendant console.

Administration Commands

The following administration commands can be used to access the DIOD Trunk Group form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
add	trunk-group	1-MAX (or 'next')
change	trunk-group	1-MAX or TAC X...
display	trunk-group	1-MAX ['number' X]['to-number' X]['count N] ['tac' assigned TAC]['print' or 'schedule']
list	trunk-group	['print' or 'schedule']
remove	trunk-group	1-MAX or TAC X...

* Brackets [ ] indicate the qualifier is optional. Single quotes (") indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered. MAX is the maximum number available in your system configuration. Refer to the Capacity Table in Appendix C.

Form Instructions

Make assignments as required for the following fields on each page of the form:

Page 1 of the Form

- **Group Number** — Enter a group number when completing a paper form. This is a display-only field when the form is accessed using an administration command such as adder change.
- **Group Type** — Enter "did" to identify the trunk group type.
- **CDR Reports** — Enter "y" to provide a detailed CDR record of both incoming and outgoing calls made on all trunks in the trunk group; otherwise, enter "n." default is "y."

- **Group Name** — Enter a unique name that identifies the trunk group. Up to 16 characters can be used. Default is “OUTSIDE CALL.”
- **COR** — Enter a class of restriction (COR) number from 0 to 95 that reflects the desired restriction. Default is ”1."
- **TAC** — Enter the trunk access code (TAC) that must be dialed to access the trunk group. CDR also uses the TAC to identify the trunk group on associated CDR reports. A different TAC must be assigned to each trunk group. Valid entries are TACs that are compatible with the System Dial Plan (1 to 4 digits).
- **Country** — This field specific the country code for each subscriber line. Valid values are any number between 1 and 18, inclusive. The value of this field, in conjunction with the values of the Trunk Termination and Trunk Gain fields, will determine the input and trans-hybrid balance impedance requirements for TN465B, TN2146, and TN2147 ports. Refer to the “Country Code Assingments” table in Appendix B for a complete list of valid country codes.
- **CO Type** — Only displayed when Country is set to 14 (Czechoslovakia) and is only applicable if the trunk group members are administered on a TN464D vintage 2 or greater. This field specifies the type of CO the trunk group is attached to. Valid entries are “analog” (default) and “digital.”
- **Protocol Type** — Only displayed when Country is set to 15 (C.I.S.) and is only applicable if the trunk group members are administered on a TN464D vintage 3 or greater. This field specifies the type of line signaling protocol (Incoming Local or Incoming Toll) to be used. Valid entries are “inloc” (default) and “intoI.”
- **Direction** — Enter “two-way.”
- **Outgoing Display** — Specifies whether or not the trunk group name is displayed on a terminal placing an outgoing call. Valid entries are “y” or “n.” Default is “n.”
- **Dial Access** — Enter “y” to allow the trunk group to be accessed via a TAC. Default is “n.” Access via the ARS feature is allowed regardless of this entry.
- **Busy Threshold** — Enter the number of trunk group members that must be busy before the attendant is alerted by the Warning lamp on the Attendant Console.
- **Queue Length** — Enter the number of outgoing calls that can be held waiting. A “0” (default) indicates no calls will be held in queue.
- **Auth Code** — Enter “y” if an authorization code must be dialed to complete incoming calls on the trunk group. This field can only be set to “y” if the Authorization Codes feature is enabled on the System-Parameters Customer-Options form. Default is “n.”

■ **Digit Absorption List** — Enter a digit list absorption number, if required, when this trunk group terminates at a Step-by-Step office. This field specifies the type of absorption as specified on the System Digit Absorption form. Up to five different forms (lists 0 to 4) may be administered in the system.

■ **Prefix-1** — Indicates if the prefix 1 is required for NXX FNPA calls (where N is 2 to 9, and X is 0 to 9). Valid entries are “y” (default) and “n.”

■ **Toll Restricted** — Automatic dial type trunks should have this field set to “n.” Valid entries are “y” (default) and “n.”

■ **Trunk Type** — Enter “loop-start” for analog DIOD trunk ports. Enter “immed-start” or “wink-start” for digital DIOD trunk ports. Default is blank. Entering “loop-start” causes the Terminal Balanced field to appear. All analog members of this group must be on TN429 (Japan) or TN2184 (Germany) circuit packs. All digital members of this group must be TN464Dr2 or later.

■ **ANI Upon Seizure** — This field appears only if the Direction is “outgoing” or “two-way” and the Country is”15“ (C.I.S.). Enter “y” (default) when an ANI request is expected after the trunk is *seized,* enter “n” when an ANI request is expected after the trunk is *answered.*

■ **Outgoing Dial Type** — Identifies the type of pulsing required on an outgoing call. Valid entries are “tone” (default), “rotary," or “mf.”

■ **Incoming Dial Type** — Indicates the type of pulses required on an incoming trunk group. Valid entries are "tone” (default), “rotary,” or “mf.”

■ **Trunk Termination** — Valid entries are “600ohm” or “rc”; 600ohm is used when the PBX trunk port is connected to terminal equipment (for example, SLC carrier or compensators optioned for 600 ohms input impedance) and the distance to the terminal equipment from the system is less than 3000 feet. Enter “rc” (default) in all other cases.

■ **Digit Treatment** — Indicates if digits are to be absorbed or inserted. A blank indicates no digit absorption or insertion. Valid entries are “absorption” or “insertion,” or leave blank.

■ **Digits** — Indicates the digits to be inserted or number of digits to be absorbed. This field is used with the Digit Treatment field. No entry indicates no digit absorption or insertion is done. Valid entries are the number of digits to be absorbed (1 to 5) or the actual digits to be inserted (up to 5 digits including the character “*” and “#’).

■ **Expected Digits** — Enter the number of digits (1 to 18) the Central Office sends for an incoming call connection. Default is blank.

- **Sig Bit Inversion** — This field allows the user to administer the signaling bit inversion (the A-bit and B-bit inversion) on a per-port basis. This field applies only to TN464B or later. The CCITT standards define on-hook to be"1" in the A-bit and off-hook to be "0." This definition is the opposite of the EIA definition. The default in the TN464 firmware for signaling bit inversion is use the CCITT standard for 32-channel mode and to use the EIA standard for 24-channel mode. Valid entries are "A," "A&B," "B," and "none" (default).
- **Terminal Balanced** — Displayed when the Trunk Type field is "loop-start," "immed-start," or "wink-start." Specifies whether the trunks in the trunk group are balanced. A "y" signifies that the trunks are terminally balanced and "n" signifies that the trunks are not terminally balanced. Typically, a Trunk Termination field of "600ohm" signifies a balanced trunk group and a field of "rc" signifies a non-balanced trunk group. If the trunks in this group pass the Low Frequency Return Loss test requirements, then they are terminally balanced, and this field should be set to "y." Since most trunks are not balanced, the default is "n."
- **RA Trunk Loss** — (Remote Access Trunk Loss) Specifies the type of dB loss to be applied to non-terminally balanced trunks. The 0dB entry is used in both directions as the default option. If unsatisfactory echo performance (hollowness) is experienced, the field should be reset to 2dB. Valid entries are "0db" and "2db." This field is only displayed when the Terminal Balanced field entry is "n."
- **Trunk Gain** — This field specifies the gain of the trunk, and can be "high" (default) or "low." The value of this field, in conjunction with the values of the Trunk Termination and Country fields, will determine the input and trans-hybrid balance impedance for TN465B, TN2146, TN2147, and TN2184 ports. All other CO circuit packs will be automatically set to "high."
- **Drop Treatment** — Setting this field set to "intercept"
- **Disconnect Supervision-In** — Enter "y" (default) to indicate that the far end has the ability to release a trunk when the calling party releases from a call and the system is able to recognize the release signal.
- **Disconnect Supervision—Out** — This field appears when the Direction is "two-way." internally, the field is set to "n" if the direction is incoming. If the field is set to "y," a Warning Message appears to alert the user of possible trunk lockups. This field specifies whether trunks in this trunk group provide disconnect supervision when seized outgoing (that is, whether these trunks should be allowed to participate in outgoing trunk to outgoing trunk calls. This field is set independently of the trunk-to-trunk transfer system parameter, although both options must be set appropriately if outgoing trunk to outgoing trunk transfers are desired.
- **Cyclical Hunt** – Enter "y" (default) if a preferential hunting algorithm is to be used. Otherwise, a linear hunting algorithm will be used.
- **Answer Supervision Timeout** — Enter the amount of time in seconds the system allows for the call to be answered before beginning a CDR record of a call. This interval begins as soon as the outgoing trunk is

seized. This time-outdoes not override network or firmware sent answer supervision. Valid entries are 0 to 250. The default is ”10.”

- **Receive Answer Supervision** — Specifies whether or not the network provides answer supervision for the trunks. Answer supervision refers to notification from the far-end that the called party has gone off-hook to answer the call. When answer supervision is not provided, the originating PBX can classify a call as answered using the Answer Supervision Timeout field entry (for domestic circuit packs) or, for circuit packs that take administrable timers, by using the Outgoing End of Dial timer. For trunks over which answer supervision is provided by the network, this field should be set to “y” and the Answer Supervision Timeout field set to “0” to disable the firmware time-out. Note that the firmware time-out is automatically set to “0” for circuit packs that take the administrable Outgoing End of Dial timer. Default is “n.”

Page 2 of the Form

- **ACA Assignment** — Specifies whether or not Automatic Circuit Assurance (ACA) measurements will be taken for this trunk group. Valid entries are “y” or “n” (default).

- **Long Holding Time (hours)** — Only displayed when ACA Assignment is “y.” Is the length in hours that the system will consider as being a long holding time. If “0” is entered, the system will not consider long holding calls. Valid entries are 0 to 10. Default is ”1.“

- **Short Holding Time (secs.)** — Only displayed when ACA Assignment is “y.” Specifies the length in seconds that the system will consider as being a short holding time. If “0” is entered, the system will not consider short holding calls. Valid entries are 0 to 160. Default is “10.”

- **Short Holding Threshold** — Only displayed when ACA Assignment is “y.” Is the number of times that the system will record a short holding call before an attendant or display-equipped voice terminal user is alerted to the possibility of a faulty trunk. Valid entries are 0 to 30. Default is “15.”

- **Measured** — Indicates if the system will transmit data for this trunk group to the Call Management System (CMS). Valid entries are “internal,” “external,” “both,” or “none.” Enter “internal” if the data is to be sent to the Basic Call Management System (BCMS) (internal to the switch) for subsequent measurement reports and “external” to send the data to the 3B CMS. Enter “both” to send the data to both systems for measurement reports. Enter “none” if trunk group measurements are not required. System default is “none.”

- **Data Restriction** — Is used to prevent system features from generating tones on a data call that would cause erroneous data transmission. Valid entries are “y” or “n.” default is “n.”

- **Maintenance Tests** — Indicates whether or not hourly maintenance tests will be made on this trunk group. Valid entries are “y” (default) or “n.”

- **Suppress # Outpulsing** — Indicates end-to-end signaling begins with (and includes) the “#’ when “y” is entered in this field. The final “#” is

suppressed in cases where the system would normally outpulse it. This field should be set to “y” when the Central Office (for example, rotary) or any other facility treats “#” as an error. Default is “n.”

Page 3 of the Form (Administrable Timers)

- **Incoming Disconnect (msec)** — A disconnect signal on an incoming call is considered valid only if it continues at least for the time specified by this timer. Valid entries are 50 to 2550 in increments of 10. The field cannot be blank. Default is 500. Note that this timer is sent only to the TN2184 circuit board.

- **Outgoing Disconnect (msec)** — A disconnect signal on an outgoing call is considered valid only if it continues at least for the time specified by this timer. This timer begins timing when a disconnect signal has been detected on an outgoing call over the trunk, and resets when the signal is no longer detected. If the timer times out, the trunk is dropped. Valid entries are 50 to 2550 in increments of 10. The field cannot be blank. Default is 500. Note that this timer is only sent to the TN2184 circuit board.

- **Outgoing Dial Guard (msec)** — This timer specifies the time between seizure acknowledgment of a trunk and the outpulsing of digits. For trunks that do not provide seizure acknowledgment, the timer specifies the minimum time between seizure and the outpulsing of digits. Any digit dialed by the station user after they lift the receiver, but before the timer times out, will not be outpulsed until the timer expires. Valid entries are 100 to 25500 in increments of 100. The field cannot be blank. Default is 1600.

- **Incoming Glare Guard (msec)** — Enter the minimum time (in msec) between the time an incoming trunk is released and the same trunk can be seized for an outgoing call. This guard time will ensure the far-end has released all equipment after the incoming trunk is released. Valid entries are 100 to 25500 in increments of 100. The field cannot be blank. Default is 1500.

- **Outgoing Glare Guard (msec)** — Enter the minimum time (in msec) between the time an outgoing trunk is released and the same trunk can be seized for another outgoing call. This guard time will ensure that the far-end has released all equipment after the outgoing trunk is released. Valid entries are 100 to 25500 in increments of 100. The field cannot be blank. Default is 1500.

- **Incoming Partial Dial (sec)** — Enter the time (in sec) allowed between digits on rotary trunks. Valid entries are 5 to 255 in increments of 1; default is 18. This timer appears only if the Incoming Dial Type field is “rotary.” This timer is sent only to the TN2184 circuit board.

- **Outgoing Rotary Dial Interdigit (msec)** — Enter the interval (in msec) between rotary dial digits being outpulsed by the system. Valid entries are 150 to 2550 in increments of 10. The field cannot be blank. Default is 800. This field only appears when the Outgoing Dial Type is “rotary.”

■ **Ringing Monitor (msec)** — Enter the minimum time (in msec) required to determine if the trunk is disconnected. If the ringing signal disappears for a duration longer than the time specified in this field, the call will be assumed to be disconnected. Valid entries are 200 to 51000 in increments of 200. Default is 5200. The field cannot be blank. This timer is sent only to the TN464D and TN2184 circuit boards.

■ **Incoming Seizure (msec)** — Enter the minimum time (in msec) required for recognition of incoming ringing signal from the serving CO. Valid entries are 20 to 2550 in increments of 10. The field cannot be blank. Default is 500. This timer is sent only to the TN464D andTN2184 circuit boards.

■ **Outgoing Seizure Response (sec)** — Enter the time (in seconds) by which the PBX should receive the proceed-to-dial indication from the far-end after sending the seize signal. if the indication is not received in this time, a seizure failure response is uplinked. Valid entries are 1 to 255 in increments of 1; default is 5. This timer is sent only to the TN464D and TN2184 circuit boards.

■ **Outgoing End of Dial (sec)** — Enter the maximum time (in sec) a trunk may wait for answer supervision after dialing an outgoing call. During cut-through operation, timing begins after each outgoing digit is sent by the PBX and timing ceases after the far-end sends answer supervision. If the timer expires, the PBX acts as if it had received answer supervision. On slenderized operation, the timer begins after the last digit collected is sent by the PBX. The timer ceases when the far-end sends answer supervision. If the timer expires, the PBX acts as if it has received answer supervision. This field appears when Direction is “outgoing” or “two-way” and Receive Answer Supervision is “n.” This field will not appear if the Receive Answer Supervision field is “y,” but a zero (0) value will be sent down to the firmware to disable the timer. This timer applies to the outgoing and two-way CO trunk groups. Valid entries are 1 to 254 in increments of 1. Default is 10.

■ **Programmed Dial Pause (msec)** — Enter the length (in msec) of a pause during abbreviated dialing, ARS outpulsing, and terminal dialing operations. Valid entries are 100 to 25500 in increments of 100. Default is 1500 msec.

■ **Flash Length (sec)** — Specifies the length of the flash signal to be generated toward the Central Office. Valid entries are 10 to 2550 in increments of 10; default is 540. This timer is sent only to the TN464D and TN2184 circuit boards.

■ **Incoming Incomplete Dial Alarm (sec)** — Enter the maximum time (in seconds) between incoming seizure of a trunk and receipt of all digits. Intervals greater than this generate an inline error. Valid entries are 1 to 255 in increments of 1; default is 255. This timer is sent only to the TN464D andTN2184 circuit boards.

■ **Tone (msec)** — Enter the length (in msec) of a DTMF tone sent to the public network in response to a button depression at a hybrid station set. Valid entries are 20 to 2550 in increments of 10. Default is 350. This timer is sent only to the TN2184 circuit boards.

■ **Pause (msec)** — Enter the minimum length (in msec) of a pause between tones being sent in response to button depressions at a hybrid station set. Valid entries are 20 to 2550 in increments of 10. Default is 150. This tier is sent only to the TN2184 circuit boards.

■ **PPS** — Enter either "10" or "20" to specify the PPS (pulses per second) assigned to rotary dial pulse trunk groups. Valid entries are "10" or "20." Default is "10."

■ **Make (msec)** — Enter the duration of the make interval (the pause between pulses) while the system is outpulsing digits using dial pulse signaling.

If the PPS field is "10," the sum of the Make and Break fields must equal 100. Valid entries are 20 to 80 in increments of five. The field cannot be blank. The default is 40.

If the PPS field is "20," the sum of the Make and Break fields must equal 50. Valid entries are 10 to 40 in increments of five. The field cannot be blank. The default is 20.

■ **Break (msec)** — Enter the duration of the break interval (the pulse duration) while the system is outpulsing digits using dial pulse signaling.

If the PPS field is "10," the sum of the Make and Break fields must equal 100. Valid entries are 20 to 80 in increments of five. The field cannot be blank. The default is 60.

If the PPS field is "20," the sum of the Make and Break fields must equal 50. Valid entries are 10 to 40 in increments of five. The field cannot be blank. The default is 30.

■ **PPM (Periodical Pulse Metering)** — This field does not apply to the TN429 since that circuit pack cannot detect PPM. Default is "n."

■ **Frequency** — Displayed if the Direction is "outgoing" or "two-way" and the PPM field is "y." Identifies the PPM pulse frequency(ies). Circuit packs can listen for up to three different frequencies, (12kHz, 16kHz, and 50Hz), plus two frequency combinations, (50Hz/12kHz and 50Hz/16kHz). Valid entries are "12k," "16k," "50," "50/12k" (default), and "50/16 k." This field is sent to theTN2184 circuit packs.

NOTE:

The TN2184 can only detect 12k and 16kHz PPM. Therefore, if "50/12k" or "12k" is administered, the circuit pack will be set to detect 12kHz. If "16k," "50," or "50/16k" is administered, the circuit pack will be set to detect 16kHz.

Page 4 of the Form (ATMS Thresholds)

This form appears when the Direction on Page 1 is "two-way" and ATMS is enabled on the Feature-Related System Parameters form.

- **TTL Type** — Specifies the type of TTL selected for testing trunks. The TTL type determines what ATMS tests can be completed and thus which threshold values need to be administered. The different TTLs supported are 105 with return loss (105-w-rl) (default), 105 without return loss (105-wo-rl), high-level tone source (high-level-tone), low-level tone source (low-level-tone), 100-type (100), and 102 type (102). The following table explains the differences between TTL Types:

Type TTL	Description	Example
105-w-rl	Full range of 18 measurements or some defaults for return loss used (56A)	TN771B, ZLC12 and SN261B circuit packs and new 56A mini-responder
105-wo-rl	Cannot return default values for far-end return loss	Older 56A mini-responder
high-level-tone	sends a freed sequence of tones at 0 dBm	ZLC12 and SN261B circuit packs
low-level-tone	Sends a fixed sequence of tones at -16dBm	SN261B circuit pack
100	Up to 5 measurements that sends a 1004 Hz tone then a quiet termination	
102	One measurement that sends a 1004 Hz tone	

The far-end switch containing the TTL may be any of the following:

- System 85 R3 PBX equipped with the Maintenance/Test Board (TN771B)
- System 75 R1V2 and beyond, all of which contain the circuitry required to perform the TTL function
- System 85 R2 PBX equipped with the Analog/Digital Facility Test Circuit (ADFTC,SN261)
- DIMENSION FP8 equipped with the Analog Facility Test Circuit (AFTC, ZLC-12)
- Central Office switches equipped with various TTL equipment that provide 100, 102, or 105 test line capabilities (56A)

Other vendor PBXs *may* be supported if compatible test lines are provided by these switches.

Four different versions of the ATMS Threshold Administration page can occur depending upon the measurements allowed by the TTL type selected. The four possibilities are:

1. 105-w-rI and105-wo-rl — All thresholds appear.
2. high-Its and Iow-Its — All thresholds (except maximum C-notched noise) appear.
3. 100 — All thresholds (except maximum c-notched noise, 404Hz loss, and 2804 Hz loss) appear.
4. 102 — Only 1004 Hz loss threshold appears.

```
                                   ATMS  THRESHOLDS
TTL Type: 105-w-rl_____              Far End Test No: _____________________
TTL Vendor: _____________            TTL Contact: _____________________
Trunk Vendor: _____________          Trunk Contact: _____________________
Trunk Length: ___________

                        MARGINAL          UNACCEPTABLE
                        Min    Max          Min    Max
          1004 Hz Loss: -2 21               -2      21

                        -Dev   +Dev          -Dev    +Dev
           404 Hz Loss: 9      9              9       9
          2804 Hz Loss: 9      9              9       9

Maximum C Message Noise:      55                    55
Maximum C Notched Noise:      74                    74
         Minimum SRL-HI:      0_                    0_
         Minimum SRL-LO:      0_                    0_
            Minimum ERL:      0_                    0_

     Allow ATMS Busyout, Error Logging and Alarming? y
  Maximum Percentage of Trunks Which Can Be Removed from Service by ATMS: 0_
```

Screen 4-61. ATMS Thresholds Form

- Far End Test No.— Enter the access number (1 to 20 digits)dialed to reach the TTL.
- TTL Vendor— Enter the 0 to 22 alphanumeric character TTL vendor name (the name of the vendor supplying the terminating test line); default is blank.
- TTL Contact — Enter the 0 to 25 alphanumeric character TTL vendor contact (the name and/or telephone-number of someone from the TTL vendor who can be contacted in the event of problems with the TTL); default is blank.

■ **Trunk Vendor—** Enter the 0 to 22 alphanumeric character trunk vendor name (who to notify in the event of problems with the trunks); default is blank.

■ **Trunk Contact —** Enter the 0 to 25 alphanumeric character trunk vendor contact (the name and/or telephone number of someone from the trunk vendor who can be contacted in the event of problems with the trunks); default is blank.

■ **Trunk Length —** Enter 0 to 4 digits followed by “k” (for kilometers) or “m” (for miles) showing the length of trunk. This field is not required, since it is not used by the G3-MT. It has been included for the G3-MA adjunct to use in aiding with threshold establishment, since noise on a trunk increases with the length of the trunk. The default is "0m.”

■ **Marginal Threshold — Minimum 1004 Hz Loss** — Enter -2 (default), -1, or 0 to 21 to indicate the minimum signal loss for a 1004 Hz test tone (in dB) allowed before reporting a trunk as out of tolerance. A larger dB value is more restrictive.

■ **Marginal Threshold — Maximum 1004 Hz Loss** — Enter the maximum signal loss (0 to 21) for a 1004 Hz test tone (in dB) allowed before reporting a trunk as out of tolerance; default is 21. A smaller dB value is more restrictive.

■ **Unacceptable Threshold — Minimum 1004 Hz Loss** — Enter-2 (default), -1, or 0 to 21 to indicate the minimum signal loss for a 1004 Hz test tone (in dB) allowed before reporting a trunk as unacceptable. A larger dB value is more restrictive.

■ **Unacceptable Threshold — Maximum 1004 Hz Loss** — Enter the maximum signal loss (0 to 21) for a 1004 Hz test tone (in dB) allowed before reporting a trunk as unacceptable; default is 21. A smaller dB value is more restrictive.

■ **Marginal Threshold — 404 Hz Loss Negative Deviation** — Enter the maximum negative deviation of measured loss (0 to 9) at 404 Hz from the 1004 Hz test tone noise level (in dB) allowed before reporting a trunk as out of tolerance; default is 9. Smaller dB values are more restrictive.

■ **Marginal Threshold — 404 Hz Leas Positive Deviation** — Enter the maximum positive deviation of measured loss (0 to 9) at 404 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk as out of tolerance; default is 9. Smaller dB values are more restrictive.

■ **Unacceptable Threshold — 404 Hz Loss Negative Deviation** — Enter the maximum negative deviation of measured loss (0 to 9) at 404 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk unacceptable; default is 9. Smaller dB values are more restrictive.

■ **Unacceptable Threshold — 404 Hz Loss Positive Deviation** — Enter the maximum positive deviation of measured loss (0 to 9) at 404 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk unacceptable; default is 9. Smaller dB values are more restrictive.

■ **Marginal Threshold — 2804 Hz Loss Negative Deviation** — Enter the maximum negative deviation of measured loss (0 to 9) at 2804 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk as out of tolerance; default is 9. Smaller dB values are more restrictive.

■ **Marginal Threshold — 2804 Hz Loss Positive Deviation** — Enter the maximum positive deviation of measured loss (0 to 9) at 2804 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk as out of tolerance; default is 9. Smaller dB values are more restrictive.

■ **Unacceptable Threshold — 2804 Hz Loss Negative Deviation** — Enter the maximum negative deviation of measured loss (0 to 9) at 2804 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk unacceptable; default is 9. Smaller dB values are more restrictive.

■ **Unacceptable Threshold — 2804 Hz Loss Positive Deviation** — Enter the maximum positive deviation of measured loss (0 to 9) at 2804 Hz from the 1004 Hz test tone loss level (in dB) allowed before repotting a trunk unacceptable; default is 9. Smaller dB values are more restrictive.

■ **Marginal Threshold — Maximum C Message Noise** — Enter the maximum C-message noise interference (15 to 55) in dBmC above reference noise terminating on a voice terminal as measured within the voice band frequency range (500 to 2500 Hz) allowed before reporting a trunk as out of tolerance. The default is 55. Smaller values are more restrictive.

■ **Unacceptable Threshold — Maximum C Message Noise** — Enter the maximum C-message noise interference (15 to 55) in dBmC above reference noise terminating on a voice terminal as measured within the voice band frequency range (500 to 2500 Hz) allowed before reporting a trunk as unacceptable. The default is 55. Smaller values are more restrictive.

■ **Marginal Threshold — Maximum C Notched Noise** — Enter the maximum C-notched signal dependent noise interference (34 to 74) in dBmC allowed before reporting a trunk as out of tolerance. The default is 74. Smaller values are more restrictive.

■ **Unacceptable Threshold — Maximum C Notched Noise** — Enter the maximum C-notched signal dependent noise interference (34 to 74) in dBmC allowed before reporting a trunk as unacceptable. The default is 74. Smaller values are more restrictive.

■ **Marginal Threshold — Minimum SRL-HI** — Enter the minimum high-frequency signaling return loss (0 to 40) in dB allowed before repotting a trunk as out of tolerance. The default is 0. Larger values are more restrictive.

■ **Unacceptable Threshold — Minimum SRL-HI** — Enter the minimum high-frequency signaling return loss (0 to 40) in dB allowed before reporting a trunk as unacceptable. The default is 0. Larger values are more restrictive.

■ **Marginal Threshold — Minimum SRL-LO** — Enter the minimum low-frequency signaling return loss (0 to 40) in dB allowed before reporting a trunk as out of tolerance. The default is 0. Larger values are more restrictive.

■ **Unacceptable Threshold — Minimum SRL-LO** — Enter the minimum low-frequency signaling return loss (0 to 40) in dB allowed before reporting a trunk as unacceptable. The default is 0. Larger values are more restrictive.

■ **Marginal Threshold — Minimum ERL** — Enter the minimum low-frequency echo return loss (0 to 40) in dB allowed before reporting a trunk as out of tolerance. The default is 0. Larger values are more restrictive.

■ **Unacceptable Threshold — Minimum ERL** — Enter the minimum low-frequency echo return loss (0 to 40) in dB allowed before reporting a trunk as unacceptable. The default is 0. Larger values are more restrictive.

■ **Allow ATMS Busyout, Error Logging and Alarming** — Enter "y" to allow ATMS error logging and alarming (subject to filtering depending on the service organization used to deal with alarms); default is n.

■ **Maximum Percentage of Trunks Which Can Be Removed From Service by ATMS** — Enter the highest percentage of trunks from the trunk group (0 to 100) that can be removed from service at one time because of unacceptable transmission measurement results; default is 0. This field appears only if the Allow ATMS Busyout, Error Logging and Alarming field is "y."

Pages Y through X of the Form (Group Member Assignments)

NOTE:
The total number of pages, and the first page of Group Member Assignments, will vary depending on whether the Administrable Timers and ATMS Thresholds pages are displayed.

■ **Administered Members (min/max)** — indicates the minimum and maximum member number that is administered for the particular trunk group (displayed on all member pages).

■ **Total Administered Members** — Indicates the total number of members administered in the trunk group (appears on all trunk group member pages).

■ **Port** — Enter seven characters. The first two characters identify the cabinet (01 to 22 [G3r V2], 1 to 3 [G3s V2, G3i V2]); the third character identifies the carrier (A through E); the fourth and fifth identify the slot number in the carrier (01 to 20 for multi-carrier cabinets or 01 to 18 for single-carrier cabinets); the last two characters identify the circuit number (01 to 31).

NOTE:
All ports in a DIOD trunk group must be from TN429 circuit packs.

■ **Code** — Display-only field. Displays the type of circuit pack physically installed or logically administered at the location to which this member has been assigned. If a circuit pack is neither installed nor administered at the member's location, the field is blank.

■ **Sfx** — Displays the type of circuit pack (suffix only) physically installed at the location to which this member has been assigned. Field is blank if a circuit pack has not been physically installed.

■ **Name** - Enter up to ten characters to identify the member of the trunk group. The name can be a 7-digit telephone number or a 10-digit Trunk Circuit Identification number (provided by trunk supplier).

■ **Night** — Enter the extension of the night destination for the trunk. This individual night destination overrides the group night service destination on the first page of the trunk group form. incoming calls are routed to this destination when the system is placed in night service mode. (If "attd" is entered, night service will be to the attendant.)

■ **Mode** — This field must be blank for DIOD groups.

■ **Type** — This field must be blank for DIOD groups.

■ **Ans Delay** — This field must be blank for DIOD groups.

```
                                                              Page 1 of X
                                TRUNK GROUP

Group Number: xxx                 Group Type: died          CDR Reports? y
  Group Name: OUTSIDE CALL_            COR: 1_                      TAC :____
   Direction: two-way_       Outgoing Display? n
 Dial Access? n                Busy Threshold: 99_
Queue Length: 0_                      Country: 15          Protocol Type: inloc
                                   Auth Code? n   Digit Absorption List: _
    Prefix-1? y                  Trunk Flash? n         Toll Restricted? y

TRUNK PARAMETERS
            Trunk Type: ____________                 ANI Upon Seizure? y
    Outgoing Dial Type: tone_.                   Incoming Dial Type: tone_
     Trunk Termination: rc____
       Digit Treatment: ____________                          Digits:  _
       Expected Digits: _                         Sig Bit Inversion: none

                                  Trunk Gain: high     Drop Treatment: silence

 Disconnect Supervision - In? y Out? n
 Answer Supervision Timeout: 10_          Receive Answer Supervision? n
```

Screen 4-62. Direct Inward and Outward Dial Trunk Group Form (Page 1 of X)

Implementation Notes:

The Terminal Balanced field is only displayed when Trunk Type is “loop-start.”

The RA Trunk Loss field is only displayed when Terminal Balanced is ’’n.”

```
                                                                  Page 2 of X
TRUNK  FEATURES
          ACA Assignment? n            Measured: none
                                Data Restriction? n
                                                        Maintenance Tests? y
   Suppress # Outpulsing? n
```

Screen 4-63. Direct lnward and Outward Dial Trunk Group Form (Page 2 of X)

Implementation Note:

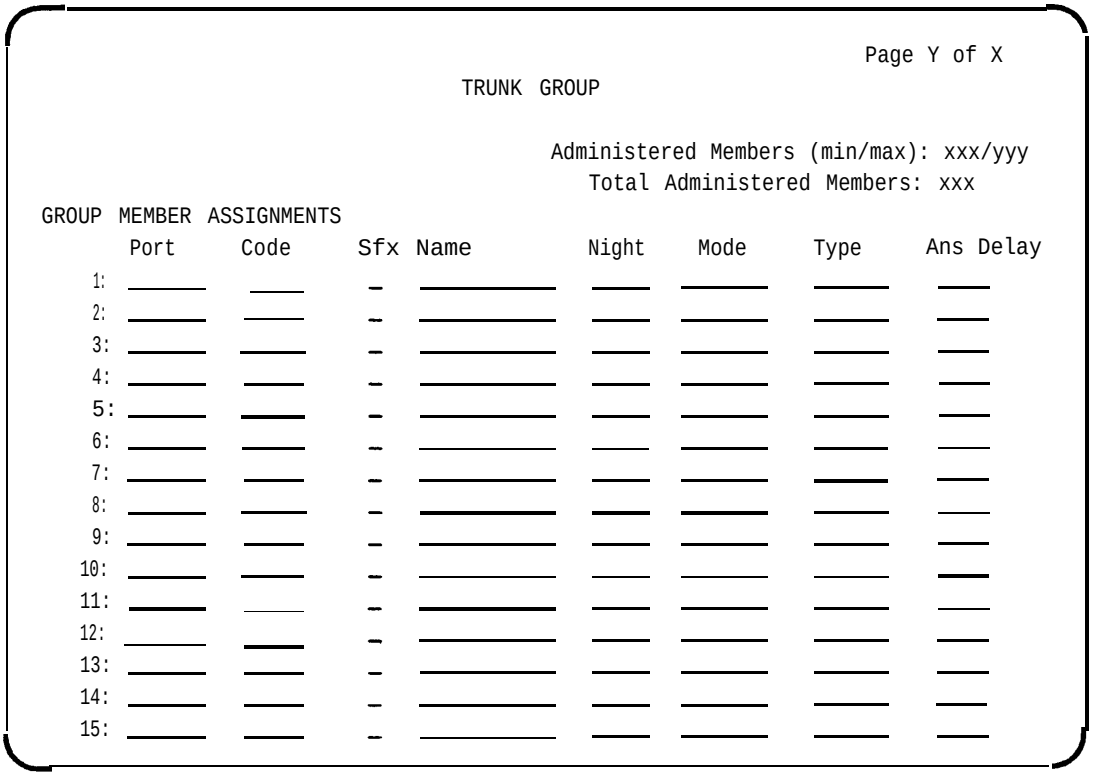
The Long Holding Time (hours), Short Holding Time (secs.), and Short Holding Threshold fields are only displayed if ACA Assignment is "y."

```
                                                                  Page 3 of X
ADMINISTRABLE  TIMERS
  Incoming Disconnect (msec) : 500             Outgoing Disconnect (msec) : 500
                                               Outgoing Dial Guard (msec): 1600
 Incoming Glare Guard (msec) : 1500           Outgoing Glare Guard(msec): 1500

                                  Outgoing Rotary Dial Interdigit(msec): 800
      Ringing Monitor(msec): 5200               Incoming Seizure(msec): 500
  Outgoing End of Dial(sec): 10         Outgoing Seizure Response(sec): 5
Programmed Dial Pause(msec): 1500


END TO END SIGNALING
   Tone(msec): 350              Pause(msec): 150

OUTPULSING  INFORMATION
     PPS: 10    Make(msec): 40   Break(msec): 60       PPM? n
```

Screen 4-64. Direct lnward and Outward Dial Trunk Group Form (Page 3 of X)

Implementation Note:

Outgoing End of Dial does not appear if the Receive Answer Supervision field is "y"



```
                                                              Page Y of X
                                    TRUNK GROUP

                                                Administered Members (min/max): xxx/yyy
                                                   Total Administered Members: xxx
GROUP  MEMBER ASSIGNMENTS
       Port      Code      Sfx  Name            Night    Mode      Type      Ans Delay
 1:
 2:
 3:
 4:
 5:
 6:
 7:
 8:
 9:
10:
11:
12:
13:
14:
15:
```

Screen 4-65. Direct Inward and Outward Dial Trunk Group Form (Page Y of X)

To reduce repetition, the remaining pages are not shown. For a complete set of forms, refer to the “Blank Forms Package.”

Foreign Exchange Trunk Group

This form is used to allow a connection between a distant central office and the System.

Administration Commands

The following administration commands can be used to access the FX Trunk Group form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
add	trunk-group	1- MAX (or 'next')
change	trunk-group	1- MAX or TAC X...
display	trunk-group	1-MAX ['number' X]['to-number' X]['count' N] ['tac' assigned TAC]['print' or 'schedule']
list	trunk-group	['print' or 'schedule']
remove	trunk-group	1- MAX or TAC X...

* Brackets [ ] indicate the qualifier is optional. Single quotes ('') indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered. MAX is the maximum number available in your system configuration. Refer to the Capacity Table in Appendix C.

Form Instructions

Make assignments as required for the following fields on each page of the form:

Page 1 of the Form

- **Group Number** — Enter a group number when completing a paper form. This is a display-only field when the form is accessed using an administration command such as *add* or *change.*
- **Group Type** — Enter "fx" to identify the trunk group type.
- **CDR Reports** – Enter "y" (default) to provide a detailed Call Detail Recording (CDR) record of both incoming and outgoing calls made on all trunks in the trunk group.
- **Group Name** — Enter a unique name that identifies the trunk group. Up to 15 characters can be used; default is OUTSIDE CALL.
- **COR** — Enter a class of restriction (COR) number from 0 to 95 that reflects the desired restriction; default is 1.
- **TAC** — Enter the trunk access code (TAC) that must be dialed to access the trunk group. CDR also uses the TAC to identify the trunk group on associated CDR reports. A different TAC must be assigned to each trunk group. Valid entries are TACs that are compatible with the System Dial Plan (1 to 4 digits; 1 to 3 digits for DCS or to remotely control it).

■ **Direction** — Enter whether the trunk group is “incoming,” “outgoing,” or “two-way” (default). Note that the Direction administered will affect which timers will appear on the Administrable Timer page.

■ **Outgoing Display** — Specifies whether or not the trunk group name is displayed on a terminal placing an outgoing call. Valid entries are “y” or “n” (default).

■ **Dial Access** — Enter “y” to allow the trunk group to be accessed via a TAC. Access via the ARS feature is allowed regardless of this entry.

■ **Busy Threshold** — Enter the number of trunk group members that must be busy before the attendant is alerted by the Warning lamp on the Attendant Console.

■ **Night Service** — Enter the extension number assigned to Night Service. The extension number entered will receive all incoming calls when Night Service is activated and the individual trunk member Night field is not administered to override this group extension. Valid entries are an extension number (can be a VDN extension), the attendant group access code (“attd"), or leave blank if the Trunk Type field is not “auto/. ...”

■ **Queue Length** — Enter the number of outgoing calls that can be held waiting. A “0” (default) indicates no calls will be held in queue. Enter “0" for DCS trunks. This field is not displayed if the Direction field is “incoming.”

■ **Country** — This field specifies the country code for each subscriber line. Valid values are any number between 1 and 19, inclusive. The value of this field, in conjunction with the values of the Trunk Termination and Trunk Gain fields, will determine the input and trans-hybrid balance impedance requirements for TN465B, TN2146, and TN2147 ports.

Refer to the “Country Code Assignments” table in Appendix B for a complete list of country codes.

■ **Incoming Destination** — Indicates where incoming calls will terminate. Valid entries are an extension number, the attendant group access code (“attd"), VDN, or leave blank if the Trunk Type field is not “auto/. ...” if “attd” is entered, a call is treated as an LDN call.

■ **Comm Type** — Indicates if the trunk is to be used for voice, data, alternate voice-data (avd), or alternate voice/voice grade data and 56-kbps digital data (rbavd) calls. Valid entries are “avd,” “rbavd,” “voice” (default), or “data.” Type “rbavd" supports access to voice/data SDN service on robbed-bit T1 transmission facilities.

NOTE:
“avd” and “rbavd" types require trunk member ports on a DS1 circuit pack. An “avd” type also requires that the DS1 circuit pack be administered for either common-chan or CAS signaling. An “rbavd’ type requires that the DS1 circuit pack be administered for robbed-bit, ISDN-EXT, or ISDN-PRI signaling. Also, if mixed mode signaling is allowed on the DS1 circuit pack, it must be administered for robbed bit signaling.

■ **Auth Code** — Enter "y" if an authorization code must be dialed to complete incoming calls on the trunk group. This field can only be "y" if the Authorization Codes feature is enabled on the System-Parameters Customer-options form.

■ **Digit Absorption List** — Enter a digit list absorption number, if required, when this trunk group terminates at a Step-by-Step office. This field specifies the type of absorption as specified on the System Digit Absorption form. Up to five different forms (lists 0 to 4) may be administered in the System.

■ **Prefix-1** — Specifies if the prefix 1 is required for N(0/1)X (where N is 2 to 9, and X is 0 to 9) calls. Valid entries are "y" and "n" (default).

■ **Trunk Flash** — Enter "y" or "n" (default) to indicate if access to customized services provided by a far-end (such as Central Office) is permitted for this trunk group. The PBX must be directly connected to a far-end that provides such services.

■ **Toll Restricted** — Applies for outgoing TAC calls if the originating party is toll restricted. Enter "y" (default) if this trunk group is to be toll restricted. Set this field to "n" for trunks with an Outgoing Dial Type of "automatic."

■ **BCC** (Bearer Capability Class) — Displayed when ISDN-PRI is optioned for on the System-Parameters Customer-Options form and Comm Type is "data," "avd," or "rbavd." Used by the Generalized Route Selection feature and identifies the type of traffic on trunks in the group. The BCC entry is used by far-end tandem switches to select outgoing routing facilities with equivalent BCC classes. Valid entries are 0,1,2,3, and 4. Default is 0 for "avd" and 2 for "data."

NOTE:
Refer to "Generalized Route Selection" in *DEFINITY Communications System Generic 3 V2 Feature Description,* 555-230-204, for a detailed description of Bearer Capability Classes (BCCs) and their use to provide specialized routing for various types of voice and data calls.

■ **ITC** (Information Transfer Capability) — Displayed for non-ISDN trunk groups, and when Comm Type is "data," "avd," or "rbavd" and BCC is not "0." Used by the GRS feature and enables the system to route calls to restricted (default) or unrestricted facilities according to the endpoints information transfer capability. A trunk member is said to be restricted if the circuit pack it belongs to is administered as "zcs" in the Line Coding field of the DS1 form. A trunk member is said to be unrestricted if the circuit pack it belongs to is administered as "b8zs" or "hdb3" in the Line Coding field of the DS1 form. A restricted trunk member can only carry restricted calls. An unrestricted trunk member may carry restricted or unrestricted calls. A trunk group with a transfer capability of unrestricted may have only unrestricted trunk members.

■ **Trunk Type** — Identifies the physical type of CO trunk. It may differ for incoming and outgoing types. Valid entries are "ground-start," "loop-start," "auto/auto," "auto/delay," "auto/immed," and "auto/wink." If the

Country is “15” (C.I.S.), additional valid entries are “2-wire-ac,” “2-wire-dc,” and “3-wire.” These three trunk types must be on theTN2199 circuit board.

■ **ANI Upon Seizure** — This field appears only if the Direction is “outgoing” or “two-way” and the Country is ”15“ (C.I.S.). Enter “y” (default) when an ANI request is expected after the trunk is *seized,* enter “n” when an ANI request is expected after the trunk is *answered.*

■ **Outgoing Dial Type** — Identifies the type of pulsing required on an outgoing call. Valid entries are “automatic,” “mf,” “rotary,” or "tone” (default).

NOTE:
Multifrequency Signaling must be enabled on the System-Parameters Customer-Options form before a value of “mf” may be administered.

■ **Cut-Through** — This field appears only when the Outgoing Dial Type is either “rotary” or “tone.” Enter “y” to allow cut-through to the CO trunk.

If the dialed digits are restricted:

- The connection to the CO trunk is dropped.
- Intercept treatment is applied.

If “n” (default) is entered, then PBX dial tone will be received, and, instead of digits being sent to the CO as they are dialed, they are collected, checked for restrictions, and, if there are no restrictions, the digits are sent to the CO.

■ **Trunk Termination** — Specifies how the trunk group is terminated. Valid entries are “600ohm” or “rc” (default). Enter “600ohm” when the PBX trunk port is connected to terminal equipment (for example, SLC carrier or compensators optioned for 600 ohms input impedance) and the distance to the terminal equipment from the System is less than 3000 feet.

■ **Disconnect Timing (msec)** — Specifies the minimum time period (in ms) that is required for recognition of disconnect by the serving central office or far-end PBX. The time interval must be in increments of 10 (from 140 to 2550 ins); default is 500. This timer is not used for ports on a circuit pack that can receive the administrable Incoming Disconnect and Outgoing Disconnect timers. These latter two timers replace Disconnect Timing.

■ **Analog Gain** — This field appears only if the Country is “15” (C.I.S.) and the Trunk Type is “2-wire-ac,“ “2-wire-dc,” or “3-wire.” This field allows you to specify a boost in analog gain for theTN2199 port in the direction toward the PBX. Enter “a” (-3dB gain boost), “b” (-6dB gain boost), “c” (-8dB gain boost), or “none” (default). This applies only to the TN2199 port.

■ **Auto Guard** — This field enables the user to prevent repeated seizures of a defective trunk. This field is effective only for TN438B, TN465B, and TN2147 ports. TN438B ports have hardware support for detecting a

defective trunk. TN465B andTN2147 ports consider a trunk defective if no dial tone is detected on an outgoing call, and Outpulse Without Tone? is set to “no” on the Feature-Related System Parameters form. Valid entries are “n” (default) and “y.”

■ **Call Still Held** — Enter “y” to prevent call collisions by not allowing an outgoing seizure for a period of not less than 140 seconds. This field is used only at the end of an incoming call where the disconnect is initiated by the PBX, and it will effectively extend the incoming Glare Guard timer by 140 seconds. This field is effective only for TN438B, TN465B, and TN2147 ports.

■ **Sig Bit Inversion** — This field allows the user to administer the signaling bit inversion (the A-bit and B-bit inversion) on a Per-port basis. This field applies only to TN464B or later suffixed circuit packs. The CCITT standards define on-hook to be”1” in the A-bit and off-hook to be “0.” This definition is the opposite of the EIA definition. The default in the TN464 firmware for signaling bit inversion is use the CCIIT standard for 32-channel mode and to use the EIA standard for 24-channel mode. Valid entries are “A,” “A&B,” “B,” and “none” (default).

■ **Connected to Toll** — Enter “y” if connected to a CO toll office. This field is displayed when the Trunk Type field contains an entry of “auto/...,” “decay/...,” “wink/...,” or “immed/....”

■ **STT Loss (Satellite PBX Tie Trunk Loss)** — Displayed when Connected to Toll is “n.” Specifies the loss plan to be used for the trunk group. Valid entries are “normal” (default) or “low.” This option affects the transmission performance of a private PBX network.

Although the use of this option has wider applications, only for the simplest network arrangements should this field be administered without Network Engineering advise. The “low” option (described as the ISL digital low loss plan in *DEFINITY Communications System Generic 1 and System 75 and System 85 DS1/DMI/ISDN-PRI Reference,* 555-025-101) should be used when:

1. Stations on the satellite PBX complain of too much loss on calls to the public network.
2. The PBX network consists of no more than three PBXs: one main and one or two satellite PBXs.
3. All PBXs have the “low” option available.
4. The total DS1 trunk connection length is less than 100 miles.

If the preceding conditions are not met, obtain Network Engineering assistance. The field entry is based on the following:

— **normal** — Applies to AIU-TT (Analog Interface Unit at Customer Switching System for Tie Trunk — 4-wire E&M interface) and DIU-TT (Digital Interface Unit at Customer Switching System for Tie Trunk — voice or AVD DS1 interface) loss plans.

— **low** — Applies to AIU-TTS (same as AIU-TT, but suitable for private network connections that can be connected in tandem with

public network connections) and DIU-TTS (same as DIU-TT, but suitable for private network connections that can be connected in tandem with public network connections). These interfaces were formerly referred to as DIU DTT ISL.

■ **DTT to DCO Loss** (Digital Tie to Digital CO Trunk Loss) — Specifies the loss plan to be used for the trunk group for interconnections from a DIU-CO (Digital Interface Unit at a Central Office) to a DIU-DTT (Digital Interface Unit for a Digital Tie Trunk Interface). This field is displayed when the Trunk Type field contains an entry of "auto/...," "delay/...," "wink/... ," or "immed/...."

This option affects the transmission performance of public network access via a private PBX network. Choose the "low" option if private network users complain about too much loss on calls to the public network, otherwise, the "normal" option should be used. Valid entries are "normal" (default) and "low." The entry is based on the following:

— **normal** — Corresponds to a (0, -6) dB gain pair and is used as the default option. (This corresponds to the DTT/EIA DCO port to port configuration as described in *DEFINITY Communications System Generic 1 and System 75 and System 85 DS1/DMI/ISDN-PRI Reference, 555-025-1* 01.)

— **low** — Corresponds to (+3, -3) dB gain pair. Low is used for internetwork applications in which no significant configuration will encounter echo, stability, or overload problems because of reduced loss. With the low gain pair, subscriber station DTMF signals transmitted through the digital class 5 office into the customer network may experience nonrecoverable digit mutilation in secondary signaling applications (that is, DTMF signaling after the connection has been established). (This corresponds to the DTT/ISL DCO port to port configuration as described in *DEFINITY Communications System Generic 1* and *System* 75 *and System 85 DS1/DMI/ISDN-PRI Reference,* 555-025-101.)

■ **Trunk Gain** — This field specifies the gain of the trunk, and can have the values of "high" (default) or "low." The value of this field, in conjunction with the values of the Trunk Termination and Country fields, will determine the input and trans-hybrid balance impedance for TN465B, TN2146, TN2147, andTN2184 ports. All other CO and DID circuit packs will be automatically set to "high."

■ **Bit Rate** — Displayed when Comm Type is "avd" or "rbavd." It is also displayed if the Comm Type is "data" and the ISDN-PRI option is enabled on the System-Parameters Customer-Options form. Specifies the baud rate to be used by pooled modems. Valid entries are 300, 1200 (default), 2400, 4800, 9600, and 19200.

■ **Synchronization** — Displayed when Comm Type is "avd" or "rbavd." It is also displayed if the Comm Type is "data" and the ISDN-PRI option is enabled on the System-Parameters Customer-Options form. Enter whether the trunk group will use synchronous or asynchronous communications. Valid entries are "async" (default) and "sync."

■ **Duplex** — Displayed when Comm Type is “avd” or “rbavd.” Specifies either “full” (default) or “half” duplex for the trunk group. It is also displayed if the Comm Type is “data” and the ISDN-PRI option is enabled on the System-Parameters Customer-Options form.

■ **Disconnect Supervision-In** — This field appears when the Direction is “incoming” or “two-way.” Internally, the field is set to “n” if Direction is “outgoing.” Enter “y” (default) to indicate that the far-end has the ability to release a trunk when the calling party releases from a call and the system can recognize the release signal.

■ **Disconnect Supervision-Out** — This field appears when Direction is “outgoing” or “two-way.” Internally, the field is set to “n” (default) if the direction is incoming. If the field is set to “y” a Warning Message appears to alert the user of possible trunk lockups. This field specifies whether trunks in this trunk group provide disconnect supervision when seized outgoing, (that is, whether these trunks should be allowed to participate in outgoing trunk to outgoing trunk calls). This field is set independently of the trunk-to-trunk transfer system parameter, although both options must be set appropriately if outgoing trunk to outgoing trunk transfers are desired.

■ **Cyclical Hunt** — Only displayed when Trunk Type is “loop-start.” Enter “y” (default) if a preferential hunting algorithm is to be used. Otherwise, a linear hunting algorithm will be used.

■ **Disconnect Type** — This field appears only if the Country is “15” (C.I.S.) and the Trunk Type is “2-wire-ac,“ “2-wire-dc,” or “3-wire.” This field indicates which side or user controls the disconnect, where A refers to the *calling* party and B refers to the *called* party. Enter “A and B“ or “A or B“ (default). This applies only to the TN2199 port.

■ **Answer Supervision Timeout** — Used for analog port circuits to indicate the amount of time in seconds the System allows for a call to be answered before beginning a CDR record of a call. This interval begins as soon as the outgoing trunk is seized. Valid entries are 0 to 250; default is 10.

NOTE:

This timeout does not override answer supervision sent from the network or other firmware (DS1 port circuit timers). DS1 firmware-sent answer supervision is administered in the Outgoing End of Dialing field on Page 3 of the Trunk Group form (Administrable Timers page).

■ **Receive Answer Supervision** — Specifies whether or not the network provides answer supervision for the trunks. Answer supervision refers to notification from the far-end that the called party has gone off-hook to answer the call. When answer supervision is provided, the originating PBX can classify a call as answered using the Answer Supervision Timeout field entry (for domestic circuit packs) or, for circuit packs that take administrable timers, by using the Outgoing End of Dial timer. For trunks over which answer supervision is provided by the network, set this field to “y” and the Answer Supervision Timeout field to “0” so that the

firmware timeout is disabled. The firmware timeout is automatically set to "0" on circuit packs that take the administrable Outgoing End of Dial timers. Receive Answer Supervision must be set to "n" (default) if the Direction field is "incoming."

Page 2 of the Form

- **ACA Assignment** — Specifies whether or not Automatic Circuit Assurance (ACA) measurements will be taken for this trunk group. Valid entries are "y" or "n" (default). If "y" is entered, complete the next three fields.

- **Long Holding Time (hours)** — Only displayed when ACA Assignment is "y." Is the length in hours that the System will consider as being a long holding time. If "0" is entered, the System will not consider long holding calls. Valid entries are 0 to 10; default is 1.

- **Short Holding Time (secs.)** — Only displayed when ACA Assignment is "y." Specifies the length in seconds that the System will consider as being a short holding time. If "0" is entered, the System will not consider short holding calls. Valid entries are 0 to 160; default is 10.

- **Short Holding Threshold** — Only displayed when ACA Assignment is "y." Is the number of times that the System will record a short holding call before an attendant or display-equipped voice terminal user is alerted to the possibility of a faulty trunk. Valid entries are 0 to 30; default is 15.

- **Measured** — Indicates if the System will transmit data for this trunk group to the Call Management System. Valid entries are "internal," "external," "both," or "none." Enter "internal" if the data is to be sent to the Basic Call Management System (internal to the switch) for subsequent measurement reports and "external" to send the data to the Call Management System Adjunct. Enter "both" to send the data to both systems for measurement reports. Enter "none" (default) if trunk group measurements are not required.

- **Data Restriction** — Is used to prevent System features from generating tones on a data call that would cause erroneous data transmission. Valid entries are "y" or "n" (default).

- **Abandoned Call Search** — Applicable when Trunk Type is "ground-Start." Enter "y" if this trunk group will conduct an Abandoned Call Search to identify a ghost call.

NOTE:
Abandoned Call Search is designed to work with CO trunks (ground start - analog) that *do not* provide disconnect supervision. Central offices that provide disconnect supervision do not require use of the Abandoned Call Search feature. The CO must support Abandoned Call Search for the feature to work properly.

- **Suppress # Outpulsing** — Indicates end-to-end signaling begins with (and includes) the "#" when "y" is entered in this field. The final "#" is suppressed in cases where System would normally outpulse it. This field

should be “y” when the Central Office (for example, rotary) or any other facility treats "#“ as an error; default is “n.”

- **Maintenance Tests** — Indicates whether or not hourly maintenance tests will be made on this trunk group. Valid entries are “y” (default) or “n.”

Page 3 of the Form (Administrable Timers)

NOTE:
Different fields appear on the form depending on whether the Direction is “incoming,” “outgoing,” or “two-way.”

- **Incoming Disconnect (msec)** — A disconnect signal on an incoming call is considered valid only if it continues at least for the time specified by this timer. Valid entries are 50 to 2550 in increments of 10. The field cannot be blank; default is 500. This timer is sent to ground-start and loop-start trunks that are “incoming” or “two-way.” The only “incoming” or “two-way” loop-start circuit packs that receive this timer are the TN2138 and TN2147.

- **Outgoing Disconnect (msec)** — A disconnect signal on an outgoing call is considered valid only if it continues at least for the time specified by this timer. This timer begins timing when a disconnect signal has been detected on an outgoing call over the trunk, and resets when the signal is no longer detected. If the timer times out, the trunk is dropped. Valid entries are 50 to 2550 in increments of 10. The field cannot be blank default is 500. This timer is sent to ground-start and loop-start trunks that are “outgoing” or “two-way.” The only “outgoing” or “two-way” loop-start circuit packs that receive this timer are the TN2138 and TN2147. This timer is also sent if the Direction is “out-going” or “two-way,” the Country is ”15“ (C.I.S.), and the Trunk Type is “2-wire-ac,” “2-wire-dc,” or “3-wire.”

- **Outgoing Dial Guard (msec)** — This timer specifies the time between seizure acknowledgment of a trunk and the outpulsing of digits. For trunks that do not provide seizure acknowledgment, the timer specifies the minimum time between seizure and the outpulsing of digits. Any digit dialed by the station user after they lift the receiver, but before the timer times out, will not be outpulsed until the timer expires. Valid entries are 100 to 25500 in increments of 100. The field cannot be blank default is 1600.

- **Incoming Glare Guard (msec)** — Enter the minimum time between the time an incoming trunk is released and the same trunk can be seized for an outgoing call. This guard time will ensure the far-end has released all equipment after the incoming trunk is released. Valid entries are 100 to 25500 in increments of 100. The field cannot be blank default is 1500. This field only appears when the trunk group is “two-way.”

- **Outgoing Glare Guard (msec)** — Enter the minimum time between the time an outgoing trunk is released and the same trunk can be seized for another outgoing call. This guard time will ensure that the far-end has released all equipment after the outgoing trunk is released. Valid entries

are 100 to 25500 in increments of 100. The field cannot be blank default is 1500. This field only appears when the trunk group is “outgoing” or “two-way.”

- **Outgoing Rotary Dial Interdigit (msec)** — Enter the interval between rotary dial digits being outpulsed by the system (that is, PBX). Valid entries are 150 to 2550 in increments of 10. The field cannot be blank; default is 800. This field only appears when the Outgoing Dial Type is “rotary.”
- **Ringing Monitor (msec)** — Enter the minimum time required to determine if the trunk is disconnected. If the ringing signal disappears for a duration longer than the time specified in this field, the call will be assumed to be disconnected. Valid entries are 200 to 51000 in increments of 200. The field cannot be blank; default is 5200. This timer is sent to TN464C (or later), TN767, TN438 (all), TN465 (all), TN447, TN2138, and TN2147 CO circuit packs.
- **Incoming Seizure (msec)** — Enter the minimum time required for recognition of incoming ringing signal from the serving CO. Valid entries are 20 to 2550 in increments of 10. The field cannot be blank default is 500. This timer is sent to TN464C (or later), TN767, TN438 (all), TN465 (all), TN447, TN2138, and TN2147 CO circuit packs.
- **Outgoing End Of Dial (sec)** — Indicates the maximum time (in sec) a trunk waits for answer supervision after dialing an outgoing call. During cut-through operation, timing begins after each outgoing digit is sent by the PBX and timing ceases after the far-end sends answer supervision. If the timer expires, the PBX acts as if it had received answer supervision. On senderized operation, the timer begins after the last digit collected is sent by the PBX. The timer ceases when the far-end sends answer supervision. If the timer expires, the PBX acts as if it has received answer supervision. This field appears when Direction is “outgoing” or “two-way” and Receive Answer Supervision is “n.” This field will not appear if the Receive Answer Supervision field is “y” but a zero (0) value will be sent to the firmware to disable the timer. This timer applies to the outgoing and two-way CO trunk groups. Valid entries are 1 to 254; default is 10.

  NOTE:
  This field controls the firmware answer-supervision timer on ports that take the administrable timers; the Answer Supervision Timeout field on Page 1 of the Trunk Group form controls answer supervision for ports that do not take administrable timers. This field and the value administered in the Answer Supervision Timeout field on the Trunk Group form should be the same value.

- **Outgoing Seizure Response (sec)** — Enter the time (in sec) by which the PBX should receive the proceed-to-dial indication from the far-end after sending the seize signal. If the indication is not received in this time, a seizure failure response is uplinked. This timer is sent to TN464B (or later), TN767, TN438B, TN447, TN465B, and TN2147 CO circuit packs. Valid entries are 1 to 255 in increments of 1; default is 5.

■ **Programmed Dial Pause (msec)** — Enter the length of a pause during abbreviated dialing, ARS outpulsing, and terminal dialing operations. This timer is administrable for all outgoing and two-way trunk groups. Valid entries are 100 to 25500 in increments of 100; default is 1500.

■ **Disconnect Signal Error (sec)** — Enter the time (in sec) within which a disconnect signal from the far-end is expected after the internal party (a station or a tie trunk) goes on-hook. If the timer expires, the system can assume a disconnect failure and take an appropriate action (such as error message). This field appears for ground-start trunk groups. This field also appears if the Country is "15" (C.I.S.), and the Trunk Type is "2-wire-ac, " "2-wire-dc," or "3-wire." Valid entries are 1 to 255 in increments of 1; default is 240.

■ **Outgoing Seizure (msec)** — This field appears only if the Country is "15" (C.I.S), the Direction is "outgoing" or "two-way," and the Trunk Type is "2-wire-ac," "2-wire-dc," or "3-wire." This timer specifies the duration (in milliseconds) of the outgoing seizure signal. Enter a number between 20 and 2550 in an increment of 10; default is 200. This timer is sent only to the TN2199 circuit board.

■ **Flash Length (msec)** — Specifies the length of the flash signal to be generated toward the Central Office. Valid entries are 10 to 2550 in increments of 10; default is 540. This timer is sent to TN464C (or later), TN465B, and TN2147 ports.

■ **Tone (msec)** — Enter the length of a DTMF tone sent to the public network in response to a button depression at a hybrid station set. Valid entries are 20 to 2550 in increments of 10; default is 350.

■ **Pause (msec)** — Enter the minimum length of a pause between tones being sent in response to button depressions at a hybrid station set. Valid entries are 20 to 2550 in increments of 10; default is 150.

■ **PPS** — Enter either "10" or "20" to specify the pulses per second (PPS) assigned to rotary dial pulse trunk groups. Valid entries are "10" (default) or "20."

NOTE:
The TN767 and TN747Bv12 (or later) circuit packs can only perform at 10pps.

■ **Make (msec)** — Enter the duration of the make interval (the pause between pulses) while the system is outpulsing digits using dial pulse signaling.

If the PPS field is "10," the sum of the Make and Break fields must equal 100. Valid entries are 20 to 80 in increments of 5. The field cannot be blank; default is 40.

If the PPS field is "20," the sum of the Make and Break fields must equal 50. Valid entries are 10 to 40 in increments of 5. The field cannot be blank default is 20.

■ **Break (msec)** — Enter the duration of the break interval (the pulse duration) while the system is outpulsing digits using dial pulse signaling.

If the PPS field is “10,” the sum of the Make and Break fields must equal 100. Valid entries are 20 to 80 in increments of 5. The field cannot be blank; default is 60.

If the PPS field is “20,” the sum of the Make and Break fields must equal 50. Valid entries are 10 to 40 in increments of 5. The field cannot be blank; default is 30.

■ **PPM** — Only displayed if the Direction is “outgoing” or “two-way.” Enter “y” if Periodical Pulse Metering (PPM) pulses should be collected from the public network to determine call cost. If this field is “y," the Frequency field is displayed.

■ **Frequency** — Appears if the Direction is “outgoing” or “two-way” and the PPM field is “y.” Identifies the PPM pulse frequency(ies). Boards can listen for up to three different frequencies, (12kHz, 16kHz, and 50Hz), plus two frequency combinations, (50Hz/12kHz and 50Hz/16kHz). Valid entries are “12k,” “16k,” “50,” “50/12k” (default), and “50/16 k.” This field is sent to the TN465B andTN2136 circuit packs.

NOTE:
The TN465B can only detect 12k and 16kHz PPM. Therefore, if “50/12k” or “12k” is administered, the circuit pack will be set to detect 12kHz. If "16k,” “50,” or “50/16k” is administered, the circuit pack will be set to detect 16kHz.

Page 4 of the Form (ATMS Thresholds)

This form appears when the Direction field on Page 1 is “outgoing” or “two-way” and ATMS is enabled on the Feature-Related System Parameters form.

■ **TTL Type** — Specifies the type of TTL selected for testing trunks. The TTL type determines what ATMS tests can be completed and thus which threshold values need to be administered. The different TTLs supported are 105 with return loss (105-w-rl) (default), 105 without return loss (105-wo-rl), high-level tone source (high-level-tone), low-level tone source (low-level-tone), 100-type (100), and 102 type (102).

The following table explains the differences between TTL Types:

Type TTL	Description	Example
105-w-rl	Full range of 18 measurements or some defaults for return loss used (56A)	TN771B, ZLC12 and SN261B circuit packs and new 56A mini-responder
105-wo-rl	Cannot return default values for far-end return loss	Older 56A mini-responder
high-level-tone	sends a fixed sequence of tones at 0 dBm	ZLC12 and SN261B circuit packs
low-level-tone	Sends a fixed sequence of tones at -16dBm	SN261B circuit pack
100	Up to 5 measurement that sends a 1004 Hz tone then a quiet termination	
102	One measurement that sends a 1004 Hz tone	

The far-end switch containing the TTL may be any of the following:

— System 85 R3 PBX equipped with the Maintenance/Test Board (TN771B)

— System 75 R1V2 and beyond, all of which contain the circuitry required to perform the TTL function

— System 85 R2 PBX equipped with the Analog/Digital Facility Test Circuit (ADFTC,SN261)

— DIMENSION FP8 equipped with the Analog Facility Test Circuit (AFTC, ZLC-12)

— Central Office switches equipped with various TTL equipment that provide 100,102, or 105 test line capabilities (56A)

Other vendor PBXs *may* be supported if compatible test lines are provided by these switches.

Four different versions of the ATMS Threshold Administration page can occur depending upon the measurements allowed by the TTL type selected. The four possibilities are:

1. 105-w-rl and 105-wo-rl — All thresholds appear.
2. high-its and Iow-lts — All thresholds (except maximum C-notched noise) appear.
3. 100 — All thresholds (except maximum c-notched noise, 404Hz loss, and 2804 Hz loss) appear.
4. 102 — Only 1004 Hz loss threshold appears.

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                                                          Page 3 of X
                                ATMS THRESHOLDS
TTL Type: 105-w-rl_____           Far End Test No: _____________________
TTL Vendor: _____________         TTL Contact: _____________________
Trunk Vendor: _____________       Trunk Contact: _____________________
Trunk Length: _____________

                        MARGINAL          UNACCEPTABLE
                        Min   Max           Min   Max
          1004 Hz Loss: -2 21               -2     21

                       -Dev  +Dev          -Dev   +Dev
           404 Hz Loss: 9     9             9      9
          2804 Hz Loss: 9     9             9      9

Maximum C Message Noise:     55                  55
Maximum C Notched Noise:     74                  74
         Minimum SRL-HI:     0_                  0_
         Minimum SRL-LO:     0_                  0_
            Minimum ERL:     0_                  0_

     Allow ATMS Busyout, Error Logging and Alarming? y
  Maximum Percentage of Trunks Which Can Be Removed from Service by ATMS: 0_
```

Screen 4-66. ATMS Thresholds Form

- **Far End Test No.** — Enter the access number (1 to 20 digits) dialed to reach the TTL.
- **TTL Vendor** — Enter the 0 to 22 alphanumeric character TTL vendor name (the name of the vendor supplying the terminating test line); default is blank.
- **TTL Contact** — Enter the 0 to 25 alphanumeric character TTL vendor contact (the name and/or telephone number of someone from the TTL vendor who can be contacted in the event of problems with the TTL); default is blank.
- **Trunk Vendor** — Enter the 0 to 22 alphanumeric character trunk vendor name (who to notify in the event of problems with the trunks); default is blank.
- **Trunk Contact** — Enter the 0 to 25 alphanumeric character trunk vendor contact (the name and/or telephone number of someone from the trunk vendor who can be contacted in the event of problems with the trunks); default is blank.

■ **Test Call BCC** — Indicates the Bearer Capability Code (BCC) used for the ISDN-PRI test call. Valid entries and their definitions areas follows:

Entry	Definition
0	Voice
1	Model
2	Mode 2 Asynchronous
3	Mode 3 Circuit
4	Mode 0 (default)

■ **Test Call Service** — Specifies the call by call selection for an ISDN-PRI test call. This field only appears if the Service Type field is "cbc." Valid entries are all the services listed in Table 4-7 excluding "sddn" or any user-defined services as administered on the Network Specific Facility Encoding form.

■ **Trunk Hunt** — The switch performs a trunk hunt when searching for available channels within a facility in an ISDN-PRI trunk group. Enter "ascend" to enable a linear trunk hunt search from the lowest to highest numbered channels, or "descend" for a linear trunk hunt search from the highest to lowest numbered channels. With both "ascend" and "descend," all trunks within an ISDN-PRI trunk group are selected based on this field and without regard to the order in which trunks are administered within the trunk group.

Enter "cyclical" (default) to enable a circular trunk hunt based on the order in which trunks were administered within the trunk group.

NOTE:
The "cyclical" option cannot be set if the trunk group is to be used for Wideband operations (Wideband Support field set to "y").

The search is administrable per ISDN-PRI trunk group, but it infers the direction of search within all ISDN-PRI facilities (or portions of those facilities) administered within the trunk group.

■ **Codeset to Send Display** — This field defines the codeset for sending the information element for Display. The value depends on what type of switch the user is connected to as follows:

Value	Switch Type
0	CCITT
6	Any other than CCITT or System 85 R2V4, 4E11 (default)
7	System 85 R2V4, 4E11

- **Codeset to Send TCM, Lookahead** — This field defines the codeset for sending the information element for Traveling Class Marks and Lookahead Interflow. The value depends on what type of switch the user is connected to. Valid entries are “7” for System 85 R2V4, 4E11 or newer switch types or “6" (default) for any other types.

  NOTE:
  A Traveling Class Mark (that is, the user’s FRL or the user's trunk group FRL) is passed between tandem nodes in an ETN in the setup message only when the Service Type is set to "tandem.” It is then used by the distant tandem switch to permit access to facilities consistent with the originating user's privileges.

- **Max Message Size to Send** — Defines the maximum size of ISDN-PRI messages sent by the switch. Currently, the system can receive 260 byte messages. Valid entries are ”128,” “244,” “256,” and “260” (default). The following table indicates the expected message size from several AT&T products.

Products	Message Length (octets) Received
4ESS(4E11)	256
4ESS (4E13)	256
4ESS (4E14)	256
5ESS (5E4)	244
5ESS (5E5)	244
5ESS (5E6)	244
System 75 (all)	260
System 85 (R2V4)	128
System 85 (R2V5)	260
System 85 (R2V6)	260

- **Supplementary Services Protocol** — This field determines which supplementary services protocol to use for services provided over the trunk group. Enter “a” (default) for the AT&T Supplementary Services Protocol. Enter “b” for the QSIG Global Networking Supplementary Services Protocol.

  NOTE:
  A trunk group administered for use with DCS must have a value of “a.” The value of “b" is allowed with Generic 3 Version 3 and later versions.

- **Overlap Receiving** — Indicates if it is possible to accept digits using Overlap Receiving. If this field is administered as “n” (default), then the current Enbloc procedures will be applied to incoming calls on that trunk group.

If the far-end switch sends digits using Overlap Sending and the trunk group is not administered to be able to accept Overlap Receiving, there is a good chance calls will not complete due to an incomplete called party number. If, however, the trunk group is administered for Overlap Receiving and the far-end only uses Enbloc Sending, an additional call delay (of up to 15 seconds) may be placed on certain calls. When Overlap Receiving is "y" (yes), the Incoming Call Handling table does not appear on page 2 of the form, and the Digit Treatment and Digits fields appear on page 1 of the form.

■ **Digit Treatment** — Indicates if digits are to be absorbed or inserted. A blank indicates no digit absorption or insertion. Valid entries are "absorption" or "insertion," or leave blank.

■ **Digits** — indicates the digits to be inserted or number of digits to be absorbed. This field is used with the Digit Treatment field. No entry indicates no digit absorption or insertion is done. Valid entries are the number of digits to be absorbed (1 to 5) or the actual digits to be inserted (up to 5 digits including the characters "*" and "#').

■ **Connected to Toll** — Enter "y" if connected to a CO toll office.

■ **STT Loss** (Satellite PBX Tie Trunk Loss) — Displayed when Connected to Toll field is "n." Specifies the loss plan to be used. Valid entries are "normal" (default) or "low." This option affects the transmission performance of a private PBX network.

Although the use of this option has wider applications, only for the simplest network arrangements should this field be administered without Network Engineering advise. The "low" option (described as the ISL digital low loss plan in *DEFINITY Communications System Genetic 1 and System 75 and System 85 DS1/DMI/ISDN-PRI Reference,* 555-025-101) should be used when:

1. Stations on the satellite PBX complain of too much loss on calls to the public network.
2. The PBX network consists of no more than three PBXs; one main and one or two satellite PBXs.
3. All PBXs have the "low" option available.
4. The total DS1 trunk connection length is less than 100 miles.

If the above conditions are not met, obtain Network Engineering assistance. The field entry is based on the following:

— **normal** — Applies to AIU-TT (Analog interface Unit at Customer Switching System for Tie Trunk — 4-wire E&M interface), and DIU-TT (Digital Interface Unit at Customer Switching System for Tie Trunk — voice or AVD DS1 interface) loss plans.

- **low** — Applies to AIU-TTS (same as AIU-TT, but suitable for private network connections that can be connected in tandem with public network connections) and DIU-TTS (same as DIU-TT, but suitable for private network connections that can be connected in tandem with public network connections). These interfaces were formerly referred to as DIU DTT ISL.

■ **DTT to DCO Loss** (Digital Tie to Digital CO Trunk Loss) — Specifies the loss plan used for the trunk group that connects a DIU-CO (Digital Interface Unit at a Central Office) to a DIU-DTT (Digital Interface Unit for a Digital Tie Trunk Interface).

This option affects the transmission performance of public network access via a private PBX network. Choose the "low" option if private network users complain about too much loss on calls to the public network; otherwise, the "normal" option should be used. Valid entries are "normal" (default) and "low." The entry is based on the following:

- **normal** — Corresponds to a (0, -6) dB gain pair and is used as the default option. (This corresponds to the DTT/EIA DCO port to port configuration as described in *DEFINITY Communications System Generic 1 and System 75 and System 85 DS1/DMI/ISDN-PRI Reference,* 555-025-101.)
- **low** — Corresponds to (+3, -3) dB gain pair. Low is used for internetwork applications in which no significant configuration will encounter echo, stability, or overload problems because of reduced loss. With the low gain pair, subscriber station DTMF signals transmitted through the digital class 5 office into the customer network may experience non-recoverable digit mutilation in secondary signaling applications (that is, DTMF signaling after the connection has been established). (This corresponds to the DTT/ISL DCO port to port configuration as described in *DEFINITY Communications System Generic 1 and System 75 and System 85 DS1/DMI/ISDN-PRI Reference,* 555-025-101.)

■ **Bit Rate** — Specifies the baud rate used for pooled moderns. Valid entries are 300, 1200 (default), 2400,4800,9600, and 19200.

■ **Synchronization** — Specifies if the trunk group will use synchronous or asynchronous communications. Valid entries are "async" (default) and "sync."

■ **Duplex** — Specifies if the trunk will operate full or half duplex. Valid entries are "full" (default) and "half."

■ **Disconnect Supervision-In** — This field appears when the Direction is either "incoming" or "two-way." Internally, the field is set to "n" if the Direction is "outgoing." Enter "y" (default) to indicate that the far-end has the ability to release a trunk when the calling party releases from a call and the system can recognize the release signal.

■ **Disconnect Supervision-Out** — This field appears when the Direction is either "outgoing" or "two-way." Internally, the field is set to "n" (default) if the Direction is "incoming." If the field is set to "y" a warning message

appears to alert the user of possible trunk lockups. This field specifies whether trunks in this trunk group provide disconnect supervision when seized outgoing, (that is, whether these trunks should be allowed to participate in outgoing trunk to outgoing trunk calls). This field is set independently of the trunk-to-trunk transfer system parameter, although both options must be set appropriately if outgoing trunk to outgoing trunk transfers are desired.

- **Answer Supervision Timeout** — Used to indicate the amount of time in seconds the System allows for a call to be answered before beginning a CDR record of a call. This interval begins as soon as the outgoing trunk is seized. Valid entries are 0 to 250; default is 0 (disabled for ISDN-PRI trunk groups).

Page 2 of the Form

■ **ACA Assignment** — Specifies whether or not ACA measurements will be taken for this trunk group. Valid entries are “y” or “n” (default). If “y” is entered, complete the next three fields.

NOTE:
For the Wideband Switching feature, wideband trunk calls are treated as a single trunk call. This way, if an ACA referral call is generated (for short or long holding time), the wideband call only triggers a single referral call using the lowest B-channel trunk member associated with the wideband channel.

■ **Long Holding Time (hours)** — Only displayed when ACA Assignment is “y.” This is the length in hours that the system considers as being a long holding time. If “0” is entered, the system does not consider long holding calls. Valid entries are 0 to 10; default is 1. Field must be “0" for a Service Type field entry of “sddn.”

■ **Short Holding Time (secs.)** — Only displayed when ACA Assignment is “y.” Specifies the length in seconds that the system considers as being a short holding time. If “0” is entered, the system does not consider short holding calls. Valid entries are 0 to 160; default is 10.

■ **Short Holding Threshold** — Only displayed when ACA Assignment is “y.” This is the number of times that the system records a short holding call before an attendant or display-equipped voice terminal user is alerted to the possibility of a faulty trunk. Valid entries are 0 to 30; default is 15.

■ **Wideband Support?** — Specifies whether or not Wideband Switching is supported by this trunk group. Valid entries are “y” or “n” (default). This field is only administrable if the Wideband Switching feature is enabled on the System-Parameters Customer-Options form. If set to “y,” the Wideband Support Options page is displayed.

■ **Internal Alert** — Specifies if internal ringing and coverage are used for incoming calls. This field only appears if the Service Type on Page 1 is "tie.” Valid entries are “y” or “n” (default).

- **Data Restriction** — Is used to prevent system features from generating tones on *a* data call that would cause erroneous data transmission. Valid entries are “y” or “n” (default).
- **NCA TSC Signaling Group** — Identifies which signaling group an NCA TSC is routed on.
- **Send Name** — Specifies if the calling/connected party’s administered name is sent to the network on outgoing/incoming calls. Valid entries are “y,” “n,” or “r" (restricted). The value “r” indicates that the calling/connected name will be sent by the PBX but will be marked “presentation restricted.” The value “r” is only valid if the Supplementary Services Protocol is “b” for the QSIG Global Networking Supplementary Services Protocol. The default is “n.”

  NOTE:
  In G3V3, the system does not display a received restricted name; this functionality is independent of the “Send Name” administration.

  NOTE:
  If name information is not administered for the calling station or the connected station, the system sends the extension number in place of the name.

- **Send Calling Number** — Specifies if the calling party’s number is sent on outgoing or tandemmed ISDN calls. Valid entries are “y,” “n,” or “r” (restricted). If “y” is entered, the CPN Prefix Table is accessed to construct the actual number to be sent. The default is “n.” If the value is “r,” the calling number is sent “presentation restricted.”

  NOTE:
  The CPN Prefix Table can override the Send Calling Number field entry for any administrable block of extensions.

  NOTE:
  in G3V3, the system does not display a received restricted calling number; this functionality is independent of the “Send Calling Number" administration.

- **Used for DCS** — Specifies whether the trunk group will send and receive messages on a DCS signaling link. This field does not appear if the Service Type is “dmi-mos” or “sddn.” Valid entries are “y” or “n” (default). If “y” is entered, complete the DCS Signaling field entry as well.

  NOTE:
  This field cannot be activated if the tie trunk group number is greater than 255, if there are more than 255 members in the trunk group, or if the trunk access code (TAC) is more than three digits brig.

- **PBX ID** — Displayed when the Used for DCS field is “y.” Enter the ID of the PBX at the other end of this trunk.

- **Send Connected Number** — Specifies if the connected party's number is sent on incoming or tandemmed ISDN calls. Valid entries are "y," "n," or "r" (restricted). If "y" is entered, the CPN Prefix table is accessed to construct the actual number sent. If the value is "r," the connected number is sent "presentation restricted." The default is "n."

  WARNING:
  displays of connected numbers. Therefore, if you administer the In country-protocol/protocol-version combination on the DS1 form, you should not administer the Send Connected Number field to "r" (restricted) on the ISDN-PRI Trunk Group form as this causes display problems.

  NOTE:
  The CPN Prefix table overrides the Send Connected Number field entry for any administrable block of extensions.

  NOTE:
  In G3V3, the system does not display a received restricted connected number; this functionality is independent of the "Send Calling Number" administration.

- **Numbering Format** — This field appears if the Send Calling Number is "y" or "r" or the Send Connected Number is "y" or "r." This specifies the encoding of the "Numbering Plan Indicator" field for identification purpose. Valid input is "public" (default), which indicates the CCITT E.164 numbering plan will be used.
- **DCS Signaling** — Specifies the means used to send the DCS message. This field is only displayed if the "Used for DCS" field entry is "y." Valid entries are "bx.25" for the traditional DCS feature or "d-chan" for the DCS over ISDN-PRI D-channel feature.
- **Maintenance Tests** — Indicates whether or not hourly maintenance tests will be made on this trunk group. Valid entries are "y" (default) or "n."

ISDN Call Handling Table

NOTE:
This table does not appear if the Overlap Receiving field on page 1 contains "y" (yes).

The following fields on Page 2 of the form provide an incoming call handling table. The table can (optionally) be used to provide unique call treatment for different incoming calls on any ISDN-PRI trunk group. Twelve unique treatment specifications are possible, corresponding to the 12 rows (lines) on the table. Unique digit manipulation capabilities, CPN/BN requests, and night service destinations are possible for different types of incoming calls. The unique digit manipulation capabilities can be particularly useful to accommodate different dial plans for different services on a ISDN-PRI trunk type with a Service Type (field entry) of "cbc" (Call-by-Call). The table can also be used for ISDN-PRI trunk groups that are not Call-by-Call. For example, an ISDN-PRI group with service

type “mega800” could use the Incoming Call Handling Table to distinguish treatment of calls to different 800 numbers based on the Dialed Number Identification Service (DNIS) number that is incoming to the PBX.

Each row in the table consists of seven columns. The first three columns (Service/Feature, Called Len, and Called Number) constitute a key that together select which row or unique treatment should apply for an incoming call on the group. The remaining four columns (Del, Insert, and soon) specify the treatment to be provided for a call that matches the key.

If an incoming call is for a service listed in a row on the table, then that row may specify the treatment for the call, depending on the other two columns of the key. The Called Len field is used to continue the row determination. If the number of digits received with the incoming call matches the number of digits in the Called Len field for calls to the matched service, then this row may apply. If no other row also contains a matching service and called length, then this row does apply. If another row does exist with the same service and number length, then the Called Number field will be used to continue the row determination.

If the leading digits received with the incoming call match the digits specified in the Called Number field, then this row applies to the call. Therefore, with this table, a unique treatment can be given to any incoming call, even if these calls are to the same service or have the same length of digits. The remaining four fields specify the unique treatment for the call once the row has been determined. Together, the Del and Insert fields can be used to manipulate the incoming number that will be used to route the call. The Per Call CPN/BN field can be used to request CPN/BN for specific calls incoming on the group. The Night Serve field is used to have calls of different types routed to different night destinations when night service is in effect.

NOTE:
DCS features that use the remote-tgs button (on the remote switch) do not work when the local trunk group deletes or inserts digits on the incoming call. These buttons try to dial a local TAC. Adding or deleting digits defeats this operation and renders the remote feature inoperable. If digit manipulation is needed, use it on the outgoing side, based on the routing pattern. One reason for digit manipulation is insertion of the AAR feature access code (FAC).

The following provides information for each field that can be administered:

- **Service/Feature** — Specifies the ISDN-PRI Services/Features for an incoming call type. See the Service Type field description for a list of predefine Services/Features that can be received. The identifier “other” can be used for any Services/Features not explicitly specified.
- **Called Len** — Specifies the number of digits received for an incoming call. A blank entry is used as a “wildcard” entry and, when used, means that any length of digits associated with the specified Service/Feature can match in this field. Valid entries are 0 to 21, or leave blank.
- **Called Number** — Specifies the leading digits received for an incoming call. A blank entry is used as a “wildcard” entry and, when used, means

that any number associated with the specified Service/Feature can match in this field. Valid entries are 1 to 16 digits, or leave blank.

- **Del** — Specifies the number of leading digits to be deleted from the incoming Called Party Number. Calls of a particular type may be administered to be routed to a single destination by deleting all incoming digits and then administering the Insert field with the desired extension. Valid entries are 1 to 21, "all," or leave blank.

- **Insert** — Specifies the digits to be prepended to the front of the remaining digits after any (optional) digit deletion has been performed. The resultant number formed from digit deletion/insertion is used to route the call, provided night service is not in effect. Valid entries are up to 16 characters consisting of a combination from the following: 0 through 9, *, #, or leave blank.

- **Per Call CPN/BN** — Specifies if and how to request Calling Party Number (CPN) or Billing Number (BN) for calls of this type. An entry of "none" indicates that the switch will not request either CPN or BN for any incoming calls of this type. Valid entries are "cpn-only," "bn-only," "bn. pref" (prefer BN, but will accept CPN), "cpn-pref" (prefer CPN, but will accept BN), "none," or leave blank; default is blank. Leave blank when connected to another PBX switch or to a network other than the AT&T Switched Network.

NOTE:
A 4-second delay wilt occur in terminating the call to the far-end station if the connecting switch does not respond to the request.

- **Night Serv** — Specifies a night service extension (can be a VDN extension) per Service/Feature. An entry other than blank overrides the Night Service field entry on page 1 of the form. This entry can be overridden by the Trunk/Member Night Service entry when provided. Valid entries are an assigned extension, the attendant group access code ("attd"), or leave blank.

Page 3 of the Form

The following fields appear when Service Type on Page 1 is "cbc" and Usage Allot is "y." Page 3 is used to set a minimum and maximum number of members for up to ten different Services/Features for up to three different Usage Allocation Plans (1 through 3).

NOTE:
Refer to "Call By Call Service Selection" in *DEFINITY Communications System Genetic 3 V2 Feature Description,* 555-230-204, for a detailed description of Usage Allocation Plans.

- **Service/Feature** — Specifies the ISDN-PRI Services/Features that can be requested at call setup time when using this trunk group. See the Service Type field description for a list of predefine Services/Features that can be received on a call by call basis. The identifier "other" is used for all Services/Features not explicitly specified.
- **Min# Chan** — Indicates the minimum number of members of an ISDN-PRI trunk group with a Service Type of "cbc" that a particular Service/Feature can use at any given time. The sum of the minimum number of members for all Service/Features must not exceed the total number of members of the trunk group.
- **Max# Chan** — Indicates the maximum number of members of a ISDN-PRI trunk group with a Service Type of "cbc" that a particular Service/Feature can use at any given time. This field must be completed if a Service/Feature has been entered on Page 2 of the form.

Page 4 of the Form

Page 4 is displayed when Service Type on Page 1 is "cbc" and Usage Alloc is "y." Page 4 provides for administering a fixed schedule or administering a schedule that can change up to six times a day for each day of the week.

- **Fixed** — Indicates whether the allocation plan will be fixed. If "y" (default) is entered in this field, the plan number entered in the Allocation Plan Number field will be enabled. This field must be completed if a Service/Feature has been entered on Page 2 of the form.
- **Allocation Plan Number** — Specifies the CBC Trunk Allocation Plan (1 through 3) that is in effect if a fixed usage method has been selected. This field must be assigned if the Fixed field is "y." Valid entries are 1 through 3 or blank (default).
- **Scheduled** — Indicates whether the allocation plans will be in effect according to the schedule found on this page. If "y" is entered in this field then there must be at least one entry in the schedule.
- **Act Time** — Indicates the time that the usage allocation plan administered in the next field (Plan #) will become effective. The time is entered in military time. There must be at least one entry per day. Valid entries are 00:00 through 23:59.
- **Plan #—** Specifies the number of the usage allocation plan that will be in effect from the activation time until the activation time of the next scheduled plan change. Valid entries are 1 to 3.

Wideband Support Options Page

This page is displayed if Wideband Support field is "y."

This page appears immediately before the trunk member pages. The actual page number will vary. If the Service Type is "cbc" and the Usage Allocation field is "y," the Wideband Support Options page is Page 5; otherwise, it is Page 3.

NOTE:
All B-channels that comprise the wideband call must reside on the same ISDN-PRI facility.

- **H0** — Enter "y" to specify the ISDN information transfer rate for 384-kbps data, which is comprised of six B-channels. When a trunk group is administered to support H0, the trunk/hunt algorithm to satisfy a call requiring 384-kbps of bandwidth uses a fixed allocation scheme. default is "n."

- **H11** — Enter "y" to specify the ISDN information transfer rate for 1536-kbps data, which is comprised of 24 B-channels. When a trunk group is administered to supportH11, the trunk/hunt algorithm to satisfy a call requiring 1536-kbps bandwidth uses a fixed allocation scheme. Default is "n."

- **H12** — Enter "y" to specify the ISDN information transfer rate for 1920-kbps data, which is comprised of 30 B-channels. When a trunk group is administered to supportH12, the trunk/hunt algorithm to satisfy a call requiring 1920-kbps bandwidth uses a fixed allocation scheme. default is "n."

- **N x DS0** — Enter "y" to specify the NxDS0 multirate service. Default is "n."

- **Contiguous?** — Specifies whether to hunt contiguous NxDS0 channels. This field only appears if "y" is entered in the NxDS0 field.

The trunk/hunt algorithm to satisfy an NxDS0 call is as follows:

- Enter "y" to specify the "floating" scheme. NxDS0 calls are placed on a contiguous group of B-channels large enough to satisfy the requested bandwidth without constraint on the starting channel (no fixed starting point trunk).

  NOTE:
  HO and NxDS0 "floating" scheme cannot both be set to "y."

- Enter "n" to specify the "flexible" scheme. NxDS0 calls are placed on any set of B-channels on the same facility as long as the requested bandwidth is satisfied. There are no constraints such as contiguity of B-channels or fixed starting points.

Pages Y through X of the Form (Group Member Assignment)

NOTE:
When supporting DCS, Member Number Assignments must be the same between nodes (Member #1 must be Member #1 at the far-end trunk group).

For BX.25 signaling, Trunk Group numbers must be the same between nodes (trunk group 1 must be trunk group 1 at the far-end).

The trunk access code (TAC) must be less than four digits.

The total number of pages, and the first page of Group Member Assignments, will vary depending on whether the CBC and Wideband Support pages are displayed.

- **Administered Members (min/max)** — Display-only field. Indicates the minimum and maximum member number that has been administered for the particular trunk group. This field is displayed on all member pages.
- **Total Administered Members** — Display-only field. Indicates the total number of members administered in the trunk group. This field will appear on all trunk group member pages.
- **Port** — Enter seven characters. The first two characters identify the cabinet (01 to 22 [G3r V2], 1 to 3 [G3s V2, G3i V2]); the third character identifies the carrier (A through E); the fourth and fifth identify the slot number in the carrier (01 to 20 for multi-carrier cabinets or 01 to 18 for single-carrier cabinets); the last two characters identify the circuit number (01 to 31).
- **Code** — Display-only field. Displays the type of circuit pack physically installed or logically administered at the location to which this member has been assigned. If a circuit pack is neither installed nor administered at the member's location, the field is blank.
- **Sfx** — Displays the type of circuit pack (suffix only) physically installed at the location to which this member has been assigned. Field is blank if a circuit pack has not been physically installed.
- **Name** — Enter up to ten characters to identify the member of the trunk group. The name can be a 7-digit telephone number or a 10-digit Trunk Circuit Identification number (provided by trunk supplier).
- **Night** — Specifies a night destination for an individual trunk. This entry overrides the group Night Service entry on Page 1 of the form. Valid entries are an extension (can be a VDN extension), the attendant group access code ("attd"), or leave blank.
- **Sig Grp** — Enter the appropriate signaling group number. See Signaling Group in this chapter for more information. If a DS1 interface appears in one signaling group, then the number of that signaling group will appear as a default in the Sig Grp column for any trunk on that interface after the form is submitted. This value cannot be altered without adding a DS1 interface to another signaling group. If a DS1 circuit pack appears in more than one signaling group, then Sig Grp cannot be left blank. One of the signaling group members must be entered.

```
                                TRUNK GROUP            Page 1 of X

Group Number: 1               Group Type: isdn-pri     CDR Reports? y
  Group Name: OUTSIDE_CALL_       COR : 1_                    TAC : ____
   Direction: two-way_ Outgoing Display? n
 Dial Access? n           Busy Threshold: 99          Night  Service:  _
Queue Length: 0_
Service Type: _______________ Auth Code? n           Test Call ITC: rest
                   Far End Test Line No: _______________
Test Call BCC: 4

TRUNK  PARAMETERS
         Codeset to Send Display: 6    Codeset to Send TCM, Lookahead: 6
        Max Message size to Send: 260_
                                            Overlap Receiving? n
                      Trunk Hunt: cyclical

    Connected to Toll? n   STT Loss: normal     DTT to DCO Loss: n

                 Bit Rate: 1200_   Synchronization: async        Duplex: full
    Disconnect Supervision - In? y Out? n
    Answer  Supervision  Timeout:  0
```

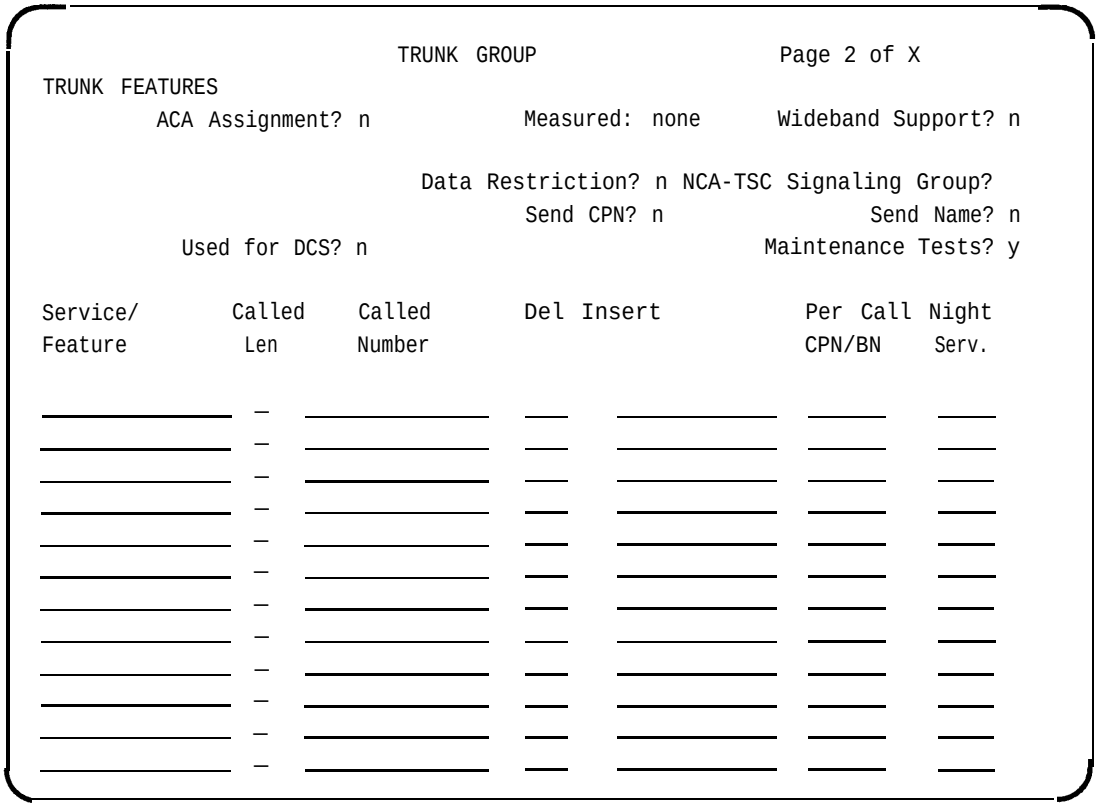
Screen 4-72. ISDN-PRI Trunk Group Form (Page 1 of X)

Implementation Notes:

Queue Length is displayed when Direction is ''outgoing" or ''two-way."

Usage Alloc andTestcall Service are displayed when Service Type is ''cbc."

STT loss is only displayed if Connected to Toll is “n.”



```
                              TRUNK GROUP                    Page 2 of X
TRUNK FEATURES
         ACA Assignment? n             Measured: none      Wideband Support? n

                                Data Restriction? n NCA-TSC Signaling Group?
                                        Send CPN? n                Send Name? n
           Used for DCS? n                                 Maintenance Tests? y

Service/        Called    Called       Del Insert            Per Call  Night
Feature          Len      Number                             CPN/BN    Serv.

_____________   _   _____________   ___   _____________   _______   ____
_____________   _   _____________   ___   _____________   _______   ____
_____________   _   _____________   ___   _____________   _______   ____
_____________   _   _____________   ___   _____________   _______   ____
_____________   _   _____________   ___   _____________   _______   ____
_____________   _   _____________   ___   _____________   _______   ____
_____________   _   _____________   ___   _____________   _______   ____
_____________   _   _____________   ___   _____________   _______   ____
_____________   _   _____________   ___   _____________   _______   ____
_____________   _   _____________   ___   _____________   _______   ____
_____________   _   _____________   ___   _____________   _______   ____
_____________   _   _____________   ___   _____________   _______   ____
```

Screen 4-73. ISDN-PRI Trunk Group Form (Page 2 of X)

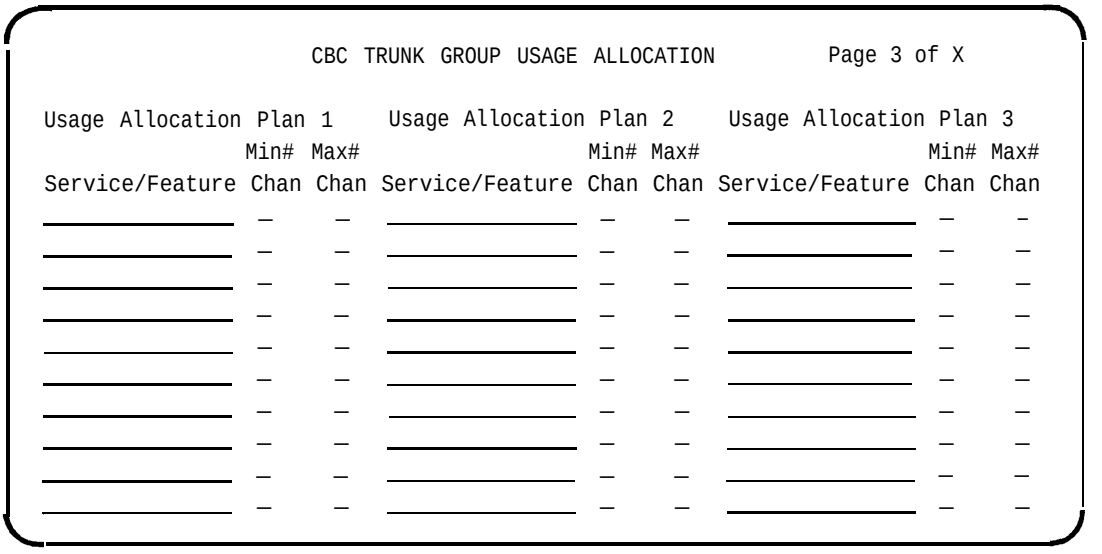
Implementation Notes:

The Long Holding Time (hours), Short Holding Time (seconds), and Short Holding Threshold fields are displayed when ACA Assignment is “y.”

Internal Alert field is only displayed if Service Type on Page 1 is “tie.”

DCS Signaling and PBX ID are displayed when Used for DCS is “y.”

The Used for DCS field is not displayed if the Service Type field on Page 1 is “dmi-mos” or “sddn.”



```
                    CBC TRUNK GROUP USAGE ALLOCATION          Page 3 of X

Usage Allocation Plan 1     Usage Allocation Plan 2     Usage Allocation Plan 3
                 Min# Max#                   Min# Max#                   Min# Max#
Service/Feature  Chan Chan  Service/Feature  Chan Chan  Service/Feature  Chan Chan
_______________  _    _     _______________  _    _     _______________  _    _
_______________  _    _     _______________  _    _     _______________  _    _
_______________  _    _     _______________  _    _     _______________  _    _
_______________  _    _     _______________  _    _     _______________  _    _
_______________  _    _     _______________  _    _     _______________  _    _
_______________  _    _     _______________  _    _     _______________  _    _
_______________  _    _     _______________  _    _     _______________  _    _
_______________  _    _     _______________  _    _     _______________  _    _
_______________  _    _     _______________  _    _     _______________  _    _
_______________  _    _     _______________  _    _     _______________  _    _
```

Screen 4-74. ISDN-PRI Trunk Group Form (Page 3 of X)

Implementation Note:

This page is displayed when ServiceType on Page 1 is ''cbc'' and Usage Alloc is "y"

```
                                                          Page 4 of X

           CBC SERVICE TRUNK GROUP ALLOCATION PLAN ASSIGNMENT SCHEDULE
  Usage Method:
         Fixed? y      Allocation Plan Number: 1
     Scheduled? n

Usage Allocation Plan Activation Schedule:
          Act  Pln    Act Pln    Act  Pln    Act Pln    Act  Pln    Act  Pln
          Time #      Time #     Time #      Time #     Time #      Time #
Sun       __:__  __   __:__  __   __:__  __   __:__  __   __:__  __   __:__  __
Mon       __:__  __   __:__  __   __:__  __   __:__  __   __:__  __   __:__  __
Tue       __:__  __   __:__  __   __:__  __   __:__  __   __:__  __   __:__  __
Wed       __:__  __   __:__  __   __:__  __   __:__  __   __:__  __   __:__  __
Thu       __:__  __   __:__  __   __:__  __   __:__  __   __:__  __   __:__  __
Fri       __:__  __   __:__  __   __:__  __   __:__  __   __:__  __   __:__  __
Sat       __:__  __   __:__  __   __:__  __   __:__  __   __:__  __   __:__  __
```

Screen 4-75. ISDN-PRI Trunk Group Form (Page 4 of X)

Implementation Notes:

This page is displayed when Service Type on Page 1 is ''cbc" and the Usage Alloc field is ''y."

The Allocation Plan Number field is only displayed if the Fixed field is set to "y."

```
                                                          Page Y of x
                    Wideband Support Options

                           H0? n
                          H11? n
                          H12? n
                      N x DS0? y     Contiguous? n
```

Screen 4-76. ISDN-PRI Trunk Group Wideband Switching Parameters

Implementation Notes:

This page is only displayed if the Wideband Support field is "y."

The Contiguous field is only displayed if NxDS0 is "y."

```
                                TRUNK GROUP                    Page Y of X

                                          Administered Members (min/max) : xxx/yyy
                                             Total Administered Members: xxx
GROUP  MEMBER  ASSIGNMENTS
         Port      Code      Sfx Name         Night    Sig Grp
     1:  _____     ____      _   ___________  ____     ___
     2:  _____     ____      _   ___________  ____     ___
     3:  _____     ____      _   ___________  ____     ___
     4:  _____     ____      _   ___________  ____     ___
     5:  _____     ____      _   ___________  ____     ___
     6:  _____     ____      _   ___________  ____     ___
     7:  _____     ____      _   ___________  ____     ___
     8:  _____     ____      _   ___________  ____     ___
     9:  _____     ____      _   ___________  ____     ___
    10:  _____     ____      _   ___________  ____     ___
    11:  _____     ____      _   ___________  ____     ___
    12:  _____     ____      _   ___________  ____     ___
    13:  _____     ____      _   ___________  ____     ___
    14:  _____     ____      _   ___________  ____     ___
    15:  _____     ____      _   ___________  ____     ___
```

Screen 4-77. ISDN-PRI Trunk Group Form (Page Y through X)

To reduce repetition, the remaining pages are not shown. For a complete set of forms, refer to the “Blank Forms Package.”

When the Trunk Signaling Type is “cont,” the valid values are:

auto/auto	auto/cont	auto/delay	auto/immed	auto/wink
cont/delay	cont/immed	cont/wink	delay/auto	delay/cont
delay/immed	delay/wink	immed/auto	immed/cont	immed/delay
Immed/wink	winl/auto	wink/cont	/wink/delay	wink/immed

Otherwise, the valid values are:

auto/auto	auto/delay	auto/immed	auto/wink
delay/auto	delay/delay	delay/immed	delay/wink
immed/auto	immed/delay	immed/immed	immed/wink
wink/auto	wink/delay	wink/immed	winiw/wihk

NOTE:
For “immed/immed” trunks (on incoming trunks), the far-end PBX seizes the trunk and then sends digits without waiting for acknowledgment from the receiving PBX. When heavily loaded, the receiving PBX may incur a short delay in attaching a Touch-Tone Receiver to this call and, therefore, cause it to lose digits. Using wink-start trunks or increasing the dial-guard timer value on the far-end PBX avoids this problem.

- **Incoming Rotary Timeout (sec)** — The timing interval required by the central office that the System is connected to. If the System is connected to a Step-by-Step office, 18 or more seconds must be used; if the System is not connected to a Step-by-Step office, 5 or more seconds may be used. Valid entries are 5 to 99, or leave blank; default is 5.

- **Outgoing Dial Type** — Identifies the type of pulsing required on an outgoing call. Valid entries are “tone” (default), “rotary,” or (when the Trunk Signaling Type field is blank) “ref.”

  NOTE:
  Multifrequency Signaling must be enabled on the System-Parameters Customer-Options form before a value of “mf" may be administered.

  Outgoing Dial Type may not be set to “mf” if the Used for DCS field (Page 2 of the form) is set to “y.”

- **Incoming Dial Type** — Indicates the type of pulses required on an incoming trunk group. Valid entries are "tone” (default), “rotary,” or “mf.”

  NOTE:
  Multifrequency Signaling must be enabled on the System-Parameters Customer-options form before a value of “mf” may be administered.

  Incoming Dial Type may not be set to “mf” if the Used for DCS field (Page 2 of the form) is set to “y.”

Wink Timer (msec) — Displayed when the Trunk Type for the "out" side of the in/out field is "wink" or "delay." Enter a number from 300 to 5000 in increments of 50; default is 300. This timer is sent only to TN760C vintage 4 or later), TN767, and TN464C (or later) circuit packs.

NOTE:
This value is the same for each member of the trunk group where the timing is administered; that is, if members from TN760B ports are mixed with members from TN760C V4 ports, only the TN760C V4 ports are set to this value. (The TN760B ports use a default value on the circuit pack itself.)

United States domestic requirements state that for a "wink" start trunk, the wink must begin within five seconds (the "wait-for-wink-to-start" time) and must end within 290 ms (the "wait-for-wink-to-end" time). For a "delay" dial trunk, the wink must begin within 140 ms (the "wait-for-wink-to-start" time) and end when the switch is ready to receive digits.

The "wink" start "wait-for-wink-to-end" time and the "delay" dial "wait-for-wink-to-start" time are ***both*** administered through the use of this field.

■ **Disconnect Timing (msec)** — Specifies the minimum time period (in ms) that is required for recognition of disconnect by the serving central office or far-end PBX. The time interval must be in increments of 10 (from 140 to 2550 ins); default is 500.

This timer is not used for ports on a circuit pack that can receive the administrable Incoming Disconnect and Outgoing Disconnect timers. These latter two timers replace Disconnect Timing.

■ **Digit Treatment** — Indicates if digits are to be absorbed or inserted. A blank indicates no digit absorption or insertion. Valid entries are "absorption, " "insertion," or leave blank.

NOTE:
DCS features that use the remote-tgs button (on the remote switch) do not work when the local trunk group deletes or inserts digits on the incoming call. These buttons try to dial a local TAC. Adding or deleting digits defeats this operation and renders the remote feature inoperable. If digit manipulation is needed, use it on the outgoing side, based on the routing pattern. One reason for digit manipulation is insertion of the AAR feature access code (FAC).

■ **Digits** — Indicates the digits to be inserted or number of digits to be absorbed. This field is used with the Digit Treatment field. No entry indicates no digit absorption or insertion is done. Valid entries are the number of digits to be absorbed (1 to 5) or the actual digits to be inserted (up to 5 digits including the characters "*" and "#").

- **Expected Digits** — This field specifies the number of digits that the far-end sends for an incoming connection. Valid values are between 1 and 18 inclusive. This field only appears if the Trunk Signaling Type field is left blank, the Direction is “incoming” or “two-way,” and the Incoming Dial Type is “ref.”
- **Sig Bit Inversion** — This field allows the user to administer the signaling bit inversion (the A-bit and B-bit inversion) on a per port basis. This field applies only to TN464B or later suffixed circuit packs. The CCITT standards define on-hook to be”1” in the A-bit and off-hook to be “0.” This definition is the opposite of the EIA definition. The default in the TN464 firmware for signaling bit inversion is use the CCITT standard for 32-channel mode and to use the EIA standard for 24-channel mode. Valid entries are “A,” “A&B," “B,” and “none” (default).
- **Connected to Toll** — Enter “y” if connected to a CO toll office. This field is displayed when the Trunk Type field contains an entry of “auto/...,” “delay/...,” “wink/...,” or “immed/...”.
- **STT Loss** (Satellite PBX Tie Trunk Loss) — Displayed when Connected to Toll is “n.” Specifies the loss plan to be used for the trunk group. Valid entries are “normal” (default) or “low.” This option affects the transmission performance of a private PBX network.

  Although the use of this option has wider applications, only for the simplest network arrangements should this field be administered without Network Engineering advice. The “low” option (described as the ISL digital low loss plan m *DEFINITY Communications System Generic 1 and System 75 and System 85 DS1/DMI/ISDN-PRI Reference,* 555-025-101) should be used when:

  1. Stations on the satellite PBX complain of too much loss on calls to the public network.
  2. The PBX network consists of no more than three PBXs: one main and one or two satellite PBXs.
  3. All PBXs have the “low” option available.
  4. The total DS1 trunk connection length is less than 100 miles.

  If the preceding conditions are not met, obtain Network Engineering assistance. The field entry is based on the following:

  — **normal** – Applies to AIU-TT (Analog Interface Unit at Customer Switching System for Tie Trunk — 4-wire E&M interface) and DIU-TT (Digital Interface Unit at Customer Switching System for Tie Trunk — voice or AVD DS1 interface) loss plans.

  — **low** — Applies to AIU-TTS (same as AIU-TT, but suitable for private network connections that can be connected in tandem with public network connections) and DIU-TTS (same as DIU-TT, but suitable for private network connections that can be connected in tandem with public network connections). These interfaces were formerly referred to as DIU DTT ISL.

- **DTT to DCO Loss** (Digital Tie to Digital CO Trunk Loss) — Specifies the loss plan to be used for the trunk group for interconnections from a DIU-CO (Digital Interface Unit at a Central Office) to a DIU-DTT (Digital Interface Unit for a Digital Tie Trunk Interface). This field is displayed when the Trunk Type field contains an entry of "auto/...," "delay/...," "wink/... ," or "immed/...".

  This option affects the transmission performance of public network access via a private PBX network. Choose the "low" option if private network users complain about too much loss on calls to the public network, otherwise, the "normal" option should be used. Valid entries are "normal" (default) and "low." The entry is based on the following:

  - **normal** — Corresponds to a (0, -6) dB gain pair and is used as the default option. (This corresponds to the DTT/EIA DCO port to port configuration as described in *DEFINITY Communications System Generic 1 and System 75 and System 85 DS1/DMI/ISDN-PRI Reference,* 555-025-101.)
  - **low** — Corresponds to (+3, -3) dB gain pair. Low is used for internetwork applications in which no significant configuration will encounter echo, stability, or overload problems because of reduced loss. With the low gain pair, subscriber station DTMF signals transmitted through the digital class 5 office into the customer network may experience non-recoverable digit mutilation in secondary signaling applications (that is, DTMF signaling after the connection has been established). This corresponds to the DTT/lSL DCO port to port configuration as described in *DEFINITY Communications System Generic 1* and *System* 75 *and System 85 DS1/DMI/ISDN-PRI Reference,* 555-025-101.

- **Incoming Dial Tone** — indicates whether or not the trunk group will pass on incoming dial tone to the calling party. Valid entries are "y" or "n."
- **Send Release Ack** — This field appears only when the Trunk Signaling Type has a value of either "cont" or "dis." (Thus, this field only applies to TN2140 ports.) Enter "y" (default) if the switch must send a release acknowledgment in response to a forward or backward release signal.
- **Receive Release Ack** — This field appears only when the Trunk Signaling Type has a value of either "cont" or "dis." (Thus, this field only applies to TN2140 ports.) Enter "y" (default) if the switch should expect to receive a release acknowledgment in response to a forward or backward release signal.
- **Bit Rate** — Displayed when Comm Type is "avd' or "rbavd." It also appears if the Comm Type is "data" but only if the option for lSDN-PRI is enabled on the System-Parameters Customer-Options form. Specifies the baud rate to be used by pooled modems. Valid entries are 300, 1200 (default), 2400, 4600, 9600, and 19200.

- **Incoming Dial Type** — Not displayed if the Trunk Signaling Type is “tge,” “tgu,” or “tgi”; the Dial Type is internally set to “rotary.” indicates the type of pulses required on an incoming trunk group. Valid entries are "tone" (default), “rotary,” or “mf.” The value in this field impact the appearance of the Incoming Partial Dial Timer on the Administrable Timer Page.

  NOTE:
  Multifrequency Signaling must be enabled on the System-Parameters Customer-Options form before a value of “mf” may be administered.

  Incoming Dial Type may not be set to “mf” if the Used for DCS field (Page 2 of the form) is set to “y.”

- **Wink Timer (msec)** — Displayed when the Trunk Type for the “out” side of the it/out field is “wink” or “delay.” Enter a number between 300 to *5000* in increments of *50;* default is 300. This timer is sent only to TN760C (vintage 4 or later), TN767, and TN464C (or later) circuit packs.

  NOTE:
  This value is the same for each member of the trunk group where the timing is administered; that is, if members from TN760B ports are mixed with members from TN760C V4 ports, only the TN760C V4 ports are set to this value. (The TN760B ports use a default value on the circuit pack itself.)

  United States domestic requirements state that for a “wink” start trunk, the wink must begin within five seconds (the “wait-for-wink-to-start” time) and must end within 290 ms (the “wait-for-wink-to-end" time). For a “delay” dial trunk, the wink must begin within 140 ms (the “wait-for-wink-to-start” time). and end when the switch is ready to receive digits.

  The “wink” start “wait-for-wink-to-end” time and the “delay” dial “wait-for-wink-to-start” time are ***both*** administered through the use of this field.

- **Disconnect Timing (msec)** — Specifies the minimum time period (in ms) that is required for recognition of disconnect by the serving central office or far-end PBX. The time interval must be in increments of 10 (from 140 to 2550 ins); default is 500. This timer is not used for ports on a circuit pack that can receive the administrable Incoming Disconnect and Outgoing Disconnect timers. These latter two timers replace Disconnect Timing.

- **Digit Treatment** — Indicates if digits are to be absorbed or inserted. A blank indicates no digit absorbtion or insertion. Valid entries are “absorption” or “insertion,” or leave blank.

NOTE:

DCS features that use the remote-tgs button (on the remote switch) do not work when the local trunk group deletes or inserts digits on the incoming call. These buttons try to dial a local TAC. Adding or deleting digits defeats this operation and renders the remote feature inoperable. If digit manipulation is needed, use it on the outgoing side, based on the routing pattern. One reason for digit manipulation is insertion of the AAR feature access code (FAC).

- **Digits** — Indicates the digits to be inserted or number of digits to be absorbed. This field is used with the Digit Treatment field. No entry indicates no digit absorption or insertion is done. Valid entries are the number of digits to be absorbed (1 to 5) or the actual digits to be inserted (up to 5 digits including the characters '*' and '#') (incoming).
- **Expected Digits** — This field specifies the number of digits that the far-end sends for an incoming connection. Valid values are between 1 and 18 inclusive. This field only appears if the Trunk Signaling Type field is left blank, the Direction is "incoming" or "two-way," and the Incoming Dial Type is "mf."
- **Sig Bit Inversion** — This field allows the user to administer the signaling bit inversion (the A-bit and B-bit inversion) on a per port basis. This field applies only to TN464B or later suffixed circuit packs. The CCITT standards define on-hook to be"1" in the A-bit and off-hook to be "0." This definition is the opposite of the EIA definition. The default in the TN464 firmware for signaling bit inversion is use the CCITT standard for 32-channel mode and to use the EIA standard for 24-channel mode. Valid entries are "A," "A&B," "B," and "none" (default).
- **Connected to Toll** — Enter "y" if connected to a CO toll office. This field is displayed when the Trunk Type field contains an entry of "auto/...," "decay/...," "wink/...," or "immed/...".
- **STT Loss** (Satellite PBX Tie Trunk Loss) — Displayed when Connected to Toll is "n." Specifies the loss plan to be used for the trunk group. Valid entries are "normal" (default) or "low." This option affects the transmission performance of a private PBX network

  Although the use of this option has wider applications, only for the simplest network arrangements should this field be administered without Network Engineering advice. The "low" option (described as the ISL digital low loss plan in *DEFINITY Communications System Generic 1 and System 75 and System 85 DS1/DMI/ISDN-PRI Reference,* 555-025-101) should be used when:

  1. Stations on the satellite PBX complain of too much loss on calls to the public network.
  2. The PBX network consists of no more than three PBXs: one main and one or two satellite PBXs.
  3. All PBXs have the "low" option available.

Wide Area Telecommunications Service Trunk Group

This form is used to provide access to and/or from a portion of the DDD network via dedicated trunks to and/or from a WATS serving office.

Administration Commands

The following administration commands can be used to access the WATS Trunk Group form. in some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
add	trunk-group	1-MAX (or 'next')
change	trunk-group	1-MAX or TAC X...
display	trunk-group	1-MAX ['number' X]['to-number X]['count' N] ['tac' assigned TAC]['print' or 'schedule']
list	trunk-group	['print' or 'schedule']
remove	trunk-group	1-MAX or TAC X...

* Brackets [ ] indicate the qualifier is optional. Single quotes (") indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered. MAX is the maximum number available in your system configuration. Refer to the Capacity Table in Appendix C.

Instructions

Make assignments as required for the following fields on each page of the form:

Page 1 of the Form

- **Group Number—** Enter a group number when completing a paper form. This is a display-only field when the form is accessed using an administration command such as *add* or *change.*
- **Group Type** — Enter "wats" to identify the trunk group type.
- **CDR Reports** — Enter "y" (default) to provide a detailed Call Detail Recording (CDR) record of both incoming and outgoing calls made on all trunks in the trunk group.
- **Group Name** — Enter a unique name that identifies the trunk group. Up to 15 characters can be used; default is OUTSIDE CALL.
- **COR** — Enter a class of restriction (COR) number from 0 to 95 that reflects the desired restriction; default is 1.
- **TAC** — Enter the trunk access code (TAC) that must be dialed to access the trunk group. CDR also uses the TAC to identify the trunk group on associated CDR reports. A different TAC must be assigned to each trunk group. Valid entries are TACs that are compatible with the System Dial Plan (1 to 4 digits; 1 to 3 digits for DCS or to remotely control it).

■ **Direction** — Enter whether the trunk group is “incoming,” “outgoing,” or “two-way” (default). Note that the Direction administered will affect which timers will appear on the Administrable Timer page.

■ **Outgoing Display** — Specifies whether or not the trunk group name is displayed on a terminal placing an outgoing call. Valid entries are “y” or “n” (default).

■ **Dial Access** — Enter “y” to allow the trunk group to be accessed via a TAC; otherwise, enter “n” (default). Access via the ARS feature is allowed regardless of this entry.

■ **Busy Threshold** — Enter the number f trunk group members that must be busy before the attendant is alerted by the Warning lamp on the Attendant Console.

■ **Night Service** — Enter the extension number assigned to Night Service. The extension number entered will receive all incoming calls when Night Service is activated and the individual trunk member Night field is not administered to override this group extension. Valid entries are an extension number (can be a VDN extension), the attendant group access code (“attd’), or leave blank if the Trunk Type (in/out) field is not “auto/...”

■ **Queue Length** — Enter the number of outgoing calls that can be held waiting. A “0” (default) indicates no calls will be held in queue. Enter “0” for DCS trunks. This field is not displayed if the Direction field is “incoming.”

■ **Country** — This field specifies the country code for each subscriber line. Valid values are any number between 1 and 19, inclusive. The value of this field, in conjunction with the values of the Trunk Termination and Trunk Gain fields, will determine the input and trans-hybrid balance impedance requirements for TN465B, TN2146, and TN2147 ports. Refer to the “Country Code Assingments” table in Appendix B for a complete list of valid country codes.

■ **Incoming Destination** — Indicates where incoming calls will terminate. Valid entries are an extension number, the attendant group access code (“attd’), VDN, or leave blank if the Trunk Type (in/out) field is not “auto/.. .“ If “attd” is entered, a call is treated as an LDN call.

■ **Comm Type** — Indicates if the trunk is to be used for voice, data, alternate voice-data (avd), or alternate voice/voice grade data and 56-kbps digital data (rbavd) calls. Valid entries are “avd,” “rbavd,” “voice” (default), or “data.” Type “rbavd’ supports access to voice/data SDN service on robbed-bit T1 transmission facilities.

NOTE:

“avd” and “rbavd’ types require trunk member ports on a DS1 circuit pack. An “rbavd” type requires that the DS1 circuit pack be administered for robbed-bit, or (if mixed mode signaling is allowed on the DS1 circuit pack) ISDN-EXT, or ISDN-PRI. An “avd” type requires that the DS1 circuit pack be administered for either common-chan or CAS signaling.

■ **Auth Code** — Enter “y” if an authorization code must be dialed to complete incoming calls on the trunk group; otherwise, enter “n” (default). This field can only be “y” if the Authorization Codes feature is enabled on the System-Parameters Customer-Options form.

■ **Trunk Flash** — Enter ‘y’ or “n” (default) to indicate if access to customized services provided by a far-end (such as Centrex Services) is permitted for this trunk group. The PBX must be directly connected to a far-end that provides such services.

■ **BCC** (Bearer Capability Class) — Displayed when the ISDN-PRI is optioned on the System-Parameters Customer-Options form and Comm Type is “data,“ “avd,” or “rbavd.” Used by the Generalized Route Selection feature and identifies the type of traffic on trunks in the group. The BCC entry is used by far-end tandem switches to select outgoing routing facilities with equivalent BCC classes. Valid entries are 0,1,2,3, and 4. Default is 0 for “avd’ and 2 for “data.”

NOTE:
Refer to “Generalized Route Selection” in *DEFINITY Communications System Genetic 3 V2 Feature Description, 555-230-204,* for a detailed description of Bearer Capability Classes (BCCs) and their use to provide specialized routing for various types of voice and data calls.

■ **ITC** (Information Transfer Capability) — Displayed for non-ISDN trunk groups, and when Comm Type is “data,” “avd,” or “rbavd’ and BCC is not “0.” Used by the GRS feature and enables the system to route calls to restricted (default) or unrestricted facilities according to the endpoint's information transfer capability. A trunk member is said to be restricted if the circuit pack it belongs to is administered as “zcs” in the Line Coding field of the DS1 form. A trunk member is said to be unrestricted if the circuit pack it belongs to is administered as “b8zs” or “hdb3” in the Line Coding field of the DS1 form. A restricted trunk member can only carry restricted calls. An unrestricted trunk member may carry restricted or unrestricted calls. A trunk group with a transfer capability of “unrestricted” may have only unrestricted trunk members.

■ **Trunk Type** — Identifies the physical type of WATS trunk. It may differ for incoming and outgoing types. Valid entries are “ground-start,” “loop-start,” “auto/auto,” “auto/delay,“ “auto/immed,” and “auto/wink.” If the Country is “15” (C.I.S.), additional valid entries are “2-wire-ac,” “2-wire-dc,” and “3-wire.” These three trunk types must be on the TN2199 circuit board.

■ **ANI Upon Seizure** — This field appears only if the Direction is “outgoing” or “two-way” and the Country is ”15“ (C.I.S.). Enter “y” (default) when an ANI request is expected after the trunk is *seized* enter “n” when an ANI request is expected after the trunk is *answered.*

■ Outgoing Dial Type — Identifies the type of pulsing required on an outgoing call. Valid entries are “automatic,” “mf ,“ "tone” (default), or “rotary.”

NOTE:
Multifrequency Signaling must be enabled on the System-Parameters Customer-Options form before a value of “mf” may be administered.

■ **Incoming Dial Type** — indicates the type of pulses required on an incoming trunk group. Valid entries are “tone” (default) or “rotary.”

■ **Trunk Termination** — Specifies how the trunk group is terminated. Valid entries are “600ohm” or “rc;” 600ohm is used when the PBX trunk port is connected to terminal equipment (for example, SLC carrier or compensators optioned for 600 ohms input impedance) and the distance to the terminal equipment from the System is less than 3000 feet. Enter “rc” (default) in all other cases.

■ **Disconnect Timing (msec)** — Specifies the minimum time period (in ms) that is required for recognition of disconnect by the serving central office or far-end PBX. The time interval must be in increments of 10 (from 140 to 2550 ins); default is 500. This timer is not used for ports on a circuit pack that can receive the administrable Incoming Disconnect and Outgoing Disconnect timers. These latter two timers replace Disconnect Timing.

■ **Analog Gain** — This field appears only if the Country is “15” (C.I.S.) and the Trunk Type is “2-wire-ac," "2-wire-dc," or "3-wire." This field allows you to specify a boost in analog gain for theTN2199 port in the direction toward the PBX. Enter “a” (-3dB gain boost), “b” (-6dB gain boost), “c” (-8dB gain boost), or “none” (default). This applies only to the TN2199 port.

■ **Sig Bit Inversion** — This field allows the user to administer the signaling bit inversion (the A-bit and B-bit inversion) on a per-port basis. This field applies only to TN464B or later suffixed circuit packs. The CCITT standards define on-hook to be”1” in the A-bit and off-hook to be “0.” This definition is the opposite of the EIA definition. The default in the TN464 firmware for signaling bit inversion is use the CCITT standard for 32-channel mode and to use the EIA standard for 24-channel mode. Valid entries are “A,” “A&B,” “B,” and “none” (default).

■ **Connected to Toll** — Displayed when Trunk Type is “auto/...”, “delay/...”, “wink/...”, or “immed/...” Enter “y” if connected to a CO toll office.

■ **SIT Loss** (Satellite PBX Tie Trunk Loss) — Displayed when Connected to Toll is “n.” Specifies the loss plan to be used for the trunk group. Valid entries are “normal” (default) or “low.” This option affects the transmission performance of a private PBX network.

Although the use of this option has wider applications, only for the simplest network arrangements should this field be administered without Network Engineering advice. The “low” option (described as the ISL digital low loss plan in *DEFINITY Communications System Genetic 1 and System 75 and System 85 DS1/DMI/ISDN-PRI Reference,* 555-025-101) should be used when:

1. Stations on the satellite PBX complain of too much loss on calls to the public network.
2. The PBX network consists of no more than three PBXs: one main and one or two satellite PBXs.
3. All PBXs have the "low" option available.
4. The total DS1 trunk connection length is less than 100 miles.

If the preceding conditions are not met, obtain Network Engineering assistance. The field entry is based on the following:

- **normal** — Applies to AIU-TT (Analog Interface Unit at Customer Switching System for Tie Trunk — 4-wire E&M interface) and DIU-TT (Digital Interface Unit at Customer Switching System for Tie Trunk — voice or AVD DS1 interface) loss plans.
- **low** — Applies to AIU-TTS (same as AIU-TT, but suitable for private network connections that can be connected in tandem with public network connections) and DIU-TTS (same as DIU-TT, but suitable for private network connections that can be connected in tandem with public network connections). These interfaces were formerly referred to as DIU DTT ISL.

■ **DTT to DCO Loss** (Digital Tie to Digital CO Trunk Loss) — Specifies the loss plan to be used for the trunk group for interconnections from a DIU-CO (Digital Interface Unit at a Central Office) to a DIU-DTT (Digital Interface Unit for a Digital Tie Trunk Interface). This field is displayed when the Trunk Type field contains an entry of "auto/...", "delay/...", "wink/...", or "immed/..."

This option affects the transmission performance of public network access via a private PBX network. Choose the "low" option if private network users complain about too much loss on calls to the public network; otherwise, the "normal" option should be used. Valid entries are "normal" (default) and "low." The entry is based on the following:

- **normal** — Corresponds to a (0, -6) dB gain pair and is used as the default option. (This corresponds to the DTT/EIA DCO port to port configuration as described in *DEFINITY Communications System Generic 1 and System 75 and System 85 DS1/DMI/ISDN-PRI Reference,* 555-025-101.)
- **low** — Corresponds to (+3, -3) dB gain pair. Low is used for internetwork applications in which no significant configuration will encounter echo, stability, or overload problems because of reduced loss. With the low gain pair, subscriber station DTMF signals transmitted through the digital class 5 office into the customer network may experience non-recoverable digit mutilation in secondary signaling applications (that is, DTMF signaling after the connection has been established). (This corresponds to the DTT/ISL DCO port to port configuration as described in *DEFINITY Communications System Generic 1 and System 75 and System 85 DS1/DMI/ISDN-PRI Reference,* 555-025-101.)

■ **Trunk Gain** — This field specifies the gain of the trunk, and can have the values of “high” (default) or “low.” The value of this field, in conjunction with the values of the Trunk Termination and Country fields, will determine the input and trans-hybrid balance impedance for TN465B, TN2146, TN2147, and TN2184 ports. All other CO and DID circuit packs will be automatically set to “high”.

■ **Bit Rate** — Displayed when Comm Type is “avd’ or “rbavd.” It also appears if the Comm Type is “data,” but only if the option for ISDN-PRI is enabled on the System-Parameters Customer-Options form. Specifies the baud rate to be used by pooled modems. Valid entries are 300, 1200 (default), 2400, 4800, 9600, and 19200.

■ **Synchronization** — Displayed when Comm Type is “avd’ or “rbavd.” It also appears if the Comm Type is “data,” but only if the option for ISDN-PRI is enabled on the System-Parameters Customer-Options form. Enter whether the trunk group will use synchronous or asynchronous communications. Valid entries are “async” (default) and “sync.”

■ **Duplex** — Displayed when Comm Type is “avd" or “rbavd.” It also appears if the Comm Type is “data,” but only if the option for ISDN-PRI is enabled on the System-Parameters Customer-Options form. Specifies either full or half duplex for the trunk group. Valid entries are “full” (default) or “half.”

■ **Disconnect Supervision-In** — This field appears when the Direction is either “incoming” or “two-way.” Internally, the field is set to “n” if the Direction is “outgoing.” Enter “y” (default) to indicate that the far-end has the ability to release a trunk when the calling party releases from a call and the system is able to recognize the release signal.

■ **Disconnect Supervision-Out** — This field appears when the Direction is either “outgoing” or “two-way.” Internally, the field is set to “n” (default) if the Direction is “incoming.” If the field is set to “y” a warning message appears to alert the user of possible trunk lockups. This field specifies whether trunks in this trunk group provide disconnect supervision when seized outgoing (that is, whether these trunks should be allowed to participate in outgoing trunk to outgoing trunk calls). This field is set independently of the trunk-to-trunk transfer system parameter, although both options must be set appropriately if outgoing trunk to outgoing trunk transfers are desired.

■ **Cyclical Hunt** – Enter “y” (default) if a preferential hunting algorithm is to be used. Otherwise, a linear hunting algorithm will be used.

■ **Disconnect Type** — This field appears only if the Country is”15“ (C.I.S.) and the Trunk Type is “2-wire-at,“ “2-wire-de,” or “3-wire.” This field indicates which side or user controls the disconnect, where A refers to the *calling* party and B refers to the *called* party. Enter “A and B" or “A or B“ (default). This applies only to the TN2199 port.

- **Answer Supervision Timeout** — Used for analog port circuits to indicate the amount of time in seconds the System allows for a call to be answered before beginning a CDR record of a call. This interval begins as soon as the outgoing trunk is seized. Valid entries are 0 to 250; default is 10.

  NOTE:
  This timeout does not override answer supervision sent from the network or other firmware (DS1 port circuit timers). DS1 firmware-sent answer supervision is administered in the Outgoing End of Dialing field on Page 3 of the Trunk Group form (Administrable Timers page).

- **Receive Answer Supervision** — Specifies whether or not the network provides answer supervision for the trunks. Answer supervision refers to notification from the far-end that the called party has gone off-hook to answer the call. When answer supervision is provided, the originating PBX can classify a call as answered using the Answer Supervision Timeout field entry (for domestic circuit packs) or, for circuit packs that take administrable timers, by using the Outgoing End of Dial timer. For trunks over which answer supervision is provided by the network, set this field to “y” and the Answer Supervision Timeout field to “0” so that the firmware timeout is disabled. The firmware timeout is automatically set to “0" on circuit packs that take the administrable Outgoing End of Dial timers. Receive Answer Supervision must be set to “n” (default) if the Direction field is “incoming.”

Page 2 of the Form

- **ACA Assignment** — Specifies whether or not Automatic Circuit Assurance (ACA) measurements will be taken for this trunk group. Valid entries are ‘y’ or “n” (default). If “y” is entered, complete the next three fields.
- **Long Holding Time (hours)** — Only displayed when ACA Assignment is “y.” Is the length in hours that the System will consider as being a long holding time. If “0” is entered, the System will not consider long holding calls. Valid entries are 0 to 10; default is 1.
- **Short Holding Time (secs.)** — Only displayed when ACA Assignment is “y.” Specifies the length in seconds that the System will consider as being a short holding time. If “0” is entered, the System will not consider short holding calls. Valid entries are 0 to 160; default is 10.
- **Short Holding Threshold** — Only displayed when ACA Assignment is “y.” Is the number of times that the System will record a short holding call before an attendant or display-equipped voice terminal user is alerted to the possibility of a faulty trunk. Valid entries are 0 to 30; default is 15.
- **Measured** — Indicates if the System will transmit data for this trunk group to the Call Management System. Valid entries are “internal,” “external,” “both,” or “none” (default). Enter “internal” if the data is to be sent to the Basic Call Management System (internal to the switch) for subsequent measurement reports and “external” to send the data to the Call

Management System Adjunct. Enter “both” to send the data to both systems for measurement reports. Enter “none” if trunk group measurements are not required.

■ **Data Restriction** — Is used to prevent System features from generating tones on a data call that would cause erroneous data transmission. Valid entries are “y” or “n” (default).

■ **Glare Handling** — Only displayed when the Direction field is “two-way” and the outgoing side of the Trunk Type field is either “wink” or “delay.” This field determines how glare situations should be treated. Valid entries are “control,” “backoff,” or “none.”

Warnings are generated if the field is changed to either “control” or “backoff” and ports for the trunk group are not capable of detecting glare.

■ **Abandoned Call Search** — Applicable when Trunk Type is “ground-start.” Enter a “y” if this trunk group will conduct an Abandoned Call Search to identify a ghost call.

NOTE:
Abandoned Call Search is designed to work with CO trunks (ground start - analog) that *do not* provide disconnect supervision. Central offices that provide disconnect supervision do not require use of the Abandoned Call Search feature. The CO must support Abandoned Call Search for the feature to work properly.

■ **Maintenance Tests** — Indicates whether or not hourly maintenance tests will be made on this trunk group. Valid entries are “y” (default) or “n.”

■ **Suppress # Outpulsing** — Indicates end-to-end signaling begins with (and includes) the “#” when “y” is entered in this field. The final “#” is suppressed in cases where System would normally outpulse it. This field should be “y” when the Central Office (for example, rotary) or any other facility treats “#’ as an error; default is n.

Page 3 of the Form (Administrable Timers)

■ **Incoming Disconnect (msec)** — A disconnect signal on an incoming call is considered valid only if it continues at least for the time specified by this timer. Valid entries are 50 to 2550 in increments of 10. The field cannot be blank default is 500. This timer is sent to ground-start and loop-start trunks that are “incoming” or “two-way.” The only “incoming” or “two-way” loop-start circuit packs that receive this timer are the TN2138 and TN2147.

■ **Outgoing Disconnect (msec)** — A disconnect signal on an outgoing call is considered valid only if it continues at least for the time specified by this timer. This timer begins timing when a disconnect signal has been detected on an outgoing call over the trunk, and resets when the signal is no longer detected. If the timer times out, the trunk is dropped. Valid entries are 50 to 2550 in increments of 10. The field cannot be blank; default is 500. This timer is sent to ground-start and loop-start trunks that are “outgoing” or “two-way.” The only “outgoing” or "two-way” loop-start

circuit packs that receive this timer are the TN2138 and TN2147. This timer is also sent if the Direction is “out-going” or “two-way,” the Country is ”15“ (C.I.S.), and the Trunk Type is “2-wire-ac,” “2-wire-dc,” or “3-Wire.”’

- **Outgoing Dial Guard (msec)** — This timer specific the time between seizure acknowledgment of a trunk and the outpulsing of digits. For trunks that do not provide seizure acknowledgment, the timer specifies the minimum time between seizure and the outpulsing of digits. Any digit dialed by the station user after they lift the receiver, but before the timer times out, will not be outpulsed until the timer expires. Valid entries are 100 to 25500 in increments of 100. The field cannot be blank; default is 1600.
- **Incoming Glare Guard (msec)** — Enter the minimum time between the time an incoming trunk is released and the same trunk can be seized for an outgoing call. This time ensures that the far-end has released all equipment after the incoming trunk is released. Valid entries are 100 to 25500 in increments of 100. The field cannot be blank default is 1500. This field only appears when the trunk group is “two-way.”
- **Outgoing Glare Guard (msec)** — Enter the minimum time between the time an outgoing trunk is released and the same trunk can be seized for another outgoing call. This time ensures that the far-end has released all equipment after the outgoing trunk is released. Valid entries are 100 to 25500 in increments of 100. The field cannot be blank default is 1500. This field only appears when the trunk group is “two-way” or “outgoing.”
- **Outgoing Rotary Dial Interdigit (msec)** — Enter the interval between rotary dial digits being outpulsed by the system (that is, PBX). Valid entries are 150 to 2550 in increments of 10. The field cannot be blank default is 800. This field only appears when the Outgoing Dial Type is “rotary.”
- **Ringing Monitor (msec)** — Enter the minimum time required to determine if the trunk is disconnected. If the ringing signal disappears for a duration longer than the time specified in this field, the call will be assumed to be disconnected. Valid entries are 200 to 51000 in increments of 200. The field cannot be blank default is 5200. This timer is sent to TN464C (or later), TN767, TN438 (all), TN465 (all), TN447, TN2138, and TN2147 circuit packs.
- **Incoming Seizure (msec)** — Enter the minimum time required for recognition of incoming ringing signal from the serving CO. Valid entries are 20 to 2550 in increments of 10. The field cannot be blank default is 500. This timer is sent to TN464C (or later), TN767, TN438 (all), TN465 (all), TN447, TN2138, and TN2147 circuit packs.
- **Outgoing End of Dial (sec)** — Enter the maximum time (in sec) a trunk may wait for answer supervision after dialing an outgoing call. During cut-through operation, timing begins after each outgoing digit is sent by the PBX and timing ceases after the far-end sends answer supervision. If the timer expires, the PBX acts as if it had received answer supervision. On senderized operation, the timer begins after the last digit collected is

sent by the PBX. The timer ceases when the far-end sends answer supervision. If the timer expires, the PBX acts as if it has received answer supervision. This field appears when Direction is “outgoing” or “two-way” and Receive Answer Supervision is “n.” This field will not appear if the Receive Answer Supervision field is “y,” but a zero (0) value will be sent down to the firmware to disable the timer. Valid entries are 1 to 254 in increments of 1. Default is 10.

NOTE:
This field controls the firmware answer-supervision timer on ports that take the administrable timers; the Answer Supervision Timeout field on Page 1 of the Trunk Group form controls answer supervision for ports that do not take administrable timers. This field and the value administered in the Answer Supervision Timeout field on the Trunk Group form should be the same value.

■ **Outgoing Seizure Response (sec)** — Enter the time (in sec) by which the PBX should receive the proceed-to-dial indication from the far-end after sending the seize signal. If the indication is not received in this time, a seizure failure response is uplinked. This timer is sent to TN464B (or later), TN767, TN438B, TN447, TN465B, and TN2147 circuit packs. Valid entries are 1 to 255; default is 5.

■ **Programmed Dial Pause (msec)** — Enter the length of a pause during abbreviated dialing, ARS outpulsing, and terminal dialing operations. This timer is administrable for all outgoing and two-way trunk groups. Valid entries are 100 to 25500 in increments of 100; default is 1500.

■ **Disconnect Signal Error (sec)** — Enter the time (in sec) within which a disconnect signal from the far-end is expected after the internal party (a station or a tie trunk) goes on-hook. If the timer expires, the system can assume a disconnect failure and take an appropriate action (such as error message). This field appears for ground-start trunk groups. This field also appears if the Country is “15” (C.I.S.), and the Trunk Type is “2-wire-ac,“ “2-wire-de,” or “3-wire.” Valid entries are 1 to 255 in increments of 1; default is 240.

■ **Flash Length (msec)** — Specifies the length of the flash signal to be generated toward the Central Office. Valid entries are 10 to 2550 in increments of 10; default is 540. This timer is sent to TN464C (or later), TN465B, and TN2147 ports.

■ **Outgoing Seizure (msec)** — This field appears only if the Country is “15” (C.I.S), the Direction is “outgoing” or “two-way,” and the Trunk Type is “2-wire-ac,” ”2-wire-dc,” or “3-wire.” This timer specifies the duration (in milliseconds) of the outgoing seizure signal. Enter a number between 20 and 2550 in an increment of 10; default is 200. This timer is sent only to the TN2199 circuit board.

■ **Tone (msec)** — Enter the length of a DTMF tone sent to the public network in response to a button depression at a hybrid station set. Valid entries are 20 to 2550 in increments of 10; default is 350.

- **Pause (msec)** — Enter the minimum length of a pause between tones being sent in response to button depressions at a hybrid station set. Valid entries are 20 to 2550 in increments of 10; default is 150.
- **PPS** — Enter either “10” or “20” to specify the pulses per second (PPS) assigned to rotary dial pulse trunk groups. Valid entries are ”10“ (default) or “20.”

  N O T E :
  The TN767 and TN747Bv12 (or later) circuit packs can do only “10’ PPS.

- **Make (msec)** — Enter the duration of the make interval (the pause between pulses) while the system is outpulsing digits using dial pulse signaling.

  If the PPS field is ”10,” the sum of the Make and Break fields must equal 100. Valid entries are 20 to 80 in increments of 5. The field cannot be blank default is 40.

  If the PPS field is “20,” the sum of the Make and Break fields must equal 50. Valid entries are 10 to 40 in increments of 5. The field cannot be blank default is 20.

- **Break (msec)** — Enter the duration of the break interval (the pulse duration) while the system is outpulsing digits using dial pulse signaling.

  If the PPS field is ”10,” the sum of the Make and Break fields must equal 100. Valid entries are 20 to 80 in increments of 5. The field cannot be blank default is 60.

  If the PPS field is “20,” the sum of the Make and Break fields must equal 50. Valid entries are 10 to 40 in increments of 5. The field cannot be blank; default is 30.

- **PPM** — Enter “y” if Periodical Pulse Metering (PPM) pulses should be collected from the public network to determine call cost. If this field is “y,” the Frequency field is displayed.
- **Frequency** — Displayed if the Direction is “outgoing” or “two-way,” and the PPM field is “y.” Identifies the PPM pulse frequency(ies). Circuit packs can listen for up to three different frequencies, (12kHz, 16kHz, and 50Hz), plus two frequency combinations, (50Hz/12kHz and 50Hz/16kHz). Valid entries are”12k,” “16k,” “50,” “50/12k” (default), and “50/16 k.” This field is sent to the TN465B andTN2138 circuit packs.

  NOTE:
  The TN465B can only detect 12k and 16kHz PPM. Therefore, if “50/12k” or “12k” is administered, the circuit pack will be set to detect 12kHz. If “16k,” “50,” or “50/16k” is administered, the circuit pack will be set to detect 16kHZ.

Page 4 of the Form (ATMS Thresholds)

This form appears when the Direction field on Page 1 is "outgoing" or "two-way" and ATMS is enabled on the Feature-Related Systems Parameters form.

- **TTL Type** — Determines what ATMS tests can be completed and thus which threshold values need to be administered. The different TTLs supported are: 105 with return loss (105-w-rl) (default), 105 without return loss (105-wo-rl), high level tone source (high-level-tone), low level tone source (low-level-tone), 100 type (100), and 102 type (102). The following table explains the differences between TTL Types:

Type TTL	Description	Example
105-w-rl	Full range of 18 measurements or some default-for return loss used (56A)	TN771B, ZLC12 and SN261B circuit packs and new 56A mini-responder
105-wo-rl	Cannot return default values for far-end return loss	Older 56A mini-responder
high-level-tone	Sends a fixed sequence of tones at 0 dBm	ZLC12 and SN261B circuit packs_
low-level-tone	Sends a fixed sequence of tones at -16dBm	SN261B circuit pack
100	Up to 5 measurements that sends a 1004 Hz tone then a quiet termination	
102	One measurement that sends a 1004 Hz tone	

The far-end switch containing the TTL may be any of the following:

- System 85 R3 PBX equipped with the Maintenance/Test Board (TN771B)
- System 75 R1V2 and beyond, all of which contain the circuitry required to perform the TTL function
- System 85 R2 PBX equipped with the Analog/Digital Facility Test Circuit (ADFTC,SN261)
- DIMENSION FP8 equipped with the Analog Facility Test Circuit (AFTC, ZLC-12)
- Central Office switches equipped with various TTL equipment that provide 100,102, or 105 test line capabilities (56A)

Other vendor PBXs may be supported if compatible test lines are provided by these switches.

Four different versions of the ATMS Threshold Administration page can occur depending upon the measurements allowed by the TTL type selected. The four possibilities are:

1. 105-w-rl and 105-wo-rl — All thresholds appear.
2. high-Its and Iow-Its— All thresholds (except maximum C-notched noise) appear.

3. 100 — All thresholds (except maximum c-notched noise, 404 Hz loss, and 2804 Hz loss) appear.
4. 102 — Only 1004 Hz loss threshold appears.

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                                                              Page 4 of X
                                  ATMS THRESHOLDS
TTL Type: 105-w-rl_______           Far End Test No: ____________________
TTL Vendor: _____________           TTL Contact: ____________________
Trunk Vendor: _____________         Trunk Contact: _____________________
Trunk Length: ___________

                        MARGINAL          UNACCEPTABLE
                        Min   Max           Min  Max
          1004 Hz Loss: -2 21               -2     21

                        -Dev  +Dev          -Dev   +Dev
           404 Hz Loss: 9     9              9      9
          2804 Hz Loss: 9     9              9      9

Maximum C Message Noise:      55                  55
Maximum C Notched Noise:      74                  74
         Minimum SRL-HI:      0_                  0_
         Minimum SRL-LO:      0_                  0_
            Minimum ERL:      0_                  0_
      Allow ATMS Busyout, Error Logging and Alarming? y
  Maximum Percentage of Trunks Which Can Be Removed from Service by ATMS: 0_
```

Screen 4-97. ATMS Thresholds Form

- **Far End Test No.** — Enter the access number (1 to 20 digits) dialed to reach the TTL.
- **TTL Vendor** — Enter the 0 to 22 alphanumeric character TTL vendor name (the name of the vendor supplying the terminating test line); default is blank.
- **TTL Contact** — Enter the 0 to 25 alphanumeric character TTL vendor contact (the name and/or telephone number of someone from the TTL vendor who can be contacted in the event of problems with the TTL); default is blank.
- **Trunk Vendor** — Enter the 0 to 22 alphanumeric character trunk vendor name (who to notify in the event of problems with the trunks); default is blank.
- **Trunk Contact** — Enter the 0 to 25 alphanumeric character trunk vendor contact (the name and/or telephone number of someone from the trunk vendor who can be contacted in the event of problems with the trunks); default is blank.

■ **Trunk Length —** Enter 0 to 4 digits followed by “k” (for kilometers) or “m” (for miles) showing the length of trunk. This field is not required, since it is not used by the G3-MT. It has been included for the G3-MA adjunct to use in aiding with threshold establishment, since noise on a trunk increases with the length of the trunk. The default is “Om.”

■ **Marginal Threshold — Minimum 1004 Hz Loss** — Enter -2 (default), -1, or 0 to 21 to indicate the minimum signal loss for a 1004 Hz test tone (in dB) allowed before reporting a trunk as out of tolerance. A larger dB value is more restrictive.

■ **Marginal Threshold — Maximum 1004 Hz Loss** — Enter the maximum signal loss (0 to 21) for a 1004 Hz test tone (in dB) allowed before reporting a trunk as out of tolerance; default is 21. A smaller dB value is more restrictive.

■ **Unacceptable Threshold — Minimum 1004 Hz Loss** — Enter-2 (default), -1, or 0 to 21 to indicate the minimum signal loss for a 1004 Hz test tone (in dB) allowed before reporting a trunk as unacceptable. A larger dB value is more restrictive.

■ **Unacceptable Threshold — Maximum 1004 Hz Loss** — Enter the maximum signal loss (0 to 21) for a 1004 Hz test tone (in dB) allowed before reporting a trunk as unacceptable; default is 21. A smaller dB value is more restrictive.

■ **Marginal Threshold — 404 Hz Lose Negative Deviation** — Enter the maximum negative deviation of measured loss (0 to 9) at 404 Hz from the 1004 Hz test tone noise level (in dB) allowed before reporting a trunk as out of tolerance; default is 9. Smaller dB values are more restrictive.

■ **Marginal Threshold — 404 Hz Lose Positive Deviation** — Enter the maximum positive deviation of measured loss (0 to 9) at 404 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk as out of tolerance; default is 9. Smaller dB values are more restrictive.

■ **Unacceptable Threshold — 404 Hz Loss Negative Deviation** — Enter the maximum negative deviation of measured loss (0 to 9) at 404 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk unacceptable; default is 9. Smaller dB values are more restrictive.

■ **Unacceptable Threshold — 404 Hz Loss Positive Deviation** — Enter the maximum positive deviation of measured loss (0 to 9) at 404 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk unacceptable; default is 9. Smaller dB values are more restrictive.

■ **Marginal Threshold — 2804 Hz Loss Negative Deviation** — Enter the maximum negative deviation of measured loss (0 to 9) at 2804 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk as out of tolerance; default is 9. Smaller dB values are more restrictive.

■ **Marginal Threshold — 2804 Hz Loss Positive Deviation-** Enter the maximum positive deviation of measured loss (0 to 9) at 2804 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk as out of tolerance; default is 9. Smaller dB values are more restrictive.

■ **Unacceptable Threshold — 2804 Hz Loss Negative Deviation** — Enter the maximum negative deviation of measured loss (0 to 9) at 2804 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk unacceptable; default is 9. Smaller dB values are more restrictive.

■ **Unacceptable Threshold — 2804 Hz Loss Positive Deviation** — Enter the maximum positive deviation of measured loss (0 to 9) at 2804 Hz from the 1004 Hz test tone loss level (in dB) allowed before reporting a trunk unacceptable; default is 9. Smaller dB values are more restrictive.

■ **Marginal Threshold — Maximum C Message Noise** — Enter the maximum C-message noise interference (15 to 55) in dBmC above reference noise terminating on a voice terminal as measured within the voice band frequency range (500 to 2500 Hz) allowed before reporting a trunk as out of tolerance. The default is 55. Smaller values are more restrictive.

■ **Unacceptable Threshold — Maximum C Message Noise** — Enter the maximum C-message noise interference (15 to 55) in dBmC above reference noise terminating on a voice terminal as measured within the voice band frequency range (500 to 2500 Hz) allowed before reporting a trunk as unacceptable. The default is 55. Smaller values are more restrictive.

■ **Marginal Threshold — Maximum C Notched Noise** — Enter the maximum C-notched signal dependent noise interference (34 to 74) in dBmC allowed before reporting a trunk as out of tolerance. The default is 74. Smaller values are more restrictive.

■ **Unacceptable Threshold — Maximum C Notched Noise** — Enter the maximum C-notched signal dependent noise interference (34 to 74) in dBmC allowed before reporting a trunk as unacceptable. The default is 74. Smaller values are more restrictive.

■ **Marginal Threshold — Minimum SRL-HI** — Enter the minimum high-frequency signaling return loss (0 to 40) in dB allowed before reporting a trunk as out of tolerance. The default is 0. Larger values are more restrictive.

■ **Unacceptable Threshold — Minimum SRL-HI** — Enter the minimum high-frequency signaling return loss (0 to 40) in dB allowed before reporting a trunk as unacceptable. The default is 0. Larger values are more restrictive.

■ **Marginal Threshold — Minimum SRL-LO** — Enter the minimum low-frequency signaling return loss (0 to 40) in dB allowed before reporting a trunk as out of tolerance. The default is 0. Larger values are more restrictive.

■ **Unacceptable Threshold — Minimum SRL-LO** — Enter the minimum low-frequency signaling return loss (0 to 40) in dB allowed before reporting a trunk as unacceptable. The default is 0. Larger values are more restrictive.

- **Marginal Threshold — Minimum ERL** — Enter the minimum low-frequency echo return loss (0 to 40) in dB allowed before reporting a trunk as out of tolerance. The default is 0. Larger values are more restrictive.
- **Unacceptable Threshold — Minimum ERL** — Enter the minimum low-frequency echo return loss (0 to 40) in dB allowed before repotting a trunk as unacceptable. The default is 0. Larger values are more restrictive.
- **Allow ATMS Busyout, Error Logging and Alarming** — Enter "y" to allow ATMS error logging and alarming (subject to filtering depending on the service organization used to deal with alarms); default is n.
- **Maximum Percentage of Trunks Which Can Be Removed From Service by ATMS** — Enter the highest percentage of trunks from the trunk group (0 to 100) that can be removed from service at one time because of unacceptable transmission measurement results; default is 0.

Pages 4 through X of the Form (Group Member Assignments)

NOTE:
The total number of pages, and the first page of Group Member Assignments, will vary depending on whether the Administrable Timer and ATMS Threshold pages are displayed.

- **Administered Members (min/max)** — Indicates the minimum and maximum member number that has been administered for the particular trunk group. This field is displayed on all member pages.
- **Total Administered Members** — Indicates the total number of members administered in the trunk group. This field will appear on all trunk group member pages.
- **Port** — Enter seven characters. The first two characters identify the cabinet (01 to 22 [G3r V2], 1 to 3 [G3s V2, G3i V2]); the third character identifies the earner (A through E); the fourth and fifth identify the slot number in the carrier (01 to 20 for multi-carrier cabinets or 01 to 18 for single-carrier cabinets); the last two characters identify the circuit number (01 to 31).
- **Code** — Display-only field. Displays the type of circuit pack physically installed or logically administered at the location to which this member has been assigned. If a circuit pack is neither installed nor administered at the member's location, the field is blank.
- **Sfx** — Displays the type of circuit pack (suffix only) physically installed at the location to which this member has been assigned. Field is blank if a circuit pack has not been physically installed.
- **Name** — Enter up to ten characters to identify the member of the trunk group. The name can be a 7-digit telephone number or a 10-digit Trunk Circuit Identification number (provided by trunk supplier).

NOTE:
Previously, Generic 1 Night Service and Balance/Loss information was entered in the Name field as “NT#...” and “TT#)...” This information must now be entered in the Night field (below) or the STT Loss field on Page 1 of the form, as applicable.

- **Night** — Enter the extension of the night destination for the trunk. This individual night destination overrides the group night service destination on the first page of the trunk group form. Incoming calls are routed to this destination when the system is placed in night service mode. (If “attd” is entered, night service will be to the attendant.)
- **Mode** — Specifies the signaling mode used on Tie Trunks with TN722A, TN722B, TN760B (or later), TN767, TN464 (any suffix), TN437, TN439, TN458, or TN2140 circuit packs. Valid entries are “e&m” (interface), “simplex” (phantomed), or “protected.” This entry must correspond to associated dip switch settings on the circuit pack.
- **Type** — Specifies the signaling type to be used. This field should only be used with TN760B (or later release), TN722 (with any suffix), TN767, TN2140 (when the Trunk Signaling Type field is "cont”), TN437, TN439, TN464 (with any suffix), or TN458 circuit packs. The Type field appears with the Trunk Signaling Type field is “cont” or blank.

  The value of “t5 rev” is only allowed for the TN760D vintage 10 or later. When the Type field is “t5 rev,” the Mode field must be “e&m.”

  Valid entries are “t1 stan,“ “t1 comp,” “t5rev,” or “type 5.” Default is blank.
- **Ans Delay** — Specifies the length of the wait for answer supervision delay (in ms) for Trunks using the TN722A, TN722B, TN760 (B, C, or D), TN767, TN464 (any suffix), TN437, TN439, TN458, or TN2140 circuit packs. Valid entries are 20to5100 in increments of 20; default is no entry (blank) and internally treated as a zero. This delay serves two purposes:

  1. Used to assure that the answer supervision signal is valid and not a secondary delay-dial or wink-start signal.
  2. Used to bridge over momentary off-hook signals resulting from connections made off-network through certain No. 5 Crossbar CCSA switches as the connection is being established.

```
                                TRUNK GROUP              Page 1 of X

Group Number: xxx              Group Type: wats        CDR Reports? y
  Group Name: OUTSIDE_CALL_.       COR: 1_                    TAC : ____
   Direction: two-way Outgoing Display? n
 Dial Access? n           Busy Threshold: 99          Night Service: _____
Queue Length: 0_                Country: 1    Incoming Destination:  _____
   Comm Type: voice            Auth Code? n

                             Trunk Flash? n

TRUNK PARAMETERS
        Trunk Type: _____________
Outgoing Dial Type: tone____                    Incoming Dial Type: tone_
 Trunk Termination: rc____                Disconnect Timing(msec): 500_

                                             Sig Bit Inversion: none
                           Trunk Gain: high

Disconnect Supervision- In? y Out? n
Answer Supervision Timeout: 10_       Receive Answer Supervision? n
```

Screen 4-98. WATS Trunk Group Form (Page 1 of X)

Implementation Notes:

The BCC field is displayed when ISDN-PRI is optioned for on the System-Parameters Customer-Options form and the Comm Type field is ''avd," "rbavd," or ''data."

The Connected toToll and DTT to DCO Loss fields are displayed when the Trunk Type field is ''auto/ .."

The STT Loss field is displayed when the Connected to Toll field is ''n."

The Terminal Balanced field is displayed when the Trunk Type is ''ground-start" or ''loop-start."

The RA Trunk Loss is displayed when the Terminal Balanced field is ''n."

The Bit Rate, Synchronization, and Duplex fields are displayed when the Comm Type field is "avd."

The ITC (Information Transfer Capability) field appears for non-ISDN trunk groups and is displayed when the Comm Type field is "data," "avd," or "rbavd' and the BCC field is "0."

```
                          TRUNK GROUP               Page 2 of X
TRUNK  FEATURES
         ACA Assignment? n                      Measured:  none

                                  Data Restriction? n

  Abandoned Call Search? n             Maintenance Tests? y
  Suppress # Outpulsing? n
```

Screen 4-99. WATS Trunk Group Form (Page 2 of X)

Implementation Note:

The Long Holding Time (hours), Short Holding Time (seconds), and Short Holding Threshold fields are displayed when ACA Assignment is "y."

```
                                  TRUNK GROUP              Page 3 of X
ADMINISTRABLE  TIMERS
  Incoming Disconnect (msec) : 500            Outgoing Disconnect (msec) : 500
                                               Outgoing Dial Guard (msec): 1600
 Incoming Glare Guard (msec): 1500            Outgoing Glare Guard(msec):  1500

                                  Outgoing Rotary Dial Interdigit (msec): 800
      Ringing Monitor (msec): 5200                 Incoming Seizure (msec): 500
  Outgoing End of Dial (sec): 10**       Outgoing Seizure Response (sec): 5
Programmed Dial Pause (msec): 1500       Disconnect Signal Error(sec): 240
         Flash Length (msec): 540*


END TO END SIGNALING
   Tone (msec): 350                     Pause (msec): 150

OUTPULSING  INFORMATION
   PPS: 10    Make (msec): 40 Break (msec): 60 PPM? y Frequency: 50/12k
```

Screen 4-100. Timers Page for Ground Start WATS Trunk Group (two-way) with PPM

Implementation Note:

The Frequency field is only displayed when PPM is "y."

```
                                TRUNK GROUP              Page 3 of X
ADMINISTRABLE  TIMERS
  Incoming Disconnect (msec) : 500            Outgoing Disconnect (msec): 500
                                               Outgoing Dial Guard(msec): 1600
 Incoming Glare Guard(msec): 1500            Outgoing Glare Guard(msec): 1500

                                Outgoing Rotary Dial Interdigit (msec): 800
     Ringing Monitor (msec): 5200               Incoming Seizure (msec): 500
  Outgoing End of Dial (sec): 10**      Outgoing Seizure Response (sec): 5
Programmed Dial Pause (msec): 1500
         Flash Length (msec): 540*


END TO END SIGNALING
   Tone (msec): 350                    Pause: (msec): 150

OUTPULSING  INFORMATION
   PPS: 10    Make (msec):  40 Break (msec): 60 PPM? n
```

Screen 4-101. Timers Page for Loop Start WATS Trunk Group (two-way)

Implementation Note:

The Outgoing End of Dial field is only displayed if the Receive Answer Supervision field is “n.”

```
                                TRUNK  GROUP                Page 4 of X

                                                Administered Members (min/max) : xxx/yyy
                                                   Total Administered Members: xxx
GROUP  MEMBER  ASSIGNMENTS
         Port       Code      Sfx  Name          Night     Mode      Type      Ans Delay
    1:  _______    _____      _   _____________  _____    _______   _______   _____
    2:  _______    _____      _   _____________  _____    _______   _______   _____
    3:  _______    _____      _   _____________  _____    _______   _______   _____
    4:  _______    _____      _   _____________  _____    _______   _______   _____
    5:  _______    _____      _   _____________  _____    _______   _______   _____
    6:  _______    _____      _   _____________  _____    _______   _______   _____
    7:  _______    _____      _   _____________  _____    _______   _______   _____
    8:  _______    _____      _   _____________  _____    _______   _______   _____
    9:  _______    _____      _   _____________  _____    _______   _______   _____
   10:  _______    _____      _   _____________  _____    _______   _______   _____
   11:  _______    _____      _   _____________  _____    _______   _______   _____
   12:  _______    _____      _   _____________  _____    _______   _______   _____
   13:  _______    _____      _   _____________  _____    _______   _______   _____
   14:  _______    _____      _   _____________  _____    _______   _______   _____
   15:  _______    _____      _   _____________  _____    _______   _______   _____
```

Screen 4-102. WATS Trunk Group Form (Pages 4 to X)

To reduce repetition, the remaining pages are not shown. For a complete set of forms, refer to the “Blank Forms Package.”

Uniform Dial Plan (UDP)

This form is used to administer the Uniform Dial Plan (UDP). UDP is distinct from the local dial plan form. A PBX code match chooses an RNX and PBX-ID, and such a match can choose one of five different types of treatment which identify the RNX and PBX-ID in different ways. Additionally, each extension is matched first against the local extension translation and then against the UDP, so if an extension is administered to be on the local node, even though a matching UDP pattern exists, dialing it reaches the local extension and the call is not routed off the node.

The UDP consists of patterns that may match all the digits of the dialed extension.

NOTE:
The Total number of patterns will vary depending on System configuration. Refer to the Capacity Table in Appendix C for more information.

These patterns consist of digits and a trailing wildcard "x" pattern, thus entires can be conserved by using wildcards. For example, "20xxx" would match and route all extensions beginning with "20." More exact matches take precedence over less, so the extension 20100 would match the entry "201xx'' before it matched "20xxx."

Once a pattern is matched, one of five different routing treatments can be applied.

1. **Local** (Local) — Intercept treatment is given to the caller. The call is not routed anywhere.
2. **Reorder treatment** (TempOOS) — Used on the old home of a station while it is being moved.
3. **AAR Location Code** (AARCode) — This code is prefixed to the last 4 digits of the extension and the resulting digit string is given to AAR. AAR performs digit conversion and/or analysis. There are two tables: the aar digit conversion and aar digit analysis tables. The best match may be in either one. Conversion matches take precedence over analysis matches only to break a tie (identical matching digits). Conversion matches can form a new number and send the digit string to ARS, through AAR again, or back to UDP. Eventually, analysis is used to route the call.
4. **UDP Code** (UDPCode) — Most likely used in a DCS network. This is identical to AARCode, except that no digit conversion is ever performed (the call must route via AAR).
5. **ENP Node** (ENPNode) — Most likely used in a DCS network. This node number is the PBX-ID for DCS. The node-number-routing form maps this node number into a routing pattern for routing the call. The enp-number-plan form provides the information to convert the extension into a 7-digit number, in a manner similar to the UDPCode. A difference here is that the AAR analysis table is never used in this form of routing.

Attendant Console

This form is used to assign one Attendant Console in the System. The form is used to administer either a Basic Attendant Console (Figure 5-1) or Enhanced Attendant Console (Figure 5-2). As far as administration is concerned, the basic console and enhanced console are treated as the same console.

Administration Commands

The following administration commands can be used to access the Attendant Console form. In some cases, just the most commonly used commands are shown. Refer to “Administration Commands” in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
add	attendant	1 -MAX
change	attendant	1 -MAX
display	attendant	1-MAX ['print’ or ‘schedule']
remove	attendant	1 -MAX

* Brackets [ ] indicate the qualifier is optional. MAX is the maximum number available in your system configuration. Refer to the Capacity Table in Appendix C.

Form Instructions

Make assignments in the following fields on each page of the form:

Page 1 of the Form

■ **Attendant Console x** — Enter the console number when completing a paper form. This is a display-only field when the form is accessed using an administration command such as adder change.

■ **Type** — Indicates the type of attendant console being administered. Valid options are: “console” (default) and “302B1.“ (The 302B1 Attendant Console administration will be available June, 1994.) If the attendant console is not a 302B1 type, the field must contain “console.”

NOTE:
You can administer the type as “302B1” only if the G3 Version field on the System-Parameters Customer-Options form contains “V3" or higher.

■ **Extension** (Optional) — Enter the extension for the individual attendant console. If an extension is not assigned, the attendant can only be addressed as a member of the attendant group. Default is blank. Refer to the "Individual Attendant Access” feature in *DEFINITY Communications System Generic 3 V2 Feature Description,* 555-230-204,

for additional information. Once administered, the individual attendant extension can also be entered in any of the following:

- Any coverage point in a call coverage path (Call Coverage Paths form)
- CAS Backup Extension (Console Parameters form)
- Hunt Group Supervisor Extension (Hunt Group form)
- LDN Night Extension (Listed Directory Numbers form)
- Stations with Systemwide Message Retrieval Permission (Feature-Related System Parameters form)
- Member of a Hunt Group (Hunt Group form)
- Incoming Destination for a Trunk Group (Trunk Group forms)
- Night Service Destination for a Hunt Group (Hunt Group form)

■ **Name** — Enter the name of this console (up to 15 alphanumeric characters). Any entry is accepted, default is blank.

■ **Console Type** — Enter the intended use for this console; valid entries are “principal,” “day-only,“ “night-only,” or “day/night.” Default is blank. There can only be one night-only or one day/night console in the System. Night Service is activated from the principal console only.

■ **COS** — Enter the class of servioe (COS) for this attendant console (0 through 15). Default is ”1.“

■ **Auto Answer** — Entering “all” for Auto Answer indicates that an incoming call to an idle attendant will be automatically answered without any action (no button presses required) by the attendant. Entering “acd” for Auto Answer indicates that only ACD split/skill calls and direct agent calls can auto answer. Non-ACD calls terminated to an attendant console with Auto Answer set to “acd” ring audibly. Entering “none” causes all calls terminated to this attendant console to receive some sort of audible ringing treatment. Default is “none.”

■ **Port** — Enter seven characters.

The entry breaks down as follows:

Character	Meaning	Value
1-2	Cabinet Number	01 through 22 (G3r V2) 01 through 03 (G3i V2) 01 (G3s V2)
3	Carrier	A through E
4-5	Slot Number	01 through 20
697	Circuit Number	01 through 08 (Digital Line circuit pack)

NOTE:
When using the Administration Without Hardware feature, place an "X" in this field to indicate that there is no hardware associated with this port assingment. An individual attendant extension must be assigned in the Extension field.

Each attendant console requires a port on a TN754B Digital Line circuit pack. For reliability, the attendant consoles should not be assigned to ports on the same TN754B circuit pack. For example, if three attendant consoles are to be provided, assign each console to a port on three different TN754Bs, if possible. However, if required, all attendant consoles can be assigned to ports on the same TN754B circuit pack.

NOTE:
For installations outside the United States of America, refer to Appendix B, *Application Notes,* for the appropriate circuit packs.

- **COR** — Enter the class of restriction (0 through 95) that reflects the desired restriction. Default is "1."
- **Data Module** — Enter "y" if the console is to be connected to a data terminal via 7400B Data Module. If "y" is entered, the Data Module form (Page 4) must be completed. Default is "n."
- **Display Language** — Enter the language in which you want console messages displayed. English, French, Italian, Spanish, and "user-defined" are acceptable entries. English is the default.

  Refer to the Language Translations forms in this chapter, and the "Administrable Language Display" feature in Chapter 3, to administer the "user-defined" language set.
- **DIRECT TRUNK GROUP SELECT BUTTON ASSIGNMENTS (Trunk Access Codes)** — Enter the trunk access codes (TACs) for local and remote PBXs. (There are fields for one local TAC and one remote TAC per button labeled *Local* and *Remote.)* The local TAC (1 to 4 digits) refers to a trunk group or Loudspeaker Paging zone on this PBX. Remote TACs are only useful in a Distributed Communications System (DCS) network. The remote TAC (1 to 3 digits) refers to a trunk group on the remote PBX. If a remote TAC is given, then the local TAC must refer to a trunk group that connects directly to the remote PBX and is also limited to 1 to 3 digits.

  It is recommended that a DCS trunk be specified as the local TAC between the local and remote switches. If the TAC specified as local between the local and remote switches is not a DCS trunk, the remote trunk cannot be monitored by the local switch.
- **HUNDREDS SELECT BUTTON ASSIGNMENTS** — Enter in the appropriate field (1 through 20), the hundreds group to be associated with a Hundreds Group Select button located on an optional selector console (Figure 5-3 and Figure 5-4). Fields 1 through 8 are used when the selector console is a 24A-type console (Figure 5-3) and fields 1 through

20 are used when the console is a 28A-type console (Figure 5-4). The hundreds group number entered in the field represents all but the last two digits of an extension number (for example, the Hundreds Select Button — on the selector console — for extension 3822 would be “38”; the Hundreds Select Button for extension 27105 would be “271”). The last two digits of an extension number are obtained (after pressing a Hundreds Group Select button) by pressing the appropriate extension button (00 through 99) on the console.

Page 2 of the Form

This page is only displayed if the Data Module field on Page 1 is “y.” Complete the Data Module form as follows:

- **Data Extension** — Enter the extension number assigned to the data module. A data extension can be a 1- to 5-digit number and must agree with the System’s Dial Plan.
- **BCC** — Display-only field. Only displayed when the ISDN-PRI option is enabled on the System-Parameters Customer-Options form.

  NOTE:
  Refer to “Generalized Route Selection” in *DEFINITY Communications System Generic 3 V2 Feature Description,* 555-230-204, for a detailed description of Bearer Capability Classes (BCCs) and their use to provide specialized routing for various types of voice and data calls. The BCC value is used to determine compatibility when non-ISDN-PRI facilities are connected to ISDN facilities (ISDN-PRI Interworking feature).

- **ITC** — Enter “restricted” or “unrestricted.”
- **Name** — Enter the name of the user associated with the data module. The name is optional, it can be left blank.
- **COR** — Enter the desired class of restriction (COR) number from 0 through 95. Default is ”1.“
- **COS** — Enter the desired class of service (COS) number from 0 through 15 to designate allowed features. Refer to “Class of Service” form for additional information on the allowed features. Default is ”1.“
- **ABBREVIATED DIALING List 1:** — Enter “p” (personal), “s” (system), “g” (group), or “e” (enhanced). If “g” or “p” is entered, a group number or personal list number is also required.
- **SPECIAL DIALING OPTION** — Enter one of three dialing options that are available. This identifies the destination of all call when this data module originates calls. Valid entries are “hot-line,” “default,” or leave blank.
- **HOT LINE DESTINATION** — **Abbreviated Dialing Dial Codes** — Only displayed when the SPECIAL DIALING OPTION field is “hot-line.” Enter a dial code within the range of the abbreviated dialing list type. The associated AD number is dialed when the user goes off-hook on a Data Hot Line call.

- **DEFAULT DIALING Abbreviated Dialing Dial Code** — Only displayed when the Special Dialing Option field is "default." Enter a dial code within the range of the abbreviated dialing list type. The associated AD number is dialed when the user goes off-hook and enters a carriage return following the "DIAL" prompt. The data call originator can also perform data terminal dialing by specifying a dial string that may or may not contain alphanumeric names.
- **Ext** — Display-only field. This is the extension number of a previously administered user who has an associated Data Extension button and who will share the use of the module.
- **Name** — Display-only field. Contains the name assigned to the above extension numbs.

Page 3 of the Form (Page 2 if the Data Module form is not displayed)

- **FEATURE BUTTON ASSIGNMENTS** — Enter the desired feature buttons from Table 5-1 that you want to assign to the attendant console. The fixed buttons that cannot be changed (that is, split and forced release) are shown on the form. The hold, night-serv, and pos-busy buttons are shown in the System default locations. These buttons can be administered elsewhere on the form. The following provides descriptions of feature buttons that are unique to the attendant console. Refer to Table 5-1 and to the "Voice Terminals — General" section in this chapter for a description of the feature buttons.
  - Audible Tones On/Off
    - "cw-ringoff" — Call waiting ringer off; turns on/off the audible tone for call waiting on attendant console (1 per console).
    - "in-ringoff" — Incoming call ringer off; turns on/off the audible tone for incoming call ringer (1 per console).
    - "re-ringoff" — Timed reminder ringer off; turns on/off the audible tone for timer reminder ringer (1 per console).
  - Alternate FRL ("alt-frl") — Alternate facility restriction level; allows the attendant to activate or deactivate the AFRL feature. When activated, this allows the originating device (lines or trunks) to use an alternate set of the facility restriction levels to originate a call (1 per console).
  - Attendant Control of Trunk Group Access
    - "act-tr-grp" — Activate trunk group access; allows the attendant to control a trunk group. All calls going to the trunks are routed to the attendant (1 per console).
    - "deact-tr-g" — Deactivate trunk group access; allows the attendant to release control of a trunk group (1 per console).
  - Display Class of Restriction ("class-rstr") — Display Class of Restriction; used to display the COR associated with a call (1 per console).

- Emergency Access to the Attendant (“em-acc-att”) — Emergency access to attendant; the associated status lamp is flashed when there is one or more calls on the emergency attendant queue (1 per console).
- Hold (“hold”) — When the hold button is pressed while the attendant is active on a loop, the party on the loop is put on hold and the “Hold” button associated with the loop is lit (1 per console).
- Position Busy (“pos-busy”) — When this button is pushed, the attendant is put into position busy mode, the “Pos Avail” light is turned off, and the light associated with the pos-busy button is lit. Pushing the pos-busy button a second time takes the console out of “position busy” mode, turns on the “Pos Avail” light and turns off the light associated with the pos-busy button.

  If the pos-busy button is administered on a 2-LED button, the top LED flashes when the last attendant goes into “Position Busy” mode. Otherwise, if the button has only one LED, the single LED associated with the Poe-busy button flashes (1 per console).
- Serial Call (“serial-cal”) — This button allows the attendant-extended calls to return to the same attendant if the trunk remains off-hook (1 per console).
- Attendant Override (“override”) — This button enables the attendant to override diversion features such as, Call Forwarding, Call Coverage, and soon (1 per console).
- Call Offer (“intrusion”) — Depression of this button allows the attendant to extend a call when the called party is active on another call (1 per console).
- Don’t Split (“dont-split”) — This button allows the attendant to not split away a call when dialing (1 per console).
- Visually Impaired Attendant Service (“vis”) — This button activates visually impaired service for the attendant. When this service is activated, the attendant can listen to console status or messages by pressing buttons that have been translated as follows:
  - “con-stat” repeats the console status.
  - “display” calls out display contents.
  - “dtgs-stat” calls out the DTGS status.
  - “last-mess” repeats the last message.
  - “last-op” repeats the last operation.

- Trunk Group Select — In addition to the 12 Direct Trunk Group Selection (DTGS) Button Assignments on Page 1 of the form, up to 12 single lamp DTGS buttons can be administered on this page. The status lamp associated with the feature button is used to monitor the busy/idle status of the trunk. Trunk groups administered on these buttons cannot be controlled using Attendant Control of Trunk Group Select buttons. The single lamp DTGS buttons can be administered as follows:
  - "local-tgs" — Local trunk group select; allows the attendant to access trunk groups on the local PBX (combination of 12 local-tgs/remote-tgs per console).
  - "remote-tgs" — Remote trunk group select; allows the attendant to access trunk groups on a remote PBX (combination of 12 local-tgs/remote-tgs per console).
  - "hundrd-sel" — Hundreds group select; in addition to the fixed HGS buttons on Page 1 of the form, a user can administer hundreds group select feature buttons on this page. When a feature button is administered as "hundrd-sel," a subfield appears that must then be administered in the same manner as the fixed HGS button fields (a 1 to 3 digit hundreds group plus prefix, if needed). Administered "hundrd-sel" feature buttons operate in the same manner as fixed HGS buttons.

    The total number of hundreds group select buttons (fixed and administered) allowed on a console is 20. Thus, if all 20 fixed HGS buttons have been administered, no "hundrd-sel" feature buttons can be administered.

    NOTE:
    If no fixed HGS buttons are administered, 19 "hundrd-sel" feature buttons are available. This is because 5 of the 24 feature buttons must be used for required feature buttons (hold, pm-busy, night-serv, forced-rel, and split).

- Group Display ("group-disp") — (G3V3 only) Allows the attendant to see a display of extensions currently being tracked on the DXS module.
- Group Select ("group-sel") — (G3V3 only) Allows the attendant to select a specific group of hundreds by dialing the first 2 or 3 digits of the hundreds group.
- Attendant Room Status (G3V3 only)
  - "occ-rooms" — Occupied rooms; allows the attendant to see which rooms are occupied.
  - "maid-stat' — Maid status; allows the attendant to see which rooms are in one of six specified states.

- VuStats ("vu-display") — (G3V3 only) This button allows users with display terminals and attendants to turn on the VuStats display. The limit to the number of VuStats feature buttons you can administer depends on how many feature buttons are available on the attendant console you are administering. The system is designed to allow you to set up a separate VuStats display format for each feature button. Therefore, agents can change the type of measurements on their display by selecting a different VuStats feature button.

  When you enter "vu-display" for one of the feature button assignments, the display shows:

  #:vu-display Format:_ID:_____

  where "#" is the feature button number. These fields appear for each feature button to which you assign "vu-display." In the Format field, enter the number (from 1 to 25) of the format you want to display when a user presses this feature button. In the ID field, you can enter a split or trunk group number, or the agent extension, login ID, or vector directory number (VDN). This specifies the data that VuStats displays. The ID field is optional. If the ID is left blank, the user enters the ID on the key pad when activating the feature.

  Note that these two fields are closely related to the Object Type that you specify on the Display Format form. For example, a Format "10" must have an associated Display Format "10." Additionally:

  - The value for the ID on this form should be an agent extension or login ID if the Object Type on the associated Display Format form associated with the Format is "vu-agent-extension."
  - The ID should should be a split or skill number if the Object Type for the associated Display Format is "vu-split."
  - The ID should should be a trunk group number if the Object Type for the associated Display Format is "vu-trunk-group."
  - The ID should be a VDN extension if the Object Type for the associated Display Format is "vu-vdn."
  - The ID should be left blank if the Object Type for the associated Display Format is "vu-agent." Data for the currently staffed agent appears when the user activates the feature.

    NOTE:
    The specified agent, split, trunk group, or VDN can be unassigned when you administer the button.

If 12 HGS buttons are assigned on page 2 of the form, it is recommended that the "night," "pos-busy," and "hold" buttons be reassigned to locations 20, 21, and 3, respectively. The HGS buttons should then be assigned to the right-most three columns, as required.

Page 4 of the Form (Page 3 if the Data Module form is not displayed)

- **DISPLAY MODULE BUTTON ASSIGNMENTS** — Enter the desired feature or functions from Table 5-1. Display-type buttons are used to obtain display functions on the associated alphanumeric display. These buttons are noted as "[display button]" in the Feature or Function column on the table. Also, several feature buttons can be administered so that their associated status lamps can be used to provide visual indications of the associated feature or function. In some cases, the button itself is not operational. These buttons are noted as "[status lamp]." If a Call Cover Msg Rt (cov-msg-rt) button is assigned, a Leave Word Calling Delete Msg (delete-msg) button and a Next (next) button must also be assigned.

```
                                                                  Page 1 of X
                                  ATTENDANT CONSOLE _
              Type:  console
         Extension: _____         Name: _____________
      Console Type: _________      COS : 1                 Auto Answer: none
              Port: _____          COR : 1                 Data Module? n
                                                         Display Language: english
DIRECT TRUNK GROUP SELECT BUTTON ASSIGNMENTS (Trunk Access Codes)
    Local Remote                          Local Remote
  l  :  _  _                            7  :  _  _
  2  :  _  _                            8  :  _  _
  3  :  _  _                            9  :  _  _
  4  :  _  _                           10:  _  _
  5  :  _  _                           11:  _  _
  6  :  _  _                           12:  _  _
HUNDREDS SELECT BUTTON ASSIGNMENTS
  1:  _          6:  _          11:  _          16:  _
  2:  _          7:  _          12:  _          17:  _
  3:  _          8:  _          13:  _          18:  _
  4:  _          9:  _          14:  _          19:  _
  5:  _         10:  _          15:  _          20:  _
```

Screen 5-12. Attendant Console Form (Page 1 of X)

```
                                                                Page 2 of 4
                                    STATION
DATA  MODULE
     Data Extension:____                BCC: 2          ITC: rest
               Name: _____________      COR: 1_         COS: 1_
ABBREVIATED  DIALING
 List1: ________
SPECIAL  DIALING  OPTION:  default
   DEFAULT  DIALING
        Abbreviated Dialing Dial Code (From above list): _
ASSIGNED MEMBER ( Station with a data extension button for this data module )
        Ext      Name
     1:
```

Screen 5-13. Attendant Console Data Module Form (Page 2 of 4)

Implementation Notes:

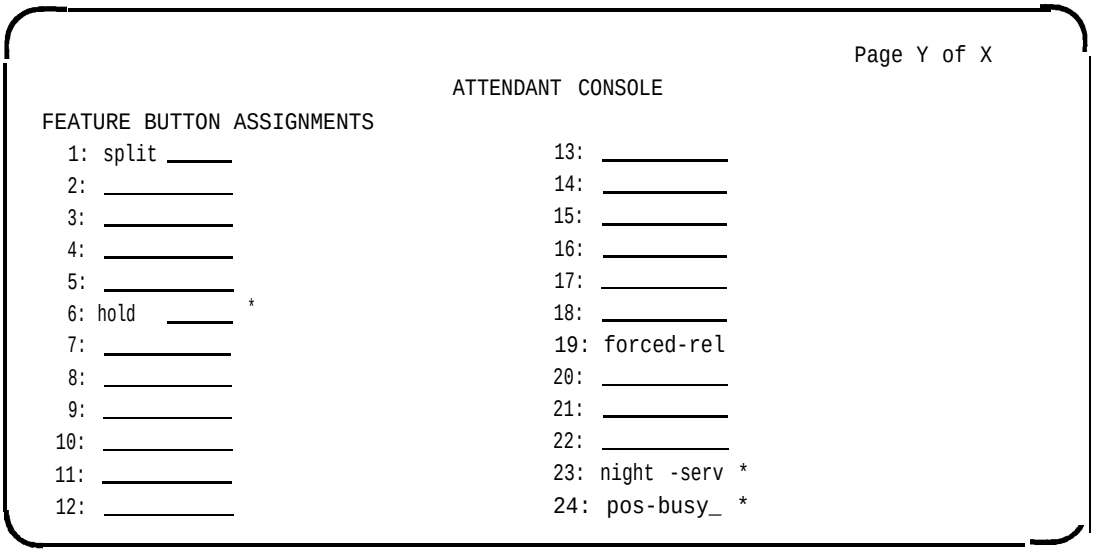
This page is only displayed if the Data Module field on Page 1 is ”y.”

The BCC field is only displayed if the ISDN-PRI option is enabled on the System-Parameters Customer-Options form.

HOT LINE DESTINATION is only displayed when the SPECIAL DIALING OPTION field is “hot-line.”

DEFAULT DIALING is only displayed when the SPECIAL DIALING OPTION field is “default.”

Abbreviated Dialing Dial Code only displayed when SPECIAL DIALING OPTION is “hot-line” or “default.”

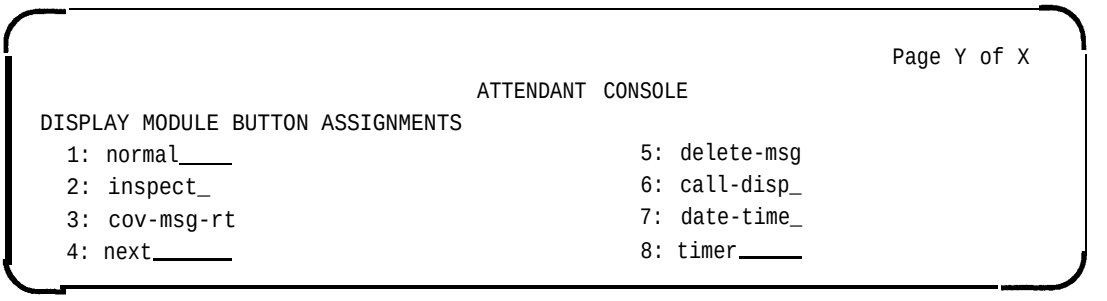


```
                                                          Page Y of X
                                ATTENDANT CONSOLE
FEATURE BUTTON ASSIGNMENTS
  1: split _____                          13: _____
  2: _____                                14: _____
  3: _____                                15: _____
  4: _____                                16: _____
  5: _____                                17: _____
  6: hold  _____ *                        18: _____
  7: _____                                19: forced-rel
  8: _____                                20: _____
  9: _____                                21: _____
 10: _____                                22: _____
 11: _____                                23: night -serv *
 12: _____                                24: pos-busy_ *
```

Screen 5-14. Attendant Console Form (Page Y of X)

Implementation Note:

* Feature button administrable to other button locations (shown in system default location).



```
                                                          Page Y of X
                                ATTENDANT CONSOLE
DISPLAY MODULE BUTTON ASSIGNMENTS
  1: normal____                           5: delete-msg
  2: inspect_                             6: call-disp_
  3: cov-msg-rt                           7: date-time_
  4: next_____                            8: timer_____
```

Screen 5-15. Attendant Console Form (Page Y of X)

Implementation Note:

Default feature buttons shown above. Other display feature buttons as noted on Table 5-l can be administered here, as required.

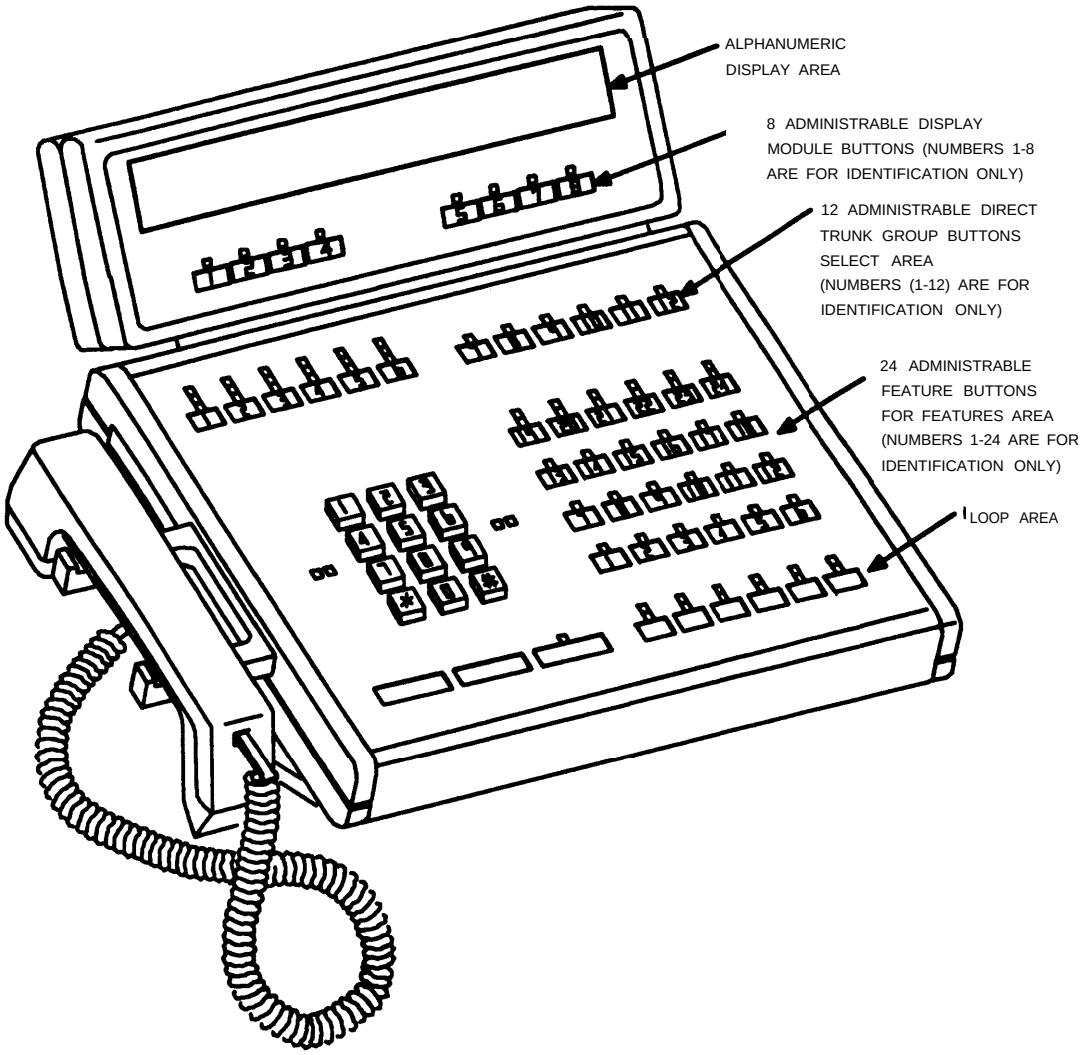


Figure 5-1. Basic Attendant Console (301A) Button Assignments

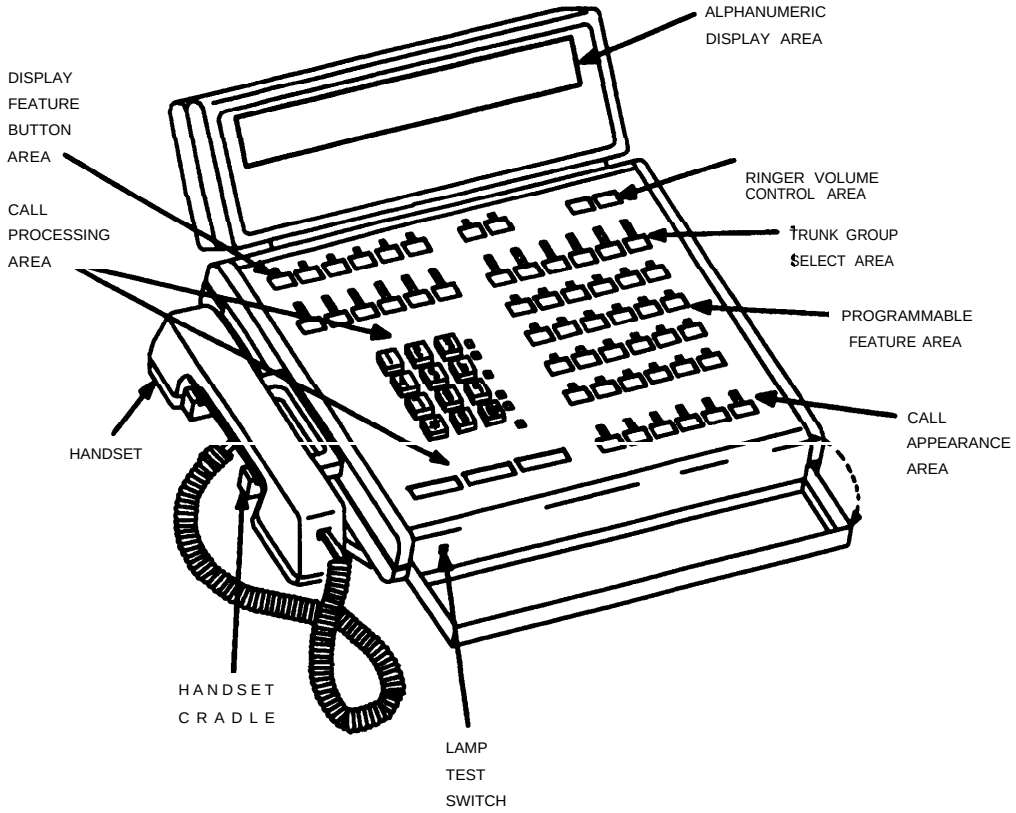


Figure 5-2. Enhanced Attendant Console (302A) Button Assignments

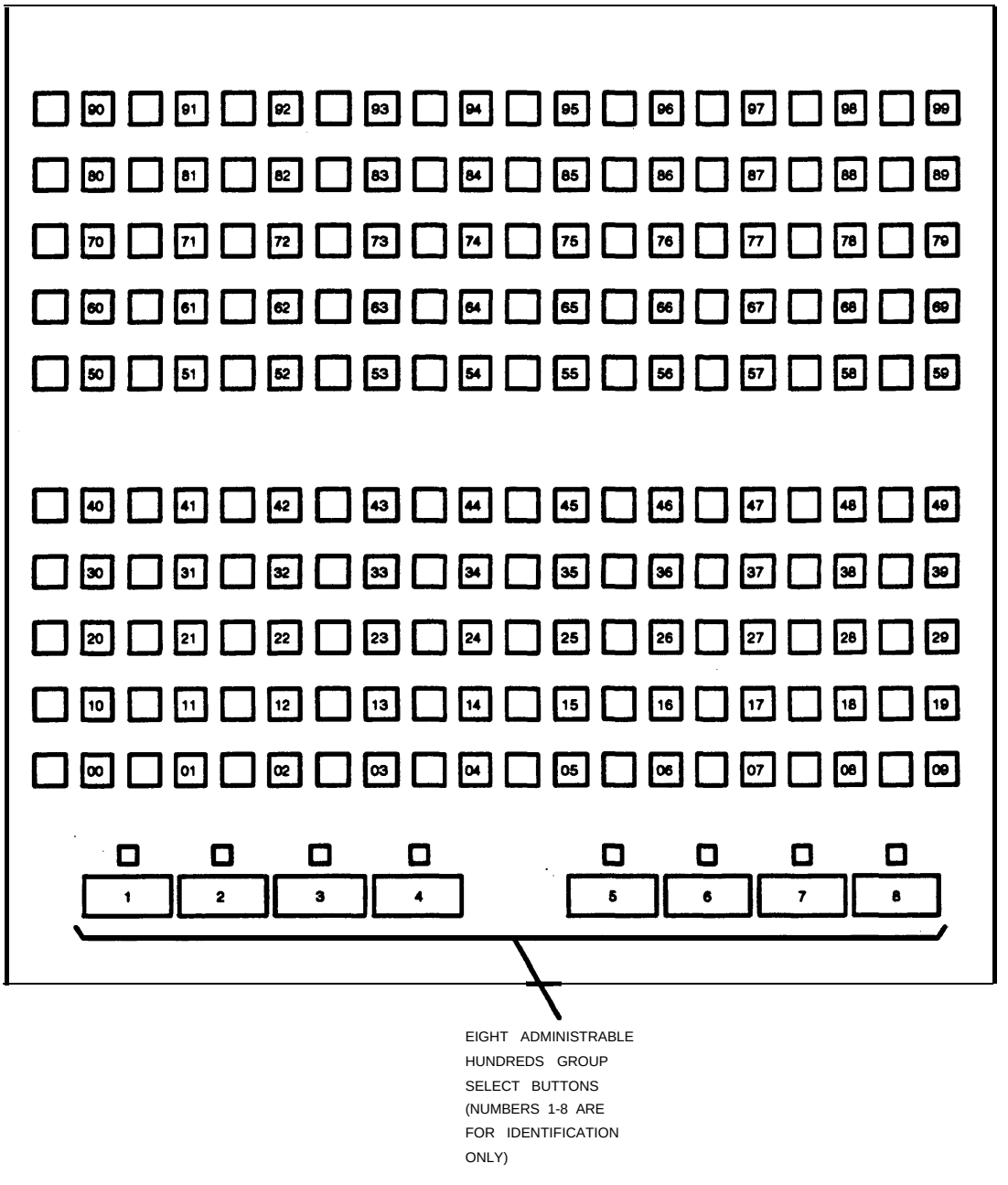


Figure 5-3. Selector Console (24A) Administrable Hundreds Group Select Buttons

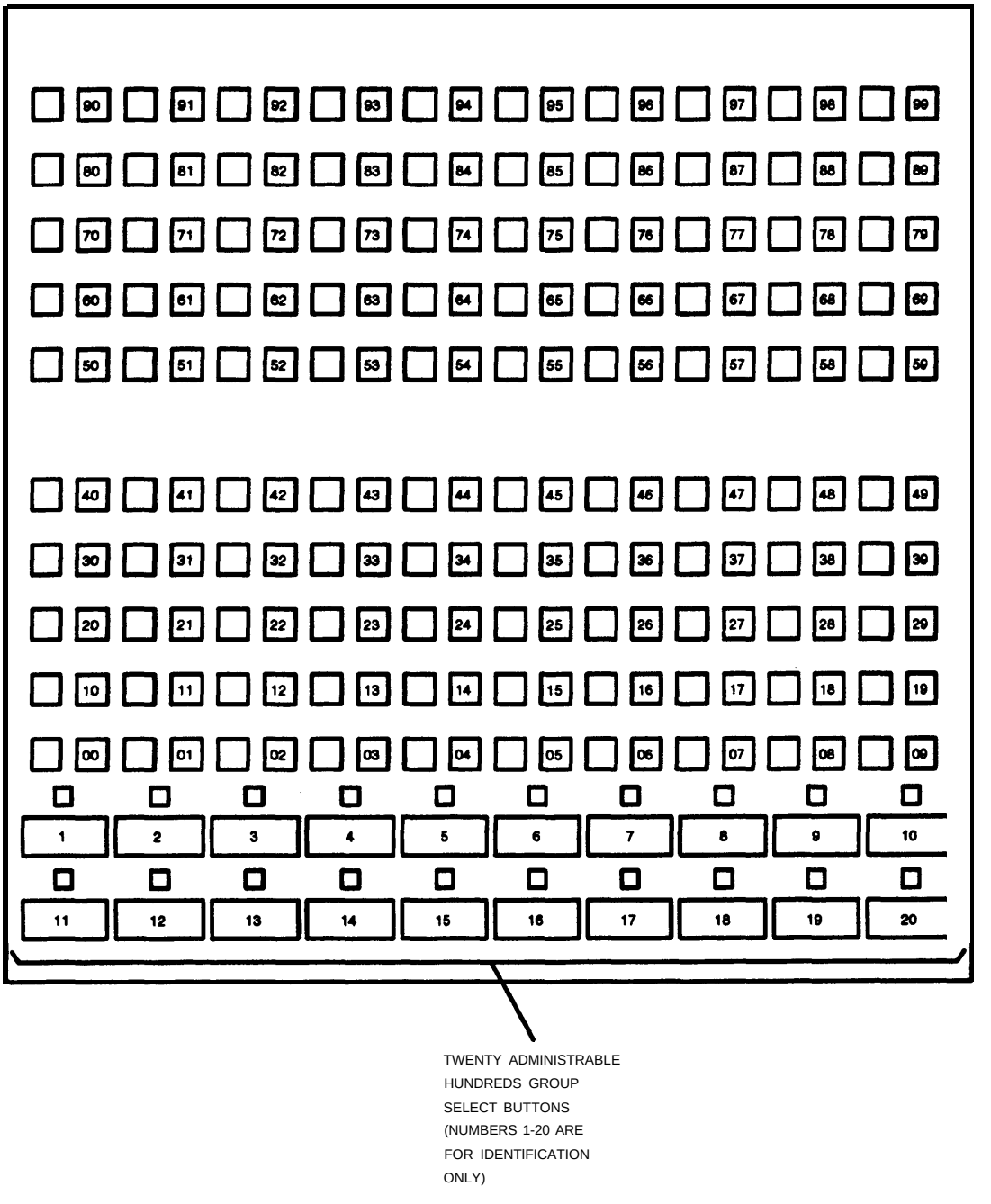


Figure 5-4. Enhanced Selector Console (26A) Administrable Hundreds Group Select Buttons

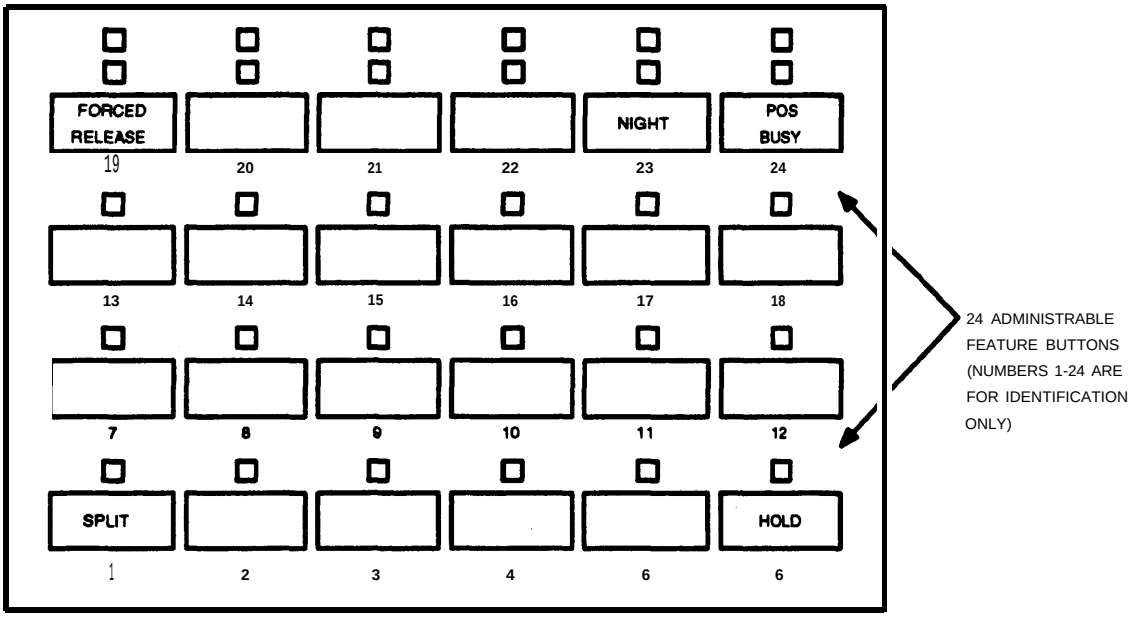


Figure 5-5. Attendant Console 24 Administrable Feature Button Number Assignments

Table 5-1. Attendant Console Feature Button Characteristic

Feature of Function	Recommended Button Label	Name Entered On Station Form	Maximum Allowed*	Notes **
Abbreviated Dialing	AD	abrv-dial (List:_ DC:_)	1 per List/DC	1
Administered Connection [status lamp]	AC Alarm	ac-alarm	1	
Automatic Call Distribution (ACD)	After Call Work	after-call (Grp. No._)	N	2
	Assist	assist (Grp. No:_)	1 per split group	2
	Auto In	auto-in (Grp. No._)	1 per split group	2
	Auxiliary Work	aux-work (Grp. No._)	1 per split group	2
	Manual-In	manual-in (Grp. No._)	1 per split group	2
	Release	release	1	
	Work Code	work-code	1	
	Stroke (0-9)	stroke-cnt	1	10
Attendant Console (Calls Waiting)	CW Aud Off	(Code:) cw-ringoff	1	
Attendant Control of Trunk Group Access (Activate)	Cont Act	act-tr-grp	1	
Attendant Control of Trunk Group Access (Deactivate)	Cont Deact	deact-tr-g	1	
Attendant Direct Trunk Group Select	Local TG Remote TG	local-tgs remote-tgs	12	9
Attendant Display [display buttons]	Date/Time	date-time	1	
	Inspect Mode	inspect	1	
	Normal Mode	normal	1	
	Stored Number	stored-num	1	
	Timer	timer	1	

* N = any number of buttons on the voice terminal can be assigned to this feature. Feature button descriptions are provided in the “Voice Terminals — General” section of this chapter.

** See Notes at end of table.

Table 5-1. Attendant Console Feature Button Characteristics *(continued)*

Feature or Function	Recommended Button Label	Name Entered On Station Form	Maximum Allowed*	Notes **
Attendant Hundreds Group Select	Group Select _	hundrd-sel (Grp:_)	20 per console	11
Attendant Room Status	Occupied Rooms Status	occ-rooms	1	13
	Maid Status	maid-stat	1	13
Attendant Override	Override	override	1	
Automatic Circuit Assurance	ACA	aca-call	1 per system	
Automatic Wakeup (Hospitality)	Auto Wakeup	auto-wkup	1	
Busy Verification	Busy Verify	verify	1	
Call Coverage	Cover Cback	cov-cback	1	
	Consult	consult	1	
	Go To Cover	goto-cover	1	
Call Coverage [display button]	Cover Msg Rt	Cov-msg-rt	1	
Call Offer	Intrusion	intrusion	1	
Call Prompting [display button]	Caller Info	callr-info	1	
Centralized Attendant Service	CAS-Backup	cas-backup	1	
Check In/Out (Hospitality) [display buttons]	Check In	check-in	1	
	Check Out	check-out	1	
Class of Restriction [display button]	COR	class-rstr	1	
Demand Print	Print Msgs	print-msgs	1	
Do Not Disturb (Hospitality)	Do Not Disturb	dn-dst	1	
Do Not Disturb (Hospitality) [display buttons]	Do Not Disturb Ext	ext-dn-dst	1	
	Do Not Disturb Grp	grp-dn-dst	1	
Don't Split	Don't Split	dont-split	1	

* Feature button descriptions are provided in the "Voice Terminals — General" section of this chapter.

** See Notes at end of table.

Table 5-1. Attendant Console Feature Button Characteristics *(continued)*

Feature Or Function	Recommended Button Label	Name Entered On Station Form	Maximum Allowed*	Notes **
Emergency Access To the Attendant	Emerg. Access To Attndt	em-acc-att	1	
Facility Busy Indication [status lamp]	Busy (trunk or extension)	busy-ind (TAC/Ext: _)	1 per TAC/Ext.	8
Facility Test Calls [status lamp]	FTC Alarm	trk-ac-alm	1	
Group Display	Group Display	group-disp	1	12
Group Select	Group Select	group-sel	1	
Hardware Failure [status lamps]	Major Hdwe Failure	major-alrm	10 per system	
	Auto Wakeup	pr-awu-alm	1	
	DS1 (facility)	ds1-alarm	10 per system	
	PMS Failure	pms-alarm	1	
	PMS Ptr Alm	pr-pms-alm	1	
	CDR 1 Failure	cdr1-alrm	1	
	CDR 2 Failure	cdr2-alrm	1	
	Sys Ptr Alm	pr-sys-alm	1	
Hold	Hold	hold	1	
Integrated Directory [display button]	Integrtd Directory	directory	1	
Incoming Call Identification	Coverage (Group number, type, name, or ext.#)	In-call-id	N	
Leave Word Calling	Cancel LWC	lwc-cancel	1	
	LWC	lwc-store	1	
Leave Word Calling [display buttons]	Delete Msg	delete-msg	1	
	Next	next	1	
	Call Display	call-disp	1	
Leave Word Calling (Remote Message Waiting) [status lamp]	Msg (name or extension #)	aut-msg-wt (Ext:_)	N	8
Link Failure	Link Failure (Link No._)	link-alarm (Link No._)	1 per Link #	3

* Feature button descriptions are provided in the “Voice Terminals — General” section of this chapter.

** See Notes at end of table.

Table 5-1. Attendant Console Feature Button Characteristics *(continued)*

Feature or Function	Recommended Button Label	Name Entered on Station Form	Maximum Allowed	Notes **
Night Service (ACD)	Hunt Group	hunt-ns (Grp. No._)	3 per hunt group	4
	Trunk Grp.	trunk-ns (Grp. No._)	1 per trunk group	5
PMS Interface [display buttons]	Message Waiting Act.	mwn-act	1 per system	
	Message Waiting Deact	mwn-deact	1 per system	
Priority Calling	Prior Call	priority	N	
Position Busy	Position Busy	pos-busy	1	
Queue Status indications (ACD) [display buttons]	AQC	atd-qcalls (Grp:_)	1	6
	AQT	atd-qtime (Grp:_)		6
Queue Status indications (ACD) [status lamps]	NQC	q-calls(Ext:_)	1	7
	OQT	q-time (Ext:_)	1 per hunt group	7
Ringing	In Aud Off	In-ringoff	1	
Serial Call	Serial Call	serial-cal	1	
System Reset Alert	System Reset Alert [status lamp]	rs-alert	1	
Time of Day Routing [display buttons]	Immediate Override	man-ovrid	1	
	Clocked Override	clk-overid	1	
Timed Reminder	RC Aud Off	re-ringoff	1	
Trunk Identification [display button]	Trunk-ID	trk-id	1	
Trunk Group Name [display button]	Trunk-Name	trunk-name	1	

* N = any number of buttons on the voice terminal can be assigned to this feature. Feature button descriptions are provided in the "Voice Terminals — General" section of this chapter.

** See Notes at end of table.

Table 5-540. Attendant Console Feature Button Characteristics *(continued)*

Feature Or Function	Recommended Button Label	Name Entered On Station Form	Maximum Allowed*	Notes **
Visually Impaired Service (VIAS)	VIS	vis	1	
	Console Status	con-stat	1	
	Display	display	1	
	DTGS Status	dtgs-stat	1	
	Last Message	last-mess	1	
	Last Operation	last-op	1	
VOA Repeat	VOA Repeat	voa-repeat	1	14, 15
VuStats	VuStats	vu-display	1	14

** See Notes at end of table.

Notes:

1. List: List number 1 to 3 where the destination number is stored.
   DC: Dial codes of destination number.
2. Grp: The split group number for ACD.
3. Link: A link number — 1 to 8 for multi-carrier cabinets, 1 to 4 for single-carrier cabinets).
4. Grp: A hunt group number.
5. Grp: A trunk group number.
6. Grp: Group number of the hunt group.
7. Ext: Extension number of the hunt group (cannot be a VDN extension).
8. Ext: May be a VDN extension.
9. TAC: local-tgs — TAC of local TG
   remote-tgs – (L-TAC) TAC of TG to remote PBX
   remote-tgs – (R-TAC) TAC of TG on remote PBX

   The combination of local-tgs/remote-tgs per console must not exceed 12 (maximum). Label associated button appropriately so as to easily identify the trunk group.
10. Code: Enter a stroke code (0 through 9).
11. Grp: Enter a hundreds group number (1 through 20).
12. This button can be administered as either an attendant display button or a feature button.
13. (G3V3 only) “G3V3 Enhanced Hospitality” must be optioned on the System-Parameters Customer-Options form.
14. G3V3 only.
15. VDN of Origin must be enabled.

BCMS/VuStats Login ID

If you want to monitor call center activity by agent login IDs, and if the "BCMS/VuStats Login ID" field on the System-Parameters Customer-Options form is set to "y" but the EAS feature is not optioned, the administrator uses this form to administer valid logins.

You do not have to enter names. If you do not use names with the login IDs, the data you receive from BCMS and/or VuStats defaults to "ID xxxxxxxxx" where "xxxxxxxxx" is the login ID.

NOTE:
Only agents using one of the administered login IDs can successfully log in to a split measured by BCMS.

Administration Commands

The following administration commands can be used to access the BCMS/VuStats Login ID form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words to use when entering a command.

Action	Object	Qualifier*
add	loginIDs	
change	login IDs	[login ID]
display	login IDs	[login ID]
list	login IDs	[login ID] count X

* Brackets [ ] indicate the qualifier is optional.

Form Instructions

Make assignments as required for the following fields on the form:

- **Login ID** — A number up to nine digits that an agent must enter to be measured in a split by BCMS. The system validates each login ID. If you enter a duplicate login ID, the system displays an error message and places the cursor at the duplicate field. Also, the login ID must be the same length as the number in the "ACD Login Identification Length" field on the Feature-Related System-Parameters form. If the login ID you enter does not match the length specified in the "ACD Login Identification Length" field, the system displays an error message and places the cursor at the field that is incorrect.

  NOTE:
  The administered login length may change to another value, but doing so changes the allowed length for all IDs entered on this form. Before agents with logins that do not match the administered login length can log on, you must readminister either the ACD login

identification length to fit the existing logins or change the logins to match the ACD login identification length.

- **Name** — A name associated with the login ID (optional).

```
change bcms/vu-stats login IDs

                                                          Page 1 of x
                          BCMS / W-STATS LOGIN IDS

       Assigned Numbers: 300 of 400
          Login Id   Name                  Login Id   Name
       1: _________  ________________   17: _________  ________________
       2: _________  ________________   18: _________  ________________
       3: _________  ________________   19: _________  ________________
       4: _________  ________________   20: _________  ________________
       5: _________  ________________   21: _________  ________________
       6: _________  ________________   22: _________  ________________
       7: _________  ________________   23: _________  ________________
       8: _________  ________________   24: _________  ________________
       9: _________  ________________   25: _________  ________________
      10: _________  ________________   26: _________  ________________
      11: _________  ________________   27: _________  ________________
      12: _________  ________________   28: _________  ________________
      13: _________  ________________   29: _________  ________________
      14: _________  ________________   30: _________  ________________
      15: _________  ________________   31: _________  ________________
      16: _________  ________________   32: _________  ________________
```

Screen 56a. BCMS/VuStats Login IDs

Implementation Notes:

You can administer 400 login IDs for the G3i and 2000 login IDs for the G3r. However, with either system, the form appears only two pages (64 IDs) at a time. If you are adding login IDs, you can fill two pages and then reissue the command to fill an additional two pages, and so on. If you are changing or displaying login IDs, the system displays two pages of login IDs beginning with the ID you specified; if you did not specify a login ID when you issued the command, the display begins with the first login ID. The **list** command lists all login IDs and may run to 63 pages.

Cabinet Administration

NOTE:
This form is applicable only to G3r configurations.

This form is used to describe cabinets and to define mapping between external and internal board addresses so that boards and ports can be identified in a uniform way.

Administration Commands

The following administration commands can be used to access the Cabinet Administration form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
add	cabinet	xx
remove	cabinet	xx
change	cabinet	xx
display	cabinet	xx ['print' or 'schedule']
list	cabinet	['print' or 'schedule']

* "xx" is the cabinet number (01-22 for G3rV1 and V2 or 01-44 for G3rV3)

* Brackets [ ] indicate the qualifier is optional. Single quotes (') indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered.

Form Instructions

Make assignments as required for the following fields on the form:

- **Cabinet** — Display-only field. This field shows the cabinet number as entered in the command line.
- **Cabinet Layout** — Enter the type of physical carrier layout. Valid entries are "file-carrier" and "single-carrier-stack." Default is blank.
- **Cabinet Type** — Display-only field. This field shows the type of cabinet being administered. If cabinet "01" is being administered, this field is "processor." If cabinets "02" through "22" (G3rV1 and V2) or "02 through 44" (G3rV3) are being administered, this field is "expansion-portnetwork."
- **Number of Port Networks** — Enter the number of PNs in the cabinet. Valid entries are"1" (default), and "2."
- **Room** — Enter up to ten characters identifying the room where the cabinet is located. Default is blank.

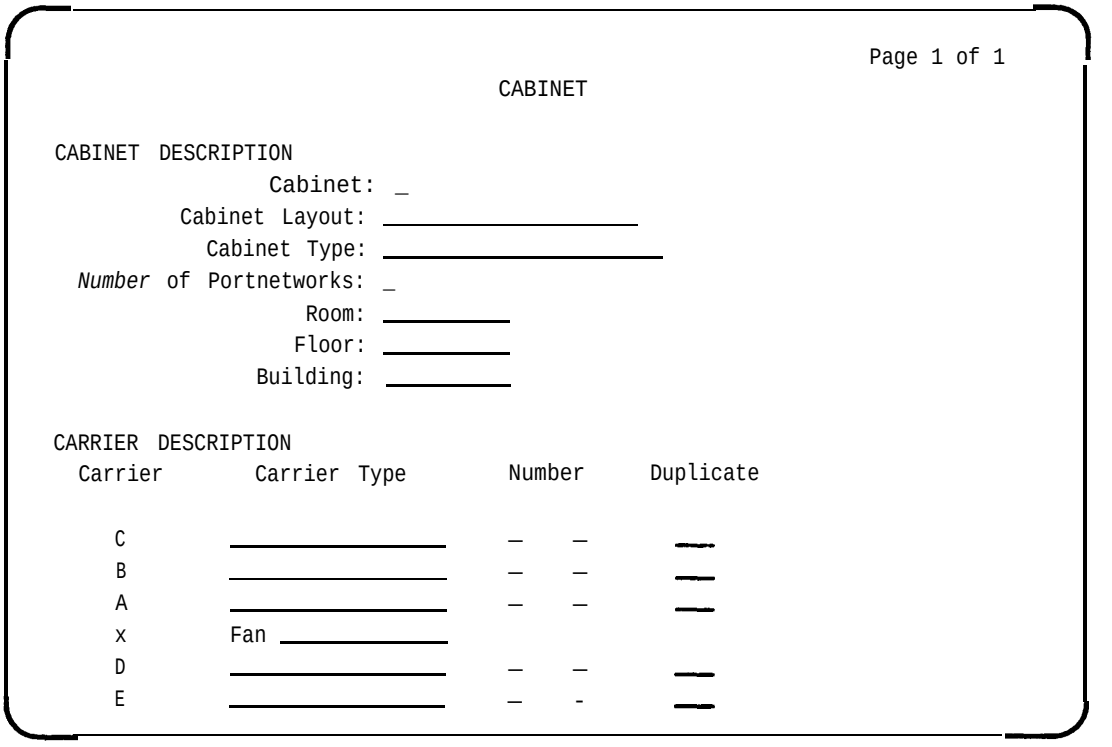
- **Floor** — Enter up to ten characters identifying the floor in the building where the cabinet is located. Default is blank.
- **Building** — Enter up to ten characters identifying the building where the cabinet is located. Default is blank.
- **Carrier Type** — Enter the type of carrier in the cabinet being administered. Valid entries are “dup-switch-node,” “expansion-control,” “not-used” “port,” “processor,” and “switch-node.”
- **Number** — Display-only field. Consists of two fields: the Designator field and the Number field. The Designator field contains one of the following entries:

  PN if the carrier is a port carrier, processor carrier, or unused carrier.

  SN if the carrier is a switch node carrier, or duplicate switch node carrier.

  The Number field contains either the switch node number or port network number.
- **Duplicate** — The location for the duplicate of a switch node. Only displayed when administration of PNC Duplication is enabled. If the Carrier Type is “dup-switch-node,” the field displays the three-character carrier address of the duplicate. The first two characters represent the cabinet number (1 to 22 for G3rV1 and V2 or 1-44 for G3rV3); the third character represents the carrier (A through E).

  This is a display-only field if the Carrier Type is “switch-node.”



```
                                                          Page 1 of 1
                                    CABINET

CABINET  DESCRIPTION
                 Cabinet: _
          Cabinet Layout: _____________________
            Cabinet Type: _____________________
  Number of Portnetworks: _
                    Room: _________
                   Floor: _________
                Building: _________

CARRIER  DESCRIPTION
  Carrier       Carrier Type        Number     Duplicate

     C        _____________________  _   _       ___
     B        _____________________  _   _       ___
     A        _____________________  _   _       ___
     x        Fan _________________
     D        _____________________  _   _       ___
     E        _____________________  _   -       ___
```

Screen 5-17. Cabinet Administration Form

Implementation Notes:

This form is only displayed for G3r configurations.

This form is for a 5-carrier cabinet layout. The Carrier Description fields vary for a single-carrier stack and for different configurations of switch nodes and port networks.

The Duplicate field is only displayed when PNC Duplication has been enabled and the Carrier Type field is “switch-node” or “dup-switch-node.”

Call Coverage Answer Group

This form is used to establish Call Coverage Answer Groups.

An answer group contains up to eight members who act as a coverage point for another user. For example, if several secretaries are responsible for answering a department's redirected calls, all the secretaries could be assigned to an answer group. The answer group is assigned a group number, and that group number appears in the department's coverage path. All terminals in an answer group ring (alert) simultaneously. Any member of the group can answer the call.

Each coverage answer group is identified by a number from 1 through the maximum number allowed by your system configuration (refer to the Capacity Table in Appendix C). The members of the group are identified by their extension number. Any installed voice terminal (but not attendants) can be assigned to a coverage answer group.

Administration Commands

The following administration commands can be used to access the Coverage Answer Group form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier'
add	coverage answer-group	1-MAX (or 'next')
change	coverage answer-group	1 -MAX
display	coverage answer-group	1-MAX ['print' or 'schedule']
list	coverage answer-group	[1-MAX]['nurnber' x]['to-number' x]['name' x] ['count' n]['print' or 'schedule']
remove	coverage answer-group	1 -MAX

* Brackets [ ] indicate the qualifier is optional. Single quotes (") indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered. MAX is the maximum number available in your system configuration. Refer to the Capacity Table in Appendix C.

Form Instructions

Make assignments as required for the following fields on the form:

- **Group Number** — Enter a group number when completing a paper form. This is a display-only field when the form is accessed using an administration command such as *add* or *change.*
- **Group Name** — Enter the group name you want to use to identify this group. Up to 16 characters can be used, for example, typing pool, room 12, secy, and so on. Default is "COVERAGE GROUP."

- **CRV Length** (Call Reference Value Length) — Used to indicate the length of Call Rference Value (CRV) for each ASAI interface. Enter ”1” or “2.” Default is ”1.“

```
                                                              Page 1 of 1
                                    STATION
Extension: ____                   BCC : 0
     Type: asai                                                COR : 1
     Port: _____________                                       COS : 1
     Name: _____________
FEATURE OPTIONS
                     XID? y          Fixed TEI? y    TEI: 3
            MIM Support? n
                                    CRV Length: 1
```

Screen 5-24. ASAI Station Form (Page 1 of 1)

Implementation Note:

TEI field only displayed when the Fixed TEI field is “y.”

Circuit Pack Administration

This form is used to administer circuit packs to carrier slots before the circuit packs are actually installed in the carrier or cabinet. This allows the system to be configured (administered) when the circuit packs have not yet been physically inserted in their appropriate slots. Before any voice terminals, attendant consoles, or trunks can be administered in the system, the correct type of circuit pack must be installed in the appropriate slot, or using the Circuit Pack form, a circuit pack must be assigned to the slot.

The Circuit Pack Administration forms do not have to be completed if the system cabinet is equipped with the circuit packs at the time of administration. However, for switch node carriers, these forms must be administered.

Refer to *DEFINITY Communications System Generic 3 V2 Planning and Configuration,* 555-230-601, for additional information on circuit pack administration and Port Assignment Records. (The DS1 circuit pack and associated translation coverage is provided in Chapters 3 and 4).

WARNING:
For initial installation procedures, circuit packs should only be assigned slots per the hardware Configuration Layout record (obtained from the factory or Customer Services Support Organization). Arbitrarily assigning circuit packs to slots should not be attempted because this eventually requires (at the time of installation and test) realignment of the circuit packs and reworking associated wiring to agree with the software translations or new software translations to agree with the shipped hardware configuration.

Administration Commands

The following administration commands can be used to access the Circuit Pack form. In some cases, just the most commonly used commands are shown. Refer to “Administration Commands” in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier’
change	circuit-packs	xx (cabinet number)
display	circuit-packs	xx (cabinet number) ['print’ or ‘schedule’]

* Brackets [ ] indicate the qualifier is optional. Single quotes (’’) indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered.

“xx” is the cabinet number (1-22 for G3rV2 or 1-44 for G3rV3).

NOTE:
If no cabinet number is specified, this command defaults to"1."

Form Instructions

Make assignments as required for the following fields on the form:

Page 1 of Form

NOTE:
Each page of the form represents one carrier within the cabinet specified on the command line. For G3i and G3s configurations, all carriers and slots appear even if they are not included in the actual hardware. This is done for reconfiguration purposes.

- **Cabinet** — Display-only field. This field shows the cabinet number as entered on the command line.
- **Carrier** — Display-only field. This field shows the letter of the carrier (A through E) circuit packs are being administered on.
- **Cabinet Layout** – Display-only field. This field is only displayed for G3r configurations. This field describes the physical layout of the cabinet. Values that may be displayed are "five-carrier" and "single-carrier-stack."
- **Carrier Type** — Display-only field. This field shows the type of carrier. Values that may be displayed are "dup-switch-node," "expansion-control," "not-used," "pat," "processor," and "switch-node."

  NOTE:
  For G3r configurations, if the Carrier Type (as administered through the Cabinet Administration form) does not match the physical hardware, the Code fields may display question marks.

- **Slot** — Display-only field. The slot equates to the physical slot of the given carrier; the number of slots displayed depends on the system being configured.

  — For G3r configurations, the number of slots represent all administrable slots available for the given carrier type.

  The following table lists the administrable slots, and the circuit pack types that may be administered in those slots, for each Cabinet Layout/Carrier Type combination in a G3r configuration.

CABINET LAYOUT	CARRIER TYPE	SLOTS	CIRCUIT PACK TYPES
five-carrier	port	00	TN420, TN433, TN457, TN725, TN744, TN748, TN750, TN771
		01-20	All port circuit packs
	not-used	00-21	Fields are display only.
	switch-node	01	TN570 or TN574
		02-09	TN573
		10	TN572
		11	Not administrable
		12	TN572
		13-20	TN573
		21	TN574
single-carrier-stack	expansion-control	01	TN570
		02-17	All port Circuit Packs
	port	01-18	All port circuit packs

— For G3i V2 and V3 configurations, ALL slots that could possibly be administered are displayed even if they do not apply to the current configuration of the system. This is to accommodate the situation when a system is being reconfigured.

The following table lists the slots to use, and the circuit pack types that may be administered in those slots, for each combination of Cabinet/Carrier/Carrier Type in a G3i V2 and V2 configuration.

Class of Restriction (COR)

This form is used to implement classes of restriction (CORs). A COR is used to control call origination and termination. A system may have only one COR or as many as necessary to control calling privileges. Up to 96 different CORs (0 through 95) can be assigned. CORs can be assigned to any of the following facilities:

- Attendant Console
- Hunt Groups
- Loudspeaker Paging/Code Calling Access
- Data Module
- Station
- Remote Access
- Terminating Extension Group
- Authorization Codes
- Trunk Groups

NOTE:
When a call is to a vector directory number (VDN) extension, the COR of the caller and the VDN are compared to determine if the associated Call Vector can be accessed. After the vector is accessed, the COR of the VDN is used for further call permission checking.

To maximize the security of the system, the following should be considered:

1. Assign a separate COR to incoming and to outgoing trunk groups, then restrict calling between the two groups.
2. Limit the calling permissions as much as possible by setting appropriate Calling Party Restrictions and FRLs.

Administration Commands

The following administration commands can be used to access the Class of Restriction form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
change	cor	0-95
display	cor	0-95 ['print' or 'schedule']
list	partitioned group	['print' or 'schedule']

* Brackets [ ] indicate the qualifier is optional.

Form Instructions

Make assignments as required for the following fields on the form:

Page 1 of Form

- **COR Number** — Enter a number from 0 through 95 when completing a paper form. This is a display-only field when the form is accessed via an administration command such as *change* or *display.*

- **COR Description** — Enter a description of the COR of up to 35 characters.

- **FRL** — Enter an originating Facility Restriction Level (FRL) number from 0-7. This entry is used by AAR and/or ARS features to determine call access to an outgoing trunk group. Outgoing call routing is determined by a comparison of the FRLs in the AAR/ARS Routing Pattern and the FRL associated with the COR of the call originator (typically, a voice terminal user). An originating FRL of 0 has the least calling privileges. Default is "7."

  Attendants use the FRL assigned via COR administration. This FRL is used for attendant origination and assisted calls.

  NOTE:
  For system security reasons, it is recommended that the lowest possible FRL be assigned.

- **APLT** — Enter "n" to allow access to APLT trunk group Enhanced Private Switched Communications System (EPSCS) or Common Control Switched Arrangement (CCSA) off-net facilities. Default is "y."

  NOTE:
  If fully restricted service is enabled, this field must be set to "n."

- **Can Be Service Observed** — Enter "y" if users with this COR can be service observed, otherwise enter "n." Note that this field allows or denies service observing for not only physical extensions, but also for logical agent IDs and VDNs.

- **Can Be a Service Observer** — Enter "y" if users with this COR can service observe other users, otherwise enter "n."

  NOTE:
  You cannot enter "y" in the previous two fields unless Basic Service Observing is enabled on the System-Parameters Customer-Options form.

  NOTE
  if the Service Observing Basic option is not enabled on the System-Parameters Customer-Options form, this field must be set to "n."

CAUTION:
The use of Service Observing features may be subject to federal, state, or local laws, rides, or regulations; or require the consent of one or both of the parties to the conversation. Customers should familiarize themselves with and comply with all applicable laws, rules, and regulations before using these features.

- **Calling Patty Restriction** — Enter one of the following: "origination," "outward," "all-toll," "tac-toll," or "none."
  - *origination* — Blocks the calling party from originating a call from the facility at any time. The party can only receive calls.
  - *outward* — Blocks the calling party from directly accessing the exchange network
  - *all-toll*- Blocks the calling party from making ARS and trunk access calls from a facility assigned the COR to certain toll areas as defined in the Dialed String Field on the Toll Analysis form. The Dialed String field on the form must be marked as being associated with the System's Toll List. The call will complete if the facilities COR is also associated with an Unrestricted Call List and whose Dialed String field on the Toll Analysis form also matches the dialed number.
  - *tac-toll*— Blocks the calling party from making trunk access calls from the facility assigned the COR to certain toll areas as defined in the Dialed String field on the Toll Analysis form. The Dialed String field on the form must be marked as being associated with the System's Toll List. The call will complete if the facilities COR is also associated with an Unrestricted Call List and whose Dialed String field on the Toll Analysis form also matches the dialed number. Refer to "Toll Analysis" elsewhere in this chapter for additional information.
  - *none* — No calling party restrictions.

NOTE:
For System security reasons, it is recommended that calling permissions be limited as much as possible.

- **Called Party Restriction** — Enter one of the following: "inward," "manual," "public," "termination," or "none."
  - *Inward*— Blocks the calling party from receiving incoming exchange network calls, attendant originated calls, and attendant completed calls.
  - *Manual*— Blocks the called party from receiving all calls except for those originated or extended by the attendant.
  - *Public* — Blocks the called party from receiving public network calls. Attendant calls are allowed to go through to the called party as are attendant-assisted calls if the Restriction Override field in the public restricted station's COR is set to "attd" or "all."

- *Termination* — Blocks the called party from receiving any calls at any time.
- *none* — No called party restrictions.

■ **Time of Day Chart** —Enter the AAR/ARS time-of-day-chart number (1 to 8) associated with this COR.

■ **Forced Entry of Account Codes** — Enter "y" to indicate that an account code must be dialed when making outgoing trunk calls. Entering "n" indicates that an account code is not required. Default is "n. As a result of entering a "y," any voice terminal assigned the associated COR must dial an account code before making an outgoing call. Any trunk group assigned that COR cannot be accessed until an account code is dialed. If a call is being routed by AAR or ARS, account code checking is not done on the COR.

NOTE:
For System security reasons, it is recommended that this field be administered to "y."

If the Forced Entry of Account Codes for Toll Calls field on the System-Parameters Customer-Options form is set to "y," Forced Entry of Account Codes may also be required for all outgoing calls.

NOTE:
If a COR requiring entry of account codes is assigned a VDN, the route to commands executed by the associated vector will not be successful.

■ **Priority Queuing** — Enter "y" to allow the voice terminal user's calls to be placed ahead of nonpriority calls in a hunt group queue. Default is "n."

NOTE:
If the ACD Option is not enabled on the System-Parameters Customer-Options form, this field must be set to "n."

■ **Direct Agent Calling** — Enter "y" to allow a user to originate or receive direct agent calls. This is used whenever a user should talk directly with a specific ACD agent, not just anyone in the agent pool. if the System is in Night Service, the call routes to the Night Service extension. Default is "n."

■ **Restricted Call List** — Enter "y" to specify that this COR will have access to the System's Restricted Call List (see Toll Analysis form). This list can be used whether or not the COR is toll restriced. The Restricted Call List (RCL) has priority over the Toll Analysis Unrestricted Call List (UCL). *ACM* attempt from a facility assigned a COR (with RCL field = "y"), whose dialed digit string is on the Toll Analysis form and is marked as being associated with the RCL, will be denied. Default is "n."

■ **Facility Access Trunk Test** — Enter "y" to allow Facility Access Trunk Tests (FAT). Test calls from facilities (for example, voice terminals) will be

allowed to complete if their COR FAT field = "y." For calls from facilities whose COR FAT field = "n," intercept treatment will be given. An associated feature button ("trk-ac-aim") status lamp will light when a successful FAT access has occurred. Pressing one of the alarm buttons (ten maximum) when its associated status lamp is lighted will turn off all lamps on all buttons whether or not the access is still in progress or has completed. Default is "n."

■ **Hear VDN of Origin Announcement** — Enter "y" if users with this COR can receive VDN of Origin messages. Enter "n" to deny the ability to receive VDN of Origin messages.

■ **Unrestricted Call List** — Enter the identifying number of up to ten lists of exceptions that this COR should access.

■ **Restriction Override** — Enter the type of user who is allowed to bypass restriction on the conference/transfer or call forwarding operations. Valid entries are "all," "attendant," or "none." Default is "all."

■ **Access to MCT?** — This field refers to Malicious Call Trace. If "y" is entered in this field, then the class has permissions to activate a request to trace a malicious call. Default is "y."

■ **Fully Restricted Service** — When enabled ("y" entered in field) for a given COR, stations assigned that COR will not have access to the public network for either incoming or outgoing calls.

NOTE:
If this field is enabled, the APLT field must be set to "n."

■ **Category For C.I.S. ANI** — Only applicable in the Commonwealth of Independent States (C.I.S.). The Calling Party Category digit administered in this field is included as part of the ANI information sent to the Central Office on request. Valid entries are numbers 1 through 10. Default is 7.

■ **Send ANI for MFE** — Only applicable for Spain. Enter "y" to enable Automatic Number Identification (ANI). When the value is "y," the PBX sends the calling party's number to the public or IBERCOM network for line charging; "n" indicates block charging. Valid for 2/6 signaling, but not 2/5 signaling.

NOTE:
The following field appears only if Expert Ease Selection (EAS) is enabled on the Feature-Related System-Parameters form and if the G3 Version field on the System-Parameters Customer-Options form contains "V3."

■ **Add/Remove Agent Skills** — Enter "y" or "n." If this field contains "y," users with this COR can add and remove skills. If this field contains "n," users with this COR cannot access the Add/Remove Skills feature access code (FAC) to add or remove skills.

Page 2 of Form

- **CALLING PERMISSION 0 through 95** — Enter “n” for each COR number (0 through 95) that cannot be called by the COR being implemented. A “y” means that an originating facility assigned this COR can be used to call facilities assigned this COR. Default is “y.”

```
                              CLASS  OF  RESTRICTION          Page 1 of 2

                 COR Number: 10
           COR  Description:  supervisor

                       FRL : 7                                    APLT? y
    Can  Be  Service  Observed? n            Calling Party Restriction: none
 Can Be A Service Observer? y                 Called Party Restriction: none
  Partitioned  Group  Number: _          Forced  Entry  of  Account  Codes? n
          Priority  Queuing? n                    Direct Agent Calling? n
      Restriction  Override:  all           Facility Access Trunk Test? n
      Restricted Call List? n
    Unrestricted  Call  List:  _  _  _  _  _  _  _  _  _  _
            Access to MCT? _                 Fully Restricted Service? n
   Category  For  C.I.S.  ANI: 7             Hear VDN of Origin Annc.? y
          Send ANI for MFE? _                  Add/Remove Agent Skills? y
```

Screen 5-26. COR Form (Page 1 of 2)

Implementation Note:

The Category For C.I.S. ANI field is only applicable in the Commonwealth of Independent states (C.I.S.).

```
                                                              Page 2 of 2
                              CLASS OF RESTRICTION

CALLING  PERMISSION  (Enter "y"  to grant permission to call specified COR)
  0? y      12? y      24? y      36? y      48? y      60? y      72? y      84? y
  1? y      13? y      25? y      37? y      49? y      61? y      73? y      85? y
  2? y      14? y      26? y      38? y      50? y      62? y      74? y      86? y
  3? y      15? y      27? y      39? y      51? y      63? y      75? y      87? y
  4? y      16? y      28? y      40? y      52? y      64? y      76? y      88? y
  5? y      17? y      29? y      41? y      53? y      65? y      77? y      89? y
  6? y      18? y      30? y      42? y      54? y      66? y      78? y      90? y
  7? y      19? y      31? y      43? y      55? y      67? y      79? y      91? y
  87 y      20? y      32? y      44? y      56? y      68? y      80? y      92? y
  9? y      21? y      33? y      45? y      57? y      63? y      81? y      93? y
 10? y      22? y      34? y      46? y      58? y      70? y      82? y      94? y
 11? y      23? y      35? y      47? y      59? y      71? y      83? y      95? y
```

Screen 5-27. COR Form (Page 2 of 2)

List COR Information Form

This form is used to display information about a COR or a range of CORs. To access this form, enter the command **list cor 10** to display information for a single COR or enter **list cor 10 to-cor 20** to display a range of COR numbers. The print and schedule options are supported for the list cor command. If the list cor command is executed without arguments, all assigned CORs are displayed.

```
                    CLASS OF RESTRICTION INFORMATION

                COR   Description

                 0
                 1
                 2    Internal station users
                 3    Remote Access
                 4    Wideband trunk groups
                 .
                 .

                 95
```

Screen 5-27a. Class of Restriction Information

Feature Access Codes

This form is used to assign feature access codes (FACs) that, when dialed, activate or cancel certain System features.

Administration Commands

The following administration commands can be used to access the Feature Access Codes form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
change	feature-access-codes	—
display	feature-access-codes	['print' or 'schedule']

* Brackets [ ] indicate the qualifier is optional. Single quotes (") indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered.

Form Instruction

Make assignments as required for the following fields on each page of the form:

Pages 1 through 4 of the Form

- In each field that ends with **Access Code** — enter the digits required to access the feature.

  NOTE:
  For System security, it is recommended that the Facility Test Calls Access Code field be left blank except when actually testing trunks.

  The Emergency Access to Attendant Access Code cannot be used if the feature is not enabled on the System-Parameters Customer-Options form.

  The access codes assigned to the Housekeeping Status (Client Room) and Housekeeping Status (Station) are assigned to reflect the customer requirements. These codes are transmitted to the Property Management System (PMS) for processing.

- In each field that ends with **Activation** — enter the digits required to activate the feature.
- In each field that ends with **Deactivation** — enter the digits required to cancel or deactivate a feature.

Valid entries are any 1-to 4-digit number consisting of the digits 0 through 9. The "*" and "#" symbols can be used as the first digit.

NOTE:
Analog rotary dial sets cannot use the "*" and "#" symbols.

Page 2 of the Form

- **Leave Word Calling Message Retrieval Lock** — Enter the digits that must be dialed to lock the display module on voice terminals. Valid entries are a 1- to 4-digit number consisting of the digits 0 through 9; "*" and "#" can be used as the first digit. (The lock function is activated at a voice terminal by dialing the systemwide Lock access code. This prevents unauthorized users from displaying, canceling, or deleting messages associated with the voice terminal.) The Lock Messages field on the voice terminal form must also be enabled.

- **Leave Word Calling Message Retrieval Unlock** — Enter the digits that must be dialed to unlock a voice terminal's display module. Valid entries are a 1-to 4-digit number consisting of the digits 0 through 9; "*" and "#" can be used as the first digit. The lock function is canceled at the voice terminal by dialing the Unlock security code (4 digits) unique to the voice terminal.

- **Leave Word Calling Send A Message** — Enter the digits that must be dialed to send a message. Valid entries area 1- to 4-digit number consisting of the digits 0 through 9; "*" and "#" can be used as the first digit.

- **Leave Word Calling Cancel A Message** — Enter the digits that must be dialed to cancel a message. Valid entries area 1-to 4-digit number consisting of the digits 0 through 9; "*" and "#" can be used as the first digit.

- **Transfer into AUDIX** — Enter the digits that must be dialed to allow coverage to transfer the caller to the original call recipient's AUDIX mail where the caller can leave a message. Valid entries area 1-to 3-digit number consisting of the digits 0 through 9; "*" and "#" can be used as the first digit. Default is blank.

Page 3 of the Form

The next seven fields are only available for administration if the Automatic Call Distribution option has been enabled on the System-Parameters Customer-Options form.

NOTE:
These fields will also be displayed if the Call Vectoring (Basic) and Vectoring (Prompting) features have been enabled on the System-Parameters Customer-Options form; however, they will only be administrable if ACD has been enabled.

- **After Call Work Access Code** — Enter the digits the agent must dial when the agent will be performing work-related ACD activities.

- **Assist Access Code** — Enter the digit the agent must dial to request assistance from the split supervisor.

- **Auto-In Access Code** — Enter the digits the agent must dial to become automatically available to receive another ACD call on completion of a current call.
- **Aux Work Access Code** — Enter the digits the agent must press when the agent will be performing non-ACD activities.
- **Login Access Code** — Enter the digits the agent must enter to gain access to the ACD functions. This is a systemwide digit for all ACD agents.
- **Logout Access Code** — Enter the logout code the agent must enter to exit ACD. This is a systemwide logout code for all ACD agents.
- **Manual-In Access Code** — Enter the digits the agent must press to receive new ACD calls upon the completion of an ACD call.

The next field is only available if the Call Vectoring (Basic) and Vectoring (Prompting) options have been enabled on the System-Parameters Customer-Options form.

- **Converse Data Return Code** — Enter the access code the CONVERSANT must outpulse prior to outpulsing the digits being returned to the System.

The following two fields appear only if the Expert Agent Selection (EAS) feature is optioned on the Feature-Related System-Parameters form and if the G3 Version field on the System-Parameters Customer-Options form contains "V3."

- **Add Agent Skill Access Code** — Enter the digits an agent must press to be able to add a skill to their current skill set.
- **Remove Agent Skill Access Code** — Enter the digits an agent must press to be able to remove a skill from their current skill set.

Page 4 of the Form

The next five fields are only available if the Hospitality option has been enabled on the System-Parameters Customer-Options form.

- **Automatic Wakeup Call Access Code** — Enter the access code the user must dial to schedule or cancel a wakeup call.
- **Housekeeping Status (Client Room) Access Code** — Enter the access code the housekeeper dials from the client's room to provide room status. There are six codes.
- **Housekeeping Status (Station) Access Code** — Enter the access code the housekeeper must dial to provide room status. This access code must be dialed from designated voice terminals. There are four codes.
- **Verify Wakeup Announcement Access Code** — Enter the access code the user can dial to verify a wakeup announcement.
- **Voice Do Not Disturb Access Code** — Enter the access code the user must dial to enter or cancel a do not disturb request without using a display — through the use of voice prompting.

```
                                                              Page 1 of 4
                              FEATURE ACCESS CODE (FAC)
            Abbreviated Dialing List1 Access Code: ____
            Abbreviated Dialing List2 Access Code: ____
            Abbreviated Dialing List3 Access Code: ____
                         Announcement Access Code: ____
                          Answer Back Access Code: ____
          Auto Alternate Routing (AAR) Access Code: ____
           Auto Route Selection (ARS) Access Code1: ____   Access Code2:____
                     Automatic Callback Activation: ____   Deactivation: ____
                        Call Forwarding Activation: ____   Deactivation: ____
                             Call Park Access Code: ____   (see Note)
                           Call Pickup Access Code: ____
  CAS Remote Hold / Answer Hold-Unhold Access Code: ____
                         CDR Account Code Access Code: ____
                         Data Origination Access Code: ____
                             Data Privacy Access Code: ____
         Emergency Access To Attendant Access Code: ____
                    Facility Test Calls Access Code: ____
                                 Flash Access Code: ____
```

Screen 5-48. Feature Access Code Form (Page 1 of 4)

Implementation Notes:

The Emergency Access to Attendant Access Code field is displayed when the optional Emergency Access to the Attendant feature has been enabled on the System-Parameters Customer-Options form.

Call Park Access Code — Do not administer to have the same first digit as another feature access code that is longer in length.

```
                                                          Page 2 of 4
                          FEATURE ACCESS CODE (FAC)
          Group Control Restrict Activation: ___    Deactivation: ____
                 Hunt Group Busy Activation: ____   Deactivation: ____
             Last Number Dialed Access Code: ___
   Leave Word Calling Message Retrieval Lock: ____
 Leave Word Calling Message Retrieval Unlock: ____
          Leave Word Calling Send A Message: _
        Leave Word Calling Cancel a Message: _
            Malicious Call Trace Activation: _    Deactivation: ____
                 Print Messages Access Code: _
               Priority Calling Access Code: ____
                        Program Access Code: ____
                  Send All Calls Activation: _    Deactivation: ____
Terminal Translation Initialization Merge Code: ____ Separation Code: ____
                Transfer to AUDIX Access Code: ____  (see Note)
         Trunk Answer Any Station Access Code: ____
             User Control Restrict Activation: ____   Deactivation: ____
  Voice Coverage Message Retrieval Access Code: _
 Voice Principal Message Retrieval Access Code: _
```

Screen 5-49. Feature Access Code Form (Page 2 of 4)

Implementation Note:

Transfer into AUDIX Access Code — Do not administer to have the same first digit as another feature access code that is longer in length.

```
                                                    Page 3 of 4
                FEATURE ACCESS CODE (FAC)
          Automatic Call Distribution Features
           After Call Work Access Code: _
                    Assist Access Code: _
                  Auto-In Access Code: _
                 Aux Work Access Code: _
                    Login Access Code: _
                   Logout Access Code: _
                 Manual-In Access Code: _
            Add Agent Skill Access Code: _
         Remove Agent Skill Access Code: _

          Call Vectoring/Call Prompting Features
              Converse Data Return Code: _
```

Screen 5-50. Feature Access Code Form (Page 3 of 4)

Implementation Notes:

This page is displayed only when the optional ACD feature, or Call Vectoring (Basic) and Vectoring (Prompting) have been enabled on the System-Parameters Customer-Options form.

The Call Vectoring/Call Prompting features are only displayed if Call Vectoring (Basic) and Vectoring (Prompting) have been enabled on the System-Parameters Customer-Options form.

The Add and Remove Agent Skill Access Code fields only appear if the Expert Agent Selection feature is optioned on the Feature-Related System-Parameters form.

```
                                                          Page 4 of 4
                        FEATURE ACCESS CODE (FAC)
                          Hospitality  Features
                  Automatic Wakeup Call Access Code:_____
      Housekeeping Status (Client Room) Access Code:_____
      Housekeeping Status (Client Room) Access Code: _
      Housekeeping Status (Client Room) Access Code:_____
      Housekeeping Status (Client Room) Access Code: _
      Housekeeping Status (Client Room) Access Code: _
      Housekeeping Status (Client Room) Access Code:_____
          Housekeeping Status (Station) Access Code: _
          Housekeeping Status (Station) Access Code: _
          Housekeeping Status (Station) Access Code:_____
          Housekeeping Status (Station) Access Code: _____
             Verify Wakeup Announcement Access Code: _
                   Voice Do Not Disturb Access Code:_____
```

Screen 5-51. Feature Access Code Form (Page 4 of 4)

Implementation Note:

The Hospitality features are displayed when the Hospitality feature has been enabled on the System-Parameters Customer-Options form.

Feature-Related System Parameters

This form is used to implement System parameters associated with various System features.

Administration Commands

The following administration commands can be used to access the Feature-Related System Parameters form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualified*
change	system-parameters features	—
display	system-parameters features	['print' or 'schedule']

* Brackets [ ] indicate the qualifier is optional. Single quotes (") indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered.

Form Instructions

Additional information on the parameters listed below can be found within feature descriptions of the same name by referring to *DEFINITY Communications System Generic 3 V2 Feature Description,* 555-230-204.

Make assignments as required for the following fields on each page of the form:

Page 1 of the Form

- **Trunk-to-Trunk Transfer** — Enter "all" to enable all trunk-to-trunk transfers. This allows voice terminal users to setup trunk-to-trunk transfer, go on-hook without disconnecting the call, and forward the call to a remote location. Enter "restricted" (restricted public) to restrict all public trunks (CO, WATS, FX, CPE, DID, and DIOD). Enter "none" (default) to restrict all trunks (except CAS and DCS) from being transferred.

  NOTE:
  For installations outside the United States of America, refer to Appendix B, *Application Notes,* for the appropriate entries for this field.

- **Coverage — Subsequent Redirection No Answer Interval** — Enter the number of times (1 through 99) a voice terminal in a Call Coverage path will ring before the call is routed to the next coverage point. A typical (recommended) interval is 2 to 3 rings. Default is 3.
- **Coverage — Caller Response Interval (seconds)** — Enter the time in seconds (0 through 10) that the caller (internal caller only) has before the

System-Wide Parameters:

- **Switch Name** — Enter the name of the switch.

Call Center System Parameters:

- **Expert Agent Selection (EAS) Enabled** — Only displayed if Expert Agent Selection (EAS) is enabled on the System-Parameters Customer-Options form. Enter "y" to enable Expert Agent Selection. To enable this field, either no ACD or vectoring hunt groups may exist or, existing ACD or vectoring hunt groups must be "skilled." Default is "n."

- **Minimum Agent-LoginID Password Length** — Only displayed if Expert Agent Selection (EAS) is "y" on the System-Parameters Customer-Options form. Enter the minimum number of digits that must be administered as an EAS Agent's LoginID password. Valid entries are 0 through 9 or blank. Entering a "0" or blank indicates no password is required. Default is blank.

- **Direct Agent Announcement Extension** — Only displayed if Expert Agent Selection (EAS) or ASAI are enabled on the System-Parameters Customer-Options form. Enter a valid announcement extension (consistent with the dial plan).

- **Direct Agent Announcement Delay** — Only displayed if Expert Agent Selection (EAS) or ASAI are enabled on the System-Parameters Customer-Options form. Enter the number of seconds (0 to 99) the caller will hear ringback before the Direct Agent Announcement is heard by the calling party.

- **Converse First Data Delay** — Only displayed if Vectoring (Basic) is enabled on the the System-Parameters Customer-Options form. This time delay prevents data from being outpulsed (as a result of a converse vector step) from the System to CONVERSANT before CONVERSANT is ready. The delay commences when the CONVERSANT port answers the call. Enter the number of seconds (0 to 9) for the delay. Default is "0."

- **Converse Second Data Delay** — Only displayed if Vectoring (Basic) is enabled on the the System-Parameters Customer-Options form. When two groups of digits are being outpulsed (as a result of a converse vector step) from the System to CONVERSANT, this time delay prevents the second set from being outpulsed before CONVERSANT is ready. The delay commences when the first group of digits has been outpulsed. Enter the number of seconds (0 to 9) for the delay. Default is "2."

Call Management System Parameters:

- **BCMS Measurement Interval** — You can enter "half-hour" or "hour" for polling and reporting measurement data if the BCMS and/or the VuStats option is enabled on the System-Parameters Customer-Options form. If neither of these features is optioned, and if you enter a value in the BCMS Measurement Interval field, the system displays the following error message:

  <value> cannot be used; assign either BCMS or VuStats first

If you receive this message, you must turn on BCMS anti/or VuStats on the System-Parameters Customer-Options form. Contact an AT&T representative for assistance.

There are a maximum of 25 time slots available for measurement intervals. If "hour" is specified, an entire day of traffic information will be available for history reports; otherwise, only half a day will be available. This does not affect daily summaries as they will always reflect traffic information for the entire day. The interval may be changed at any time, but will not go into effect until the current interval completes. Default is "hour."

■ **BCMS/VuStats Abandon Call Timer (seconds)** — Enter "none" or 1-10 to specify the number of seconds for calls to be considered abandoned. Calls with talk time that is less than or equal to this number are tracked by BCMS and displayed by VuStats as ABAND calls.

■ **ACD Login Identification Length** — Enter the number of digits (0 through 9) for an ACD Agent Login ID if Expert Agent Selection (EAS) is "n" on the System-Parameters Customer-Options form. Default is "0." If BCMS/VuStats Login IDs is set to "y," the ACD Login ID length must be greater than 0.

■ **Adjunct CMS Release** — Specifies the release of the CMS adjunct used with the System. Default is "R2."

NOTE:
In order to use the Multiple Call Handling feature, this field must contain "R3V2" or a later version.

Malicious Call Trace Parameters:

- **Apply MCT Warning Tone** — Enter "y" to provide an audible tone to the controlling station when an MCT recorder is actively recording a malicious call. Default is "n."
- **MCT Voice Recorder Trunk Group** — Assign the trunk group for MCT voice recorders. Default is blank.

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■ **Public Network Trunks on Conference Call** — Enter 0 to 5 to indicate the number of public network trunks allowed on a conference call. If this field is "0," the Conference Parties with Public Network Trunks field will not appear on the form. Default is "5."

■ **Conference Parties with Public Network Trunks** — Enter a number between 3 and 6 to specify the maximum number of parties allowed in a conference call involving a public network subscriber. If the value of the Public Network Trunks on Conference Call field is "0," this field will not appear on the form. Default is "6."

■ **Conference Parties without Public Network Trunks** — Enter a number between 3 and 6 to specify the maximum number of parties allowed in a conference call involving no public network trunks. Default is "6."

- **Night Service Disconnect Timer (seconds)** — Enter a number between 10 and 1024 (or blank) to indicate how long a trunk call can be unanswered during night service before being disconnected. The trunk must not have Disconnect Supervision for this timer to apply. Default is 180.

- **Short Interdigit Timer (seconds)** — Enter a number between 3 and 9 to limit the time that digit analysis will wait for the next digit when it has predicted that all the digits have already been collected. Default is "3."

- **Unanswered DID Call Timer (seconds)** — Enter number between 10 and 1024 (or blank) to limit how long a DID call can remain unanswered before it is muted to the attendant. A value of blank will disable this timer. Default is blank.

- **Line Intercept Tone Timer (seconds)** — Enter a number between 2 and 60 to specify how long an analog station user can wait after hearing warning tone without going on hook, before the station is placed in the lockout state. Default is 30.

- **Auto Start** — Enter "y" to enable the Automatic Start feature. If Auto Start is enabled, the Start buttons on all attendant consoles are disabled. Default is "n."

- **Auto Hold** — Enter "y" to enable the Automatic Hold feature on a system wide basis. Default is "n."

- **Attendant Tone** — Enter "y" to provide call progress tones to the attendants. Default is "y."

- **Bridging Tone** — Enter "y" to apply a bridging tone when calls are bridged on primary extensions. Default is "n."

- **Conference Tone** — Enter "y" to provide conference tone as long as three or more calls are in a conference call. Default is "n."

NOTE:

Bridging and Conference Tones are not supported by all countries. If these tones are enabled for countries other than Italy, Belgium, United Kingdom, or Australia, the tones will be equivalent to no tone (silence) unless the tone is independently administered or customized on the System-Parameters Country Options form. Refer to Appendix B, *Application Notes,* for information regarding tone administration for each individual country.

- **Intrusion Tone** — Enter "y" to apply an intrusion tone (executive override) when an attendant intrudes on the call. Default is "n."

- **DID Busy Treatment** — Enter "attendant" or "tone" to specify how to handle a DID call to a busy station. Default is "tone."

The next three fields control the Distinctive Audible Alerting feature. This feature provides an administrable ringing pattern (1- ,2- , or 3-bursts) for internal, external, and priority calls. An internal call is a station to station call, or a call over a tie trunk administered as "internal." An external call is from the attendant

or from a trunk other than a tie trunk administered as “internal.” A priority call is one so designated by the calling party. Only sets with correct permissions can make priority calls.

- **Internal** — Enter a number (1 through 3) to specify the ringing pattern for internal calls. Default is ”1.“
- **External** — Enter a number (1 through 3) to specify the ringing pattern for external calls. Default is “2.”
- **Priority** — Enter a number (1 through 3) to specify the ringing pattern for priority calls. Default is “3.”

NOTE:
The administration of these ringing patterns may be different in installations outside the United States of America. Refer to Appendix B, *Application Notes,* for information on administering ringing patterns for each individual country.

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- **Pull Transfer** — Enter “y” to enable the Pull Transfer feature on a systemwide basis. Default is “n.”
- **Level of Tone Detection** — Enter “broadband,” “medium,” or “precise” to specify the precision level of tone detection to be supported in the switch. Default is “precise.”
- **Repetitive Call Waiting interval (sec)** (This field appears when the Repetitive Call Waiting Tone field is set to “y.”) — Enter a number from 1 to 99 in increments of 1 to specify the number of seconds between call waiting tones.
- **Repetitive Call Waiting Tone** — Enter “y” to indicate that a repetitive call waiting tone will be used for all forms of call waiting access. Default is “n.”

NOTE:
All countries except France and C.I.S. should have this field set to “n.”

- **Wait Answer Supervision Timer** — Enter “y” to enable the Wait Answer Supervision Timer feature on a systemwide basis. When “y” is entered in this field, calls to stations that are unanswered after 50 seconds will be dropped. When “n” is entered in this field, unanswered calls will be dropped only when the calling party goes on-hook. Default is “n.”
- **Outpulse Without Tone** — Enter “y” to indicate that the switch will outpulse digits when an expected tone (dial tone) has not been received. Default is “y.”
- **Network Feedback During Tone Detection** — Enter “y” to provide audible feedback to the user while the system attempts to detect dial tone. Default is “y.”

- **Intercept Treatment on Failed Trunk** Transfers— Enter “y” to provide intercept tone to calls that fail trunk transfers. Enter “n” to drop these calls. Default is “n.”
- **Station Busy Tone Foward** Disconnect— Enter “y” or “n” (default). If the value is “y,” when a station is the last party on-hook on a call, that station receives busy tone until that station is placed on-hook, or until the busy tone has played for 45 seconds and is followed by silence. The Busy Tone Forward Disconnect applies to any station other than one administered as a data endpoint, an attendant console, an auto answer, or as an Outgoing Call Management (OCM) agent.

The next four fields control station-to-switch recall signal timing. If a flashhook interval (recall window) is required, the upper and lower bounds of the interval can be administered. An on-hook that lasts for a period of time greater than or equal to the lower bound and less than or equal to the upper bound will be treated as a recall flash. If an interval is not required, the Disconnect Timing value must be administered. An on-hook that lasts for a period of time less than this value will be ignored; greater than or equal to this value will be regarded as a disconnect.

- **Flashhook Interval** — Enter “y” to indicate that a flashhook interval (recall window) is required. If a “y” is entered, the Upper and Lower Bound fields will appear; if “n” is entered, the Disconnect Timing field will appear. Default is “y.”
- **Upper Bound (msec)** — Appears when the Flashhook Interval field is “y.” Specifies the upper bound of the station-to-switch recall signal timing interval in milliseconds. Enter 150 through 1250 (in increments of 10) to specify the upper bound of the flashhook interval. Default is “1000.”
- **Lower Bound (msec)** — Appears when the Flashhook Interval field is “y.” Specifies the lower bound of the station-to-switch recall signal timing interval in milliseconds. Enter 150 through 1250 (in increments of 10) to specify the lower bound of the flashhook interval. Default is “200.”
- **Disconnect Timing (msec)** — Appears when the Flashhook Interval field is “n.” Enter 150 through 1250 (in increments of 10) to specify the number of seconds an on-hook must last for it to be considered a disconnect. Default is “150.”

The next three fields control the Enhanced DCS feature.

- **Enhanced DCS Enabled?** — Enter “y” to enable the Enhanced DCS feature on a systemwide basis. Default is “n.”
- **Apply Intercept Locally?** — Enter “y” to indicate that DID/CO intercept treatment will be applied locally instead of on the originating switch. This field appears only if the Enhanced DCS Enabled field is set to “y.” Default is “y.”

- **Enforce PNT-to-PNT Restrictions?** — Enter “y” in this field to indicate that restrictions and denial of PNT-to-PNT connections will be enforced when the EDCS message is unavailable. A “y” in this field means restrictions will be enforced. This field appears only if the Enhanced DCS Enabled field is set to “y.” Default is “n."

```
                                                          Page 1 of 6
                      FEATURE-RELATED  SYSTEM  PARAMETERS
                                Trunk-to-Trunk Transfer? n
   Coverage - Subsequent Redirection No Answer Interval: 3_
          Coverage - Caller Response Interval (seconds) : 4_
                        Keep Held SBA at Coverage Point? y_
Automatic Callback - No Answer Timeout Interval (rings) : 4_
                  Call Park Timeout Interval (minutes): 10
    Off-Premises Tone Detect Timeout Interval (seconds): 20_
                             AAR/ARS Dial Tone Required? y
                                     Music/Tone On Hold: music Port: _____
         Music (or Silence) On Transferred Trunk Calls: all
                     DID/Tie/ISDN Intercept Treatment: attd
            Messaging Service Adjunct (MSA) Connected? y
 Internal Automatic Answer for Attendant Extended Calls? y
            Automatic Circuit Assurance (ACA) Enabled? y
                                     ACA Referral Calls: local
                                ACA Referral Destination: _______
          ACA Short Holding Time Originating Extension: _____
           ACA Long Holding Time Originating Extension:_____
                          ACA Remote PBX Identification:  ____
```

Screen 5-52. Feature-Related System-Parameters Form (Page 1 of 6)

Implementation Notes:

If Automatic Circuit Assurance (ACA) Enabled is ’’n," associated ACA fields will not be displayed.

If ACA Referral Calls is ’’local’’ or ’’primary," the ACA Referral Destination and the ACA Shortand Long HoldingTime fields are displayed.

If ACA Referral Calls is ’’remote,’’ the ACA Remote PBX Identification field is displayed.

If the Music/Tone on Hold field is ’’music," the Port field is displayed.

The Messaging Service Adjunct (MSA) Connected field is only displayed on a G3s V2 or G3i V2 configuration.

```
                                                              Page 2 of 6
                        FEATURE-RELATED SYSTEM PARAMETERS
LEAVE WORD CALLING PARAMETERS
  Maximum Number of Messages Per Station (when MSA not in service): 10_
  Stations with System-wide Retrieval Permission (enter extension)
    1: 34430    3:  attd_  5:  ____   7: _____    9: _____
    2:  34412   4:  _____  6: _____   8: _____   10: _____


     WARNING !   SEE USER DOCUMENTATION BEFORE CHANGING TTI STATE
                  Terminal Translation Initialization (TTI) Enabled? y
                   TTI State: voice      TTI Security Code:  _____
```

Screen 5-53. Feature-Related System-Parameters Form (Page 2 of 6)

Implementation Notes:

The four fields immediately under SVN Login Violation Notification Enabled are only displayed if the Enabled field entry is ''y."

The four fields immediately under SVN Remote Access Violation Notification Enabled are only displayed if the Enabled field entry is ''y."

An Originating Extension must be a previously unadministered extension.

The originating extensions for login and remote access security violations cannot be the same as the originating extensions for ACA long and short holding time originating extensions. However, the destination extensions for both features can be the same.

A Referral Destination must be an extension equipped with a display.

Enter "attd" or local extension number for Referral Destination.

```
                                                              Page 3 of 6
                    FEATURE-RELATED SYSTEM PARAMETERS
                     Reserved Slots for Attendant Priority Queue: 5_
                                      Time Before Off-Hook Alert: 10_
                          Emergency Access Redirection Extension:_____
                                  Service Observing Warning Tone? n

                                               Call Pickup Alerting? n
                 Deluxe Paging and Call Park Timeout to Originator? n

      Controlled Outward Restriction Intercept Treatment: tone _______
     Controlled Termination Restriction (Do Not Disturb): tone _______
               Controlled Station-to-Station Restriction: tone _______

AUTHORIZATION CODE PARAMETERS           Authorization Code Enabled? y

                                         Authorization Code Length: 7
                               Authorization Code Cancellation Symbol? #
                                           Attendant Time Out Flag? n
```

Screen 5-54. Feature-Related System-Parameters Form (Page 3 of 6)

Implementation Note:

The Authorization Code Length, Cancellation Symbol, and Attendant Time Out Flag fields are only displayed when the Authorization Code Enabled field is ''y."

```
                                                              Page 4 of 6
                        FEATURE-RELATED SYSTEM PARAMETERS
SYSTEM PRINTER PARAMETERS
            System Printer Extension: ____              Lines Per Page: 60
                 EIA Device Bit Rate: 9600
SYSTEM-WIDE PARAMETERS
                        Switch Name: ________________
CALL CENTER SYSTEM PARAMETERS
 Expert Agent Selection (EAS) Enabled? n    Direct Agent Announcement Delay: _
Minimum Agent-LoginID Password Length: _         Converse First Data Delay: 0
  Direct Agent Announcement Extension: _____     Converse Second Data Delay: 2
CALL MANAGEMENT PARAMETERS
          BMCS Measurement Interval: hour ______
BCMS/VuStats Abandon Call Timer (seconds): _____
         ACD Login Identification Length: 0           Adjunct CMS Release: R2
MALICIOUS CALL TRACE PARAMETERS
              Apply MCT Warning Tone? n     MCT Voice Recorder Trunk Group: _
```

Screen 5-55. Feature-Related System-Parameters Form (Page 4 of 6)

Implementation Note:

The EIA Device Bit Rate field is not displayed for G3r V2 configurations.

```
                                                              Page 5 of 6
                        FEATURE-RELATED SYSTEM PARAMETERS

                     Public Network Trunks on Conference Call: 5
                  Conference Parties with Public Network Trunks: 6
               Conference Parties without Public Network Trunks: 6
                     Night Service Disconnect Timer (seconds): 180
                             Short Interdigit Timer (seconds): 3
                          Unanswered DID Call Timer (seconds): ____
                          Line Intercept Tone Timer (seconds): 30
                                                Auto Start? n
                                                 Auto Hold? n
                                             Attendant Tone? Y
                                              Bridging Tone? n
                                            Conference Tone? n
                                             Intrusion Tone? n
                                        DID Busy Treatment: tone
    DISTINCTIVE AUDIBLE ALERTING
                           Internal: 1   External: 2   Priority: 3
```

Screen 5-56. Feature-Related System-Parameters Form (Page 5 of 6)

```
                                                          Page 6 of 6
                    FEATURE-RELATED SYSTEM PARAMETERS

                                              Pull Transfer: _
                                   Level Of Tone Detection: _________
                                Wait Answer Supervision Timer? _
                                 Repetitive Call Waiting Tone? _
                            Repetitive Call Waiting Interval (sec): _
                                    Outpulse Without Tone? _
                            Network Feedback During Tone Detection? _
                        Intercept Treatment On Failed Trunk Transfers? _
                                        Vector Disconnect Timer (min): _
                                  Station Busy Tone Forward Disconnect? _

RECALL TIMING
        Flashhook Interval? _                  Upper Bound (msec): ____
  Disconnect Timing (msec): ____               Lower Bound (msec): ____

ENHANCED DCS
      Enhanced DCS Enabled? _
   Apply Intercept Locally? _      Enforce PNT-to-PNT Restrictions? _
```

Screen 5-57. Feature-Related System-Parameters Form (Page 6 of 6)

Implementation Notes:

The Upper Bound and Lower Bound fields appear only if the Flashhook lnterval field is ''y."

A flash of 50 msec to 130 msec is always acceptable from a 2500-type set regardless of the setting of the Upper and Lower bounds.

If the Flashhook lnterval field is ''n," the Disconnect Timing field appears.

The Apply lntercept Locally and Enforce PNT-to-PNT Restrictions fields appear when the Enhanced DCS field is set to ''y."

The Repetitive Call Waiting (sec) field appears when the Repetitive Call Waiting Tone field is set to "y."

Hospitality

This form is used to implement the system parameters associated with the hospitality features. To use and administer the Hospitality-related features, you must enable Hospitality on the System-Parameters Customer-Options form. Contact your AT&T support representative for assistance.

Administration Commands

The following administration commands can be used to access the Hospitality form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
change	system-parameters hospitality	—
display	system-parameters hospitality	['print' or 'schedule']

* Brackets [ ] indicate the qualifier is optional. Single quotes (") indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word can be entered.

Form Instructions

Make assignments as required for the following fields on each page of the form:

Page 1 of the Form

- **Message Waiting Configuration** — Indicates if message waiting notification requests and changes are being exchanged between the system and PMS. if it is active, the system and the PMS, when used, exchange message waiting information. Valid entries are "act-nopms" or "act-pms"; act-nopms indicates message waiting is activated but no waiting message information is being transmitted between PMS and the system; act-pros indicates message waiting is activated and transmitting information between the PMS and the system. Default is "act-nopms."
- **Controlled Restrictions Configuration** — Indicates if notification of controlled restriction is being exchanged between the system and PMS. If "act-pms" the system and the PMS, when used, exchange controlled restriction information. Valid entries are "act-nopms" or "act-pms." Default is "act-nopms."
- **Housekeeper Information Configuration** — Indicates if housekeeper information is being exchanged between the system and PMS. If "act-pms," the system and PMS exchange housekeeper information. Valid entries are "act-nopms," or "act-pros." Default is "act-nopms."
- **Number of Housekeepr ID Digits** — Enter the number of digits (0 to 6) that the housekeeper must dial for identification. Default is "0."

■ **Extension of PMS Log Printer** — Enter the extension number (cannot be a VDN extension) of the data module or data line that is connected to the PMS/Log printer.

■ **Extension of Journal/Schedule Printer** — Enter a valid data extension number (cannot be a VDN extension) assigned to the Journal/Log printer. This extension number is dialed by the system so it can send log and scheduled hospitality reports information to the printer.

■ **Client Room Coverage Path Configuration** — This field indicates if the PBX and PMS exchange coverage path information for guest stations. Setting this field to "act-pros" enables the PMS to update the coverage path of a guest station. Setting this field to "act-nopms" (default) prevents the PMS from setting a room's coverage path. When upgrading from a release that does not support this field, the field is "act-pros" if the PMS protocol made was administered as "transparent." Otherwise, this field is "act-nopms."

■ **Default Coverage Path For Client Rooms** — Only displayed when the PMS Protocol Mode field is "transparent." Enter a Coverage Path number or leave blank. This field defines the call coverage path number set for an extension when the system receives a checkout message in the "transparent" mode. The extension must belong to a station that has "Client Room" class of service (COS) and has "occupied" room status (before check out). This value is also used during a "save translations" operation as the coverage path for each station with "Client Room" COS.

■ **Extension of PMS** — Enter the data extension number (cannot be a VDN extension) the system must dial to access PMS.

■ **PMS Protocol Mode** — Enter "normal" or "transparent" to identify the mode of the message protocol and the message set to be used between the digital switch and the PMS. The "normal" mode supports up to 4-digit room extension numbers and the "transparent" mode supports up to 5-digit room extension numbers, name registration, and other enhancements. Default is "normal."

■ **Seconds Before PMS Link Idle Timeout** — Enter the idle time in seconds (5 to 20) the system waits before it concludes that the PMS is not sending data across the transmission link. Default is "10."

■ **Milliseconds Before PMS Link Acknowledgment Timeout** — Enter the time in milliseconds (100 to 500) the system waits for an acknowledgment from the PMS indicating it correctly received a message. Default is "200."

■ **PMS Link Maximum Retransmissions** — Enter the number of times (1 to 5) that the system will retransmit a message in response to a negative acknowledgment or send an inquiry for an acknowledgment from the PMS for a message before giving up on the message transmission. Default is "3."

■ **PMS Link Maximum Retransmission Request** — Enter the number of times (1 to 5) that the switch will request the PMS to retransmit a message. Default is "3."

- **Take Down Link for Lost Messages** — Enter a "y" to cause the PBX to take down the PMS link if a message is sent and rejected the number of times specified in the "PMS Link Maximum Retransmissions" field. An "n" in this field causes the PBX to leave up the PMS link but to stop trying to send the message. Careful monitoring of the PMS error log is recommended when using this option. Default is "y."

NOTE:
It is recommended that this field be left at the default setting.

Page 2 of the Form

- **Time of Scheduled Wakeup Activity Report** — Enter the time the Wakeup Activity Report will be printed. This report summarizes the wakeup activity for each extension that had wakeup activity for the past 24 hours. Enter the time hh[:mm][a/pm] where hh=hour, mm=minute, a/pm=am or pm.

- **Time of Scheduled Wakeup Summary Report** — Enter the time the Wakeup Summary Report will be printed. This report gives an hour-by-hour summary of the number of scheduled wakeup calls and a list of extensions to which wakeup calls were attempted but did not complete during the hour. Enter the time hh[:mm][a/pm] where hh=hour, mm=minute, a/pm=am or pm.

- **Time of Scheduled Emergency Access Activity Report** — Enter the time the Emergency Access Activity Report will be printed. Enter the time hh[:mm][a/pm] where hh=hour, mm=minute, a/pm=am or pm.

- **Announcement Type** — Enter the type of automatic wakeup announcement the hotel guest will receive. Valid entries are:
  - external (applicable if you are using an announcement adjunct)
  - integrated (applicable if you are using the TN750B announcement board)
  - mult-integ (multi-integrated, applicable if you are using the TN750B announcement board)
  - music-on-hold
  - silence (default)
  - voice-synthesis
  - If "integrated" is entered, complete the Integrated Announcement Extension field. If "mult-integ" is entered, complete the Default Announcement field. In these two cases, the extension you enter must be a valid integrated announcement (administered on the Recorded Announcement form) or a VDN. If you enter an invalid extension, the system displays an error message. If "voice-synthesis" is entered, complete the Announcement Ports field. If "external" is entered, complete the Auxiliary Board for Announcement field.

- **Integrated Announcement Extension** — This field appears only if you entered "integrated" as an Announcement Type. Enter the extension (5 digits or less) of the announcement you want to use for wakeup calls. This extension must be administered on Recorded Announcement form.
- **Default Announcement Extension** — This field appears only if you entered "multi-int" as an Announcement Type. Enter the extension (5 digits or less) of the announcement you want to use for the default wakeup call. Note that an attendant can identify an other announcement extension for any specific wakeup call. This extension and all other extensions used for Auto-Wakeup must be administered on the Recorded Announcement form.
- **Announcement Ports** — Enter two port numbers of seven characters each. This field appears only if you entered "voice-synthesis" as an Announcement Type. The port numbers are assigned to two different ports (01, 02, 03,04 — any two of the four) on the Voice Synthesizer circuit pack.

  The entry breaks down as follows:

Characters	Meaning	Value
1-2	Cabinet Number	01 through 22 (G3r V2) 01 through 03 (G3i V2) 01 through 44 (G3r V3) 01 (G3s V2)
3	Carrier	A through E
4-5	Slot Number	01 through 20
6-7	Circuit Number	01 through 04

- **Auxiliary Board For Announcement** — Enter a 4- or 5-character circuit pack number. This field requests the circuit pack address that connects to the external announcement equipment.

  The entry breaks down as follows:

Characters	Meaning	Value
1-2	Cabinet Number	01 through 22 (G3r V2) 01 through 03 (G3i V2) 01 through 44 (G3r V3) 01 (G3S V2)
3	Carrier	A through E
4-5	Slot Number	01 through 20

- **Length of Time To Remain Connected To Announcement—** Enter the length of time in seconds (0 to 300) the hotel guest will receive a wakeup call announcement. Default is 30.
- **Extension To Receive Failed Wakeup LWC Mesages** — Enter the unassigned extension number (cannot be a VDN extension)

where unsuccessful wakeup LWC messages will be stored. A dedicated unassigned extension is required. Default is blank.

- **Routing Extension On Unavailable Voice Synthesis** — Enter the extension number (cannot be a VDN extension) or "attd" (attendant) to which a call will be placed during voice synthesis entry of wakeup requests when a voice synthesis port is not available. Default is blank.
- **Display Room Information in Call Display** — Enter "y" when the information in the Room field on Station forms is to be used in the Extension Display field on delay-equipped voice terminals. If the associated station form defines a "Client Room" COS and a non-blank value in the Room field, the characters in the Room field are shown in the extension portion of call displays. If the Room field has more than five characters, only the first five characters are shown. This supports situations where there are several phones with different extension numbers in one guest room. The room number will always be displayed no matter which phone is in use.

  This field also affects redirected client room calls if the Disp. Client Redir field is set to "n" on the station form of a display station receiving redirected client room calls.

  Default is "n."
- **Definition for Rooms in State 1-6** — The default is the Rooms in State number. You can enter up to 30 characters.

Implementation Notes:

The Announcement Ports field appears only when the Announcement Type field is "voice-synthesis."

The Auxiliary Board for Announcement field appears only when the Announcement Type field is "external."

The Default Announcement Extension field appears only if you entered "multi-int" as an Announcement Type.

The Integrated Announcement Extension field appears only if you entered "integrated" as an Announcement Type.

The definitions for room states (page 3 of the form), are for Attendant Room Status only. If you are not using Attendant Room Status, you do not need to complete these fields.

```
                                                          Page 1 of 3
                          HOSPITALITY
                      Message Waiting Configuration: act-nopms
                   Control Restrictions Configuration: act-nopms
                 Housekeeper Information Configuration: act-nopms
                       Number of Housekeeper ID Digits: 0
                          Extension of PMS Log Printer: _____
                  Extension of Journal/Schedule Printer: _____
               Client Room Coverage Path Configuration: act-nopms
                Default Coverage Path For Client Rooms: _______
                             PMS LINK PARAMETERS
                                      Extension of PMS: ___
                                    PMS Protocol Mode: normal_____
                  Seconds before PMS Link Idle Timeout: 10
Milliseconds before PMS Link Acknowledgement Timeout: 200
                       PMS Link Maximum Retransmissions: 3
              PMS Link Maximum Retransmission Requests: 3
                      Take Down Link for Lost Messages? Y
```

Screen 5-58. Hospitality Form (Page 1 of 3)

```
                                                          Page 2 of 3
                          HOSPITALITY
                 Time of Scheduled Wakeup Activity Report: _______
                  Time of Scheduled Wakeup Summary Report: _______
          Time of Scheduled Emergency Access Summary Report: _______

                                       Announcement Type: External
                                      Announcement Ports: _______
                           Auxiliary Board for Announcement: _______
       Length of Time To Remain Connected To Announcement: 30 ____
          Extension To Receive Failed Wakeup LWC Messages:_______
        Routing Extension On Unavailable Voice Synthesis: _
                Display Room Information in Call Display? n
```

Screen 5-59. Hospitality Form (Page 2 of 3)

```
change system-parameters hospitality                          Page   2 of 3
                              HOSPITALITY


                    Time of Scheduled Wakeup Activity Report:
                     Time of Scheduled Wakeup Summary Report:
              Time of Scheduled Emergency Access Summary Report:

                                          Announcement Type: silence


            Length of Time to Remain Connected to Announcement: 30
               Extension to Receive Failed Wakeup LWC Messages:
              Routing Extension on Unavailable Voice Synthesis:
                      Display Room Information in Call Display? n
```

Screen 5-59a. Hospitality Form (Page 2 of 3)

```
                                                          Page 2 of 3
                           HOSPITALITY
                    Time of Scheduled Wakeup Activity Report: _____
                     Time of Scheduled Wakeup Summary Report: _____
              Time of Scheduled Emergency Access Summary Report: _____

                                          Announcement Type: integrated
                         Integrated Announcement Extension: xxxxx
            Length of Time To Remain Connected To Announcement: _____
               Extension To Receive Failed Wakeup LWC Messages: _____
              Routing Extension On Unavailable Voice Synthesis: _____
                      Display Room Information in Call Display? _
```

Screen 5-59b. Hospitality Form (Page 2 of 3)

```
                                                          Page 2 of 3

                        HOSPITALITY
                Time of Scheduled Wakeup Activity Report: _____
                 Time of Scheduled Wakeup Summary Report: _
          Time of Scheduled Emergency Access Summary Report: _

                                        Announcement Type: mult-integ
                          Default Announcement Extension: xxxxx
        Length of Time To Remain Connected To Announcement: _____
           Extension To Receive Failed Wakeup LWC Messages: _____
          Routing Extension On Unavailable Voice Synthesis: _
                  Display Room Information in Call Display? _
```

Screen 5-59c. Hospitality Form (Page 2 of 3)

```
                                                          Page 3 of 3


Definition for Rooms in State 1: Rooms in State 1
Definition for Rooms in State 2: Rooms in State 2
Definition for Rooms in State 3: Rooms in State 3
Definition for Rooms in State 4: Rooms in State 4
Definition for Rooms in State 5: Rooms in State 5
Definition for Rooms in State 6: Rooms in State 6
```

Screen 5-59d. Hospitality Form-G3V3 only (Page 3 of 3)

Hunt Group

Allows calls to be answered by users (agents) at a predesignated group of terminals or devices.

This form is used to create a hunt group that is identified by a hunt group number. Users assigned to a hunt group are identified by their extension number.

NOTE:
If the Hospitality Parameter Reduction option is enabled on the System-Parameters Customer-Options form, only five hunt groups can be assigned.

The Hunt Group form can be used to implement a hunt group and its associated features such as Automatic Call Distribution (ACD) and Hunt Group Queuing. Look at the various hunt group forms and choose the forms that can be used to implement your hunt group requirements.

The System checks for the busy or idle status of extension numbers in the hunt group when answering calls. A Uniform Call Distribution (UCD) type hunt group selects the “most idle” extension in the group when answering a new call. A Direct Department Calling (DDC) type hunt group selects the first available extension (in the administered sequence) when answering a new call.

Once the forms have been chosen, review the following instructions and use them for the fields that appear on the forms. The instructions listed below describe all the fields that can be used; however, some of the fields cannot appear on the forms you selected. Implementation Notes at the bottom of the screen form examples lists the field entries required to obtain the associated form.

NOTE:
Vector controlled splits/skills (that is, ACD hunt group with vector= “y”) can be called directly via the split/skill extension (instead of calling a VDN mapped to a vector that will terminate the call to a vector controlled split/skill); however, the calls will not receive any announcements, be forwarded, redirect to coverage, or intraflow/interflow to another hunt group.

Administration Commands

The following administration commands can be used to access the Hunt Group form. In some cases, just the most commonly used commands are shown. Refer to “Administration Commands” in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

	Action	Object	Qualifier*
Without Hospitality Parameter Reduction Feature	add	hunt-group	1-MAX (or ‘next’)
	change	hunt-group	1 -MAX
	display	hunt-group	1-MAX ['print’ or ‘schedule’]
	list	hunt-group	['print’ or ‘schedule’]
	remove	hunt-group	1-MAX
With Hospitality Parameter Reduction Feature	add	hunt-group	1-5 (or ‘next’)
	change	hunt-group	1-5
	display	hunt-group	1-5 ['print’ or ‘schedule’]
	list	hunt-group	['print' or ‘schedule’]
	remove	hunt-group	1-5

* Brackets [ ] indicate the qualifier is optional. Single quotes (”) indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word can be entered. MAX is the maximum number available in your system configuration. Refer to the Capacity Table in Appendix C.

NOTE:
Hospitality Parameter Reduction is not supported by the G3s V2 and higher ABP configurations.

Form Instructions

Make assignments as required for the following fields on each page of the form:

Page 1 of the form

- **Group Number** — Enter a hunt group number when completing a paper form (only five hunt groups can be assigned if the Hospitality Parameters Reduction option is enabled on the System-Parameters Customer-options form). This is a display-only field when the form is accessed using an administration command such as *add* or *change.*
- **Group Extension** — Enter an unused extension number (1 to 5 digits) to be assigned to the hunt group.
- **Group Type** — Enter the type of hunt group: "ucd,” “ddc,” or “ead.” Enter “ucd” if the hunt group has an AUDIX or Messaging Server Adjunct message or if the Skill field has been set to “y.” Also, “ucd” is required when supporting the Outbound Call Management feature and when the “Controlling Adjunct” field is administered as “asai.”

Enter “ead’ (expert agent distribution) in the “type” field when EAS is optioned. When ead is optioned, a call to the hunt group first looks for the most-idle “primary” agent and only if no “primary” agents are available will the call go to the most-idle “secondary” agent. This allows a call to be distributed to an agent best able to handle the call if multiple agents (primary and secondary) are available.

The default is “ucd.”

- **Group Name** — Enter a 16-character string that uniquely identifies the group (for example, “parts dept,” “purchasing,” or “sales dept”).
- **Skill** — Only appears if Expert Agent Selection is enabled on the System-Parameters Customer-Options form. Enter “y” if this hunt group has an associated Skill. When set to “y,” the ACD and Vector fields will automatically be set to “y.” Default is “n.”

  NOTE:
  If the field is "y," then the Group Type field must be "ucd."

- **ACD** — Enter “y” if the hunt group will function as an ACD split/skill. AUDIX and MSA hunt groups can function as ACD splits/skills. This field cannot be completed if the ACD option is not enabled on the System-Parameters Customer-Options form. Enter “n” if this feature is not desired, even if ACD is enabled on the System-Parameters Customer-Options form. When the hunt group is assigned as an ACD split/skill, the hunt group members will serve as ACD agents. The agents in this split/skill must log in to receive ACD split/skill calls. If this hunt group is on a remote switch using the AUDIX in a DCS feature, enter “n” in this field.
- **Queue** — Enter “y” if the hunt group will be served by a queue. Default is “n.”
- **AAS** — Displayed when the “ACD" field for this hunt group is “y.” Enter “y” when this hunt group will serve as an Auto-Available Split.
- **Vector** — Enter “y” to indicate that this hunt group will be vector controlled. The Vectoring-Basic option must be enabled on the System-Parameters Customer-Option form before “y” can be entered in the field. Default is “n.” (See example screen forms for fields that are displayed when “y” is entered in this field.)
- **Security Code** — Enter a 4-digit security code (password) used for the Demand Print feature. Valid entries are a 4-digit security code or leave blank.
- **Night Service Destination** — Not displayed if Vector is “y.” Enter the destination where calls to this ACD split will redirect when the split is in the night service mode. Valid entries are an assigned extension number (can be a VDN extension), the attendant group code, or leave blank.
- **COR** — Enter the class of restriction (COR) number from 0 through 95 that reflects the desired restriction for the hunt group. If this is a hunt group supporting the AUDIX in a DCS feature, the CORs on the Hunt Group form on each switch must be the same. Default is ”1.“

- **ISDN Caller Disp** — Enter “grp-name” or “mbr-name” to specify whether the hunt group name or member name, respectively, will be sent to the originating user. This field is required if the ISDN-PRI option on the System-Parameters Customer-Options form is enabled. If ISDN-PRI is not enabled, this field must be blank.
- **Coverage Path** — Not displayed if Vector is “y.” Enter a coverage path number. This assigns a coverage path for the hunt group. The coverage path is assigned using the Call Coverage Path form. Valid entries vary depending on the system configuration, or this field can be left blank.

The following fields are displayed if ACD is “y”:

- **Measured** — Enter “internal” or “both” to have real-time data for the ACD split/skill collected (internal to switch) for possible use by VuStats (if optioned) or BCMS (if the BCMS field on the Hunt Group form is set to “y”). You can enter “internal" or “both” if the BCMS and/or the VuStats option is enabled on the System-Parameters Customer-Options form. If neither of these features is optioned, and if you enter a value in the BCMS Measurement Interval field, the system displays the following error message:

  <value> cannot be used; assign either BCMS or VuStats first

  At this time you must turn BCMS and/or VuStats on on the System-Parameters Customer-Options form. Contact an AT&T representative for assistance. Enter “external” to have measurements made by the Call Management System (external to switch). Enter “both” to have data sent to both systems for measurement reports. Enter “none” if measurement reports for this hunt group is not required. Default is “none.”
- **Supervisor Extension** — Enter the extension number (cannot be a VDN number) of the ACD split/skill supervisor that agents will reach when using the Assist feature.
- **Priority On Intraflow** — Not displayed if Vector is “y.” Enter “y” if calls intraflowing from this split to a covering split will be given priority over other calls waiting in the covering split queue. Default is “n.”
- **Controlling Adjunct** — Displayed when the ACD field is “y.” Enter “none” to indicate that members of the split/skill or hunt group are not controlled by an adjunct processor. When set to "asai,” all agent logins are controlled by an associated adjunct and logged-in agents can only use their data terminal keyboards to perform voice terminal functions (for example, change work state). If the controlling adjunct is a CONVERSANT voice system (requires an ASAI link), then enter “asai” in this field. (The ASAI option must be enabled on the System-Parameters Customer-Option form for CallVisor ASAI capability.) Valid entries are “asai” or “none.”
- **Multiple Call Handling** — Displayed only if the ACD field is set to “y” and the Multiple Call Handling field on the System-Parameters Customer-Options form is set to “y.” This field defines whether the hunt group can

have multiple call handling capabilities, and if so, what type. Valid input is: "none" and "on-request."

■ **ASAI Link Extension** — Displayed when controlling Adjunct field is "asai." Enter the appropriate ASAI Link extension (see CallVisor Adjunct/Switch Applications Interface Link information elsewhere is this chapter). This field cannot be blank.

■ **Acceptable Service Level (sec)** — The "Acceptable Service Level" field does not appear on the Hunt Group form unless the BCMS Service Level option and/or the VuStats option is enabled on the System-Parameters Customer-Options form and either "internal" or "both" appears in the Measured field on the Hunt Group form. Enter the number of seconds within which calls to this hunt group should be answered. This will allow BCMS to print out a percentage of calls that were answered within the specifed time. Valid entries are 0 through 9999 seconds. Default is blank.

■ **Objective** — Enter a numerical user-defined objective. An objective is a split or skill goal for the call center. This could be an agent objective such as a specific number of calls handled or an average talk time. The objective could also be a percent within the service level. The objective appears on the VuStats display and allows agents and supervisors to compare the current performance against the value of the objective for the split or skill.

You can use this value in a customized display format if the value in the Object Type field on the Display format form is either "vu-agent," "vu-agent-extension," or "vu-split."

■ **BCMS Historical and Real-Time Reports** — This field only appears if the BCMS option is enabled on the System-Parameters Customer-Options form and if the Measured field on the Hunt Group form contains either "internal" or "both." Enter "y" to receive historical and real-time BCMS reports; otherwise, enter "n."

■ **Redirect on No Answer (rings)** — Only appears when ACD is "y." Enter the maximum number of rings (1 to 20, or blank) before a call will redirect back to the split/skill.

■ **Forced Entry of Stroke Counts or Call Word Codes** — This field is only displayed when the Controlling Adjunct field is set to "none." Enter "y" if either a Stroke Count or Call Work Code must be entered for each call answered by an agent when in the Manual-in mode.

The following fields are displayed if Queue is set to "y":

■ **Queue Length** — Enter the maximum number of calls that can be in the queue at the same time. This field must have an entry when Queue is "y"

■ **Calls Warning Threshold** — Enter the number of calls that can be queued before the System flashes the queue status (feature buttons assigned on agents voice terminals) and the optional Auxiliary Queue Call

Warning Threshold lamp assigned to the split/skill. These lamps are lighted steadily when at least one call is in queue and the threshold has not yet been reached. Must be less than or equal to the queue length or leave blank. This field must not be left blank if the Calls Warning Port field is assigned a port number.

■ **Calls Warning Port** — Enter the seven-character port number assigned to connect the optional external Auxiliary Queue Call Warning Threshold lamp that will flash when the number of calls in queue has exceeded the queue warning threshold (assigned in the Calls Warning Threshold field).

The entry breaks down as follows:

Characters	Meaning	Value
1-2	Cabinet Number	01 through 22 (G3r V2 and higher) 01 through 03 (G3i V2 and higher) 01 (G3s V2 and higher)
3	Carrier	A through E
4-5	Slot Number	01 through 20
6-7	Circuit Number	01 through 32

NOTE:
This port is assigned to an Analog Line circuit pack or given an "X' designation if an extension is used.

■ **(Calls Warning) Extension** – An extension is needed when an X is placed in the Calls Warning Port field. This extension can be used by the Terminal Translation Initialization (TTI) feature to assign a port to this extension from the port itself. Once the Calls Warning Port field is assigned a valid port (either via TTl or the *change hunt-group* command), then the extension is removed and considered unassigned.

■ **Time Warning Threshold** — Enter the time in seconds (0 through 999, or blank) that a call can remain in the queue before the System flashes the Queue status lamps (feature buttons assigned members voice terminals) and the Auxiliary Queue Time Warning lamp assigned to this split/skill. An entry of "0" provides a warning whenever a call is queued.

■ **Tires Warning Port** — Enter the seven-character port number assigned to the Auxiliary Queue Time Warning lamp that flashes when the time entered in the Time Warning Threshold field has been reached by a call in queue. The entry breaks down as follows:

Characters	Meaning	Value
1-2	Cabinet Number	01 through 22 (G3r V2 and higher) 01 through 03 (G3i V2 and higher) 01 (G3s V2 anf higher)
3	Carrier	A through E

4-5	Slot Number	01 through 20
6-7	Circuit Number	01 through 32

NOTE:

This port is assigned to an Analog Line circuit pack or given an "X" designation if an extension is used.

- **(Time Warning) Extension** — An extension is needed when an X is placed in the Time Warning Port field. This extension can be used by the Terminal Translation Initialization (TTI) feature to assign a port to this extension from the port itself. Once the Time Warning Port field is assigned a valid port (either via TTl or the "change hunt-group command), then the extension is removed and considered unassigned.

The following field is displayed when ACD is "y" and Queue is "y":

- **Inflow Threshold** — Enter the number of seconds (0 through 999) that a call can remain in the queue before no more calls will be accepted by the queue. If "0" is entered, a call will be redirected to this split/skill only if there is an available agent.

Page 2 of the Form

- **Message Center** — Enter the type of messaging adjunct for the hunt group. Valid entries are "msa" (Messaging Server Adjunct), "rem-audix" (DCS feature allowing AUDIX to be located on another switch), or "audix" (for AUDIX located on this switch). Entering "none" indicates the hunt group does not serve as a message hunt group. Default is "none." Except on G3r V2 and higher configurations, only one hunt group in the System can be administered as msa, one as audix, and one as rem-audix.
- **AUDIX Extension** — Displayed when Message Center is "rem-audix." Enter a valid 4- to 5-digit Uniform Dial Plan (UDP) extension that identifies the AUDIX hunt group on the host switch used as the Message Center for this hunt group (supports the AUDIX In A DCS feature).
- **Message Center MSA Name** — Only appears on G3r and higher configurations for hunt groups with "msa" as the Message Center. Enter the name of the Message Center MSA.
- **Message Center AUDIX Name** — Only appears on G3r V2 and higher configurations for hunt groups with "audix" as the Message Center. Enter the name of the Message Center AUDIX.
- **Primary** — Only appears on G3r V2 and higher configurations for hunt groups with "audix" or "msa" as the Message Center. Enter "y" to indicate that the specified AUDIX or Messaging Server is the primary adjunct.
- **LWC Reception** — Defines the destination for Leave Word Calling (LWC) messages left for the hunt group. Valid entries are "audix," "msa," "spe," or "none."

- **AUDIX Name** — Only appears on G3r V2 and higher configurations. Enter the name of the AUDIX machine as it appears on the User-Defined Adjunct Names form.

- **Messaging Server Name** — Name of the server as it appears in the User-Defined Adjunct Names form. Only displayed for G3r V2 and higher configurations.

- **First Announcement Extension** — Appears when either ACD or Queue (or both) are "y." Not displayed if Vector is "y." Enter a recorded announcement extension number or leave blank. This is the announcement the caller will receive after being in the queue for the time interval specified in the First Announcement Delay field. If the call hasn't been answered after the announcement, the caller will hear music (only for first announcement) if Music-on-Hold is provided, or ringing for as long as it remains in the queue. Leaving this field blank indicates there will be no announcement, If this is the forced first announcement, the caller always hears ringback after the announcement; otherwise, the caller will hear music (if provided).

- **First Announcement Delay (sec)** — Displayed only if Queue is "y" and Vector is "n." Enter the number of seconds (0 through 99) that a call can remain in queue before the associated first announcement is given the calling party. The call retains its place in the queue while the caller is listening to the recorded announcement. If the call hasn't been answered after the announcement, the caller will hear music (for first announcement only) if Music-on-Hold is provided or ringing for as long as the call remains in queue. When "0" is entered, the first announcement is provided immediately to the caller. This value is automatically set to "0" if there is no queue. This field must be blank if there is no first announcement.

The following fields are displayed only when ACD and Queue are both "y" and Vector is "n":

- **Second Announcement Extension** — Enter the extension number assigned to a recoded announcement or leave blank. Leaving the field blank indicates that there is no second announcement.

- **Second Announcement Delay (sec)** — Enter the time in seconds (1 through 99) before the call in the queue receives a second recorded announcement or that the second announcement is repeated. It is recommended that, if this split/skill or hunt group is a coverage point for another split/skill, that this delay should not be more than 15 seconds. Leave blank if there is no second announcement.

- **Second Announcement Recurring** — Enter "y" if the second announcement can be repeated. Leave blank if there is no second announcement.

Pages 3 through X of the Form

The total number of pages will vary depending on your System configuration. Refer to the Capacity Table in Appendix C for the maximum number of hunt groups supported by each configuration.

NOTE:
Only Pages 1 and 2 will be displayed if the hunt group is skilled.

- **Group Number** — Display-only field.
- **Group Extension** — Display-only field.
- **Group Type** — Display-only field.
- **Member Range Allowed** — The range of allowed members will be displayed on all member pages. These values vary depending on the particular system and/or configuration.
- **Administered Members (min/max)** — This field will be displayed on all member pages. Indicates the minimum and maximum member number administered for this hunt group.
- **Total Administered Members** — This field will be displayed on all member pages. Indicates the total number of members administered for this hunt group.
- **More Members Exist** — Display-only field showing that there are more members than currently displayed (the current page is not the last page).
- **At End of Member List** — Display-only field showing that the current page is also the last page.
- **Ext** — Display-only field if the Controlling Adjunct field is "asai." Controlled Agent extensions must be entered on the Adjunct controlled Agent Table form. If Controlling Adjunct is "none," enter the extension number associated with a member in the hunt group or with an associated data module. The extension cannot be a VDN. The data module cannot be a member of an ACD split/skill.
- **Name** — Make no entry, this is a display-only field. The name is assigned to the above extension number when it is administered in the System.

```
                              HUNT GROUP                          Page 1 of X
    Group Number: _             Group Extension: _     Group Type: ucd
      Group Name: _____________           Skill? n              ACD? n
           Queue: n                     Vector? n
   Security Code?____  Night Service Destination:  ____          COR : 1
ISDN Caller Disp: _____          Coverage Path:  _____
```

Screen 5-60. Hunt Group Form (Page 1 of X)

```
                                                              Page 2 of X
                              HUNT GROUP
          Message Center: _________          AUDIX Extension: _____
Message Center MSA Name: _________                  Primary? _
            LWC Reception: ________
               AUDIX Name: ________
  Messaging Server Name: ________
```

Screen 5-61. Hunt Group Form (Page 2 of X)

Implementation Notes:

Pages 1 and 2 when the ACD, Queue, and Vector fields are ”n.”

Night Service Destination and Coverage Path fields are not displayed if Vector is “y”

AUDIX Extension is only displayed when Message Center is “rem-audix.”

The Message Center MSA Name, Message Center AUDIX Name, Primary, AUDIX Name, and Messaging Server Name fields are only displayed for G3r V2 and higher configurations.

Message Center MSA Name is only displayed when Message Center is “msa.”

Message Center AUDIX Name is only displayed when Message Center is “audix” or “rem-audix.”

Primary is only displayed when Message Center is “audix” or “msa.”

```
                              HUNT GROUP                      Page 1 of X
    Group Number: 35              Group Extension: 3035    Group Type: ucd_
      Group Name: hu 35 non-ACD             Skill? n            ACD? n
           Queue: y                        Vector? n
   Security Code? ____  Night Service Destination: ____         COR : 1
 ISDN Caller Disp: ________          Coverage Path: _

          Queue Length: 1
Calls Warning Threshold: _     Calls Warning Port: X     Extension: _____
 Time Warning Threshold: _      Time Warning Port: X     Extension: _____
```

Screen 5-62. Hunt Group Form (Page 1 of X)

```
                                HUNT GROUP                          Page 2 of X
            Message Center: _________          AUDIX Extension: _____
  Message Center MSA Name: _________                   Primary? _
             LWC Reception: ________
                AUDIX Name: ________
    Messaging Server Name: ________

First Announcement Extension:    _____      First Announcement Delay (sec): _
```

Screen 5-63. Hunt Group Form (Page 2 of X)

Implementation Notes:

Pages 1 and 2 when the ACD and Vector fields are ''n'' and the Queue field is "y"

Night Service Destination, Coverage Path, First Announcement Extension, and First Announcement Delay (sec) fields are not displayed if Vector is "y."

The two Extension fields on Page 1 are displayed only when Calls Warning Port and Time Warning Port are "X."

AUDIX Extension is only displayed when Message Center is "rem-audix."

The Message Center MSA Name, Message Center AUDIX Name, Primary, AUDIX Name, and Messaging Server Name fields are only displayed for G3r V2 and higher configurations.

Message Center MSA Name is only displayed when Message Center is "msa."

Message Center AUDIX Name is only displayed when Message Center is "audix" or "rem-audix."

Primary is only displayed when Message Center is "audix" or "msa."

```
                                HUNT GROUP                          Page 1 of X
    Group Number: 5               Group Extension: 3005    Group Type: ucd
      Group Name: int acd no que             Skill? n              ACD? y
           Queue: n                         Vector? n              AAS? n
   Security Code? _   Night Service Destination: ____             COR: 1
ISDN Caller Disp: ________          Coverage Path: _

              Measured: internal                 Supervisor Extension: _
  Priority On Intraflow? n
    Controlling Adjunct? none
 Multiple Call Handling: none           Acceptable Service Level (sec):
                                BCMS Historical and Real-Time Reports? n
                                  Redirect on No Answer (rings):
               Forced Entry of Stroke Counts or Call Work Codes? n
```

Screen 5-64. Hunt Group Form (Page 1 of X)

```
                                HUNT GROUP                          Page 2 of X
            Message Center: _________          AUDIX Extension:_____
   Message Center MSA Name: _________                  Primary? _
              LWC Reception: ________
                 AUDIX Name: ________
     Messaging Server Name: ________
First Announcement Extension:  _____
```

Screen 5-65. Hunt Group Form (Page 2 of X)

Implementation Notes:

Pages 1 and 2 when Queue and Vector are “n’’ and ACD is”y.”

Night Service Destination, Coverage Path, Priority On lntraflow, and First Announcement Extension fields are not displayed if Vector is ’’y.”

BCMS Acceptable Service Level (sec) is only displayed when the BCMS Acceptable Service Level option is enabled on the System-Parameters Customer-Options form and the Measured field is ’’internal’’ or ’’both.”

AUDIX Extension is only displayed when Message Center is "rem-audix.”

The Message Center MSA Name, Message Center AUDIX Name, Primary, AUDIX Name, and Messaging Server Name fields are only displayed for G3r V2 and higher configurations.

Message Center MSA Name is only displayed when Message Center is ’’msa.”

Message Center AUDIX Name is only displayed when Message Center is “audix” or “rem-audix.”

Primary is only displayed when Message Center is “audix” or “msa.”

```
change hunt -group 11                                    Page   l of 7
                                  HUNT GROUP

    Group Number: 11             Group Extension: 3011     Group Type: ucd
      Group Name: hu 11 mess acd                                 ACD? y
           Queue? y                        Vector? n             AAS? n
   Security Code:       Night Service Destination:                COR: 1
ISDN Caller Disp:                   Coverage Path:

              Measured: both                    Supervisor Extension:
  Priority On Intraflow? n                    Inflow Threshold (sec): 999
    Controlling Adjunct: none
 Multiple Call Handling? on-request    Acceptable Service Level (sec):
                                 BCMS Historical and Real-time Reports? y

           Queue Length: 5
Calls Warning Threshold: 2        Calls Warning Port:
 Time Warning Threshold: 15       Time Warning Port:

                                  Redirect on No Answer (rings):
               Forced Entry of Stroke Counts or Call Work Codes? n
```

Screen 5-66. Hunt Group Form (Page 1 of X)

```
                                  HUNT GROUP                    Page 2 of X

            Message Center: _________        AUDIX Extension: _____
    Message Center MSA Name: _________               Primary? _
              LWC Reception: _______
                 AUDIX Name: _______
      Messaging Server Name: _______

 First Announcement Extension: _____     First Announcement Delay (sec): _
Second Announcement Extension: _____    Second Announcement Delay (sec) : _
Second Announcement Recurring? _
```

Screen 5-67. Hunt Group Form (Page 2 of X)

Implementation Notes:

Pages 1 and 2 when the Queue and ACD fields are ”y” and the Vector field is “n.”

Night Service Destination, Coverage Path, Priority On Intraflow, Inflow Threshold, First Announcement Extension, First Announcement Delay (sec),

Second Announcement Extension, Second Announcement Delay (sec), and Second Announcement Recurring fields are not displayed if Vector is “y.”

Acceptable Service Level (sec) is only displayed when the BCMS Acceptable Service Level option is enabled on the System-Parameters Customer-Options form and the Measured field is “internal” or “both.”

The Objective field does not appear on the Hunt Group form unless VuStats is enabled on the System-Parameters Customer-Options form and either “internal” or “both” is in the Measured field on the Hunt Group form. (Note that the Measured field does not appear on the Hunt Group form unless the ACD field on the Hunt Group form is set to “y,” which requires ACD being enabled on the System-Parameters Customer-Options form.)

AUDIX Extension is only displayed when Message Center is “rem-audix.”

The Message Center MSA Name, Message Center AUDIX Name, Primary, AUDIX Name, and Messaging Server Name fields are only displayed for G3r V2 and higher configurations.

Message Center MSA Name is only displayed when Message Center is “msa.”

Message Center AUDIX Name is only displayed when Message Center is “audix” or “rem-audix.”

Primary is only displayed when Message Center is “audix” or “msa.”

```
                                                              Page 3 of X
                              HUNT GROUP
          Group Number: _      Group Extension:  ____          Type:  _
  Member Range Allowed: x - yyy          Administered Members (min/max) : xxx/yyy
                                            Total Administered Members: xxx

GROUP  MEMBER  ASSIGNMENTS
         Ext      Name            Ext      Name                Ext      Name
     1: ____                  14: ____                  27: ____
     2: ____                  15: ____                  28: ____
     3: ____                  16: ____                  29: ____
     4: ____                  17: ____                  30: ____
     5: ____                  18: ____                  31: ____
     6: ____                  19: ____                  32: ____
     7: ____                  20: ____                  33: ____
     8: ____                  21: ____                  34: ____
     9: ____                  22: ____                  35: ____
    10: ____                  23: ____                  36: ____
    11: ____                  24: ____                  37: ____
    12: ____                  25: ____                  38: ____
    13: ____                  26: ____                  39: ____
                                                        40: ____

     More members Exist
```

Screen 5-68. Hunt Group Form (Page 3 of X)

To reduce repetition, the remaining pages are not shown. For a complete set of blank forms, refer to the “Blank Forms Package.”

Implementation Note:

Pages 3 and above are not displayed if the hunt group is skilled.

List Hunt Group Form

- **Group Number** — The number of a hunt group.
- **Group Extension** — The extension of the hunt group.
- **Name** — The name administered for the hunt group.
- **Type** — The type of the hunt group. See the Group Type field description for page 1 of the Hunt Group form.
- **ACD/MEAS** — Indicates whether the hunt group will function as an ACD split/skill (“y” or “n”) and how it is measured (“I,” “B,” or “N”). See the ACD and Measured field descriptions for Page 1 of the Hunt Group form.
- **Vec** — An indicator (“y” or “n”) of whether the hunt group is controlled by a vector. See the Vector field description for page 1 of the Hunt Group form.

- **MCH** — An indicator ("y" or "n") of whether Multiple Call Handling is allowed for the hunt group. See the MCH field description for page 1 of the Hunt Group form.
- **Que Siz** — The maximum number of calls that can be in queue for the hunt group.
- **No. Mem** — The maximum number of members allowed for the hunt group.
- **Cov Path** — The number of the coverage path for the hunt group.
- **Notif/Ctg Adj** (Notifying/Controlling Adjunct) — An indicator of notification ("N") or controlling adjunct ("C"), or none ("n"). If the Notification field displays "N," it also contains the extension of the ASAI application link that has the notification. You can have up to three ASAI applications monitoring a single hunt group. If the field contains "C," it also displays the extension of the controlling adjunct. You can have one controlling adjunct for each hunt group.
- **Dom Ctrl** (Domain Control) — Displays the extension of the ASAI link over which the domain split is set up.
- **Message Center** — An indicator of the type of message center (if any) used. See the Messaging Center field description for page 2 of the Hunt Group form.

```
                                HUNT GROUPS

Grp  Grp                    Hunt  ACD/          Que  No.  Cov  Not i f / Dom   Message
No.  Ext.   Name            Type  MEAS Vec MCH  Siz  Mem  Path Ctg Adj Ctrl  Center

1    3001 hu 1 mess vec     ucd   y/B  y   n    5    11        n              n
2    3002 hu 2 mess vec     ucd   y/B  y   n    5    11        n              n
3    3003 hu 3 mess vec     ucd   y/B  y   n    5    11        n              n
11   3011 hu 11 mess acd    ucd   y/B  n   o    5    11        n              n
12   3012 hu 12 mess acd    ucd   y/B  n   n    5    11        n              n
13   3013 hu 13 mess acd    ucd   y/B  n   n    5    11        n              n
21   3021 hu 21 unm acd     ucd   y/N  n   n    5    11        n              n
22   3022 hu 22 unm acd     ucd   y/N  n   n    5    11        n              n
23   3023 hu 23 unm acd     ucd   y/N  n   n    5    11        n              n
31   3031 hu 31 non acd     ucd   n/-  n   n    5    1         n              n
32   3032 hu 32 non acd     ucd   n/-  n   n    5    1         n              n
33   3033 hu 33 non acd     ucd   n/-  n   n    5    l         n              n
```

Screen 5-68a. List Hunt Group Form (Page 1 of X)

Intra-Switch CDR

This form is used to administer extensions for which Intra-Switch CDR is to be enabled.

NOTE:
Attendants are not allowed to be optioned for the Intra-Switch CDR feature.

Administration Commands

The following administration commands can be used to access the Intra-Switch CDR form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
add	intra-switch-cdr	
change	intra-switch-cdr	[extension]
display	intra-switch-cdr	[extension]['print' or 'schedule']
list	intra-switch-cdr	[extension][count x]

* Brackets [ ] indicate the qualifier is optional. Single quotes (') indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word can be entered.

If your system can record more than 100 stations (see "Capacities" below), the system only displays two pages of extensions (112 per page) at one time. When you enter the **add** command to add extensions, the system automatically begins after the last administered extensions. If you enter the **change** command, the system display begins with the first extension. If you enter the **change** command with an extension number, the system begins the display with that extension.

When you enter the command **list intra-switch-cdr <extension> count x,** the system lists "x" switch extensions administered for Intra-Switch CDR beginning with the extension specified by <extension>. For example, if you enter "list intra-switch-cdr 81000 count 500," the system displays extension 81000 (if it is administered for Intra-Switch CDR) and the next 500 extensions that are administered for Intra-Switch CDR. The **display** command functions similarly to the **change** command.

Capacities

The Intra-Switch CDR extension capacities vary from switch to switch. The maximum allowed number of extensions for Intra-Switch CDR are: G3vsV3/G3sV3 — 100, G3iV3 — 1000, and G3rV3 — 5000.

Form Instructions

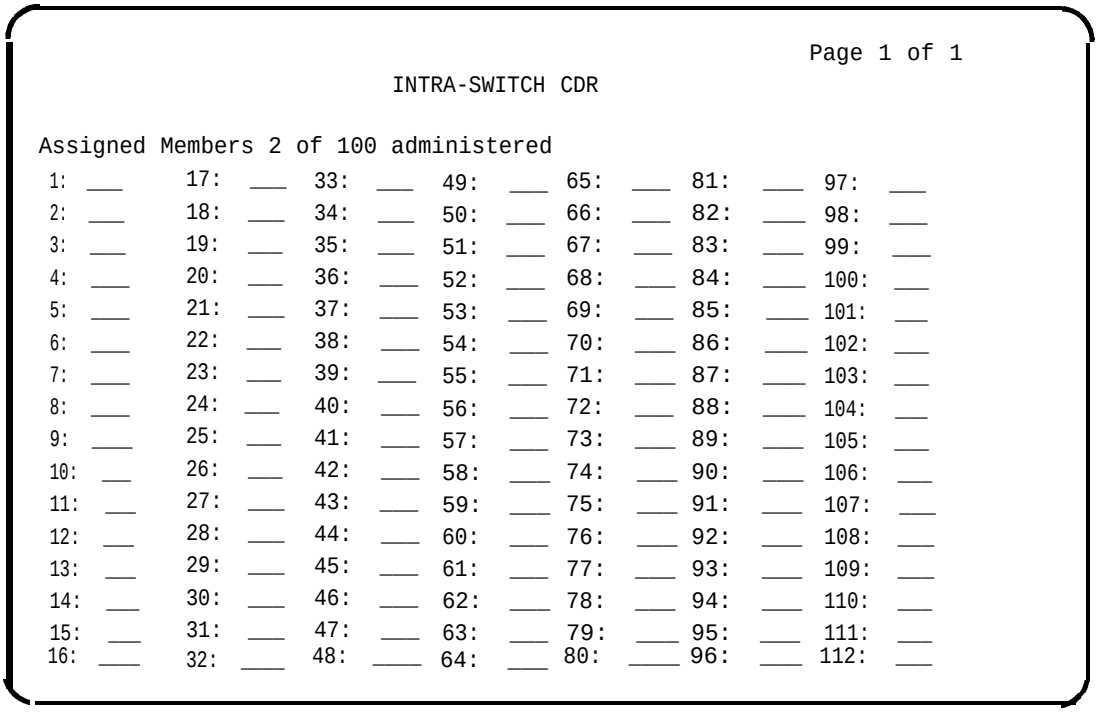
Make assignments as required for the following fields of the form:

Page 1 of X of the Add/Change/Display Form

- **Assigned Members** — The number of extensions administered out of the switch version maximum. To add the Intra-Switch CDR feature to additional extensions, enter the extension number(s) on this form.

```
                                                          Page 1 of 1
                          INTRA-SWITCH CDR

Assigned Members 2 of 100 administered
  1: 72447 17: _____ 33: _____ 49: _____ 65: _____ 81: _____  97: _____
  2: 72448 18: _____ 34: _____ 50: _____ 66: _____ 82: _____  98: _____
  3: _____ 19: _____ 35: _____ 51: _____ 67: _____ 83: _____  99: _____
  4: _____ 20: _____ 36: _____ 52: _____ 68: _____ 84: _____ 100: _____
  5: _____ 21: _____ 37: _____ 53: _____ 69: _____ 85: _____
  6: _____ 22: _____ 38: _____ 54: _____ 70: _____ 86: _____
  7: _____ 23: _____ 39: _____ 55: _____ 71: _____ 87: _____
  8: _____ 24: _____ 40: _____ 56: _____ 72: _____ 88: _____
  9: _____ 25: _____ 41: _____ 57: _____ 73: _____ 89: _____
 10: _____ 26: _____ 42: _____ 58: _____ 74: _____ 90: _____
 11: _____ 27: _____ 43: _____ 59: _____ 75: _____ 91: _____
 12: _____ 28: _____ 44: _____ 60: _____ 76: _____ 92: _____
 13: _____ 29: _____ 45: _____ 61: _____ 77: _____ 93: _____
 14: _____ 30: _____ 46: _____ 62: _____ 78: _____ 94: _____
 15: _____ 31: _____ 47: _____ 63: _____ 79: _____ 95: _____
 16: _____ 32: _____ 48: _____ 64: _____ 80: _____ 96: _____
```

Screen 5-72. Intra-Switch CDR Form for G3vs V3 and G3s V3



```
                                                              Page 1 of 1
                                INTRA-SWITCH CDR

Assigned Members 2 of 100 administered
 1: ___     17: ___  33: ___  49: ___  65: ___  81: ___  97: ___
 2: ___     18: ___  34: ___  50: ___  66: ___  82: ___  98: ___
 3: ___     19: ___  35: ___  51: ___  67: ___  83: ___  99: ___
 4: ___     20: ___  36: ___  52: ___  68: ___  84: ___ 100: ___
 5: ___     21: ___  37: ___  53: ___  69: ___  85: ___ 101: ___
 6: ___     22: ___  38: ___  54: ___  70: ___  86: ___ 102: ___
 7: ___     23: ___  39: ___  55: ___  71: ___  87: ___ 103: ___
 8: ___     24: ___  40: ___  56: ___  72: ___  88: ___ 104: ___
 9: ___     25: ___  41: ___  57: ___  73: ___  89: ___ 105: ___
10: ___     26: ___  42: ___  58: ___  74: ___  90: ___ 106: ___
11: ___     27: ___  43: ___  59: ___  75: ___  91: ___ 107: ___
12: ___     28: ___  44: ___  60: ___  76: ___  92: ___ 108: ___
13: ___     29: ___  45: ___  61: ___  77: ___  93: ___ 109: ___
14: ___     30: ___  46: ___  62: ___  78: ___  94: ___ 110: ___
15: ___     31: ___  47: ___  63: ___  79: ___  95: ___ 111: ___
16: ___     32: ___  48: ___  64: ___  80: ___  96: ___ 112: ___
```

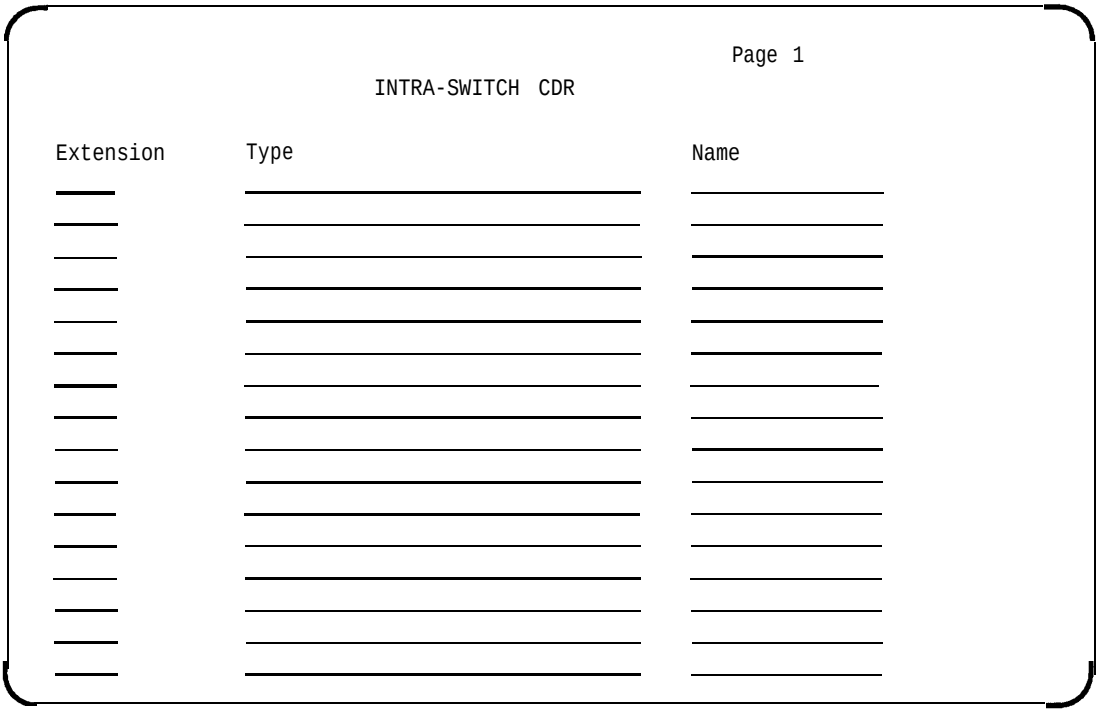
Screen 5-72a. Intra-Switch CDR Form for G3i and G3r

Implementation Note:

If your configuration allows more than 112 trackable extensions, this will be a multipage form.

Page 1 of X of the List Form

- **Extension** — The extensions administered for Intra-Switch CDR.
- **Type** — A user-defined description of the extension.
- **Name** — A user-defined name associated with the extension.



Screen 5-72b. List Intra-Switch CDR Form

Language Translations

These forms are used to administer a "user-defined" language for display messages. This allows a user-customized language to be added to the four languages (English, French, Italian, and Spanish) provided with the System.

Only Roman letters, punctuation, and digits are accepted (blanks are also acceptable). Diacritical marks are not supported.

NOTE:
If "user-defined" is selected for the display language and no translations have been made on these forms, all display messages will appear as a string of asterisks.

Administration Commands

The following administration commands can be used to access the Language Translations forms. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
change	display-messages auto-wakeup-dn-dst	
display	display-messages auto-wakeup-dn-dst	['print' or 'schedule']
change	display-messages call-identifiers	
display	display-messages call-identifiers	['print' or 'schedule']
change	display-messages date-time	
display	display-messages date-time	['print' or 'schedule']
change	display-messages leave-word-calling	
display	display-messages leave-word-calling	[print' or 'schedule']
change	display-messages malicious-call-trace	
display	display-messages malicious-call-trace	['print' or 'schedule']
change	display-messages miscellaneous-features	
display	display-messages miscellaneous-features	['print' or 'schedule']
change	display-messages property-management	
display	display-messages property-management	['print' or 'schedule']
change	display-messages softkey-labels	
display	display-messages softkey-labels	['print' or 'schedule']
change	display-messages time-of-day-routing	
display	display-messages time-of-day-routing	['print' or 'schedule']

* Brackets [ ] indicate the qualifier is optional. Single quotes (') indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word can be entered.

Form Instructions

Make assignments as required for the following fields on the form:

- **English** — Display-only field. This field contains the English term to be translated.
- **Meaning of English term** — Display-only field. Only appears on certain forms. This field contains a short explanation of the English message if that message is an abbreviation.
- **Translation** — Enter the desired translation for the corresponding English term.

```
                                                              Page 1 of 3
                          LANGUAGE  TRANSLATIONS

1.      English:     AUTO WAKEUP - Ext:
   Translation:  ********************.

2.      English:  WAKEUP  ENTRY  DENIED
   Translation:    ***********************

3.      English:  WAKEUP  REQUEST  CANCELED
   Translation:  ************************************

4.      English:  WAKEUP  REQUEST  CONFIRMED
   Translation:    **************************** **********

5.      English:  Wakeup  Call
   Translation:     ***********************************

6.      English:   Time:
   Translation:  *****:
```

Screen 5-73. Auto-Wakeup-Dn-Dst Language Translation Form (Page 1 of 3)

```
                                                                Page 2 of 3
                            LANGUAGE  TRANSLATIONS

 7.      English:     DO NOT DIST - Ext:
    Translation:  ***************  *****

 8.      English:      DO NOT DIST - Group:
    Translation:   **************  ********

 9.      English:  DO NOT DIST ENTRY DENIED
    Translation:  **************  *********

10.      English:  THANK YOU - DO NOT DIST ENTRY CONFIRMED
    Translation:  ************************************

11.      English:  THANK YOU - DO NOT DIST REQUEST CANCELED
    Translation:  ************************************
```

Screen 5-74. Auto-Wakeup-Dn-Dst Language Translation Form (Page 2 of 3)

```
                                                                Page 3 of 3
                            LANGUAGE  TRANSLATIONS

12.      English:  INTERVAL  FULL
    Translation:  *************

13.      English:  NO  PERMISSION
    Translation:  *************

14.      English:  SYSTEM  FULL
    Translation:  *************

15.      English:  TOO  SOON
    Translation:  *************

16.      English:  INVALID  EXTENSION  -  TRY  AGAIN
    Translation:  ************************************

17.      English:  INVALID  GROUP  -  TRY  AGAIN
    Translation:  ************************************
```

Screen 5-75. Auto-Wakeup-Dn-Dst Language Translation Form (Page 3 of 3)

```
                                                              Page 1 of 4
                              LANGUAGE TRANSLATIONS

    English              Meaning of English term                 Translated
    Term                                                         Term

 1. sa             ACD Supervisor Assistance                    1: * *
 2. ac             Attendant Assistance Call                    2: **
 3. tc             Attendant Control Of A Trunk Group           3: **
 4. an             Attendant No Answer                          4: **
 5. pc             Attendant  Personal  Call                    5: **
 6. rc             Attendant Recall Call                        6: **
 7. rt             Attendant Return Call                        7: **
 8. sc             Attendant Serial Call                        8: **
 9. co             Controlled Outward Restriction               9: **
10. cs             Controlled Station To Station Restriction   10: **
11. ct             Controlled Termination Restriction          11: * *
12. db             DID Find Busy Station With CO Tones         12: **
13. da             DID Recall Go To Attendant                  13: * *
14. qf             Emergency Queue Full Redirection            14: * *
```

Screen 5-76. Call-Identifiers Language Translation Form (Page 1 of 4)

```
                                                              Page 2 of 4
                              LANGUAGE  TRANSLATIONS

    English                Meaning of English term                Translated
    Term                                                          Term

15. hc              Held Call Timed Reminder                  15: **
16. ic              Intercept                                 16: **
17. ip              Interposition  Call                       17: **
18. ld              LDN Calls On DID Trunks                   18: **
19. so              Service Observing                         19: **
20. na              Unanswered Or Incomplete DID Call         20: **
21. ACB             Automatic Callback                        21: *******
22. callback        Callback  Call                            22: ********
23. park            Call Park                                 23: ********
24. control         Control                                   24: *******
25. ICOM            Intercom  Call                            25: *******
26. OTQ             Outgoing Trunk Queuing                    26: •*******
27. priority        Priority  Call                            27: ********
28. recall          Recall  Call                              28: •*******
```

Screen 5-77. Call-Identifiers Language Translation Form (Page 2 of 4)

```
                                                              Page 3 of 4
                              LANGUAGE TRANSLATIONS

    English                Meaning of English term                Translated
    Term                                                          Term

29. return          Return  Call                              29: ********
30. ARS             Automatic Route Selection                 30: ********
31. forward         Call Forwarding                           31: ********
32. cover           Cover                                     32: ********
33. DND             Do Not Disturb                            33: *******
34. p               Call Pickup                               34: *
35. c               Cover  All  Calls                         35: *
36. n               Night Station Service, Including No Answer 36: *
37. B               All Calls Busy                            37: *
38. f               Call Forwarding                           38: *
39. b               Cover Busy                                39: *
40. d               Cover Don't Answer                        40: *
41. s               Send  All  Calls                          41: *
```

Screen 5-78. Call-Identifiers Language Translation Form (Page 3 of 4)

```
                                                                Page 4 of 4
                              LANGUAGE  TRANSLATIONS

     English          Meaning of English term                  Translated
     Term                                                      Term

42.  OPERATOR         Operator                          42:   ***************
43.  EXT              Extension                         43:   ***************
44.  OUTSIDE CALL     Outside Call                      44:   ***************
45.  UNKNOWN NAME     Unknown  Name                     45:   ***************
46.  CONFERENCE       Conference                        46:   ************
47.  ringing          Ringing                           47:   ********
48.  busy             Busy                              48:   ********
49.  busy (I)         Busy  With  Intrusion  Allowed     49:   ********
50.  wait             Wait                              50:   *****
51.  (I)              Intrusion                         51:   ***
52.  to               <calling party> to <called party> 52:   **
```

Screen 5-79. Call-Identifiers Language Translation Form (Page 4 of 4)

```
                                                                Page 1 of 1
                              LANGUAGE  TRANSLATIONS

     English             Translation             English             Translation

 1.  SUNDAY          1:  ***********         11.  APRIL          11:  ***********
 2.  MONDAY          2:  ***********         12.  MAY            12:  ***********
 3.  TUESDAY         3:  ***********         13.  JUNE           13:  ***********
 4.  WEDNESDAY       4:  ***********         14.  JULY           14:  ***********
 5.  THURSDAY        5:  ***********         15.  AUGUST         15:  ***********
 6.  FRIDAY          6:  ***********         16.  SEPTEMBER      16:  ***********
 7.  SATURDAY        7:  ***********         17.  OCTOBER        17:  ***********
 8.  JANUARY         8:  ***********         18.  NOVEMBER       18:  ***********
 9.  FEBRUARY        9:  ***********         19.  DECEMBER       19:  **********
10.  MARCH          10:  ***********

20.      English:  SORRY,  TIME  UNAVAILABLE  NOW
     Translation:  ************************************
```

Screen 5-80. Date-Time Language Translation Form (Page 1of 1)

```
                                                              Page 1 of 2
                          LANGUAGE  TRANSLATIONS

1.      English:              MESSAGES FOR
    Translation:  ************************

2.      English:  WHOSE  MESSAGES? (DIAL  EXTENSION  NUMBER)
    Translation:     ************************************

3.      English:  END OF MESSAGES (NEXT TO REPEAT)
    Translation:  ****************************************

4.      English:  MESSAGES UNAVAILABLE  -  TRY  LATER
    Translation:  ****************************************

5.      English:  MESSAGE RETRIEVAL DENIED
    Translation:  ****************************************

6.      English:  MESSAGE RETRIEVAL LOCKED
    Translation:     ************************************
```

Screen S-81. Leave-Word-Calling Language Translation Form (Page 1 of 2)

```
                                                              Page 2 of 2
                          LANGUAGE TRANSLATIONS

 7.     English: NO  MESSAGES
    Translation: ************************************

 8.     English: IN PROGRESS
    Translation: ************************************

 9.     English: DELETED
    Translation: ************************************

10.     English: GET DIAL TONE, PUSH Cover Msg Retrieval
    Translation: ************************************

11.     English: Message Center (AUDIX) CALL
    Translation: ************************************

12.     English: CANNOT BE DELETED - CALL MESSAGE CENTER
    Translation: ************************************
```

Screen 5-82. Leave-Word-Calling Language Translation Form (Page 2 of 2)

```
                                                              Page 1 of 2
                          LANGUAGE TRANSLATIONS

 1.     English: MALICIOUS CALL TRACE REQUEST
    Translation: ************************************

 2.     English: END OF TRACE INFORMATION
    Translation: ************************************

 3.     English: original call redirected from:
    Translation  ***************************.

 4.     English            voice recorder port:
    Translation: ***************************

 5.     English:   MCT activated by:         for:
    Translation: * * * * * * * * * * * * * * ****.
```

Screen 5-83. Malicious-Call-Trace Language Translation Form (Page 1 of 2)

```
                                                                Page 2 of 2
                              LANGUAGE TRANSLATIONS


6.      English:     party :                    (EXTENSION)
    Translation:  ******* :          **********************

7.      English:     party :                  (ISDN SID/CNI
    Translation:  ******* :               ***************

8.      English:     party :                      (PORT ID)
    Translation:  ******** :             ******************

9.      English:     party :                  (ISDN PORT ID)
    Translation:  ******** :             ******************
```

Screen 5-84. Malicious-Call-Trace Language Translation Form (Page 2 of 2)

```
                                                                Page 1 of 5
                              LANGUAGE TRANSLATIONS

    English                                  Translation

 1. ALL MADE BUSY                        1:  ***************
 2. BRIDGED                              2:  ***************
 3. DENIED                               3:  ***************
 4. INVALID                              4:  ***************
 5. NO MEMBER                            5:  ***************
 6. OUT OF SERVICE                       6:  ***************
 7. RESTRICTED                           7:  ***************
 8. TERMINATED                           8:  ***************
 9. TRUNK SEIZED                         9:  ***************
10. VERIFIED                            10:  ***************
11. CDR OVERLOAD                        11:  ***************
12. ANSWERED BY                         12:  ***************
13. CALL FROM                           13:  ***************
14. Skills                              14:  ***************
```

Screen 5-85. Miscellaneous-Features Language Translation Form (Page 1 of 5)

```
                                                                Page 2 of 5
                              LANGUAGE  TRANSLATIONS

    English                Meaning of English term                Translated
    Term                                                          Term

15. TOLL          Toll                                    15:  ****
16. FULL          Full                                    16:  ****
17. NONE          None                                    17:  ****
18. ORIG          Origination                             18:  ****
19. OTWD          Outward                                 19:  ****
20. CALL          <call> This Number                      20:  ****
21. INTL          International                           21:  ****
22. Info          Information                             22:  *****
23. p             Primary                                 23:  *
24. s             Secondary                               24:  *
25. m             Mark                                    25:  *
26. p             Pause                                   26:  *
27. s             Suppress                                27:  *
28. w             Wait For A Specified Time               28:  *
29. W             Wait For Off-Premise Dial Tone          29:  *
```

Screen 5-86. Miscellaneous-Features Language Translation Form (Page 2 of 5)

```
                                                              Page 3 of 5
                              LANGUAGE  TRANSLATIONS

30.      English: You have adjunct messages
     Translation: ****************************************

31.      English: Login Violation
     Translation: ****************************************

32.      English: Barrier Code Violation
     Translation: ****************************************

33.      English: DIRECTORY - PLEASE ENTER NAME
     Translation: ****************************************

34.      English: DIRECTORY UNAVAILABLE - TRY LATER
     Translation: ****************************************

35.      English: NO MATCH - TRY AGAIN
     Translation: ****************************************
```

Screen 5-87. Miscellaneous-Features Language Translation Form (Page 3 of 5)

```
                                                              Page 4 of 5
                              LANGUAGE  TRANSLATIONS

36.      English: NO NUMBER STORED
     Translation: ****************************************

37.      English: TRY AGAIN
     Translation: ****************************************

38.      English: Ext           in EMRG Q
     Translation: ***           ********

39.      English:        HUNT GROUP   NOT ADMINISTERED
     Translation: ****************   ********************

40.      English: Q-time        calls
     Translation: ******        *****
```

Screen 5-88. Miscellaneous-Features Language Translation Form (Page 4 of 5)

```
                                                              Page 5 of 5

                              LANGUAGE  TRANSLATIONS

41.      English:  Add Skill: Enter number, then # sign
     Translation:  ****************************************

42.      English:  Remove Skill: Enter number, then # sign
     Translation:  ****************************************

43.      English:  Press 1 for primary or 2 for secondary
     Translation:  ****************************************

44.      English:  Enter Agent LoginID
     Translation:  ****************************************
```

Screen 5-89. Miscellaneous-Features Language Translation Form (Page 5 of 5)

```
                                                              Page 1 of 5
                              LANGUAGE TRANSLATIONS


1.       English:                      CHECK IN - Ext:
    Translation:  *******************************

2.       English:  CHECK IN: ROOM ALREADY OCCUPIED
    Translation:  ****************************************

3.       English:  CHECK IN COMPLETE
    Translation:  ****************************************

4.       English:  CHECK IN FAILED
    Translation:  ****************************************
```

Screen 5-90. Property-Management Language Translation Form (Page 1 of 5)

```
                                                              Page 2 of 5
                            LANGUAGE  TRANSLATIONS

 5.      English:                     CHECK OUT - Ext:
    Translation:  ********************************

 6.      English:  CHECK OUT: ROOM ALREADY VACANT
    Translation:  ****************************************

 7.      English:  CHECK OUT FAILED
    Translation:  ****************************************

 8.      English:  MESSAGE  NOTIFICATION  FAILED
    Translation:  ****************************************

 9.      English:    MESSAGE NOTIFICATION ON - Ext
    Translation:  ********************************

10.      English:   MESSAGE NOTIFICATION OFF - Ext
    Translation:  ********************************
```

Screen 5-91. Property-Management Language Translation Form (Page 2 of 5)

```
                                                              Page 3 of 5
                            LANGUAGE  TRANSLATIONS

11.      English:  CHECK OUT COMPLETE: MESSAGE LAMP OFF
    Translation:  ****************************************

12.      English:  CHECK OUT COMPLETE: MESSAGE LAMP ON
    Translation:  ****************************************

13.      English:  MESSAGE LAMP ON
    Translation:  ************************************

14.      English:  MESSAGE LAMP OFF
    Translation:  ************************************
```

Screen 5-92. Property-Management Language Translation Form (Page 3 of 5)

```
                                                              Page 4 of 5
                          LANGUAGE TRANSLATIONS

15.      English:  Occupied  Rooms
     Translation:  ************************************

16.      English:  Enter  Room  Status
     Translation:  ************************************

17.      English:  Invalid  Maid  State
     Translation:  ************************************
```

Screen 5-93. Property-Management Language Translation Form (Page 4 of 5)

```
                                                              Page 5 of 5
                          LANGUAGE TRANSLATIONS

18.      English:  WAKEUP  MESSAGE:
     Translation:   ************** ************** **********

19.      English:  INVALID NUMBER - TRY AGAIN
     Translation:  ************************************
```

Screen 5-94. Property-Management Language Translation Form (Page 5 of 5)

```
                        LANGUAGE TRANSLATIONS

      English      Translation          English     Translation

 1.  AD        1.  *****          16.  LWC  16.  *****
 2.  AutCB     2.  *****          17.  Mark 17.  *****
 3.  CFrwd     3.  *****          18.  Pause 18.  *****
 4.  CnLWC     4.  *****          19.  PCall 19.  *****
 5.  Cnslt     5.  *****          20.  Prog 20.  *****
 6.  Count     6.  *****          21.  Rngof 21.  *****
 7.  CPark     7.  *****          22.  SAC  22.  *****
 8.  CPkUp     8.  *****          23.  SFunc 23.  *****
 9.  Dir       9.  *****          24.  Spres 24.  *****
10.  Excl     10.  *****          25.  Stats 25.  *****
11.  HFAns    11.  *****          26.  Stop 26.  *****
12.  IAuto    12.  *****          27.  Timer 27.  *****
13.  IDial    13.  *****          28.  TmDay 28.  *****
14.  Inspt    14.  *****          29.  View 29.  *****
15.  Last     15.  *****          30.  Wait 30.  *****
```

Screen 5-95. Softkey Labels Form (Page 1 of 1)

```
                                                          Page 1 of 1
                        LANGUAGE TRANSLATIONS

1.      English: ENTER ACTIVATION ROUTE PLAN, DAY & TIME
    Translation: ****************************************

2.      English: ENTER DEACTIVATION DAY AND TIME
    Translation: ****************************************

3.      English:    OLD ROUTE PLAN:       ENTER NEW PLAN:
    Translation: ****************:     ****************:

4.      English:    OLD ROUTE PLAN:          NEW PLAN:
    Translation: ****************:     **************:

5.      English: ROUTE PLAN:     FOR        ACT-TIME:
    Translation: **********:     ****       *********:

6.      English: ROUTE PLAN:     FOR       DEACT-TIME:
    Translation: **********:     ****       *********:
```

Screen 5-96. Time-Of-Day-Routing Language Translation Form (Page 1 of 1)

Listed Directory Numbers

Allows Direct Inward Dialing (DID) numbers to be treated as public Listed Directory Numbers (LDNs). When one of these numbers is direct inward dialed, the calling party is routed to the attendant. The attendant display indicates a Listed Directory Number call and the name associated with the dialed extension. Refer to the "Multiple Listed Directory Numbers" feature in *DEFINITY Communications System Generic 3 V2 Feature Description,* 555-230-204, for additional information.

Administration Commands

The following administration commands can be used to access the Listed Directory Numbers form. In some oases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter *2* for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
change	listed directory-numbers	—
display	listed directory-numbers	['print' or 'schedule']

- Brackets [ ] indicate the qualifier is optional. Single quotes (') indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word can be entered.

Form Instructions

Make assignments as required for the following fields on the form:

- **Ext** — Enter a valid unassigned extension number (1 to 5 digits).
- **Name** — Enter a name used to identify the Listed Directory Number. Up to 15 alphanumeric characters may be used.
- **Night Destination** — Enter the valid assigned extension number (may be a night service extension, a recorded announcement extension, a Vector Directory Number, an individual attendant extension, or an AUDIX hunt group extension) that will receive calls to these listed numbers when the System is in the Night Service mode. Enter 1 to 5 digits.

Multifrequency Signaling System Parameters

This form is used to set the system parameters associated with R2 multifrequency compelled (MFC) signaling.

Administration Commands

The following administration commands can be used to access the System Parameter Multifrequency Signaling form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object		Qualifier*
change	system-parameters	multifrequency-signaling	
display	system-parameters	multifrequency-signaling	['print' or 'schedule']

- Brackets [ ] indicate the qualifier is optional. Single quotes (") indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered.

Form Instructions

Additional information on the parameters listed below can be found in the "R2-MFC Signaling" section in Chapter 3. Also, refer to Appendix B, *Application Notes,* for information required to complete the fields on this form.

Make assignments as required for the following fields on each page of the form:

Page 1 of the Form.

- **Incoming Call Type** — Enter "group-ii-mfc" (default), "non-group-ii-mfc," or "mfe" (multi-frequency Espanol, used only in Spain). This field defines the signal type that a CO uses to place an incoming call to the PBX.

  If the value of the Incoming Call Type field is "group-ii-mfc," the second page of the form will display entries for all group-1, group-II, group-A, and group-B signal types with a set of default values (see page 2 of form). If the value is "non-group-ii-mfc," the second page displays only group-1 and group-A signal types.

- **Outgoing Call Type** — Enter "group-ii-mfc," "none" (default), or "mfe" (multi-frequency Espanol, used only in Spain). This field defines the signal type that the PBX uses to place an outgoing call into a CO.

  If the contents of the Outgoing Call Type field is "group-ii-mfc," the third page of the form is displayed. On the third page appear entries for all group-l, group-II group-A, and group-B signal types with a set of default

values. If the contents of the Outgoing Call Type field is “none,” the third page is not displayed. In addition, Outgoing Forward Signal Present Timer, Outgoing Forward Signal Absent Timer, ANI Prefix, ANI for PBX, Next ANI Digits, and Collect All Digits Before Seizure fields will not be displayed on page 1 of the form.

- **MFE Type** — Enter “2/5” (default) or “2/6” to determine which public signaling the switch will use. The field only appears when the Incoming Call Type is “mfe” and the Outgoing Call Type is “mfe” or “none.”

- **Maintenance Call Type** — Enter”1 ,“ “2,” or “none” (default) to indicate which maintenance test is indicated when the CO sends an MFC maintenance tone. Currently,”1” indicates the Belgium maintenance sequence, and “2” indicates the Saudi Arabian sequence.

- **Test Call Extension** — Enter an unassigned extension to specify the destination of a call between the CO and the PBX that tests R2-MFC signaling. A test call extension is used when the call type is ”1.“ Default is blank.

- **Incoming Interdigit Timer (sec)** — Enter a number between 1 and 255 to specify the maximum number of seconds the switch will wait for the first forward signal (digit) to arrive, and for subsequent expected digits to arrive. Intercept is returned to the calling party if this timer expires. Default is 10.

- **Outgoing Forward Signal Present Timer (sec)—** Enter a number between 1 and 255 to specify the maximum number of seconds to elapse between signals on a call. This timer runs when MFC tones are being sent or received on an outgoing call. The timer starts (and restarts) timing when the PBX begins sending a forward signal, and stops timing when the PBX receives the corresponding backward signal. This field is only displayed when the value of the Outgoing Call Type field is “group-ii-mfc.” Default is 15.

- **Outgoing Forward Signal Absent Timer (sec)** — Enter a number between 11 and 255 to indicate the maximum number of seconds to elapse between forward signals on outgoing calls. The timer starts (and restarts) when a forward tone is taken off the link and it is stops when the next forward tone is applied to the link. This field is only displayed when the contents of the Outgoing Call Type field is “group-ii-mfc.” Default is 30.

- **Multifrequency Signaling Incoming Intercept Treatment** — Enter “y” or “n” (default) to indicate whether a group B “intercept” message is sent to the CO. If the value of this field is “n,” then the normal DID/TIE/ISDN intercept treatment is applied. If the value is “y,” then the group B signal for the intercept is sent to the CO, and the intercept tone is played on the trunk.

- **Received Signal Gain (-Loss) (dB)** — Enter a number between -15 and 3 to specify the loss/gain when the MFC port listens to the trunk port. Default is 0. Currently listens with a range of -5 to -35; this value moves the range (for example, a value of -5 provides a range of -10 to -40).

■ **Transmitted Signal Gain (-Loss) (dB)** — Enter a number between -15 and 3 to specify the Ioss/gain when the trunk port listens to the MFC port. Default is -3. The MFC port currently generates at -5 for MFC and -8 for MFE; this field adds gain or loss to the starting value of -5.

■ **ANI Prefix** — Enter between 1 and 6 digits to define the prefix to apply to an extension number when ANI is sent to the CO. This field appears only when the Outgoing Call Type is “group-ii-mfc” or “mfe.” Default is blank.

■ **ANI for PBX** — Enter a number from 2 to 9 (2 to 15, effective June 1994) to define the PBX identification number that is sent to the CO when ANI is requested (by the CO) on a particular call but is not available, such as tandem tie trunk calls. This field appears only when the Outgoing Call Type is “group-ii-mfc.” Default is blank.

■ **Next ANI Digit** — This field appears when the Outgoing Call Type is “group-ii-mfc.” Valid input is “next-digit” and “send-ani” (default). This field determines whether the Next ANI Digit signal will be the same as the "call-info-ani” signal or the “next-digit” signal.

■ **Collect All Digits Before Seizure** — Enter “y” or “n” (default) to determine whether the system collects all the digits before seizing the trunk. This field appears only when the Outgoing Call Type is “group-ii-mfc” or “mfe.”

NOTE:
The following three fields appear only if the Incoming Call Type is “mfe” and the Outgoing Call Type is “mfe” or “none.”

■ **Forward Cycle Timer (sec)** —Enter a number from 1 to 255 to determine how many seconds to wait to receive the check frequency after sending an MFE signal. Default is 5.

■ **Backward Cycle Timer (sec)** — Enter a number from 1 to 255 to determine how many seconds to wait to send the check frequency after receiving an MFE signal. Default is 5.

■ **Income Dial Timer (sec)** — Enter a number between 45-255 to determine how long to wait from the start of a call until the end of the check frequency of the last signal. Default is 90.

■ **Outgoing Start Timer (sec)** — Enter a number from 1 to 255 to indicate how long to time from seizure until the beginning of the first Group A signal from the receiving end, and from the end of the check frequency until the beginning receipt of the first digit following the Group II signal. The field appears only if the Incoming Call Type and the Outgoing Call Types are both “mfe.”

Page 2 of the Form

The fields shown on Page 2 define the meaning of MFC tones for calls originated at the CO.

When the form initially appears, either of two sets of default values is possible. One set is for the group II call type; the other set is for non-group II call type. In each set, the default value for each field is set to the most common value.

- **Tones from CO on Incoming Forward Calls— Group I** — Message codes 11 to 15 are displayed. (Numbers 1 through 10 are assigned to the digits of the destination telephone number.) Assign a meaning to each code. If the incoming Call Type is “group-ii-mfc,” acceptable meanings are “drop,“ “end-of-dial,” “ignored,“ “maint-call,” and “send-congest.” if the Incoming Call Type is "non-group-ii-mfc,” acceptable meanings are “drop” and “ignored.”
- **Tones from CO on Incoming Forward Calls— Group II** — Message codes 1 to 15 are displayed. Assign a meaning to each code. Acceptable meanings are “attendant,” “busy-rt-attd,” “data-call,” “drop,” “maint-call,” “normal,” and “send-intercept.”
- **Tones to CO on Incoming Backward Calls— Group A** — Enter numbers between 1 and 15 to identify the message codes. Then assign a meaning to each code. if the incoming Call Type is “group-ii-mfc,” acceptable meanings are “end-of-dial,” “congestion,” and “next-digit.” If the Incoming Call Type is “non-group-ii-mfc,” acceptable meanings are “next-digit” and “setup-sppath.”
- **Tones to CO on Incoming Backward Calls— Group B** — Enter numbers between 1 and 15 to identify the message codes. Then assign a meaning to each code. Acceptable meanings are “busy,” “congestion,” “free,” and “intercept.”

Page 3 of the Form

This page only appears if the Outgoing Call Type is “group-ii-mfc” or “mfe.” The fields shown on this page define the meaning of MFC tones for calls originated at the PBX.

- **Tones to CO on Outgoing Forward Calls— Group I** — Enter numbers between 11 and 15 to identify the message codes. (Numbers 1 through 10 are assigned to the digits of the destination telephone number.) Then assign a meaning to each code. Acceptable meanings are “end-of-digits,” “end-of-ani,” and “ani-not-avail.”
- **Tones to CO on Outgoing Forward Calls— Group II** — Enter numbers between 1 and 15 to identify the message codes. Then assign a meaning to each code. Acceptable meanings are “attendant,” “data-call,” and “normal.” Each or these can only appear once in the group II column.
- **Tones from CO on Outgoing Backward Calls— Group A** — Message codes between 1 and 15 are displayed. Assign a meaning to each code. Acceptable meanings are “call-info-ani,” “congestion,” “drop,” “end-of-

dial," "last-2-digits," "last-3-digits," "last-digit," "next-digit" "restart" and "setup-sppath."

- **Tones from CO on Outgoing Backward Calls— Group B** — Message codes between 1 and 15 are displayed. Then assign a meaning to each code. Acceptable meanings are "busy," "congestion," "free," and "intercept."

```
MULTI FREQUENCY -SIGNALING-RELATED SYSTEM PARAMETERS     Page 1 of 3

                                    Incoming Call Type: group-ii-mfc
                                    Outgoing Call Type: none
                                Maintenance Call Type: none
                                  Test Call Extension: _
                               Interdigit Timer (sec) : 10


  Multi frequency Signaling Incoming Intercept Treatment? n
                       Received Signal Gain (-Loss) (dB): 0
                   Transmitted Signal Gain (-Loss) (dB): -3
```

Screen 5-99. Multifrequency Signaling System Parameters (Page 1 of 3)

This screen appears when the lncoming Call Type field is ''group-ii-mfc" and the Outgoing Call Type field is ''none."

```
        MULTIFREQUENCY-SIGNALING-RELATED  SYSTEM  PARAMETERS

                                      Incoming Call Type: group-ii-mfc
                                      Outgoing Call Type: group-ii-mfc
                                  Maintenance Call Type: none
                                    Test Call Extension: _____
                                 Interdigit Timer (sec): 10
           Outgoing Forward Signal Present Timer (sec): 15 *
            Outgoing Forward Signal Absent Timer (sec): 30 *
  Multifrequency Signaling Incoming Intercept Treatment? n
                       Received Signal Gain(-Loss) (dB): 0
                  Transmitted Signal Gain(-Loss) (dB): -3
                                           ANI Prefix: _____ **
                                         ANI for PBX: _________________**
                     Collect All Digits Before Seizure? n **
```

Screen 99a. Multifrequency Signaling System Parameters (Page 1 of 3)

This screen appears when the lncoming Call Type and Outgoing Call Type fields are ''group-ii-mfc."

* This field is only displayed when the value of the Outgoing Call Type field is "group-ii-mfc."

** This field is only displayed when the value of the Outgoing Call Type field is "group-ii-mfc" or "mfe."

```
        MULTIFREQUENCY-SIGNALING-RELATED  SYSTEM  PARAMETERS

                                      Incoming Call Type: mfe
                                      Outgoing Call Type: mfe
                                                MFE Type: 2/5

                                  Interdigit Timer (sec): 10


  Multifrequency Signaling Incoming Intercept Treatment? n
                       Received Signal Gain(-Loss) (dB): 0
                   Transmitted Signal Gain(-Loss) (dB): -3
                                         ANI Prefix: _____ **
                                        ANI for PBX: _____________ **
                     Collect All Digits Before Seizure? n **
                              Forward Cycle Timer (sec): 5
                             Backward Cycle Timer (sec): 5
                           Incomplete Dial Timer (sec): 90
                             Outgoing Start Timer (sec): 10 *
```

Screen 99b. Multifrequency Signaling System Parameters (Page 1 of 3)

This screen appears when the Incoming Call Type and Outgoing Call Type fields are ''mfe."

*This field is only displayed when the value of the Outgoing Call Type field is "mfe."

**This field is only displayed when the value of the Outgoing Call Type field is "group-ii-mfc'' or ''mf"."

Implementation Notes:

The Outgoing Forward Signal Present Timer field appears only when the Outgoing Call Type field is equal to ''group-ii-mfc."

The Outgoing Forward Signal Absent Timer field appears only when the Outgoing Call Type field is equal to ''group-ii-mfc."

The ANI Prefix, ANI for PBX, and Next ANI Digits fields appear only when the Outgoing Call Type field is equal to "group-ii-mfc."

```
                                                                Page 2 of 3
              MULTIFREQUENCY-SIGNALING-RELATED  SYSTEM  PARAMETERS

INCOMING FORWARD SIGNAL TYPES            INCOMING BACKWARD SIGNAL TYPES
(Tones from CO)                          (Tones to CO)

     Group-I              Group-II             Group-A              Group-B
 11: ignored           1: normal            1: next-digit        1: free
 12: ignored           2: normal            3: end-of-dial       2: busy
 13: ignored           3: normal           _ : _____________     4: congestion
 14: ignored           4: normal           _ : _____________     7: intercept
 15: ignored           5: normal           _ : _____________   _ : _____________
                       6: normal           _ : _____________   _ : _____________
                       7: normal           _ : _____________   _ : _____________
                       8: normal           _ : _____________   _ : _____________
                       9: normal           _ : _____________   _ : _____________
                      10: normal           _ : _____________   _ : _____________
                      11: normal           _ : _____________   _ : _____________
                      12: normal           _ : _____________   _ : _____________
                      13: normal           _ : _____________   _ : _____________
                      14: normal           _ : _____________   _ : _____________
                      15: normal           _ : _____________   _ : _____________
```

Screen 5-100. Multifrequency Signaling System Parameters (Page 2 of 3)

Implementation Note:

The above defaults are shown when the incoming Call Type is ''group-ii-mfc.'' A variation of the above appears if the lncoming Call Type is equal to ''non-group-ii-mfc.'' In addition, when the Incoming Call Type is ''non-group-ii-mfc," group ll and group B columns are not displayed.

```
                                                                Page 3 of 3
                MULTIFREQUENCY-SIGNALING-RELATED  SYSTEM  PARAMETERS

OUTGOING FORWARD SIGNAL TYPES                OUTGOING BACKWARD SIGNAL TYPES
(Tones to CO)                                (Tones from CO)

     Group-I              Group-II                Group-A              Group-B
_ :              2: normal                1: next-digit        1: free
_ :              5: attendant             2: congestion        2: busy
_ :              6: data-call             3: end-of-dial       3: congestion
_ :              _ :                      4: congestion        4: congestion
_ :              _ :                      5: call-info-ani     5: congestion
                 _ :                      6: congestion        6: free
                 _ :                      7: last-2-digits     7: intercept
                 _ :                      8: last-3-digits     8: congestion
                 _ :                      9: congestion        9: congestion
                 _ :                     10: congestion       10: congestion
                 _ :                     11: congestion       11: congestion
                 _ :                     12: congestion       12: congestion
                 _ :                     13: congestion       13: congestion
                 _ :                     14: congestion       14: congestion
                 _ :                     15: congestion       15: congestion
```

Screen 5-101. Multifrequency Signaling System Parameters (Page 3 of 3)

Implementation Note:

The above page is displayed only if the Outgoing Call Type is ''group-ii-mfc.''

- **H12** — Enter “y” to specify the ISDN information transfer rate for 1920 kbps data, which includes 30 B-channels. When a PE is administered to support H12, the hunt algorithm to satisfy a call requiring 1920 kbps bandwidth uses a fixed allocation scheme. Default is “n’.”
- **N x DS0** — Enter “y” to specify the NxDS0 multirate service. Default is “n.”
- **Contiguous?** — Specifies whether to hunt contiguous NxDS0 channels. This field only appears if “y” is entered in the NxDS0 field.

  The hunt algorithm to satisfy an NxDS0 call is as follows:

  - Enter “y” to specify the “floating” scheme. NxDS0 calls are placed on a contiguous group of B-channels large enough to satisfy the requested bandwidth without constraint on the starting channel (no fixed starting point trunk).

    NOTE:
    HO and NxDS0 “floating” scheme cannot both be set to “y.”

  - Enter “n” to specify the “flexible” scheme. NxDS0 calls are placed on any set of B-channels on the same facility as long as the requested bandwidth is satisfied. There are no constraints such as contiguity of B-channels or fixed starting points.

```
                                                          Page 1 of 1
                              PRI ENDPOINT

                  Extension: _____                  Name: ________________
             (Starting) Port: _______                Width: _
Originating Auto Restoration? _                Signaling Group: _
                         COR : _                         COS : _
           Maintenance Tests ? _           Simultaneous Calls? n

                   WIDEBAND SUPPORT OPTIONS

                            H0? n
                           H11? n
                           H12 ? n
                       N x DS0? y     Contiguous? n
```

Screen 5-103. PRI Endpoint Form

Implementation Note:

The Contiguous field is only displayed if NxDS0 is “y.”

Recorded Announcements

This form is used to assign analog or integrated announcements, or any desired combination of both. Integrated announcements are assigned and recorded on the TN750B Announcement circuit pack. The analog announcements are assigned on the TN742, TN746B, or TN769 Analog Line circuit pack that is connected to external recording or playback equipment. External announcement equipment can also be connected via an auxiliary trunk (TN763).

NOTE:
Refer to Appendix B, *Application Notes,* for circuit pack requirements outside the United States of America.

Each announcement is accessed by dialing an extension number that is assigned to each announcement.

Integrated announcements on the TN750B circuit pack can be recorded at 16 kbps (for 8 minutes and 32 seconds of total announcement time), 32 kbps (for 4 minutes and 16 seconds of total announcement time), or 64 kbps (for 2 minutes and 8 seconds of total announcement time) depending on administration. A different recording speed may be used for each integrated announcement. These capacities are different if a combination of different recording speeds is used.

G3V3 allows for an additional announcement type that was designed to enhance the Automatic Wakeup feature (but can be used for other announcements). This type is “integ-rep” (integrated-repeating), and is most useful when it is used with the new queue type “b" (barge-in, which is also for G3V3 only). For the Automatic Wakeup feature, the combination of repeating messages and barge-in queuing means that when the first wakeup call for a specific time slot and announcement is answered — that is, the guest goes off-hook — the announcement begins. With barge-in queuing enabled, the next guest to go off-hook for the same wakeup call time barges-in on the announcement whether or not it is at the beginning, and can hear the announcement repeat if necessary. The announcement continues repeating until the last guest receiving the message goes on-hook or the message reaches the end. The benefit with this combined functionality is that it does not require separate ports for each call, since guests “barge-in” on only one call. Note that barge-in queuing can also be used when the announcement type is “aux-trunk” (auxiliary trunk).

Administration Commands

The following administration commands can be used to access the Recorded Announcements form. In some cases, just the most commonly used commands are shown. Refer to “Administration Commands” in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
change	announcements	—
display	announcements	['print' or 'schedule']
restore	announcements	—
save	announcements	—

* Brackets [ ] indicate the qualifier is optional.

Form Instructions

Make assignments as required for the following fields on each page of the form:

Pages 1 through 8 of the Form

- **Ext** — Enter a 1-to 5-digit unassigned extension number that agrees with the dial plan. References to a particular announcement "Ext" may be from the following forms: Hunt Group, Call Coverage Paths, Trunk Group (incoming Destination and Night Destination), Vector Directory Number, and Feature-Related System Parameters (DID/Tie/ISDN Intercept Treatment, Controlled Restriction fields).

- **Type** — Enter the type of announcement you want to assign to this extension number. Valid entries are "integrated," "analog," "aux-trunk" (auxiliary trunk, for using an adjunct), and "integ-rep" (integrated repeating, G3V3 only).

  If "integrated" or "integ-rep" is entered, the Protect and Rate fields must be completed. If "analog" or "aux-trunk" is entered, the Queue Length and Port fields must be completed.

  Integrated announcement circuit packs have pre-set queue lengths based on the model type.

- **COR** — Enter the desired class of restriction (COR) number from 0 through 95. Default is "1."

- **Name** — Enter up to 15 alphanumeric characters to describe the announcement message.

- **Queue** — Enter "y" in the Queue field to queue calls for the announcement. If the type is either "integ-rep" or "aux-trunk," enter "y" to queue calls or "b' to enable barge-in (G3V3 only). The default is "n" (no queue and no barge-in). You can enter "b' only if the type is "aux-trunk" or "integrated." The Queue Length field only applies if "y" is entered in the Queue field (which applies only to Analog/Aux). Default is "n."

- **Queue Length** — Applicable if the Queue field is "y" and the Type field is "analog" or "aux-trunk." Enter the number of calls that can be queued for this analog announcement. The sum of the queue entries for all analog announcements cannot exceed the maximum number allowed for your system configuration. Default is "0." When the Type field entry is "integrated" or "integ-rep," "N/A" is displayed in this field.

- **Protect** — Enter "y" to protect the integrated announcement from being deleted or changed by any user. Enter "n" to allow only users with a

console permission COS to change or delete an announcement. Default is “n.” When the Type field is “analog” or “aux-trunk,” “N/A” is displayed in this field.

- **Rate** — Used to specify the recording speed (in 1000 bits/second) when recording announcements on the TN750B Integrated circuit pack. Valid entries are “16,” “32,” or “64.” Default is “32.” When the Type field is “analog” or "aux-trunk," "N/A" is displayed in this field.
- **Port** — Enter seven characters.

  The entry breaks down as follows:

Characters	Meaning	Value
1-2	Cabinet Number	01 through 22 (G3r V2) 01 through 44 (G3r V3) 01 through 03 (G3i V2) 01 (G3s V2)
3	Carrier	A through E
4-5	Slot Number	01 through 20
6-7	Circuit Number	01 through 32

  When the Type field is “integrated,” “N/A" is displayed in this field.

Page 1 of X

ANNOUNCEMENTS

	Ext.	Type	COR	Name	Queue	Q-Len	Protect?	Rate	Port
1:	1701_	analog	1_	busy	y	10	N/A	N/A	1B0404
2:	1702_	analog	1_	out of service	n	N/A	N/A	N/A	1B1701
3:	1703_	integrated	1_	please dial	n	N/A	n	32	N/A
4:	1704_	aux-trunk_	1_	call-back	y	20	N/A	N/A	2C0902
5:			1_		n				
6:			1_		n				
7:			1_		n				
8:			1_		n				
9:			1_		n				
10:			1_		n				
11:			1_		n				
12:			1_		n				
13:			1_		n				
14:			1_		n				
15:			1_		n				
16:			1_		n				

Screen 5-104. Recorded Announcements Form (Page 1 of X)

To reduce repetition, the remaining pages of the Recorded Announcements form are not shown.

Implementation Notes:

Announcements 1 and 3 show the fields that are assigned to the analog and integrated announcement, respectively.

The Queue Length field is only displayed when the Type field is “analog” or “aux-trunk” and the Queue field is “y.”

The Port field is only displayed when the Type field is “analog” or “aux-trunk.”

The Protect field is only displayed when the Type field is “integrated.”

Remote Access

NOTE:

AT&T has designed the Remote Access feature incorporated in this product that, when properly administered by the customer, will enable the customer to minimize the ability of unauthorized persons to gain access to the network. It is the customer's responsibility to take the appropriate steps to properly implement the features, evaluate and administer the various restriction levels, protect access codes and distribute them only to individuals who have been advised of the sensitive nature of the access information. Each authorized user should be instructed concerning the proper use and handling of access codes.

In rare instances, unauthorized individuals make connections to the telecommunications network through use of remote access features. In such an event, applicable tariffs require that the customer pay all network charges for traffic. AT&T cannot be responsible for such charges, and will not make any allowance or give any credit for charges that result from unauthorized access.

This form is used to implement the Remote Access feature. Remote Access permits a caller located outside the System to access the System through the public or private network and then use the features and services of the System.

Remote Access users can dial into the System using Central Office, Foreign Exchange, WATS, and ISDN-PRI trunks. In addition, a dedicated Remote Access Direct Inward Dialing number can be provided.

To maximize the security of the System, the following should be considered:

1. All remote access facilities should be unlisted directory telephone numbers.
2. Users should be required to enter a Barrier Code of seven random digits ***AND*** an Authorization Code of at least seven random digits to make network calls.
3. Authorization Codes should be nonconsecutive (random) and changed at least quarterly.
4. Deactivate Authorization Codes immediately if the user leaves the company or changes assignments.
5. Each Authorization Code should have assigned the minimum level of calling permissions required.
6. When possible, block off-hours and weekend remote access calling. Use Alternative Facility Restriction Levels, if available.
7. Use a voice recording, warble tone, or no tone and avoid use of a dial tone as a prompt when the remote access unit answers.
8. Assign the lowest possible FRL to only allow internal PBX calls.

As an additional step to ensure System security, if the Remote Access feature is not going to be utilized, and there is no anticipated future need for the feature, Remote Access may be "permanently" disabled in such a way that it will require Services intervention to activate the feature again.

CAUTION:
This change will be lost if the switch is rebooted without saving translations. Therefore, a "save translation" command should be executed after permanently disabling the Remote Access feature.

Refer to the "Remote Access Flowchart" figure at the end of this section. The chart depicts the sequence of events associated with Remote Access call processing.

Administration Commands

The following administration commands can be used to access the Remote Access form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier'
change	remote access	—
display	remote access	['print' or 'schedule']

* Brackets [ ] indicate the qualifier is optional. Single quotes (") indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered.

Form Instructions

■ **Remote Access Extension** — Enter an extension number (cannot not be a VDN extension) for Remote Access. This extension is associated with each trunk that supports the Remote Access feature. This field can be left blank if no barrier code is assigned. The default for this field is blank. The remote access extension is used as if was a DID extension. Only one DID extension can be assigned as the remote access extension. Calls to that number are treated the same as calls on the remote access trunk.

When a trunk group is dedicated to Remote Access, the remote access extension number is administered on the trunk group's incoming destination field.

■ **Barrier Code Length** — Enter the desired barrier code length (4 to 7 digits), or leave this field blank indicating that a barrier is not required. Assigning a barrier code length of 7 provides maximum security.

■ **Authorization Code Required** — Enter "y" if a authorization code must be dialed by Remote Access users to access the system's Remote Access facilities. The default for this field is "n." Use of an authorization

code in conjunction with barrier codes increases the security of the Remote Access feature.

■ **Remote Access Dial Tone** — This field appears on the form if the Authorization Code Required field is set to “y.” Enter “y” in this field if Remote Access Dial Tone is required, as a prompt to the user, to enter an authorization code to enable Remote Access.

■ **Barrier Code** — Assign a barrier code that conforms to the number entered in the Barrier Code Length field. All codes must be a 4- to 7-digit number. The code can be any combination of the digits 0 through 9. If the Barrier Code length field is blank, the first Barrier Code field must be specified as “none.” Duplicate entries are not allowed. The system default for this field is a blank. Assign a 7-digit number in this field for maximum security.

■ **COR** — Enter the class of restriction (COR) number (0 through 95) associated with the barrier code that defines the call restriction features. The default for this field is ”1 .“ Assigning the most restrictive COR that provides only the level of service required, will provide the maximum security.

■ **COS** — Enter a class of service (COS) number (0 through 15) associated with the barrier code that defines access permissions for Call Processing features. The system default for this field is ”1.“ Assigning the most restrictive COS that provides only the level of service required provides the maximum security.

■ **Expiration Date** — Assign an expiration date based on the expected length of time the barrier code will be needed. Enter the date the remote access barrier code will expire. Valid entries are a date greater than the current date or a blank. The default is tomorrow’s date. If it is expected that the barrier code will be used for a 2-week period, assign a date two weeks from the current date. If the Expiration Date is assigned, a warning message is displayed on the system copyright screen seven days prior to the expiration date. The system administer can modify the expiration date to extend the time interval if needed.

■ **No. of Calls** — This field specifies the number of Remote Access calls that can be placed using the associated barrier code. Valid entries are any number from 1 to 9999 or a blank. The default is one call. The Expiration Date field and No. of Calls field can be used independently or in conjunction to provide the maximum security. If both the Expiration Date and No. of Calls fields are assigned, the corresponding barrier code expires when the first of these criteria is satisfied.

■ **Calls Used** — This field is a display only field that specifies the number of calls that have been placed using the corresponding barrier code. The Calls Used field is incremented each time a barrier code is successfully used to access the Remote Access feature. A usage that exceeds the expected rate can indicate improper use.

- **Permanently Disable** — A “y” entered in this field permanently disables the Remote Access feature once a security violation occurs. This field appears on the form if the remote access component of the SVN feature is enabled.
- **Disable Following a Security Violation** — A “y” entered in this field disables the associated remote access barrier code following a security barrier code threshold violation. The system administrator can re-enable Remote Access with the **enable remote access** command. This field appears on the form if the remote component of the SVN feature is enabled.

```
     ------------------------------------------------------------------------
     ------------------------------------------------------------------------

                                REMOTE ACCESS

   Remote Access Extension_______          Barrier Code Length____


Barrier Code   COR    COS    Expiration Date   No. of Calls    Calls Used
1:_________     1_     1_    _ / _ / _          ______          ______
2:_________     1_     1_    _ / _ / _          ______          ______
3:_________     1_     1_    _ / _ / _          ______          ______
4:_________     1_     1_    _ / _ / _          ______          ______
5:_________     1_     1_    _ / _ / _          ______          ______
6:_________     1_     1_    _ / _ / _          ______          ______
7:_________     1_     1_    _ / _ / _          ______          ______
8:_________     1_     1_    _ / _ / _          ______          ______
9:_________     1_     1_    _ / _ / _          ______          ______
10:________     1_     1_    _ / _ / _          ______          ______

Permanently Disable? _ Disable Following A Security Violation? y
(Note:  You must log off to affect permanent disabling of remote access)
Authorization Code Required? y
     ------------------------------------------------------------------------
     ------------------------------------------------------------------------
```

Screen 5-105. Remote Access Form (Page 1 of 1)

Implementation Notes:

The Remote Access Dial Tone field is only displayed if Authorization Code Required is “y”. The Permanently Disable field is only administrable if no entry has been made in the Remote Access Extension field.

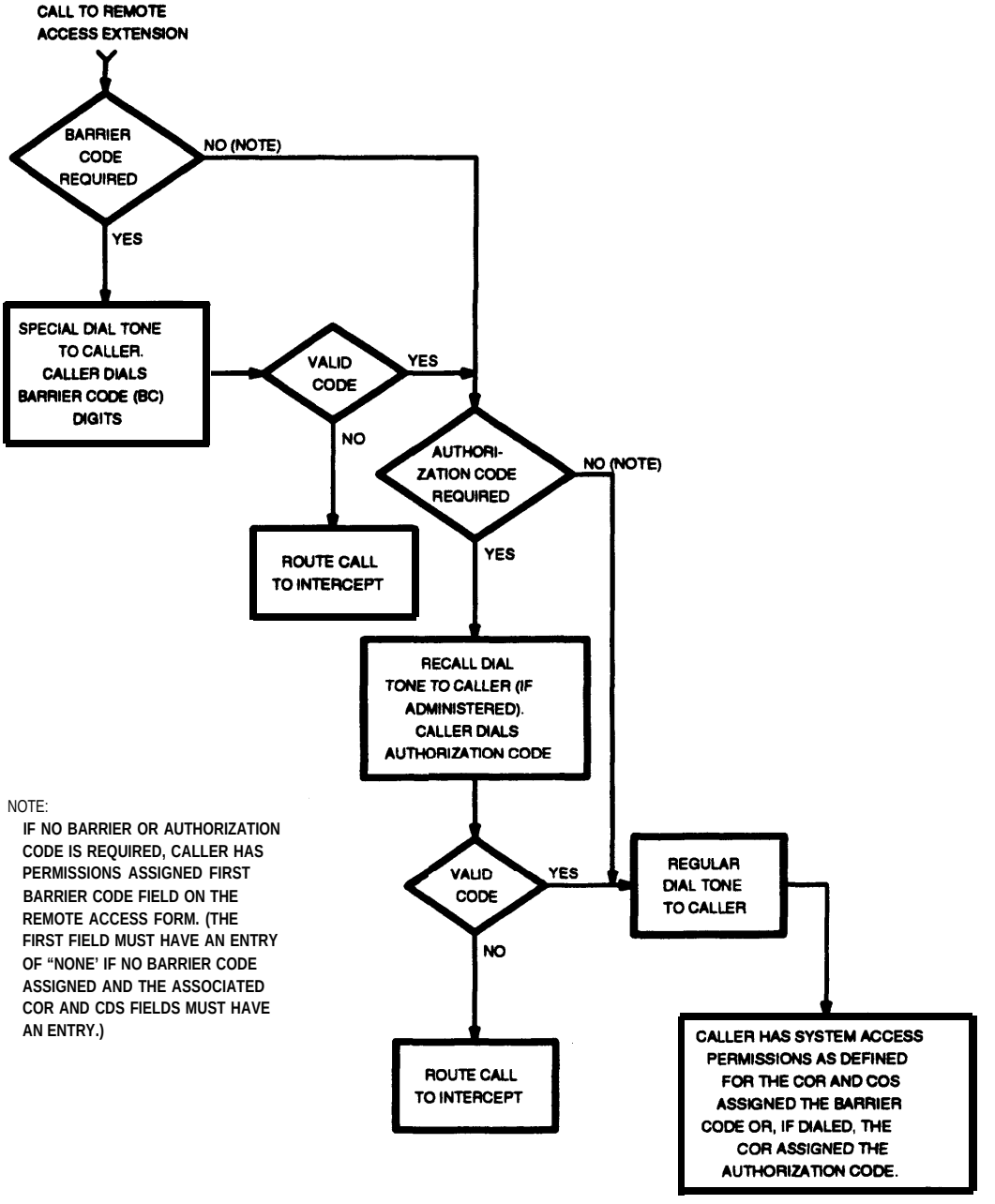


Figure 5-11. Remote Access Flowchart

Remote Call Coverage

Provides automatic redirection of certain calls to alternate answering positions in a Remote Call Coverage path for any valid dialed number up to 16 digits that begins with an Automatic Alternate Routing (AAR) or Automatic Route Selection (ARS) feature access code (FAC), outgoing trunk dial access code (TAC), or UDP/DCS extension. Once a remote call coverage point is administered for a user, calls to that user are directed to the remote coverage point when the user and any other coverage points are unavailable. The call may have been previously directed to up to two alternate answer points before being redirected to the remote call coverage point. Once a call is directed to the remote call coverage point, it cannot be picked up by the principal user and that user's bridged appearance lamp is extinguished. Calls redirected to a remote call coverage point do not time out and go to a subsequent coverage point.

NOTE:
A vector directory number (VDN) can be administered as the last point in a coverage path. Refer to "VDN in a Coverage Path" in this chapter for more information.

Administration Commands

The following administration commands can be used to access the Remote Call Coverage form. In some cases, just the most commonly used commands are shown. Refer to "Administration commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
change	coverage	remote
display	coverage	remote

* Brackets [ ] indicate the qualifier is optional. Single quotes (") indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word can be entered. MAX is the maximum number available in your system configuration. Refer to the Capacity Table in Appendix C.

Form Instructions

Enter coverage points into the numbered fields on the form. Valid coverage points are valid dialed numbers up to 16 digits that begin with an AAR or ARS FAC, outgoing trunk TAC, or UDP/DCS extension. Up to 225 remote call coverage points can be entered on the five pages of this form.

REMOTE CALL COVERAGE TABLE

01:	16:	31:
02:	17:	32:
03:	18:	33:
04:	19:	34:
05:	20:	35:
06:	21:	36:
07:	22:	37:
08:	23:	38:
09:	24:	39:
10:	25:	40:
11:	26:	41:
12:	27:	42:
13:	28:	43:
14:	29:	44:
15:	30:	45:

Screen 5-105a. Remote Call Coverage Table (Page 1 of 5)

REMOTE CALL COVERAGE TABLE

46:	61:	76:
47:	62:	77:
48	63:	78:
49	64:	79:
50	65:	80:
51	66:	81:
52	67:	82:
53:	68:	83:
54:	69:	84:
55:	70:	85:
56:	71:	86:
57:	72:	87:
58:	73:	88:
59:	74:	89:
60:	75:	90:

Screen 5-105b. Remote Call Coverage Table (Page 2 of 5)

REMOTE CALL COVERAGE TABLE

91:	106:	121:
92:	107:	122:
93:	108:	123:
94:	109:	124:
97:	112:	127:
98:	113:	128:
99:	114:	129:
100:	115:	130.
101:	116:	131:
102:	117:	132:
103:	118:	133:
104:	119:	134:
105:	120:	135:

Screen 5-105c. Remote Call Coverage Table (Page 3 of 5)

REMOTE CALL COVERAGE TABLE

136:	151:	166:
137:	152:	167:
138:	153:	168:
139:	154:	169:
140:	155:	170:
141:	156:	171:
142:	157:	172:
143:	158:	173:
144:	159:	174:
145:	160:	175:
146:	161:	176:
147:	162:	177:
148:	163:	178:
149:	164:	179:
150:	165:	180:

Screen 5-105d. Remote Call Coverage Table (Page 4 of 5)

REMOTE CALL COVERAGE TABLE

181:	196:	211:
182:	197:	212:
183:	198:	213:
184:	199:	214:
185:	200:	215:
186:	201:	216:
187:	202:	217:
188:	203:	218:
189:	204:	219:
190:	205:	220:
191:	206:	221:
192:	207:	222:
193:	208:	223:
194:	209:	224:

Screen 5-105e. Remote Call Coverage Table (Page 5 of 5)

Special Information Tones

This form is used to provide the capability of specifying the treatment of Special Information Tones (SITs) used for Outbound Call Management type calls. The TN744 Call Classifier circuit pack ports are used to detect SITs. The TN744 is capable of detecting the following six SITs:

- SIT Ineffective Other
- SIT Intercept
- SIT No Circuit
- SIT Reorder
- SIT Vacant Code
- SIT Unknown
- AMD Treatment

The CPN/BN option must be enabled on the System-Parameters Customer-Options form before associated forms or fields on forms can be administered.

Administration Commands

The following administration commands can be used to access the SIT Treatment For Call Classification form. In some cases, just the most commonly used commands are shown. Refer to “Administration Commands” in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
change	sit-treatment	—
display	sit-treatment	['print’ or ‘schedule']

* Brackets [ ] indicate the qualifier is optional. Single quotes (”) indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word can be entered.

Form Instructions

Make assignments as required for each field on the form as follows: In the field following each type of SIT, enter “answered” to specify that the call is classified as answered, and is therefore sent to an agent; or enter “dropped” to specify that the call is classified as not answered, and is therefore not sent to an agent.

- **SIT Ineffective Other** — Sample announcement following this SIT — “You are not required to dial a ”1” when calling this number.” Valid entries are “answered” and “dropped.” Default is “dropped.”
- **SIT Intercept** — Sample announcement following this SIT — “XXX-XXXX has been changed to YYY-YYYY, please make a note of it.” Valid entries are “answered” and “dropped.” Default is “answered.”

- **SIT No Circuit** — Sample announcement following this SIT — “All circuits are busy, please try to call again later.” Valid entries are “answered” and “dropped.” Default is “dropped.”
- **SIT Reorder** — Sample announcement following this SIT — “Your call did not go through, please hang up and dial again.” Valid entries are “answered” and “dropped.” Default is “dropped.”
- **SIT Vacant Code** — Sample announcement following this SIT — “Your call cannot be completed as dialed, please check the number and dial again.” Valid entries are “answered” and “dropped.” Default is “dropped.”
- **SIT Unknown** — A situation or condition that is unknown to the network is encountered. Valid entries are “answered” and “dropped.” Default is “dropped.”
- **AMD** (Answering Machine Detected) — An ASAI adjunct can request AMD for a switch-classified call. If Answering Machine is detected, one of two treatments is specified. Valid entries are “dropped” and “connected.” Default is “dropped.”

  AMD Treatment has two separately administrable subfields. Talk Duration is for full seconds and Pause Duration is for fractions of a second, separated by a display-only decimal point. Talk Duration defaults to 2.0 seconds and allows a range from 0.1 seconds to 5.0 seconds in increments of 0.1 seconds. Pause duration defaults to 0.5 seconds and allows a range from 0.1 seconds to 2.0 seconds in increments of 0.1 seconds.

```
                    SIT TREATMENT FOR CALL CLASS IF I CATION
  SIT Ineffective Other:  dropped
           SIT Intercept:  answered
         SIT No Circuit:  dropped
            SIT Reorder:  dropped
       SIT Vacant Code:  dropped
           SIT Unknown:  dropped
          AMD Treatment:  dropped
Pause Duration (seconds) : 0.5
 Talk Duration (seconds) : 2.0
```

Screen 5-106. SIT Treatment For Call Classification Form

System Parameters Country-Options

This form is used to implement parameters associated with certain international (including North American) call characteristics.

Administration Commands

The following administration commands can be used to access the Country Options System Parameters form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
change	system-parameters country-options	—
display	system-parameters country-options	['print' or 'schedule']

* Brackets [ ] indicate the qualifier is optional. Single quotes (") indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered.

Form Instructions

Additional information on the parameters listed below can be found within feature descriptions of the same name by referring to *DEFINITY Communications System Generic 3 V2 Feature Description,* 555-230-204.

NOTE:
Refer to the "Country Code Assignments" table in Appendix B for a complete list of Country codes and other international information.

Make assignments as required for the following fields on each page of the form:

Page 1 of the Form

- **Commanding Mode** — Enter "A-law" or "Mu-law" to identify the commanding algorithm to be used by system hardware. Default is "Mu-law."
- **Base Tone Generation Set** — Enter a country code (1 through 19) to identify the base tone generation set to be used. This field is meaningful only if the system tone detector is a TN780, vintage 4 or greater. Default is "1" (U.S.).

  NOTE:
  A TN780 vintage 5 or greater is required if Belgian Tones (Country code 8) are specified.

```
                                                              Page 2 of 7
                    SYSTEM PARAMETERS COUNTRY -OPTIONS

    Tone Name      Cadence        Tone
                    Step      (Frequency/Level)
busy_____________     1:        440/-17.25_   Duration (msec) : 200_
                      2:        silence _____ Duration (msec): 200_
                      3:        440/-l7.25_   Duration (msec): 200_
                      4:        silence _____ Duration (msec): 200_
                      5:        440/-l7.25_   Duration (msec): 200_
                      6:        goto_____          step: 3_
                      7:        _____
                      8:        _____
                      9:        _____
                     10:        _____
                     11:        _____
                     12:        _____
                     13:        _____
                     14:        _____
                     15:        _____
```

Screen 5-108. Country-Options System Parameters Form (Page 2 of 7)

Terminal Parameters Form

This form is used to administer system-level parameters and audio levels for the 603 CALLMASTER voice terminals and the 8403, 8410B, 8410D, and 8434D terminals.

NOTE:
This form is available only if the G3 version is "V3" on the System-Parameters Customer-options form. Only users with "init," "inads," and "craft" logins can administer this form.

Administration Commands

You can use the following administration commands to access the Terminal Parameters form. Use the **603** command for the 603 CALLMASTER voice terminal and the **8400** command for the 6400-series voice terminals. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and how to use abbreviated command words when entering a command.

Action	Object		Qualifier*
change	terminal-parameters	603/302B1	
display	terminal-parameters	603/302B1	[print' or 'schedule']
change	terminal-parameters	6400	
display	terminal-parameters	6400	[print' or 'schedule']

*Brackets [ ] indicate the qualifier is optional. Single quotes indicate the text inside the quotes must be entered exactly as shown or you can enter an abbreviated form of the word.

Making a change to this form affects all 603 voice terminals or all 6400-series voice terminals, depending on whether you are administering the 603 or the 6400-series voice terminals.

A terminal that has not been programmed with the correct parameters may experience incorrect volume levels while a user is on a call or incorrect touchtone levels while the user is placing a call, If you suspect the parameters are incorrect, use the **busyout station/release station** commands to force the currently administered parameters to be sent to the terminal. Use the **status station** command to verify that the download status field indicates the parameters were successfully downloaded.

The switch checks all the 603 and 6400-series terminals each day (during scheduled maintenance) to ensure they are operating with the currently-administered transmission parameters. If the switch detects an incorrectly-programmed terminal, it automatically attempts to send the correct parameters to the terminal.

NOTE:
Terminals that are off-hook cannot be programmed, and therefore, cannot be corrected until they are on-hook the next time the switch attempts to correct the parameters.

Form Instructions

- **Default Parameter Set** — Determines which default set of terminal options and levels will be used. Currently, five default parameter sets (for the USA, Australia, Italy, Netherlands, and the UK) have been defined. All other country codes will automatically map to one of these sets. Enter the correct country code (1 to 19) for your country.

  Country codes are shown below:

Country Code	Country
1	US
2	Australia
3	Japan
4	Italy
5	Netherlands
6	Singapore
7	Mexico
8	Belgium
9	Saudi Arabia
10	UK
11	Spain
12	France (not available in V3)
13	Germany
14	Czechoslovakia
15	C.I.S (Commonwealth of Independent States - Russia)
16	Argentina
17	Greece
18	China

- **Customize Parameters** — Indicates whether the administrator wishes to change one or more of the default parameters. If this field is set to “n” (no), the system uses all default parameters associated with the Default Parameter Set. If this field is set to “y” (yes), the OPTION and LEVEL fields appear.

- **Display Mode** — Determines how the “#” and “~” characters appear on the 603 terminal’s display. If this field is set to ”1,“ the "#" and "~" do not change. If this field is set to “2,” the 603 terminal displays a “#” as a British pound sterling symbol and a “~” as a straight overbar. This field only appears if the Customize Parameters field is set to “y.”

DLI Voltage Level — Determines whether DCP Line Voltage used by the terminals is forced high, forced low, or allowed to automatically adjust. This field only appears if the Customize Parameters field is set to "y."

- **Handset Expander Enabled** — Determines whether the terminal will reduce noise on the handset. If the field is set to "y," the terminal reduces background noise. This field appears only if the Customize Parameters field is set to "y."

PRIMARY LEVELS

The following fields only appear if the Customize Parameters field is set to "y." In each case, if the field is blank, the system uses the default setting from the Default Parameter Set. Also, these fields all require the same input; valid input is shown in Table X-X.

- **Voice Transmit (dB)** — Determines the volume of voice outbound from the terminal.
- **Voice Receive (dB)** — Determines the volume of voice inbound to the terminal.
- **Voice Sidetone (dB)** — Determines the volume of voice fed back from the handset voice microphone to the user's ear.
- **Touch Tone Sidetone (dB)** — Determines the touchtone volume fed back from the terminal when a users presses a button.
- **Touch Tone Transmit (dB)** — Determines the touchtone volume fed outbound from the terminal.

Level	Level	Level
-44.0	-24.5	-5.0
-43.5	-24.0	-4.5
-43.0	-23.5	-4.0
-42.5	-23.0	-3.5
-42.0	-22.5	-3.0
-41.5	-22.0	-2.5
-41.0	-21.5	-2.0
-40.5	-21.0	-1.5
-40.0	-20.5	-1.0
-39.5	-20.0	-0.5
-39.0	-19.5	0.0
-38.5	-19.0	+0.5
-38.0	-18.5	+1.0
-37.5	-18.0	+1.5
-37.0	-17.5	+2.0
-36.5	-17.0	+2.5
-36.0	-16.5	+3.0
-35.5	-16.0	+3.5
-35.0	-15.5	+4.0
-34.5	-15.0	+4.5
-34.0	-14.5	+5.0
-33.5	-14.0	+5.5
-33.0	-13.5	+6.0
-32.5	-13.0	+6.5
-32.0	-12.5	+7.0
-31.5	-12.0	+7.5
-31.0	-11.5	+8.0
-30.5	-11.0	+8.5
-30.0	-10.5	+9.0
-29.5	-10.0	+9.5
-29.0	-9.5	+10.0
-28.5	-9.0	+10.5
-28.0	-8.5	+11.0
-27.5	-8.0	+11.5
-27.0	-7.5	+12.0
-26.5	-7.0	+12.5
-26.0	-6.5	+13.0
-25.5	-6.0	+14.0
-25.0	-5.5	

NOTE:

You cannot administer all five of the Primary Level fields to +14.0 dB. If you attempt to submit the Terminal Parameter form with all Primary Levels set to +14.0 dB, you receive an error message.

ADJUNCT LEVELS

The following fields appear only if you are administering 8400-series terminals and if the Customize Parameters field is set to "y." In each case, if the field is blank, the system uses the default setting from the Default Parameter Set. Also, these fields all require the same input; valid input is shown in the previous Table X-X.

Voice Transmit (dB) — Determines the volume of voice outbound from the adjunct.

Voice Receive (dB) — Determines the volume of voice inbound to the adjunct.

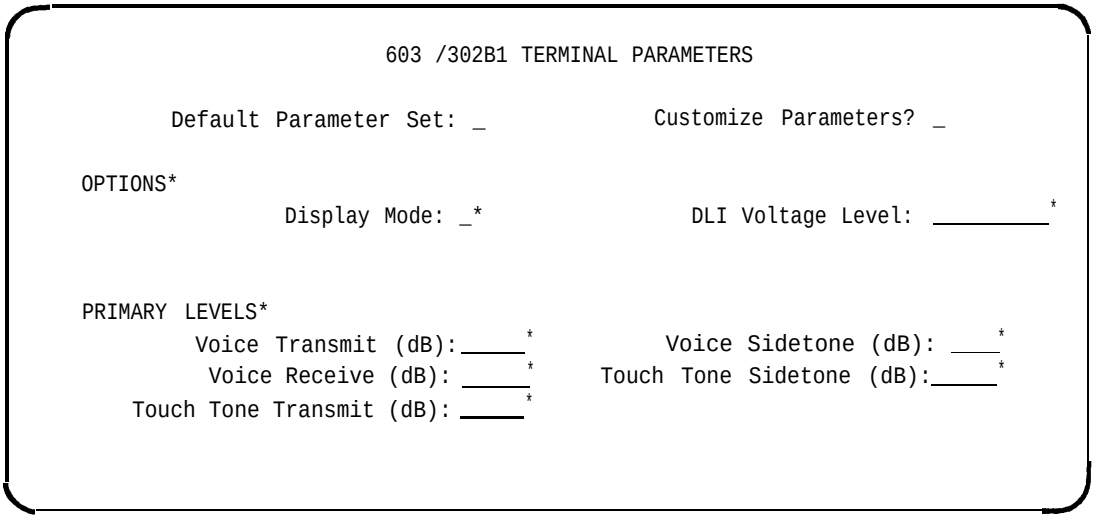
Voice Sidetone (dB) — Determines the volume of voice fed back from the handset voice microphone to the user's ear.

Touch Tone Sidetone (dB) — Determines the touchtone volume fed back from the terminal when a users presses a button.

```
                        8400 - TYPE TERMINAL PARAMETERS

       Default Parameter Set: _             Customize Parameters? _

OPTIONS*
                Display Mode: _*                DLI Voltage Level: _____*
    Handset Expander Enabled? _*

PRIMARY LEVELS*
         Voice Transmit (dB): ____*          Voice Sidetone (dB): ____*
          Voice Receive (dB): ____*     Touch Tone Sidetone (dB): ____*
    Touch Tone Transmit (dB): ____*

ADJUNCT LEVELS*+
         Voice Transmit (dB) : _*           Voice Receive (dB) : ____*
         Voice Sidetone (dB) : _*     Touch Tone Sidetone (dB): ____*
```

Screen 5-108a. 8400-Series Terminal Parameters Form

* This field appears only if Customize Parameters is "y."



Screen 5-108b. 603/302B1 Terminal Parameters Form

* This field appears only if CustomizeParameters is ''y."

Terminating Extension Group

This form is used to define Terminating Extension Groups (TEGs). Any voice terminal can be assigned as a TEG member; however, only a multi-appearance voice terminal can be assigned a TEG button with associated status lamp. The TEG button allows the terminal user to select a TEG call appearance for answering or for bridging onto an existing call.

The TEG members are assigned on an extension number basis. Call reception restrictions applicable to the group are specified by the group class of restriction (COR). The group COR takes precedence over an individual member's COR. The members could all be termination restricted but still receive calls if the group is not restricted.

The system allows for as many as 32 TEGs with up to four members each. An extension number can be assigned to more than one TEG but can have only one appearance of each group.

Administration Commands

The following administration commands can be used to access the Terminating Extension Group form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
add	term-ext-group	1-32 (or 'next')
change	term-ad-group	1-32
display	term-ext-group	1-32 ['print' or 'schedule']
list	term-ext-group	[1-32]['number' x]['to-number' x]['name' x]['ext' x] ['to-ext' x]['count' n]['print' or 'schedule']
remove	term-ext-group	1-32

* Brackets [ ] indicate the qualifier is optional. Single quotes (") indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered.

Form Instructions

Make assignments as required for the following fields on the form:

- **Group Number—** Enter a group number from 1 through 32 when completing a paper form. This is a display-only field when the form is accessed using an administration command such as *add* or *change.*
- **Group Extension** — Enter an unused extension number (may not be a VDN extension) consisting of two to five digits (do not leave blank).
- **Group Name** — Enter up to 16 characters to identify the group.

- **Coverage Path** — Enter a number for the call coverage path for this group. (A TEG cannot serve as a coverage point; however, calls to a TEG can redirect to coverage).
- **Security Code** — Enter a 4-digit security code or leave blank. This code is used for the Demand Print feature.
- **COR** — Enter the desired class of restriction (COR) number (0 through 95) that reflects the desired restrictions. Default is "1".
- **ISDN Caller Display** — Enter "grp-name" or "mbr-name" to specify whether the TEG group name or member name (member of TEG where call terminated) will be sent to the originating user. This field is required if the ISDN-PRI option is enabled on the System-Parameters Customer-Options form. If ISDN-PRI is not enabled, leave blank.
- **LWC Reception** — Defines the source for Leave Word Calling (LWC) messages. Enter "audix", "msa-spe", or "none".
- **AUDIX Name** — Only displayed for a G3r V2 configuration. Name of the AUDIX machine as it appears in the Adjunct Names form.
- **Messaging Server Name** — Only displayed for a G3r V2 configuration. Name of the server as it appears in the Adjunct Names form.
- **Group Member Assignments— Ext** — Enter the extension number (may not be a VDN extension) for the members of this group.
- **Group Member Assignment — Name** — Make no entry. The name is assigned to the preceding extension number when the TEG member's voice terminal is administered.

```
                                                          Page 1 of 1
                        TERMINATING EXTENSION GROUP
        Group Number: _                          Group Extension:____
          Group Name: _______________              Coverage Path: _
       Security Code: ______                                COR : 1_
 ISDN Caller Display: ______                       LWC Reception: none
          AUDIX Name: _____                  Messaging Server Name:_____
      GROUP MEMBER ASSIGNMENTS
               Ext     Name                       Ext     Name
            1: ____                            3: ____
            2: ____                            4: ____
```

Screen 5-109. Terminating Extension Group Form (Page 1 of 1)

Implementation Note:

The AUDIX Name and Messaging Server Name fields are only displayed on G3r V2 configurations.

Vector Directory Number

This form is used to define vector directory numbers (VDNs) for the Call Vector feature. A VDN is an extension number used to access a call vector. Each VDN is mapped to one call vector.

VDNs are software extension numbers (that is, not assigned to physical equipment). A VDN is accessed via direct dial CO trunks mapped to the VDN (incoming destination or night service extension), DID trunks, and LDN calls. The VDN may be Night Destination for LDN.

For more information, refer to "Call Vectoring" in *DEFINITY Communications System Genetic 3 V2 Feature Description,* 555-230-204, or *DEFINITY Communications System Generic 3 Call Vectoring Guide,* 555-230-520.

NOTE:
For G3r systems only, the Vectoring (Basic) or Vectoring (Prompting) options must be enabled on the System-Parameters Customer-Options form before the VDN form can be administered.

You can administer up to 3300 VDNs with this form unless you have specified a greater number on the Feature-Related System-Parameters form. On that form, using the Maximum Number of Administrable VDNs field, you can specify the maximum number of VDNs you will need, up to 20,000.

NOTE:
For G3r systems, the maximum number of total extensions, including VDNs, is 25,000. Therefore, if you have 15,000 extensions administered, you cannot have more than 10,000 VDNs.

Administration Commands

The following administration commands can be used to access the Vector Directory Number form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
add	vdn	xxxxx (extension number of VDN to be added) or 'next'
change	vdn	xxxxx (extension number of VDN to be changed)
display	vdn	xxxxx (extension number of VDN to be displayed) ['print' or 'schedule']
list	vdn	xxxxx (extension number of VDN to be listed) ('count' 1 -MAX) ['print' or 'schedule']
remove	vdn	xxxxx (extension number of VDN to be removed)

* Brackets [ ] indicate the qualifier is optional. Single quotes (') indicate the text inside the quote must be entered exactly as shown or an abbreviated

form of the word may be entered. MAX is the maximum number available in your system configuration. Refer to the Capacity Table in Appendix C.

Form Instructions

Make assignment as required for the following fields on the form:

- **Extension:** — Enter the extension associated with the VDN when completing a paper form. The extension is a 1- to 5-digit number that starts with a valid first digit and length as defined by the System's dial plan. This is a display-only field when using an administration command such as *add* or *change* to access the form.

- **Name:** — Enter up to a 15-character alphanumeric name that is used to identify the VDN. This is an optional field that need not contain any data.

- **Allow VDN Override?** — This entry affects the operation of an agent's display when a call is routed through several VDNs. If it is set to "n," the name of this VDN appears on the agent's display and the VDN's AUDIX mailbox is accessed. If any subsequent VDNs are used to process this call, their names will not appear on the terminating display and the AUDIX mailbox for the original VDN is accessed. If the field is set to "y," the name of the VDN appearing on the terminating display will depend on the administration and chaining of the subsequent VDNs and the AUDIX mailbox for the last VDN is accessed. Default is "n."

  For Expert Agent Selection (EAS), if this field is "y" on the original VDN, the Skills of the new VDN will be used. If this field is "n" on the original VDN, the Skills of the original VDN will be used.

- **Class of Restriction:** — Enter a 1-to 2-digit number that specifies the class of restriction (COR) to be assigned the VDN. The default value is "1 ." The field cannot be blank and must have an entry in the range from O through 95.

- **Vector Number:** — Enter a 1- to 3-digit vector number that specifies a particular call vector that is accessed through the VDN. Valid entries are in the range from 1 through the maximum number allowed in your system configuration. The field cannot be blank.

- **AUDIX Name** — Only displayed for G3r V2 and later configurations. If this VDN is associated with the AUDIX vector, enter the name of the AUDIX machine as it appears in the Adjunct Names form.

- **Messaging Server Name** — Only displayed for G3r V2 and later Configurations. If this VDN is associated with MSA, enter the name of the server as it appears in the Adjunct names form.

- **Measured** — Used to collect measurement data for this VDN. Valid entries are "internal," "external," "both," or "none." Data may be collected for reporting by BCMS or CMS. Default is "none."

NOTE:
The BCMS feature must be enabled on the System-Parameters Customer-Options form for the Measured field to be set to "internal" or "both." In addition, the appropriate CMS release must be administered on the Feature-Related System Parameters form if the field is being changed to "external" or "both."

- **BCMS Acceptable Service Level (sec)** — Only displayed when the BCMS Acceptable Service Level option is enabled on the System-Parameters Customer-Options form and the Measured field is "internal" or "both." Enter the number of seconds within which calls to this VDN should be answered. This will allow BCMS to print out a percentage of calls that were answered within the specified time. Valid entries are 0 through 9999 seconds. Default is blank.

  The following field appears only if VDN of Origin Announcements is enabled.

- **VDN of Origin Annc. Extension** — Enter the extension number of the VDN of Origin announcement. Default is none.
- **1st/2nd/3rd Skill** — Only displayed when Expert Agent Selection is enabled on the System-Parameters Customer-Options form. Enter the desired Skill numbers (or leave blank) in each field.

The figure that follows the sample screen form shows three typical examples of how VDNs are used. An outside call to a VDN is processed based on the various elements that are entered on the VDN form. Handling of the call is based on the commands associated with the vector. Displayed information and any VOAs are dependent on the setting of the Allow VDN Override field entry. As shown in the third example, the Allow VDN Override field set to "N" for VDN 4501 determines the name displayed on the terminating extension 7000.

```
                    VECTOR DIRECTORY NUMBER

                     Extension: 50000
                          Name: Tech Support
          Allow VDN Override? n
                         COR: 59
                Vector Number: 234
                   AUDIX Name:
      Messaging Server Name:
                    Measured: none

VDN of Origin Anne. Extension: 301
                    1st Skill:
                    2nd Skill:
                    3rd Skill:
```

Screen 5-110. Add/Change Vector Directory Number Form

```
                        VECTOR DIRECTORY NUMBERS

                     Allow VDN      Vec        Orig   Event         Skills
Ext    Name          Override  COR Num Meas   Anne   Notif Adj   1st 2nd 3rd

50000 Tech Support       Y      59  234 none  301
50001 Customer Serv.     n      1     1 none  302
50002 New Orders         Y      23    5 none  303
50003 Denver             Y      23  123 int   304
50004 San Francisco      Y      39  123 ext   305
50005 Chicago            Y      12  123 both  306
```

Screen 5-110a. List Vector Directory Number

Implementation Notes:

AUDIX Name and Messaging Server Name are only displayed for a G3r V2 configuration.

The BCMS feature must have been optioned if the Measured field is set to “internal’’ or ’’both.” In addition, the appropriate CMS release must be administered on the Feature-Related System Parameters form if the field is being changed to “external” or “both.”

The 1st/2nd/3rd Skill fields are only displayed when Expert Agent Selection is enabled on the System-Parameters Customer-Options form.

The BCMS Acceptable Service Level (sec) field is only displayed if the BCMS Acceptable Service Level option is enabled on the System-Parameters Customer-Options form and the Measured field is “internal” or “both.”

Data for the Orig Annc column appears only when VDN of Origin Announcement is enabled on the System-Parameters Customer-Options form.

Voice Terminals — General

Voice terminals combine the capabilities of both a telephone and computer and have a variety of controlling and monitoring capabilities, While providing basic telephone service (placing and answering calls), voice terminals can also be used to activate or deactivate the advanced features of the system. Both single-line and multi-appearance voice terminals are supported. A single-line voice terminal can have only one incoming call appearing at the terminal at a time. Multi-appearance voice terminals can have up to ten calls appearing at the terminal at the same time. Several of the terminals have associated alphanumeric display capabilities for display of call progress and related status information.

Each voice terminal to be assigned in the system must be administered using system forms. Unique forms are provided for the terminals which are administered by their voice terminal type. Certain terminals that do not have their own forms can be administered using an existing form. Terminals not accounted for may be administered using the Enhanced Terminal Administration (ETA) feature and its associated Alias Station form. Refer to the ETA feature description in Chapter 3 for additional information. Refer to the voice terminal information provided later in this chapter for specific implementation instructions for each terminal type.

System Voice Terminals

The "System Voice Terminals" table that follows lists the voice terminals that are administrable in the system. In addition, administration is supported for Personal Computer — 6300 and 7300 PBX Connections.

Voice Terminal Feature Button Descriptions

The "Voice Terminal Feature Button Descriptions" table in this section provides descriptions of the feature buttons that can be administered on multi-appearance voice terminals. The administrable software names and recommended button label names are shown.

Voice Terminal Feature Button Characteristics

The "Voice Terminal Feature Button Characteristics" table provides a listing of voice terminal feature button characteristics. The features or functions that have associated feature buttons are listed alphabetically on the table. Recommended button labels and administration names that must be entered on system forms are listed for each button type. Certain buttons are administered so that their associated status lamps can be used to provide visual status indications of a related feature or function. In some cases, the button itself is not functional. These buttons are noted as "[status lamp]" in the Feature or Function column on the table.

NOTE:
When assigning one of these buttons the button must have an associated status lamp.

Buttons noted as “[display button]” are used to support voice terminals equipped with alphanumeric displays. These buttons are only functional if the terminal has a display.

NOTE:
Depending on the voice terminal type (such as MET, analog, digital), certain feature buttons may or may not be administrable on the voice terminal. Coverage for each voice terminal type (where appropriate) includes a listing of the feature buttons that can be administered on the terminal.

Table 5-10. System Voice Terminals

Terminal Type	Model	Administered As
Single-Line Analog	500	500
	2500	2500
	2500 With Message Waiting Adjunct	2500
	7101A	7101A
	7102A	7101A
	7103A Programmable and Original	7103A
	7104A	7104A
	8110	8110
	DS1FD	DS1FD
Muiti-Appearance Hybrid	7302H	7303S
	7303H	7303S
	7303S	7303S, 7313H
	7305H01B or 7305H02B	7305S
	7305H03B	7305S
	7305H04B	7305S
	7305S*	7305S, 7316H, 7317H (with optional display)
	7309H	7309H, 7313H
	7313H	7313H
	7314H	7314H
	7315H	7315H
	7316H	7316H
	7317H	7317H
Multi-Appearance Digital	7401 D	7401D
	7401+	7401+
	7403D	7403D
	7404D	7404D
	7405D	7405D
	7406D	7406D
	7406+	7406+
	7407D	7407D
	7407+	7407+
	7410D	7410D
	7410+	7410+
	7434D	7434D
	7444D	7444D
	8403B	8403B
	8410B	8410B
	8410D	8410D
	8434D	8434D
	602A1 “CALLMASTER” Terminal	602A1
	603A1, 603D1 “CALLMASTER” Terminal	603A1, 603D1
	IDT1	7403D
	IDT2	7406D

Table 5-10. System Voice Terminals *(continued)*

Terminal Type	Model	Administered As
Multi-Button Electronic Telephone (MET) sets	10-button (5 administrable) 10-button with built-in speakerphone 20-button (15 administrable) 30-button (25 administrable)	10MET 10MET 20MET 30MET
Terminals	510D 515BCT	510 515
ISDN-BRI Station	—	asai **
ISDN-BRI Station	7505D 7506D 7507D 8503D 8510D 8520D	7505D 7506D 7507D 8503D 8510D 8520D
PBX/PC (voice/data)	6300/7300 6538/9	PC Constellation
Test Line	ATMS	105TL***
Key Phone System Interface	—	K2500****

*If administered as 7316H (with speakerphone or handset) Internal Automatic Answer (IAA) will work.

** "asai" is administered as the ISDN-BRI set type in support of an Adjunct Switch Applications Interface (ASAI) link. This interface supports use of CallVisor ASAI and an associated adjunct such as CONVERSANT speech processor used with Inbound Call Management feature. Refer to ASAI Link form (this chapter) and CallVisor Adjunct/Switch Applications Interface feature description in Chapter 3 for additional information.

*** Available without the Automatic Transmission and Measurement System (ATMS) feature package. Refer to *DEFINITY Communications System Generic* 3 V2 *Maintenance,* 555-230-105, and *DEFINITY Communications System Genetic 3 V2 System Reports,* 555-230-511, for more information on ATMS.

**** The K2500 has the same administration form as the 2500 except that it supports rotary or DTMF sets.

NOTE:

When administering a system that is comprised of a large number of digital voice terminals, 20- and 30-MET sets, or hybrid sets equipped with feature buttons, administer the voice terminals in the following order:

1. Digital voice terminals
2. 20-, 30-MET sets
3. Hybrid sets equipped with feature buttons
4. All others (that is, analog, hybrids, 10-MET, and so on).

The 8500 ISDN-BRI Data Module is administered as "6500."

Table 5-11. Voice Terminal Feature Button Descriptions

Administration Name	Button Label	Description
abr-prog	AbrvDial Program	Abbreviated Dialing Program Mode: allows the user to program or reprogram abbreviated dialing buttons or to store or change a number in a personal list associated with the station. (One per-station maximum.)
abr-spchar	AbrvDial (char)	Abbreviated Dialing Special Character allows the user to enter an associated special character [~m (mark), ~p (pause), ~s (suppress), or ~w (wait)] when programming an abbreviated dialing list entry. [One each (~m, ~p, ~s, ~w) per station.]
abrdg-appr	(extension)	Bridged Call Appearance of an Analog Station: allows the user to have an appearance of a single-line voice terminal's extension number. (Can only be assigned to a 2-lamp button, Refer to specific terminal information for maximums.)
abrv-dial	AD	Abbreviated Dialing: used to access an associated abbreviated dialing list entry and causes the associated stored number it to be dialed, (One per AD list per dial code; otherwise, no per-station maximum.)
ac-alarm	AC Alarm	Administered Connection Alarm Notification: associated status lamp lights when the number of failures for at least one administered connection has equaled the specified threshold. (One per-station maximum.)
aca-call	Auto-Ckt Assure	Automatic Circuit Assurance (display button): allows users of display-equipped voice terminals to identify trunk malfunctions. The system automatically initiates a referral call to the terminal when a possible failure occurs, The button is *used* to activate/deactivate referral calls, (One per-system maximum.)
after-call*	After Call Work	After Call Work Mode: used to remove an agent from ACD call distribution in order for the agent to complete ACD-related activities such as forms completion. (One per split group; otherwise, no per-station maximum.)
alt-frl	Alt FRL	Alternate FRL: used to activate or deactivate the Alternate Facility Restriction Level (AFRL) feature. (One per system maximum.)
assist l	Assist	Supervisory Assistance: used by an ACD agent to place a call to a split supervisor. (One per split group; otherwise, no per-station maximum.)
atd-qcalls ‡	AQC	Attendant Queue Calls *(display button):* used to track the number of calls in the attendant group's queue and obtain a display of the queue status. (One per-station maximum,)
atd-qtime ‡	AQT	Attendant Queue Time *(display button):* used to track the calls in the attendant group's queue with regards to the oldest time a call has been queued, and obtain a display of the queue status. (One per-station maximum.)

* The Automatic Call Distribution feature must be enabled on the System-Parameters Customer-Options form before the feature button can be administered.

‡ The voice terminal must be equipped with a display before the feature button can be administered.

Table 5-11. Voice Terminal Feature Button Descriptions *(continued)*

Administration Name	Button Label	Description
aut-msg-wt	Message (name or ext #)	Automatic Message Waiting: associated status lamp automatically lights when an LWC message has been stored in the system for the associated extension (can be a VDN), (One per aut-msg-ext; otherwise, no per-station maximum.)
auto-cback	Auto Call Back	Automatic Call Back: when activated, allows inside user who placed a call to a busy or unanswered voice terminal to be called back automatically when the called voice terminal becomes available to receive a call. (One per-station maximum.)
auto-icom	Auto (name or ext #)	Automatic Intercom: used to place a call to the station associated with the button. The called user receives a unique alerting signal, and a status lamp associated with a Dial or Automatic Intercom button, if provided, flashes. (One per group per dial code; otherwise, no per-station maximum.)
auto-in*	Auto In	Auto-In Mode: allows the user to become automatically available for new ACD calls upon completion of an ACD call. (One per split group; otherwise, no per-station maximum.)
auto-wkup ** ‡	Auto Wakeup	Automatic Wakeup *(display button):* allows attendants, front-desk users, and guests to request a wakeup call to be placed automatically to a certain extension number (may not be a VDN extension)at a later time. (One per-station maximum.)
aux-work *	Auxiliary work	Auxiliary Work Mode: removes agent from ACD call distribution in order to complete non-ACD-related activities. (One per split group and one per-station maximum.)
brdg-appr	(extension)	Bridged Call Appearance of a Multi-Appearance Station: provides an appearance of a voice terminal's primary extension number at the terminal assigned the brdg-appr button. The button tracks and may be used like a call appearance on the tracked station. (Can only be assigned to a 2-lamp button. Refer to specific terminal information for maximums.) A VDN cannot be assigned to a bridged appearance button.
busy-ind	Busy (trunk or ext #)	Station Busy Indication: (see Facility Busy Indication feature) provides user with a visual indication of the busy or idle status of an extension (can be a VDN extension), trunk group, hunt group (DDC or UCD), or paging zone, User can use button for direct access to associated facility. (One per TAC/Ext; otherwise, no per-station maximum.)

* The Automatic Call Distribution feature must be enabled on the System-Parameters Customer-Options form before the feature button can be administered.

** The Hospitality feature must be enabled on the System-Parameters Customer-Options form before the feature button can be administered.

‡ The voice terminal must be equipped with a display before the feature button can be administered.

Table 5-11. Voice Terminal Feature Button Descriptions *(continued)*

Administration Name	Button Label	Description
call-appr	(extension)	Call Appearance: used to originate or receive calls. (Refer to specific voice terminal information for maximums allowed.)
call-disp ‡	Return Call	Call Displayed Number *(display button):* automatically initiates a call to the currently displayed number, which may be a part of a leave word calling message or a number retrieved using the integrated directory feature, (One per-station maximum.)
call-fwd	Call Forwarding	Call Forwarding: used to activate/deactivate the Call Forwarding All Calls feature. Calls that would normally terminate at the station are redirected (forwarded) to another extension (may not be a VDN extension). (One per-station maximum.)
call-park	Call Park	Call Park used to place a current call in the call park state and later used to retrieve the call. Note that a call cannot be parked on a VDN extension. (One per-station maximum.)
call-pkup	Call Pickup	Call Pickup: used to pickup a call that is ringing in the users pickup group, (One per-station maximum.)
callr-info	Caller Info	Caller information (display button): used with the Call Prompting feature to allow the user to display information (i.e., digits) collected from the originator. (One per-station maximum.)
cas-backup	CAS Backup	Centralized Attendant Service Backup Mode: used to redirect all CAS calls to a backup extension in the local branch if all RLTs are out-of-service or maintenance busy. The associated status lamp indicates if CAS is in the backup mode, (One per-station maximum.)
cdr1-alarm	CDR 1 Failure	CDR Alarm: associated status lamp is used to indicate that a failure in the interface to the primary CDR output device has occurred (1 per-station maximum,)
cdr2-alarm	CDR 2 Failure	CDR Alarm: associated status lamp is used to indicate that a failure in the interface to the secondary CDR output device has occurred (1 per-station maximum.)
check-in ** ‡	Check In	Check In *(display button):* used to change the state of the associated guest room to “occupied’ and turn off the outward calling restriction for the guest room’s station. (One per-station maximum.)
check-out ** ‡	Check Out	Check Out *(display button):* used to change the state of the associated guest room to “vacant” and turn on the outward calling restriction for the guest room’s station. Also dears (removes) any wake-up request for the station. (One per-station maximum.)
clk-overid ‡	Clocked Override	Clocked Manual Override *(display button):* used in association with the Time of Day Routing feature to override the routing plan in effect for the activating user’s partitioned group number. The routing plan is overridden for a specified period of time. (One per-station maximum.)

** The Hospitality feature must be enabled on the System-Parameters Customer-Options form before the feature button can be administered.

‡ The voice terminal must be equipped with a display before the feature button can be administered.

Table 5-11. Voice Terminal Feature Button Descriptions *(continued)*

Administration Name	Button Label	Description
consult	Consult	Consult used by a covering party, after answering a coverage call, to call the principal (called party) for private consultation. This places the calling party on hold, (One per-station maximum.)
cov-cback	Coverage Callback	Coverage Callback: used by a covering party to leave a message for the principal (called Party) to call the calling party. (One per-station maximum.)
cov-msg-rt ‡	Covr Msg Retrieve	Coverage Message Retrieval *(display button):* used to place a covering station into the message retrieval mode for the purposes of retrieving messages for the group. (One per-station maximum.)
data-ext	Data (data ext #)	Data Extension; used to setup a data call. May be used to pre-indicate a data call or to disconnect a data call. (One per data extension group; otherwise, no per-station maximum.) May not be a VDN or ISDN-BRI extension, Not allowed on a ISDN-BRI station.
date-time ‡	Date Time	Date Time Display *(display button):* used to display the current date and time. (One per-station maximum.)
delete-msg ‡	Delete Message	Delete Message *(display button):* used to delete a stored message that is currently on the station's display. (One per-station maximum.)
dial-icom	Dial Icom	Dial Intercom: used to recess the intercom group assigned to the button, (One per group; otherwise, no per-station maximum.)
directory ‡	Integrtd Directory	Directory *(display button):* used to place the station's display in the integrated directory mode allowing the user to search for any system user, (One per-station maximum.)

** The Hospitality feature must be enabled on the System-Parameters Customer-Options form before the feature button can be administered.

‡ The voice terminal must be equipped with a display before the feature button can be administered,

Table 5-11. Voice Terminal Feature Button Descriptions *(continued)*

Administration Name	Button Label	Description
disp-norm ‡	Local/Normal	Local/Normal *(display button);* 7315H and 7317H stations only. User can toggle between LOCAL display mode (displays time and date) and NORMAL mode (displays call-related data), Status LED off = LOCAL mode. Status LED on = NORMAL mode. (One per station maximum.)
dn-dst **	Do Not Disturb	Do Not Disturb: used to place the user in the do not disturb mode. (One per-station maximum.)
ds1-alarm	DS1 (facility)	DS1 Alarm: associated status lamp lights if an off-circuit pack major, minor, or warning alarm is active on a DS1 circuit pack. Off-board alarms (e.g., loss of signal, slips, misframes) relate to problems on the facility side of the DS1 interface.
exclusion	Exclusion	Exclusion: used to prevent any other user from bridging onto the current call. (One per-station maximum.)
ext-dn-dst ** ‡	Do Not Disturb Ext	Extinguish Do Not Disturb *(display button):* used to remove the user from the do not disturb mode. (One per-station maximum.)
flash	Flash	Flash; used for two types of calls: 1) allows a station on a trunk call with Trunk Flash enabled to send a Trunk Flash signal to the far end (e.g., Central Office); 2) allows a station on a CAS main call to send a Trunk Flash signal over the connected RLT trunk back to the branch to conference/transfer the call on the branch. (One per station maximum.)
goto-cover	Go To Cover	Go To Coverage: used to send a call directly to coverage instead of waiting for the called inside user to answer. (One per-station maximum.)
grp-dn-dst ** ‡	Do Not Disturb Grp	Group Do Not Disturb *(display button):* used to remove a group of users from the do not disturb mode. (One per-station maximum.)
hunt-ns *	Hunt Group	Hunt-Group Night Service: used to place a hunt-group into night service. (Three per hunt group maximum.)
in-call-id	Coverage (group #, type, name, or ext #)	Incoming Call Identification: used to identify the hunt or coverage answer group associated with the current incoming call. (One per group type per group; otherwise, no per-station maximum.)
inspect ‡	Inspect Mode	Inspect *(display button):* used to display the extension number of the current ringing call, or the extension behind a subsequently pressed call appearance button. (One per-station maximum.)
int-aut-an	IntAutoAns	Internal Auto Answer; used to condition a type 731xH type station to automatically answer incoming internal calls. May also be administered on 730xH type stations administered as 731XH type stations. (One per station maximum.)

* The Automatic Call Distribution feature must be enabled on the System-Parameters Customer-Options form before the feature button can be administered.

** The Hospitality feature must be enabled on the System-Parameters Customer-Options form before the feature button can be administered.

‡ The voice terminal must be equipped with a display before the feature button can be administered.

Table 5-11. Voice Terminal Feature Button Descriptions *(continued)*

Administration Name	Button Label	Description
last-numb	LastNumb Dialed	Last Number Dialed: used to originate a call to the number last dialed by the station user. (One per-station maximum.)
link-alarm	Link Failure (link #)	Link Alarm: associated status lamp is used to indicate that a failure has occurred on one of the Processor Interface circuit pack data links, (One to eight per-station maximum.)
lsvn-call	Login SVN	Login Security Violation Notification: used to activate/deactivate call referral when a login security violation has been detected by the system. See "Security Violation Notification" for more information. (One per-system maximum.)
lwc-cancel	Cancel LWC	Leave Word Calling Cancel: used to cancel the last leave word calling message originated by the user. (One per-station maximum.)
lwc-lock	Lock LWC	Leave Word Calling Lock: used to lock the message retrieval capability of the display module on the station. (One per-station maximum.)
lwc-store	LWC	Leave Word Calling Store: used to leave a message for the user associated with the last number dialed to return the call to the originator. (One per-station maximum.)
major-alrm	Major Hdwe Failure	Major Alarm: associated status lamp is used to indicate that a vital system hardware component(s) has failed, This type of alarm represents a disruption of overall System performance, (One per-station maximum.)
man-msg-wt	Msg Wait (name or ext #)	Manual Message Waiting: used to turn on a message waiting lamp on the station associated with the button. Note that the Manual Message Waiting button may not point to a VDN. (No per-station maximum.)
man-overid ‡	Immediate Override	Immediate Manual Override *(display button):* used in association with the Time of Day Routing feature to temporarily override the routing plan in effect for the activating user's partitioned group number. The routing plan is overridden upon activation. (One per-station maximum.)
manual-in *	Manual In	Manual-in Mode: used to prevent the user from becoming available for new ACD calls upon completion of an ACD call by automatically placing the agent in the after call work mode. (One per split group; otherwise, no per-station maximum.)
mct-act	MCT Activation	Malicious Call Trace Activation: used to send a message to MCT controller consoles to indicate that someone want to trace a malicious call.
mct-contr	MCT Control	Malicious Call Trace Control: used to allow the console to take control of malicious call trace requests. (This button must be administered with the change-mct-group-extensions command.)
mj/mn-alrm	Major/Minor Hdwe Failure	Minor Alarm: associated status lamp is used to indicate that a system hardware component has failed that will disrupt service on a limited scale. (One per-station maximum.)

* The Automatic Call Distribution feature must be enabled on the System-Parameters Customer-Options form before the feature button can be administered.

‡ The voice terminal must be equipped with a display before the feature button can be administered.

Table 5-11. Voice Terminal Feature Button Descriptions *(continued)*

Administration Name	Button Label	Description
msg-retr ‡	Message Retrieve	Message Retrieval *(display button):* used to place the station's display into the message retrieval mode. (One per-station maximum.)
mwn-act **	Message Waiting Act.	Message Waiting Activation (supports PMS feature): used to turn on a message waiting lamp on an associated station. (One per-station maximum.)
mwn-deact **	Message Waiting Deact	Message Waiting Deactivation (supports PMS feature): used to turn off a message waiting lamp on an associated station. (One per-station maximum.)
next ‡	Next	Next Message *(display button):* used to step to the next message when the station's display is in message retrieval mode. (One per-station maximum.)
night-serv	Night Serv	Night Service Activation: used to place the system into or out of the night service mode. (One per-system maximum.)
noans-alrt	RONA	Redirection on No Answer Alert: indicates a Redirection on No Answer timeout has ocourred for the split, Administered on a per split/skill basis. (One per-split maximum.)
normal ‡	Normal Mode	Normal *(display button):* used to place the station's display into the normal call identification mode. (One per-station maximum.)
per-COline	CO Line (line #)	Personal CO Line: allows the user to receive calls directly via a specific trunk. (One per group; otherwise, no per-station maximum.)
pms-alarm	PMS Failure	PMS Alarm: associated status lamp is used to indicate that a failure in the PMS has occurred. A major or minor alarm condition will raise the alarm, (One per-station maximum.)
pr-awu-alm	Auto Wakeup Alm	Automatic Wakeup Printer Alarm: associated status lamp is used to indicate that an automatic wakeup printer interface failure has occurred. (One per-station maximum.)
pr-pms-alm	PMS Ptr Alarm	PMS Printer Alarm: associated status lamp is used to indicate that a PMS printer interface failure has occurred. (One per-station maximum.)
pr-sys-alm	Sys Ptr Alarm	System Printer Alarm: associated status lamp is used to indicate that a system printer (dedicated to Report Scheduler feature) interface failure has occurred. (One per-station maximum.)
print-msgs	Print Msgs	Print Messages allows the user to print messages for any extension by pressing the button and then entering the extension number and a security code (if one assigned). (One per-station maximum.)

* The Automatic Call Distribution feature must be enabled on the System-Parameters Customer-Options form before the feature button can be administered.

** The Hospitality feature must be enabled on the System-Parameters Customer-Options form before the feature button can be administered.

‡ The voice terminal must be equipped with a display before the feature button can be administered.

Table .5-11. Voice Terminal Feature Button Descriptions *(continued)*

Administration Name	Button Label	Description
priority	Priority call	Priority Calling: allows the user to place a priority call by pressing the button and then dialing an extension, or change an existing call to a priority call by pressing the button after the extension has been dialed. (One per-station maximum.)
q-calls	NQC	Queue Calls: associated status lamp flashes if a call warning threshold has been reached. (One per hunt group per-station maximum.)
q-time	OQT	Queue Time: associated status lamp flashes if a time warning threshold has been reached. (One per hunt group per-station maximum.)
release	Release	Release: used to release an agent from an ACD call. (One per station)
ringer-off	Ringer cutoff	Ringer-off used to silence the alerting ringer on the station. (One per-station maximum.)
rs-alert	System Reset Alert	System Reset Alert: the associated status lamp will light if the system has a problem that escalates beyond a warm start. (One per-station maximum.)
rsvn-call	Remote SVN	Remote Access Barrier Code Security Violation Notification Call: used to activate/deactivate call referral when a Remote Access Barrier Code security violation has been detected by the system. See “Security Violation Notification” for more information. (One per-system maximum.)
scroll ‡	Scroll	Scroll *(display button);* administrable on 7315H and 7317H stations. Button used to select one of two lines (alternates with each press) of the 16-character LCD display. Only one line can be displayed at a time. (One per station maximum.)
sd-stroke	ACD SD stroke Count	Automatic Call Distribution Single Digit Stroke Count: used to send a message to CMS to increment a stroke count number. The auxiliary field contains the stroke count number (0-9) to be incremented. (One per-station maximum.)
send-calls	Send All Calls	Send All Calls: used to send all calls to coverage as soon as they terminate at the station. (One per-station maximum.)
send-term	Send All Calls-TEG	Send All Calls For Terminating Extension Group: allows the user to forward all calls directed to a terminating extension group. (One per group; otherwise, no per-station maximum.)

Table 5-11. Voice Terminal Feature Button Descriptions *(continued)*

Administration Name	Button Label	Description
serv-obsrv *	Service Observing	Service Observing: activates the Service Observing feature. Used to toggle between a listen-only and a Iisten-talk mode. Deactivate by hanging up or pressing another call-appearance button. (One per-station maximum.)
signal	Signal (name or ext #)	Signal: allows the user to manually signal (via ringing) a station associated with the button. Note that the button cannot point to a VDN. (One per signal extension maximum; otherwise, no per-station maximum.)
stored-num ‡	Stored Number	Stored Number *(display button):* used to place the station's display into the stored number mode. This allows the user to query button translations and display associated stored numbers. (One per-station maximum.)
term-x-gr	Term Grp (name or ext #)	Terminating Extension Group: used to provide one *or* more extensions (may not be a VDN extension) for a station. Calls may be received but not originated with this button, (One per group; otherwise, no per-station maximum.)
timer ‡	Timer	Timer *(display button):* used to start a clock on the station to display elapsed time. (One per-station maximum.)
trk-ac-alm	FTC Alarm	Facility Test Call Alarm: associated status lights when a successful Facility Test Call (FTC) has occurred. Pressing an FTC button (up to ten may be administered) when its status lamp is lighted will turn off all FTC status lamps whether or not the FTC is still in progress or has completed. FTC access is controlled via COR assignment. The status lamp provides an indication that a FTC has occurred.
trk-id ‡	Trunk ID	Trunk Identification *(display button):* used to identify the tac (trunk access code) and trunk member number associated with a call. (One per-station maximum.)
trunk-name ‡	Trunk Name	Trunk Name *(display button):* used to display the name of the trunk as administered on the CAS Main or on a switch without CAS. (One per-station maximum.)
trunk-ns *	Trunk Grp	Trunk-Group Night Service: used to place a trunk-group into night service. (One per trunk-group maximum.)
verify	Verify	Busy Verification: allows the user to make test calls and check the condition of a station, stations in a hunt group, or a trunk and quickly identify faulty equipment. (One per-station maximum.)
vu-display	VuStats #	VuStats: used to enable VuStats and to specify a display format. It is recommended that, on the button label, you add some form of ID for the Display Format, indicated here by "#." Maximum: based on the number of feature buttons available on the voice terminal (G3V3 only).
work-code *	Work Code	Call Work Code: allows an ACD agent after pressing "work-code" to send up to 16 digits (using the dial pad) to CMS. The data is associated with a current ACD call, and may represent account codes, social security numbers, or telephone numbers, for example. (One per-station maximum.)

* The Automatic Call Distribution feature must be enabled on the System-Parameters Customer-Options form before the feature button can be administered.

‡ The voice terminal must be equipped with a display before the feature button can be administered.

Table 5-12. Voice Terminal Feature Button Characteristics

Feature Or Function	Recommended Button Label	Name Entered On Station Form	Maximum Allowed*	Notes **
Abbreviated Dialing	AD	abrv-dial (list:_ DC:_)	1 per list/DC	1
	AbrvDial Mark	abr-spchar (Char:~m)	1	
	AbrvDial Pause	abr-spchar (Char:~p)	1	
	AbrvDial Program	abr-prog	1	
	AbrvDial Suppress	abr-spchar (Char:~s)	1	
	AbrvDial Wait	abr-spchar (Char:~w)	1	
Abbreviated Dialing [display button]	Stored Number	stored-num	1	2
Administered Connection [status lamp]	AC Alarm	ac-alarm	1	
Alternate Facility Restriction Level	Alt-FRL	alt-frl	1 per system	
Automatic Call Distribution	After Call Work	after-call (Grp._)	1 per split group	3
	Assist	assist (Grp. —)	1 per split group	3
	Auto In	auto-in (Grp. _)	1 per split group	3
	Auxiliary work	aux-work (Grp._)	1 per split group	3
	Manual-In	manual-in (Grp._)	1 per split group	3
	Release	release	1	
	Work Code	work-code	1	
	Stroke _	stroke-cnt (Code:)	10 per terminal	17

* Refer to the previous table ("Voice Terminal Feature Button Descriptions") for feature button descriptions and notes.

** See Notes at end of table.

Table 5-12. Voice Terminal Feature Button Characteristics *(continued)*

Feature Or Function	Recommended Button Label	Name Entered On Station Form	Maximum Allowed*	Notes **
Automatic Callback	Auto Callback	auto-cback	1	
Automatic Circuit Assurance	Auto-ckt Assure	aca-call	1	
Auto Wakeup [display button]	Auto Wakeup	auto-wkup	1 per split group	2
Bridged Call Appearance	*Extension*	brdg-appr	N	
	Extension	abrdg-appr	N	
Busy Verification	Verify	verify	1	
Call Appearance	*Extension*	call-appr	‡	
Call Coverage	Consult	consult	1	
	Coverage Callback	cov-cback	1	
	Send All Calls-TEG	send-term (Grp:_)	1 per Grp.	
	Go to Cover	goto-cover	1	
	Send All Calls	send-calls	1	
Call Coverage [display button]	Covr Msg Retrieve	cov-msg-rt	1	2
Call Forwarding	Call Forwarding	call-fwd	1	
Call Park	Call Park	call-park	1	
Call Pickup	Call Pickup	call-pkup	1	
Call Prompting [display button]	Caller Info	callr-info	1	
Centralized Attendant Service	CAS-Backup	cas-backup	1	
	Flash	flash	1	18
Data Call Setup	Data (data extension #)	data-ext (Ext:_)	1 per Ext.	
Date and Time [display button]	Date Time	date-time	1	2
Demand Print	Print Msgs	print-msgs	1	
Display-Normal	local-nor-m	disp-norm	1	20
Do Not Disturb	Do Not Disturb	dn-dst	1	
Do Not Disturb [display buttons]	Do Not Disturb Ext	ext-dn-dst	1	2
	Do Not Disturb Grp	grp-dn-dst	1	2

* N = any number of buttons on the voice terminal can be assigned to this feature. Refer to the previous table ("Voice Terminal Feature Button Descriptions") for feature button descriptions and notes.

** See Notes at end of table.

‡ Refer to specific voice terminal information provided later in this chapter for maximum allowed.

Table 5-12. Voice Terminal Feature Button Characteristics *(continued)*

Feature Or Function	Recommended Button Label	Name Entered On Station Form	Maximum Allowed*	Notes **
Elapsed Time [display button]	Timer	timer	1	2
Facility Busy Indication [status lamp]	Busy (trunk or extension #)	busy-ind (TAC/ Ext:_)	1 per TAC/Ext.	4
Facility Test Calls [status lamp]	FTC Alarm	trk-ac-alm	10 per system	
Hardware Failure [status lamps]	Major Hdwe Failure	major-alrm	10 per system	
	Major/Minor Hdwe Failure	mj/mn-alrm	10 per system	
	DS1 (facility)	ds1 -alarm	10 per system	
	PMS Failure	Pms-alarm	1	
	PMS Ptr Alm	pr-pms-alm	1	
	CDR 1 Failure	cdr1-alrm	1	
	CDR 2 Failure	cdr2-alrm	1	
	Auto Wakeup Alm	pr-awu-alm	1	
	Sys Ptr Alm	pr-sys-alrm	1	
Inspect [display button]	Inspect Mode	inspect	1	2
Integrated Directory [display button]	Integrtd Directory	directory	1	2
Intercom- Automatic	Autolcom (name or extension #)	auto-icom Grp:_ DC:_)	1 per Grp/DC	5
Intercom-Dial	Diallcom	dial-icom (Grp:_)	1 per Grp.	6
Internal Automatic Answer	Int AutoAns	int-aut-an	1	
Last Number Dialed	LastNumb Dialed	last-numb	1	

* Refer to the previous table (“Voice Terminal Feature Button Descriptions”) for feature button descriptions and notes.

** See Notes at end of table.

Table 5-12. Voice Terminal Feature Button Characteristics *(continued)*

Feature Or Function	Recommended Button Label	Name Entered On Station Form	Maximum Allowed*	Notes **
Leave Word Calling	LWC	lwc-store	1	
	Cancel LWC	lwc-cancel	1	
	Lock LWC	lwc-lock	1	
Leave Word Calling (Remote Message Waiting) [status lamp]	Message (name or extension #)	aut-msg-wt (Ext:_)	1 per Ext.	7
Leave Word Calling [display buttons]	Return Call	call-disp	1	2
	Message Retrieve	msg-retr	1	2
	Next	next	1	2
	Delete Message	delete-msg	1	2
Link Failure [status lamp]	Link Failure (Link No._)	link-alarm (Link #_)	1 per Link #	8
Manual Signaling	Signal (name or extension #)	signal (Ext:_)	1 per Ext.	16
Manual Message Waiting	Msg Wait (name or extension #)	man-msg-wt (Ext:_)	1 per Ext.	9
Night Service	Night Serv	night-serv	1	
	Hunt Group	hunt-ns (Grp.	3 per Grp.	10
	Trunk Grp.	trunk-ns (Grp._)	1 per Grp.	11
Normal Mode [display button]	Normal Mode	normal	1	2

* N = any number of buttons on the voice terminal can be assigned to this feature. Refer to the previous table (“Voice Terminal Feature Button Descriptions”) for feature button descriptions and notes.

** See Notes at end of table.

Table 5-12. Voice Terminal Feature Button Characteristics *(continued)*

Feature Or Function	Recommended Button Label	Name Entered On Station Form	Maximum Allowed*	Notes**
Personal Central Office Line	CO Line (telephone #)	per-COline (Grp:_)	1 per Grp.	12
PMS Interface [display button]	Check-In	check-in	1	2
	Check-Out	check-out	1	2
	Message Waiting Act.	mwn-act	1	2
	Message Waiting Deact.	mwn-deact	1	2
Priority Calling	Priority Call	priority	1	
Privacy-Manual Exclusion	Exclusn	exclusion	1	
Queue Status Indications [status lamps]	NQC	q-calls (Grp:_)	1 per hunt group	13
	OQT	q-time (GrP:)	1 per hunt group	13
Queue Status Indications [display buttons]	AQC	atd-qcalls	1	
	AQT	atd-qtime	1	19
Redirect On No Answer	RONA	noans-alrt	1 per split	
Rinser Cutoff	Ringer Cutoff	ringer-off	1	
Scroll [display button]	Scroll	scroll	1	20
Service Observing ‡	Service Observing	serv-obsrv	1	
System Reset Alert	System Reset Alert [statusIamp]	rs-alert	1	
Terminating Extension Group	Term Grp (name or extension #)	term-x-gr (Grp:_)	1 per Grp.	14

* Refer to the previous table ("Voice Terminal Feature Button Descriptions") for feature button descriptions and notes.

** See Notes at end of table.

‡ The use of service observing features may be subject to federal, state, or local laws, rules or regulations or require the consent of one or both of the parties to the conversation. Customers should familiarize themselves with and comply with all applicable laws, rules and regulations before using these features.

Table 5-12. Voice Terminal Feature Button Characteristics *(continued)*

Feature Or Function	Recommended Button Label	Name Entered On Station Form	Maximum Allowed*	Notes **
Time of Day Routing [display buttons]	Immediate Override	man-overid	1	2
	Clocked Override	clk-overid	1	2
Trunk Identification [display button]	Trunk-ID	trk-id	1	2
Trunk Group Name [display button]	Trunk-Name	trunk-name	1	2
UCD/DDC	Auxiliary Work	aux-work (Grp:_)	1 per Grp.	
UCD/DDC/Intraflow Call Coverage (Answer Group)	Coverage (group number, type or name or ext #)	in-call-id (Type:_) Grp:_)	1 per Type/Grp.	15
VOA Repeat	VOA Repeat	voa-repeat	1	21,23
VuStats	VuStats #	vu-display	1	21,22

* Refer to the previous table ("Voice Terminal Feature Button Descriptions") for feature button descriptions and notes.

** See the following Notes.

Notes:

1. List: List number 1 to 3 where the destination number is stored.
   DC: Dial codes of destination number.
2. — Display-type buttons may be administered if the voice terminal is equipped with the optional Digital Display or alphanumeric display.
3. Grp: The split group number for ACD.
4. TAC/Ext: Trunk or extension number of voice terminal to be monitored.
5. Grp: Dial Icom group number. This extension and destination extension number must be in the same group.
6. Grp: Dial Icom group number.
7. Ext: Extension number of principal. (May be a VDN extension.)
8. Link: Link number-1 to 8 for multi-carrier cabinets or 1 to 4 for single-carrier cabinets.
9. Ext: The destination extension. (May be a VDN extension.)
10. Grp: Hunt group number.

11.	Grp:	Trunk group number.
12.	Grp:	CO line group number.
13.	Grp:	Group number of hunt group.
14.	Grp:	TEG Number.
15.	Type:	A “c” for coverage answer group, “h” for a uniform call distribution, or direct department calling group.
	Grp:	The number of the group.
16.	-	The extension may not be a VDN extension.
17.	Code:	Stroke count number (0 through 9).
18.	Flash:	Not administrable on attendant consoles.
19.	atd-qcalls:	Zero-seeking attendant calls reported.
20.	Scroll, Local/Norm	Administrable on 7315H and 7317H stations equipped with display. Scroll button enables user to toggle between two lines and thus see both lines of the display.
21.	G3V3 only	
22.	—	Requires voice terminal with display. Maximum number of this type of feature button depends on the number of feature buttons on the voice terminal. The limit to the number of VuStats feature buttons you can administer depends on how many feature buttons are available on the voice terminal you are administering. The system is designed to allow you to set up a separate VuStats display format for each feature button. Therefore, agents can change the type of measurements on their display by selecting a different VuStats feature button. When you enter “vu-display” for one of the feature button assignments, the terminal displays the fields: #: vu-display Format: _ ID: _____ where “#” is the feature button number. These fields appear for each feature button to which you assign “vu-display.” In the “Format” field enter the number (from 1 to 25) of the format you want to display when a user presses this feature button. In the “ID” field, you must enter a split or trunk group number or the extension of an agent or VDN. This specifies the data that VuStats will display. Note that these two fields are closely related to the Object Type that you specify on the For example, a Format ”10“ must have an associated Display Format ”10.” Additionally: — The value for the ID on this form should be an agent extension if the Object Type on the associated Display Format form associated with the Format is “agent” or “agent-extension.”

— The ID should be a split number if the Object Type for the associated Display Format is “split.”

— The ID should be a trunk group if the Object Type for the associated Display Format is “trunk-group.”

— The ID should be a VDN extension if the Object Type for the associated Display Format is “vdn.”

Note that the specified agent, split, trunk group, or VDN may be unassigned when you administer the button.

23. — VDN of Origin Announcement must be enabled.

Station Forms — Field Descriptions

The following provides descriptions of the fields that are displayed on the various pages of the station forms. Some of the fields are only used for specific voice terminal types; others are used for all terminals. Fields and/or pages of the form that require unique consideration are covered where appropriate with the respective voice terminal coverage. The descriptions are organized by form page number and listed alphabetically within each grouping for easy access.

Page 1 of the Form

- **Adjunct Supervision** — Enter “y” (default) if an analog disconnect signal will be automatically sent to the port after a call is terminated. This signal is used by analog devices such as answering machines and speakerphones to turn the devices off after a call has terminated. In a hunt group environment, however, this signal blocks the reception of zip tone and incoming call notification by an auto answer station when a call is queued for the station. In these environments, set this field to “n” so that hunt group agents will be alerted to an incoming call.
- **Att. Call Waiting Indication** — Enter “y” (default) to assign the Attendant Call Waiting feature to the voice terminal. This allows attendant originated and extended calls to a busy single-line voice terminal to wait and send a distinctive two-burst call waiting tone to the single-line user. Use of the feature is denied if the Data Restriction field is “y” or the Switchhook Flash field is “n,” or if via the voice terminal’s COS assignment, the Data Privacy feature is active.
- **Audible Message Waiting** — Enter “y” to have the voice terminal user receive a “stutter” dial tone when initiating a call. The tone indicates that the user has a message waiting. This field only appears if the Audible Message Waiting feature has been activated at the System-Parameters Customer-Options form. This field does not control the activity of the Message Waiting Lamp.
- **AUDIX Name** — Name of AUDIX machine as it appears in the User-Defined Adjunct Names form. Only displayed for the G3r V2 configuration.

■ **Messaging Server Name** — Name of the server as it appears in the User-Defined Adjunct Names form. Only displayed for the G3r V2 configuration.

■ **Auto Answer** — Entering "all" allows all calls (ACD and non-ACD) terminated to an idle station to be cut through immediately. Entering "acd" allows only ACD split/skill calls and direct agent calls to auto answer. Non-ACD calls terminated to a station with Auto Answer set to "acd" will ring audibly. Entering "none" causes all calls terminated to this station to receive some sort of audible ringing treatment. Default is "none."

NOTE:
For analog stations, if Auto Answer is set to "acd" and the station is off-hook and idle, only ACD split/skill calls and direct agent calls will auto answer while non-ACD calls will get busy treatment. If the station is active on an ACD call and a non-ACD call arrives, the Agent will get call waiting tone.

■ **BCC** — Displayed when the ISDN-PRI option is enabled on the System-Parameters Customer-Options form. Display-only field set to "O" (default) for stations (that is, indicates voice or voice-grade data).

NOTE:
Refer to the Generalized Route Selection feature description in *DEFINITY Communications System Generic* 3 *V2 Feature Description,* 555-230-204, for a detailed description of Bearer Capability Classes (BCCs) and their use to provide specialized routing for various types of voice and data calls. The BCC value is used to determine compatibility when non-ISDN-PRI facilities are connected to ISDN facilities (ISDN-PRI Interworking feature).

■ **Bridged Call Alerting** — Enter "y" to allow incoming calls on bridged appearances of another terminal's primary extension number, TEG calls, or PCOL calls; otherwise, enter "n" (default).

■ **Call Waiting Indication** — Enter "y" (default) to activate the Call Waiting Termination feature for the voice terminal. This allows other voice terminal, attendant-originated, and outside calls to busy single-line voice terminals to wait and sends a distinctive call waiting tone to the single-line user. Use of the feature is denied if the Data Restriction field is "y" or the Switchhook Flash field is "n," or if via the voice terminal's COS assignment, the Data Privacy feature is active.

■ **CDR Privacy** — An administrable option that allows digits in the called number field of an outgoing call to be blanked, on a per-station basis. The number of blocked digits is administered systemwide in the "Privacy - Digits to Hide" field on the Feature-Related System Parameters form. Enter "y" to enable the call privacy feature for each station. Default is "n."

■ **COR** — Enter a class of restriction (COR) number (0 through 95) that reflects the desired restriction; default is"1 ."

■ **COS** — Enter the desired class of service (COS) number (0 through 15) to designate allowed features; default is"1."

■ **Coverage Msg Retrieval** — Applies if the voice terminal is marked for LWC Reception. Enter a "y" (default) to allow a user in the voice terminal's Coverage Path to retrieve Leave Word Calling (LWC) messages for this voice terminal.

■ **Coverage Module** — Enter "y" to indicate the presence of a coverage module connected to the station. Default is "n." It adds an additional page containing the button assignment configuration for the module.

■ **Coverage Path** — Enter a coverage path number (1 through 600) from a previously administered Call Coverage Path form. Leave blank if no coverage is desired.

■ **CRV Length** — Displayed for ASAI stations. Enter "1" (default) or "2" to indicate the length of CRV for each interface.

■ **Data Module** — Indicates if a data module is to be administered with the voice terminal. Enter "y" or "n" (default). If a "y" is entered, then Page X of the Form is displayed (see below).

■ **Data Restriction** — Enter "y" to prevent tones, such as Call Waiting Tones, from interrupting this user's calls. Data restriction provides permanent protection and cannot be changed by the voice terminal user. Default is "n." This field should not be assigned if Auto Answer is "all" or "acd."

■ **Display Language** — Displayed when Display Module is "y." Enter "english" (default), "french," "italian," "spanish," or "user-defined."

■ **Display Cartridge** — An entry of "y" indicates there is a display cartridge associated with the station (voice terminal 7404D only). Default is "n." It generates an additional page containing button assignment configurations for display buttons.

■ **Distinctive Audible Alert** — Enter "y" (default) so the voice terminal can receive the three different types of ringing patterns that identify the type of incoming calls. Features that provide distinctive ringing might function improperly toward an off-premises voice terminal.

■ **Endpt Init** — Displayed if the MIM Support field entry is "y." Indicates terminal's endpoint initialization capability. The endpoint initialization procedure, required for multipoint operation, associates the User Service Order Profile (USOP) translation belonging to the extension with the physical endpoint on the ISDN-BRI interface. This association is made via the Service Profile Identifier (SPID) that has been administered on the System and entered into the ISDN-BRI terminal. This implies that, for a ISDN-BRI terminal to become operational in the multipoint configuration, both the administered SPID and the SPID programmed into the ISDN-BRI terminal must be the same. Therefore, the SPID of a new or reused terminal must be programmed to match the administered SPID value. For information on SPID installation, see "Appendix A." Valid entries are "y" (default) or "n."

■ **Extension** — When completing a blank paper form, enter a valid extension number (1 to 5 digits) that agrees with the dial plan. When implementing the form, "Extension" is part of the input command used to access the form and is a display-only field.

■ **Feature Module** — Enter "y" to indicate the station has a feature module connected. Default is "n." It adds an additional page containing the button assignment configuration for the module.

■ **Fixed TEI** — Appears for an ISDN-BRI data module. Indicates if the endpoint has a fixed Terminal Endpoint Identifier (TEI). This field only appears for ISDN-BRI data modules. The TEI identifies a unique access point within a service. For terminals with the automatic TEI capability, the system dynamically assigns the TEI. Therefore, for the fixed TEI terminals, TEIs must be administered. Valid entries are "y" or "n" (default). If a "y" is entered, then the TEI field is displayed.

■ **Idle Appearance Preference** — Enter "y" or "n" (default) to indicate which call appearance is selected when the user lifts the handset and there is an incoming call. If "y" is entered, the Idle Appearance Preference is set and the user is connected to an idle call appearance instead of the ringing call. If "n" is entered, Alerting Appearance Preference is set and the user is connected to the ringing call appearance.

■ **LWC Activation** — Enter "y" (default) to allow internal voice terminal users to leave short LWC messages for this terminal. If the system has the hospitality features, enter "y" for voice terminals in the guest rooms if the terminal designated to receive failed wakeup messages is to receive LWC messages indicating incomplete wakeup calls. Enter "y" if "audix" was entered for LWC Reception.

■ **LWC Reception** — Enter "msa-spe" (default) if LWC messages are stored in the system or on the Messaging Server Adjunct - Switch Processor or enter "audix" if the messages are stored on the Audio Information Exchange System; otherwise, enter "none."

■ **Lock Messages** — Enter "y" to restrict other users from reading or canceling the voice terminal messages or retrieving messages via Voice Message Retrieval; otherwise, enter "n" (default).

■ **Message Waiting Indicator** — Appears for ISDN-BRI data modules and applies to 500, 2500, and 7104A voice terminals. Enter "led" if the message waiting indicator is a light-emitting diode (LED) or "neon" if the indicator is a neon indicator.

■ **MIM Mtce/Mgt** — Displayed if the MIM Support field entry is "y." Used to indicate if the terminal supports MIM Maintenance and Management capabilities other then endpoint initialization. Valid entries are "y" (default) or "n. "

■ **MIM Support** (Management Information Message Support) — Appears for ISDN-BRI data modules. Used to support MIM endpoint initialization (SPID support) and other Maintenance/Management capabilities. Valid entries are "y" (default) or "n." If "y" is entered, the following dependent fields appear: Endpt Init and MIM Mtce/Mgt.

■ **Name** — Enter up to a 15-character name for the person associated with this voice terminal. This field can be shared with a Room number. The name assigned to a voice terminal remains with that voice terminal until it is changed.

The Integrated Directory feature lists the names as they should be entered on the forms. Names can be entered in all uppercase letters, all lowercase letters, or a mixture of uppercase and lowercase letters. Also, the first or last name can be entered first and a middle name or initial can be used. Spaces or commas can be used between names. For systems using a 3B2 Messaging Server Adjunct, the last name must be the first entry.

Periods, hyphens, apostrophes, or other special characters, if used, are discarded by the system when the name is entered into the database. The following examples show formats that are required for the name to be retrieved by the Integrated Directory feature. Note also that this field can be any printable character string or can be left blank.

— Bill J Doe

— Doe,Bill J

— Bill Doe

■ **Off Premise Station** — Enter "y" if this voice terminal is not located in the same building with the system. Enter "n" (default) if the voice terminal is located in the same building with the system. If "y" is entered, the R Balance Network field must be completed.

■ **PCOL/TEG Call Alerting** — Enter "y" to alert the station for Personal CO Line/Terminating Extension Group calls. Default is "n."

■ **Personalized Ringing Pattern** — Enter a Personalized Ringing Pattern (1 through 8) as follows (default is"1 "):

Ring Pattern	Tone Sequence
1	MMM (standard ringing)
2	HHH
3	LLL
4	LHH
5	HHL
6	HLL
7	HLH
8	LHL

L = 530 Hz, M = 750 Hz, and H = 1060 Hz

■ **Port** — Enter seven characters.

The entry breaks down as follows:

Characters **Meaning** **Value**

1-2	Cabinet Number	01 through 22 (G3r V2) 01 through 03 (G3i V2) 01 (G3s V2)
3	Carrier	A through E
4-5	Slot Number	01 through 20
6-7	Circuit Number	01 through 32

NOTE:
A 1-character entry of “X’ in the Port field can be used to indicate that there is no hardware associated with the port assignment (Administration Without Hardware feature). These stations are referred to as “phantom stations.”

For DCP sets, the port may only be assigned once. ISDN-BRI provides multipoint configuration capability that allows a previously assigned port to be specified more than once as follows: 2 stand-alone voice endpoints, 2 stand-alone data endpoints, or 1 integrated voice and data endpoint.

■ **R Balance Network** — Enter “y” to select the R Balance Capacitor network, or “n” to select the standard resistor capacitor network. This field must be completed if “y” was entered in the Off-Premise Station field. Enter “n” (default) when the station port circuit is connected to terminal equipment (such as SLC carriers or impedance compensators) optioned for 600 ohm input impedance and the distance to the terminal equipment from the system is less than 3,000 feet. Enter “y” in all other cases.

■ **Redirect Notification** — Enter "y" (default) to give a half ring at this voice terminal when calls to this terminal are redirected (via Call Forwarding or Call Coverage). Enter “y” if audix was entered for LWC Reception.

■ **Restrict Last Appearance** — Enter “y” (default) to restrict the last idle call appearance for incoming priority calls and outgoing call originations only.

■ **Security Code** — Enter a 4-digit security code required by users to retrieve messages via Demand Print or Voice Message Retrieval.

■ **SPID** — (Service Profile Identifier) Displayed when MIM Support is “y.” Enter a variable length parameter (up to 10 digits). SPID is a numeric string, which means that the value of “00” is different from “000.” The SPID must be different for all terminals on the BRI and from the Service SPID. The SPID should always be assigned. If the SPID is not assigned for the first BRI on a port, any other BRI assignment to that port will be blocked. Default is the station extension.

NOTE:
If using the Administration Without Hardware feature for an ISDN-BRI extension (an “X’ in the Port field) and Terminal Translation Initialization (TTI) is intended to be used to assign the port, then the SPID number must equal the station number.

■ **Switchhook Flash** — Enter “y” (default) to allow users to use the switchhook flash function to activate the-Conference/Transfer/Hold and Call Waiting features; otherwise, enter “n.” An “n” entered in this field

disables the flash function, and when the switchhook is pressed while active on a call, the call will be dropped. If this field is set to “n, ” the Call Waiting Indication field must be set to “n.”

- **TEI** — Displayed when the Fixed TEI field is “y.” Enter a 1- or 2-digit number in the range of 0 through 63; default is blank.
- **Tests** — Enter “y” (default) to enable port maintenance tests. If terminal equipment (Dictaphone) connected to the port does not support these tests, “n” must be entered in the field.
- **Type** — Enter the voice terminal type.
- **XID** — Appears for an ISDN-BRI data module or an ASAl link. Used to identify layer 2 XID testing capability. Valid entries are “y” (default) or “n.”

Page 2 of the Form

- **Abbreviated Dialing List1:, List2:, List3:** — Enter “p” (personal), “s” (system), “g” (group), or “e” (enhanced). Up to three AD lists can be accessed by the voice terminal. If “p” or “g” is entered, a personal list number or a group number, respectively, is also required.
- **Building** — Enter up to seven characters to identify the voice terminal’s building location.
- **Button Assignments** — The feature buttons that can be assigned to voice terminals are listed with each terminal’s coverage. Depending on the button type, additional auxiliary information may be required when administering buttons.
- **Cable** — Enter up to five characters to identify the cable number that connects the voice terminal jack to the system. This field may be left blank. This information can also be entered in the Blank column on the Port Assignment Record.
- **Cord Length** — Enter a number from 0 to 99 to specify the length (in feet) of the cord attached to the receiver; default is 0.
- **Floor** — Enter up to seven characters to identify the voice terminal’s floor location.
- **Headset** — Enter “y” if this terminal has a headset; otherwise, enter “n” (default).
- **HOT LINE DESTINATION** — Abbreviated Dialing List Number (from above) — Enter”1,“ “2,” “3,” or blank. Default is blank. This field identifies the abbreviated dialing list to access when originating a call. It refers to the abbreviated dialing lists associated with the station.
- **HOT LINE DESTINATION** — Dial Code — Enter a number from 0 to 999 or blank. Default is blank. This field is the index for the Abbreviated Dialing List that contains the digits to be dialed during origination.
- **Jack** — Enter up to five characters that are used to identify the jack location where the voice terminal is connected. This field may be left blank.

Room — Enter up to ten characters to identify the voice terminal's location. This field may be blank.

If this station is one of several to be assigned a guest room and the Hospitality-Related System Parameters form has "y" entered in the "Display Room Information in Call Display" field, enter up to five characters in the Room field to identify the guest room number.

Set Color — Enter up to 6 characters to describe the set color.

Speaker Phone — Enter "y" to indicate a speakerphone will be attached to the voice terminal; default is "n."

Page X of the Form — Data Module

Abbreviated Dialing List1: — Enter "p" (personal), "s" (system), "g" (group), or "e" (enhanced). If "g" or "p" is entered, a group number or personal list number respectively is also required. The entry in this field and the HOT LINE DESTINATION field support the Data Hot Line feature.

Assigned Member — Ext — Make no entry. The extension number is automatically assigned when the system is administered. This is the extension number of the user who has an associated Data Extension button and will share the module.

Assigned Member — Name — Display-only field. Contains the name assigned to the Assigned Member - Ext number.

BCC — Displayed when ISDN-PRI is enabled on the System-Parameters Customer-Options form (display-only field).

NOTE:
Refer to Generalized Route Selection in *DEFINITY Communications System Generic 3 V2 Feature Description,* 555-230-204, for a detailed description of Bearer Capability Classes (BCCs) and their use to provide specialized routing for various types of voice and data calls. The BCC value is used to determine compatibility when non-ISDN-PRI facilities are connected to ISDN facilities (ISDN-PRI Interworking feature).

COR — Enter the desired Class of Restriction (COR) number (0 through 95) that reflects the desired restriction; default is "1 ."

COS — Enter the desired Class of Service (COS) number (0 through 15) to designate allowed features; default is "1." Refer to Class of Service form for additional information on the allowed features.

Data Extension — Enter the extension number assigned to the data module. A data extension can be a 1- to 5-digit number and must agree with the System's Dial Plan.

Default Dialing Abbreviated Dialing Dial Code — Displayed when the Special Dialing Option field is "default." Enter a list number (0 through 999) associated with the above AD List. The associated AD number will be dialed when the user goes off-hook and enters a carriage return following the "DIAL" prompt. The data call originator can also perform

data terminal dialing by specifying a dial string that mayor may not contain alphanumeric names.

- **HOT LINE DESTINATION — Abbreviated Dialing Dial Code (from above list)** — Displayed when Special Dialing Option is "hot-line." Enter a list number (associated with the above AD List) from 0 to 999. The associated AD number will be dialed when the user goes off-hook on a Data Hot Line call.

- **ITC (Information Transfer Capability)** — The field is not available for voice-only stations or BRI stations. Valid entries are "restricted" (default) and "unrestricted." This field is used to determine the type of transmission facilities to be used for ISDN calls originated from this endpoint.

  When "unrestricted," only unrestricted transmission facilities will be used to complete the call. An unrestricted facility is a transmission facility that does not enforce 1's density digital transmission (that is, digital information is sent exactly as is).

  When "restricted," either restricted or unrestricted transmission facilities will be used to complete the call. A restricted facility is a transmission facility that enforces 1's density digital transmission (that is, a sequence of eight digital zeros will be converted to a sequence of seven zeros and a digital one).

- **Name** — Enter the name of the user associated with the data module. The name is optional, it can be left blank.

- **Special Dialing Option** — Enter one of three dialing options that are available. This identifies the type of dialing for calls when this data module originates calls. Valid entries are "hot-line," "default," or leave blank for regular (normal) keyboard dialing.

- **Circuit Switched Data Attributes** — The following field only appears on the ISDN-BRI Data Module Form:

  — **Default Duplex** — Used to identify the duplex mode. Valid entries are "full" (default) or "half."

  — **Default Mode** — Used to identify the data mode. Valid entries are "sync" or "async" (default).

  — **Default Speed** — Used to identify the data rate. Valid entries are "1200" (default), "2400," "4800," and "19200."

- **Data Module Capabilities** — The following fields only appear on the ISDN-BRI Data Module Form:

  — **Origination Default Data Applications** — Used to identify mode to be used for originating data calls when the mode is not specified with the calling parameters. This mode will also be used for terminating trunk calls that do not have bearer capability specified or administered connections. Possible mode values are M0 (mode 0), M1 (mode 1), M2 (mode 2), and M3/2 (mode 3/2 adaptable), or blank. Valid entries are "M0," "M1," "M2_A" (default), "M2_S," or "M3/2."

VuStats Display Format

The VuStats Display Format form allows you to define what information you want to have appear on the terminal displays, and the layout for that information, for when agents and supervisors use the VuStats feature. The system has 25 different display formats; the first display is a predefine example format which you may change; displays 2 through 24 are blank. Each display format can contain up to ten data items. However, the amount of data you can display is limited to 40-characters, due to the physical limitations on voice terminals with display capabilities.

Administration Commands

The following administration commands enable you to use the VuStats Display Format form. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words for entering a command.

Action	Object	Qualifier*
change	vustats-display-format	1-25
display	vustats-display-format	1-25
list	vustats-display-format	1-25 count ##

*Specify a number from 1 to 25 to indicate the number of the display format you want to change or display. "Count ##" is the number of display formats to list.

Form Instructions

Enter the data as required for the following fields on the form:

- **Format Number** — The display format number (display only; this field cannot be modified).
- **Next Format Number** — If you want to link this display to another display, enter the number of the display format that should appear when a VuStats user presses the next button, or enter "none."
- **Data Field Character** — The character you want to use to identify in the Format Description field the length of each data field (see the Format Description field description below). The default is "$." You can enter another character if you will need the "$" for fixed text in the Format Description field. Any character is valid except a space.
- **Object Type** — The type of object for which data will be displayed. Enter one of the following values: "agent" (for staffed agents to view their own statistics), "agent-extension" (for users such as supervisors to view agent statistics), "split" (default), "trunk-group," and "vdn."

- **Update Interval** — The interval, in seconds, between display updates. Enter one of the following values:

Valid Input	Description
no-update	The display is not updated, and appears only for the interval specified in the Display Interval field
on-change	Updates the display whenever the agent's status changes. You can enter this value only if the Object Type field contains "agent" or "agent-extension."
polled	Updates the display hourly or half-hourly, based on the value in "BCMS Measurement Interval" (System-Parameters Features form)
10	Updating every 10 seconds
20	Updating every 20 seconds
30	Updating every 30 seconds, default value
60	Updating every 1 minute
120	Updating every 2 minutes

- **Display Interval** — The interval, in seconds, for which data is displayed if there is no update. Enter one of the following values:

Valid Input	Description
5	Display clears after 5 seconds
10	Display clears after 10 seconds, default value
15	Display clears after 15 seconds
30	Display clears after 30 seconds
not-cleared	The display does not clear, and the data appears until the display is used for another operation or until you press the Normal button.

- **Format Description** — The definition of the actual layout for the 40-character display. You can specify the starting position and the length of the data items by entering, for each date field, a label for the field followed the appropriate number of data field characters (such as $s).

  The data field character must be the same as the value of the Data Field Character; the default is "$." Each "$" represents one character in the display. For example, if the data will be a maximum of five characters long (for example, to display 5-digit agent extensions), enter "$$$$$."

  NOTE:
  Some data types have preset maximum field length limits based on switch administration. For example, the data type "acceptable-service-level" is taken from the BCMS Acceptable Service Level field on the Vector Directory Number form; on this form, the field allows a maximum number of four characters. Therefore, for the acceptable-service-level, you should not create a VuStats display

field that consists of more than four characters (that is, "$$$$"). Other data types will have the same limits. Before you begin defining field lengths on the display format, you should know the limits of your field lengths. The field length information is available in the DEFINITY G3V3 Implementation Manual.

Field lengths for data items that appear as time must match the value in the Format field, which is discussed below. Remember to account for colons when the display will be in a time format. For example, if the display will be in hours and minutes enter "$$$$" (for example, 3:54); for hours, minutes, and seconds, enter "$$$$$$$" (for example 3:54:38).

For example, a Format Description might be:

SPLIT=$$ WAITING=$$$ OLDEST=$$$$$

This VuStats display consists of the text "SPLIT=" followed by a 2-character field, the text "WAITING=" followed by a 3-character field, and the text "OLDEST=" followed by a 5-character field. A VuStats display with this format might appear on a voice terminal as:

SPLIT=1 WAITING=23 OLDEST=3:24

In this case, the data is for the first split the agent logged into, there are 23 calls waiting to be answered by this split, and the oldest call in the queue has been waiting for 3 minutes and 24 seconds.

The system treats any character other than the data field character (and the tilde, ~) as literal text and the fixed text terminates any preceding data item. Note that you specify only the starting position and length of the data items in this field; you must specify the data type, optional format, and split reference for the data items in the remaining fields on the form.

Format descriptions can be all text (such as a message of the day) or they can be all data fields, in which case users will have to memorize the labels or use customer-provided overlays above or below the display.

NOTE:
If numeric data for a field is too large for the field, then on the voice terminal's display the field will be filled with asterisks (*) rather than data. If a name or ID is too long for the field, then on the voice terminal display the name will truncated on the right side.

Data Item Fields

Lines 1 through ten on the screen, beneath the Data Type field label, are for the data items you must specify for the display format. These data items are associated with the sets of data field characters in the Format Description field. Each data item is defined by two or three fields: Data Type, Format (optional),

and, if the Display Format is either “agent” or “agent-extension, ” Ref (optional split reference). Input for these fields is described in more detail below.

You must enter each data item in the same order as you defined data fields in the Format Description field. This means that Line 1 of the Data Type field must contain the data item for the first data field (that is, the first set of $s). For example, the first data type for the format description

SPLIT=$$ WAITING=$$$ OLDEST=$$$$$

should be a split-related data item, such as “split-number.” If the first text item is “SPLIT=,” as in this example, then you don’t want the first data type to be “agent-name.”

- **Data Type** — The data item that you want included in the current display format. The following lists contain the data items that you can enter for each object type. The lists also indicate whether a format is required, whether a reference is required, and whether the data item uses data that is administered elsewhere on the switch (indicated by the word “translation”), such as’’split-objective” which is administered on the Hunt Group Form as “Objective.”

  You can enter one of the following values if the Object Type field contains either “agent” or “agent-extension.”

  - acd-calls (split reference required)
  - agent-extension (translation)
  - agent-name (translation)
  - agent-state (real-time) (split reference required)
  - average-acd-talk-time (format and split reference required)
  - average-extension-time (format required)
  - extension-calls
  - extension-incoming-calls
  - extension-outgoing-calls
  - shift-acd-calls (split reference required)
  - shift-average-acd-talk-time (format and split reference required)
  - split-acceptable-service-level (translation; split reference required)
  - split-acd-calls (split reference required)
  - split-after-call-sessions (split reference required)
  - split-average-after-call-time (format and split reference required)
  - split-average-speed-of-answer (format and split reference required)
  - split-average-time-to-abandon (format and split reference required)

- split-calls-abandoned (split reference required)
- split-calls-flowed-in (split reference required)
- split-calls-flowed-out (split reference required)
- split-calls-waiting (split reference required)
- split-name (translation) (split reference required)
- split-number (translation) (split reference required)
- split-objective (translation) (split reference required)
- split-oldest-call-waiting (format and split reference required)
- split-percent-in-service-level (split reference required)
- split-total-acd-talk-time (split reference required)
- split-total-after-call-time (split reference required)
- time-agent-entered-state (real-time) (split reference required)
- total-acd-talk-time (format required)
- total-after-call-time (format required)
- total-aux-time (format required)
- total-available-time (format required)
- total-hold-time (format required)
- total-staffed-time (format required)

You can enter one of the following values if the Object Type field contains "split,"

- acceptable-service-level (translation)
- acd-calls
- after-call-sessions
- agents-available (real-time)
- agents-in-after-call (real-time)
- agents-in-aux (real-time)
- agents-in-other (real-time)
- agents-on-acd-calls (real-time)
- agents-on-extension-calls (real-time)
- agents-staffed (real-time)
- average-acd-talk-time (format required)
- average-after-call-time (format required)
- average-speed-of-answer (format required)

- average-time-to-abandon (format required)
- calls-abandoned
- calls-flowed-in
- calls-flowed-out
- calls-waiting (real-time)
- oldest-call-waiting (real-time) (format required)
- percent-in-service-level
- split-name (translation)
- split-number (translation)
- split-objective (translation)
- total-acd-talk-time (format required)
- total-after-call-time (format required)

You can enter one of the following values if the Object Type field contains "trunk-group."

- average-incoming-call-time (format required)
- average-outgoing-call-time (format required)
- incoming-abandoned-calls
- incoming-calls
- incoming-usage (format required)
- number-of-trunks (translation)
- outgoing-calls
- outgoing-completed-calls
- outgoing-usage (format required)
- percent-all-trunks-busy
- percent-trunks-maint-busy
- trunk-group-name (translation)
- trunk-group-number (translation)
- trunks-in-use (real-time)
- trunks-maint-busy (real-time)

You can enter one of the following values if the Object Type field contains "vdn."

- acceptable-service-level (translation)
- acd-calls

- average-acd-talk-time (format required)
- average-speed-of-answer (format required)
- average-time-to-abandon (format required)
- calls-abandoned
- calls-flowed-out
- calls-forced-busy-or-disc
- calls-offered
- calls-waiting (real-time)
- non-acd-connected-calls
- oldest-call-waiting (real-time) (format required)
- percent-in-service-level
- total-acd-talk-time (format required)
- vdn-extension (translation)
- vdn-name (translation)

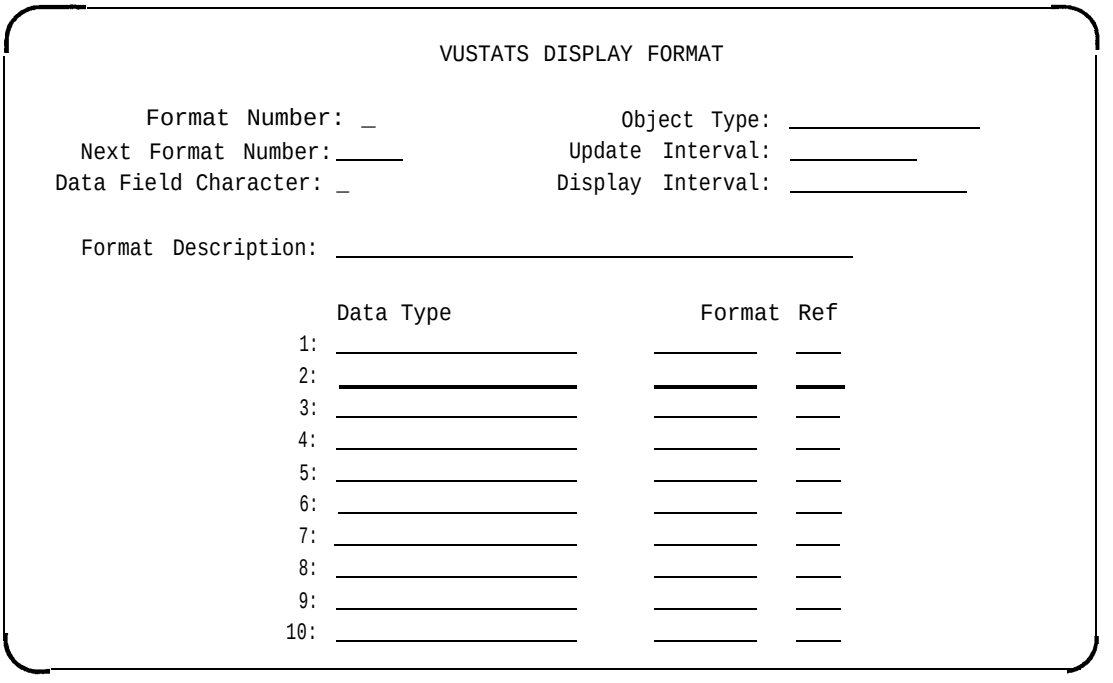
■ **Format** — The format for displaying the data type. The format is required only if you use a data type with a time value, such as the "Oldest Call in Queue" which indicates the time the oldest call has been in the queue. Enter one of the following Format values.

Valid Input	Description	Minimum Input Length
c c s	Hundred call seconds (CCS) rounded to the nearest CCS	1
h	Hours rounded to the nearest hour	1
h:mm	Hours and minutes rounded to the nearest minute	4
h:mm:ss	Hours, minutes, and seconds	7
m	Minutes rounded to the nearest minute	1
m:ss	Minutes and seconds	4
s	Seconds	1

■ **Ref** — A reference to a split; this field does not appear unless the Object Type is either "agent" or "agent-extension." This field is required only if the data type is an agent-related data type collected on a per-split basis, such as the "ACD Calls Answered" data type. Enter one of the following values:

"all" (if the associated data type is acd-calls, average-acd-talk-time, shift-acd-calls, or shift-average-acd-talk-time), "1," "2," "3," or "4."

"All" indicates that VuStats displays the combined data for all the splits to which the agent has logged in. The numbers 1 through 4 represent a split to which the agent logged in. For example, if the Ref field contains "1," VuStats displays the data for the first split the agent entered, if the Ref field contains "2," VuStats displays the data for the second split the agent entered, and so on.



Screen 5-110a. Blank Change/Display VuStats Display Format Form

The following screen shows an example of a completed VuStats Display Format screen.

```
change display-format 11                                        Page   l of  l

                              VUSTATS DISPLAY FORMAT

        Format Number: 11                    Object Type: agent
   Next Format Number: 12                 Update Interval: 30
 Data Field Character: $                 Display Interval: _____________

   Format Description: SPLIT=$$ ASL=$$ ASA=$$ PSL=$$$

                        Data Type                        Format  Ref
                    1: split-number                              1
                    2: split-acceptable-service-level s          1
                    3: split-average-speed-of-answer s           1
                    4: split-percent-in-service-level            1
                    5:
                    6:
                    7:
                    8:
                    9:
                   10:
```

Screen 110b. Example Change/Display VuStats Display Format Form

List VuStats Display Format Screen

A second VuStats Display Format Screen is available with the **list** command. The purpose of this screen is to present the format of all, or a selected number, of VuStats displays. The List VuStats Display Format screen displays the Format Number, Next Format Number, Object Type, Update interval, and Format Description fields, and all designated data items, including the Data Type, Format, and Ref (split reference).

With this screen, you can compare your VuStats displays with each other. This “list” presentation is most helpful when you are trying to see how displays are linked to each other. The screen includes the Next field, which contains the number of the next display (if any) to which a display is linked.

The following screen shows an example of the List VuStats Display Format screen. The fields for this screen are described below. Refer to the previous field descriptions in this section for more information.

No — Number. The unique identifying number of each display format.

Next — The number of the next display if the current display is linked to (followed by) another display format, or “none” if the current display format is not linked to another display format.

Object Type — The type of object for which data will be displayed.

Update — Update Interval. The time, in seconds, between display updates.

Format Description — The definition of the display's layout. The first line of the Format Description contains the text that precedes the data on a display plus the length of each data field (indicated by $s). The succeeding lines of the Format Description identify the data item, in the order they are to appear. The data items are the actual numbers that tell how agents, splits, vector directory numbers (VDNs), and the call center in general, are performing. The data items are followed by the format (if any), which identifies how the data is to appear in the display, or by the split reference (if any).

```
                                                                  Page  1
                              VUSTATS DISPLAY FORMATS

No Next Object Type      Update     Format Description

1 none split             30         SPLIT=$$ WAITING=$$$ OLDEST=$$$$$
                                    split-number
                                    calls-waiting
                                    oldest-call-waiting              m:ss
2 none agent-extension   on-change  SPLIT=$$ OUTFLOWS=$$ INFLOWS=$$
                                    split-number                        1
                                    split-calls-flowed-out              1
                                    split-calls-flowed-in               1



               press CANCEL to quit --  press NEXT PAGE to continue
```

Screen 110C. List VuStats Display Format Form

Example of Administering a VuStats Display

This subsection contains an example of how to create a VuStats display. As with all switch administration, you should do the task on paper first, using copies of the blank forms from the DEFINITY G3V3 Blank Forms Manual. Before you begin, you should know what information you want to display, who is going to use it, and how and when users will want to see it.

In this example, there will be three formats for supervisors to be able to see data on specific splits, so that if a splits are imbalance in terms of how many calls are waiting, the supervisor can tell another agent to log into a problem split. These splits are numbered 101, 102, and 103. One format will be set up for each split, and the formats will be numbered 21, 22, and 23. They will be linked so that the displays will start with format 21; when the supervisor presses the Next key, the display will change to format 22; when the supervisor press the

Next key again, the display changes to format 23; when the supervisor presses the Next key again, the display loops back to display format 21. If the supervisor does not press any keys for a period of time, the display will update every 30 seconds.

Because the data in this example will be used by the supervisor, the example calls for an object type of "agent-extension" (as previously mentioned in the Object Type field description, agent-extension allows supervisors to view agents' and splits' data). Therefore, we must refer to the list in this section of data types that are available when the object type is agent-extension.

The data will include the actual number of the split being observed, how many calls are in queue waiting to be answered, and how long the oldest call has been in the queue. Because the data for the oldest call is presented in a time format, and the supervisor assumes the time is measured in minutes rather than hours [that is, that no calls sit in queue more than 59 minutes], the format will be minutes and seconds only (m:ss).

The process begins by building the first display format (assuming that splits have already been administered). To do so, complete the following steps.

1. Enter the command **change vustats-display-format 21.** The system displays the VuStats Display Format screen.
2. Press Tab to move the curser to the Next Format Number field.
3. Enter the Next Format Number: **22,** which is the number of the format that will display the second split the supervisor wants to track.
4. Press Tab to leave the Data Field Character as the default "$."
5. Enter the object type **agent-extension.**
6. Enter the update interval: **30.**
7. Press Tab to leave the Display Interval blank (this field is used only if there is no update interval).
8. Enter the format description **SPLIT#=$$$ WAITING=$$ OLDEST=$$$$$.**
9. Enter the first data type **split-number.** This first data type corresponds to the first field, SPLIT#=$$$." Note that this data type does not cause the system to prompt you for a format and reference. The three $s represent the example splits (101, 102, and 103), which are all 3-character numbers and thus require a 3-character display.
10. Enter the second data type **split-calls-waiting.** This corresponds to the second field, WAITING=$$." Note that this data type does not cause the system to prompt you for a format and reference. The two $s in this case represent the fact that we hope there are never more than 99 calls waiting and thus the field requires no more than a 2-character display.
11. Enter the third data type **split-oldest-call-waiting.** This corresponds to the third field, OLDEST=$$$$$." As mentioned in the list of data types, this data type requires a format and a reference. The five $s in this case

represent the field length required by the time format, since the field displays the amount of time the oldest call has been waiting. As mentioned in the Format field description, the format for minutes and seconds — “m:ss” — requires at least four characters; if the time goes over 9 minutes and 59 seconds, the field requires five characters. Therefore, the five $s covers the maximum field required field length.

12. Enter the format **m:ss.**
13. Enter the reference **101** for the first split the supervisor wants to track, which is 101.

At this time, the first VuStats format is complete and can be submitted. The form should appear as in the following example.

```
change display-format 21                                        Page   1 of 1

                              VUSTATS DISPLAY FORMAT

       Format Number: 21                    Object Type: agent-extension
  Next Format Number: 22                Update Interval: 30
Data Field Character: $

  Format Description: SPLIT#=$$$ WAITING=$$ OLDEST=$$$$$

                        Data Type                       Format   Ref
                    1: split-number
                    2: split-calls-waiting
                    3: split-oldest-calls-waiting       m:ss
                    4:
                    5:
                    6:
                    7:
                    8:
                    9:
                   10:
```

Screen 110d. Example VuStats Display Format

Next, you should create the second format. This format closely resembles the first except that the next format number and the reference for the split will be different. To build this display format, complete the following steps.

1. Enter the command **change vustats-display-format 22** The system displays the VuStats Display Format screen.
2. Press Tab to move the curser to the Next Format Number field.
3. Enter the Next Format Number: **23,** which is the number of the format that will display the third split the supervisor wants to track.

1. Enter the command **change vustats-display-format 23.** The system displays the VuStats Display Format screen.
2. Press Tab to move the curser to the Next Format Number field.
3. Enter the Next Format Number: **21,** which is the number of the format that will display the first split the supervisor wants to track. By using this number the linking will be in a loop so the supervisor can press the Next button to view each split one right after the other.
4. Press Tab to leave the Data Field Character as the default "$."
5. Enter the object type **agent-extension.**
6. Enter the update interval: **30.**
7. Press Tab to leave the display interval blank.
8. Enter the format description **SPLIT#=$$$ WAITING=$$ OLDEST=$$$$$.**
9. Enter the first data type **split-number.**
10. Enter the second data type **split-calls-waiting.**
11. Enter the third data type **split-oldest-call-waiting.**
12. Enter the format **m:ss.**
13. Enter the reference **103** for the third split the supervisor wants to track, which is 103.

At this time, the third VuStats format is complete and can be submitted. The form should appear as in the following example.

```
change display-format 23                                    Page   1 of 1

                              VUSTATS DISPLAY FORMAT

        Format Number: 23                    Object Type: agent-extension
   Next Format Number: 21                Update Interval: 30
 Data Field Character: $

   Format Description: SPLIT#=$$$ WAITING=$$ OLDEST=$$$$$

                       Data Type                        Format Ref
                    1:  split-number
                    2: split-calls-waiting
                    3: split-oldest-calls-waiting   m:ss
                    4:
                    5:
                    6:
                    7:
                    8:
                    9:
                   10:
```

Screen 110f. Example of VuStats Display Format

Another task which should be done, either before or after complete the VuStats displays, is to administer the supervisor's voice terminal so that the first display automatically appears when the supervisor presses a particular vu-display button. (Keep in mind that the second and third displays are linked to the first and are available by pressing the Next button.)

This administration is done on the Button Assignment section of the Station and the Feature Button Assignment section of the Attendant Console forms (usually page 2). For the sake of this example, assume the supervisor has an attendant console which is console number 2. To administer this console with a vu-display button for the format 21 that you just created, complete the following steps.

1. Enter the command **change attendant 2.** The system displays the Attendant Console screen.
2. Press Next Page to go to page 2 of the form.
3. Press Tab to move the cursor to Feature Button 7.
4. Enter **vu-display.** The system prompts you for the format and ID.
5. Enter **21** for display format 21.

The ID is not necessary in this case because the ID (which is the split number in this example) is identified in the display format. If the display format did not contain the split number 21, that number is entered as the ID for the vu-display feature button.

The following screen shows an example of the Attendant Console form after you administer the vu-display button.

```
change attendant 2                                              Page   2 of 3
                                ATTENDANT CONSOLE

FEATURE BUTTON ASSIGNMENTS

 1: split                                13:
 2:                                      14:
 3:                                      15:
 4:                                      16:
 5:                                      17:
 6: hold                                 18:
 7: vu-display Format: 21 ID:            19: forced-rel
 8:                                      20:
 9:                                      21:
10:                                      22:
11:                                      23: night-serv
12:                                      24: pos-busy



Enter split or trunk group number or agent or VDN extension (optional)
```

Screen 110g. Example of Administration for a vu-display Button

10-MET, 20-MET, and 30-MET Voice Terminals

This form is used to implement 10-, 20-, and 30-MET voice terminals.

Administration Commands

The following administration commands can be used to access the Voice Terminal form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
add	station	xxxxx (extension number) or ('next')
change	station	xxxxx (extension number)
display	station	xxxxx (extension number)
duplicate	station	
list	station	[x (extension)]['ext' x]['to-ext' x]['port' x]['type' x] ['count' n]['print' or 'schedule']
remove	station	[xxxxx] (extension number)

***** Brackets [ ] indicate the qualifier is optional. Single quotes (') indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered. MAX is the maximum number available in your system configuration. Refer to the Capacity Table in Appendix C.

Form Instructions

Please review the "Voice Terminals — General" information at least once before completing the form. General information, including feature button descriptions and characteristics is covered. In addition, descriptions of the administrable fields appearing on Pages 1 and 2 of the form are provided in the "Voice Terminals — General" section. Instructions are provided below for fields and/or pages of the form that require additional consideration because of the terminal type.

Page 1 of the Form

- **Type** — Enter "10MET," "20MET," or "30MET" as appropriate.

Page 2 of the Form

- **BUTTON ASSIGNMENTS**

  The feature buttons that can be assigned to the 10/20/30 MET sets are listed below. The abbreviated software name (that is, administration name) as shown on the following list must be entered on the form. Depending on the button type, additional auxiliary information may be required when administering buttons.

510D Personal Terminal and 515 Business Communications Terminal

This form is used to implement an AT&T5100 Personal Terminal or an AT&T 515 Business Communications Terminal (BCT).

Administration Commands

The following administration commands can be used to access the form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
add	station	xxxxx (extension number) or ('next')
change	station	xxxxx (extension number)
display	station	xxxxx (extension number)
duplicate	station	
list	station	[x (extension)]['ext' x]['to-ext' x]['port' x]['type' x] ['count' n]['print' or 'schedule']
remove	station	xxxxx (extension number)

* Brackets [ ] indicate the qualifier is optional. Single quotes (') indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered. MAX is the maximum number available in your system configuration. Refer to the Capacity Table in Appendix C.

Please review the "Voice Terminals — General" information at least once before completing the form. General information, including feature button descriptions and characteristics is covered. In addition, descriptions of the administrable fields appearing on Pages 1 and 2 of the form are provided in the "Voice Terminals — General" section. Instructions are provided below for fields and/or pages of the form that require additional consideration because of the terminal type.

Page 1 of the Form

- **PCOL/TEG Call Alerting** — (510D only) Enter "y" if the user will be alerted of a PCOL/TEG call. Default is "n."
- **Bridged Call Alerting** — (515 BCT only) Enter "y" to allow incoming calls on bridged appearances of another terminals primary extension number or TEG or PCOL calls to alert at this terminal. Default is "n."
- **Active Station Ringing** — Only displayed when the G3V2 option is enabled on the System-Parameters Customer-Options form. Define how a call will ring at an off-hook station. Default is "single."

  Enter "continuous" to cause all calls terminated to this station to ring continuously.

Enter “single” to cause a call terminated to an off-hook and active or off-hook and idle station to receive one ring cycle and then ring silently.

Enter “if-busy-single” to cause a call terminated to an off-hook and idle station to ring continuously and a call terminated to an off-hook and active station to receive one ring cycle and then ring silently.

Enter “silent” to cause a call terminated to an off-hook and active or off-hook and idle station to receive no audible ring and just ring silently.

- **Data Module** — Display-only field. Restricted to “y.”
- **Display Module** — Display-only field. Restricted to “y.”
- **Disp Client Redir** — This field is only administrable if the Hospitality feature has been enabled on the System-Parameters Customer-Options form. This field affects the station’s display on calls that originated from a station with Client Room Class of Service. When the field is “n” (default), then for all calls originating from a Client Room (even redirected calls) that terminate to this station, this station’s display will not show the redirection information. Only the client name and extension (or room, depending on what is administered on the System-Parameters Hospitality form) will be displayed. When the field is set to “y,” the redirection information for a call originating from a Client Room and terminating to this station will be displayed.

  NOTE:
  For stations with an “audix” station type, AUDIX Voice Power ports, or ports for any other type of messaging that needs display information, this field must be “y.”

- **Event Minimization** — For G3V3, this field offers a way to minimize events sent on a link. It appears only if you enter ASAI in the Type field. It should be enabled when an application/library does not wish to receive identical event reports over different associations. When it is enabled, the switch sends a single event report on only one association and discards any remaining reports. In this case, it is up to the library/application to report this event to other interested parties/aplications. Values are “y” or “n.” The default is “n.”

  NOTE:
  For G3V3, the ADJLK (AT&T-Adjunct Link) link type appears on the help line.

Page 2 of the Form

- **Button Assignments**

The feature buttons that can be assigned to the 510 Personal Terminal (PT) and 515 BCT are listed below. The abbreviated software name (that is, administration name) as shown on the following list must be entered on the form. Depending on the button type, additional auxiliary information may be required when administering buttons.

- abr-prog
- abr-spchar
- abdg-appr
- abrv-dial
- ac-alarm
- aca-call
- after-call
- alt-frl
- assist
- atd-qcalls *
- atd-qtime *
- aut-msg-wt
- auto-cback
- auto-icom
- auto-in
- auto-wkup *
- aux-work
- brdg-appr
- busy-ind
- call-appr
- call-disp *
- call-fwd
- call-park
- call-pkup
- callr-info *
- cas-backup
- cdr1-alrm
- cdr2-alrm
- check-in *
- check-out *
- clk-overid *
- consult
- cov-cback
- cov-msg-rt *
- data-ext
- date-time *
- delete-msg *
- dial-icom
- directory *
- disp-norm
- dn-dst
- ds1-alarm
- exclusion
- ext-dn-dst *
- flash
- goto-cover
- grp-dn-dst *
- hunt-ns
- in-call-id
- inspect*
- int-aut-an
- last-numb
- link-alarm
- lsvn-call
- lwc-cancel
- lwc-lock
- lwc-store
- major-alrm
- man-msg-wt
- man-overid *
- manual-in
- mct-act
- mct-contr
- mj/mn alrm
- msg-retr *
- mwn-act *
- mwn-deact *
- next *
- night-serv
- noans-alrt
- normal *
- per-COline
- pms-alarm
- pr-awu-alm
- pr-pms-alm
- pr-sys-alm
- print-msgs
- priority
- q-calls
- q-time
- release
- ringer-off
- rs-alert
- rsvn-call
- scroll
- send-calls
- send-term
- serv-obsrv
- signal
- stored-num *
- stroke-cnt
- term-x-gr
- timer *
- trk-ac-alm
- trk-id
- trunk-name *
- trunk-ns
- verify
- work-code†

† Stations administered with displays only.
* Display-type buttons.

The 510D and 515 button number assignments in relation to the button numbers on the form are shown in the figures entitled “510D Personal Terminal Administrable Screen Button Assignments” and “515 Business Communications Terminal (BCT)” located at the end of this section dealing with the 510D and 515D terminals.

Page 3 of the Form (510D Only)

- **Feature Button Assignments**

  The features and functions that can be assigned to the 510 Personal Terminal (PT) Page 3 of X are the same as those listed for BUTTON ASSIGNMENTS above.

  The 510D button number assignments in relation to the button numbers on the form are shown in the figure entitled “510D Personal Terminal Administrable Screen Button Assignments” located at the end of this section dealing with the 510D and 515D terminals.

Page X of the Form

- **(Display Button Assignments)**

  The administrable display-type buttons that can be assigned are shown on the above list (see BUTTON ASSIGNMENTS) and are noted as [display buttons].

Page X of the Form

- **Data Module**

  Refer to the “Station Forms — Field Descriptions” section of this chapter for associated field descriptions.

```
                                                              Page 1 of x
                                    STATION
Extension: ____                BCC : 0
     Type:  _                       Lock Messages: n                    COR:  1
     Port: _____________            Security Code: ____                 COS :  1
     Name: _____________            Coverage Path: _
 FEATURE  OPTIONS
         LWC  Reception? msa-spe                  Coverage Msg Retrieval? Y
        LWC  Activation? Y                                  Auto Answer:  none
           CDR  Privacy? n                               Data  Restriction? n
 Redirect  Notification? Y                     Idle Appearance Preference? n
PCOL/TEG  Call  Alerting? n
 Bridged  Call  Alerting? n
Active  Station  Ringing:  single               Restrict Last Appearance? Y
           Data  Module? Y
        Display Module? Y
    Event  Minimization:

            AUDIX Name: _____
 Messaging  Server  Name: _____                 Audible Message Waiting? Y
      Display  Language:  English                      Disp Client Redir? n
                                              Select Last Used Appearance?
```

Screen 5-116. 510D and 515 BCT Form (Page 1 of X)

603 CALLMASTER Voice Terminal

This form is used to assign the CALLMASTER digital voice terminal. The terminal can also be used to support the ACD feature.

The 603-type CALLMASTER voice terminal is an upgrade from the 602-type CALLMASTER voice terminals. The CALLMASTER voice terminal is improved by the addition of internal nonvolatile memory and native support. “Native support” means the switch stores a predefine terminal type and automatically downloads the terminal type information to the terminal. These enhancements provide several benefits. First, the internal nonvolatile memory of the terminal stores information even if the terminal loses power. Second, native support removes from the customer or service technician the burden of having to alias the terminals, that is — manually map call appearance and feature buttons onto some other supported terminal type. Also, the nonvolatile memory can support transmission changes for applications in various countries.

NOTE:
The 603s must have their handset unplugged to receive the downloaded parameters.

The 603-type CALLMASTER voice terminal is available in three models: 603A1, 603D1, and 603E1. The only difference among these three is the ability to connect the 603D1 to tape recording equipment of a user and the 603E1 can operate on either the standard 4-wire DCP circuit pack or on theTN2181 2-wire circuit pack (16-port, A-law/Mu-law selectable). Administration for the three models is identical except for specifying the “Type” field on the CALLMASTER Station form.

If you are using 603-type voice terminals with a switch release older than G3V3 (and therefore had to alias the sets to a set type that the system release supported), you will have to re-administer the terminals and provide the correct . set type in order to access all administrable terminal functionality.

You can check the Download Status field on the Status Station screen to verify that the system successfully completes each download. You do not need to download the information to the terminals, as the switch does it automatically after the initialization period during the first periodic maintenance cycle.

NOTE:
If you have one or more 603-type CALLMASTER voice terminals, you must also administer the CALLMASTER Terminal Parameters form. The 603 CALLMASTER voice terminal form is available only if the G3 Version field on the System-Parameters Customer-Options form contains “V3" or greater. Only init, inads, and craft logins can administer this form.

Administration Commands

The following administration commands can be used to access the Voice Terminal form. In some cases, just the most commonly used commands

are shown. Refer to “Administration Commands” in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier’
add	station	xxxxx (extension number) or (’next’)
change	station	xxxxx (extension number)
display	station	xxxxx (extension number)
duplicate	station	
list	station	[x (extension)]['ext’ x]['to-ext’ x]['port’ x]['type’ x] ['count’ n]['print’ or ‘schedule’]
remove	station	xxxxx (extension number)

* Brackets [ ] indicate the qualifier is optional. Single quotes (”) indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word can be entered. MAX is the maximum number available in your system configuration. Refer to the Capacity Table in Appendix C.

Form Instructions

Please review the “Voice Terminals — General” information at least once before completing the form. General information, including feature button descriptions and characteristics is covered. In addition, descriptions of the administrable fields appearing on Pages 1 and 2 of the form are provided. Instructions are provided below for fields and/or pages of the form that require additional consideration because of the terminal type.

Page 1 of the Form

- **Type** — Enter “603A1 ,“ “603D1 ,“ or “603E1 .“
- **Idle/Active Ringing** — Define how a call will ring at a station. Default is “single.”

  Enter “continuous” to cause all calls terminated to this station to ring continuously.

  Enter “single” to cause all calls terminated to this station to receive one ring cycle and then ring silently.

  Enter “if-busy-single” to cause calls terminated to an idle station to ring continuously, and calls terminated to a station active on another call to receive one ring cycle and then ring silently.

  Enter “silent-if-busy” to cause calls terminated to a station active on another call to receive no audible ring and just ring silently, and calls terminated to an idle station to ring continuously.

- **Data Module** — Enter “y” if this terminal is connected to a data terminal via 7400B Data Module. If “y” is entered, the Data Module form must be completed. Valid entries are “y” or “n.” Default is “n.”

- **Display Module** — Display-only field; restricted to "y." Display-type buttons are administered on Page 3 of the form.
- **Disp Client Redir** — This field is only administrable if the Hospitality feature has been enabled on the System-Parameters Customer-Options form. This field affects the station's display on calls that originated from a station with Client Room Class of Service. When the field is "n" (default), then for all calls originating from a Client Room (even redirected calls) that terminate to this station, this station's display will not show the redirection information. Only the client name and extension (or room, depending on what is administered on the System-Parameters Hospitality form) will be displayed. When the field is set to "y," the redirection information for a call originating from a Client Room and terminating to this station will be displayed.

  NOTE:
  For stations with an "audix" station type, AUDIX Voice Power ports, or ports for any other type of messaging that needs display information, this field must be "y."

Page 2 of the Form

- **BUTTON ASSIGNMENTS**

  The feature buttons that can be assigned to the CALLMASTER digital voice terminal are listed below. The abbreviated software name (that is, administration name) as shown on the following list must be entered on the form. Depending on the button type, additional auxiliary information can be required when administering buttons. This information is provided in the "Voice Terminals — General" section.

- abr-prog
- abr-spchar
- abrdg-appr
- abrv-dial
- ac-alarm
- aca-call
- after-call
- alt-frl
- assist
- atd-qcalls *
- atd-qtime *
- cov-msg-rt *
- data-ext
- date-time *
- delete-msg *
- dial-icom
- directory *
- disp-norm
- dn-dst
- ds1-alarm
- exclusion
- ext-dn-dst *
- mwn-deact *
- next *
- night-serv
- noans-alrt
- normal *
- per-COline
- pms-alarm
- pr-awu-alm
- pr-pms-alm
- pr-sys-alm
- print-msgs

- aut-msg-wt
- auto-cback
- auto-icom
- auto-in
- auto-wkup *
- aux-work
- brdg-appr
- busy-ind
- call-appr
- call-fwd
- call-park
- call-pkup
- talk-info *
- cas-backup
- cdr1-alrm
- cdr2-alrm
- check-in *
- check-out *
- clk-overid *
- consult
- cov-cback
- flash
- goto-cover
- grp-dn-dst *
- hunt-ns
- in-call-id
- inspect *
- int-aut-an
- last-numb
- link-alarm
- lsvn-call
- lwc-cancel
- lwc-lock
- lwc-store
- major-alrm
- man-msg-wt
- man-overid *
- manual-in
- mct-act
- mct-contr
- mj/mn-alrm
- msg-retr *
- mwn-act *
- priority
- q-calls
- q-time
- release
- ringer-off
- rs-alert
- rsvn-call
- scroll
- send-calls
- send-term
- serv-obsrv
- signal
- stored-num *
- stroke-cnt
- term-x-gr
- timer *
- trk-ac-alm
- trk-id
- trunk-name *
- trunk-ns
- verify
- voa-repeat
- vu-display
- work-code

* Requires display.

Figure 5-47 shows the CALLMASTER digital voice terminal's button locations in relation to the button numbers on the forms.

Page X of the Form

- **FEATURE BUTTON ASSIGNMENTS**

  The features and functions that can be assigned to the terminal's administrable buttons are the same as those for BUTTON ASSIGNMENTS above. The abbreviated name as shown on the list must be entered on the form. At least two buttons must be administered as call appearances.

Page X of the Form (DATA MODULE)

- Only displayed if the Data Module field on Page 1 is "y." Refer to "Station Forms — Field Descriptions" section in this chapter for associated field descriptions.

```
                                                                Page 1 of X
                                    STATION
  Extension:  ____              BCC : 0
       Type: 603A1                   Lock Messages: n                    COR : 1
       Port : _____________          Security Code: ____                 COS : 1
       Name: _____________           Coverage Path: _
   FEATURE OPTIONS
           LWC Reception? msa-spe                  Coverage Msg Retrieval? y
          LWC Activation? y                                  Auto Answer: none
             CDR Privacy? n                             Data Restriction? n
   Redirect Notification? y                    Idle Appearance Preference? n
   Bridged Call Alerting? n                  Personalized Ringing Pattern: _
     Idle/Active Ringing: n                 Restrict Last Appearance? y
             Data Module? y
          Display Module? y
            AUDIX Name: _____*
Messaging Server Name: _____*                      Audible Message Waiting? y
       Display Language: English                         Disp Client Redir? n
                                                  Select Last Used Appearance? n
```

Screen 5-166. 602A1 Station Form (Page 1 of X)

Implementation Notes:

The BCC field is only displayed if the ISDN-PRI option is enabled on the System-Parameters Customer-Options form.

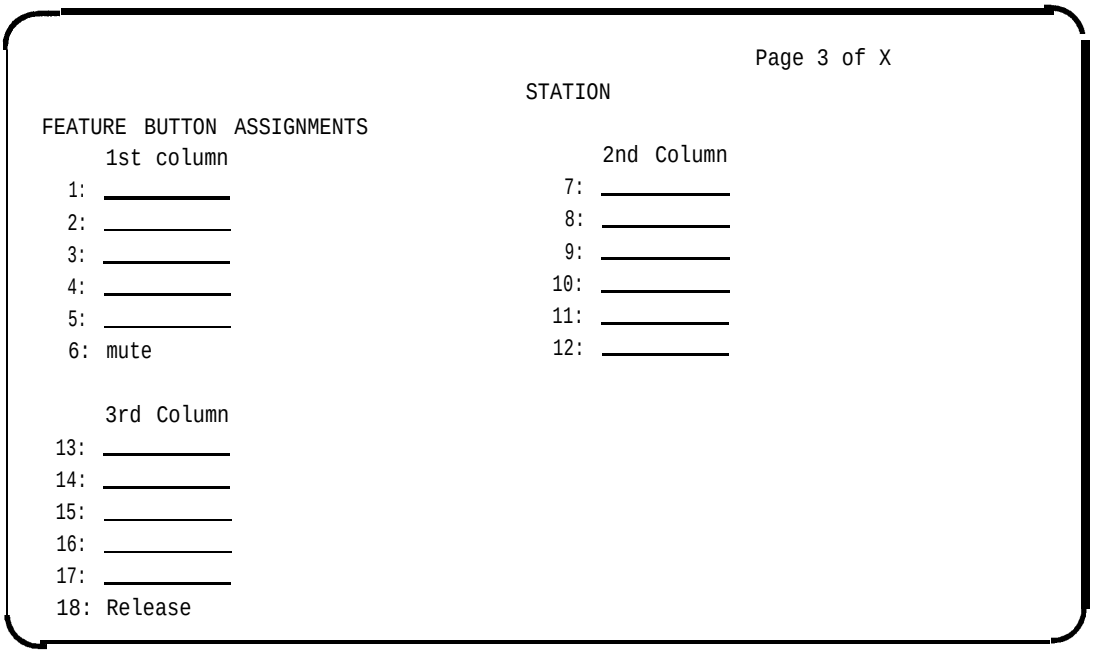
*The AUDIX Name and Messaging Server Name fields are only displayed for G3r V2 and V3 configurations.

```
                                                              Page 2 of X
                                    STATION
     SITE DATA
       Room :                                          Headset? n
       Jack:                                           Speaker? n
      Cable:                                          Mounting? d
      Floor:                                        Cord Length: 0_
   Building:                                          Set Color: _
ABBREVIATED  DIALING
     List1:              List2 :                        List3:
BUTTON  ASSIGNMENTS
  1: _call-appr                        4:
  2: _call-appr                        5:
  3: _call-appr                        6:
```

Screen 5-167. 602A1 Station Form (Page 2 of X)

Implementation Note:

At least two BUTTON ASSIGNMENTS buttons must be assigned to call-appr (call appearance.)



```
                                                    Page 3 of X
                                    STATION

FEATURE BUTTON ASSIGNMENTS
     1st column                          2nd Column
  1: _____                            7: _____
  2: _____                            8: _____
  3: _____                            9: _____
  4: _____                           10: _____
  5: _____                           11: _____
  6: mute                            12: _____

     3rd Column
 13: _____
 14: _____
 15: _____
 16: _____
 17: _____
 18: Release
```

Screen 5-168. 602A1 Station Form (Page 3 of X)

Implementation Notes:

Feature button #6 is preassigned as a mute button (not administrable).

Feature button #12 is prelabeled on the terminal as a login button. You must still administer it as a login button.

Feature #18 is preassigned as a release button (not administrable).

```
                                                              Page Y of X
                                    STATION
DATA MODULE
     Data Extension:____                BCC: 2          ITC: restricted
               Name: _____________      COR: 1_         COS: 1_
ABBREVIATED DIALING
 List1: ________
SPECIAL DIALING OPTION:      _____
   HOT LINE DESTINATION
   DEFAULT DIALING
        Abbreviated Dialing Dial Code (From above list): _
ASSIGNED MEMBER ( Station with a data extension button for this data module )
        Ext      Name
     1:
```

Screen 5-169. 602A1 Data Module Form (Page Y of X)

Implementation Notes:

This page is only displayed if the Data Module field on Page 1 is ''y."

The BCC field is only displayed if the lSDN-PRI option is enabled on the System-Parameters Customer-Options form.

HOT LINE DESTINATION only displayed when the SPECIAL DIALING OPTION field is ''hot-line."

DEFAULT DIALING only displayed when the SPECIAL DIALING OPTION field is ''default."

Abbreviated Dialing Dial Code only displayed when SPECIAL DIALING OPTION is “hot-line” or “default.”

603A1 & 603D1 Callmaster® Sets

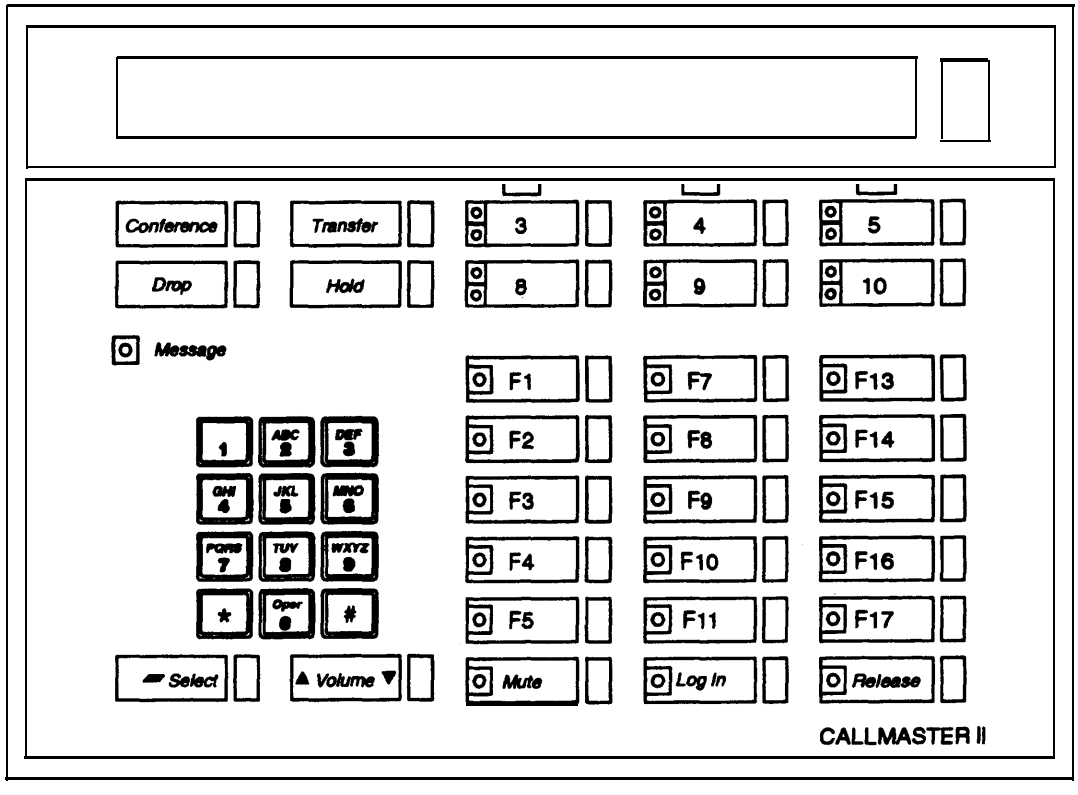


Figure 5-47.60321 and 603D1 CALLMASTER Digital Voice Terminals

Personal Computer (PC) — 6300 PC/PBX Connection

This form is used to implement a PC/PBX Connection. The PC must be an IBM-compatible PC that can be used with a 7400D series voice terminal to form a workstation arrangement. [Refer to "Personal Computer (PC) — 6300 PC/PBX Connection" in this chapter for additional information and typical connections.]

Administration Commands

The following administration commands can be used to access the form. in some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
add	station	xxxxx (extension number) or ('next')
change	station	xxxxx (extension number)
display	station	xxxxx (extension number)
duplicate	station	
list	station	[x (extension)]['ext' x]['to-ext' x]['port' x]['type'x] ['count' n]['print' or 'schedule']
remove	station	xxxxx (extension number)

* Brackets [ ] indicate the qualifier is optional. Single quotes (") indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered. MAX is the maximum number available in your system Configuration. Refer to the Capacity Table in Appendix C.

Form Instructions

Please review the "Voice Terminals — General" information at least once before completing the form. General information, including feature button descriptions and characteristics is covered. In addition, descriptions of the administrable fields appearing on Pages 1 and 2 of the form are provided. instructions are provided below for fields and/or pages of the form that require additional consideration because of the terminal type.

Page 1 of the Form

- **Type** — Enter "pc."
- **Set** — Enter the digital voice terminal type the PC is connected to. Valid entries are "7401 D," "7401 +," "7403D," "7404D," "7405D," "7406D," "7406+, " "7407D," "7407+," "7410D," "7410 +," "7434D," and "7444D."
- **PCOL/TEG Call Alerting** — Enter "y" if the PC user will be alerted on an incoming PCOLG/TEG call. Default is "n."

Constellation Voice/Data Terminals

This form is used to implement a Constellation voice/data terminal.

NOTE:
This terminal is available only with G3V3 or later versions. The G3 Version field on the System-Parameters Customer-Options form must contain "V3" or greater.

Administration Commands

The following administration commands can be used to access the form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
add	stat ion	xxxxx (extension number) or ('next')
change	station	xxxxx (extension number)
display	station	xxxxx (extension number)
duplicate	station	
list	station	[x (extension)]['ext' x}{'to-ext' x]['port' x]['type' x] ['count' n]['print' or 'schedule']
remove	station	xxxxx (extension number)

* Brackets [ ] indicate the qualifier is optional. Single quotes (') indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word can be entered. MAX is the maximum number available in your system configuration. Refer to the Capacity Table in Appendix C.

Form Instructions

Please review the "Voice Terminals — General" information at least once before completing the form. General information, including feature button descriptions and characteristics, is covered. In addition, descriptions of the administrable fields appearing on Pages 1 and 2 of the form are provided. Instructions are provided below for fields and/or pages of the form that require additional consideration because of the terminal type.

NOTE:
The forms and fields that appear depend on the value in the "set" field, as each set requires different administration. The form included here is for the defaul set "7401D." Please refer to the forms for the individual sets to see what fields the system displays.

Page 1 of the Form

- **Type** — Enter "6538."
- **Set** — Enter the digital voice terminal type the PC is connected to. Valid entries are "7401D," "7406D," "602A1 ," " 603A1 ," " 603D1, and 603E1 ."
- **PCOL/TEG Call Alerting** — Enter "y" if the user will be alerted on an incoming PCOLG/TEG call. Default is "n."
- **Active Station Ringing** — Only displayed when the G3V2 option is enabled on the System-Parameters Customer-Options form. Define how a call will ring at an off-hook station. Default is "single."

  Enter "continuous" to cause all calls terminated to this station to ring continuously.

  Enter "single" to cause a call terminated to an off-hook and active or off-hook and idle station to receive one ring cycle and then ring silently.

  Enter "if-busy-single" to cause a call terminated to an off-hook and idle station to ring continuously and a call terminated to an off-hook and active station to receive one ring cycle and then ring silently.

  Enter "silent" to cause a call terminated to an off-hook and active or off-hook and idle station to receive no audible ring and just ring silently.
- **Data Module** — Display-only (set to "y").
- **Display Module** — Display-only (set to "y").

Page 2 of the Form

- **BUTTON ASSIGNMENTS**

  The feature buttons that can be assigned to the associated voice terminal are listed below, but are dependent on the set you are administering with the constellation (refer to the list). The abbreviated software name (that is, administration name) as shown on the following list must be entered on the form. Depending on the button type, additional auxiliary information may be required when administering buttons. This information is provided in the "Voice Terminals — General" section.

- abr-prog
- abr-spchar
- abrdg-appr
- abw-dial
- ac-alarm
- cov-msg-rt *
- data-ext
- date-time *
- delete-msg *
- dial-icom
- mwn-deact *
- next *
- night-serv
- noans-alrt
- normal *

- aca-call
- after-call
- alt-frl
- assist
- atd-qcalls *
- atd-qtime *
- aut-msg-wt
- auto-cback
- auto-icom
- auto-in
- auto-wkup *
- aux-work
- brdg-appr
- busy-ind
- call-appr
- call-disp *
- call-fwd
- call-park
- call-pkup
- callr-info*
- cas-backup
- cdr1-alrm
- cdr2-alrm
- check-in *
- check-out *
- clk-overid *
- consult
- cov-cback
- directory *
- disp-norm
- dn-dst
- ds1-alarm
- exclusion
- ext-dn-dst*
- flash
- goto-cover
- grp-dn-dst*
- hunt-ns
- in-call-id
- inspect *
- int-aut-an
- last-numb
- link-alarm
- lsvn-call
- lwc-cancel
- lwc-lock
- lwc-store
- major-alrm
- man-msg-wt
- man-overid *
- manual-in
- mct-act
- mct-contr
- mj/mn alrm
- msg-retr *
- mwn-act *
- per-COline
- pms-alarm
- pr-awu-alm
- pr-pms-alm
- pr-sys-alm
- print-msgs
- priority
- q-calls
- q-time
- release
- ringer-off
- rs-alert
- rsvn-call
- scroll
- send-calls
- send-term
- serv-obsrv
- signal
- stored-num*
- stroke-cnt
- term-x-gr
- timer*
- trk-ac-alm
- trk-id
- trunk-name*
- trunk-ns
- verify
- work-code

* Display-type buttons.

Page 3 of the Form

- **FEATURE BUTTON ASSIGNMENTS**

  The feature buttons that can be administered are the same as those for BUTTON ASSIGNMENTS above. The abbreviated name as shown on the list must be entered on the form.

Page X of the Form (DATA MODULE)

Complete the Data Module fields as required. Refer to "Station Forms — Field Descriptions" section in this chapter for associated field descriptions.

```
                                                                Page 1 of X
                                    STATION
Extension: ____                       BCC : 0
     Type: 6538_ Set: 7404D                Lock Messages: n          COR : 1
     Port: _______________                 Security Code: _          COS : 1
     Name: _______________                 coverage Path: _
FEATURE OPTIONS
         LWC Reception? msa-spe                  Coverage Msg Retrieval? y
        LWC Activation? y                                  Auto Answer: none
           CDR Privacy? n                             Data Restriction? n
 Redirect Notification? y                        Idle Appearance Preference? n
PCOL/TEG Call Alerting? n                      Personalized Ringing Pattern? n
Active Station Ringing: single                     Restrict Last Appearance? y
           Data Module? y
            AUDIX Name: _______
 Messaging Server Name: _______                      Audible Message Waiting? y
                                                  Select Last Used Appearance? n
```

Screen 5-175. Constellation Station Form, for default 7401D Set (Page 1 of X)

Implementation Notes:

*Field only appears on G3rV3 systems.

The BCC field is only displayed if the ISDN-PRI option is enabled on the System-Parameters Customer-Options form.

The Active Station Ringing field is only displayed if the G3V2 option is enabled on the System-Parameters Customer-Options form.

The AUDIX Name and Messaging Server Name fields are only displayed for G3r V2 configurations.

```
                                                          Page 2 of X
                                   STATION
     SITE DATA
       Room: _______                                  Headset? n
       Jack: _____                                    Speaker? n
      Cable: _____                                   Mounting? d
      Floor: _______                               Cord Length: 0_
   Building: _______                                 Set Color: _____
ABBREVIATED DIALING
     List1: _______          List2 : _________        List3: _________
BUTTON ASSIGNMENTS
  1: call-appr_                                  6: _________
  2: call-appr_                                  7: _________
  3: call-appr_                                  8: _________
  4: call-appr_                                  9: _________
  5: _________  (AF1)
```

Screen 5-176. Constellation Voice Terminal Form (Page 2 of X)

Implementation Notes:

Call appearance buttons (that is, ''call-appr," "brdg-appr,'' ''abrdg-appr") should only be administered in BUTTON ASSIGNMENTS fields 1 through 4.

```
                                                          Page Y of X
                                   STATION
DATA MODULE
     Data Extension : ____              BCC: 2        ITC:  restricted
               Name : _______________   COR: I_       COS: 1_
ABBREVIATED DIALING
 List1: _______
SPECIAL DIALING OPTION: _
   HOT LINE DESTINATION
   DEFAULT DIALING
        Abbreviated Dialing Dial Code (From above list): _
ASSIGNED MEMBER ( Station with a data extension button for this data module )
        Ext      Name
     1:
```

Screen 5-177. Constellation Data Module Form (Page Y of X)

Implementation Notes:

This page is only displayed if the Data Module field on Page 1 is "y."

The BCC field is only displayed if the ISDN-PRI option is enabled on the System-Parameters Customer-Options form.

HOT LINE DESTINATION only displayed when the SPECIAL DIALING OPTION field is "hot-line."

DEFAULT DIALING only displayed when the SPECIAL DIALING OPTION field is "default."

Abbreviated Dialing Dial Code only displayed when SPECIAL DIALING OPTION is "hot-line" or "default."

6538 (Constellation) Data Terminal

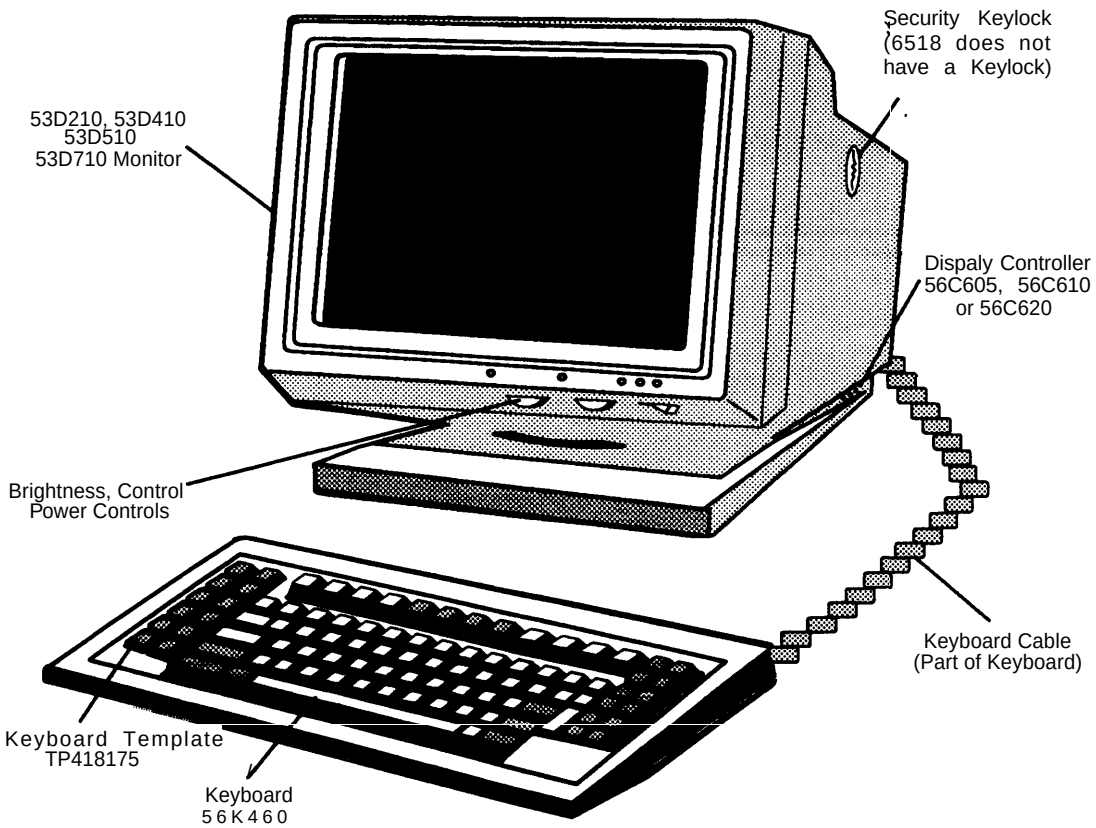


Figure 5-48. Constellation Data Terminal

MDC9000 and MDW9000 Cordless Voice Terminals

This form is used to implement MDC9000 and MDW9000 cordless terminals.

NOTE:
The MDC9000 and MDW9000 cordless terminals are available only with G3V3. The G3 Version field on the System-Parameters Customer-Options form must contain "V3."

Administration Commands

The following administration commands can be used to access the Voice Terminal form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
add	station	xxxxx (extension number) or ('next')
change	station	xxxxx (extension number)
display	station	xxxxx (extension number)
duplicate	station	
list	station	[x (extension)]['ext' x]['to-ext' x]['port' x]['type' x] ['count' n]['print' or 'schedule']
remove	station	xxxxx (extension number)

*Brackets [ ] indicate the qualifier is optional. Single quotes (') indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word can be entered. MAX is the maximum number available in your system configuration. Refer to the Capacity Table in Appendix C.

Form Instructions

Please review the "Voice Terminals — General" information at least once before completing the form. General information, including feature button descriptions and characteristics is covered. In addition, descriptions of the administrable fields appearing on Pages 1 and 2 of the form are provided. Instructions are provided below for fields and/or pages of the form that require additional consideration because of the terminal type.

Page 1 of the Form

- **Type** — Enter "MDC9000" or "MDW9000," as appropriate.
- **Active Station Ringing** — Only displayed when G3V3 is enabled on the System-Parameters Customer-Options form. Defines how a call will ring at an off-hook station. Default is "single."

  Enter "continuous" to cause all calls terminated to this station to ring continuously.

Enter “single” to cause a call terminated to an off-hook and active or off-hook and idle station to receive one ring cycle and then ring silently.

Enter “if-busy-single” to cause a call terminated to an off-hook and idle station to ring continuously and a call terminated to an off-hook and active station to receive one ring cycle and then ring silently.

Enter “silent” to cause a call terminated to an off-hook and active or off-hook and idle station to receive no audible ring and just ring silently.

Page 2 of the Form

- **BUTTON ASSIGNMENTS**

  The feature buttons that can be assigned to the MDC9000 and MDW9000 cordless voice terminals are listed below. The abbreviated software name (that is, administration name) as shown on the following list must be entered on the form. Depending on the button type, additional auxiliary information may be required when administering buttons. This information is provided in the “Voice Terminals — General” section.

Administrable feature buttons:

- abr-prog
- abr-spchar
- abrdg-appr
- abtv-dial
- ac-alarm
- aca-call
- after-call
- alt-frl
- assist
- atd-qcalls
- atd-qtime
- aut-msg-wt
- auto-cback
- auto-icom
- auto-in
- aux-work
- brdg-appr
- busy-ind
- call-appr
- consult
- cov-cback
- data-ext
- dial-icom
- dn-dst
- ds1-alarm
- exclusion
- flash
- goto-cover
- hunt-ns
- in-call-id
- int-aut-an
- last-numb
- link-alarm
- lsvn-call
- lwc-cancel
- lwc-store
- major-alrm
- man-msg-wt
- per-COline
- pms-alarm
- pr-awu-alm
- pr-pms-alm
- pr-sys-alm
- print-msgs
- priority
- q-calls
- q-time
- release
- ringer-off
- rs-alert
- rsvn-call
- send-calls
- send-term
- serv-obsrv
- signal
- stroke-cnt
- term-x-gr

- call-fwd
- call-park
- call-pkup
- cas-backup
- cdr1-alrm
- cdr2-alrm
- manual-in
- mct-act
- mct-contr
- mj/mn alrm
- night-serv
- noans-alrt
- trk-ac-alm
- trunk-ns
- verify
- voa-repeat

```
                                                              Page 1 of X
                                   STATION
Extension: ____              BCC: 0
     Type: ____                    Lock Messages: n                 COR: 1
     Port: _____________           Security Code: _                 COS: 1
     Name: _____________           coverage Path: _
 FEATURE OPTIONS
         LWC Reception? msa-spe                 Coverage Msg Retrieval? y
        LWC Activation? y                                 Auto Answer: none
           CDR Privacy? n                              Data Restriction? n
 Redirect Notification? y                      Idle Appearance Preference? n
 Bridged Call Alerting? n                    Personalized Ringing Pattern: _
Active Station Ringing: single                   Restrict Last Appearance? y

            AUDIX Name: _______*
 Messaging Server Name: _______*                   Audible Message Alerting? y
                                                 Select Last Used Appearance? n
```

Screen 5-178. MDC9000 and MDW9000 Station Form (Page 1 of X)

Implementation Notes:

*Field appears for G3rV3 only.

The BCC field is only displayed if the ISDN-PRI option is enabled on the System-Parameters Customer-Options form.

The Active Station Ringing field is only displayed if the G3V2 option is enabled on the System-Parameters Customer-Options form.

The AUDIX Name and Messaging Server Name fields are only displayed for G3r V2 configurations.

```
                                                          Page 2 of X
                                    STATION
SITE DATA
     Room: _______                                    Headset? n
     Jack: _______                                    Speaker? n
    Cable: _______                                   Mounting? d
    Floor: _______                                 Cord Length: 0
 Building: _______                                   Set Color:_____


ABBREVIATED DIALING
     List1 ________          List2: _________          List3: _________

BUTTON ASSIGNMENTS
  1: call-appr_                          4: _________
  2: call-appr_                          5: _________
  3: call-appr_                          6: drop
```

Screen 5-179. MDC9000 and MDW9000 Station Form (Page 2 of X)

Implementation Note:

The first three Button Assignments fields can only reassigned as call-appr (call appearance).

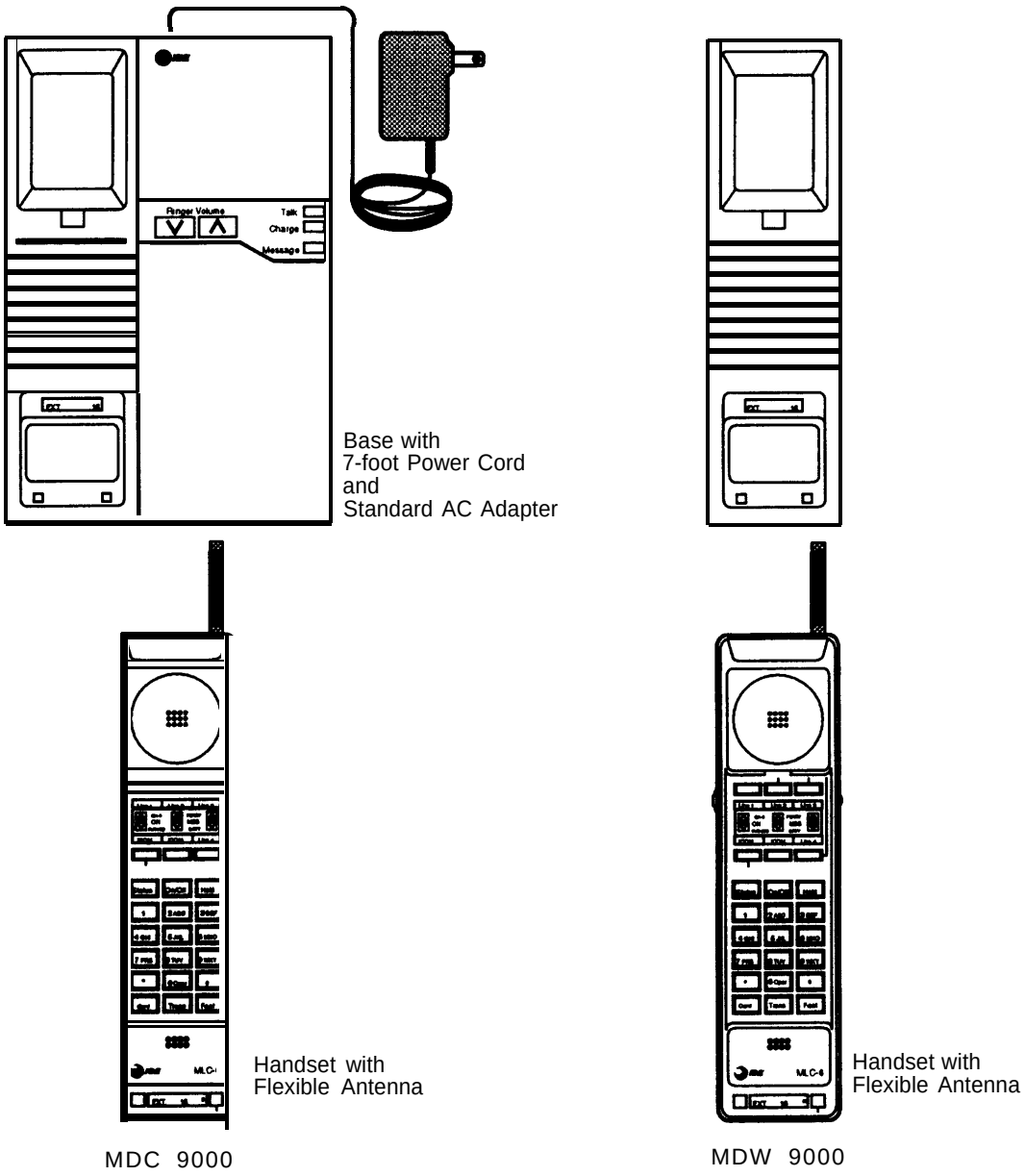


Figure 5-49. MDC9000 and MDW9000 Cordless Voice Terminals (Page 1 of 2)

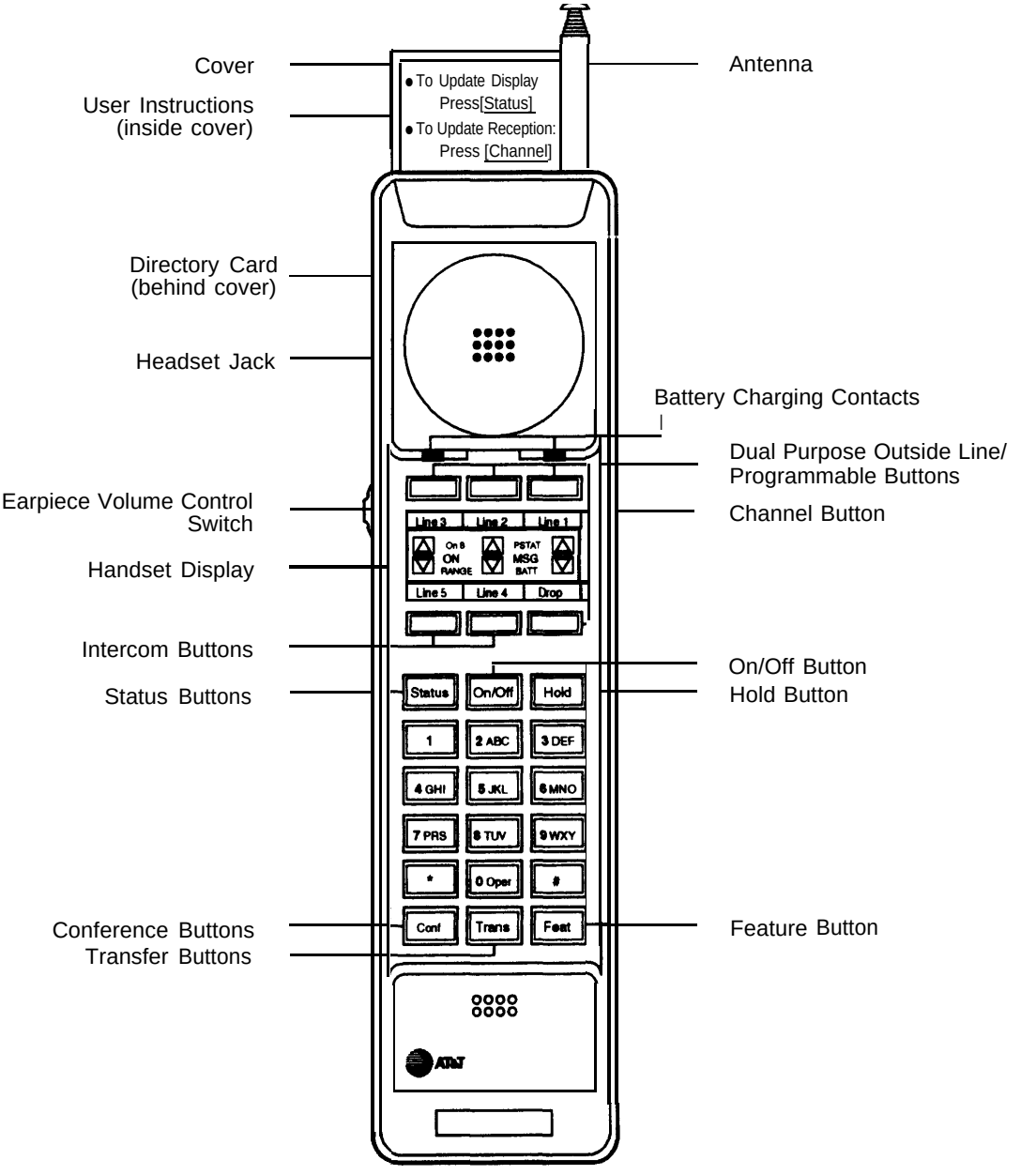


Figure 5-50. MDC9000 and MDW9000 Cordless Voice Terminals (Page 2 of 2)

CP9530 Cordless Voice Terminals

This form is used to implement CP9530 cordless terminals.

NOTE:
The CP9530 cordless voice terminal is available only with G3V3. The G3 Version field on the System-Parameters Customer-Options form must contain "V3."

Administration Commands

The following administration commands can be used to access the Voice Terminal form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
add	station	xxxxx (extension number) or ('next')
change	stat ion	xxxxx (extension number)
display	station	xxxxx (extension number)
duplicate	station	
list	stat ion	[x (extension)]['ext' x]['to-ext' x]['port' x]['type' x] ['count' n]['print' or 'schedule']
remove	station	xxxxx (extension number)

*Brackets [ ] indicate the qualifier is optional. Single quotes (") indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word can be entered. MAX is the maximum number available in your system configuration. Refer to the Capacity Table in Appendix C.

Form Instructions

Please review the "Voice Terminals — General" information at least once before completing the form. General information, including feature button descriptions and characteristics is covered. In addition, descriptions of the administrable fields appearing on Pages 1 and 2 of the form are provided in the "Voice Terminals — General" section. Instructions are provided below for fields and/or pages of the form that require additional consideration because of the terminal type.

Page 1 of the Form

- **Type** — Enter "CP9530" as appropriate.
- **Tests** — Enter "y" to enable port maintenance tests. Enter "n" when the voice terminal is connected through a peripheral unit, such as a dictating machine, that will cause the tests to fail. Default is "y."

Page 2 of the Form

- **Abbreviated Dialing List1:, List2:, List3:** — Up to three AD lists can be accessed by the voice terminal. Enter "p" for personal, "s" for system, "g" for group, or "e" enhanced. If "p" or "g" is entered, a personal list number (1 through 3) or a group number (1 through 100), respectively, is also required.

```
                                                                Page 1 of 2
                                    STATION
Extension: ____              BCC: 0
     Type: CP9530                    Lock Messages: n                 COR : 1
     Port: _____________          Security Code: ____                 COS : 1
     Name: _____________          Coverage Path: _                  Tests? y
FEATURE OPTIONS
         LWC Reception? msa-spe                  Coverage Msg Retrieval? y
        LWC Activation? y                                  Auto Answer: none
           CDR Privacy? y                             Data Restriction? n
 Redirect Notification? y                        Call Waiting Indication? y
   Off Premise Station? y                   Att. Call Waiting Indication? y
Active Station Ringing? y                     Distinctive Audible Alert? y
      Switchhook Flash? y                      Message Waiting Indicator? _
                                                    Adjunct Supervision? y
           AUDIX Name? _______*
Messaging Server Name? _______*                 Audible Message Waiting? y
```

Screen 5-180. CP9530 Station Form (Page 1 of 2)

Implementation Notes:

*Field only appears on G3rV3 systems.

The BCC field is only displayed if the ISDN-PRI option is enabled on the System-Parameters Customer-Options form.

The AUDIX Name and Messaging Server Name fields are only displayed on G3r V2 and V3 configurations.

```
                                                          Page 2 of 2
                                    STATION
SITE DATA
     Room: _______                                  Headset ? n
     Jack: _______                                  Speaker? n
    Cable: _______                                  Mounting? d
    Floor: _______                                  Cord Length: o_
 Building: _______                                    Set Color? ______

ABBREVIATED DIALING
     List1: ________          List2: _________          List3: _________
HOT LINE DESTINATION
        Abbreviated Dialing List Number (From above 1, 2 or 3) : _
                                                    Dial Code: _
```

Screen 5-181. CP9530 Station Form (Page 2 of 2)

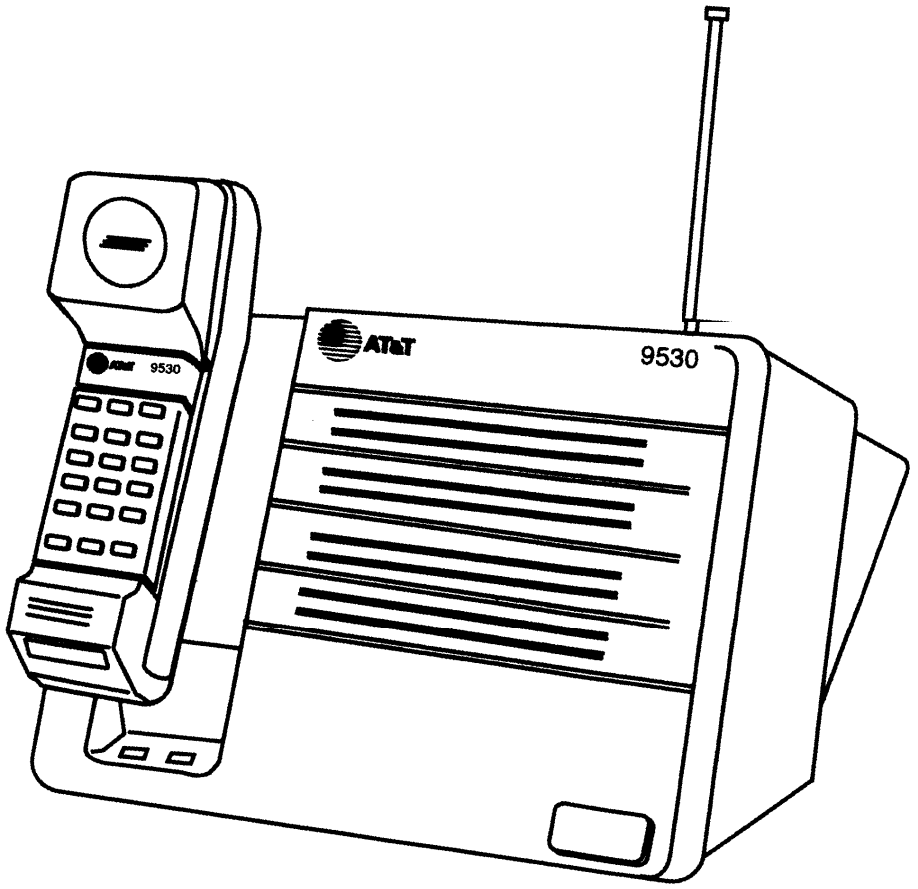


Figure 5-51. CP9530 Cordless Voice Terminal (Page 1 of 2)

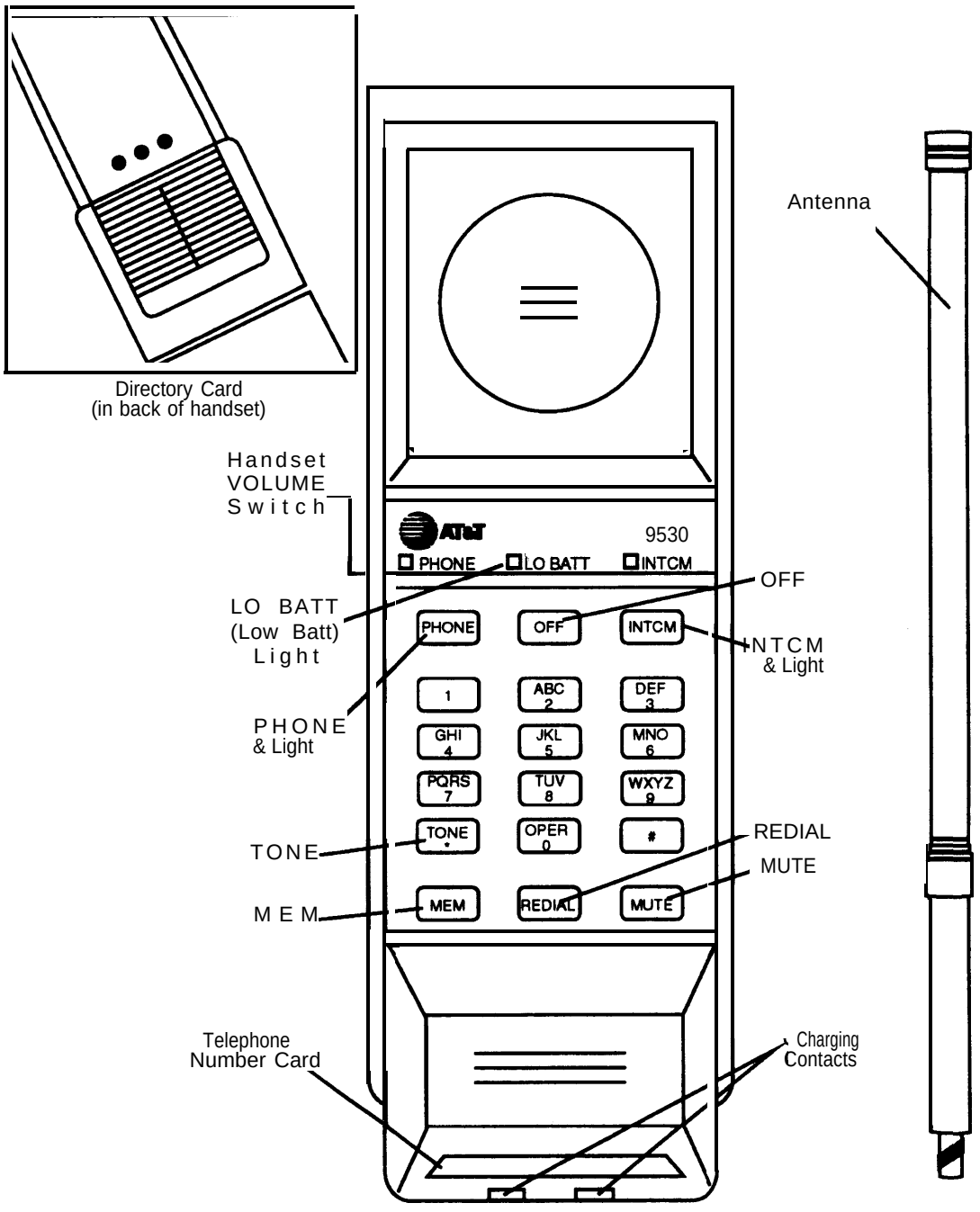


Figure 5-52. CP9530 Cordless Voice Terminal (Page 2 of 2)

8403B and 8410B Voice Terminals

These forms are used to implement 8403B and 84106 voice terminals.

NOTE:
You can administer the forms only if the G3 version is set to "V3" on the System-Parameters Customer-options form.

Administration Commands

The following administration commands can be used to access the Voice Terminal forms. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
add	station	xxxxx (extension number) or ('next')
change	station	xxxxx (extension number)
display	station	xxxxx (extension number)
duplicate	station	
list	station	[x (extension)]['ext' x]['to-ext' x]['port' x]['type' x] ['count' n]['print' or 'schedule']
remove	station	xxxxx (extension number)

*Brackets [ ] indicate the qualifier is optional. Single quotes (') indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word can be entered. MAX is the maximum number available in your system configuration. Refer to the Capacity Table in Appendix C.

Form Instructions

Please review the "Voice Terminals — General" information at least once before completing the form. General information, including feature button descriptions and characteristics is covered. Instructions are provided below for fields and/or pages of the form that require additional consideration because of the terminal type.

Page 1 of the Form

- **Type** — Enter "84036" or "8410B" as appropriate.
- **Bridged Call Alerting** — Enter "y" to allow incoming calls on bridged appearances at another voice terminal's primary extension, TEG, or PCOL calls to alert at this voice terminal. Default is "n."

- **Personalized Ringing Pattern** — Enter a Personalized Ringing Pattern (1 through 8) as follows:

Ring Pattern	Tone Sequence
1	MMM (standard ringing)
2	HHH
3	LLL
4	LHH
5	HHL
6	HLL
7	HLH
8	LHL

L=530 Hz, M=750 Hz, and H=1060 Hz

- **Active Station Ringing** — Only displayed when the G3V3 option is enabled on the System-Parameters Customer-Options form. Defines how a call will ring at an off-hook station. Default is “single.”

  Enter “continuous” to cause all calls terminated to this station to ring continuously.

  Enter “single” to cause a call terminated to an off-hook and active or off-hook and idle station to receive one ring cycle and then ring silently.

  Enter “if-busy-single” to cause a call terminated to an off-hook and idle station to ring continuously and a call terminated to an off-hook and active station to receive one ring cycle and then ring silently.

  Enter “silent” to cause a call terminated to an off-hook and active or off-hook and idle station to receive no audible ring and just ring silently.

- **Data Module** — Enter “y” if this terminal is to be connected to a data terminal via a 7400B data module. If you enter “y,” you must complete the Data Module form. Valid entries are “y” or “n.” Default is “n.”

Page 2 of the Form

- **Headset** — Enter ‘‘y” if the terminal is to have a headset. Default is “n.”
- **BUTTON ASSIGNMENTS**

  The feature buttons that can be assigned to the 8403B and 8410B voice terminals are listed below. The abbreviated software name (administration name) as shown on the following list must be entered on the form. Depending on the button type, additional auxiliary information can be required when administering buttons. This information is provided in the “Voice Terminals — General” section.

- abr-prog
- abr-spchar
- abrdg-appr
- consult
- cov-cback
- data-ext
- noans-alrt
- per-COline
- pms-alarm

- abrv-dial
- ac-alarm
- aca-call
- after-call
- alt-frl
- assist
- atd-qcalls
- atd-qtime
- aut-msg-wt
- auto-cback
- auto-icom
- auto-in
- aux-work
- brdg-appr
- busy-ind
- call-appr
- call-fwd
- call-park
- call-pkup
- cas-backup
- cdr1-alrm
- cdr2-alrm
- dial-icom
- dn-dst
- ds1-alarm
- exclusion
- flash
- goto-cover
- hunt-ns
- in-call-id
- int-aut-an
- last-numb
- link-alarm
- lsvn-call
- lwc-cancel
- lwc-store
- major-alrm
- man-msg-wt
- manual-in
- mct-act
- mct-contr
- mj/mn alrm
- night-ser
- pr-awu-alm
- pr-pms-alm
- pr-sys-alm
- print-msgs
- priority
- q-calls
- q-time
- release
- ringer-off
- rs-alert
- rsvn-call
- send-calls
- send-term
- serv-obsrv
- signal
- stroke-cnt
- term-x-gr
- trk-ac-alm
- trunk-ns
- verify
- voa-repeat

The first three buttons (all three buttons on the 8403B voice terminal) are defaulted as call-appearance buttons. You can readminister them, but the system requires that you have at least two call-appearance buttons.

Page 3 of the Form for the 8403B (FEATURE BUTTON ASSIGNMENTS)

- On the form for the 8403B voice terminal, these fields correspond to the 12 feature buttons accessed from the 8403B voice terminal by first pressing the feature button and then pressing a number on the dial pad. You can not administer these buttons as a call appearance (call-appr) or bridged appearance (brdg-appr).

```
                                    STATION
Extension: 300              BCC: 0
     Type: 8403B                    Lock Messages? n          COR: 1_
     Port: _______                  Security Code: ____       COS: 1_
     Name: _______________          Coverage Path: _____

FEATURE OPTIONS
         LWC Reception: msa_spe                  Coverage Msg Retrieval? y
        LWC Activation? y                                 Auto Answer: none
           CDR Privacy? n                              Data Restriction? n
 Redirect Notification? y                    Idle Appearance Preference? n
 Bridged Call Alerting? n                  Personalized Ringing Pattern: 1
Active Station Ringing: single                 Restrict Last Appearance? y
           Data Module? n                           Mute Button Enabled? y
          Speakerphone: 1 way


            AUDIX Name: _______*
   Message Server Name: _______*              Audible Message Waiting? n

                                            Select Last Used Appearance? n
```

Screen 5-184. 8403B Station Form (Page 1 of 3)

*Field only appears on G3r systems.

```
                                    STATION

 SITE DATA
       Room:                                        Headset? n
       Jack:                                        Speaker? n
      Cable:                                       Mounting? d
      Floor:                                   Cord Length: 0
   Building:                                     Set Color:

 ABBREVIATED DIALING
      List1:                 List2:                 List3:

 BUTTON ASSIGNMENTS
   1:  call-appr_
   2:  call-appr_
   3:  call-appr_
```

Screen 5-185. 8403B Station Form (Page 2 of 3)

```
                                    STATION

 FEATURE BUTTON ASSIGNMENTS

   1:
   2:
   3:
   4:
   5:
   6:
   7.
   8:
   9:
   *:
   0:
   #:
```

Screen 5-186. 8403B Station Form(Page 3 of 3)

Implementation Notes:

BCC is displayed when the ISDN-PRI option is enabled on the System-Parameters Customer-Options form.

The AUDIX Name and Messaging Server Name fields are only displayed on G3r configurations.

You cannot administer any feature button as a call appearance (call-appr) or bridged appearance (brdg-appr).

```
                                    STATION
Extension:  300              BCC : 0
     Type:  8410B                    Lock Messages? n           COR : 1_
     Port:  _______                  Security  Code: ____       COS : 1_
     Name:  ________________         Coverage Path:

FEATURE  OPTIONS
         LWC Reception: msa_spe                    Coverage Msg Retrieval? y
        LWC Activation? y                                   Auto Answer: n
           CDR Privacy? n                                Data Restriction? n
 Redirect Notification? y                      Idle Appearance Preference? n
 Bridged Call Alerting? n                    Personalized Ringing Pattern: 1
Active Station Ringing? n                        Restrict Last Appearance? y
           Data Module? n                             Mute Button Enabled? y
          Speakerphone: 1 way


            AUDIX  Name: _______
   Message Server Name: _______                    Audible Message Waiting? _

                                                 Select Last Used Appearance? _
```

Screen 5-187. 8410B Station Form (Page 1 of 2)

*Field only appears on G3r systems.

Implementation Notes:

BCC is displayed when the ISDN-PRI option is enabled on the System-Parameters Customer-Options form.

The AUDIX Name and Messaging Server Name fields are only displayed on G3r configurations.

```
                                    STATION

SITE DATA
      Room :                                          Headset? n
      Jack:                                           Speaker? n
     Cable:                                          Mounting? d
     Floor:                                      Cord Length: 0
  Building:                                        Set Color:


ABBREVIATED  DIALING
     List1:            List2:                 List3:

BUTTON  ASSIGNMENTS
  1: call-appr_                          6:
  2: call-appr_                          7:
  3: call-appr_                          8:
  4:                                     9:
  5:                                    10:
```

Screen 5-188. 8410B Station Form (Page 2 of 2)

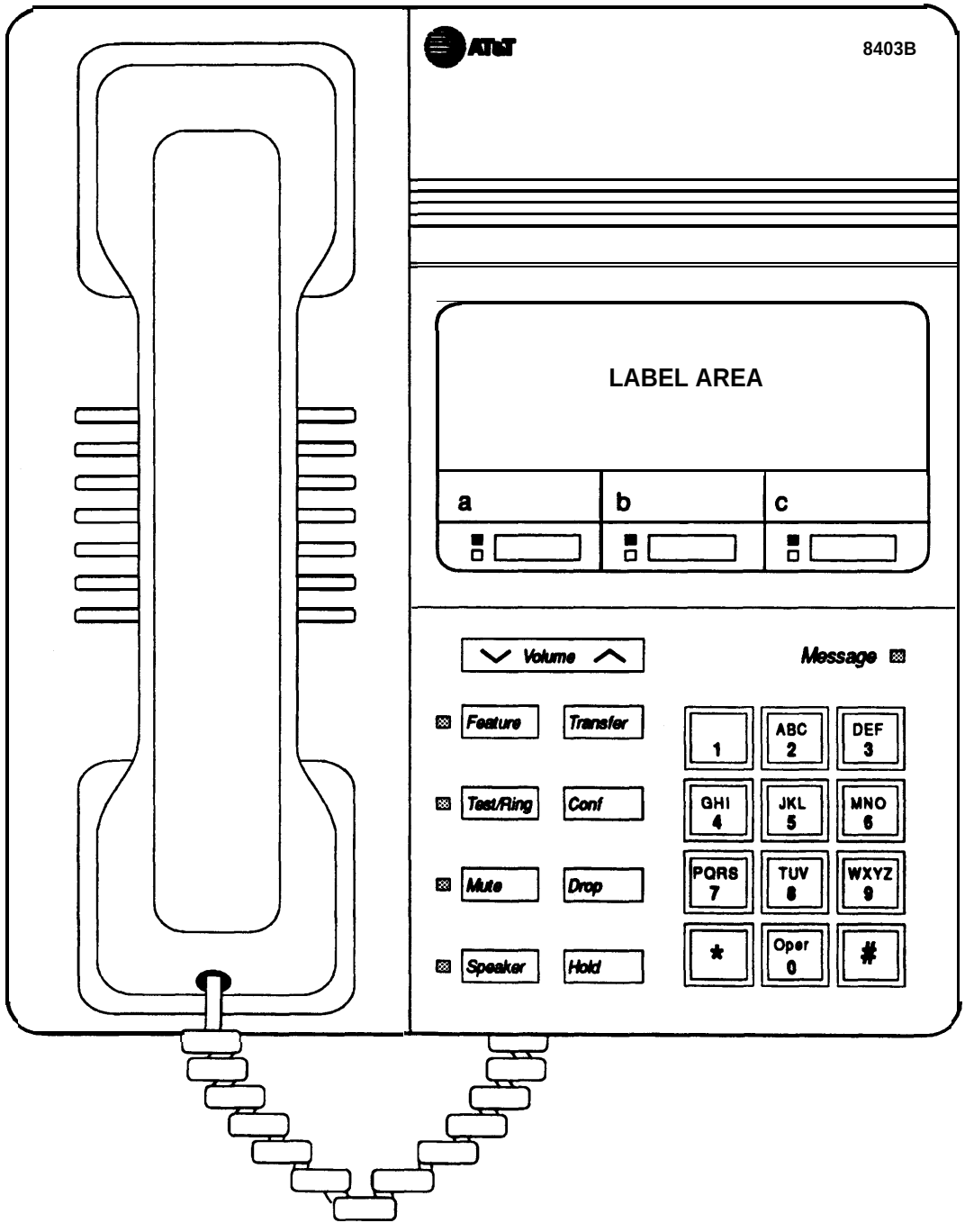


Figure 5-51. 8403B Voice Terminal

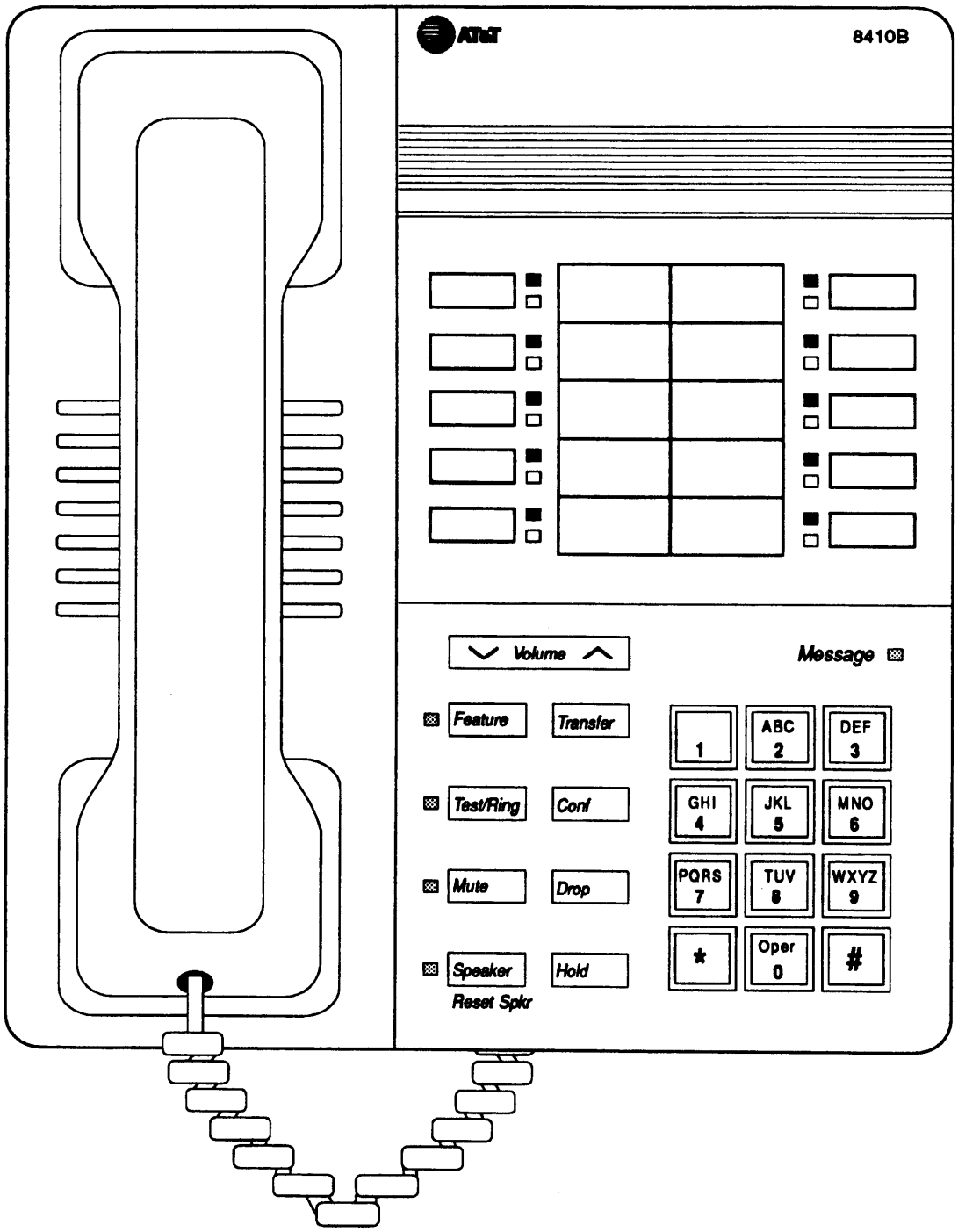


Figure 5-52. 8410B Voice Terminal

8410D and 8434D Voice Terminals

These forms are used to implement 8410D and 8434D multiappearance voice terminals.

NOTE:
The forms are available only if the G3 version is set to "V3" on the System-Parameters Customer-Options form.

Administration Commands

The following administration commands can be used to access the Voice Terminal form. In some cases, just the most commonly used commands are shown. Refer to "Administration Commands" in Chapter 2 for a complete listing of all administration commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	Qualifier*
add	station	xxxxx (extension number) or ('next')
change	station	xxxxx (extension number)
display	station	xxxxx (extension number)
duplicate	station	
list	station	[x (extension)]['ext' x]['to-ext' x]['port' x]['type' x] ['count' n]['print' or 'schedule']
remove	station	xxxxx (extension number)

* Brackets [ ] indicate the qualifier is optional. Single quotes (") indicate the text inside the quote must be entered exactly as shown or an abbreviated form of the word may be entered. MAX is the maximum number available in your system configuration. Refer to the Capacity Table in Appendix C.

Form Instructions

The form for the 8410D voice terminal consists of three pages while the form for the 8434D voice terminal consists of four pages with an optional fifth page.

Please review the "Voice Terminals — General" information at least once before completing the form. General information, including feature button descriptions and characteristics is covered. In addition, descriptions of the administrable fields appearing on Pages 1 and 2 of the form are provided. Instructions are provided below for fields and/or pages of the form that require additional consideration because of the terminal type.

Page 1 of the Form

- **Type** — Enter "8410D" or "8434D."
- **Active Station Ringing** — Only displayed when the G3V3 option is enabled on the System-Parameters Customer-Options form. Defines how a call will ring at an off-hook station. Default is "single."

Enter "continuous" to cause all calls terminated to this station to ring continuously.

Enter "single" to cause a call terminated to an off-hook and active or off-hook and idle station to receive one ring cycle and then ring silently.

Enter "if-busy-single" to cause a call terminated to an off-hook and idle station to ring continuously and a call terminated to an off-hook and active station to receive one ring cycle and then ring silently.

Enter "silent" to cause a call terminated to an off-hook and active or off-hook and idle station to receive no audible ring and just ring silently.

■ **Data Module** — Enter "y" if this terminal is connected to an optional 7400B data module. If a "y" is entered, the Data Module form (page x) must be completed. Default is "n."

■ **Expansion Module** — (8434D only) Identifies whether a ZE801A expansion module is attached to the station set. Enter "y" or "n" (default). If you enter "y," a fifth page of the form appears to allow you to administer the Expansion Module buttons.

Page 2 of the Form

■ **BUTTON ASSIGNMENTS**

The feature buttons that can be assigned to the 8410D and 8434D voice terminal are listed below. The abbreviated software name (that is, administration name) as shown on the following list must be entered on the form. Depending on the button type, additional auxiliary information may be required when administering buttons. This information is provided in the "Voice Terminals — General" section.

- abr-prog
- abr-spchar
- abrdg-appr
- abrv-dial
- ac-alarm
- aca-call
- after-call
- alt-frl
- assist
- atd-qcalls *
- atd-qtime *
- aut-msg-wt
- cov-msg-rt *
- data-ext
- date-time *
- delete-msg *
- dial-icom
- directory *
- disp-norm +
- dn-dst
- ds1-alarm
- exclusion
- ext-dn-dst *
- flash
- next*
- night-serv
- noans-alrt
- normal**
- per-COline
- pros-alarm
- pr-awu-alm
- pr-pms-alm
- pr-sys-alm
- print-msgs
- priority
- q-calls

- auto-cback
- auto-icom
- auto-in
- auto-wkup *
- aux-work
- brdg-appr
- busy-ind
- call-appr
- call-disp *
- call-fwd
- call-park
- call-pkup
- callr-info *
- cas-backup
- cdr1-alrm
- cdr2-alrm
- check-in*
- check-out*
- clk-overid*
- consult
- cov-cback
- goto-cover
- grp-dn-dst*
- hunt-ns
- in-call-id
- inspect*
- int-aut-an
- last-numb
- link-alarm
- lsvn-call
- lwc-cancel
- lwc-lock
- lwc-store
- major-alrm
- man-msg-wt
- man-overid*
- manual-in
- mct-act
- mct-contr
- mj/mn-alrm
- msg-retr*
- mwn-act*
- mwn-deact*
- q-time
- release
- ringer-off
- rs-alert
- rsvn-call
- scroll
- send-calls
- send-term
- serv-obsrv
- signal
- stored-num*
- stroke-cnt
- term-x-gr
- timer*
- trk-ac-alm
- trk-id
- trunk-name*
- trunk-ns
- verify
- voa-repeat
- vu-display

* Display-type button.

** Both the 8410D and the 8434D voice terminals have an Exit button. This button is mapped to the “normal” button function. Therefore, you are not allowed to specify a “normal” feature button on any of the button fields on these forms.

\+ 8410D only.

Page 3 of the 8434D Form

- **FEATURE BUTTON ASSIGNMENTS**

  The 24 feature buttons correspond to the fixed, dual-LED buttons on the right side of the 8434D voice terminal.

  The features that can be assigned to buttons are the same as those listed for BUTTON ASSIGNMENTS above. The abbreviated name as shown on the list must be entered on the form.

Page 3 of the 8410D Form/Page 4 of the 8434 Form

- **SOFTKEY BUTTON ASSIGNMENTS**

  The 8410D voice terminal supports 12 display softkeys and the 8434D voice terminal supports 15 softkeys. You can assign features to these softkeys, making them “virtual” buttons. When you assign a feature to a softkey, the system automatically downloads to the terminal the appropriate information for operating the feature. The following table shows the administrable button names, a description of the feature, and predefine button labels (in English).

Button Name	English Label	Feature Name
abr-prog	Prog	Program Abbreviated Dial
abr-spchar	SFunc	Abbreviated Dial Special Function
abr-spchar m	Mark	Mark Special Function
abr-spchar p	Pause	Pause Special Function
abr-spchar s	Spres	Suppress Special Function
abr-spchar w	Wait	Wait Special Function
abr-spchar W	Stop	Indefinite Wait Special Function
abrv-dial	AD	Abbreviated Dial
auto-cback	AutCB	Automatic Call Back
auto-icom	IAuto	Auto Intercom
call-fwd	CFrwd	Call Forward
call-park	CPark	Call Park
call-pkup	CPkUp	Call Pick Up
consult	Cnslt	Consult
date-time	TmDay	Date/Time
dial-icom	IDial	Dial Intercom
directory	Dir	System Directory
exclusion	Excl	Manual Exclusion
inspect	Inspt	Inspect Mode
int-aut-an	HFAns	Internal Auto Answer
last-numb	Last	Last Number Redial
lwc-cancel	CnLWC	Cancel Leave Word Calling
lwc-store	LWC	Leave Word Calling
priority	PCall	Priority Call
ringer-off	RngOf	Ringer Off
send-calls	SAC	Send All Calls
stored-num	View	Stored Number Mode
stroke-cnt	Count	Count
timer	Timer	Timer
vu-display	Stats	VuStats

For the 8410D and 8434D terminals, you may also customize the softkey displays, for either English, French, Italian, or Spanish. To customize the labels, use the Language Translation form by issuing the command “change display-messages softkey-labels”. You may enter a five-character label for each of the softkeys.

Page 5 of the 8434D Form (EXPANSION MODULE) This page only appears if the Expansion Module field on Page 1 is “y”. Use this page to administer buttons on the ZE801A Expansion Module if one is attached to the 8434D terminal. Fields 1-9 on the form correspond to the 18 dual-LED feature buttons on the Expansion Module; buttons 10-12 correspond to the 6 single-LED feature buttons. You can assign to these buttons any of the features/functions that you can assign to the feature buttons on the 8434D terminal from the previous list.

```
                                    STATION
Extension:  300              BCC : 0
     Type:  8434D                    Lock Messages? n          COR : 1
     Port:  _______                  Security Code: ____       COS : 1
     Name:  ________________         Coverage Path: ____

FEATURE  OPTIONS
         LWC Reception: msa spe                  Coverage Msg Retrieval? y
        LWC Activation? y                                Auto Answer? n
           CDR Privacy? n                             Data Restriction? n
 Redirect Notification? y                    Idle Appearance Preference? n
 Bridged Call Alerting? n                  Personalized Ringing Pattern: 1
Active Station Ringing? n                      Restrict Last Appearance? y
           Data Module? n                           Mute Button Enabled? y
          Speakerphone: 2-way                          Expansion Module? n


            Audix Name: _______*
   Message Server Name: _______*                    Audible Message Waiting? n
      Display Language: english                           Disp Client Redir? n

                                                 Select Last Used Appearance? n
```

Screen 5-189. Page 1 of the Form

*Field only appears on G3rV3 systems

```
                                   STATION

 SITE DATA
      Room: _______                                  Headset? n
      Jack: _____                                    Speaker? n
     Cable: _____                                   Mounting? d
     Floor: _______                              Cord Length: 0
  Building: _______                                Set Color: ______


 ABBREVIATED DIALING
     List1: _________          LiSt2: _________          List3: _________

 BUTTON ASSIGNMENTS
   1: call-appr                          6: _________
   2: call-appr                          7: _________
   3: call-appr                          8: _________
   4: _________                          9: _________
   5: _________                         10: _________
```

Screen 5-190. Page 2 of the Form

```
                                   STATION

 FEATURE BUTTON ASSIGNMENTS

   1: _________                         13: _________
   2: _________                         14: _________
   3: _________                         15: _________
   4: _________                         16: _________
   5: _________                         17: _________
   6: _________                         18: _________
   7: _________                         19: _________
   8: _________                         20: _________
   9: _________                         21: _________
  10: _________                         22: _________
  11: _________                         23: _________
  12: _________                         24: _________
```

Screen 5-191. Page 3 of the Form

```
                                        STATION

SOFTKEY  BUTTON  ASSIGNMENTS

  1: _____
  2: _____
  3: _____
  4: _____
  5: _____
  6: _____
  7: _____
  8: _____
  9: _____
 10: _____
 11: _____
 12: _____
 13: _____
 14: _____
 15: _____
```

Screen 5-192. Page 4 of the Form

```
                                        STATION

EXPANSION MODULE BUTTON ASSIGNMENTS

  1: _____                    13: _____
  2: _____                    14: _____
  3: _____                    15: _____
  4: _____                    16: _____
  5: _____                    17: _____
  6: _____                    18: _____
  7: _____                    19: _____
  8: _____                    20: _____
  9: _____                    21: _____
 10: _____*                   22: _____*
 11: _____*                   23: _____*
 12: _____*                   24: _____*
```

Screen 5-193. Page 5 of the Form for 8434D: Expansion Module

*Single LED buttons.

Implementation Notes:

The BCC field is only displayed if the ISDN-PRI option is enabled on the System-Parameters Customer-Options form.

The Active Station Ringing field is only displayed if the G3 Version is V3 or later on the System-Parameters Customer-Options form.

The Display Language field is only displayed if Display Module is “y.”

The Coverage Module field is not displayed for the 8434D voice terminal.

The AUDIX Name and Messaging Server Name fields are only displayed for G3r V2 and later configurations.

Page 5 of the form is for the 8434D terminal only, This page only appears if the Expansion Module field on page 1 contains “y.”

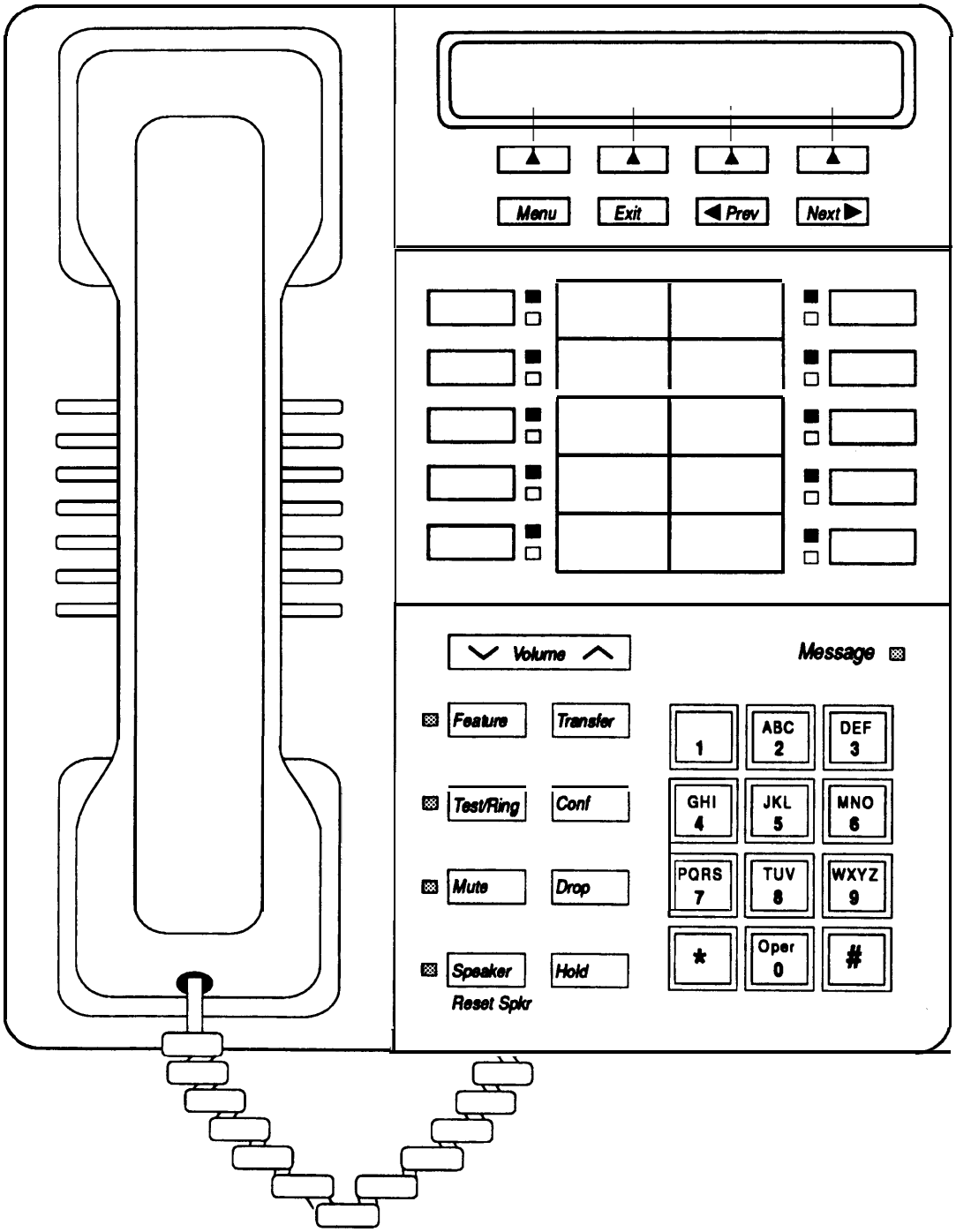


Figure 5-53. 8410D Voice Terminal

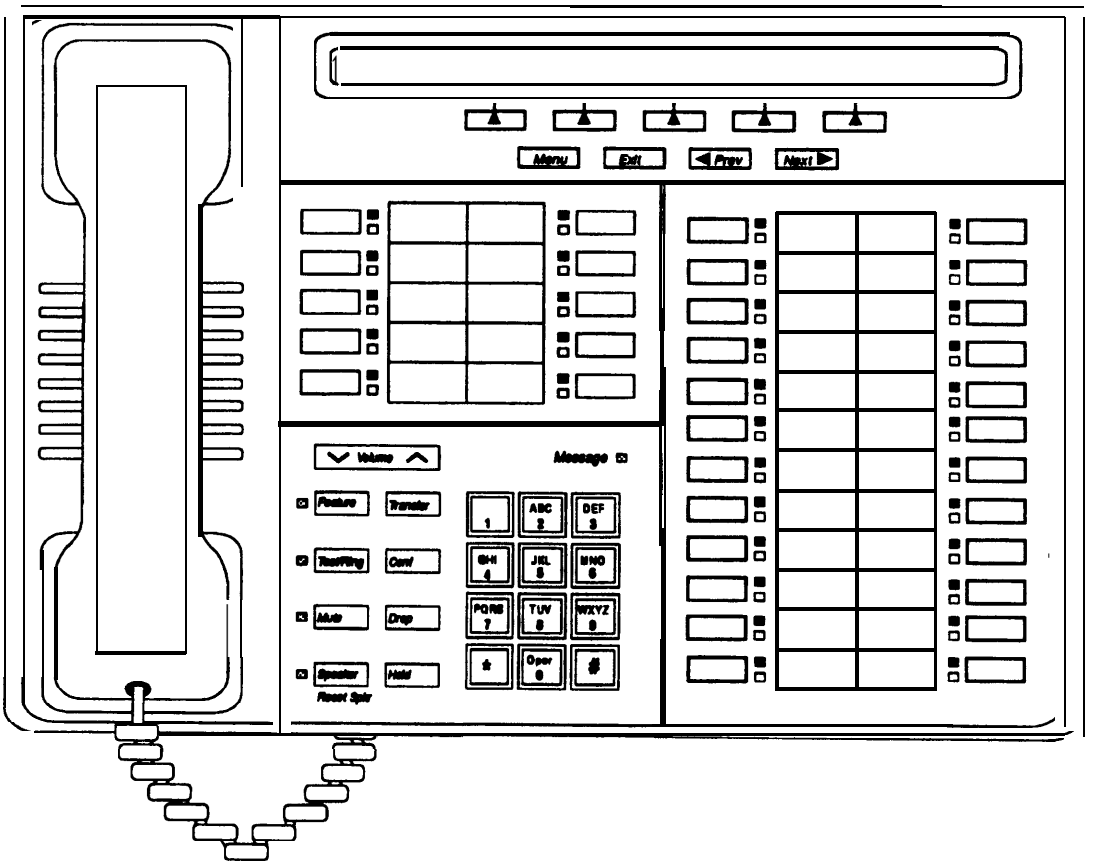


Figure 5-54. 8434D Voice Terminal

Table C-1. Maximum System Parameters For Hardware and Software Items *(continued)*

ITEM	G3 V1				G3 V1.1 or V2				
	G3vsV1 ABP/PBP	G3sV1 ABP/PBP	G3IV1/ G3I-Global	G3rV1	G3IV1.1-286	G3vsV2 ABP/PBP	G3sV2 ABP/PBP	G3IV2-386	G3rV2
Basic CMS									
Daily Summary Reports	7	7	7	7	7	7	7	7	7
Measured Agents	75	75	200	200	200	75	75	200	200
Measured Splits	12/24	12/24	99	99	w	12/24	12/24	99	99
Measured Trunk Groups	16/32	16/32	99	32	32	16/32	16/32	32	32
Measured VDNs	NA/24	NA/24	99	512	99	NA/24	NA/24	99	512
Reporting Periods (30 or 60 min)	25	25	25	25	25	25	25	25	25
Number of Terminal User IDs	5	5	5	8	5	5	5	5	8
Cabinets									
EPN									
MCC(8)	NA	NA	2	21	2	NA	NA	2	21
SCC(8)	NA	NA	8	80	8	NA	NA	8	80
small (Upgrades only)(9)	NA	NA	2	20	2	NA	NA	2	20
Inter-Port Network connectivity									
Port Network	1	1	3	22	3	1	1	3	22
Max No. of Port Networks/Cabinet	1	1	1	2	1	1	1	1	2
Switch Node Carriers (Simplex)	NA	NA	NA	2	NA	NA	NA	NA	2
Switch Node Carriers (Duplex)	NA	NA	NA	4	NA	NA	NA	NA	4
DS1 Converter Complex (Simplex)	NA	NA	NA	20	NA	NA	NA	NA	20
DS1 Converter Complex (Duplex)	NA	NA	NA	40	NA	NA	NA	NA	40
PPN									
MCC (10)	NA	NA	1	1	1	NA	NA	1	1
SCC/ESCC	NA	4	4	NA	4	NA	4	4	NA
CSCC	1	NA	NA	NA	NA	1	NA	NA	NA
Remote Modules									
Remote Port Network	NA	NA	2/1	21	2	NA	NA	2	21
Call Appearances									
Bridged images/Appearance	7	7	7	15	7	7	7	7	15
Call Appearances/Station(11)	54	54	54	54	54	54	54	54	54
Max. Appearances per Ext.	10	10	10	10	10	10	10	10	10
Min. Appearances per Ext.	2	2	2	2	2	2	2	2	2
Total Bridged Appearances	200	200	1600/2,400	10,000	1,600	200	200	2,400	25,000
Max.Simultaneous Off-Hook per Call(12)	5	5	5	5	5	5	5	5	5

8. The EPNs in G3r can be DS1-remote EPNs.

9. Small systems refer to the two-carrier cabinet systems that are no longer sold to new customers.

10. MCC includes Medium Cabinet.

11. The number of call appearances is the sum of primary and bridged appearances; at most ten can be primary. A maximum of 54 administrable buttons are supported for the 7434D terminal—34 buttons in the basic terminal and an additional 20 button in the coverage module.

12. Does not apply to conferencing.

Table C-1. Maximum System Parameters For Hardware and Software Items *(continued)*

ITEM	G3 V1				G3 V1.1 or V2 (16)				
	G3vsV1 ABP/PBP	G3sV1 ABP/PBP	G3IV1/ G3I-Global	G3rV1	G3IV1.1-286	G3vsV2 ABP/PBP	G3sV2 ABP/PBP	G3/V2-386	G3rV2
Call Coverage									
Coverage Answer Groups (CAG)	30	30	200	500	200	30	30	200	750
Coverage Paths with Hospitality Parameter Reduction	150 NA/5	150 NA/5	600 5	5,000 5	600 5	150 NA/5	150 NA/5	600 5	7,500 5
Coverage Paths Incl. in Call Covg.Report	100	100	100	100	100	100	100	100	100
Coverage Path per Station (13)	4	4	4	4	4	4	4	4	4
Covarage Pionts in a Path	3	3	3	3	3	3	3	3	3
Max Users/Coverage Path (14)	500	500	2900 (3500)	21,875	2900	500	500	3,500	36,065
Members per CAG	8	8	8	8	8	8	8	8	8
Call Detail Recording									
CDRU Trackable Extensions	200	200	1,600, 2400	10,000	1,600	200	200	2,400	25,000
We-switch Call Trackable Extensions	100	100	100	500	100	100	100	100	500
No. of CDRUs/System (15)	1	1	1	1	1	1	1	1	1
Call Forwarding (Follow-me)									
Cdl Forwarded Digits (off-net)	16	16	16	16	16	16	16	16	16
Call Forwarded Numbers	200	200	1,600/2,400	10,000	1,600	200	200	2,400	25,000
Call Park									
Attnd.Grp.Common Shared Exten.Nos.	10	10	10	40	10	10	10	10	80
No. of Parked Calls	180	180	723	5,302	723	180	180	723	5,302
Call Pickup Groups									
Call Pickup Members/Group	50	50	50	50	50	50	50	50	50
Call Pickup Members/System	200	200	1600/ 2400	10,000	1,600	200	200	2,400	25,000
No. of Groups With Hospitality Parameter Reduction	100 NA/5	100 NA/5	800 5	5,000 5	800 5	100 NA/5	100 NA/5	800 5	5,000 5

13. Only available with ABP when AT&T Voice Power adjunct (AUDIX, AUDIX Voice Power, AUDIX Voice Power Lodging, and DEFINITY AUDIX) are used.

14. The maximum number of users per coverage path equals the number of dial plan extensions (including hunt groups, TEGs, etc.).

15. The CDRU adjunct capacity is 40,000 calls per hour, and exceeds the system cell capacity for all systems except for G3r.

16. For G3iV3, Intra-Switch CDR Trackable Extensionsis 1000. For G3rV3, Intra-Switch CDR Tradable Extensions is 5000.

Groups

After the voice terminals are added, the following items can be administered using the add commands:

- Abbreviated Dialing (System, Group, Enhanced)
- Hunt Groups
- Call Coverage Answer Groups
- Pickup Groups
- Intercom Groups
- Terminating Extension Groups

Trunk Groups

Trunk groups are assigned by entering the command **add trunk-group 1-99 (or next).** For the Hospitality Reduction Parameter feature, only 50 trunk groups can be assigned.

The Network Access Features forms are filled out by the Account Team and must always be entered. The Network Access forms are provided in two sections, Private and Public. The Public Network Access includes the Trunk Group forms which, when entered, provide voice terminals and attendants with access to and from the public network.

Private Network Access allows calls to be connected to several networks, such as the following:

- Common Control Switching Arrangement (CCSA)
- Digital Signal Level 1 (DS1) Interface
- Electronic Tandem Network (ETN)
- Enhanced Private Switched Communications Service (EPSCS) Access
- Tandem Tie Trunk Network (TTN)
- Integrated Services Digital Network-Primary Rate Interface (ISDN-PRI)
- Software Defined Data Network (SDDN)

Administrative Tasks—System

This section covers administrative tasks that allow the System Manager to add, remove, and change system and voice terminal features to meet business requirements. The following administrative tasks are covered:

- How to log in and log off
- How to change your password
- How to set up the system to allow remote administration
- How to administer the system from a remote location
- How to administer netcon channels
- How to initially administer dial plan and feature access codes
- How to administer abbreviated dialing
- How to set time and date
- How to print on demand
- How to list history
- How to set up night service

How to Log In and Log Off

The system translations are protected by the login/password concept. The login name identifies the type of terminal user to the system. The password is a personal code that can be changed periodically to enhance system security. Before any system administration commands or functions can be executed, the System Manager must successfully log into the system and receive the **enter command:** prompt.

NOTE:
When logging into the system from a remote location using the asynchronous link, the user should not be on the link too long or leave the terminal logged on unattended. This link is used by the system to transmit alarms and errors to the Customer Service Support Organization (CSSO).

NOTE:
Please note that logins such as

- cust
- rcust
- bcms
- browse

don't have default passwords. This means that these logins have to be assigned passwords by the System Administrator at setup time. Use the **init** login and use the "change password" command to enter a password which can be used for each of the logins listed above.

Log Into System

The following procedure is used for logging into the system.

1. Turn on the terminal, if required. Screen displays:

   Login:

2. Enter your login name and press the RETURN key. Screen displays:

   Password:

3. Enter your password and press the RETURN key.

   For security reasons, the password is not displayed as you type it. The system verifies a valid login and password name were entered. If an invalid login or password name was entered, the system responds with

   INCORRECT LOGIN

   Login:

4. If **INCORRECT LOGIN** is displayed, you must repeat Steps 2 and 3.

5. If the system recognizes the login and password name,

   Terminal Type (Enter 513, 715, 4410, 4425, or VT220): [513]

   is displayed on the screen.

6. Do one of the following to identify the terminal type:

   - If the system is equipped with a 4410 terminal, enter **4410** and press the RETURN key.
   - If the system is equipped with a 4425 terminal, enter **4425** and press the RETURN key.
   - If the system is equipped witha513 BCT, press the RETURN key. The 513 in brackets [513] is the system default.
   - If the system is equipped with a 610 or 615 MT BCT that hasa513 emulation cartridge, press the RETURN key. The 513 in brackets [513] is the system default.
   - If the system is equipped witha610or615 MT that does not have the 513 emulation cartridge, enter **4410** and press the RETURN key.

7. If **enter command:** is displayed, you may enter the desired command. Press the HELP key to obtain the list of permissible commands.

System Logoff Procedure

The system logoff procedure should be done any time the system terminal is not being used. This assures the system translations are not accidentally corrupted. To log off the system, type “logoff’ and press the RETURN key. The system automatically disconnects you from the system.

If the user logs off at the terminal located within 50 feet from the switch, the system automatically requests a login. The terminal user accessing the maintenance board, data channel, or netcon channel is disconnected from the system when “logoff’ is typed in. These users must dial up the system to access the system.

System Management

Forced Password Aging and Administrable Logins for G3V3

G3V3 provides enhanced login/password security by adding a security feature that allows the user to define their own logins/passwords and to specify a set of commands for each login. The system allows up to 11 customer logins. Each login name can be customized and must be made up of from 3 to 6 alphabetic/numeric characters, or a combination of both. A password must be from 4 to 11 characters in length and contain at least 1 alphabetic and 1 numeric symbol. Password aging is an optional feature that the super-user administering the logins can activate. The password for each login can be aged starting with the date the password was created, or changed, and continuing for a specified number of days (number of days from 1 to 99). The user is notified at the login prompt, 7 days before the password expiration date, that his/her password is about to expire. When the password expires the user is required to enter a new password into the system before logging in. If a login is added or removed, the “Security Measurement” reports are not updated until the next hourly poll, or a **clear measurements security-violations** command is entered. Once a non-super-user has changed his or her password, the user must wait 24 hours from the time he or she changed the password to change the password again.

G3V3 is delivered to the customer with one customer “super-user” login/password defined. The customer is required to administer additional login/passwords as needed. The super-user login has full customer permissions and can customize any login that they create. Login permissions for a specified login can be set by the super-user to block any object that can affect the health of the switch (up to 40 administration or maintenance objects commands can be blocked for a specified login). When an object (administrative or maintenance command) is entered in the blocked object list on the Command Permissions Categories Restricted Object List form, the associated administrative or maintenance actions cannot be performed by the specified login.

G3V3 commands are grouped into three command categories. Each of the three command categories has a group of command subcategories listed under them,

and each command subcategory has a list of command objects that the commands acts on. A super-user can set a users permissions to restrict or block access to any command in these categories. The three main categories are:

- Common Commands
  - Display Admin. and Maint. Data
  - System Measurements
- Administration Commands
  - Administer Stations
  - Administer Trunks
  - Additional Restrictions
  - Administer Features
  - Administer Permissions
- Maintenance Commands
  - Maintain Stations
  - Maintain Trunks
  - Maintain Systems
  - Maintain Switch Circuit Packs
  - Maintain Process Circuit Packs

These categories are displayed on the Command Permissions Categories form.

To Log In

To log in to the switch:

1. Enter your login name and password on the login and password screen.

   If your password has expired you see the message:

   "Your password has expired, enter a new one."

   The password aging screen is displayed when a user logs in. If the user's password is expired the user is prompted to enter a new password. If your password is within 7 days of the expiration date you see:

```
Login:  telmgr
Password:

Your Password has expired, enter a new one.
Reenter  Current  Password:
         Old  Password:
         New  Password:
Reenter  New  Password:
```

Screen D-32a. Password Aging Screen

Administering Customer Logins and Forced Password Aging for G3V3

Adding Customer Logins and Assigning Initial Password

There are two types of customer logins:

- "super-user" gives access to the **add, change, display, list,** and **remove** commands for all customer logins and passwords. The super-user can administer any mix of super-user/non-super-user logins up to a total of ten system logins. A non-super-user cannot change other user passwords, login characteristics, or permissions.
- "non-super-user" permissions are limited by restrictions specified by the super-user when administering the non-super-user login. A non-super-user can change his/her password with permission set by the super-user, however once a password has been changed the non-super- user must wait 24 hours before changing the password again. The super-user may administer up to 10 non-super-user logins.

To add a customer login you must be a super-user, have administrative permissions, and:

1. Enter the **add login [name]** command to access the Login Administration form.
2. Enter your super-user password in the Password of Login Making Change field on the Login Administration form.

   The 3-to 6-character login name (characters 0-9, a-z, A-Z) entered with the **add login [name]** command is displayed in the Login's Name field.
3. Enter "customer" in the Login Type field. The system default for the Login Type field is "customer." The maximum number of customer logins of all types is 11.
4. Enter super-user or non-super-user in the Service Level field.
5. To disable a login following a login security threshold violation, enter "y" in the Disable Following a Security Violation field. This field is a dynamic

field and only appears on the Login Administration form when the SVN Login Violation Notification feature is enabled. The system default for the Disable Following a Security Violation field is “y.”

6. Enter a password for the new login in the Login’s Password field. A password must be from 4 to 11 characters in length and contain at least 1 alphabetic and 1 numeric symbol. Valid characters include numbers, and !&*?;’^(),.:- (the system will not echo the password to the screen as you type).

7. Re-enter the password in the Login’s Password field (the system will not echo the password to the screen as you type).

8. Enter the number of days from the current day, when you wish the password to expire, in the Password Aging Cycle Length field. If a blank is entered in this field, password aging does not apply to the specified login. Valid entries are from 1 to 99 days or a blank. When a login password is within seven days or less from the expiration date, a warning message is displayed when the user logs in: “WARNING: your password will expire in xx days.”

```
                        LOGIN  ADMINISTRATION
              Password of Login Making Change:

         LOGIN  BEING  ADMINISTERED
                              Login’s Name: xxxxxxx
                                Login  Type:
                              Service  Level: ____________________
Disable  Following  a  Security  Violation?_


       LOGIN‘S  PASSWORD  INFORMATION
                       Login’s Password:
                  Reenter  Login’s  Password:
              Password Aging Cycle Length:
```

Screen D-32b. Login Administration

Changing a Login’s Attributes

To change a customer login’s attributes you must be a super-user, have administrative permissions (specifically, the Administration Permission field must be set to “y” for the super-user), and:

1. Enter the **change login [name]** command to access the Login Administration form.

2. Enter your super-user password in the Password of Login Making Change field on the Login Administration form.

The 3-to 6-character login name (characters 0-9, a-z, A-Z) entered with the **change login [name]** command is displayed in the Login's Name field.

3. Enter "customer" in the Login Type field. The system default for the Login Type field is "customer." The maximum number of customer logins of all types is 11.
4. Enter super-user or non-super-user in the Service Level field.

   NOTE:
   You cannot change your own service level.

5. To disable a login following a login security threshold violation, enter "y" in the Disable Following a Security Violation field. This field is a dynamic field and only appears on the Login Administration form when the SVN Login Violation Notification feature is enabled. The system default for the Disable Following a Security Violation field is "y."
6. Enter a password for the new login in the Login's Password field. A password must be from 4 to 11 characters in length and contain at least 1 alphabetic and 1 numeric symbol. Valid characters include numbers, and !&*?;'^(),.:- (the system will not echo the password to the screen as you type).
7. Re-enter the password in the Login's Password field (the system will not echo the password to the screen as you type).
8. Enter the number of days from the current day, when you wish the password to expire, in the Password Aging Cycle Length field. If a blank is entered in this field, password aging does not apply to the specified login. Valid entries are from 1 to 99 days or a blank. When a login password is within seven days or less from the expiration date, a warning message is displayed when the user logs in: "WARNING: your password will expire in xx days."

Administering Login Command Permissions

Users with super-user permissions can set the permissions of the logins they create. The Command Permissions Categories form displays fields that a user with super-user permissions can give or limit access to. G3V3 commands are divided into three categories:

- Common Command
- Administration Commands
- Optional Maintenance Commands

Each of the three main categories have subcategories listed under them that when set to a "y;; give permission to use the commands sets associated with that category. When the Command Permissions Categories form is displayed for a login, the subcategories fields appear with the fields set to give the login full permissions for that "login type." The super-user administering login

permissions can set any of these field to deny access to a command category for the specified login. If the super-user making the assignments has full super-user permissions and would like to limit permissions for a category, they can do so by entering “y” in the Additional Restrictions field located under the Administration Category section of the Command Permissions Categories form.

To administer command permissions, log in as super-user and:

1. Access the Command Permissions Categories form by entering the command **change permissions login [login name].** When the Command Permission Categories form is displayed for a login, the default permissions for that “login type” are shown on the form. The super-user administering the login can change a “y” to “n” for each subcategory field on the form.
2. Select a category for the login and enter “y” in each field where permission to perform a administrative or maintenance action is needed. The command object you select must be within the permissions for the login type you are administering,

   If the Maintenance option is set to “y” on the Customer Options form, the super-user can enter “y” in the Maintain Switch Circuit Packs? or Maintain Process Circuit Packs fields.
3. A super-user with full super-user permissions (super-user administering the login cannot have the Additional Restrictions field set to “y” for his/her own login) can restrict additional administrative or maintenance actions for a specified login by entering “y” in the Additional Restrictions field on the Command Permission Categories form. Enter the additional restrictions for a login in the Restricted object list fields on the Command Permission Categories Restricted Object List form. You can enter up to 40 command names (object names) to block actions associated with a command category for a specified login. You can enter 2 pages of commands (objects) to be restricted with 20 commands per page for a total of 40 commands per login.

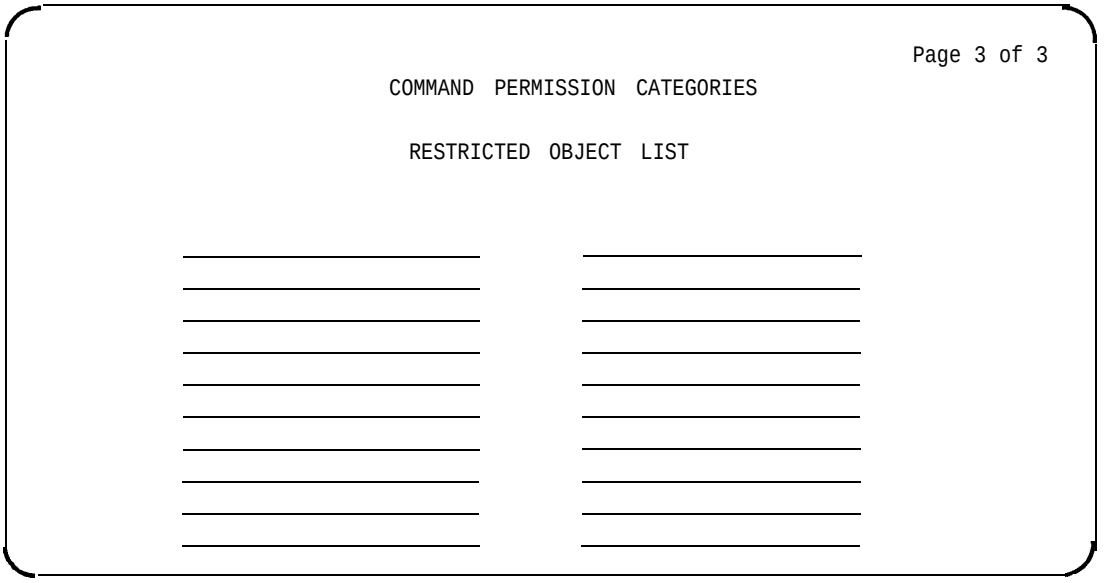
```
                                                              Page 1 of 3
                        COMMAND  PERMISSION  CATEGORIES
                          Login  Name:  super-user

COMMON  COMMANDS

               Display Admin. and Maint. Data? y
                         System  Measurements? _*

ADMINISTRATION  COMMANDS

      Administer  Stations? y            Administer Features? y
        Administer  Trunks? y          Administer Permissions? y
  Additional  Restrictions? n

MAINTENANCE  COMMANDS

        Maintain  Stations? n       Maintain Switch Circuit Packs? n
          Maintain  Trunks? n      Maintain Process Circuit Packs? n
         Maintain Systems? n
```

Screen D-32c. Command Permission Categories (Page 1 of 3)

*This field is only displayed on the G3i (S or VS) systems.

```
                                                              Page 2 of 3
                        COMMAND  PERMISSION  CATEGORIES

                          RESTRICTED OBJECT LIST

          _____________________      _____________________
          _____________________      _____________________
          _____________________      _____________________
          _____________________      _____________________
          _____________________      _____________________
          _____________________      _____________________
          _____________________      _____________________
          _____________________      _____________________
          _____________________      _____________________
          _____________________      _____________________
```

Screen D-32d. Command Permissions Categories (Page 2 of 3)



Screen D-32e. Command Permissions Categories (Page 3 of 3)

NOTE:
A user cannot change his/her own login permissions.

The following tables contain the Command Permission Categories Restricted Object List entries for maintenance commands. Use this list to restrict additional maintenance objects for a specified login/password. The Additional Restrictions field on the Command Permissions Categories form must be set to "y."

Table D-32a. Command Permissions Form Entries — Maintain Process Circuit Packs

Action	Object
TEST	alarms
TEST	shadow-link
TEST	customer-alarm
RESET	interface
TEST	interface
TEST	environment
BUSYOUT	link
RELEASE	link
TEST	link
TEST	maintenance
TEST	memory
TEST	processor
TEST	netcon
TEST	tone-clock
RECYCLE	carrier
DISABLE	synchronization
ENABLE	synchronization
SET	synchronization
RESET	board
TEST	inads
TEST	pms
TEST	wakeup-log
TEST	pm-log
TEST	cdr-link
TEST	sp-link
BUSYOUT	pms
BUSYOUT	wakeup-log
BUSYOUT	pm-log
BUSYOUT	cdr-link
BUSYOUT	sp-link
RELEASE	wakeup-log
RELEASE	pms-log
RELEASE	pms
RELEASE	cdr-link
RELEASE	sp-link
RELEASE	tdm
BUSYOUT	tdm

* Intel only.
** MIPS only.
*** Must be super-user

(Continued on next page)

Table D-32a. Command Permissions Form Entries — Maintain Process Circuit Packs *(continued)*

Action	Object
RELEASE	tone-clock
BUSYOUT	tone-clock
SET	tdm
TEST	duplication-interface**
SET	exp-link
TEST	spe-standby
TEST	synchronization
RESET	maintenance
SET	signaling-group
TEST	signaling-group
TEST	lan
TEST	isdn-testcall
STATUS	isdn-testcall
CLEAR	isdn-testcall
LIST	isdn-testcall
TEST	tsc-administered
STATUS	tsc-administered
TEST	tape
TEST	mss**
TEST	mss-net**
TEST	disk**
BUSYOUT	disk**
RELEASE	disk**
RESET	disk**
TEST	host-adapter
BUSYOUT	host-adapter
RELEASE	host-adapter
RESET	host-adapter
TEST	data-storage**
BUSYOUT	tape
RELEASE	tape
RESET	tape
TEST	switch-control
BUSYOUT	spe-standby
RELEASE	spe-standby
TEST	card-mem*

* Intel only.
** MIPS only.
*** Must be super-user

Table D-32b. Command Permissions Form Entries — Maintain Switch Circuit Packs

Action	Object
BUSYOUT	board
RELEASE	board
TEST	board
CLEAR	pkt
TEST	led
BUSYOUT	port
RELEASE	port
TEST	port
CLEAR	stargate-port**
TEST	packet-control*
TEST	packet-interface**
BUSYOUT	ds1-facility
RELEASE	ds1-facility
TEST	ds1-facility
CLEAR	port

* Intel only.
** MIPS only.

*** Must be super-user

Table D-32c. Command Permissions Form Entries — Maintain Stations

Action	Object
TEST	data-module
BUSYOUT	data-module
RELEASE	data-module
BUSYOUT	station
RELEASE	station
TEST	station

Table D-32d. Command Permissions Form Entries — Maintain Trunks

Action	Object
BUSYOUT	modem-pool
RELEASE	modem-pool
TEST	modem-pool
BUSYOUT	trunk
RELEASE	trunk
TEST	trunk
BUSYOUT	packet-control
RELEASE	packet-control
BUSYOUT	pri-endpoint
RELEASE	pri-endpoint
TEST	pri-endpoint
BUSYOUT	access-endpoint
RELEASE	access-endpoint
TEST	access-endpoint
TEST	atms trunk
TEST	atms port
TEST	atms board

* Intel only.
** MIPS only.
*** Must be super-user

Table D-32e. Command Permissions Form Entries — Maintain System

Action	Object
CLEAR	errors
DISPLAY	init-causes
CHANGE	system-maintenance
RESET	system
RESET	packet-control
RESET	packet-interface**
CLEAR	link
CLEAR	interface
UPGRADE	software
UPGRADE	software
CLEAR	meas-ds1-summary
BUSYOUT	fiber-link**
RELEASE	fiber-link**
RESET	fiber-link**
TEST	fiber-link**
SET	switch-node-clock**
BUSYOUT	pnc**
RELEASE	pnc**
RESET	pnc**
SET	pnc**
FORMAT	disk**
CONFIGURE	tape**
CONFIGURE	tape spe-active**
CONFIGURE	tape spe-standby**
CONFIGURE	tape SPE-A**
CONFIGURE	tape SPE-B**
RESET	port-network**
RESET	spe-standby
CHANGE	system-duplication**
COPY	bootimage**
COPY	coredump**
REMOVE	update-file**
CLEAR	ds1-facility**
TEST	sys-link**
CLEAR	lan**

*Intel only.
**MIPS only.
***Must be super-user

Following are tables that show command-sorted lists available to G3V3 users. The tables are sorted by category.

Table D-32f. Command Permissions Form Entries — Display Administration and Maintenance

Action	Object
DISPLAY	digit-absorption
DISPLAY	button-location-aca
DISPLAY	abbreviated-dialing 7103A-buttons
LIST	abbreviated-dialing group
DISPLAY	abbreviated-dialing group
DISPLAY	abbreviated-dialing personal
LIST	abbreviated-dialing personal
DISPLAY	abbreviated-dialing system
DISPLAY	abbreviated-dialing enhanced
DISPLAY	alarms
DISPLAY	announcements
DISPLAY	route-pattern
DISPLAY	time-of-day
DISPLAY	attendant
DISPLAY	console-parameters
LIST	wakeup incomplete
LIST	wakeup requests
DISPLAY	coverage answer-group
LIST	coverage answer-group
DISPLAY	paging code-calling-ids
LIST	paging code-calling-ids
LIST	configuration all
LIST	configuration board
LIST	configuration control
LIST	configuration software
LIST	configuration station
LIST	configuration trunk
LIST	configuration carrier
LIST	configuration network
DISPLAY	cor
LIST	cor
DISPLAY	cos
DISPLAY	coverage groups
DISPLAY	coverage path
LIST	coverage-path
DISPLAY	feature-access-codes
DISPLAY	data-module
LIST	data-module
LIST	do-not-disturb group
LIST	do-not-disturb station
LIST	emergency

(Continued on next page)

Table D-32f. Command Permissions Form Entries — Display Administration and Maintenance *(continued)*

Action	Object
DISPLAY	errors
DISPLAY	events
LIST	extension-type
DISPLAY	system features
DISPLAY	dialplan
DISPLAY	call-screening
DISPLAY	second-digit
DISPLAY	hunt-group
LIST	hunt-group
DISPLAY	intercom-group
LIST	intercom-group
DISPLAY	paging-loudspeaker
DISPLAY	system-maintenance
DISPLAY	modem-pool
LIST	modem-pool
DISPLAY	system customer-options
CHANGE	password
DISPLAY	personal-CO-line
LIST	personal-CO-line
DISPLAY	permissions
LIST	cor
DISPLAY	pickup-group
LIST	pickup-group
LIST	pms-down
DISPLAY	port
CHANGE	remote-call-coverage
DISPLAY	rhnpa
DISPLAY	station
LIST	station
LIST	wakeup station
DISPLAY	term-ext-group
LIST	term-ext-group
DISPLAY	time
DISPLAY	ars-toll
LIST	measurements security-violations summary
LIST	measurements security-violations detail
DISPLAY	trunk-group
LIST	trunk-group
DISPLAY	listed-directory-numbers
LIST	groups-of-extensions
STATUS	synchronization

(Continued on next page)

Table D-32f. Command Permissions Form Entries — Display Administration and Maintenance *(continued)*

Action	Object
STATUS	login
STATUS	trunk-group
STATUS	trunk
STATUS	station
STATUS	tti
STATUS	data-module
STATUS	attendant
STATUS	link
STATUS	interface*
STATUS	communications-interface-proc-channels
STATUS	communications-interface-hop-channels
STATUS	periodic-scheduled
STATUS	pnc
STATUS	cabinet**
STATUS	port-network**
STATUS	stargate-port
STATUS	packet-control*
STATUS	packet-interface**
STATUS	pms
STATUS	wakeup-log
STATUS	pm-log
STATUS	cdr-link
STATUS	sp-link
LIST	bridged-extensions
DISPLAY	circuit-packs
DISPLAY	ixc-codes
DISPLAY	communication-interface links
DISPLAY	communication-interface proc-channels
DISPLAY	communication-interface hop-channels
DISPLAY	ds1
DISPLAY	synchronization
LIST	aca-parameters
DISPLAY	mess-selection route-pattern
DISPLAY	mess-selection trunk-group
DISPLAY	mess-selection wideband-trunk-grp
DISPLAY	system-parameters hospitality
CHANGE	report-scheduler
LIST	report-scheduler
REMOVE	report-scheduler
DISPLAY	isdn cpn-prefix
STATUS	system all-cabinets

(Continued on next page)

Table D-32f. Command Permissions Form Entries — Display Administration and Maintenance *(continued)*

Action	Object
LIST	history
DISPLAY	isdn network-facilities
MONITOR	skill
MONITOR	system
MONITOR	vdn
LIST	trunk-group-history
LIST	vdn
LIST	bcms agent
LIST	bcms split
LIST	bcms trunk
LIST	bcms vdn
LIST	bcms loginIDs
DISPLAY	login-ids
DISPLAY	adjunt-controlled-agents
DISPLAY	alphanumeric-dial-table
LIST	route-pattern
STATUS	administered-connection
STATUS	pri-endpoint
STATUS	access-endpoint
DISPLAY	pgate
LIST	pgate
STATUS	system 1st-cabinet
STATUS	system 2nd-cabinet
STATUS	system 3rd-cabinet
DISPLAY	signaling-group
LIST	signaling-group
STATUS	signaling-group
DISPLAY	isdn tsc-gateway
DISPLAY	alias-station
DISPLAY	vdn
LIST	vdn
DISPLAY	toll
LIST	toll all
LIST	toll restricted-call
LIST	toll toll-list
LIST	toll unrestricted-call
DISPLAY	ars analysis
LIST	ars analysis
DISPLAY	aar analysis
LIST	aar analysis
LIST	ars route-chosen

(Continued on next page)

Table D-32f. Command Permissions Form Entries — Display Administration and Maintenance *(continued)*

Action	Object
LIST	aar route-chosen
DISPLAY	vector
LIST	vector
DISPLAY	intra-switch-cdr
LIST	intra-switch-cdr
DISPLAY	node-routing
LIST	node-routing
DISPLAY	enp-number-plan
DISPLAY	udp
LIST	udp
DISPLAY	ars digit-conversion
LIST	ars digit-conversion
DISPLAY	cabinet
LIST	cabinet
DISPLAY	aar digit-conversion
LIST	aar digit-conversion
DISPLAY	sit-treatment
STATUS	bri-port
DISPLAY	fiber-link**
LIST	fiber-link**
DISPLAY	administered-connection
LIST	administered-connection
DISPLAY	site-data
DISPLAY	access-endpoint
LIST	access-endpoint
DISPLAY	pri-endpoint
LIST	pri-endpoint
MONITOR	scr
STATUS	hardware-group
STATUS	switch-node**
DISPLAY	adjunct-names
LIST	set-data
STATUS	spe
LIST	mct-history
DISPLAY	mct-group-extensions
STATUS	health
LIST	test-call detail
LIST	test-call summary
DISPLAY	test-schedule
LIST	test-schedule
DISPLAY	system-parameters cdr

(Continued on next page)

Table D-32f. Command Permissions Form Entries — Display Administration and Maintenance *(continued)*

Action	Object
DISPLAY	system-parameters security
DISPLAY	system-parameters duplication**
DISPLAY	alternate-frl
LIST	trunk-group-members
DISPLAY	agent-loginID
LIST	agent-loginID
LIST	marked-port
LIST	station
DISPLAY	capacity
DISPLAY	meas-selection principal
DISPLAY	meas-selection coverage
MONITOR	security-violations
DISPLAY	svn-button-location
DISPLAY	events
LIST	unstaffed-agents
LIST	sys-link
STATUS	sys-link
DISPLAY	system-parameters country-options
MONITOR	system corm
STATUS	card-mem*
LIST	usage-extensions
LIST	usage-hunt
LIST	usage button-type night-service
LIST	usage button-type hunt-ns
DISPLAY	dsp-msg-auto-wakeup
DISPLAY	dsp-msg-call-identifier
DISPLAY	dsp-msg-date-time
DISPLAY	dsp-msg-lwc
DISPLAY	dsp-msg-mct
DISPLAY	dsp-msg-miscellaneous
DISPLAY	dsp-msg-property-mgmt
DISPLAY	dsp-msg-tod-routing
MONITOR	trunk
DISPLAY	multi-frequency signaling
DISPLAY	vustats-display-format
LIST	vustats-display-format
DISPLAY	bulletin-board
DISPLAY	dsp-msg-softkey-label
DISPLAY	terminal-parameters 603

(Continued on next page)

Table D-32f. Command Permissions Form Entries — Display Administration and Maintenance *(continued)*

Action	Object
DISPLAY	terminal-parameters 8400
LIST	login***
DISPLAY	routing-table
LIST	routing-table

* Intel only.
** MIPS only.
*** Must be super-user

Table D-32g. Command Permissions Form Entries — Administer Features

Action	Object
RESTORE	announcements
SAVE	announcements
ADD	coverage answer-group
CHANGE	coverage answer-group
REMOVE	coverage answer-group
CHANGE	paging code-calling-ids
CHANGE	cor
CHANGE	cos
ADD	coverage-path
CHANGE	coverage-path
REMOVE	coverage-path
CHANGE	feature-access-codes
CHANGE	system-parameters features
CHANGE	system-parameters security
CHANGE	dialplan
CHANGE	call-screening
ADD	second-digit
CHANGE	second-digit
REMOVE	second-digit
ADD	hunt-group
CHANGE	hunt-group
REMOVE	hunt-group
ADD	intercom-group
CHANGE	intercom-group
REMOVE	intercom-group
BUSYOUT	mis
RELEASE	mis
CHANGE	paging-loudspeaker
ADD	pickup-group
CHANGE	pickup-group
REMOVE	pickup-group
DISPLAY	remote-call-coverage
DISABLE	remote-access
ENABLE	remote-access
ADD	term-ext-group
CHANGE	term-ext-group
REMOVE	term-ext-group
SET	time
CLEAR	measurements security-violations
SAVE	translations
CHANGE	listed-directory-numbers
CHANGE	circuit-packs

(Continued on next page)

Table D-32g. Command Permissions Form Entries — Administer Features *(continued)*

Action	Object
CHANGE	ixc-codes
CHANGE	communication-interface links
CHANGE	communication-interface processor-channels
CHANGE	communication-interface hop-channels
ADD	ds1
CHANGE	ds1
REMOVE	ds1
CHANGE	synchronization
CHANGE	system-parameters hospitality
CHANGE	authorization-code
DISPLAY	authorization-code
LIST	authorization-codes
CHANGE	isdn cpn-prefix
CHANGE	isdn network-facilities
CHANGE	login-ids
ADD	login-ids
CHANGE	adjunt-controlled-agents
CHANGE	alphanumeric-dial-table
ADD	pgate
CHANGE	pgate
REMOVE	pgate
ADD	signaling-group
CHANGE	signaling-group
REMOVE	signaling-group
CHANGE	isdn tsc-gateway
CHANGE	intra-switch-cdr
ADD	intra-switch-cdr
ENABLE	administered-connection
DISABLE	administered-connection
CHANGE	node-routing
CHANGE	enp-number-plan
CHANGE	udp
ADD	cabinet**
CHANGE	cabinet**
REMOVE	cabinet**
CHANGE	sit-treatment
ADD	fiber-link**
CHANGE	fiber-link**
REMOVE	fiber-link**
ADD	administered-connection
CHANGE	administered-connection

(Continued on next page)

Table D-32g. Command Permissions Form Entries — Administer Features *(continued)*

Action	Object
DUPLICATE	administered-connection
REMOVE	administered-connection
CHANGE	site-data
CHANGE	adjunct-names**
BACKUP	disk**
RESTORE	disk**
CHANGE	mct-group-extensions
ADD	test-schedule
CHANGE	test-schedule
REMOVE	test-schedule
CHANGE	system-cdr
COPY	announcements
CHANGE	alternate-frl
ADD	agent-loginID
CHANGE	agent-loginID
REMOVE	agent-loginID
CLEAR	meas-occ-busiest-intrvl
CHANGE	meas-selection principal
CHANGE	meas-selection coverage
CHANGE	system-parameters country-options
CHANGE	dsp-msg-auto-wakeup
CHANGE	dsp-msg-call-identifier
CHANGE	dsp-msg-date-time
CHANGE	dsp-msg-lwc
CHANGE	dsp-msg-met
CHANGE	dsp-msg-miscellaneous
CHANGE	dsp-msg-property-mgmt
CHANGE	dsp-msg-tod-routing
CHANGE	multi-frequency signaling
CHANGE	vustats-display-format
CHANGE	bulletin-board
CHANGE	dsp-msg-softkey-label

** MIPS only.

Table D-32h. Command Permissions Form Entries — Administer Permissions

Action	Object
CHANGE	permissions
ADD	login
CHANGE	login
DISPLAY	login
REMOVE	login
DISABLE	login
ENABLE	login

Table D-32i. Command Permissions Form Entries — Administer Stations

Action	Object
ADD	abbreviated-dialing 7103A-buttons
CHANGE	abbreviated-dialing 7103A-buttons
REMOVE	abbreviated-dialing 7103A-buttons
ADD	abbreviated-dialing group
CHANGE	abbreviated-dialing group
REMOVE	abbreviated-dialing group
CHANGE	abbreviated-dialing personal
REMOVE	abbreviated-dialing personal
ADD	abbreviated-dialing system
CHANGE	abbreviated-dialing system
REMOVE	abbreviated-dialing system
ADD	abbreviated-dialing enhanced
CHANGE	abbreviated-dialing enhanced
REMOVE	abbreviated-dialing enhanced
ADD	attendant
CHANGE	attendant
REMOVE	attendant
CHANGE	console-parameters
ADD	data-module
CHANGE	data-module
REMOVE	data-module
DUPLICATE	station
DUPLICATE	data-module
ADD	station
CHANGE	station
REMOVE	station
CHANGE	alias-station
ADD	vdn
CHANGE	vdn
REMOVE	vdn
CHANGE	vector
CHANGE	terminal-parameters 603
CHANGE	terminal-parameters 8400
ADD	routing-table
CHANGE	routing-table
REMOVE	routing-table

Table D-32j. Command Permissions Form Entries — Administer Trunks

Action	Object
CHANGE	digit-absorption
CHANGE	announcements
CHANGE	route-pattern
CHANGE	time-of-day
ADD	modem-pool
CHANGE	modem-pool
REMOVE	modem-pool
ADD	personal-CO-line
CHANGE	personal-CO-line
REMOVE	personal-CO-line
CHANGE	remote-access
DISPLAY	remote-access
CHANGE	rhnpa
CHANGE	ars toll
ADD	trunk-group
CHANGE	trunk-group
REMOVE	trunk-group
CHANGE	meas-selection route-pattern
CHANGE	meas-selection trunk-group
CHANGE	meas-selection wideband-trunk-grp
CHANGE	toll
CHANGE	ars analysis
CHANGE	aar analysis
CHANGE	ars digit-conversion
CHANGE	aar digit-conversion
ADD	access-endpoint
CHANGE	access-endpoint
DUPLICATE	access-endpoint
REMOVE	access-endpoint
ADD	pri-endpoint
CHANGE	pri-endpoint
DUPLICATE	pri-endpoint
REMOVE	pri-endpoint

Display a Specified Login

To display a specified login:

1. Enter the command **display login [login name]** and press the Enter key.

   The system displays the specified login's service level, status, and password aging cycle length.

List Logins

To list all of the system logins and the status of each login:

1. Enter the command **list login.**

   The system displays a list of all current logins and their service levels, status, and password aging cycle length.

Following are the list login status field types:

- **active** — The login is currently in use.
- **inactive** — The login is not in use and can be changed or removed.
- **disabled** — The login's password has been "VOID''ed.
- **svn-disabled** — The Security Violation feature has detected an attempted break-in and "VOID"ed the password.
- **void** — A login that has "void" in the password field.

Remove a Login

To remove a login from the system:

1. Enter the command **remove login [login name].**

   The system displays the Login Administration form.

2. Press the Enter key to remove the login, or press Cancel to exit the remove login procedure without making a change.

Example of Adding a New Login

Filling Out the Login Administration Form

In this example, the login name "telmgr" is displayed in the Login's Name field under the Login Being Administered section of the Login Administration form in step 3. A login type of "customer" is entered in step 4, and a service level of "super-user" is entered in step 5. The Disable Following a Security Violation field is set to "y" in step 6. Remember, this field is dynamic (see step 6).

To add a customer login you must have super-user permissions and:

1. Enter the **add login [telmgr]** command to access the Login Administration form.
2. Enter your super-user password in the Password of Login Making Change field on the Login Administration Form.

   The 3-to 6-character login name (characters 0-9, a-z, A-Z) entered with the **add login [telmgr]** command is displayed in the Login's Name field.
3. Enter "customer" in the Login Type field. The system default for the Login Type field is "customer." The maximum number of customer logins of all types is 11.
4. Enter "super-user" or "non-super-user" in the Service Level field.
5. To disable a login following a login security threshold violation enter "y" in the Disable Following a Security Violation field. This field is a dynamic field and only appears on the Login Administration form when the SVN Login Violation Notification feature is enabled. The system default for the Disable Following a Security Violation field is "y."
6. Enter a password for the new login in the Login's Password field. A password must be from 4 to 11 characters in length and contain at least 1 alphabetic and 1 numeric symbol. Valid characters include numbers, and !&*?;'^(),.:- (the system will not echo the password to the screen as you type).
7. Re-enter the password in the Re-enter Login's Password field (the system will not echo the password to the screen as you type).
8. Enter the number of days from the current day, when you wish the password to expire, in the Password Aging Cycle Length field. If a blank is entered in this field, password aging does not apply to the specified login. Valid entries are from 1 to 99 days or a blank. When a login password is within seven days or less from the expiration date, a warning message is displayed when the user logs in: "WARNING: your password will expire in xx days."

```
                        LOGIN  ADMINISTRATION
               Password of Login Making Change:

         LOGIN  BEING  ADMINISTERED
                              Login's  Name:  telmgr
                                Login  Type:customer
                             Service  Level:super-user
Disable  Following  a  Security  Violation:y


       LOGIN'S  PASSWORD  INFORMATION
                       Login's  Password:
                  Reenter  Login's  Password:
              Password  Aging  Cycle  Length:30
```

Screen D-32f. Login Administration Example

Filling Out the Command Permissions Categories Form

In this example, we are administering the commands permissions for customer super-user login ''telmgr'' on the Command Permissions Categories form. The super-user administering this login has full super-user permissions.

The Additional Restrictions field is set to ''y'' ”on the Command Permissions Categories form for the customer login “telmgr," and the Command Permission Categories Restricted Object List form is displayed with additional restrictions added.

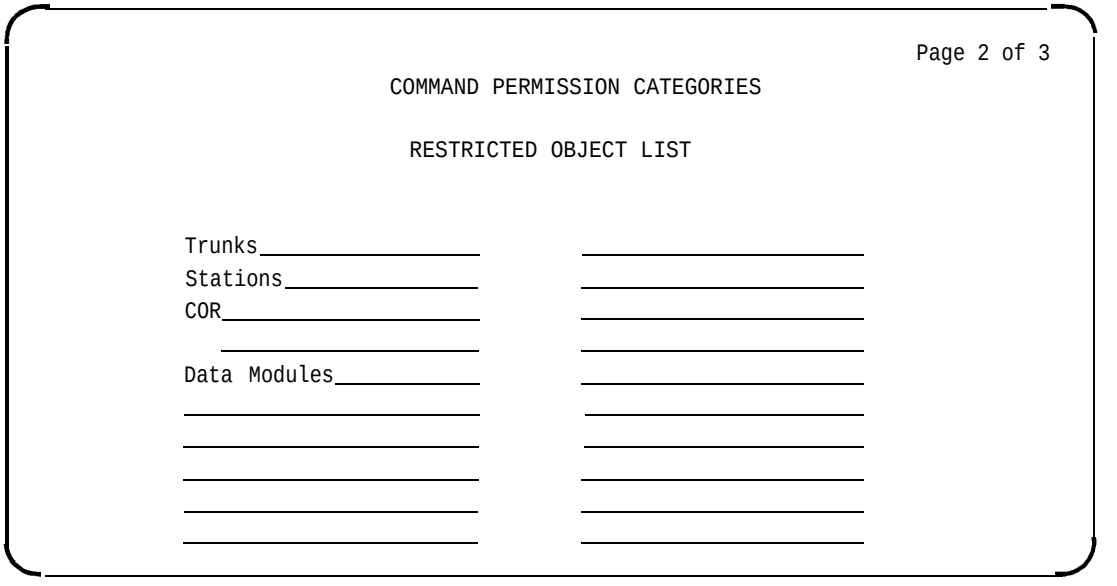
To administer command permissions, log in as super-user and:

1. Access the Commnd Permissions Categories form by entering the command **change permissions login[login name].** When the Command Permissions Categories” form is displayed for a login, the default permissions for that login type are be shown on the form. The super-user administering the login can change “y” to “n” for each sub-category field on the form.
2. Select a category for the login and enter “y” in each field where permission to perform a administrative or maintenance action is needed. The command object you select must be within the permissions for the login type you are administering. If the Maintenance option is set to “y” on the Customer Options form, the super-user can enter “y” in the Maintain Switch Circuit Packs? or Maintain Process Circuit Packs fields.
3. A super-user with full super-user permissions (super-user administering the login cannot have the Additional Restrictions field set to “y” for his/her own login) can restrict additional administrative or maintenance actions for a specified login by entering “y” in the Additional Restrictions field on the Command Permission Categories form. Enter the additional restrictions

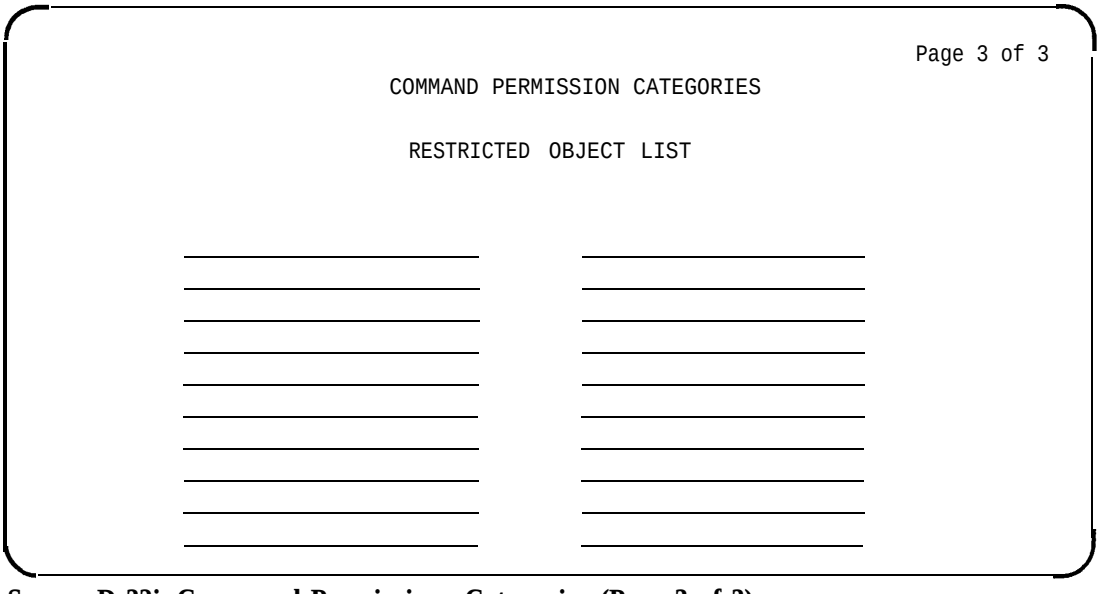
for a login in the Restricted object list fields on the Command Permission Categories Restricted Object List form. You can enter up to 40 command names (object names) to block actions associated with a command category for a specified login. You can enter 2 pages of commands (objects) to be restricted with 20 commands per page for a total of 40 commands per login.

```
                                                                Page 1 of 3
                        COMMAND  PERMISSION  CATEGORIES
                          Login  Name:  super-user

COMMON  COMMANDS

               Display  Admin.  and  Maint.  Data? y

ADMINISTRATION COMMANDS

      Administer Stations ? y             Administer Features? y
        Administer Trunks ? y          Administer permissions ? y
  Additional Restrictions? y

MAINTENANCE COMMANDS

        Maintain Stations? n       Maintain Switch Circuit Packs ? n
          Maintain Trunks? n      Maintain Process Circuit Packs? n
         Maintain Systems? n
```

Screen D-32g. Command Permissions Categories Example (Page 1 of 3)



Screen D-32h. Command Permissions Categories Example (Page 2 of 3)



Screen D-32i. Command Permissions Categories (Page 3 of 3)

Testing a Login

1. Enter your login name at the login prompt.

```
Login:  telmgr
Password:
```

Screen D-32j. Login Prompt Form

After the user enters the correct login name and password and the login is administered correctly, the system displays the command line interface.

How to Set Up System to Allow Remote Administration

Another way to administer the system, other than the Manager I terminal, is from a Remote Terminal. The Remote Terminal can be located either on or off the customer's premises. All functions of the Manager I terminal are retained by the Remote Terminal; however, terminal operation speed is limited to 1200 bps (bits per second) from a dial-up facility.

Up to five terminals can be connected to the system. In any type of configuration, only one terminal at a time can be used for administration purposes such as adding, changing, or deleting system and voice terminal features. The other terminals may be used by ACD supervisors to view Basic Call Management System (BCMS) information. To set up the system to allow for Remote Administration, use the following steps.

NOTE:
Remote Access numbers and barrier code assignments should be kept confidential to prevent unauthorized persons from accessing the system. Toll and service charges resulting from the unauthorized access of the system are the responsibility of the customer. As a result, it is recommended that the Remote Access number and associated Barrier Codes be changed periodically to maintain system security.

NOTE:
Remote Access users should be careful when using any command that requires user input such as next page. This command, if not used properly, will not let the system time out after 30 minutes and logoff the user. If the command is not used properly, system alarms cannot be reported, which may affect system service.

1. If not translated previously, translate all four netcon channels. (See the section on How to Administer Data or Netcon Channels.)
2. Translate a Uniform Call Distribution (UCD) hunt group using a hunt group form.

a. In the Group Extension field, enter an extension number. If the system is equipped with Direct Inward Dialing (DID), enter a DID extension number.

b. In the Group Members Assignment field, enter the four extension numbers (non-DID numbers) previously assigned to the four netcon channels.

If the system will be remotely administered from an on-premises terminal, no additional translations are required.

If the system will be remotely administered from an off-premises location via a dial-up facility, complete Steps 3 and 4.

3. Translate a pooled modem if not translated previously.

4. Translate a trunk group in one of the following ways.

a. DID equipped systems	Using a DID trunk group form, translate a new trunk. The NAME (Tel. number) assigned in the Group Member Assignments field must be the same DID number assigned to the UCD hunt group (see Step 2a).