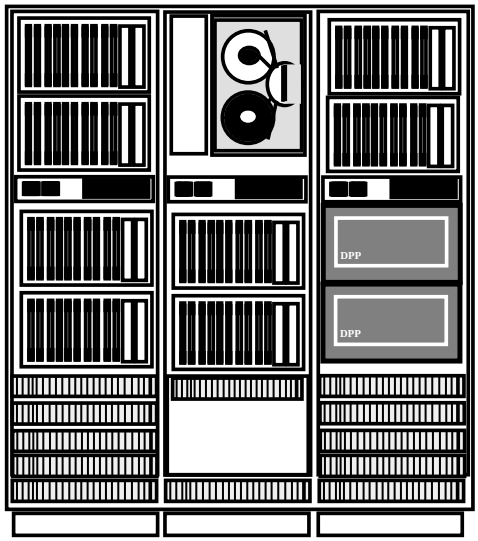
297-1001-543

DMS-100 Family

Data Processing Peripheral (DPP)

Alarm Clearing and Performance Monitoring Guide

BCS35 and up Standard 01.02 May 1994



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Data Processing Peripheral (DPP)

Alarm Clearing and Performance Monitoring Guide

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- Minor editorial changes

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About this document

This document describes the alarm clearing and performance monitoring procedures for the Distributed Processing Peripheral (DPP).

Applicability of this document

Northern Telecom (NT) software releases are called batch change supplements (BCS) and are identified by a number, for example, BCS29.

This document applies to DMS-100 Family offices that have BCS35. Unless the document is revised, it also applies to offices that have software releases greater than BCS35.

More than one version of this document may exist. To determine which version applies to the BCS in your office, check the release information in *Northern Telecom publications master index, 297-1001-001*.

How to identify the software in your office

The *Office feature record D190* lists your current BCS and the NT feature packages that it comprises. To view similar information on screen, enter the following command string at a MAP terminal.

```
PATCHER;INFORM LIST;LEAVE
```

How the DPP documentation package is organized

This document is part of the DPP documentation package that supports Northern Telecom's line of DPP products. The DPP documentation package is a subset of the DMS-100 Family library.

Documents in the DPP documentation package

The DMS-100 Family library is structured in numbered layers, each of which is associated with a Northern Telecom product. The DPP documentation package is in the 297-1001 layer.

The list of DPP documents follows.

How the DPP documents relate to other documents

DPP documents are intended to be used with other documents in the DMS-100 Family library.

Document	Title
297-1001-019	*Distributed Processing Peripheral (DPP) Product Guide*
297-1001-543	*Distributed Processing Peripheral (DPP) Alarm Clearing and Performance Monitoring Guide*
297-1001-536	*Distributed Processing Peripheral (DPP) Card Replacement-Guide*
297-1001-331	*Distributed Processing Peripheral (DPP) Administration Guide*
297-1001-537	*Distributed Processing Peripheral (DPP) Routine Maintenance and Recovery Procedures*

To fully understand the content of the DPP documents, you require documents in these layers:

- DMS-100 basic documents in the 297-1001 layer
- Distributed Processing Peripheral (DPP) documents in the 297-1001 layer

Where to find information

Documents helping you understand this manual, or the tasks it describes, are referenced in the text.

These documents, and other related manuals, follow.

Note: More than one version of these documents may exist. To determine which version of a document applies to the BCS in your office, check the *Northern Telecom Publications Master Index, 297-1001-001*.

Document	Title
297-1001-001	*Master Index of Practices*
GFXINDEX	*General Feature Description Index of Documents*
297-1001-112	*Modular Documentation System (MDS)*
297-1001-128	*AMA - Bellcore Format*
297-1001-310	*Table Editor Reference Manual*
297-1001-821	*DMS Menu Commands Reference* (covers DPP commands)
297-1001-820	*DMS NonMenu Commands Reference*

Document	Title
297-1001-013	*Device Independent Recording Package (DIRP) Product Guide*
297-1001-345	*DIRP Administration Guide*
297-1001-175	*DIRP Planning and Engineering Guide*
297-1001-345	*DIRP Administration Guide*
297-1001-574	*DIRP Recovery Procedures*
297-1001-572	*DIRP Routine Maintenance Guide*
297-1001-356	*DIRP Translation Guide*
297-1001-510	*Log Report Manual*
297-1001-451	*Customer Data Schema* (contains the five DPP translations tables)
297-1001-513	*Input/Output Devices (IOD) Man-Machine Interface Description*

NT and BNR trademarks and the products they represent

Following are all NT and BNR trademarks and their associated products in this document.

Trademark	Product
DMS	*Digital multiplex system* telephone switching equipment
DMS SuperNode	telecommunications switching equipment
MAP	*Maintenance and administration position* telephone communication equipment

What precautionary messages indicate

Caution, danger and warning messages indicate potential risks, as identified in the following chart.

Message	Significance
CAUTION	Possibility of service interruption or degradation
DANGER	Possibility of personal injury
WARNING	Possibility of equipment damage

Examples of these precautionary messages follow.

CAUTION
Calls are dropped when line group controller is busied.
Manually removing the line group controller from service removes all its subtending peripheral modules from service. All calls in progress are dropped.

DANGER
Risk of electrocution
The inverter contains high voltage lines. Do not open the front panel of the inverter unless fuses F1, F2, and F3 have been removed first. Until these fuses are removed, the high voltage lines inside the inverter are active, and you risk being electrocuted.

WARNING
Backplane connector pins may become damaged.
Use light thumb pressure to align the card with the connectors. Next use the levers to seat the card into the connectors. Failure to align the card first may result in bending of backplane connector pins.

How commands, parameters, and responses are represented

Commands, parameters, and responses are represented as follows:

Input prompt (>)

Indicates that the information that follows is a command.

Type the command following the input prompt and press the carriage return key.

Capital letters

Represent commands, fixed parameters, and responses appearing at a MAP.

Enter the command or fixed parameter exactly as it appears on the page.

Lowercase letters

Represent variables.

For commands and parameters, enter the letters or numbers the variable represents. In most instances, the variable name clearly indicates what you must enter. If it does not, further explanations are provided.

In responses (presented in capital letters), lowercase letters represent a range of values.

The following example illustrates the command syntax in this document.

Examples of command syntax in this document

Step	Action
1	Post the card in the inactive unit.
input>	**>POST unit_no card_no state**
parameters>	where unit_no is the number of the inactive unit (0 or 1) card_no is the number of the card you replaced (22-27) state is the state of the unit in which you wish to replace the card (Insv, SysB, ManB or Offl)
Example input>	For example: **>POST 7 1 INSV**
Example output>	`CARD 7 IS POSTED IN UNIT 1 OF MSB16`

Introduction to DPP alarms and performance monitoring

Read Me First:

If you are trying to resolve an alarm, make note of the alarm log message. See Chapter 19 for an alphabetical list of log messages. Locate the message and note the page number listed to the right where the procedure for resolving the alarm is located.

Operation of the DPP on a daily basis involves monitoring the DPP for alarms and verifying that major functions, such as data polling by the HOC, occur as scheduled. As an intelligent stand-alone peripheral of the DMS family, the DPP is configured with alarm reporting, self-diagnostics, and testing facilities to assist you in maintaining its proper functional status.

The DPP is linked to the DMS logutil and alarm reporting system. The DMS logutil system outputs the DPP related log reports. DPP related alarms display on the DMS MAP. The site data command (ERRMAP), used to report special situations or problems in the DPP, corresponds to the DMS logutil system. The testing feature in the DPP software package allows you to examine the sanity of the DPP circuitry. You can initiate testing of the DPP at the DPP level in MAP, from an EAT, or from a rover.

How to use this document

Use the procedures in this document when responding to alarms or monitoring the performance of the DPP. General information is first presented about alarms and performance considerations. Next, information about actual alarm and monitoring functions is presented.

DPP error, recovery, and log message procedural descriptions

The individual message descriptions and procedures vary in length and content; the overall format is the same for each message procedure sheet.

Each error message and recovery procedure is divided into six areas, as described in the following paragraphs. A sample procedure sheet is provided in Figure 1-1.

Message introduction [1]

The first area contains the message format as it would appear at the system maintenance terminal, or equivalent. To the extreme right of the message line is the DPP system version(s) to which the message applies. The DPP system version is identified as BCS followed by a number, such as BCS35.

Immediately following the message output format is a description of any variable (numeric) field data. This data is depicted by lower case letters, such as, xx or yy.

The first area concludes with a brief statement that describes the condition which caused the message to print out.

Alarm indications [2]

Alarm levels, if any, associated with the message are indicated in this area. The first entry in this part indicates the type of action the DPP system takes automatically as a result of the condition or situation which caused the message to print out. Such actions could include a processor switch, session terminated, disk drive system made non-redundant, or N/A (Not Applicable).

Those messages which do not produce an error (alarm) indication are also identified in this area. Such messages are response messages and information only messages. For these type messages, monitor the frequency of occurrence (repetition) over a period of time prior to the initiation of corrective action.

If there is a corresponding ERRMAP (Error Map) entry for the (log message), the entry is noted in this area. Refer to Error Indicators, ERRMAP (Error Map) Command on page 1-5, for information concerning the Error Map and for information on how to use the ERRMAP commands.

The system default levels indicated are those which are defined at start-up time, prior to the entry of specific site data.

Customer-selected alarm levels [3]

This area is provided for the user to complete. Make the appropriate entries in the space(s) provided to reflect the 3-level alarm (assignments) structure established at the site by the user. This structure is user selectable and subject to change; it is recommended that entries be recorded with an erasable marker.

Other alarm indications [4]

This area is for noting what type, if any, audible and/or visual alarms are provided. This area also provides a section for the user to reflect the 3-level alarm (assignments) structure established at the site by the user. This

structure is user-selectable and subject to change; it is recommended that entries be recorded with an erasable marker.

System recovery action [5]

This area provides a brief statement of any actions the DPP takes automatically to clear the error condition. The information provided defines the condition that exists after the system has completed the resident recovery program routines. The completion of these programs results in a stable state configuration. Any transitory or temporary states are omitted. For information only and log messages, this area is designated as N/A. A brief statement of action is included where applicable, that is, session terminated, processor switch, or input rejected.

Craftsperson activity [6]

This area provides the activities and procedures the Craftsperson needs to perform to correct the cause of the error condition. Detailed procedures, such as the steps required for Power Supply replacement, are provided in other parts of this Practice and are referenced accordingly in the procedures.

DPP Alarms

The DPP has been designed with seven distinct methods of reporting system problems or special conditions. System problems can be any situation that could affect the communications between the DMS and the DPP, or the reception, storage, or transmission of AMA data. Special conditions, such as scheduled processor SWACTs and polling sessions, are reported through the alarms and log systems. The seven methods of reporting alarms or status changes are the:

- LED on the front of the CPU cards in position A1 of both processor shelves
- DPP Status and Control Panel
- DMS logutil system DPP100, DPP101, and DPP102 logs
- Site data error MAP command
- DMS MAP alarm heading EXT and IOD positions
- DPP AMA MAP display DPPP and DPPU status lines
- DPP LOGCRD files

Each of the seven methods of examining the status of the DPP or problem reporting has certain limitations. For example, the DPPP and DPPU reports can only be accessed at the MAP DPP level. If another user is currently logged into the DPP level at another terminal this method of alarm reporting cannot be accessed until the other user quits the DPP level in MAP. Proper diagnostics for the DPP will require that a thorough review of the different reporting methods while troubleshooting.

Figure 1-1
DPP error recovery and log message procedure sheet - sample

[1] message as printed on the terminal — Applicable system version I.D.(s) (BCS level)

where: variable data (where applicable)

cause: reason the message appeared

[2]

Alarm Level: Critical, Major, Minor, N/A — Level 0, 1, 2, 3, or, response/information, and what primary action is caused by the alarm (message); processor switch, disk mode switch, disk mode non-redundant.

Corresponds to ERRMAP entry: — ERRMAP message, alarm and level as defined at system start-up (default values).

System Default: Type: _____ Level: _____

[3]

Customer-Selected Alarm Level: As entered by the User during execution of the ERRMAP command (make entries with an erasable marker).

Type: _____ Level: _____

[4]

Other Alarm Indications: Reflects the conditions that are present at the Switch and Status Panel and any audible chimes (where equipped).

Default: Status Panel: _____ Audible: _____

As defined for the system at start-up time.

Customer-Selected: Status Panel: _____ Audible: _____

Reflects the conditions as entered by the User during execution of the ERRMAP command.

[5]

System Recovery Action:

1. Resulting stable-state condition of the system after execution of the internal recovery routines.

[6]

Craftsperson Activity:

1. Procedures to clear the condition(s) that produced the message.

Three level alarm structure

The Error Condition Alarm Code (ECAC) provides three alarm categories. The categories are defined, in order of severity as: critical (crit), major (maj), minor (min), with no alarm defined as the error free (redundant system) operational level. Processor switch (pswitch) and retire (inhibit) are part of the ERRMAP scheme, but are not alarms in the usual sense.

The ECAC provides 14 alarm levels. (The fourteenth alarm level is reserved for the system, to initiate the planned processor switch.) Table 1-1 provides a list of alarms in priority sequence.

Each alarm category, critical, major, and minor is further divided into four levels. These four levels are defined as:

- 0 - no processor switch activity occurs
- 1 - least severe, processor switch activity occurs
- 2 - processor switch activity occurs
- 3 - most severe, processor activity switch occurs

Pswitch is used by the DPP to initiate a planned processor switch as part of the normal system operational routine. Retire (inhibit) indicates a particular alarm has been deactivated for printout and reporting purposes. The alarm condition still exists, but for every subsequent occurrence of the alarm, no further audible, visual indications are provided.

For alarm categories critical, major, and minor, a condition which results in an alarm which activates a level 1, 2, or 3 alarm results in a processor switch. Level 0 alarms for critical, major, and minor, do not result in a processor switch. Level 0 may be reserved for conditions in which a processor switch serves no purpose (such as the condition of BOTH DISKS FULL).

If an alarm occurs that is level 0, no processor switch takes place. Levels 1 through 3 assign priorities to the remaining alarms. If an alarm occurs in the standby processor (minor level 2), and a second alarm occurs in the active processor that is a higher priority than the alarm in the standby processor (minor level 3), a processor switch takes place. The DPP always makes active the processor with the lowest priority of active alarm.

Error MAP command (ERRMAP)

For maintenance and/or service purposes, you may override the existing (system default or customer-selected) alarm by assigning retire (inhibit) status to a particular device or event. This is accomplished through the use of the Error MAP Command (ERRMAP). This prevents subsequent alarm reporting (and possible repetitive processor switches) while maintenance activity/troubleshooting proceeds.

Table 1-1
ECAC alarm reporting priority sequence

CPU LED	Priority level	Alarm category	Response	Notes
E.		Major		Invalid CPU Response
d.	3	Critical	Critical Level 3	Processor switch occurs.
C.	2	Critical	Critical Level 2	Processor switch occurs.
b.	1	Critical	Critical Level 1	Processor switch occurs.
A.	0	Critical	Critical Level 0	Level 0 alarms are alarms only, with no accompanying processor switch.
9.	3	Major	Major Level 3	Processor switch occurs.
8.	2	Major	Major Level 2	Processor switch occurs.
7.	1	Major	Major Level 1	Processor switch occurs.
6.	0	Major	Major Level 0	Level 0 alarms are alarms only, with no accompanying processor switch.
5.	3	Minor	Minor Level 3	Processor switch occurs.
4.	2	Minor	Minor Level 2	Processor switch occurs.
3.	1	Minor	Minor Level 1	Processor switch occurs.
2.	0	Minor	Minor Level 0	Level 0 alarms are alarms only, with no accompanying processor switch.
1.		None		Planned processor switch.
=.		None		All systems operational.

Retiring an alarm does not remove the cause of the alarm. The reason for the alarm may still exist, but the alarm will not appear as an error condition on the status panel. An alarm does not have to be active to be retired.

A distinction is made between retiring an alarm and resetting an alarm. Retiring an alarm prevents the alarm from having an effect on the system.

Resetting the alarm clears its active status until the appropriate error condition reappears, at which time the alarm again becomes active.

The error map command displays a list of all alarms, their respective current level assignments, and whether or not a particular alarm is currently active. The error map command also permits the changing of alarm and level assignments.

See Section 5 for additional and detailed information on the error map.

Log record file

The log record file, which is listed as LOGCRD in the directory listing, contains the various information and log messages that are generated by the DPP. These versions are stored on the disk for several days; the oldest LOGCRD file is automatically deleted by the system to make room for incoming LOGCRDs.

Every time a LOGCRD is closed, the just opened one is another version number. The LOGCRD versions are numbered sequentially from 01 through 255. The 255th+1 version starts the count over again at 01. However, only 56 versions of the LOGCRD can be active at any one time.

The LOGCRDs that are currently on disk are available for (manual) recall at the terminal, if required. The IDXMAINT command is used to gain access to these records. Refer to 297-1001-331, for further details on the use of the IDXMAINT command.

AMA no block alarm

The AMA NO BLOCK ALARM notifies the DPP user that no data blocks have been received from the DMS-100 within an hourly interval starting at the beginning of each clock hour. This condition may indicate a failure of the link between systems, requiring correction before call record data can be handled properly. If no blocks are received within an hours time, an alarm is generated, notifying the user of a possible equipment failure. With this system, potential problems can be reported to the user within an hour of the occurrence. In addition, this system can check any time range, including one which crosses the midnight boundary. Maintenance personnel should conduct periodic checks on data traffic volume occurring at different hourly intervals to determine whether it is normal for data traffic to subside at any time. This information should, in turn, be used to determine when block checks should occur.

To examine the hour boundaries currently assigned, the format of the command is:

AMAHRS <carriage return>

the response message is:

```
BLOCK CHECK START ss END ee HOURS
```

where:
ss = start time hour (00 to 23)
ee = end time hour (00 to 23)

the log message is:

```
NO BLOCK LAST HOUR
```

Temperature alarm

The temperature alarm is activated when one or more of the cooling fans inside the DPP malfunctions, causing the DPP internal temperature to rise. This condition is detected by a temperature sensor located within the DPP chassis, which sends a warning signal through a cabled connection to the DMS-100. The DMS-100 displays the signal in the form of an external alarm.

Low voltage alarm

The low voltage alarm is activated when the voltage output of either of the DPP power supplies becomes insufficient to support normal operation. A voltage sensor located in the DPP power supply detects the condition, sending a warning signal through a cabled connection to the DMS-100. Just as with the temperature alarm, the DMS-100 displays the signal as an external alarm.

AC clock failure

The ac clock failure is activated by a sensor located within the DPP chassis, which sends a signal to the MAP terminal, printed out in the form of a log message.

Note: The ERRMAP entry "NO CLK TIME SET" can be set to INHIBIT if the ac transformer option is not used. Refer to the ERRMAP command or 297-1001-331 for further information.

Fuse alarm

The fuse alarm is activated when a -48 Vdc fuse blows. A -48 Vdc signal is placed on a terminal at the DPP input connection point, where it is then cabled to the DMS-100 and displayed either in the form of a warning light or a MAP level indication or alarm.

Data stream interface card alarm

The DSI Alarm is activated when the DSI fails its own self-diagnostic check. At this point, the DSI sends an alarm bit EOT to the DMS-100. The DMS-100 interprets the alarm bit as an indication that the active recording

volume is full. The DMS-100 rotates the standby volume (the other DPP DSI) to the active position and continues sending AMA to the DPP.

DPP Switch and status panel/rover interface panel

The DPP uses the upper Switch and Status Panel (A chassis) and the Rover Interface Panel (B chassis), which provide status information and manual controls, and Rover terminal interface. The Switch and Status Panel is built directly into the upper right portion of the A chassis. The Rover Interface Panel is built into the upper right portion of the B chassis, as illustrated in Figure 1-2.

The Switch and Status Panel provides switches for changing the operating condition of the A and B processors, alarm status indicators, and a banana jack connection to frame ground. The Rover Interface Panel provides a direct connection for the Rover maintenance terminal and a banana jack connection to frame ground. The banana jack connections on the Switch and Status Panel and Rover Interface Panel provide a means of neutralizing the effects of Electrostatic Discharge (ESD).

See Section 4 for more detailed information on the Switch and Status Panel.

Monitoring the DPP

The DPP performs its functions automatically and requires very little operator intervention during normal operation. Operation of the DPP on a daily basis involves monitoring the DPP for alarms and verifying that major functions, such as data polling, are occurring as scheduled. This chapter describes how to monitor DPP operation on a daily basis.

Monitoring DPP alarms

The DPP alarms indicate faults or conditions that can affect the operation of the DPP. To maintain the reliability of the DPP, check the DPP frequently for alarm conditions. The following describes how to monitor alarms from the DPP.

DPP MAP menu and display

The DPP MAP menu and display in DMS-100 MAPCI provides an immediate display of DPP alarms. To access the DPP MAP menu and display:

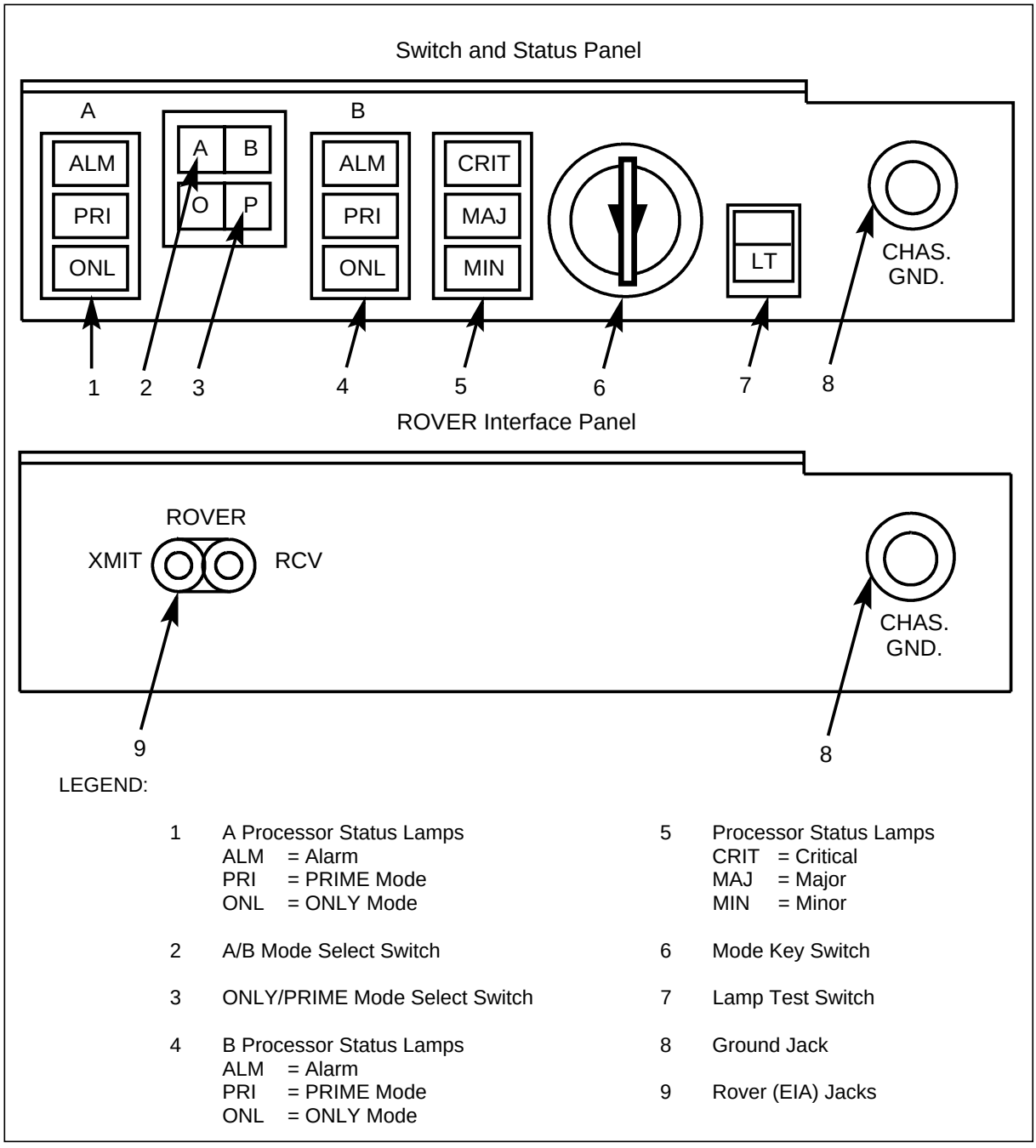
```
>MAPCI;MTC;IOD;DPP AMA
```

The DPP alarms appear in two areas of the MAP display: under the IOD header of the continuous system status display and to the right of the DPPU header of the DPP MAP display. The alarm indicators include:

- DPPCRT (DPP Critical)
- DPPMAJ (DPP Major)
- DPPMIN (DPP Minor)

When a DPP alarm occurs, the appropriate DPP alarm indicator appears to the right of the DPP header of the DPP MAP display and under the IOD header of the continuous system status display, unless a higher priority IOD alarm exists.

Figure 1-2
DPP switch and status panel



LEGEND:

1	A Processor Status Lamps ALM = Alarm PRI = PRIME Mode ONL = ONLY Mode	5	Processor Status Lamps CRIT = Critical MAJ = Major MIN = Minor
2	A/B Mode Select Switch	6	Mode Key Switch
3	ONLY/PRIME Mode Select Switch	7	Lamp Test Switch
4	B Processor Status Lamps ALM = Alarm PRI = PRIME Mode ONL = ONLY Mode	8	Ground Jack
		9	Rover (EIA) Jacks

DPP error MAP display

A more definitive alarm display can be accessed in the DPP unit itself. This display consists of a list of alarm reasons and their corresponding alarm type and level. The display is referred to as the error map display. The error map display can be seen by doing the following:

1 Access the DPP MAP menu and display.

>MAPCI;MTC;IOD;DPP AMA

to access the DPP MAP menu and display.

2 Display the error map entries for the active DPP processor, as follows:

>ERRMAP ACT

```
<error map for the active processor>
```

Note: An asterisk (*) appearing to the left of any DEV/EVT number indicates that alarm is active. The alarm type appearing on the DMS-100 MAP display corresponds to the alarm level indicated in the DPP error map display for the active alarm.

Responding to DPP alarms

When a DPP alarm occurs, contact the maintenance support group to have the alarm cleared.

Checking DPP logs

DPP supports an extensive set of messages that provide operational and fault condition information. DPP displays messages in the DPP MAP display command response field and at the DPP EAT, if equipped. DPP keeps a log file of all DPP messages on its disk. DPP messages are also captured and stored by the DMS-100 log facility. The DPP messages are stored under the DPP100 log report in the DMS-100 log system. DPP100 log report is described in 297-1001-510. See Section 9 for detailed instructions on working with DPP logs.

Checking DPP disk usage

Check the percent usage of the DPP disk regularly to determine if the data polling schedule for the office is sufficient for the traffic through the office. Disk usage can be checked as follows:

>MAPCI;MTC;IOD;DPP AMA
>DISK USAGE

```
Command sent to DPP
uuuuu/aaaaa TRACKS USED
xxx/yyy BAD TRACKS (A/B)
```

where: uuuuu = number of tracks used.
aaaaa = total number of tracks available.
xxx = number of bad tracks mapped on A.
yyy = number of bad tracks mapped on B.

Note: Response to DISK USAGE input: 72, 140, and 380-Mbyte disk drives, w/o 56K polling

```
mmmmm/nnnnnn ALLOCATION UNITS USED
```

where: mmmmm = number of allocation unit in use.
nnnnn = total number of allocation units available.

Note: Response to DISK USAGE input for 380-Mbyte w/56K polling and 760-Mbyte disk drives

Calculate the percentage of tracks used to total tracks available. If the percentage is consistently greater than 70 percent, consider increasing the frequency of DPP polling.

For DPP systems which do not have the enhanced disk storage capability, DPP automatically generates alarms when disk usage reaches 70 percent and beyond. At 70 percent, a minor alarm is raised and the DISK USE > 70% message is output. At 90 percent, a major alarm is raised and the DISK USE > 90% message is output. At 99 percent, a major alarm is raised, and the disk mode is made non_redundant. One disk is taken off-line, and the other disk is made ONLY. The DISK USE > 99% and OFFLINE DISK CONTAINS UNPOLLED DATA messages are output. When no more disk space is available, a critical alarm is raised and the BOTH DISKS FULL message is output. EOT is returned from the DSI ports and the DPP stops recording at this point.

It is important to avoid this situation by ensuring that the normal disk usage is kept well below 70 percent.

For DPP systems with disk capacity enhancement, when the amount of data on the disks reaches 70% of total storage capacity, a minor alarm is raised. No secondary data is deleted from storage at this point. When occupancy reaches 90% of maximum disk capacity, the oldest secondary file is deleted so that occupancy is reduced to below the 90% threshold. As new primary files are added to the disk, the oldest secondary files continue to be deleted. When all secondary files have been removed, the message journal files are deleted. If primary data occupancy continues to exceed the 90 % threshold, a major alarm is generated. When occupancy reaches 100%, the DPP disks mode drops to a nonredundant or ONLY mode. The active disk stops writing data and the standby disk is cleared to accept new primary AMA data. This cleared standby disk then becomes the active disk. Each hour, a

major alarm and log message are generated to notify personnel that the DPP is in the ONLY mode.

In the extreme case that the second disk should be 100% full, and end-of-tape (EOT) status is generated by the DPP. This causes the DMS-100 to switch to the Data Stream Interface. The DPP responds with another EOT status, forcing the DMS-100 to continue writing to an optional parallel file. At this point, the DPP alarm is raised to critical status. In compliance with Bellcore requirements that primary data not be overwritten, no new data can be written to the DPP disk at this point.

Verifying scheduled processor switch

The DPP automatically switches processors at 3:00 a.m. each morning, to exercise each processor. Verify that the processor switch activity is occurring as expected by examining the DPP100 log reports as outlined in Scanning DPP Logs Using LOGUTIL for a MP-SWITCH message occurring at about 3:00 a.m. If the switch did not occur, look for a message indicating the reason. Refer the problem to the maintenance support group.

Verifying polling of data

Verify that the DPP is being polled at the scheduled intervals. Scan the DPP100 logs as outlined in, Scanning DPP Logs, Using LOGUTIL for a SES CON message followed by a SES DIS message. Note the times each Message occurred. If the times do not correspond to the scheduled times, contact Collector personnel to determine the cause.

Checking the daily DPP statistics

The DPP maintains statistics on AMA data, the DPP disks, and the DPP man-machine interface for the current day and the previous day. The statistics can be viewed using the REPORT command. The statistics can help detect the development of a problem before it reaches a critical level. Check the statistics regularly, particularly the AMA and DISK statistics, as follows:

```
>MAPCI;MTC;IOD;DPP AMA
>REPORT rep_type rep_period
Command sent to DPP
<statistics specified are displayed>
```

where: rep_type is the type of report: AMA, DISK, or MMI

rep_period is the report period: TDAY for today's statistics or YDAY for yesterday's statistics.

For the AMA statistics, note the number of AMA blocks and records lost and the number of invalid blocks received. A high number of lost AMA blocks and records indicates that the DPP may be receiving AMA data faster

than it can process it or that a possible fault exists in the DPP. A high number of invalid blocks indicates a possible problem in the DMS-100. In either case, contact the maintenance support group to investigate the problem.

For the disk statistics, note the number of SCSI bus errors and disk errors. High numbers indicate a possible problem in the DPP disk system. If a problem is apparent, contact the maintenance support group to investigate the problem.

For the MMI statistics, note the number of message retries, retry threshold exceeded, and audit failures. High numbers indicate a problem in the DMS-100/DPP MMI system, which includes the DPP QUAD SIO cards, the DPPpower alarm and communications card, the DMS-100 IOC controller cards, or the cabling between the DMS-100 and DPP. If a problem is apparent, have the maintenance support group investigate the problem.

Statistical reports

AMA statistics

This feature allows you to examine the AMA data transfer activity for the DPP system. The data available for examination is divided into two reports:

- today's statistics
- yesterday's statistics.

To obtain the reports:

1 For today's AMA statistics:
Enter: (at the terminal)

>REPORT AMA TDAY (cr)

Proper response = (Refer to Table 2-1.)

2 For yesterday's AMA statistics:
Enter: (at the terminal)

>REPORT AMA YDAY (cr)

Proper response = (Refer to Table 2-1.)

3 if no data is found in the previous day's statistics file, the following message is generated:

```
NO DATA ACCUMULATED
```

Table 2-1
AMA statistics report

a. Today's AMA Statistics

```
TODAY'S REPORT AMA STATISTICS
AMA BLKS RECEIVED . . . . .xxxxxxxx  (From DSI Intfc)
AMA BLKS PROCESSED  . . xxxxxxxx  (Sent to disk)
INVALID BLK COUNT . . . . . .xxxxxxxx  (Exception file blocks)
INVALID REC COUNT  . . . . .xxxxxxxx  (Exception file blocks)
AMA BLOCKS LOST . . . . . .xxxxxxxx  (Blocks overwritten)
AMA RECORDS LOST . . . . .xxxxxxxx  (Failed writing to disk)
FORMAT CR TO DISK . . . . .xxxxxxxx  (Formatted call records)
```

b. Yesterday's AMA Statistics

```
YESTERDAY'S REPORT AMA STATISTICS
AMA BLKS RECEIVED . . . . .xxxxxxxx  (From DSI Intfc)
AMA BLKS PROCESSED  . . xxxxxxxx  (Sent to disk)
INVALID BLK COUNT . . . . . .xxxxxxxx  (Exception file blocks)
INVALID REC COUNT  . . . . .xxxxxxxx  (Exception file blocks)
AMA BLOCKS LOST . . . . . .xxxxxxxx  (Blocks overwritten)
AMA RECORDS LOST . . . . .xxxxxxxx  (Failed writing to disk)
FORMAT CR TO DISK . . . . .xxxxxxxx  (Formatted call records)
```

AMA BLKS RECEIVED	number of AMA data blocks received by the Main processor from the DMS-100 through the DSI.
AMA BLKS PROCESSED	number of AMA data blocks whose call records have been validated by the Main processor and sent to DPR storage, prior to writing to disk.
INVALID BLK COUNT	number of AMA data blocks which have failed validation and have been sent to the Exception (EXC) file on disk.
INVALID REC COUNT	number of unformatted call records encountered.
AMA BLOCKS LOST	number of AMA data blocks overwritten in DSI (TAPE BLOCKS LOST) or in the Main processor (DSI BUFFER OVERFLOW), or not written to disk due to a disk error.
AMA RECORDS LOST	number of records not written to disk due to a disk write failure.
FORMAT CR TO DISK	number of call records written to the disk.

MMI statistics

This feature allows you to examine the MMI link transfer activity for the DPP system. The data available for examination is divided into two reports:

- today's statistics
- yesterday's statistics.

To obtain the reports:

1 For today's MMI statistics:
Enter: (at the terminal)

>REPORT MMI TDAY (cr)

Proper response = (Refer to Table 2-2.)

2 For yesterday's MMI statistics:
Enter: (at the terminal)

>REPORT MMI YDAY (cr)

Proper response = (Refer to Table 2-2.)

Table 2-2
MMI statistics report

a. Today's MMI Statistics

```
TODAY'S REPORT MMI STATISTICS
LINK . . . . . .#      1      #      2
MESSAGE RETRYS . . . . . .    xxx          xxx
RETRY THRESH EXCEEDED         xxx          xxx
AUDIT FAILURES . . . . . .    xxx          xxx
```

b. Yesterday's MMI Statistics

```
YESTERDAY'S REPORT MMI STATISTICS
LINK . . . . . .#      1      #      2
MESSAGE RETRYS . . . . . .    xxx          xxx
RETRY THRESH EXCEEDED         xxx          xxx
AUDIT FAILURES . . . . . .    xxx          xxx
```

MESSAGE RETRYS	number of times the timer expired while attempting to send a message over an MMI link; results in subsequent attempts to send the message (4).
RETRY THRESH EXCEEDED	number of times the message retry attempts exceeded the threshold count (5).
AUDIT FAILURES	number of failures of automatic MMI link test. Test is initiated each time the retry threshold is exceeded.

Disk statistics

This feature allows you to examine the disk related activity for the DPP system. The data available for examination is divided into two reports:

- today's statistics
- yesterday's statistics.

To obtain the reports:

1 For today's disk statistics:
Enter: (at the terminal)

>REPORT DISK TDAY (cr)

Proper response = (Refer to Table 2-3.)

2 For yesterday's disk statistics:
Enter: (at the terminal)

>REPORT DISK YDAY (cr)

Proper response = (Refer to Table 2-3.)

Table 2-3
Disk statistics report

a. Today's Disk Statistics
system response = for DPP systems without the 56KB polling feature; no NT6M94AA PCA mounted in slots A7 and B7

```
TODAY'S REPORT DISK STATISTICS
DISK . . . . . .#      A      #      B
SCSI BUS ERRORS . . . . . .    x             x
DISK ERRORS . . . . . .        x             x
HIGH QUE USE . . . . . .       x             x
```

b. Yesterday's Disk Statistics

```
YESTERDAY'S REPORT DISK STATISTICS
DISK . . . . . .#      A      #      B
SCSI BUS ERRORS . . . . . .    x             x
DISK ERRORS . . . . . .        x             x
HIGH QUE USE . . . . . .       x             x
```

SCSI BUS ERRORS	number of failed attempts to communicate with indicated disk controller via the SCSI bus. Alarm is generated when two consecutive SCSI bus errors occur. Includes these as well as isolated errors. Counts are normally zero. Persistent appearance of non-zero values indicates imminent failure of the disk intfc or controller.
DISK ERRORS	number of errors reported by indicated disk controller. Alarm generated when two consecutive disk errors occur. Includes these as well as isolated errors. Counts are normally zero. Persistent appearance of non-zero values indicates imminent failure of a disk drive or controller.

(continued)

Table 2-3
Disk statistics report (continued)

HIGH QUE USE	entry below the A heading is meaningful. Report is the highest number of read/write accesses that have been simultaneously waiting to complete during reporting period. This number is between three and seven. A higher number can be caused by frequent SCSI bus or disk errors as well as excessively high traffic periods.

a. Today's Disk Statistics

system response = for DPP systems w/ 56K polling feature; with a NT6M94AA PCA mounted in slots A7 and B7

```
TODAY'S REPORT DISK STATISTICS
DISK . . . . . .        A          B
VENDOR ID . . . . . xxxxxxxx   xxxxxxxx
REVISION LEVEL . . . . . .  xxxx       xxxx
DISK CAPACITY (MB) . . . . . .  xxxx       xxxx
MANUFACTURE DEFECTS . .  xxxx       xxxx
GROWN DEFECTS . . . . . .  xxxx       xxxx
SCSI BUS ERRORS . . . . . .  xxxx       xxxx
DISK ERRORS . . . . . .  xxxx       xxxx
PEAK LOAD . . . . . .  x          x
```

b. Yesterday's Disk Statistics[1, 2]

```
YESTERDAY'S REPORT DISK STATISTICS
DISK . . . . . .        A          B
VENDOR ID . . . . . xxxxxxxx   xxxxxxxx
REVISION LEVEL . . . . . .  xxxx       xxxx
DISK CAPACITY (MB) . . . . . .  xxxx       xxxx
MANUFACTURE DEFECTS . .  xxxx       xxxx
GROWN DEFECTS . . . . . .  xxxx       xxxx
SCSI BUS ERRORS . . . . . .  xxxx       xxxx
DISK ERRORS . . . . . .  xxxx       xxxx
PEAK LOAD . . . . . .  x          x
```

VENDOR ID	identifies the manufacturer of the disk drive
REVISION LEVEL	indicates revision level of disk drive firmware
DISK CAPACITY	size of the disk drive in megabytes
MANUFACTURE DEFECTS	number of disk defects mapped out by the manufacturer
GROWN DEFECTS	number of defects found and mapped out during system operation
SCSI BUS ERRORS	number of recoverable failed attempts to communicate with the indicated disk drive via the SCSI bus.
DISK ERRORS	number of errors reported by the disk drive

(continued)

Table 2-3
Disk statistics report (continued)

PEAK LOAD	highest number of disk jobs waiting to be processed during a specified time period (that is, per 24 hour interval)

Notes:
Note 1: If this report is requested while the disk system is in AO or BO, the report column for offline disk contains the characters N/A for VENDOR ID, REVISION LEVEL, DISK CAPACITY, MANUFACTURE DEFECTS, and GROWN DEFECTS. SCSI BUS ERRORS, DISK ERRORS, and PEAK LOAD are still reported. PEAK LOAD reports as 0.
Note 2: If the disk mode is NONE, N/A appears in both columns for VENDOR ID, REVISION LEVEL, DISK CAPACITY, MANUFACTURE DEFECTS, and GROWN DEFECTS. SCSI BUS ERRORS, DISK ERRORS, and PEAK LOAD are still reported. PEAK LOAD reports as 0.

End

DPP power and ground requirements

DC power requirements

The DPP system receives dc power from the CO dc power system. Minimum operating voltage is -44 Vdc; maximum is -56 Vdc, although to operate properly, the DPP suffers no damage if a temporary low voltage condition occurs. However, voltages in excess of -56 Vdc may cause damage to DPP hardware. Figures 3-1, 3-2, and 3-3 show the dc power connections to the DPP.

The DPP places a 6 ampere current load on the dc power source when fully operational. The noise levels that are embedded on the CO dc power system by the DPP are:

- -35 dBmv 0 - 5 MHz
- -30 dBmv 5 - 50 MHz

Power alarm condition reporting

If a blown fuse is sensed on the -48 Vdc input line of the DPP power supply, the system places -48 Vdc on a normally open terminal of the chassis (A or B) that contains the blown fuse. If a low voltage condition from the power supply is sensed, telephony ground (battery return) is placed on a normally open contact of the alarm connector for that chassis.

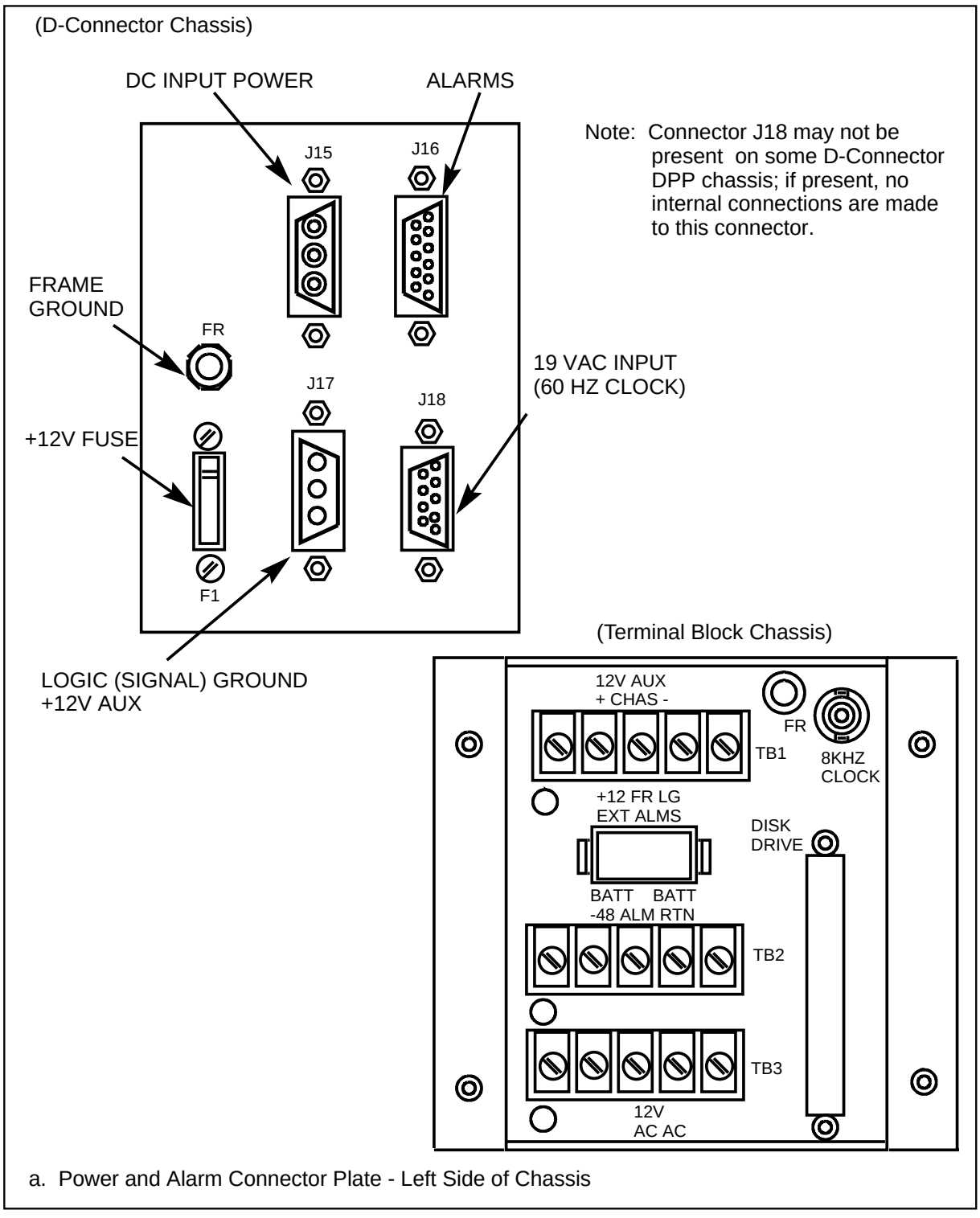
AC power requirements

Note: Use of the ac transformer is optional. Consult with technical assistance personnel for further information if the ac option is in use on the DPP . Use of the ac transformer requires a 110 V ac input to the DMS-100 frame. This condition may cause an infraction of Isolated Frame Ground.

The DPP has available an optional ac transformer to make use of an external ac power source for the operation of the internal system clock. The minimum operating ac voltage is 98 Vac, 60 Hz, maximum is 135 Vac, 60 Hz. The source for the ac voltage is a commercial 110 Vac, 60 Hz convenience outlet. Transformer output is approximately 19 Vac.

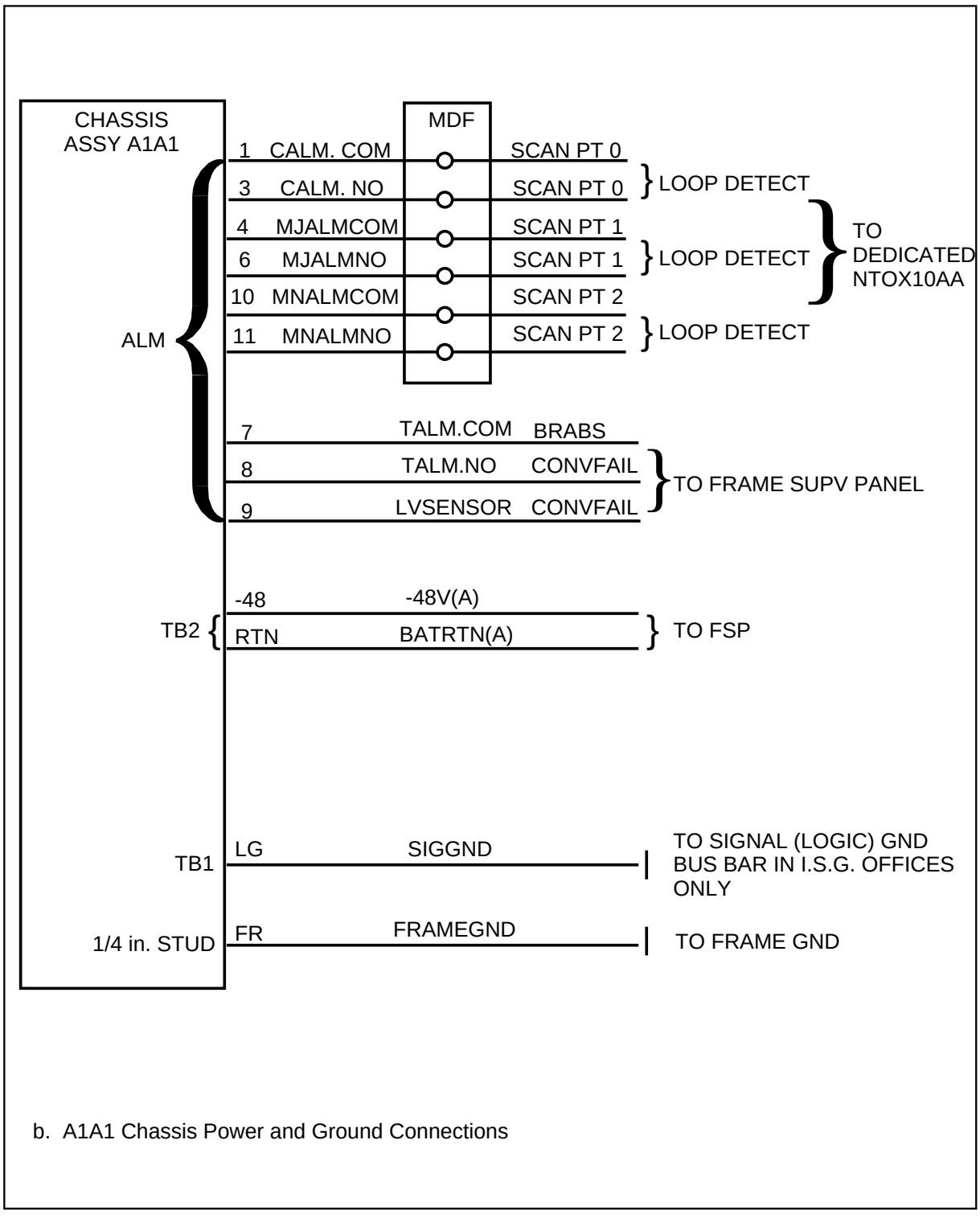
Current drain on the commercial ac source is approximately 100 ma, if used. Figure 3-1, Figure 3-2, and Figure 3-3 provides ac connection details.

Figure 3-1
DPP power and alarm bulkhead connectors (sheet 1 of 3)



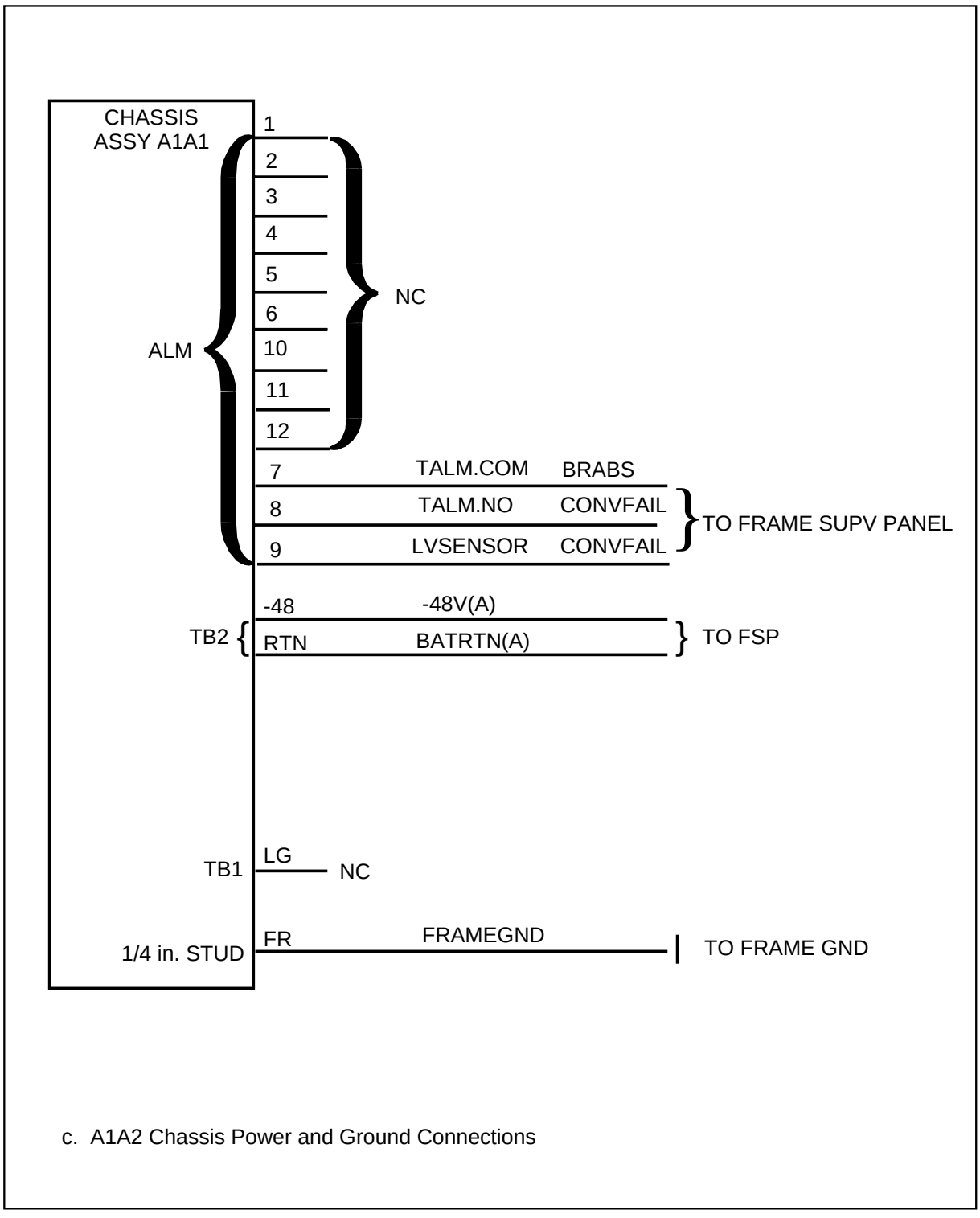
a. Power and Alarm Connector Plate - Left Side of Chassis

Figure 3-2
DPP power and alarm bulkhead connectors (sheet 2 of 3)



b. A1A1 Chassis Power and Ground Connections

Figure 3-3
DPP power and alarm bulkhead connectors (sheet 3 of 3)



c. A1A2 Chassis Power and Ground Connections

In the event of ac power failure, the system automatically switches to an internally powered dc clock. An information message is output to the terminal, as shown by:

```
>> KEY “ACR” ON AC RECV. <<
```

Note: This message is not valid for DPP systems equipped with: 380-Mbyte disk drives with 56K polling; NT6M94AA PCA mounted in slots A7 and B7 of the DPP or 760-Mbyte disk drives, all instances.

When ac power has been restored, the system clock can be manually reactivated and set to the proper time.

Note: The ERRMAP entry “NO CLK TIME SET” can be set to INHIBIT if the ac transformer option is not used.

DPP external connector wiring

Refer to Figures 3-1, 3-2, 3-3, and Table 3-1 for DPP external connector wiring. The table is partitioned into two categories: (1) DPP systems with terminal block (TB) connectors, and, (2) DPP systems with D-type connectors (D-Conn). References to the applicable figures are provided.

Grounding interface

Internal grounding of the DPP is a star-type arrangement, with battery, logic, and frame grounds isolated from each other. Connections for each of the grounds are indicated on the power and alarm connector panels. Refer to Figure 3-4.

No arrangements are required for the ac ground conductors. The ac ground for the clock is terminated at the wall transfer.

Note: The 8 KHz connector is not present on later model DPP systems; those equipped in the EMC chassis.

Figure 3-4
DPP system grounding interface to central office grounding system

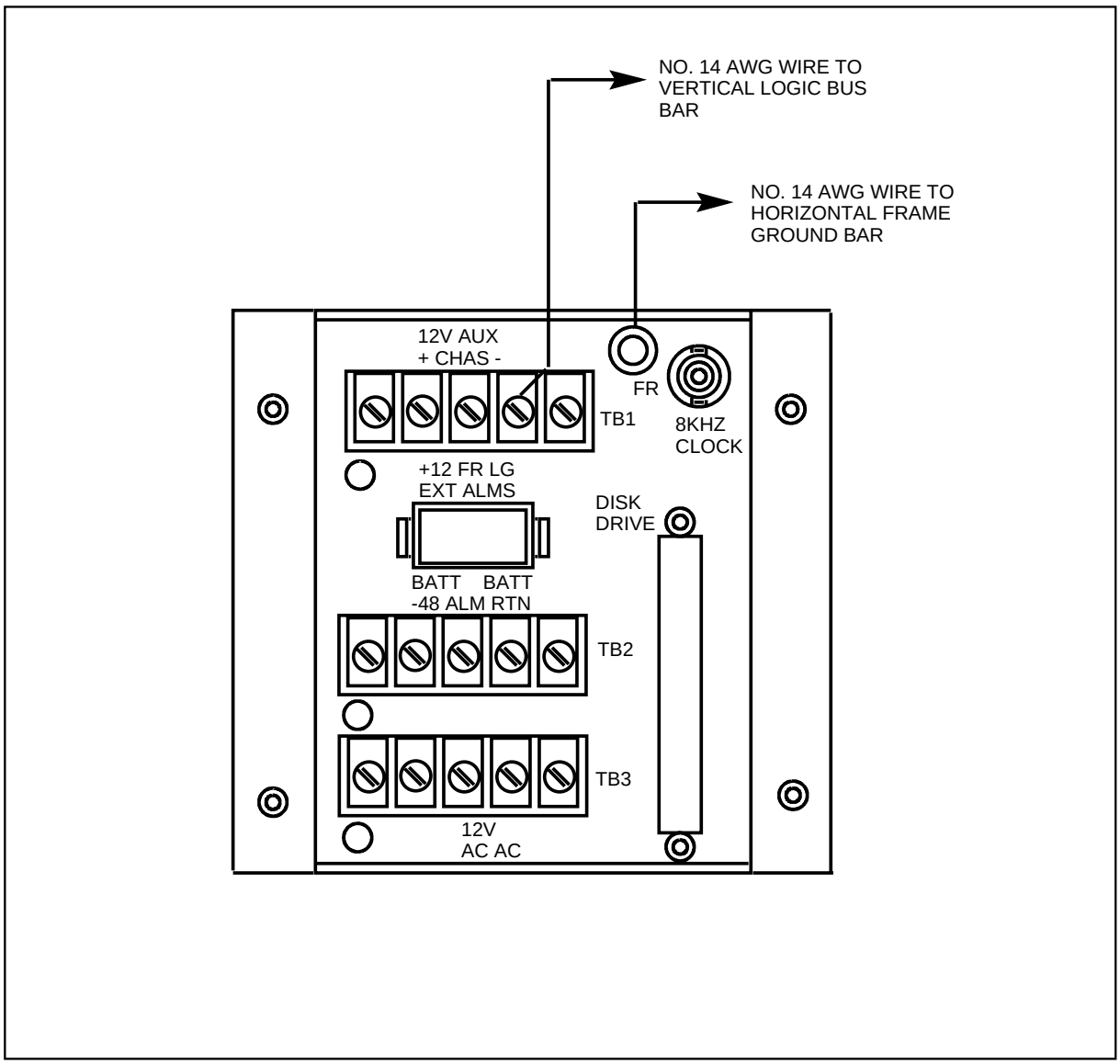


Table 3-1
DPP power and alarm bulkhead connector wiring connector wiring - a chassis

Signal type	Chassis type	Conn. desig.	Pin desig. (number)	Signal name	Description
Ground	TB	TB1	- (LG) (3)	LOGIC GROUND (signal ground)	Logic ground for DPP; Connect to vertical ground bar; Isolated System Ground (I.S.G bus bar)
Ground	TB	FR	1/4 inch stud	Frame Ground	Frame ground connection to the DMS-100 IOE frame ground bus bar
Power	TB	TB2	-48 (1)	-48 Vdc (A)	-48 Vdc CO power to the A chassis
Power	TB	TB2	RTN (3)	BATRTN (A)	-48 Vdc battery return for A chassis
Power	D-Conn	J15	N/A (1)	-48 Vdc	-48 Vdc CO power to the A chassis
Ground	D-Conn	J15	N/A (2)	Frame Ground	Optional frame ground; normally not connected; use the Frame Ground stud; refer to Figure 3-1.
Ground	D-Conn	J	Shield of connector	Shield Ground	To connector shell for full EMC compliance
Power	D-Conn	J15	N/A (3)	-48 Vdc return	Return line for -48 Vdc
Alarm	TB	J15	CRITICAL (1)	CRIT COM	Center (common) pin of contact set controlled by critical alarm relay
N/A	TB	J15	(2)	N/A	No connection
Alarm	TB	J15	(3)	CRIT	NO CRITICAL ALARM: open ANY CRITICAL ALARM: connected to pin 1
Alarm	TB	J15	MAJOR (4)	MAJ COM	Center (common) pin of contact set controlled by the major alarm relay
Alarm	TB	J15	(5)	N/A	No connection
Alarm	TB	J15	(6)	MAJ	NO MAJOR ALARM: open ANY MAJOR ALARM: connected to pin 4

(continued)

Table 3-1
DPP power and alarm bulkhead connector wiring connector wiring - a chassis (continued)

Signal type	Chassis type	Conn. desig.	Pin desig. (number)	Signal name	Description
Alarm	TB	J15	TEMP (7)	TEMP COM	Center (common) pin of contact set controlled by temp alarm relay
Alarm	TB	J15	TEMP (8)	TEMP	TEMP WITHIN ACCEPTABLE LIMITS: open TEMP OUT OF RANGE: connected to pin 7
Alarm	TB	J15	POWER (9)	LVOLT	VOLTAGE NORMAL: open LOW VOLTAGE: connected to battery ground
Alarm	TB	J15	MINOR (10)	MINOR COM	Center (common) pin of contact set controlled by the minor alarm relay
Alarm	TB	J15	MINOR (11)	MIN	NO MINOR ALARM: open ANY MINOR ALARM: connected to pin 10
Alarm	TB	J15	(12)	N/A	No connection
Alarm	D-Conn	J16	CRITICAL (1)	CRIT COM	Center (common) pin of contact set controlled by Critical Alarm relay
Alarm	D-Conn	J16	CRITICAL (2)	CRIT	NO CRITICAL ALARM: closed, connected to pin 1 ANY CRITICAL ALARM: open
Alarm	D-Conn	J16	CRITICAL (3)	CRIT	NO CRITICAL ALARM: open ANY CRITICAL ALARM: connected to pin 1
Alarm	D-Conn	J16	MAJOR (4)	MAJ COM	Center (common) pin of contact set controlled by the major alarm relay

(continued)

Table 3-1
DPP power and alarm bulkhead connector wiring connector wiring - a chassis (continued)

Signal type	Chassis type	Conn. desig.	Pin desig. (number)	Signal name	Description
Alarm	D-Conn	J16	MAJOR (5)	MAJ	NO MAJOR ALARM: closed, connected to pin 1 ANY MAJOR ALARM: open
Alarm	D-Conn	J16	MAJOR (6)	MAJ	NO MAJOR ALARM: open ANY MAJOR ALARM: connected to pin 1
Alarm	D-Conn	J16	TEMP (7)	TEMP ALM	TEMP WITHIN ACCEPTABLE LIMITS: open TEMP OUT OF RANGE: connected to pin 8
Alarm	D-Conn	J16	TEMP (8)	TEMP	TEMP WITHIN ACCEPTABLE LIMITS: open TEMP OUT OF RANGE: connected to pin 7
Alarm	D-Conn	J16	POWER (9)	PWR COM	Center (common) pin of contact set controlled by power (low voltage) alarm relay
Note: Pin 9, along with pins 13 and 14 are for both A and B chassis; shown here to maintain numerical labelling sequence.					
Alarm	D-Conn	J16	MINOR (10)	MIN COM	Center (common) pin of contact set controlled by the minor alarm relay
Alarm	D-Conn	J16	MINOR (11)	MIN	NO MINOR ALARM: closed, connected to pin 10 ANY MINOR ALARM: open
Alarm	D-Conn	J16	MINOR (12)	MIN	NO MINOR ALARM: open ANY MINOR ALARM: connected to pin 10

(continued)

Table 3-1
DPP power and alarm bulkhead connector wiring connector wiring - a chassis (continued)

Signal type	Chassis type	Conn. desig.	Pin desig. (number)	Signal name	Description
Alarm	D-Conn	J16	POWER (13)	PWR ALM	NO LOW VOLTAGE CONDITION: open LOW VOLTAGE IN EITHER CHASSIS: connected to pin 9
Note: Pins 13 and 14, along with pin 9 are for both A and B chassis; shown here to maintain numerical labelling sequence.					
Alarm	D-Conn	J16	POWER (14)	PWR ALM	NO LOW VOLTAGE CONDITION: connected to pin 9 LOW VOLTAGE IN EITHER CHASSIS: open
Alarm	D-Conn	J16	FUSE (15)	FUSE ALM	-48 Vdc FUSE INTACT: open -48 Vdc FUSE “BLOWN”: -48 Vdc on pin 15
Ground	TB	TB1	- (LG) (3)	LOGIC GROUND (signal ground)	Logic ground for DPP; Connect to vertical ground bar; Isolated System Ground (I.S.G bus bar)
Ground	TB	FR	1/4 inch stud	Frame Ground	Frame ground connection to the DMS-100 IOE frame ground bus bar
Power	TB	TB2	-48 (1)	-48 Vdc (A)	-48 Vdc CO power to the B chassis
	TB	TB2	RTN (3)	BATRTN (B)	-48 Vdc battery return for B chassis
	D-Conn	J17	N/A (1)		No connection
	D-Conn	J17	N/A (1)		No connection
	D-Conn	J17	N/A (2)		No connection
Ground	D-Conn	J17	-(LG) (3)	Logic Ground	Logic ground connection

(continued)

Table 3-1
DPP power and alarm bulkhead connector wiring connector wiring - a chassis (continued)

Signal type	Chassis type	Conn. desig.	Pin desig. (number)	Signal name	Description
Power	D-Conn	J18	N/A (2)		No connection
Power	D-Conn	J18	N/A (3)		No connection
Power	D-Conn	J18	N/A (4)		No connection
Power	D-Conn	J18	N/A (6)		No connection
Ground	D-Conn	J18	FG (7)	Frame Ground	Optional frame ground connection; normally not connected; use the Frame Ground Stud; refer to Figure 3-1.
Power	D-Conn	J18	N/A (8)		No connection
Power	D-Conn	J18	N/A (9)		No connection
The following information is for the B Chassis					
Alarm	TB	J16	N/A (1)		No connection
Alarm	TB	J16	N/A (2)		No connection
Alarm	TB	J16	N/A (3)		No connection
Alarm	TB	J16	N/A (4)		No connection
Alarm	TB	J16	N/A (5)		No connection
Alarm	TB	J16	N/A (6)		No connection
Alarm	TB	J16	TEMP (7)	TEMP ALM	Center (common) pin of contact set controlled by temp alarm relay

(continued)

Table 3-1
DPP power and alarm bulkhead connector wiring connector wiring - a chassis (continued)

Signal type	Chassis type	Conn. desig.	Pin desig. (number)	Signal name	Description
Alarm	TB	J16	TEMP (8)	TEMP	TEMP WITHIN ACCEPTABLE LIMITS: open TEMP OUT OF RANGE: connected to pin 7
Alarm	TB	J16	POWER (9)	LVOLT	VOLTAGE NORMAL: open LOW VOLTAGE: connected to battery ground
Alarm	TB	J16	N/A (10)		No connection
Alarm	TB	J16	N/A (11)		No connection
Alarm	TB	J16	N/A (12)		No connection
Alarm	D-Conn	J16	N/A (1)		No connection
Alarm	D-Conn	J16	N/A (2)		No connection
Alarm	D-Conn	J16	N/A (3)		No connection
Alarm	D-Conn	J16	N/A (4)		No connection
Alarm	D-Conn	J16	N/A (5)		No connection
Alarm	D-Conn	J16	N/A (6)		No connection
Alarm	D-Conn	J16	TEMP (7)	TEMP ALM	WITHIN UPPER LIMITS: open ABOVE UPPER HEAT LIMIT: connected to pin 8
Alarm	D-Conn	J16	TEMP (8)	TEMP ALM	WITHIN UPPER LIMITS: open ABOVE UPPER HEAT LIMIT: connected to pin 7

(continued)

Table 3-1
DPP power and alarm bulkhead connector wiring connector wiring - a chassis (continued)

Signal type	Chassis type	Conn. desig.	Pin desig. (number)	Signal name	Description
Alarm	D-Conn	J16	N/A (9)		No connection
Alarm	D-Conn	J16	N/A (10)		No connection
Alarm	D-Conn	J16	N/A (11)		No connection
Alarm	D-Conn	J16	N/A (12)		No connection
Alarm	D-Conn	J16	N/A (13)		No connection
Alarm	D-Conn	J16	N/A (14)		No connection
Alarm	D-Conn	J16	FUSE (15)	FUSE ALM	-48 Vdc FUSE INTACT: open -48 Vdc FUSE BLOWN: -48 Vdc on pin 15

Notes:
Note 1: Refer to Figure 3-1, Figure 3-2, and Figure 3-3

End

Switch and status panel operation

The following procedure is to be used whenever it becomes necessary to alter the operational configuration of the DPP processors for maintenance purposes using the Switch and Status Panel.

It must be remembered that the Switch and Status Panel controls the status of the A and B processors, not the disk drives. Disk drive operating mode changes are discussed in the section, Disk Drive Procedures.

Table 4-1 provides the necessary actions for changing processor modes in the DPP. Refer to Figure 4-1 for the layout of the Switch and Status Panel.

Processor mode changes at the terminal keyboard

Provision is made to change the operating status of the processors at the terminal. To initiate a processor switch:

Enter:	**(at the terminal)**
SWACT (cr)	**(command used to initiate a processor activity switch from the currently active processor to the currently standby processor)**

CAUTION
Use of this command during a high traffic period may result in the loss of some data during the processor switch.

To clear the active event/device alarms for the currently standby processor, followed by a processor activity switch:

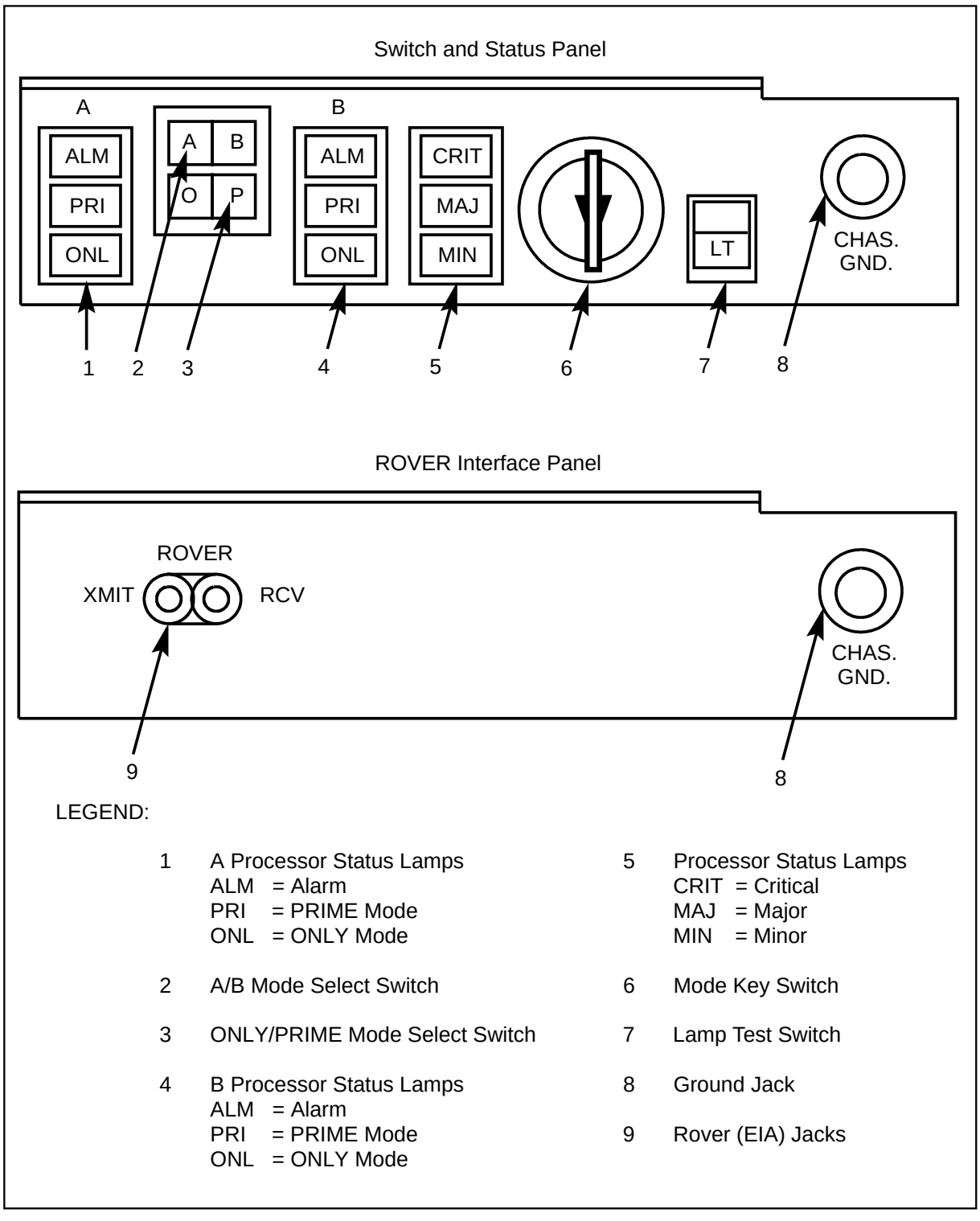
Enter: (at the terminal)

SWACT FORCE (cr)

The execution of either command produces the following sequence of expected messages:

```
ALL ALARMS CLEARED  (only for SWACT FORCE command)

MP SWITCH

DISK MODE: xx      (xx = current Disk system operating mode)

SITDAT FILE DISK JOB COMPLETE

TDYSTS FILE DISK JOB COMPLETE
(the following messages may be printed)

GOOD LOGIDX FILE

GOOD EXCIDX FILE

GOOD AMAIDX FILE
```

Figure 4-1
DPP switch and status panel



LEGEND:

1 A Processor Status Lamps
ALM = Alarm
PRI = PRIME Mode
ONL = ONLY Mode

2 A/B Mode Select Switch

3 ONLY/PRIME Mode Select Switch

4 B Processor Status Lamps
ALM = Alarm
PRI = PRIME Mode
ONL = ONLY Mode

5 Processor Status Lamps
CRIT = Critical
MAJ = Major
MIN = Minor

6 Mode Key Switch

7 Lamp Test Switch

8 Ground Jack

9 Rover (EIA) Jacks

Table 4-1
DPP switch and status panel operation

Initial processor mode	A/B mode select switch	Only/Prime mode select switch	Mode switch	Final processor mode
A PRIME	A	O	TURN	A ONLY
A PRIME	B	P	TURN	B PRIME
A PRIME	B	O	TURN	B ONLY
A ONLY	A	P	TURN	A PRIME
A ONLY	B	P	TURN	B PRIME
A ONLY	B	O	TURN	B ONLY[1]
B PRIME	B	O	TURN	B ONLY
B PRIME	A	P	TURN	A PRIME
B PRIME	A	O	TURN	A ONLY
B ONLY	B	P	TURN	B PRIME
B ONLY	A	O	TURN	A ONLY[1]
B ONLY	A	P	TURN	A PRIME

Notes:
Note 1: These changes are to be used as emergency measures ONLY. The status of the processor being changed to may be questionable.

Note: Automatic mode changes such as AP to BP or BP to AP occur only if the alarm level in the standby processor (the one being switched to) is of a lower severity level than the active processor (the one being switched from).

Switch and status panel indicators

The system provides lamps on the Switch and Status Panel for quickly ascertaining the overall system operational condition.

Table 4-2 provides a brief description of the status and alarm lamps.

Central processor unit led display

The CPU with DMA PCA contains an LED that serves the purpose of providing a visual display of error control status. Five hardware status lines are decoded to display CPU fault conditions. The LED contains a decimal point feature that provides a visual display of the CPU clock. Refer to Table 5-1.

Table 4-2
Alarm Lamp color scheme and identifiers

Lamp	Color	Function	Description
ALM	Red	Alarm	shows that an alarm is in active status. Used with other indicator lamps (CRIT, MAJ, MIN) to determine particular operational status.
PRI	Green	PRIME	indicate which processor unit is in control of the system. In the primary state, the active unit is in operational control of the system and the other unit is in a standby, or ready state. The standby unit is capable of performing the same functions as the primary unit, is error free, and is available to take control of the system in the event of malfunction in the primary unit.
ONL	Yellow	ONLY	indicate which processing unit has sole, non-transferable operational control of the system. The other unit is not available for system functions in the event of a malfunction in the ONLY unit. Non-availability of a unit could be due to a fault in a unit or normal maintenance activity on a unit. In this operating condition, both the PRI and ONL status lamps are lit for the active processor. (The ONLY condition must be manually initiated at the mode insert switch and rocker switch.)
CRIT	Red	Critical	indicates that the system is no longer capable of performing its design function of data collection, retrieval, and forwarding. The situation requires immediate corrective action so that the performance of the system may return to its design function. CRITICAL alarms are normally configured such that the probability of data loss is very high.
MAJ	Red	Major	indicate that the system is in danger of loss of operational capability. A fault, or faults, condition exists, which, if not corrected, may result in loss of functional capability. Major alarms are normally configured such that if corrective action is not taken immediately, there is a high probability of subsequent faults resulting in loss of data.
MIN	Yellow	Minor	indicate that one processor unit (A or B) has developed a fault condition, but there has been no degradation of system performance as relates to overall design capability. This situation does not require immediate attention, though delay could lead to a worsening of the situation.

For the display to remain valid, the output to the display must occur every 0.5 second or less.

Error control II jumper PCA LED

The LED on the Error Control II Jumper PCA (slot B5) lights to indicate that the toggle switch on the PCA has been activated. This toggle switch is activated during replacement of the Error Control II PCA (slot A5; A processor). Refer to 297-1001-536 for procedures on replacing the Error Control II Printed Circuit Assembly.

CAUTION
Do not activate the toggle switch unless maintenance activity is in progress (replacement of the Error Control II PCA) and the Error Control II PCA replacement assembly is immediately available.

Data stream interface PCA alarm

The DSI Alarm is activated when the DSI fails its own self-diagnostic check. At this point, the DSI sends an alarm bit EOT to the DMS-100. The DMS-100 interprets the alarm bit as an indication that the active recording volume is full. The DMS-100 rotates the standby volume (the other DPP DSI) to the active position and continues sending AMA to the DPP.

Other indicators

The system contains no audible alarm devices. However, relay contacts are provided for the routing of alarm signals to the Office Alarm system.

DPP Error indicators

Error MAP command (ERRMAP)

For maintenance and/or service purposes, you can override the existing (system default or customer-selected) alarm by assigning inhibit status to a particular device or event. This is accomplished through the use of the Error MAP Command (ERRMAP). This prevents subsequent alarm reporting (and possible repetitive processor switches) while maintenance activity/troubleshooting proceeds.

Retiring an alarm does not remove the cause of the alarm. The reason for the alarm may still exist, but the alarm will not appear as an error condition on the Switch and Status Panel. (An alarm does not have to be active to be retired.)

A distinction is made between retiring an alarm and resetting an alarm. Retiring an alarm prevents the alarm from having an effect on the system. Resetting the alarm clears its active status until the appropriate error condition reappears, at which time the alarm again becomes active.

The ERRMAP command displays a list of all alarms, their respective current level assignments, and whether or not a particular alarm is currently active. The ERRMAP command also permits the changing of alarm and level assignments. Record these assignments in the customer-selected alarm levels section of the message procedure sheets, if desired; use an erasable marker.

The following example illustrates the ERRMAP command:

To display a list of alarms and level assignments, at the terminal, enter:

ERRMAP ACT (cr) ←**active processor**
ERRMAP STDBY (cr) ←**standby processor**

Example of response:

```
CURRENT ALARM ASSIGNMENTS ARE:
DEV/EVT # NAME        ALARM     LEVEL
  * 1     DISK FULL   CRITICAL   0
    2     DSI TIMEOUT CRITICAL   1
    3     COMM FAIL   MAJOR      3
  * 4     DMA ALARM   MINOR      3
* Indicates Alarm Currently Active
```

Note: To clear an active alarm after the condition is no longer present, enter RSERR ACT or STDBY and 00 to reset all alarms, or device/event number (2 digits) to clear a specific alarm. For more information, refer to the RSERR command.

Table 5-1
ECAC alarm reporting priority sequence

CPU alarm LED category	CPU alarm LED category	CPU alarm LED category	CPU alarm LED category
E. Major	d. Critical	C. Critical	b. Critical
A. Critical	9. Minor	8. Major	7. Major
6. Major	5. Minor	4. Minor	3. Minor
2. Minor	1. None	=. None	

To assign or change an alarm event, alarm type, or alarm level (for the active processors only), at the terminal, enter:

ERRMAP ACT Event# Alarmtype Level (cr)

where:
- Event# = 0 - 99 = Device/Event Number
- Alarmtype = Minor, Major, or Critical
- Level = 0 = no switch (processor)
  = 1 = least serious (processor switch occurs)
  = 2 (processor switch occurs)
  = 3 = most serious (processor switch occurs)

Note: Consult with technical assistance personnel before changing alarm level assignments.

If a level 0 alarm occurs, no processor switch takes place. Levels 1-3 establish the priorities of the remaining alarms. If an alarm occurs that is a higher level alarm than the highest level active alarm on the standby side, a processor switch takes place.

To INHIBIT a selected alarm, at the terminal for the active processors, enter:

ERRMAP ACT event# INHIBIT 0 (cr) ← **active unit**
or
ERRMAP STDBY event# INHIBIT 0 (cr) ← **standby unit**

where: event# = 0 - 99 = Device/Event Number

If desired, make the retired alarms permanent by entering (after the completion of the ERRMAP command entry activity):

SITDAT WRITE (cr)

Alarms (ERRMAP entries) on the standby processor are viewed and retired by entering:

ERRMAP STDBY (cr)

Alarms on both processors may be viewed by entering:

ERRMAP ALARMS (cr)

Table 5-2 provides a list of ERRMAP entries along with the system default alarms and levels. The table includes a cross-reference to the log messages that correspond to each particular ERRMAP entry. Refer to Chapter 6 for a description of the ERRMAP entry test conditions.

Table 5-2
ERRMAP entries to log message cross-reference

ERRMAP message, alarm, level (notes)	Associated log messages (notes)
STANBY PROC N/A,MAJOR,0	STANBY PROC NOT AVAILABLE
	PROC FORCE SELECTED - NON REDUNDANT
	COMM DOWN TO STANDBY PROC
NO BLK LAST HR,MINOR,0	NO BLOCK LAST HOUR
DSI STNBY FAIL,MINOR,0	B0 (or) B2 DSI COLD START
	B0 (or) B2 DSI COMM FAIL
	B0 (or) B2 DSI DMA FAIL
	B0 (or) B2 DSI TIME OUT
	B0 (or) B2 DSI WARM START
	B0 (or) B2 DSI NOT READY
DSI PRIME FAIL,MAJOR,1	B0 (or) B2 DSI COLD START
	B0 (or) B2 DSI COMM FAIL
	B0 (or) B2 DSI DMA FAIL
	B0 (or) B2 DSI TIME OUT
	B0 (or) B2 DSI WARM START
	B0 (or) B2 DSI NOT READY
D_RAM ERROR,MAJOR,1	D-RAM ERROR xx AT yyyy
SIO-1 FAILURE,MAJOR,1	A0 SIO TEST FAILED
	A1 SIO TEST FAILED
	A2 SIO TEST FAILED
	A3 SIO TEST FAILED
SIO-2 FAILURE,MAJOR,1	A4 SIO TEST FAILED
	A5 SIO TEST FAILED
	A6 SIO TEST FAILED
	A7 SIO TEST FAILED
1 MMI LINK DOWN,MINOR,0	MMI LINK #x DOWN
2 MMI LNKS DOWN,MAJOR,0	BOTH MMI LINKS DOWN
ERROR CTL CONFL,MAJOR,0	EC-CF-ALM

(continued)

Table 5-2
ERRMAP entries to log message cross-reference (continued)

ERRMAP message, alarm, level (notes)	Associated log messages (notes)
ERROR CTL INCON,MAJOR,0	EC-IC-ALM
DMA COMM FAIL,MAJOR,2	DMA TIME OUT ALARM
PROC STAT ALARM,MAJOR,2	CTC MP-ST-ALM
	CLK MP-ST-ALM
	RAM PAGE a FAILURE/ADR:nnnn RD:xx WR:yy
PROG CKSUM ALM,MAJOR,3	PROG CHKSUM ALM VAL=nn
DSI DATA OVRFLO,CRITICAL,0	DATA BUFFER EXCEEDED ALARM
	DSI BUFFER OVERFLOW xx BLOCKS
EXCESS INV BLKS,MAJOR,0	EXCESSIVE INVALID BLOCKS
	EXCESSIVE INVALID RECORDS
EXCESS INV RECS,MAJOR,0	CALL RECORD BLOCK FROM DSI INCORRECT
	INVALID CALL RECORD FORMAT
TAPE BLOCK LOST,MAJOR,0	TAPE BLOCKS LOST = xxx
	BLOCK REJECTED: xxxxx BYTES
NO CLK TIME SET,MINOR,0	KEY “SETCLK”, THEN ENTER DATE, TIME, AND DAY
PROM CKSUM FAIL,MAJOR,3	PROM CHKSUM ALM VAL=nn
RESERV DSK FULL,MAJOR,0	OFF-LINE DISK HAS UNPOLLED DATA
SECND FILES DEL,MINOR,0	NO SECONDARY FILES TO DELETE
LOG FILES DEL,MAJOR,0	LOG FILES DELETED
BOTH DISKS FULL,CRITICAL,0 DSK STORE LIMIT, CRITICAL,0	BOTH DISKS FULL DISK DIRECTORY FULL VERSION POOL EXHAUSTED
DSK 70% PRIMARY,MINOR,0	DISK USE > 70% PRIMARY
DSK 90% PRIMARY,MAJOR,0	DISK USE > 90% PRIMARY
DISK WRITE FAIL,MAJOR,2	AMAIDX FILE FAILURE
	EXCIDX FILE FAILURE
	LOGIDX FILE FAILURE
DSK INDEX ERROR,MINOR,0	AMAIDX FILE FULL

(continued)

Table 5-2
ERRMAP entries to log message cross-reference (continued)

ERRMAP message, alarm, level (notes)	Associated log messages (notes)
	EXCIDX FILE FULL
	LOGIDX FILE FULL
	BAD xxxIDX FILE
SITE FILE ERROR,MAJOR,0	INVALID SITE DATA FILE
	NO SITE DATA ON DISK
	SITDAT FILE yyyyyy ERROR: ee
STAT FILE ERROR,MINOR,0	DISK BUFFER NOT AVAILABLE
	TDYSTS FILE yyyyyy ERROR: ee
CP NOT AVAIL.,MAJOR,1 w/56K polling; If an NT6M94AA PCA is mounted in slots A7 and B7 of the DPP chassis, then, 56K polling is equipped.	BOOTCP FILE yyyyyy ERROR: ee
	CP ACTIVATE FAIL
	CP AUDIT FAIL
	CP BOOT LIST EMPTY
	CP DATA ERR
	CP DMA Test Failed
	CP I/O FAILURE
	CP LOAD FAIL
	CP PRG Checksum Test Failed
	CP RAM Test Failed
	CP RESTART FAIL
	CP ROM CKSM ERR
	CP ROM Checksum Test Failed
	CP SCC Loopback Test Failed on Channel x
	CP TASK ERRCP
	CP TIMEOUT
	xxxxxx FILE yyyyyy ERROR: ee

(continued)

Table 5-2
ERRMAP entries to log message cross-reference (continued)

ERRMAP message, alarm, level (notes)	Associated log messages (notes)
CP FAULT,MAJOR,1 (w/56K polling; If an NT6M94AA PCA is mounted in slots A7 and B7 of the DPP chassis, then, 56K polling is equipped.	BOOTCP FILE yyyyyy ERROR: ee
	CP ACTIVATE FAIL
	CP AUDIT FAIL
	CP BOOT LIST EMPTY
	CP DATA ERR
	CP DMA Test Failed
	CP I/O FAILURE
	CP LOAD FAIL
	CP PRG Checksum Test Failed
	CP RAM Test Failed
	CP RESTART FAIL
	CP ROM CKSM ERR
	CP ROM Checksum Test Failed
	CP SCC Loopback Test Failed on Channel x
	CP TASK ERR
	CP TIMEOUT
	xxxxxx FILE yyyyyy ERROR: ee
DSK ERROR ALARM,CRITICAL,0	DISK TEST FAILED
	DSK TEST FAILED
	****** DISK ALARM x
DISK MODE ALARM,MAJOR,0	DISK MODE ALARM
DSK DPR,QUE ERR,MAJOR,2	DISK QUEUE ERROR
	DISK DPR FAULT
	DPR TEST FAILED: ADD: xxxx(Hex), RD: yy(Hex), WRT: yy(Hex)
DSK CARD HW ERR,MAJOR,2 w/56K polling	PARITY ERROR: x DETECTED

(continued)

Table 5-2
ERRMAP entries to log message cross-reference

ERRMAP message, alarm, level (notes)	Associated log messages (notes)
	DISK INTERFACE: x FAILURE
DISK ER MESSAGE,MINOR,0	DISK RST-7
	NO DISK ON LINE
	DISK: BOTH DISKS CONTAINED PREFERRED STATUS
	DISK NOT READY SIDE x
	DISK: DMA INTERRUPT
	DISK: BUS CONTROLLER FAILED SELF TEST
	DISK: BUS CONTROLLER FAILED SELF TEST, DISK: x
	DISK: BUS CONTROLLER INTERRUPT WHILE IDLE
	DISK: COMMAND ERROR
	DISK COMMAND xx ATTEMPTED WHILE DISK BUSY
	DISK: BUS ERROR
	DISK: BUS ERROR, m (w/56K polling)
	DISK: BUS DATA TRANSFER BYPASSED
	SCSI: INTERRUPT WHILE IDLE (w/56K polling)
	End

Activities in response to alarm conditions - no log message available

The situation may arise at unattended facilities (weekends, holidays, after midnight) that an alarm is generated and there is no way to locate the particular alarm (log) message that was output at the time of the occurrence. The procedures set forth here provide a method of locating those log messages and guidelines for how to proceed to rectify the situation.

Log call record file

The log call record file, which is listed as log in the directory listing, contains the various information and log messages that are generated by the DPP system. These versions are stored on the disk for several days; the oldest logs are automatically deleted by the system to make room for the newest logs.

Every time a log file is closed, the newly opened one is said to be another version of the log file. The log file versions are numbered sequentially from 01 through 255. The 255th+1 version starts the count over again at 01. There can be 56 versions (72- and 140-Mbyte disks; 200 versions for 380-Mbyte with 56K polling and 760-Mbyte) of the log file stored on disk at any one time. However, only 1 version of the log file can be active, or open, at any one time.

Log record recall procedure

The logs that are currently on disk are available for (manual) recall at the terminal, if required. The IDXMAINT command is used to gain access to these records. Refer to 297-1001--331 for further details on the use of the IDXMAINT command.

Procedure 5-1
Log message recall procedure

Step	Description	Notes

1	Enter: (at the terminal)
	
	ERRMAP ALARMS (cr)
	
	System response = ERRMAP printout:
	
	`CURRENT ALARM ASSIGNMENTS ARE:`
	`DEV/EVT# NAME ALARM LEVEL`
	`* 1 DISK FULL CRITICAL 0`
	`2 DSI TIMEOUT CRITICAL 1`
	`3 COMM FAIL MAJOR 3`
	`* 4 DMA ALARM MINOR 3`
	`* INDICATES ALARM CURRENTLY ACTIVE`
		This is only an example: the printout obtained contains only the active alarms for both the active and standby processors.

2	Make note of the LOG MESSAGES that correspond to the active ERRMAP entries.	This information comes from Table 5-2.

(continued)

Procedure 5-1
Log message recall procedure (continued)

Step	Description	Notes
3	Enter: (at the terminal) LSTDIR ALL (cr) System response = directory printout: AMACRD 36 AMACRD 37 AMACRD 38 AMACRD 39 AMACRD 40 AMACRD 41 AMACRD 42 AMACRD 43 AMACRD 44 AMACRD 45 AMAIDX 38 AMAIDX 47 DPPA2C 01 DPPA2D 01 DPPA2D 02 EXCCRD 01 EXCCRD 02 EXCIDX 02 LOGCRD 07 LOGCRD 08 LOGCRD 09 LOGCRD 10 LOGCRD 11 LOGCRD 12 LOGCRD 13 LOGCRD 14 LOGCRD 15 LOGCRD 16 LOGCRD 17 LOGCRD 18 LOGCRD 19 LOGCRD 20 LOGCRD 21 LOGCRD 22 LOGCRD 23 LOGCRD 24 LOGCRD 25 LOGCRD 26 LOGCRD 27 LOGCRD 28 LOGCRD 29 LOGIDX 42 MAINF1 01 SITDAT 05 TDYSTS 27 XEOB01 01 XEOB02 01 XEOB03 01 XEOB03 02 XE0B05 01 XE0B06 01 XE0B06 02 XE0B08 01 XE0B08 02 XE0B09 01 XE0B09 02 XG0401 01 XG0402 01 XG0403 01 XG0404 01 XG0404 02 YDYSTS 13 66 FILES LISTED 305/13770 TRACKS USED 2/ 0 BAD TRACKS (A/B)	The data shown is for example purposes only. The actual printout obtained varies according to file usage, disk size, and other factors. Locate the LOGCRD that has the second highest version number. In the example, this is LOGCRD 29 (column 1, row 11).
4	Enter: (at the terminal) IDXMAINT CREATE FILE LOG (cr) System Response = LOG WRITE FILE CLOSED	This closes the current LOGCRD (No. 29) and opens a new one. This new one is LOGCRD 30.

(continued)

Procedure 5-1
Log message recall procedure (continued)

Step	Description	Notes
5	Enter: (at the terminal) LSTDIR FILE LOGCRD FVersion (cr) where: FVersion = 0 - 255 = the version number of the LOGCRD under consideration. System response = directory information for the requested file/version. ii nnnnnn tt vvv yy..ddd rrrrr bbbb asaoahlb ss pppppp uuuuuu cccccc where: ii = file ID (if file is open for write) nnnnnn = file name tt = file type = 00 if file 4K buffered (8 sectors) = 01 if file is .5K buffered (1 sector) vvv = file version yy.ddd = creation date (year..day of year) rrrrr = retention period (days) bbbb = file's block size asaoahlb= path to last block in file as = (00H...10H) ao = (00H...FFH) if file type = 00H ah = (00H...08H) lb = (00H...1000H/Block size) if file type = 01H ah = (00H...10H) lb = (00H...200H/Block size) ss = file status = 02 = file closed, possibly open for read = 11 = file open for write pppppp = sector address of file's directory entry uuuuuu = user data/starting sequence number cccccc = number of data blocks in the file	In this example, the message to input is: LSTDIR FILE LOGCRD 29 (cr)

(continued)

Procedure 5-1
Log message recall procedure (continued)

Step	Description	Notes
6	Make note of the: STARTING SEQUENCE NUMBER. from the output of step 5.	The STARTING SEQUENCE NUMBER is the number in field uuuuuu.
7	Enter: (at the terminal) IDXMAINT EXAMINE LOG PACKED SeqNo (cr) where: SeqNo = sequence number (see note) System Response = First LOG message in this version.	SeqNo = Sequence Number from step 6.
8	Compare the output messages obtained in step 7 with the corresponding ERRMAP entries. a. If there is a match, refer to the procedure sheet in this Practice for that message and perform the Craftsperson activities listed. b. If there is no match, proceed to step 11.	From step 2 (Table 5-2). Refer to the appendix (Chapter 19) at the rear of this Practice to locate the message.
9	Enter: (at the terminal) IDXMAINT EXAMINE LOG NEXT Range (cr) where: Range = number of blocks in the file. System Response = All the rest of the LOG messages in this version are output.	From the cccccc field obtained in step 4.

(continued)

Procedure 5-1
Log message recall procedure (continued)

Step	Description	Notes
10	Compare the output messages obtained in step 9 with the corresponding ERRMAP entries.	From step 2.
	a. If there is a match, refer to the procedure sheet in this Practice for that message and perform the Craftsperson activities listed.	Refer to the appendix (Chapter 19) at the rear of this Practice to locate the message.
	b. If there is no match, proceed to step 11.	
11	Call for technical assistance.	
	End	

DPP Man-machine interface

DPP commands - an overview

The DPP supports an extensive set of commands and messages for use when maintaining the DPP. DPP messages inform the user when important DPP events or errors have occurred. You access the DPP commands and messages at the MAP terminal (from the DPP MAP level) and from the DPP EAT.

> ***Note:*** The EAT accepts commands only in UPPERCASE letters. Entering commands in lower case letters results in failure of the DPP to accept those commands

The MAP terminal

The DMS-100 connects to the DPP through the DPP level of MAP Command Interpreter (CI). The DPP MAP level is the standard tool for communicating with and maintaining the DPP. The MAP Terminal is designed to accommodate system administration, maintenance, and testing functions from a centralized location. Components of a MAP facility include:

- Visual Display Unit (VDU) with keyboard, which is used to directly interface with the DMS-100.
- Voice Communications Module (VCM) used to facilitate voice communication over either 101 or talk lines.
- Test Jacks, used to provide access for specialized test equipment not already integrated into the DMS-100.
- Alarm Panel providing a visual lamp display of alarms designated by class (major, minor, critical) to maintenance personnel.

The MAP VDU displays an ongoing status report covering all major subsystems of the DMS-100, including the CC, I/O devices, networking, and peripheral devices. The MAP VDU is driven by internal software in the DMS-100, which contains diagnostic routines. If a fault is detected, status information displays on the VDU. Refer to Figure 6-1 for MAP details.

At the IOD level of the MAP, menu item 11 selects the DPP level for which a data stream or DPP application must be specified as a parameter. Refer to

297-1001-513 for more information on the DPP MAP level in relation to the IOD MAP level.

From the command interpreter level of the MAP, the following command sequence telescopes to the DPP MAP level:

MAPCI;MTC;IOD;DPP AMA

Figure 6-1
DPP MAP display

```
        CC       CMC       IOD      Net       PM       CCS     Trks    Ext
         •         •         •        •         •         •       •       •

0       Quit             IOD:
2                        IOC     0       1        2        3
3       LSTDIR_          STAT    •       •        •        •
4       LSTACT_
5       REPORT_       DIRP:     •   XFER: •    DVI:  •    DPPP: •    DPPU: •
6       TEST_           NOP:    •
7
8
9       IDXMAINT
10      DSIMAINT
11      ERRMAP_
12      RSERR_
13      CLK_
14      VS_
15      LINKTEST
16      LoadDPP
17      QueryDPP
18      Reset IO_
        userid
TIME      hh:mm    MAP>
```

Note: The DPP MAP level can only be accessed by a single user at any given time. An attempt to access the DPP MAP level while it is in use results in the following error message display:

```
DPP AMATPS IN USE.  USERNAME = user_name
```

where: user_name = current user of DPP MAP level.

Two modes, MAP mode and DIRECT mode, are used from the DPP level of the MAP to access AMATPS/DPP commands. These two modes are described as follows:

- MAP mode. There are two types of commands that can be accessed when in MAP mode:

- DMS commands. These commands are checked for syntax by the CC and operated on by the DMS-100. These commands are LOADDPP, QUERYDPP, RESETIO, REVIVE, LINKTEST, and SMODE. The commands LOADDPP, QUERYDPP, RESETIO, and LINKTEST can be accessed using the DPP menu level. For more information on these commands, refer to 297-1001-331.
- DPP commands. These commands are checked for syntax by the DMS-100 and sent to the DPP for processing.

- DIRECT mode. In Direct mode, the DPP operates on commands that are sent directly to the DPP. Since the DMS-100 does not check for syntax, this mode is recommended only for experienced users. To enter the DIRECT mode for the DPP MAP level, enter the command SMODE. In the DIRECT mode, the MAP terminal simulates an EAT or Rover terminal.

Fault isolation is achieved by placing the MAP in the maintenance mode and observing the status display area at the top of the screen to determine which subsystem is at fault. The user then consults a menu display, entering the subsystem abbreviation to obtain the highest (least detailed) level display of the subsystem being examined. The fault is then isolated by focusing on the problem area through usage of a series of menu commands that provide increasingly detailed displays of the subsystem in question.

DPP unit messages

The DPP outputs several messages that inform the operator of certain events or conditions that occur within the DPP. The DPP messages consist of DPP command response messages and log messages.

DPP unit response messages

DPP response messages can be divided into two categories:

- DPP command response messages. These are output in response to DPP commands that have been entered at the MAP or EAT. These messages indicate how a command has been processed.
- DPP condition response messages. These are output after certain tests have been run or particular conditions have arisen.

DPP unit log messages

The DPP log messages are output in response to certain errors or conditions that exist in the DPP. These messages are incorporated into the DMS-100 log message DPP100. The DPP100 log message feature is implemented in feature package NTX243AA. The DPP log messages may also be accessed directly from the DPP.

Each DPP log message has an associated reason code that is used in the DPP100 log report format. This reason code is used as a reference in the

DPP100 log report description. Refer to 297-1001-510 for more information about log reports.

Associating logs with ERRMAP messages

Table 6-1 provides a list of ERRMAP entries along with the DPP default alarms and levels. The table includes a cross-reference to the log messages that correspond to each particular ERRMAP entry.

Table 6-2 provides a list of ERRMAP entries along with information which describes the conditions which cause the ERRMAP entry to activate. Information is included to define how often a particular condition is tested, the method(s) required to reset (manual or system) the alarm, and an indication of the default alarm type and level.

The DPP uses the Man-Machine Language (MML) format for the display of commands and log messages. The MML format specifies the general form and content in accordance with Bell system specifications. With commands, the DPP supplies both the content and format; with log messages, the DMS-100 supplies the MML format. For further details concerning the MML Message Format, refer to the BELLCORE (Bell Communications Research) PUB 54100 - Bell System Specification of CCITT MML.

Active and standby processor command modes

The DPP software program includes several commands that allow a user to activate a command process for a specific DPP processor. The user may direct the command activity to a specific processor by specifying ACT for the active processor, or STDBY for the standby processor. This feature is of particular value in hastening the processing time required to detect a system fault when the user already knows which processor has the fault. A listing of the commands using this feature is as follows:

- TEST - initiate self-test routines
- VS - request software version
- CLK - Clock command; verify system time of day
- RSERR - reset error flags command
- ERRMAP - error map display command
- BOOT - download software from disk

For more detailed information on the use of the active or standby mode for these commands, refer to 297-1001-331.

Table 6-1
ERRMAP entries to log message cross-reference

ERRMAP message, alarm, level (notes)	Associated log message(s) (notes)
STANBY PROC N/A, MAJOR, 0	STANBY PROC NOT AVAILABLE
	PROC FORCE SELECTED - NON REDUNDANT
	COMM DOWN TO STANBY PROC
NO BLK LAST HR, MINOR, 0	NO BLOCK LAST HOUR
DSI STNBY FAIL, MINOR, 0	B0 (or) B2 DSI COLD START
	B0 (or) B2 DSI COMM FAIL
	B0 (or) B2 DSI DMA FAIL
	B0 (or) B2 DSI TIME OUT
	B0 (or) B2 DSI WARM START
	B0 (or) B2 DSI NOT READY
DSI PRIME FAIL, MAJOR, 1	B0 (or) B2 DSI COLD START
	B0 (or) B2 DSI COMM FAIL
	B0 (or) B2 DSI DMA FAIL
	B0 (or) B2 DSI TIME OUT
	B0 (or) B2 DSI WARM START
	B0 (or) B2 DSI NOT READY
D_RAM ERROR, MAJOR, 1	D_RAM ERROR xx AT yyyy
SIO-1 FAILURE, MAJOR, 1	A0 SIO TEST FAILED
	A1 SIO TEST FAILED
	A2 SIO TEST FAILED
	A3 SIO TEST FAILED
SIO-2 FAILURE, MAJOR, 1	A4 SIO TEST FAILED
	A5 SIO TEST FAILED
	A6 SIO TEST FAILED
	A7 SIO TEST FAILED
1 MMI LINK DOWN, MINOR, 0	MMI LINK #x DOWN
2 MMI LINKS DOWN, MAJOR, 0	BOTH MMI LINKS DOWN
ERROR CTL CONNFL, MAJOR, 0	EC-CF-ALM

(continued)

Table 6-1
ERRMAP entries to log message cross-reference (continued)

ERRMAP message, alarm, level (notes)	Associated log message(s) (notes)
ERROR CTL INCON, MAJOR, 0	EC-IC-ALM
DMA COMM FAIL, MAJOR, 2	DMA TIME OUT ALARM
PROC STAT ALARM, MAJOR, 2	CTC MP-ST-ALM
	CLK MP-ST-ALM
	RAM PAGE a FAILURE/ADR:nnnn RD:xx WR:yy
PROG CKSUM ALM, MAJOR, 3	PROG CHKSUM ALM VAL=nn
DSI DATA OVRFLO, CRITICAL, 0	DATA BUFFER EXCEEDED ALARM
	DSI BUFFER OVERFLOW xx BLOCKS
EXCESS INV BLKS, MAJOR, 0	EXCESSIVE INVALID BLOCKS
	EXCESSIVE INVALID RECORDS
EXCESS INV RECS, MAJOR, 0	CALL RECORD BLOCK FROM DSI INCORRECT
	INVALID CALL RECORD FORMAT
TAPE BLOCK LOST, MAJOR, 0	TAPE BLOCKS LOST = xxx
	BLOCK REJECTED: xxxxx BYTES
NO CLK TIME SET, MINOR, 0	KEY “SETCLK”, THEN ENTER DATE, TIME, AND DAY
PROM CKSUM FAIL, MAJOR, 3	PROM CHKSUM ALM VAL=nn
RESERV DSK FULL, MAJOR, 0	OFF-LINE DISK HAS UNPOLLED DATA
SECND FILES DEL, MINOR, 0	NO SECONDARY FILES TO DELETE
LOG FILES DEL, MAJOR, 0	LOG FILES DELETED
BOTH DISKS FULL, CRITICAL, 0 DSK STORE LIMIT, CRITICAL, 0	BOTH DISKS FULL DISK DIRECTORY FULL VERSION POOL EXHAUSTED
DSK 70% PRIMARY, MINOR, 0	DISK USE > 70% PRIMARY
DSK 90% PRIMARY, MAJOR, 0	DISK USE > 90% PRIMARY
DISK WRITE FAIL, MAJOR, 2	AMAIDX FILE FAILURE
	EXCIDX FILE FAILURE
	LOGIDX FILE FAILURE
DISK INDEX ERROR, MINOR, 0	AMAIDX FILE FULL
	EXCIDX FILE FULL

(continued)

Table 6-1
ERRMAP entries to log message cross-reference (continued)

ERRMAP message, alarm, level (notes)	Associated log message(s) (notes)
	LOGIDX FILE FULL
	BAD xxxIDX FILE
SITE FILE ERROR, MAJOR, 0	INVALID SITE DATA FILE
	NO SITE DATA ON DISK
	SITDAT FILE yyyyyy ERROR: ee
STAT FILE ERROR, MINOR, 0	DISK BUFFER NOT AVAILABLE
	TDYSTS FILE yyyyyy ERROR: ee
CP NOT AVAIL., MAJOR, 1 (If an NT6M94AA PCA is mounted in slots A7 and B7 of the DPP chassis, then, 56K polling is equipped.)	BOOTCP FILE yyyyyy ERROR: ee
	CP ACTIVATE FAIL
	CP AUDIT FAIL
	CP BOOT LIST EMPTY
	CP DATA ERR
	CP DMA Test Failed
	CP I/O FAILURE
	CP LOAD FAIL
	CP PRG Checksum Test Failed
	CP RAM Test Failed
	CP RESTART FAIL
	CP ROM CKSM ERR
	CP ROM Checksum Test Failed
	CP SCC Loopback Test Failed on Channel x
	CP TASK ERR
	CP TIMEOUT
	xxxxxx FILE yyyyyy ERROR: ee

(continued)

Table 6-1
ERRMAP entries to log message cross-reference (continued)

ERRMAP message, alarm, level (notes)	Associated log message(s) (notes)
CP FAULT, MAJOR, 1 (If an NT6M94AA PCA is mounted in slots A7 and B7 of the DPP chassis, then, 56K polling is equipped.)	BOOTCP FILE yyyyyy ERROR: ee
	CP ACTIVATE FAIL
	CP AUDIT FAIL
	CP BOOT LIST EMPTY
	CP DATA ERR
	CP DMA Test Failed
	CP I/O FAILURE
	CP LOAD FAIL
	CP PRG Checksum Test Failed
	CP RAM Test Failed
	CP RESTART FAIL
	CP ROM CKSM ERR
	CP ROM Checksum Test Failed
	CP SCC Loopback Test Failed on Channel x
	CP TASK ERR
	CP TIMEOUT
	xxxxxx FILE yyyyyy ERROR: ee
DSK ERROR ALARM, CRITICAL, 0	DISK TEST FAILED
	DSK TEST FAILED
	******DISK ALARM x
DISK MODE ALARM, MAJOR, 0	DISK MODE ALARM
DSK DPR, QUE ERR, MAJOR, 2	DISK QUEUE ERROR
	DISK DPR FAULT
	DPR TEST FAILED: ADD: xxxx(Hex), RD: yy(Hex), WRT: yy(Hex)
DSK CARD HW ERR, MAJOR, 2	PARITY ERROR: x DETECTED
	DISK INTERFACE: x FAILURE

(continued)

Table 6-1
ERRMAP entries to log message cross-reference

ERRMAP message, alarm, level (notes)	Associated log message(s) (notes)
DISK ER MESSAGE, MINOR, 0	DISK RST-7
	NO DISK ON LINE
	DISK: BOTH DISKS CONTAINED PREFERRED STATUS
	DISK NOT READY SIDE x
	DISK: DMA INTERRUPT
	DISK: BUS CONTROLLER FAILED SELF TEST
	DISK: BUS CONTROLLER FAILED SELF TEST, DISK: x
	DISK: BUS CONTROLLER INTERRUPT WHILE IDLE
	DISK: COMMAND ERROR
	DISK: DISK COMMAND xx ATTEMPTED WHILE DISK BUSY
	DISK: BUS ERROR
	DISK: BUS ERROR, m
	DISK: BUS DATA TRANSFER BYPASSED
	SCSI: INTERRUPT WHILE IDLE

Notes:
Note 1: Refer to Table 6-2 for a description of ERRMAP entries.

End

Table 6-2
Description of ERRMAP entries

ERRMAP entry, type, level (notes)	Comments (notes)
STANBY PROC N/A, Major, 0	Cause: comm to the standby processor fails, or the processor status is non-redundant (processor ONLY mode). a. standby processor is powered down. b. standby processor is in the monitor mode.
	Test: on the minute boundary.

(continued)

Table 6-2
Description of ERRMAP entries (continued)

ERRMAP entry, type, level (notes)	Comments (notes)	
	Reset:	a. automatically, when communication to the standby processor succeeds. b. when the processor status becomes PRIME mode.
	Notes:	None
NO BLK LAST HR, Minor, 0	Cause:	the DPP is not receiving blocks from the DMS-100 within a desired period of time.
	Test:	on every hour boundary
	Reset:	no automatic reset, alarm cleared by input of RSERR command.
	Notes:	no check is performed if current time is not within the AMAHRS hour checking range.
DSI STNBY FAIL, Minor, 0	Cause:	standby DSI PCA not connected or there has been a hardware failure.
	Test:	a. tested 3 times an hour at 15, 35, and 55 minutes past the hour, B2 DSI port (PCA at A12 or B12) b. tested 3 times an hour at 5, 25, and 45 minutes past the hour, B0 DSI port (PCA at A13 and B13). c. manually by input of TEST command.
	Reset:	no automatic reset, alarm cleared by input of RSERR command.
	Notes:	None
DSI PRIME FAIL, Major, 1	Cause:	active DSI PCA not connected, DSI time out, or there has ben a hardware failure.
	Test:	a. tested 3 times an hour at 15, 35, and 55 minutes past the hour, B2 DSI port (PCA at A12 or B12). b. tested 3 times an hour at 5, 25, and 45 minutes past the hour, B0 DSI port (PCA at A13 or B13). c. manually by input of TEST command.

(continued)

Table 6-2
Description of ERRMAP entries (continued)

ERRMAP entry, type, level (notes)	Comments (notes)	
	Reset:	no automatic reset, alarm cleared by input of RSERR command.
	Notes:	receiving a block with an error block format causes and alarm message: B0 DSI TIME OUT or, B2 DSI TIME OUT depending on which DSI PCA is active, and there is an indication of EOT status.
D_RAM ERROR, Major, 1	Cause:	parity error of D-RAM
	Test:	by D-RAM PCA when parity error occurs (detected) whenever reading a byte from DAM.
	Reset:	no automatic reset, alarm cleared by input of RSERR command.
	Notes:	alarm set and message printed only once per occurrence
SIO-2 FAILURE, Major, 1	Cause:	SIO-1 of terminal line 1 or polling link (if no 56K polling equipped) or download link fail.
	Test:	a. input of TEST command. b. when doing a processor switch
	Reset:	no automatic reset, alarm cleared by input of RSERR command.
	Notes:	a. alarm set and message printed only once per occurrence unless the alarm is rest by the RSERR command and the error condition still exists. b. test done by firmware to check availability of SIO chip.
1 MMI LINK DOWN, Minor, 0	Cause:	loss of comm on one of the MMI Links to the DMS-100.
	Test:	every audit period (settable; typically every 3 minutes.)
	Reset:	no automatic reset, alarm cleared by input of RSERR command.
	Notes:	None

(continued)

Table 6-2
Description of ERRMAP entries (continued)

ERRMAP entry, type, level (notes)	Comments (notes)	
2 MMI LNKS DOWN, Major, 0	Cause:	loss of MMI comm to the DMS-100.
	Test:	every audit period (settable; typically every 3 minutes.)
	Reset:	no automatic reset, alarm cleared by input of RSERR command.
	Notes:	None
ERROR CTL CONNFL, Major, 0	Cause:	error control conflict caused by hardware faults in the error control II PCA.
	Test:	continuously checked.
	Reset:	alarm cleared immediately (automatically) if fault goes away.
	Notes:	alarm is set by hardware logic.
ERROR CTL INCON, Major, 0	Cause:	CPU (PCA) not responding to the error control II PCA,
	Test:	every half-second; must fail consecutively 16 times before an error is generated and alarm sets.
	Reset:	if CPU starts responding to the error control II PCA, the error control II PCA clears the alarm.
	Notes:	None
DMA COMM FAIL, Major, 2	Cause:	DMA time out.
	Test:	checked every 16 milliseconds
	Reset:	no automatic reset, alarm cleared by input of RSERR command.
	Notes:	when a DSI transfers call record blocks through a DMA channel, DPP sets a time out value four times the regular DMA transfer time. At the end of the timer count down, a DMA time-out occurs if DMA has not generated an interrupt to indicate end of a DMA transfer.

(continued)

Table 6-2
Description of ERRMAP entries (continued)

ERRMAP entry, type, level (notes)	Comments (notes)	
PROC STAT ALARM, Major, 2	Cause:	a. CTC (Counter Timer Chip) counter error. b. bad error control I/O status byte (ERIOST), status bit 1 is set.
	Test:	when performing processor switch.
	Reset:	no automatic reset, alarm cleared by input of RSERR command.
	Notes:	a. this alarm can also be set by a RAM CHECK ERROR. b. if alarm is set by 1 of the ERIOST, no message is printed.
PROG CKSUM ALM, Major, 3	Cause:	static RAM software checksum error.
	Test:	a. checksum test is continuously performed by a scheduled call; one cycle runs about 6 minutes. b. one-time test after booting down program from disk to RAM.
	Reset:	no automatic reset, alarm cleared by input of RSERR command.
	Notes:	None
DSI DATA OVRFLO, Critical, 0	Cause:	input data buffer overflow when disk storage process is overloaded.
	Test:	buffer check on input block ready for processing. Error is detected when no buffers are available.
	Reset:	RSERR input clears the alarm; the alarm may be set again when another DSI block is received.
	Notes:	alarm and message repeats for subsequent data blocks if DSI buffer over-flow condition does not clear.
EXCESS INV RECS, Major, 0	Cause:	receipt of the number of invalid blocks greater than specified system invalid block limit.
	Test:	performed whenever a bad call record block occurs. (There is no periodic check.)

(continued)

Table 6-2
Description of ERRMAP entries (continued)

ERRMAP entry, type, level (notes)	Comments (notes)	
	Reset:	no automatic reset, alarm cleared by input of RSERR command.
	Notes:	message and alarm set only once.
TAPE BLOCK LOST, Major, 0	Cause:	failure to transfer a data block from the DSI PCA to the main CPU.
	Test:	every time a block is received from the DMS-100.
	Reset:	cleared by input of RSERR command.
	Notes:	oversize BLOCK REJECTED message also sets this alarm.
NO CLK TIME SET, Minor, 0	Cause:	clock time lost due to power failure on the active processor.
	Test:	test and set every minute.
	Reset:	SETCLK resets and clears alarm. RSERR clears alarm before next minute check.
	Notes:	message and alarm are set and printed only once unless the alarm is reset with the RSERR command.
PROM CKSUM FAIL, Major, 3	Cause:	EPROM firmware checksum error.
	Test:	a. checksum test is continuously performed in the main processor waiting loop. b. checked when performing a processor switch.
	Reset:	cleared by input of RSERR command.
	Notes:	None
RESERV DSK FULL, Major, 0	Cause:	when disk usage is greater than 99% and the disk mode drops to ONLY (non-redundant) mode.
	Test:	on every minute boundary.
	Reset:	clear up (poll) off-line disk and enter RSERR command.
	Notes:	when disk usage reaches 99% of available space, disk system goes to ONLY (non-redundant) mode.

(continued)

Table 6-2
Description of ERRMAP entries (continued)

ERRMAP entry, type, level (notes)	Comments (notes)	
SECND FILES DEL, Minor, 0	Cause:	disk usage has exceeded 70% of available disk space.
	Test:	on every minute boundary.
	Reset:	RSERR input command clears alarm; alarm is set at next minute if disk usage is greater than 70%
	Notes:	a. not checked and set if disk usage is greater than 90%; alarm LOG FILE DEL is set. b. DPP starts deleting secondary data files when the disk usage is greater than 70%. When there are no more secondary data files to delete, this alarm is set.
LOG FILES DEL, Major, 0	Cause:	disk usage has exceeded 90% of available disk space.
	Test:	on every minute boundary.
	Reset:	RSERR input command clears alarm; alarm is set at next minute if disk usage is greater than 90%
	Notes:	when disk usage exceeds 90% of available disk space, all LOG files are deleted at once.
BOTH DISKS FULL, Critical, 0 DSK STORE LIMIT, Critical, 0	Cause:	both disks are full.
	Test:	on every minute boundary.
	Reset:	enter RSERR command to clear the alarm; alarm is set again on the minute boundary if both disks are still full.
	Notes:	DSI PCA shows EOT (End-of-Tape) when both disks are full.
DSK 70% PRIMARY, Minor, 0	Cause:	disk has reached 70% of capacity with primary AMA data.
	Test:	on every minute boundary.
	Reset:	RSERR input command clears alarm; alarm is set at next minute if disk usage is still greater than 70%.

(continued)

Table 6-2
Description of ERRMAP entries (continued)

ERRMAP entry, type, level (notes)	Comments (notes)	
	Notes:	a. not checked and set if disk usage is greater than 90%; alarm LOG FILE DEL is set.
DSK 90% PRIMARY, Major, 0	Cause:	disk has reached 90% of capacity with primary AMA data.
	Test:	on every minute boundary.
	Reset:	RSERR input command clears alarm; alarm is set at next minute if disk usage is still greater than 90%.
	Notes:	a. not checked and set if disk usage is greater than 90%; alarm LOG FILE DEL is set.
DISK WRITE FAIL, Major, 2	Cause:	a. failure to create or open an index file. b. failure to obtain a buffer fro call record(s). c. failure to write a call record block.
	Test:	alarm sets when one a, b, or c occurs.
	Reset:	RSERR command clears the alarm.
	Notes:	alarm and message set every time one of the above, a, b, or c, errors occurs.
DISK INDEX ERROR, Minor, 0	Cause:	a. bad version or sequence number when creating a Index file using the IDXMAINT command. b. the index file is full.
	Test:	a. no periodic check, tested when executing IDXMAINT command. b. on system boot.
	Reset:	RSERR command clears the alarm.
	Notes:	the alarm and message set and print whenever the error occurs.
SITE FILE ERROR, Major, 0	Cause:	site data file read/write error.
	Test:	no periodic check; tested when: a. invoking the commands SITDAT READ, SITDAT WRITE. b. scheduled SITDAT read on every hour boundary.

(continued)

Table 6-2
Description of ERRMAP entries (continued)

ERRMAP entry, type, level (notes)	Comments (notes)	
	Reset:	cleared by RSERR command.
	Notes:	None
STAT FILE ERROR, Minor, 0	Cause:	statistic file create, open, delete, and read error occurs when: a. executing REPORT command. b. updating stats file every hour c. closing statistic file at midnight every day.
	Test:	no periodic check; tested whenever a, b, or c above occurs.
	Reset:	cleared by RSERR command.
	Notes:	None
CP NOT AVAIL., Major, 1	Cause:	one of several CP error messages.
	Test:	every CP access
	Reset:	cleared by RSERR command.
	Notes:	refer to Table 6-1 for corresponding CP error messages.
CP FAULT, Major, 1	Cause:	one of several CP error messages.
	Test:	every CP access
	Reset:	cleared by RSERR command.
	Notes:	refer to Table 6-1 on for corresponding CP error messages.
DSK ERROR ALARM, Critical, 0	Cause:	disk interface sets the alarm by counting the errors, until the error count is greater than the threshold. The disk interface then decides to drop one of the error disks and sets the alarm.
	Test:	event driven test; test is performed by firmware.
	Reset:	cleared by RSERR command.
	Notes:	None
DISK MODE ALARM, Major, 0	Cause:	change disk mode form PRIME to ONLY

(continued)

Table 6-2
Description of ERRMAP entries

ERRMAP entry, type, level (notes)	Comments (notes)	
	Test:	a. disk mode check at hour boundary, if disk is found to be in ONLY mode, alarm is set. b. execute DISK MODE command to change disk mode to ONLY mode. c. show disk mode and disk mode is in ONLY mode, alarm is set.
	Reset:	cleared by RSERR command; alarm sets on the next hour boundary check if disk mode is still ONLY.
	Notes:	None
DSK DPR, QUE ERR, Major, 2	Cause:	Disk DPR and disk QUEUE restart error.
	Test:	a. no periodic check; performed by invoking TEST command or DPRTST command. b. when performing a processor switch.
	Reset:	cleared by RSERR command.
	Notes:	a. DPRTST repeatedly sets and prints the alarm and message. b. CPU check only sets the alarm; no message is printed.
DISK CARD HW ERR, Major, 2	Cause:	one of several low-level CP error messages.
	Test:	every CP access.
	Reset:	cleared by RSERR command.
	Notes:	refer to Table 6-1 for corresponding CP error messages.
DISK ER MESSAGE, Minor, 0	Cause:	one of several low-level CP error messages.
	Test:	every disk data access.
	Reset:	cleared by RSERR command.
	Notes:	refer to Table 6-1 for corresponding CP error messages.

End

Short form maintenance commands

The DPP program includes a series of short form commands designed primarily for use by maintenance and test personnel. Each of these commands performs a function equivalent to that of another, longer command within the DPP program. DPP operating personnel should be forewarned that the short form commands may only be issued from either the MAP level in the DIRECT mode, or from the EAT. Under no conditions may any of these commands be issued in the normal MAP mode. For more detailed information on the short form maintenance commands, refer to 297-1001-331.

SWACT processor changeover

The DPP provides an automatic processor changeover, occurring at 3:00 a.m. of each day, for the purpose of testing the integrity of the processor switch. Regardless of whether the A or B processor is currently in the active mode, the DPP automatically switches control to the standby processor unless there is an error condition. A processor switch may also be activated manually with use of the SWACT command, which is detailed in 297-1001-331.

A processor activity switch occurs automatically if an error condition causes the alarm level of the active processor to rise above that of the standby processor. When this occurs, the user should observe the alarm display for both processors, and determine which set of alarms would be least hazardous for continued operation. If it is determined that the processor with the higher alarm level is the desirable one to use, the user can manually switch back to that processor through use of the SWACT FORCE command. This command produces a processor switch, preceded by a disabling of all alarms displayed by that processor. For more details on the SWACT FORCE command, refer to 297-1001-331.

Note: Automatic mode changes such as AP to BP or BP to AP occur only if the alarm level in the standby processor (the processor to which the switch is directed) is of a lower severity level than the active processor the one being switched from.

DPP download diagnostic tests

The following messages relate to activities which occur during download procedures. If these messages appear during the execution of the download procedure, alert the technical assistance group immediately.

Refer to the appendix (Chapter 19) for the diagnostic test fail messages. Procedures 7-1 through 7-3 provide the steps for these messages.

Table 7-1
Diagnostic test fail messages - index

Message	Page
BAD CKSM	7-2
BAD PRGM CKSM OR START ADDRS	7-7
BAD S/W CKSM	7-10

Procedure 7-1
Diagnostic test fail messages - procedures

Step	Action	Response
1	BAD CKSM	cause: A program load from disk failed because the calculated checksum did not compare to the file checksum stored on the disk. This is an indication that: a. the program on disk is bad, or b. the disk system is failing, or c. attempt to load to EPROM address space was made, or d. a memory PCA is failing.
2	Alarm Level: Processor switch	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: Major Level: 3
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	Processor system is made non-redundant.

(continued)

Procedure 7-1
Diagnostic test fail messages - procedures (continued)

Step	Action	Response
6	Craftsperson Activity	a. Reload program from disk. i) Power down this chassis; then power up. ii) Refer to 297-1001-536 on Power Supplies. iii) If message repeats, proceed to step b, otherwise, procedure is complete. b. Download DPP program from the DMS-100.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

- Enter: (at the terminal)

>LOADDPP (cr)

i) If message repeats, proceed to step c, otherwise, procedure is complete.

c. Replace the Disk (SCSI Intf) Interface PCA in slot 11 of the standby chassis.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

(continued)

Procedure 7-1
Diagnostic test fail messages - procedures (continued)

Step	Action	Response
6 (cont'd)		i) Refer to 297-1001-536 for Printed Circuit Assembly Replacement. (If successful, procedure complete.) ii) If the problem is not cleared after PCA replacement and restart, proceed to step d. Return the original PCA to its position before proceeding. d. Replace the Extended Memory PCA in slot 3 of the standby chassis.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

(continued)

Procedure 7-1
Diagnostic test fail messages - procedures (continued)

Step	Action	Response
6 (cont'd)		i) Refer to 297-1001-536 on Printed Circuit Assembly Replacement. (If successful, procedure complete.) ii) If the problem is not cleared after PCA replacement and restart, proceed to step e. Return the original PCA to its position before proceeding. e. Replace the EPROM PCA in slot 2 of the standby chassis.
	CAUTION All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.	
		i) Refer to 297-1001-536 on Printed Circuit Assembly Replacement. (If successful, procedure complete.) ii) If the problem is not cleared after PCA replacement and restart, proceed to step d. Return the original PCA to its position before proceeding. f. Replace the Extended Memory PCA in slot 3 of the standby chassis.

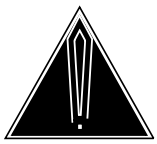
(continued)

Procedure 7-1
Diagnostic test fail messages - procedures (continued)

Step	Action	Response
6 (cont'd)		i) Refer to 297-1001-536 on Printed Circuit Assembly Replacement. (If successful, procedure complete.) ii) If the problem is not cleared after PCA replacement and restart, proceed to step e. Return the original PCA to its position before proceeding. g. Replace the EPROM PCA in slot 2 of the standby chassis.
	CAUTION All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.	
		i) Refer to 297-1001-536 on Printed Circuit Assembly Replacement. (If successful, procedure complete.) ii) If the problem is not cleared after PCA replacement and restart, proceed to step d. Return the original PCA to its position before proceeding. h. Replace the Extended Memory PCA in slot 3 of the standby chassis.
	CAUTION All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.	

(continued)

Procedure 7-1
Diagnostic test fail messages - procedures

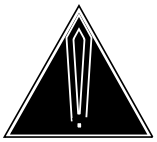
Step	Action	Response
6 (cont'd)		i) Refer to 297-1001-536 on Printed Circuit Assembly Replacement. (If successful, procedure complete.) ii) If the problem is not cleared after PCA replacement and restart, proceed to step e. Return the original PCA to its position before proceeding. i. Replace the EPROM PCA in slot 2 of the standby chassis.
	 **CAUTION** All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.	
	End	

Procedure 7-2
Diagnostic test fail messages - procedures

Step	Action	Response
1	BAD PRGM CKSM OR START ADDRS	cause: the checksum test on the loaded program file(s) failed. The system checksum may be incorrect or missing.
2	Alarm Level: Processor switch	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: Major Level: 3
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:

Procedure 7-2
Diagnostic test fail messages - procedures (continued)

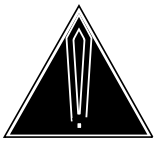
Step	Action	Response
5	System Recovery Action	The system makes 3 (three) attempts to automatically reload the program from the standby chassis.
6	Craftsperson Activity	a. If the program successfully reloaded itself from the standby, clear the alarms; Enter: (at the terminal, to clear all alarms in the active processor) **>RSERR ACT 00 (cr)** Proper response = `ALL ALARMS CLEARED` Enter: (at the terminal, to clear all alarms in the standby processor) **>RSERR STDBY 00 (cr)** Proper response = `ALL ALARMS CLEARED` (Monitor the system for a reoccurrence.) If the program did not successfully reload itself from the standby, or if the problem (log message) reoccurs, perform the following steps: b. Download new software from disk. i) Change the ONLY processor to the PRIME mode. Note: This action attempts to bring the other processor on-line in a standby mode.



CAUTION
This action may cause a loss of data.

(continued)

Procedure 7-2
Diagnostic test fail messages - procedures (continued)

Step	Action	Response
6 (cont'd)		ii) Refer to Chapter 4, Switch and Status Panel Operation. iii) If unsuccessful, proceed to step c. c. Download new software from the DMS-100. i) Consult with technical assistance personnel to perform this activity. ii) Establish a time when this can be accomplished with minimum impact on data collection activity. iii) If unsuccessful, proceed to step d. d. Replace the Disk (SCSI Intf) Interface PCA in slot 11 of the standby chassis.
	 **CAUTION** All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.	
		i) Refer to 297-1001-536 on Printed Circuit Assembly Replacement. (If successful, procedure complete.) ii) If the problem is not cleared after PCA replacement and restart, proceed to step e. Return the original PCA to its position before proceeding. e. Replace the Extended Memory PCA in slot 3 of the standby chassis.

(continued)

Procedure 7-2
Diagnostic test fail messages - procedures

Step	Action	Response
	CAUTION All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.	
6 (cont'd)		i) Refer to 297-1001-536 on Printed Circuit Assembly Replacement. (If successful, procedure complete.) ii) If the problem is not cleared after PCA replacement and restart, proceed to step f. Return the original PCA to its position before proceeding. f. Call for technical assistance.

End

Procedure 7-3
Diagnostic test fail messages - procedures

Step	Action	Response
1	`BAD S/W CKSM`	cause: output when the checksum test on software program file(s) failed on download.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	The system makes 3 (three) attempts to automatically reload the program from the standby.

(continued)

Procedure 7-3
Diagnostic test fail messages - procedures (continued)

Step	Action	Response
6	Craftsperson Activity	a. If the program successfully reloaded itself from the standby, clear the alarms; Enter: (at the terminal, to clear all alarms in the active processor) **>RSERR ACT 00 (cr)** Proper response = `ALL ALARMS CLEARED` Enter: (at the terminal, to clear all alarms in the standby processor) **>RSERR STDBY 00 (cr)** Proper response = `ALL ALARMS CLEARED` (Monitor the system for a reoccurrence.) If the program did not successfully reload itself from the standby, or if the problem (message) reoccurs, perform the following steps: b. Download new software from disk. i) Change the ONLY processor to the PRIME mode. Note: This action attempts to bring the other processor on-line in a standby mode.

CAUTION
This action may cause a loss of data.

(continued)

Procedure 7-3
Diagnostic test fail messages - procedures (continued)

Step	Action	Response
6 (cont'd)		ii) Refer to Chapter 4, Switch and Status Panel Operation. iii) If unsuccessful, proceed to step c. c. Download new software from the DMS-100. i) Consult with technical assistance personnel to perform this activity. ii) Establish a time when this can be accomplished with minimum impact on data collection activity. iii) If unsuccessful, proceed to step d. d. Replace the Disk (SCSI Intf) Interface PCA in slot 11 of the standby chassis.
	CAUTION All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.	
		i) Refer to 297-1001-536 on Printed Circuit Assembly Replacement. (If successful, procedure complete.) ii) If the problem is not cleared after PCA replacement and restart, proceed to step e. Return the original PCA to its position before proceeding. e. Replace the Extended Memory PCA in slot 3 of the standby chassis.
	CAUTION All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.	

(continued)

Procedure 7-3
Diagnostic test fail messages - procedures (continued)

Step	Action	Response
6 (cont'd)		i) Refer to 297-1001-536 on Printed Circuit Assembly Replacement. (If successful, procedure complete.) ii) If the problem is not cleared after PCA replacement and restart, proceed to step f. Return the original PCA to its position before proceeding. f. Call for technical assistance.
		End

DPP test function and diagnostics

The test function is used to verify the proper operation of various functions that reside in the DPP. The test command takes the form:

TEST ACT <carriage return> ←**active processor**
TEST STDBY <carriage return> ←**standby processor**

The following paragraphs provide a general description of the test command and a brief description of the various test functions incorporated in the test function.

The test function can be invoked by either of two means. The first is automatic activation by the DPP during a cold or warm restart procedure to automatically ascertain proper system operation. The second is invoked by manual input at the DMS-100 MAP or a local terminal at the DPP maintenance (Rover) EAT port.

> ***Note:*** The EAT accepts commands only in UPPERCASE letters. Entering commands in lower case letters results in failure of the DPP to accept those commands

When the test function is activated, either automatically as part of a start-up routine during the normal sequence of operations, or as a manual input, all eleven (11) tests are performed. At the conclusion of each test, an indication is provided at the terminal. The indication consists of two possible outputs. The first is a message to indicate the successful completion of the test. The second is an error message to provide pertinent information concerning the unsuccessful completion of a test. Table 8-1 provides a summary of the test command and the responses to the test command. Some of the tests are run as routine tasks and only provide output messages when the routine fails to execute successfully.

The following paragraphs provide a description of the test function execution routines, and identify whether the routine is available on demand at the terminal or is available as a scheduled routine task. Refer to Table 8-2.

DPR (Dual-port random access memory) communication test

This test can be initiated by entry of the TEST or DPRTST commands; acts on the standby processor. The Dual-Port RAM (DPR) is shared by the main CPU and the Disk Interface PCA. This 32 Kbytes of RAM is divided into 16 descriptors and 16 buffers. The buffers are further divided into three types:

- Seven buffers of 4 Kbytes each.
- Seven buffers of .5 Kbyte each.
- Two buffers of 30 and 80 bytes each.

Table 8-1
Test command and responses - summary

a. Active Processor: Key Input

Enter: TEST ACT <carriage return> at the terminal

Test Pass Indication	Test Error Indication	PCA Effected	PCA Slot
DPR TEST PASSED	DPR TEST FAILED: ADD: xxxx(H), RD: yy(H), WRT: yy(h)	Disk Interface	A11
DSK TEST PASSED[1]	DSK TEST FAILED	Disk Interface	A11
CLK TEST PASSED	CLK TEST FAIL (or) MP-CK-ALM	CPU	A1
CTC TEST PASSED	EC-IC-ALM	CPU	A1
SIO TEST PASSED	SIO TEST xx FAILED	SIO	A6
PIO TEST PASSED	PIO TEST FAILED	Standby CPU	A1
ERR TEST PASSED	EC-CF-ALM	Error Control II	A5
B0 DSI TEST PASSED	B1 DSI COMM FAIL	DSI 1	A13
B2 DSI TEST PASSED	B2 DSI COMM FAIL	DSI 2	A12
RAM TEST PASSED	RAM PAGE x FAILURE/ADR:nnnn; RD:xx; WR:yy	Memory Expansion	A3
ROM TEST PASSED	PROM CHKSUM ALM VAL = nn	EPROM	A2
PRG TEST PASSED	PROG CHECKSUM ALM VAL = nn	EPROM	A2

b. Standby Processor: Key Input

Enter: TEST STDBY <carriage return> at the terminal

DPR TEST PASSED	DPR TEST FAILED: ADD: xxxx(H), RD: yy(H), WRT: yy(h)	Disk Interface	A11
CLK TEST PASSED	CLK TEST FAIL (or) MP-CK-ALM	CPU	A1

(continued)

Table 8-1
Test command and responses - summary

Test Pass Indication	Test Error Indication	PCA Effected	PCA Slot
CTC TEST PASSED	EC-IC-ALM	CPU	A1
SIO TEST PASSED	SIO TEST xx FAILED	SIO	A6
PIO TEST PASSED	PIO TEST FAILED	CPU	A1
ERR TEST PASSED	EC-CF-ALM	Error Control II	A5
B0 DSI TEST PASSED	B1 DSI COMM FAIL	DSI 1	A13
B2 DSI TEST PASSED	B2 DSI COMM FAIL	DSI 2	A12
DMA TEST PASSED[2]	DMA DATA FAIL	CPU	A1
ROM TEST PASSED	PROM CHKSUM ALM VAL = nn	EPROM	A2
RAM TEST PASSED	RAM PAGE x FAILURE/ADR:nnnn; RD:xx; WR:yy	Memory Expansion	A3
PRG TEST PASSED	PROG CHECKSUM ALM VAL = nn	EPROM	A2

Notes:
Note 1: The Disk test is not run on the standby processor
Note 2: The DMA test is not run on the active processor.

End

Table 8-2
Test functions and availability

Name of Test (used in active or standby processor)	Mnemonic	PCA Tested	PCA Location	Occurrence
DPR Communications (standby processor)	DPR	Disk Interface	A11	2:50 a.m.
DISK File System End-to-End Integrity; active processor[1]	DSK	Disk Interface	A11	3:10 a.m.
DSI Communications	B0 DSI	DSI 1	A13	Every 20 minutes[2]
DSI Communications	B2 DSI	DSI 2	A12	Every 20 minutes[3]
RAM Read/Write Integrity	RAM	Memory Expansion	A3	Continuous

(continued)

Table 8-2
Test functions and availability (continued)

Name of Test (used in active or standby processor)	Mnemonic	PCA Tested	PCA Location	Occurrence
ROM Program Checksum	ROM	EPROM	A2	Continuous
ECAC Communications	ERR	Error Control II	A5	Continuous
SIO Port Check	SIO	QSIO	A6	Every 1/2 second
CTC Vectors Correct	CTC	CPU	A1	Continuous
60 Hz Clock Operational	CLK	CPU	A1	Continuous
DMA Integrity[4]	DMA	CPU	A1	Continuous
PIO Communications	PIO	STDBY CPU	A1	Continuous
MMI Link Audit	MMI	STDBY CPU	A1	Every 5 minutes[5]

Notes:
Note 1: The Disk test is not run on the standby processor.
Note 2: DSI 1 is tested on the 5, 25, and 45 minute boundaries, if idle.
Note 3: DSI 2 is tested on the 15, 35, and 55 minute boundaries, if idle.
Note 4: The DMA test is not run on the active processor.
Note 5: MMI Link Audit is not part of the TEST command functions; shown here for information purposes.

End

The 30-byte and 80-byte buffers are unidirectional. That is, data is passed through these buffers toward one destination only. The 30-byte buffer is used to transfer data from the main CPU to the disk; the 80-byte buffer is used to transfer data from the disk to the main CPU. These two buffers are associated with two unidirectional channels that correspond directly to the buffers in direction and size. The remaining buffers and corresponding channels can be used by either the main CPU or the disk.

The DPR Communication test is designed to test the ability of the unit to perform the following functions:

- Use the 30-byte buffer and its corresponding channel descriptor to send a message to the disk.
- Make certain that the disk CPU receives that message and responds back using the 80-byte buffer and the corresponding channel descriptor.
- Make the CPU access the seven 4-Kbyte buffers in less than two seconds. Provide a successful completion message if this is accomplished.
- Repeat item 3 above, using the .5 Kbyte buffers.

If the DPR communication test fails to send the message from the main CPU to the disk in less than 1 second, the following error message is output to the terminal:

```
DPR TEST FAILED: ADD: xxxx(hex), RD: yy(hex), WRT: yy(hex)
```

where: xxxx = DPR (Dual-Port-RAM) address where the fault occurred (in hex)
yy = incorrect value read from memory (to be read as byte ‘zz’, in hex)
zz = value (expected) which was written to memory (in hex)

Disk write/read test

The file system uses buffer management and file utilities to write and read data from and to the disk. The sequence of events that must be followed for reading and writing to disk are provided in Table 8-3.

The Disk Write/Read test confirms that data can be written to and read from the disk. There are two functional tests involved. The first test is the 4K buffers test followed by the .5K buffers test.

Table 8-3
Disk write/read functions overview

For Writing to Disk	For Reading from Disk
1. Create the file.	1. Open the file for read
2. Open the file for write.	2. Read the desired data into the DPR buffer.
3. Allocate a DPR buffer	3. Transfer the data from the DPR buffer.
4. Transfer the data to the DPR buffer.	4. Consume the DPR buffer.
5. Write the data to disk.	5. Close the file.
6. Close the file.	6. Delete the file.

If the Disk test fails, the following error message is output to the terminal:

```
DSK TEST FAILED
```

DSI communication

The DSI Communication test is designed to verify that communication is possible with the main CPU. The test is executed when the DSI is not transferring data blocks and when it is not in the send or receive mode. The test consists of asking the assembly for its status (RDY or NOT RDY). The response must be returned within one second of the request or an error is generated, and the following error message is output to the terminal:

```
Bx DSI COMM FAIL
```

where: x = DSI Port ID
= 0 = message is from the DSI PCA in slot A13
= 2 = message is from the DSI PCA in slot A12

There are two tests, manual and running. The manual test asks for the status of the assembly at position A12. If there is no response with status OK within one second, as error is printed. If the status is OK, the following message is output to the terminal, (the same procedure is followed for assembly at position A13):

```
Bx DSI TEST PASSED
```

where: x = DSI Port ID
= 0 = message is from the DSI PCA in slot A13
= 2 = message is from the DSI PCA in slot A12

The running test performs the same tests as the manual test, but asks for assembly No. 1 status on the 5, 25, and 45-minute boundaries, and assembly No. 2 status on the 15, 35, and 55-minute boundaries. The Bx DSI TEST PASSED message is not printed if the status is returned OK. The appropriate error message (as shown in DSI communication on page 8-5) is printed if the status is not OK.

RAM write-read-verify test

This test cycles through all of the RAM. The test is designed to store the value currently in the RAM location, write in the value 0AAH, read this value back, and restore the original value. Value 055H is employed as an alternate test pattern, read this value back from the location, and verify the integrity of the returned data pattern. The original data value is then restored, and the test moves on to the next location.

If an error (data mismatch) is encountered, the following error message is output to the terminal:

```
RAM PAGE x FAILURE/ADR:nnnn  RD:xx WR:yy
```

where: x = 0 - 7
= page number where the failure occurred
nnnn = address at which the failure occurred
xx = data byte read
yy = data byte written

Program checksum test

The program checksum test is designed to cycle from the beginning of the program to the end of the program, adding together the value of each byte as it progresses. At the end, the sum should equal zero. If the sum is not equal

to zero, the following error message is output to the terminal and a major alarm is generated:

```
PROM CHECKSUM ALM VAL=nn
                          (Firmware message; system not on line)
(or)
PROG CHECKSUM ALM VAL=nn
                               (Software message; system on line)
```

where: nn = the difference from 0 (zero) of the calculated checksum

There are two tests, manual and running. The manual test is initiated at the terminal and executes the test as described in RAM write-read-verify test. The running test is constantly executing to make certain at all times that program data is not corrupted.

Error control and alarm circuit (ECAC) test

The Error Control and Alarm Circuit (ECAC) Comm test checks the ability of the error control circuit to provide interactive monitoring of the active and standby processors. The error control and alarm circuit initiates a processor switch when the current error count in the active processor exceeds sixteen (16), generates the appropriate alarm, and prints the following error message to the terminal:

MP-switch

The ECAC Comm test checks the communication between the ECAC and the active processor. This is accomplished as a running test, divided into two parts.

The comm is checked every second. (This is done indirectly.) The ECAC must initiate a request for processor status every one-half (.5) second. If a full second expires with no request being initiated, the processor dialogue has been compromised and the following error message is output to the terminal:

EC-IC-ALM

The active processor must respond to a status request from the ECAC within 200 milliseconds, with a valid response. If there is no response from the active processor, or if there is an invalid response, the ECAC lights the major alarm lamp.

CTC vector check

The CTC channels are used as countdown timers for the interrupts created. When an interrupt occurs, the CTC counter for the channel is set to a 1 (one). After the interrupt is processed, the counter is set to 0 (zero). The

channels are arranged in a priority scheme to assure that prompt handling is provided to the associated interrupt.

The CTC vector check is a running test. Because the interrupts are processed immediately, the counter for the interrupt must be set back to zero, before the program can resume. If the counter is not set to zero, there is an indication that the interrupt did not not receive the proper handling, or did not execute at all, and the following message is output to the terminal:

```
CTC MP-ST-ALM
```

(The CTC vector check is for CTC channels 1 and 2; channel 0 (zero) is reserved for the clock and channel 3 is not used.)

60 Hz clock operation test

The clock check is a running test designed to ensure that none of the 16 millisecond interrupts generated by the clock circuit are missing. If the 8 KHz option is selected on the CPU PCA, the clock operation test is designed to ensure that the 125 microsecond interrupts are present.

For the test, the check routing sets a counter. This counter is reset for every clock interrupt generated by the clock circuit. If the counter is not reset at the proper interval, or not reset at all, it is an indication that an interrupt has been missed. This results in the generation of a major alarm, the major alarm lamp lights, and the following error message is output to the terminal:

```
CLK MP-ST-ALM
```

SIO port check

The SIO port check is designed to verify the integrity of the Port vectors. An SIO interrupt is defined as a mode 2 interrupt. This means that when an interrupt occurs, the I register, along with the 8 bits from the device form the 16-bit service routine.

The test is performed by initiation of a request being sent to the device for its vector. The vector value returned is checked against the expected value. If there is a mismatch, an error exists.

There are two tests, manual and running. The manual test is initiated at the terminal and tests each of the ports on the SIO. If there is an incorrect response, the following error message is output to the terminal:

```
xx SIO TEST FAILED
```

where: xx = The address of the SIO port that failed.
= A0 = Communications port; modem/HOC link; for DPP systems w/o 56K polling.
= A2 = MMI 1; DPP is unable to obtain a DMS-100

prompt from maintenance interface port.
= A4 = MMI 2; DPP is unable to obtain a DMS-100 prompt from maintenance interface port.
= A6 = Maintenance port; teleprinter (EAT)

The running test is the same as the manual test, with the same error message output. The running test is called automatically by the program every one-half (.5) second.

DMA communication test

The DMA is used to provide the control and processing of data transfers between the main CPU and the DSI. During a transfer operation, the DMA controls the reading from and writing to addressable ports. The data flow is handled on a byte by byte basis. These addressable ports may be either main memory or the DSI.

There are two tests, manual and running. The manual test consists of the main CPU requesting a block of data from the DSI. The DSI sends the data back to the CPU. The CPU checks the return data to ensure that it is equal to data that was originally requested. The DSI response must occur within one (1) second or an error indicating communications failure is generated. The following error message is output to the terminal:

```
Bx DSI COMM FAIL
```

where: x = DSI Port ID
= 0 = message is from the DSI PCA in slot A13
= 2 = message is from the DSI PCA in slot A12

If the data is returned within the specified .5 second, but is not equal to the original data sent by the CPU, the following error message is output to the terminal:

```
DMA DATA FAIL
```

The running test checks DSI communication but does not interrupt the DMA data operation. The running test is performed automatically every 10 minutes.

PIO communication test

The PIO is the medium used for communication between the active and standby processors, using the transmit and receive routines resident in the program software. The PIO communication test is initiated when the transmitter starts sending a message (receiving an echo for each byte transmitted), to the receiver. Upon completion of transmission, the transmitter generates an interrupt to the receiver to give control to the receiver, and to start receiver completion. The receiver accepts all of the incoming bytes, echoes them, and waits for the transmitter interrupt, to begin

its completion. If a timeout occurs during or after reception of all bytes, a reception error is generated.

There are two tests, manual and running. The manual test is initiated by terminal input. During the manual test, the active processor sends a message to the standby, waits for the message to return from the standby, and verifies that the returned message is the same as the message originally sent. If there is a discrepancy, the following error message is output to the terminal:

```
00 PIO TEST FAILED
```

The running test is performed for every occasion of messages being sent across the PIO from active processor to the standby processor. The running test consists of two operations. The first is an echo check. If the character (byte) sent across the PIO is not the same as the one echoed back, the following error message is output on the terminal:

```
00 PIO TEST FAILED
```

The second operation performed during the running test is the timeout test. When a message is started, the time between the transmission of each byte must not exceed a predetermined threshold. If this threshold is exceeded, the following error message is output to the terminal as shown:

```
00 PIO TIMEOUT
```

Printed circuit assembly diagnostics

The DPP maintains a command feature called CARDLIST that is used to provide a listing of the PCAs located in the DPP chassis. This listing includes abbreviated designations for the cards, their locations, and part numbers. For additional information concerning this feature, consult 297-1001-331.

One or more entries displayed in the CARDLIST when either of the DPP processors detects a problem. For example, if the standby processor cannot be accessed through a number of key commands, a message similar to the following is generated:

```
DPP STANDBY FAULT
ERROR DETECTED DETECTED ON PROC B
CPU CARD  / SLOT:A1  EQPEC=6M62
EPROM PCB / SLOT:A2  EQPEC=6M63
MEM EXPN  / SLOT:A3  EQPEC=6M64
```

The first line of this message indicates the nature of the fault; the second identifies the processor in which the fault occurred, and the remainder of the message lists any PCAs that may have failed. If the standby processor could not be activated in this case, it is recommended that those PCAs be replaced,

one at a time, in the order in which they are listed. For more information on PCA replacement procedures, consult 297-1001-536.

Potential PCA failures may also be detected through use of the test command, refer to Table 8-1 for a summary of the test command and outputs which performs a diagnostic test on each PCA located within the designated DPP processor. For more information on the use of this command, refer to 297-1001-331.

Additional test functions for DPP systems with 56K polling

The 56K polling feature has a series of diagnostic tests that are not included in DPP systems without 56K polling. These tests are unique to DPP systems with 56K polling.

The Communication Processor (CP) test function is used to verify the proper operation of various functions that reside in the CP. The test command takes the form:

CP TEST ACT <carriage return> ←**active processor**
CP TEST STDBY <carriage return> ←**standby processor**

The following paragraphs provide a general description of the CP test command and a brief description of the various test functions incorporated in the test function.

The CP test function can be invoked manually by either of two means. The first is automatic activation by the DPP during a cold or warm restart (CP reset) procedure to automatically ascertain proper system operation. The second is by manual input at the DMS-100 MAP or a local terminal at the DPP maintenance (Rover) port.

There are two modes of execution: MANUAL and BACKGROUND. The manual mode is entered when the test command is executed from the MAP or EAT. In the manual mode, the result of each test is reported, whether the test passes or fails. In the background mode, test execution is continuous; output is generated only when a test fails to execute properly. The continuous operation in background operation is suspended for higher priority functions, such as, a polling session.

When the CP test function is activated, either automatically as part of the start-up routine, during the normal sequence of operations, or as a manual input, all tests are performed. At the conclusion of each test in manual mode an indication is provided to the terminal. The indication consists of two possible outputs. The first possibility is an indication of the successful completion of the test. The second possibility is an error message to provide pertinent information concerning the unsuccessful completion of a test.

The following paragraphs provide a description of the test function execution routines. Keep in mind that the tests described here are to verify the functional operation of the 56K Interface PCA in slots A7 and B7.

CP EPROM checksum test

Verifies that the 2s complement of all EPROM bytes is equal to zero. If this test is successful in background mode, there is no output. If this test is successful in manual mode, the following message is generated:

```
CP ROM Checksum Test Passed
```

If this test is unsuccessful in background or manual mode, the following message is output:

```
CP ROM Checksum Test Failed
```

CP program checksum test

Verifies that the 2s complement of all program bytes is equal to zero. If this test is successful in background mode, there is no output. If this test is successful in manual mode, the following message is generated:

```
CP PRG Checksum Test Passed
```

If this test is unsuccessful in background or manual mode, the following message is output:

```
CP PRG Checksum Test Failed
```

CP DMA test

Test the DMA registers to detect DMA failures and DMA false interrupts. The test checks the DMA registers to determine whether, or not, a DMA operation was successful. If the test is successful in background mode, there is no output. If the test is successful in manual mode, the following message is generated:

```
CP DMA Test Passed
```

If the test fails, or an unknown interrupt occurs in background or manual mode, the following message is output:

```
CP DMA Test Failed
```

CP RAM parity test

The data RAM on the CP PCA is odd parity protected. If even parity is detected by the on-board parity circuitry, a maskable interrupt is generated. This is one of the highest error conditions and maintenance activity is required. If this test is successful in the background mode, there is no

output. If this test is successful in manual mode, the following message is generated:

```
CP RAM Test Passed
```

If this test is unsuccessful in background or manual mode, the following message is output:

```
CP RAM Test Failed
```

CP SCC loopback test

During the SCC local loopback test, data is written to the transmit buffer and routed back to the receiver. A match function is performed on the sent and received data; if the data matches, test pass, if there is a data mismatch, test fail. Each channel is tested separately. If this test is successful in background mode, there is no output. If this test is successful in manual mode, the following message is generated:

```
CP SCC Loopback Test Passed on Channel A
CP SCC Loopback Test Passed on Channel B
```

If this test is unsuccessful in background or manual mode, the following message is output:

```
CP SCC Loopback Test Failed on Channel A
CP SCC Loopback Test Failed on Channel B
```

Note: This test cannot execute if a polling session is in progress.

General procedures

DMS-100 procedures associated with DPP maintenance

The following DMS-100 maintenance procedures are an integral part of DPP system maintenance:

- accessing the DPP Maintenance and Administrative Position (MAP) menu and display
- silencing an audible alarm
- scanning DPP LOGS
- mounting the DPP in the Device Independent Recording Package (DIRP)
- demounting the DPP from the DIRP
- test Input/Output Circuit (IOC) port and PCA hosting DPP DSI PCAs
- test IOC card and port hosting DPP Man-Machine Interface (MMI) links
- The following paragraphs describe these procedures in detail.

Accessing the DPP map menu and display

Note: The EAT accepts commands only in UPPERCASE letters. Entering commands in lower case letters results in failure of the DPP to accept those commands.

The DPP MAP menu and display provides the Craftsperson with an interface to the DPP. The DPP MAP display provides a visual indication of DPP status. The DPP MAP menu provides the most commonly used DPP commands.

The following command, when entered from the DMS-100 MAP terminal, accesses the DPP MAP menu and display:

>MAPCI;MTC;IOD;DPP AMA (cr)

The DPP MAP display appears as shown in Figure 9-1.

Silencing audible alarms

Alarms from the DPP can, if configured by the Operating Company, activate the DMS-100 audible alarm unit. If a DPP alarm triggers a DMS-100

audible alarm, the audible alarm can be silenced by entering the following command at the DMS-100 MAP terminal:

>SIL (cr)

Scanning DPP logs using LOGUTIL

DPP100 log reports can be viewed at the DMS-100 MAP using the LOGUTIL facility. To view DPP100 logs, do the following:

1 Access the DMS-100 log utility.

>LOGUTIL

2 Open the DPP log buffer.

>OPEN DPP

Last DPP log report generated is displayed. In addition to the DPP100 log reports, DPP101 and DPP102 log reports are available for viewing. The DPP101 and DPP102 log reports are associated with the DMS-100 software that interfaces the DPP with the DMS-100 maintenance system. This DMS-100 software is included in feature package NTX243AA. For a description of feature package NTX243AA, refer to documentation listed in GFXINDEX for NTX243AA.

3 To view the next earlier DPP log message:

>BACK

Continue browsing from the last report to the earliest report until you have viewed all of the reports since the last check. Use the following commands, if necessary:

FORWARD	to view the next latest report
FIRST	to display the first report in the log buffer
LAST	to display the last report in the buffer

If desired, you can make a hard copy of all of the DPP log reports by sending the MAP terminal output to a local printer. Enter the following command while in LOGUTIL:

>LAST;WHILE (BACK) ()

This command prints the DPP logs in reverse chronological order (last to first).

Note: This command prints all of the DPP logs in the DPP log buffer.

To print the logs in chronological order,

>FIRST;WHILE (FORWARD) ()

The DPP100 log reports, as all DMS-100 log reports, indicates any alarm associated with a log message. Asterisks (*) preceding the report name are used to denote alarm levels, as follows:

- * minor alarm
- ** major alarm
- *** critical alarm.

When viewing the DPP100 log reports, note the field preceding the DPP100 field for any indication of an alarm. If an alarm is reported, the log indicates a fault.

There are several DPP messages that indicate fault conditions but do not generate alarms. An index of DPP messages and the corresponding required corrective action is in Chapter 19. For DPP100 log reports that have no associated alarm, check the index in Chapter 19 to determine whether or not the DPP100 message indicates a fault condition.

In summary, to determine whether or not a DPP100 log report indicates a fault:

- Look for an alarm indicator (asterisks '*') preceding the log report name.
- If no alarm is evident, check the DPP message index in Chapter 19 to determine if any maintenance action is required.

After viewing the DPP log reports or obtaining a hard copy:

>QUIT (to exit logutil).

Retrieving DPP logs from the DPP disk

The DPP messages can be retrieved from the DPP disk. The procedure for retrieving log messages from the DPP disk is described in Chapter .

OLD STUFF FOLLOWS

Messages from the DPP are captured and stored by the DMS-100 log system. All DPP messages are stored in the DPP log buffer and are reported as DPP100 log reports. The DPP100 log reports can be viewed from MAP terminal by entering the following commands:

>LOGUTIL (cr)
LOGUTIL:
>OPEN DPP (cr)
<the last DPP100 report generated is displayed>

At this point, the system is pointing at the last DPP100 LOG report in the DPP buffer. To scan through the DPP100 reports in the buffer the Craftsperson can scan forward or backward, from any given point in the DPP LOG buffer. The following four commands are available:

BACKWARD	displays the next earlier (the one right before the current one) DPP100 report in the DPP buffer.
FORWARD	displays the next later (the one right after the current one) DPP100 report in the DPP buffer.
LAST	displays the last (most recent) DPP100 report in the DPP buffer.
FIRST	displays the first (oldest) DPP100 report in the DPP100 buffer.

Figure 9-1
DPP MAP display; typical

```
       CC      CMC      IOD     Net      PM      CCS     Trks    Ext
        •        •        •       •       •        •       •       •

0      Quit           IOD:
2                     IOC     0       1       2       3
3      LSTDIR_        STAT    •       •       •       •
4      LSTACT_
5      REPORT_      DIRP:     •   XFER: •    DVI:  •    DPPP: •    DPPU: •
6      TEST_          NOP:    •
7
8
9      IDXMAINT
10     DSIMAINT
11     ERRMAP_
12     RSERR_
13     CLK_
14     VS_
15     LINKTEST
16     LoadDPP
17     QueryDPP
18     Reset IO_
       userid
TIME     hh:mm   MAP>
```

A printout (hard copy) of the DPP100 reports in the DPP LOG buffer can be obtained as follows, after accessing the LOGUTIL as described in the "Scanning DPP Logs Using Logutil."

1 To print the DPP100 reports from the latest to earliest:

>RECORD START ONTO prt_name (cr) **(prt_name = local printer)**
>WHILE (BACK) () (cr)

>RECORD STOP ONTO prt_name (cr)

2 To print the DPP100 reports from the earliest to latest:

>RECORD START ONTO prt_name (cr) (prt_name = local printer)
>WHILE (FORWARD) () (cr)
>RECORD STOP ONTO prt_name (cr)

To exit the LOGUTIL function:

Enter:

>QUIT (cr)

Mounting a DPP DSI in DIRP

A DPP DSI is mounted in the DMS-100 (DIRP) system as follows:

1 Access the DIRP MAP menu and display.

Enter:

>MAPCI;MTC;IOD;DIRP (cr)

2 Mount the DPP DSI as follows:

Enter:

>MNT AMA n (cr) (n = MTD number assigned to the DPP DSI)
Volume = 'volume_name'
Formatting tape as 'tape_name'
OK
UPDATING VOLUME INFORMATION FOR Tn
Please confirm ("YES" or "NO"):
>YES (cr)
VOLUME Tn ALLOCATED

Demounting a DPP DSI from DIRP

A DPP DSI is demounted in the DMS-100 DIRP system as follows:

1 Access the DIRP MAP menu and display.

Enter:

>MAPCI;MTC;IOD;DIRP (cr)

2 Check the DIRP active and standby volumes as follows:

```
>QUERY AMA FILES (cr)
 SSNAME    SSNO   SEQNO   ROTATES   POOLNO    EMERGENCY
 AMA       0        1      2         0       ***YES***
```

```
FILE(S)   STATE    VOLUME    RECOUNT      BLOCK  E  V  V_B  VLID  FNUM  FRN#
ACTIVE    AVAIL    Tn             75          3  0  1  NO   A006  0015  2058
STANDBY1  AVAIL    Tn             75          2  E  2  NO   A004  0011  2034

PARALLEL  AVAIL    Tn            N/A          0  0  S  NO   2400  0015  2060
```

Note: Determine if the DPP DSI to be demounted is the active or standby volume.

3 If the DPP DSI to be demounted is the active volume, rotate the AMA volumes as follows:

```
>ROTATE AMA (cr)
 SENDING REQUEST TO SUBSYSTEM
 Please confirm ("YES" or "NO"):
>YES (cr)
 REQUEST SENT TO SUBSYSTEM, CHECK DIRP LOG FOR DETAILS
```

4 Close and demount the standby DPP DSI volume as follows:

```
>CLOSE AMA n          (n = MTD number assigned to the DPP DSI)
 SENDING REQUEST TO SUBSYSTEM
 Please confirm ("YES" or "NO"):
>YES (cr)
 REQUEST SENT TO SUBSYSTEM, CHECK DIRP LOG FOR DETAILS
```

Mounting a DPP DSI in the DMS-100 DIRP system

Mount a DPP DSI in the DMS-100 DIRP system by using the following procedure:

1 Access the DIRP MAP menu and display.

Enter:

```
>MAPCI;MTC;IOD;DIRP (cr)
```

2 Mount the DPP DSI.

Enter:

```
>MNT AMA n (cr)       (n = MTD number assigned to the DPP DSI)
 FORMATTING TAPE AS 'volume_name'
 FIRST FILE = first_file_name, CREATED date, EXPIRES date
 ENTER FIRST FILE TO CONTINUE
>first_file_name (cr)
 VOLUME Tn ALLOCATED
```

Replacing the DPP with tape volumes

If the DPP must be removed from service, or if a DPP emergency has suspended AMA recording (DMS-100 “NO AMA” alarm), mount at least two volumes to replace the DPP DSIs while the DPP is out of service. Mount the tape volumes as provided in the following procedure.

1 Obtain two tapes suitable for AMA recording

2 Locate two idle MTDs

3 Load a tape on one of the idle MTDs

4 At the DMS-100 MAP, format the tape

Enter:

```
>MOUNT n FORMAT VOLUME volume_name (cr)          (n = MTD number)
>DEMOUNT Tn (cr)
```

5 Mount the MTD in the DIRP system.

Enter:

```
>MNT AMA n (cr)          (n = MTD number assigned to the DPP DSI)
 FORMATTING TAPE AS ‘volume_name’
 FIRST FILE = first_file_name, CREATED date, EXPIRES date
 ENTER FIRST FILE TO CONTINUE
>first_file_name (cr)
 VOLUME Tn ALLOCATED
```

Replacing tape volumes with the DPP

If the DPP was replaced with MTDs (Magnetic Tape Drives) for any reason, when the DPP is ready to be placed back in service, replace the MTDs with DPP DSIs according to the following procedure:

1 Mount the DPP DSI as described in Mounting a DPP DSI in the DMS-100 DIRP System on page 9-6.

2 Determine the numbers of the MTDs in the active and standby volume positions. Note the MTD numbers, indicated by “n” in Tn, of the active and standby volumes.

```
>QUERY AMA FILES (cr)
 SSNAME    SSNO   SEQNO   ROTATES   POOLNO    EMERGENCY
 AMA       0        1      2         0        ***YES***

FILE(S)   STATE    VOLUME    RECOUNT      BLOCK  E  V  V_B  VLID  FNUM  FRN#

ACTIVE    AVAIL    Tn             75          3  0  1  NO   A006  0015  2058

STANDBY1  AVAIL    Tn             75          2  E  2  NO   A004  0011  2034

PARALLEL  AVAIL    Tn            N/A          0  0  S  NO   2400  0015  2060
```

3 Close and demount the MTDs.

```
>CLOSE AMA STDBY 1 (cr)
 SENDING REQUEST TO SUBSYSTEM
 Please confirm ("YES" or "NO"):
>YES (cr)
 REQUEST SENT TO SUBSYSTEM, CHECK DIRP LOG FOR DETAILS
>DMNT AMA n (cr)        (n = MTD number of previously STDBY vol.)
 UPDATING VOLUME INFORMATION FOR Tn
 Please confirm ("YES" or "NO"):
>YES (cr)
 VOLUME Tn WILL BE TAKEN OUT OF DIRP AS SOON AS POSSIBLE
>CLOSE AMA ACTIVE (cr)
 WARNING - A ROTATE WILL BE DONE (IF NECESSARY) BEFORE
 CLOSING THE ACTIVE FILE.
 SENDING REQUEST TO SUBSYSTEM
 Please confirm ("YES" or "NO"):
>YES (cr)
 REQUEST SENT TO SUBSYSTEM, CHECK DIRP LOG FOR DETAILS
>DMNT AMA n             (n = MTD number of previously ACT vol.)
 UPDATING VOLUME INFORMATION FOR Tn
 Please confirm ("YES" or "NO"):
>YES (cr)
VOLUME Tn WILL BE TAKEN OUT OF DIRP AS SOON AS POSSIBLE
```

The DPP DSIs should now be mounted as the active and standby volumes. If there are any difficulties at any point, call for technical assistance immediately.

Testing IOC card and port hosting DPP DSI

If the DMS-100 Card and port hosting a DPP DSI is suspected of being faulty, the IOC Card must be tested. However, before the IOC Card can be tested, the DPP DSI must be demounted from the DIRP system. The procedure for testing a DMS-100 IOC Card is provided in 297-1001-556.

Test an IOC Card hosting a DPP DSI as follows:

1 Demount the affected DPP DSI as described in the section "Demounting a DPP DSI from DIRP."

2 Refer to 297-1001-556 for the procedure to test the IOC PCA and to clear any faults found.

3 After the IOC Card has been replaced, remount the DPP DSI as described in the section "Mounting a DPP DSI in the DMS-100 DIRP System."

Testing an IOC card hosting a DPP MMI link

If the DMS-100 IOC Card hosting a DPP MMI link is suspected of being faulty, the IOC Card must be tested. The procedure for the testing an IOC

PCA is provided in 297-1001-556. No special preparation of the DPP is required for this procedure.

Status and alarm lamp maintenance

The Status and Alarm Lamps, located on the Switch and Status Panel, are tested periodically, using the Lamp Test (LT) rocker switch located on the front of the panel. Refer to Figure 9-2.

The lamps used for the status and alarm indicators are special light bar devices, composed of four light emitting diodes (LEDs) in each lamp. The LEDs in the lamp are individually powered; if one quadrant fails, the remaining quadrants continue to operate, keeping the indicator lit.

Status and alarm lamp replacement

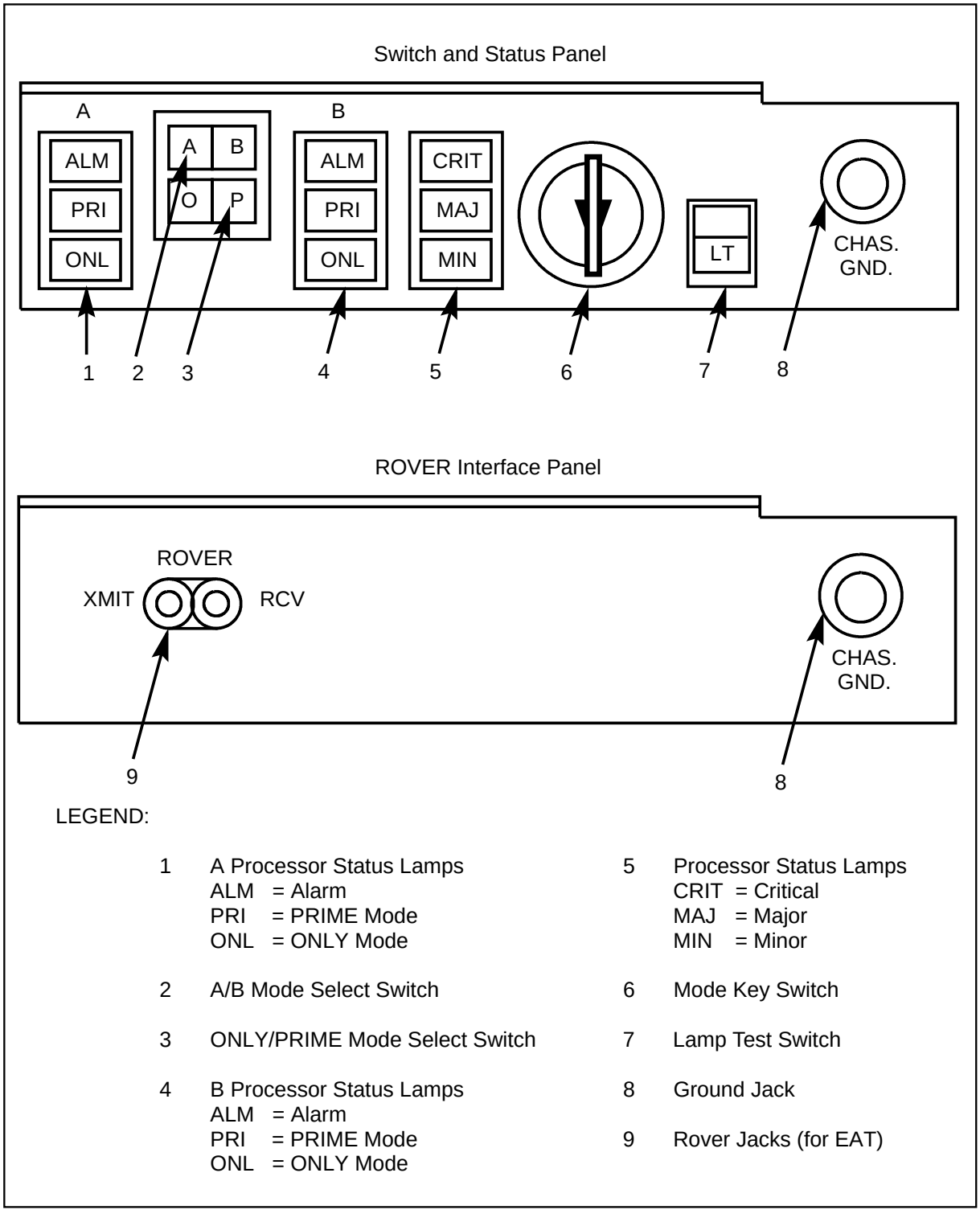
Order replacement status and alarm lamps from NT. Refer to Table 9-1.

Refer to Procedure 9-1 for lamp replacement procedures.

Table 9-1
Status and alarm lamp replacement information

Lamp	Color	Part number
ALM	Red	A0337368
PRI	Green	A0337369
ONL	Yellow	A0337370
MAJ	Red	A0337371
MIN	Yellow	A0337372
CRIT	Red	A0337373

Figure 9-2
DPP switch and status panel



LEGEND:

1 A Processor Status Lamps
ALM = Alarm
PRI = PRIME Mode
ONL = ONLY Mode

2 A/B Mode Select Switch

3 ONLY/PRIME Mode Select Switch

4 B Processor Status Lamps
ALM = Alarm
PRI = PRIME Mode
ONL = ONLY Mode

5 Processor Status Lamps
CRIT = Critical
MAJ = Major
MIN = Minor

6 Mode Key Switch

7 Lamp Test Switch

8 Ground Jack

9 Rover Jacks (for EAT)

Other indicator lamps

The red lamp on the Winchester disk drive is an LED and is not field replaceable.

The LED on the Error Control II PCA (slot A5) Error Control II Jumper PCA (slot B5), and the LED display on the CPU with DMA PCA (slots A1 and B1) are components of those PCAs and are not field replaceable.

System temperature sensor(s)

The System Temperature Sensors are located inside the Power Supplies. These sensors provide an "early warning" alarm to indicate that the DPP is operating above its recommended operating temperature limits. To test the operation of the external Temperature Alarm circuitry at the J16 connector on the input connector panel, short pins 7 and 8 together. The indication of proper operation is to watch for the "CONV FAIL" lamp on the Frame Supervisory Panel (FSP) and listen for the Office Alarm to be activated, if equipped.

Note: Test each chassis separately.

The DPP temperature alarm activates under operational conditions when either of the following conditions are met:

- If the external ambient temperature[1] exceeds 100ºF, or,
- Any fan fails and the ambient temperature[1] approaches 100ºF, or,
- If the fan filters become clogged; cooling air cannot pass through to the interior of the DPP.

CAUTION
Continuous operation of the DPP under extreme heat conditions will cause degradation of system operation.

Once the temperature alarm has been set, the ambient temperature[1] must be reduced to 80ºF to reset the thermostat. Removal of the DPP front covers and rear cabinet doors can serve to speed the thermostat reset by allowing for better circulation of cooling air within the DPP.

[1]Ambient temperature measured at the fan filter inputs on the rear of the DPP chassis inside the equipment bay.

Procedure 9-1
Lamp test and replacement procedure

Step	Description	Notes
	CAUTION It is recommended that Status and Alarm lamp replacement be performed by qualified maintenance personnel.	
1	Remove the front panel of the DPP, A chassis.	Refer to Figure 9-2.
2	Note which lamps are already lit.	The lamps reflect current DPP operating mode.
3	Press the spring-loaded switch to the LT position. If a lamp fails to light, proceed to step 3, else procedure complete; go to step 7. Loosen the four captive screws located on the left and right hand sides of the front panel; **carefully** remove the front panel.	All lamps light; the lamp(s) indicating the current status of the DPP stay lit when the switch is released. Once removed, put the front panel in a safe place to avoid damage; bending and scratching.
4	Remove the defective lamp by wedging a screwdriver blade between the lamp body and the edge of the panel cut out. Use a back and forth motion until it releases from the socket.	Place a finger on the side of the lamp opposite the blade and rock the lamp gently.
5	Insert the new lamp.	Make sure that the leads of the new lamp do not bend during insertion.
6	Press the Lamp Test rocker switch.	Verify operation of the replacement lamp.
7	Put the front panel back on the A chassis.	Put the front panel back on the A chassis.
	End	

DPP test functions

The TEST functions are used to verify the proper operation of various functions that reside in the DPP system. The TEST commands take the form:

TEST ACT (cr)	**←active processor**
TEST STDBY (cr)	**←standby processor**
CP TEST ACT	**←active 56K processor**
CP TEST STDBY	**←standby 56K processor**
CP LOOP ACT	**←active 56K processor**
CP LOOP STDBY	**←standby 56K processor**

Refer to 297-1001-331 for further information on the use of the TEST commands and 297-1001-138 for a description of the various test functions incorporated in the TEST function.

The TEST function can be invoked by either of two means. The first means is during a cold or warm restart procedure to automatically ascertain proper system operation. The TEST function can also be invoked by manual input at the DMS-100 maintenance terminal (MAP) or a local terminal at the DPP maintenance (Rover) port.

When the TEST function is activated, either automatically as part of a start-up routine, or as a manual input, all (12 on the active side; 11 on the standby side) tests are performed. At the conclusion of each test, an indication is provided to the terminal. The indication consists of two possible outputs. The first is a message to indicate the successful completion of the test. The second is an error message to provide pertinent information concerning the unsuccessful completion of a test. Refer to Tables 10-1 and 10-4. Some of the tests are run as routine tasks and only provide output messages when the routine fails to execute successfully.

Table 10-1 identifies whether the routine is available on demand at the terminal or is available as a scheduled routine task.

Activities in response to diagnostic test failure messages

Refer to Chapter 19 for the diagnostic test failure messages. Procedures 10-1 through 10-38 provide procedures to clear the conditions indicated by the TEST function error messages.

Table 10-1
Test function and responses - summary

a. Active Processor: Keyboard Input
Enter: TEST ACT (cr) at the terminal

Test pass indication	Test error indication	PCA effected	PCA slot
DPR TEST PASSED	DPR TEST FAILED: ADD: xxxx(H), RD: yy(H), WRT: yy(h)	Disk Intfc	11
DSK TEST PASSED[1]	DSK TEST FAILED	Disk Intfc	11
CLK TEST PASSED	CLK TEST FAIL MP-CK-ALM	CPU	1
CTC TEST PASSED	EC-IC-ALM	CPU	1
SIO TEST PASSED	SIO TEST xx FAILED	SIO	6
PIO TEST PASSED	PIO TEST FAILED	Standby CPU	1
ERR TEST PASSED	EC-CF-ALM	Error Control II	A5
B0 DSI TEST PASSED	B0 DSI COMM FAIL	DSI 1	13
B2 DSI TEST PASSED	B2 DSI COMM FAIL	DSI 2	12
RAM TEST PASSED	RAM PAGE x FAILURE/ ADR:nnnn; RD:xx; WR:yy	Memory Expansion	3
ROM TEST PASSED	PROM CHKSUM ALM VAL = nn	EPROM	2
PRG TEST PASSED	PROG CHECKSUM ALM VAL=nn	EPROM	2
CP ROM Checksum Test Passed	CP ROM Checksum Test Failed	56K INTFC	7
CP PRG Checksum Test Passed	CP PRG Checksum Test Passed Failed	56K INTFC	7
CP RAM Test Passed	CP RAM Test Failed	56K INTFC	7
CP DMA Test Passed[2]	CP DMA Test Failed	56K INTFC	7
CP SCC Loopback Test Passed on Channel A	CP SCC Loopback Test Failed on Channel A	56K INTFC	7

(continued)

Table 10-1
Test function and responses - summary

Test pass indication	Test error indication	PCA effected	PCA slot
CP SCC Loopback Test Passed on Channel B	CP SCC Loopback Test Failed on Channel B	56K INTFC	7

Notes:
Note 1: The Disk test is not run on the standby processor.
Note 2: The DMA test is not run on the active processor.

End

Table 10-2
Test function and responses - summary

b. Standby Processor: Keyboard Input
Enter: TEST STDBY (cr) at the terminal

Test pass indication	Test error indication	PCA effected	PCA slot
DPR TEST PASSED	DPR TEST FAILED: ADD: xxxx(H), RD: yy(H), WRT: yy(h)	Disk Interface[1]	11
CLK TEST PASSED	CLK TEST FAIL MP-CK-ALM	CPU	1
CTC TEST PASSED	EC-IC-ALM	CPU	1
SIO TEST PASSED	SIO TEST xx FAILED	SIO	6
PIO TEST PASSED	PIO TEST FAILED	CPU	1
ERR TEST PASSED	EC-CF-ALM	Error Control II	A5
B0 DSI TEST PASSED	B0 DSI COMM FAIL	DSI 1	13
B2 DSI TEST PASSED	B2 DSI COMM FAIL	DSI2	12
DMA TEST PASSED	DMA DATA FAIL	CPU	1
ROM TEST PASSED	PROM CHKSUM ALM VAL = nn	EPROM	2
RAM TEST PASSED	RAM PAGE x FAILURE/ ADR:nnnn; RD:xx; WR:yy	Memory Expansion	3
PRG TEST PASSED	PROG CHECKSUM ALM VAL=nn	EPROM	2

(continued)

Table 10-2
Test function and responses - summary

b. Standby Processor: Keyboard Input
Enter: TEST CP STDBY (cr) at the terminal

Test pass indication	Test error indication	PCA effected	PCA slot
CP ROM Checksum Test Passed	CP ROM Checksum Test Failed	56K INTFC	7
CP PRG Checksum Test Passed	CP PRG Checksum Test Passed Failed	56K INTFC	7
CP RAM Test Passed	CP RAM Test Failed	56K INTFC	7
CP DMA Test Passed[2]	CP DMA Test Failed	56K INTFC	7
CP SCC Loopback Test Passed on Channel A	CP SCC Loopback Test Passed on Channel A	56K INTFC	7
CP SCC Loopback Test Passed on Channel B	CP SCC Loopback Test Failed on Channel B	56K INTFC	7

Notes:
Note 1: The Disk test is not run on the standby processor.
Note 2: The DMA test is not run on the active processor.

End

Table 10-3
Test functions and availability

Name of test (used in active or standby processor)	Mnemonic	PCA tested	PCA location	Occurrence
DPR Communications (standby processor)	DPR	Disk Interface	11	2:50 a.m.
DISK File System End-to-End Integrity (active processor)[1]	DSK	Disk Interface	11	3:10 a.m.
DSI Communications	B0 DSI	DSI 1	13	Every 20 minutes[2]
DSI Communications	B2 DSI	DSI 2	12	Every 20 minutes[3]
RAM Read/Write Integrity	RAM	Memory Expansion	3	Continuous
ROM Program Checksum	ROM	EPROM	2	Continuous

(continued)

Table 10-3
Test functions and availability

Name of test (used in active or standby processor)	Mnemonic	PCA tested	PCA location	Occurrence
ECAC Communications	ERR	Error Control II	A5	Continuous
SIO Port Check	SIO	QSIO	6	Every 1/2 second
CTC Vectors Correct	CTC	CPU	1	Continuous
60 Hz Clock Operational	CLK	CPU	1	Continuous
DMA Integrity[4]	DMA	CPU	1	Continuous
PIO Communications	PIO	STDBY CPU	1	Continuous
MMI Link Audit	MMI	STDBY CPU	1	Every 5 minutes[5]

Notes:
Note 1: The Disk test is not run on the standby processor.
Note 2: DSI 1 is tested on the 5, 25, and 45-minute boundaries, if idle.
Note 3: DSI 2 is tested on the 15, 35, and 55-minute boundaries, if idle.
Note 4: The DMA test is not run on the active processor.
Note 5: MMI Link Audit is not part of the TEST command functions; shown here for information purposes.

End

Table 10-4
Diagnostic test failure messages - index

Message	Page
00 PIO TEST FAILED	10-7
A0 SIO TEST FAILED	10-9
A2 SIO TEST FAILED	10-9
A4 SIO TEST FAILED	10-9
A6 SIO TEST FAILED	10-9
ACTIVE PROC ALARM - NO SWITCH	10-11
CLK MP-ST-ALM	10-12
CP RELOAD	10-29
CP ACTIVATE FAIL	10-14
CP DMA Test Failed	10-20
CP DMA Test : DMA Busy	10-18

(continued)

Table 10-4
Diagnostic test failure messages - index (continued)

Message	Page
CP I/O FAILURE	10-21
CP ROM Checksum Test Failed	10-33
CP Modem Loopback Test Failed on SCC Channel x	10-26
CP PRG Checksum Test Failed	10-27
CP RAM Test Failed	10-28
CP LOAD FAIL	10-22
CP AUDIT FAIL	10-17
CP RESTART FAIL	10-32
CP SCC Channel x test : DMA Busy	10-37
CP SCC Channel x Busy	10-36
CP SCC Loopback Test Failed on Channel x	10-39
CP ROM CKSM ERR	10-34
CP xxx_TSK_ERR: y	10-43
CP TASK ERR	10-40
CP TIMEOUT	10-41
CP RESTART	10-31
CP_MMI_TSK - Memory RD/WR bad address received from the MP	10-25
CTC MP-ST-ALM	10-44
D-RAM ERROR xx AT yyyy	10-49
DPR TEST FAILED ADR:xxxx RD:yy WR:zz	10-46
DSK TEST FAILED	10-47
EC-CF-ALM	10-50
EC-IC-ALM	10-51
ERROR DETECTED ON PROC x	10-54
IPCOM LOAD ERROR	10-55
MP-CK-ALM	10-57
PARITY ERROR: x DETECTED	10-59
PROG CHKSUM ALM VAL=nn	10-60

(continued)

Table 10-4
Diagnostic test failure messages - index

Message	Page
PROM CHKSUM ALM VAL=nn	10-62
RAM PAGE a FAILURE/ADR:nnnn RD:xx WR:yy	10-64

End

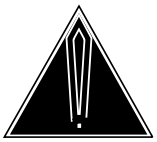
Procedure 10-1
Diagnostic test failure messages - procedures

1	00 PIO TEST FAILED	cause: a failure occurred during the Inter-Processor I/O communication test.
2	Alarm Level: No processor switch	Reason Code = 15 Corresponds to ERRMAP entry: N/A System Default: Type: Major Level: 0
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. Replace the CPU PCA in slot 1 of the standby chassis. i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. (If successful, procedure complete.) ii) If the problem is not cleared after PCA replacement and restart, proceed to step b. Return the original PCA to its position before proceeding.

(continued)

Procedure 10-1
Diagnostic test failure messages - procedures (continued)

6
(cont'd)



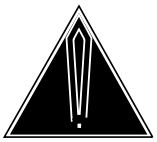
CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

b. Switch Processors.

i) Refer to Chapter 4 for switch and status panel operation.

ii) If message does not repeat, procedure complete.

iii) If message repeats, proceed to step c.



CAUTION
This action may cause a loss of data.

c. Replace the CPU PCA in slot 1 of the now standby chassis.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. (If successful, procedure complete.)

ii) If the problem is not cleared after PCA treatment and restart, proceed to step d.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

d. Call for technical assistance.

End

Procedure 10-2
Diagnostic test failure messages - procedures

1	A0 SIO TEST FAILED A2 SIO TEST FAILED A4 SIO TEST FAILED A6 SIO TEST FAILED	where: = A0 = communications port; Modem/Collector link. = A2 = MMI 1; DPP is unable to obtain a DMS-100 prompt from the maintenance interface port. = A4 = MMI 2; DPP is unable to obtain a DMS-100 prompt from the maintenance interface port. = A6 = maintenance port; teleprinter (EAT; Emergency Administrative Terminal). cause: printed to indicate that an SIO (on a QSIO PCA) channel failed.
2	Alarm Level: Two Man/Machine SIO Links Fail = Major Alarm One Man/Machine SIO Links Fail = Minor Alarm Collector or EIA Fail = Minor Alarm	Reason Code = 15 Corresponds to ERRMAP entry: SIO-1 FAILURE Major Alarm, Level 1 SIO-2 FAILURE Major Alarm, Level 1 System Default: Type: See Alarm Level Level:
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: See Alarm Level Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. Check the STANDBY SWITCH on the QSIO PCA for the LED corresponding to S1 to be OFF. If this LED is ON, move the STANDBY SWITCH to the OFF position. i) If this does not clear the problem, proceed to step b. b. Verify integrity of cabling. i) Consult Office Cabling drawings.

(continued)

Procedure 10-2
Diagnostic test failure messages - procedures

6
(cont'd)

ii) Obtain a copy of the wiring documentation for the Interface Box. Verify wiring connections.

- If cabling is not correct, make the necessary repairs.
- Consult with technical assistance personnel before moving any cable connections.

iii) If cable connections are correct, proceed to step c.

c. Verify integrity of interface connections.

i) Consult Office Cabling drawings.

- If cabling is not correct, make the necessary repairs.
- Consult with technical assistance personnel before moving any cable connections.

ii) If cable connections are correct, proceed to step d.

d. Replace the QSIO PCA in slot 6 of the standby chassis.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. (If successful, procedure complete.)

ii) If the problem is not cleared after PCA replacement and restart, proceed to step e. Return the original PCA to its position before proceeding.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

e. Call for technical assistance.

End

Procedure 10-3
Diagnostic test failure messages - procedures

1	(log message) `ACTIVE PROC ALARM - NO SWITCH`	cause: the active processor is in alarm and therefore should have switched prior to this printout. The switch did not take place for one of the following reasons: a. standby processor is not powered up b. standby processor is in a higher alarm condition than the active processor.
2	Alarm Level: No processor switch possible	Reason Code = 40 Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None; system processors are unable to reconfigure.
6	Craftsperson Activity	a. If the standby processor is not powered up (reason a above), apply power to the processor.[1] i) Refer to 297-1001-536 for power up procedures. ii) Wait for start-up activity to complete. iii) Reference the printouts to determine the reason for the alarm in the active processor. Refer to the procedure sheet for any error/log messages present; perform the Craftsperson activities listed. b. If the standby processor is in a higher alarm condition than the alarm level in the active processor (reason ii above), inform technical assistance personnel immediately.

Notes:
Note 1: If the standby processor was powered down for a particular reason, such as, maintenance activity, inform technical assistance personnel of the situation immediately.

Procedure 10-4 **Diagnostic test failure messages - procedures**		
1	(log message) `CLK MP-ST-ALM` (Clock-Microprocessor-Status-Alarm)	cause: prints out automatically to report a processor clock alarm.
2	Alarm Level: Processor switch	Reason Code = 17 Corresponds to ERRMAP entry: PROC STAT ALARM System Default: Type: Major Level: 2
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
Note: Determine if the DPP system uses the optional ac clock feature. If it does not, ignore this message. If it does use the optional ac clock feature, perform the following steps.		
6	Craftsperson Activity[1]	a. Enter ACR at the terminal to restore the ac clock circuits. i) Check the ac transformer (if present) and voltages. - Refer to Chapter 3 for power and ground requirements. ▪ Check the voltage levels and wiring connections, correct as necessary. ▪ If the wiring connections and voltage levels are correct, proceed to step b, else go to step e. ii) Replace the transformer (if equipped), if necessary.

(continued)

Procedure 10-4
Diagnostic test failure messages - procedures (continued)

6
(cont'd)

b. Restore the ac power, if used.

i) Enter ACR at the terminal to restore the ac clock circuits. (If successful, procedure complete.)

ii) If the problem still exists, proceed to step c.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

c. Replace the CPU PCA in slot 1 of the standby chassis.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. (If successful, procedure complete.)

ii) If the problem is not cleared after PCA replacement and restart, proceed to step d. Return the original PCA to its position before proceeding.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

d. Replace the P/A Comm PCA in position A16; auxiliary PCA gate in the back.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. (If successful, procedure complete.)

ii) If the problem is not cleared after PCA replacement and restart, proceed to step e. Return the original PCA to its position before proceeding.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

(continued)

Procedure 10-4
Diagnostic test failure messages - procedures

6
(cont'd)

e. RAM (A3) and EPROM (A2) messages also print out, indicating which PCA assembly to replace.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. (If successful, procedure complete.)

ii) If the problem is not cleared after PCA replacement and restart, proceed to step f. Return the original PCA to its position before proceeding.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

f. If the problem is not cleared, call for technical assistance.

End

Procedure 10-5
Diagnostic test failure messages - procedures

1	`CP ACTIVATE FAIL`	cause: The 56K Interface responded incorrectly to an attempt to start the downloaded 56K Interface software.
2	Alarm Level: Major	Reason Code = N/A Corresponds to ERRMAP entry: CP FAULT System Default: Type: Major Level: 1
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:

(continued)

Procedure 10-5
Diagnostic test failure messages - procedures (continued)

5	System Recovery Action	System attempts a 56K Interface restart. If the 56K Interface processor cannot successfully complete a restart, the alarm is upgraded to CP NOT AVAILABLE.
6	Craftsperson Activity	a. Determine the action to follow based on: i) Is the condition persistent? Proceed to step b. ii) Is the condition intermittent? Proceed to step c. b. If the condition persists, the load file residing on the Main processor is invalid. Proceed as follows: i) Verify that the correct 56K Interface load file name and version is included in the 56K Interface BOOT LIST. - Enter: (at the terminal) **>CP BOOT LIST (cr)** System response: List of file names and version numbers from the 56K Interface BOOT LIST. ii) If the file name and version are incorrect, obtain a new copy of this file and update the boot list accordingly. - Enter: (at the terminal) **>CP BOOT DELETE (cr)** Delete the incorrect file and version, proceed to the following step). - Enter: (at the terminal) **>CP BOOT ADD (cr)** Add the correct file and version. iii) If the condition persists, proceed to step d. c. If the condition is intermittent, (that is, reloads successfully at least once), proceed as follows: i) Verify the integrity of the backplane wiring. - If wiring is not correct, make the necessary repairs. - Consult with technical assistance personnel before moving any wiring connections. - If cable connections are correct, and the problem is not resolved, proceed to the following step, ii.

(continued)

Procedure 10-5
Diagnostic test failure messages - procedures (continued)

6
(cont'd)

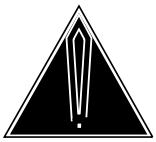
ii) Reboot the Main processor. If problem is not cleared, proceed to the following step, iii.

iii) Replace the Extended Memory PCA in A3 of the standby processor chassis.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

- Refer to 297-1001-536 for printed circuit assembly replacement procedures.
- If unsuccessful after PCA replacement and restart, proceed to the following step, iv. Return the original PCA to its position before proceeding.

iv) Replace the SCSI Interface PCA in A11 of the standby processor chassis.



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

- Refer to 297-1001-536 for printed circuit assembly replacement procedures.
- If unsuccessful after PCA replacement and restart, proceed to step v. Return the original PCA to its position before proceeding.

v) Replace the 56K Interface PCA slot 7 of the standby processor chassis.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

(continued)

Procedure 10-5
Diagnostic test failure messages - procedures (continued)

6 (cont'd)	- Refer to 297-1001-536 for printed circuit assembly replacement procedures. - If unsuccessful after PCA replacement and restart, proceed to step d. Return the original PCA to its position before proceeding. d. Call for technical assistance.

End

Procedure 10-6
Diagnostic test failure messages - procedures

1	CP AUDIT FAIL (w/56K polling)	cause: 56K Interface responded improperly to an audit command.
2	Alarm Level: Major	Reason Code = N/A Corresponds to ERRMAP entry: CP FAULT System Default: Type: Major Level: 1
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	System attempts a 56K Interface restart. If the 56K Interface PCA cannot successfully complete a restart, the alarm is upgraded to CP NOT AVAILABLE.
6	Craftsperson Activity	a. Reboot the Main processor. If problem is not cleared, proceed to step b. b. Verify the integrity of the backplane wiring. i) If wiring is not correct, make the necessary repairs.

(continued)

Procedure 10-6
Diagnostic test failure messages - procedures

ii) Consult with technical assistance personnel before moving any wiring connections.

iii) If cable connections are correct, and the problem is not resolved, proceed to step c.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

c. Replace the 56K Interface PCA in slot 7 of the standby chassis.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If unsuccessful after PCA replacement and restart, proceed to step d. Return the original PCA to its position before proceeding.

d. Call for technical assistance.

End

Procedure 10-7
Diagnostic test failure messages - procedures

1	`CP DMA Test : DMA Busy` (w/56K polling)	cause: response to the CP TEST ACT or CP TEST STDBY command; this message should never appear. If the CP TEST ACT or CP TEST STDBY command is entered during a polling session, the "CP DGN - Testing not performed due to a polling" message should appear. If the "CP DMA Test : DMA Busy" message does appear, this implies there is a hardware or internal software problem on the 56K Comm PCA.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A

(continued)

Procedure 10-7
Diagnostic test failure messages - procedures (continued)

3	Customer-Selected Alarm Level	Type:	Level:
4	Other Alarm Indications	Default: Status Panel:	Audible:
		Customer-Selected Status Panel:	Audible:
5	System Recovery Action	None	
6	Craftsperson Activity	a. Reboot the Main processor. If problem is not cleared, proceed to step b. b. Verify the integrity of the backplane wiring. i) If wiring is not correct, make the necessary repairs. ii) Consult with technical assistance personnel before moving any wiring connections. iii) If cable connections are correct, and the problem is not resolved, proceed to step c.	

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

c. Replace the 56K Interface PCA in slot 7 of the standby chassis.
   i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.
   ii) If unsuccessful after PCA replacement and restart, proceed to step d. Return the original PCA to its position before proceeding.
d. Call for technical assistance.

End

Procedure 10-8
Diagnostic test failure messages - procedures

1	`CP DMA Test Failed` (w/56K polling)	cause: 56K Interface DMA test failed.
2	Alarm Level: Processor switch	Reason Code = N/A Corresponds to ERRMAP entry: CP FAULT System Default: Type: Major Level: 1
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	Processor switch.
	CAUTION All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.	
6	Craftsperson Activity	a. Replace the 56K Interface PCA in slot 7 of the standby chassis. i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. (If successful, procedure complete.) ii) If the problem is not cleared after PCA replacement and restart, proceed to step b. Return the original PCA to its position before proceeding. b. Call for technical assistance.

Procedure 10-9
Diagnostic test failure messages - procedures

1	`CP I/O FAILURE` (w/56K polling)	cause: hardware status from the 56K Interface contains an illogical value.
2	Alarm Level: Major	Reason Code = N/A Corresponds to ERRMAP entry: CP FAULT System Default: Type: Major Level: 1
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	a. System attempts a 56K Interface restart. b. If restart attempt is unsuccessful, alarm is escalated to CP NOT AVAILABLE.
6	Craftsperson Activity	a. Verify integrity of the backplane wiring. i) If wiring is not correct, make the necessary repairs. ii) Consult with technical assistance personnel before moving any wiring connections. iii) If cable connections are correct, and the problem is not resolved, proceed to step b.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

(continued)

Procedure 10-9 **Diagnostic test failure messages - procedures**	
6 (cont'd)	b. Replace the 56K Interface PCA in slot 7 of the standby chassis. i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. ii) If unsuccessful after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding. c. Call for technical assistance.
End	

Procedure 10-10 **Diagnostic test failure messages - procedures**		
1	CP LOAD FAIL (w/56K polling)	cause: 56K Interface PCA rejected a load file from the Main processor.
2	Alarm Level: Major	Reason Code = N/A Corresponds to ERRMAP entry: CP FAULT System Default: Type: Major Level: 1
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	System attempts a 56K Interface restart. If the 56K Interface cannot successfully complete a restart, the alarm is upgraded to CP NOT AVAILABLE.
6	Craftsperson Activity	a. Determine the action to follow based on: i) Is the condition persistent? Proceed to step b. ii) Is the condition intermittent? Proceed to step c.
(continued)		

Procedure 10-10
Diagnostic test failure messages - procedures (continued)

6
(cont'd)

b. If the condition persists, the load file residing on the Main processor is invalid. Proceed as follows:

i) Verify that the correct 56K Interface load file name and version is included in the SCSI Interface BOOT LIST.

- Enter: (at the terminal)

>CP BOOT LIST (cr)
System response: List of file names and version numbers from the SCSI Interface BOOT LIST.

ii) If the file name and version are incorrect, obtain a new copy of this file and update the boot list accordingly.

- Enter: (at the terminal)

>CP BOOT DELETE (cr)
Delete the incorrect file and version, proceed to the following step.

- Enter: (at the terminal)

>CP BOOT ADD (cr)
Add the correct file and version.

iii) If the condition persists, proceed to step d.

c. If the condition is intermittent, reloads at least once successfully, proceed as follows:

i) Verify the integrity of the backplane wiring.

- If wiring is not correct, make the necessary repairs.
- Consult with technical assistance personnel before moving any wiring connections.
- If cable connections are correct, and the problem is not resolved, proceed to the following step, ii.

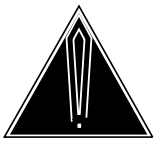
ii) Reboot the Main processor. If problem is not cleared, proceed to the following step, iii.

iii) Replace the DRAM PCA in slot 3 of the standby chassis.

(continued)

Procedure 10-10
Diagnostic test failure messages - procedures (continued)

6
(cont'd)



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

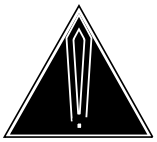
- Refer to 297-1001-536 for printed circuit assembly replacement procedures.
- If unsuccessful after PCA replacement and restart, proceed to the following step, iv. Return the original PCA to its position before proceeding.

iv) Replace the SCSI Interface PCA in A11 of the standby processor chassis.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

- Refer to 297-1001-536 for printed circuit assembly replacement procedures.
- If unsuccessful after PCA replacement and restart, proceed to the following step, v. Return the original PCA to its position before proceeding.

v) Replace the 56K Interface PCA slot 7 of the standby processor chassis.



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

- Refer to 297-1001-536 for printed circuit assembly replacement procedures.
- If unsuccessful after PCA replacement and restart, proceed to the following step, d. Return the original PCA to its position before proceeding.

d. Call for technical assistance.

End

Procedure 10-11
Diagnostic test failure messages - procedures

1	`CP_MMI_TSK - Memory RD/WR bad address received from the MP` (w/56K polling)	cause: response to CP MEMWRITE command; output if an address too large for the system configuration is entered; message is from the Main Processor.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. Reboot the Main processor. If problem is not cleared, proceed to step b. b. Verify the integrity of the backplane wiring. i) If wiring is not correct, make the necessary repairs. ii) Consult with technical assistance personnel before moving any wiring connections. iii) If cable connections are correct, and the problem is not resolved, proceed to step c.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

(continued)

Procedure 10-11
Diagnostic test failure messages - procedures (continued)

6 (cont'd)	c. Replace the 56K Interface PCA in slot 7 of the standby chassis. i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. ii) If unsuccessful after PCA replacement and restart, proceed to step d. Return the original PCA to its position before proceeding. d. Call for technical assistance.

End

Procedure 10-12
Diagnostic test failure messages - procedures

1	`CP Modem Loopback Test Failed on SCC Channel x` (w/56K polling)	where: x = channel identifier = A = channel A = B = channel B cause: the modem loopback test failed on the channel identified by 'x'.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None

(continued)

Procedure 10-12
Diagnostic test failure messages - procedures (continued)

6	Craftsperson Activity	a. Verify the integrity of the backplane wiring and cabling to the modem. i) If wiring is not correct, make the necessary repairs. ii) Consult with technical assistance personnel before moving any wiring connections. iii) If cable connections are correct, and the problem is not resolved, proceed to step b.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

b. Replace the 56K Interface PCA in slot 7 of the standby chassis.
i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.
ii) If unsuccessful after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

c. Call for technical assistance.

End

Procedure 10-13
Diagnostic test failure messages - procedures

1	`CP PRG Checksum Test Failed` (w/56K polling)	cause: 56K Interface program checksum test failed due to 56K Interface RAM chip corrupted or a bad software load.
2	Alarm Level: Processor switch	Reason Code = N/A Corresponds to ERRMAP entry: CP FAULT System Default: Type: Major Level: 1
3	Customer-Selected Alarm Level	Type: Level:

(continued)

Procedure 10-13
Diagnostic test failure messages - procedures (continued)

4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	Processor switch.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

6	Craftsperson Activity	a. Replace the 56K Interface PCA in slot A7 of the standby chassis. i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. (If successful, procedure complete.) ii) If the problem is not cleared after PCA replacement and restart, proceed to step b. Return the original PCA to its position before proceeding. b. Call for technical assistance; arrange for a software download from the DMS-100.

End

Procedure 10-14
Diagnostic test failure messages - procedures

1	`CP RAM Test Failed` (w/56K polling)	cause: the 56K Interface RAM test failed. A RAM chip may be corrupted or the parity circuitry has failed.
2	Alarm Level: Processor switch	Reason Code = N/A Corresponds to ERRMAP entry: CP FAULT System Default: Type: Major Level: 1
3	Customer-Selected Alarm Level	Type: Level:

(continued)

Procedure 10-14
Diagnostic test failure messages - procedures (continued)

4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	Processor switch.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

6	Craftsperson Activity	a. Replace the 56K Interface PCA in slot A7 of the standby chassis. i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. (If successful, procedure complete.) ii) If the problem is not cleared after PCA replacement and restart, proceed to step b. Return the original PCA to its position before proceeding. b. Call for technical assistance.

End

Procedure 10-15
Diagnostic test failure messages - procedures

1	CP RELOAD (w/56K polling)	cause: printed when the 56K Interface a requests a reload or when commanded via the 56K Interface command. The 56K Interface requests a reload if during the self test, it finds a corruption of the software.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A

(continued)

Procedure 10-15
Diagnostic test failure messages - procedures (continued)

3	Customer-Selected Alarm Level	Type:	Level:
4	Other Alarm Indications	Default: Status Panel: Customer-Selected Status Panel:	 Audible: Audible:
5	System Recovery Action	a. This message is preceded, and followed by, a CP RESTART message which indicates that the restart self tests are performed before and after loading the SCSI Interface software files. b. A subsequent CP ACTIVE message indicates a successful reload and restart.	
6	Craftsperson Activity	a. If this message prints repeatedly, the load file itself may be corrupted. If this is suspected, a 56K Interface load file is necessary. b. If this message prints intermittently, the 56K Interface memory may be faulty, or there is a software defect. Perform the following steps: i) Reboot the Main processor. If problem is not cleared, proceed to step ii. ii) Replace the 56K Interface PCA in slot 7 of the standby chassis.	

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

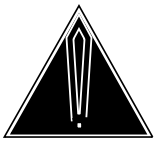
- Refer to 297-1001-536 for printed circuit assembly replacement procedures.
- If unsuccessful after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

c. Call for technical assistance.

End

Procedure 10-16
Diagnostic test failure messages - procedures

1	CP RESTART (w/56K polling)	cause: printed when the 56K Interface reset is detected. (Successful restart is indicated by a subsequent CP ACTIVE log message.)
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	a. All 56K Interface application tasks running on both the 56K Interface PCA and the Main processor are placed in their initial states. b. The 56K Interface performs a self test (firmware and software checksum tests).
6	Craftsperson Activity	a. None, if due to normal operating conditions. b. If this condition persists, with no accompanying CP FAULT alarm, perform the following tasks: i) Reboot the Main processor. If problem is not cleared, proceed to step ii. ii) Replace the 56K Interface PCA in slot 7 of the standby chassis.



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

(continued)

Procedure 10-16
Diagnostic test failure messages - procedures

6 (cont'd)

- Refer to 297-1001-536 for printed circuit assembly replacement procedures.
- If unsuccessful after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

c. Refer to any accompanying CP FAULT error messages printed along with this message for more definitive information of the fault.

i) Reference the procedure sheet for any other CP FAULT messages that appear.

ii) Do any Craftsperson activity procedures in the associated CP FAULT error procedure sheets. (If unsuccessful, proceed with step d.)

d. Call for technical assistance.

End

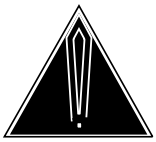
Procedure 10-17
Diagnostic test failure messages - procedures

1	`CP RESTART FAIL` (w/56K polling)	cause: the 56K Interface responded improperly to a reset condition.
2	Alarm Level: Major	Reason Code = N/A Corresponds to ERRMAP entry: CP FAULT System Default: Type: Major Level: 1
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	System attempts a 56K Interface restart. If the 56K Interface cannot successfully complete a restart, the alarm is upgraded to CP NOT AVAILABLE.

(continued)

Procedure 10-17
Diagnostic test failure messages - procedures (continued)

6	Craftsperson Activity:	a. Verify the integrity of the backplane wiring. i) If wiring is not correct, make the necessary repairs. ii) Consult with technical assistance personnel before moving any wiring connections. iii) If cable connections are correct, and the problem is not resolved, proceed to step b. b. Reboot the Main processor. If problem is not cleared, proceed to step c.



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

c. Replace the 56K Interface PCA in slot 7 of the standby chassis.
i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.
ii) If unsuccessful after PCA replacement and restart, proceed to step d. Return the original PCA to its position before proceeding.
d. Call for technical assistance.

End

Procedure 10-18
Diagnostic test failure messages - procedures

1	`CP ROM Checksum Test Failed` (w/56K polling)	cause: the 56K Interface EPROM checksum test failed. The EPROM is corrupted or there is a bad checksum byte.
2	Alarm Level: Processor switch	Reason Code = N/A Corresponds to ERRMAP entry: CP FAULT System Default: Type: Major Level: 1

(continued)

Procedure 10-18
Diagnostic test failure messages - procedures

3	Customer-Selected Alarm Level	Type:	Level:
4	Other Alarm Indications	Default: Status Panel: Major	Audible: Major
		Customer-Selected Status Panel:	Audible:
5	System Recovery Action	Processor switch.	

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

6 Craftsperson Activity

a. Replace the 56K Interface PCA in slot 7 of the standby chassis.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. (If successful, procedure complete.)

ii) If the problem is not cleared after PCA replacement and restart, proceed to step b. Return the original PCA to its position before proceeding.

b. Call for technical assistance.

End

Procedure 10-19
Diagnostic test failure messages - procedures

1	`CP ROM CKSM ERR` (w/56K polling)	cause: a 56K Interface restart self test detected an incorrect ROM checksum.
2	Alarm Level: Major	Reason Code = N/A Corresponds to ERRMAP entry: CP FAULT System Default: Type: Major Level: 1

(continued)

Procedure 10-19
Diagnostic test failure messages - procedures (continued)

3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	System attempts a 56K Interface restart. If the 56K Interface cannot successfully complete a restart, the alarm is upgraded to CP NOT AVAILABLE.
6	Craftsperson Activity	a. Reboot the Main processor. If problem is not cleared, proceed to step b. b. Verify the integrity of the backplane wiring. i) If wiring is not correct, make the necessary repairs. ii) Consult with technical assistance personnel before moving any wiring connections. iii) If cable connections are correct, and the problem is not resolved, proceed to step c.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

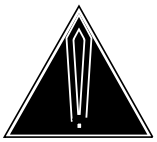
c. Replace the 56K Interface PCA in slot 7 of the standby chassis.
i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.
ii) If unsuccessful after PCA replacement and restart, proceed to step d. Return the original PCA to its position before proceeding.
d. Call for technical assistance.

End

Procedure 10-20 **Diagnostic test failure messages - procedures**		
1	`CP SCC Channel x Busy` (w/56K polling)	where: x = channel identifier = A = channel A = B = channel B cause: response to the CP TEST ACT or CP TEST STDBY command; this message should never appear. If the CP TEST ACT or CP TEST STDBY command is entered during a polling session, the “CP DGN - Testing not performed due to a polling” message should appear. If the “CP DMA Test : DMA Busy” message does appear, this implies there is a hardware or internal software problem on the 56K Comm PCA.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. Reboot the Main processor. If problem is not cleared, proceed to step b. b. Verify the integrity of the backplane wiring. i) If wiring is not correct, make the necessary repairs. ii) Consult with technical assistance personnel before moving any wiring connections. iii) If cable connections are correct, and the problem is not resolved, proceed to step c.
		(continued)

Procedure 10-20
Diagnostic test failure messages - procedures (continued)

6 (cont'd)



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

c. Replace the 56K Interface PCA in slot 7 of the standby chassis.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If unsuccessful after PCA replacement and restart, proceed to step d. Return the original PCA to its position before proceeding.

d. Call for technical assistance.

End

Procedure 10-21
Diagnostic test failure messages - procedures

1 `CP SCC Channel x test : DMA Busy` (w/56K polling)

where: x = channel identifier
= A = channel A
= B = channel B

cause: response to the CP TEST ACT or CP TEST STDBY command; this message should never appear. If the CP TEST ACT or CP TEST STDBY command is entered during a polling session, the "CP DGN - Testing not performed due to a polling" message should appear. If the "CP DMA Test : DMA Busy" message does appear, this implies there is a hardware or internal software problem on the 56K Comm PCA.

2 Alarm Level: N/A

Reason Code = N/A

Corresponds to ERRMAP entry: N/A

System Default:
Type: N/A Level: N/A

3 Customer-Selected Alarm Level

Type: Level:

(continued)

Procedure 10-21
Diagnostic test failure messages - procedures (continued)

4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. Reboot the Main processor. If problem is not cleared, proceed to step b. b. Verify the integrity of the backplane wiring. i) If wiring is not correct, make the necessary repairs. ii) Consult with technical assistance personnel before moving any wiring connections. iii) If cable connections are correct, and the problem is not resolved, proceed to step c.

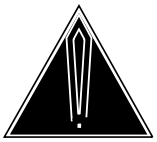
CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

c. Replace the 56K Interface PCA in slot 7 of the standby chassis.
i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.
ii) If unsuccessful after PCA replacement and restart, proceed to step d. Return the original PCA to its position before proceeding.
d. Call for technical assistance.

End

Procedure 10-22
Diagnostic test failure messages - procedures

1	`CP SCC Loopback Test Failed on Channel x` (w/56K polling)	where: x = channel identifier = A = channel A = B = channel B cause: 56K Interface SCC loopback test failed for the designated channel.
2	Alarm Level: Processor switch	Reason Code = N/A Corresponds to ERRMAP entry: CP FAULT System Default: Type: Major Level: 1
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	Processor switch.



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

6	Craftsperson Activity	a. Replace the 56K Interface PCA in slot 7 of the standby chassis. i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. (If successful, procedure complete.) ii) If the problem is not cleared after PCA replacement and restart, proceed to step b. Return the original PCA to its position before proceeding. b. Call for technical assistance.

Procedure 10-23
Diagnostic test failure messages - procedures

1	CP TASK ERR (w/56K polling)	cause: an illogical condition was detected by the 56K Interface system software.
2	Alarm Level: Major	Reason Code = N/A Corresponds to ERRMAP entry: CP FAULT System Default: Type: Major Level: 1
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	System attempts a 56K Interface restart. If the 56K Interface cannot successfully complete a restart, the alarm is upgraded to CP NOT AVAILABLE.
6	Craftsperson Activity	a. Reboot the Main processor. If problem is not cleared, proceed to step b. b. Verify the integrity of the backplane wiring. i) If wiring is not correct, make the necessary repairs. ii) Consult with technical assistance personnel before moving any wiring connections. iii) If cable connections are correct, and the problem is not resolved, proceed to step c.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

(continued)

Procedure 10-23
Diagnostic test failure messages - procedures (continued)

6 (cont'd)	c. Replace the 56K Interface PCA in slot 7 of the standby chassis. i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. ii) If unsuccessful after PCA replacement and restart, proceed to step d. Return the original PCA to its position before proceeding. d. Call for technical assistance.

End

Procedure 10-24
Diagnostic test failure messages - procedures

1	`CP TIMEOUT` (w/56K polling)	cause: the 56K Interface failed to respond to a continuous audit or synchronization command.
2	Alarm Level: Major	Reason Code = N/A Corresponds to ERRMAP entry: CP FAULT System Default: Type: Major Level: 1
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	System attempts a 56K Interface restart. If the 56K Interface cannot successfully complete a restart, the alarm is upgraded to CP NOT AVAILABLE.

(continued)

Procedure 10-24
Diagnostic test failure messages - procedures

6 Craftsperson Activity:

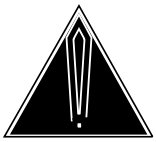
a. Verify the integrity of the backplane wiring.

i) If wiring is not correct, make the necessary repairs.

ii) Consult with technical assistance personnel before moving any wiring connections.

iii) If cable connections are correct, and the problem is not resolved, proceed to step b.

b. Reboot the Main processor. If problem is not cleared, proceed to step c.



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

c. Replace the 56K Interface PCA in slot 7 of the standby chassis.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If unsuccessful after PCA replacement and restart, proceed to step d. Return the original PCA to its position before proceeding.

d. Call for technical assistance.

End

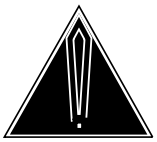
Procedure 10-25
Diagnostic test failure messages - procedures

1	(log message) CP xxx_TSK_ERR: y	where: xxx = DGN = diagnostics = during a diagnostic task execution, an error occurred = MMI = man-machine interface = during a man-machine interface task execution, an error occurred = MSG = message = during a message task execution, an error occurred = RPT = report = during a report task execution, an error occurred y = error code = 0 = internal software error = 1 = unknown (error) message received from Main processor = 2 = invoking Main processor failed via RFT = 3 = reading data from Main processor failed via RFT = 4 = writing data to Main processor failed via RFT cause: a Comm Processor task encounters an internal error.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: N/A Audible: N/A Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. Reboot the Main processor. If problem is not cleared, proceed to step b.

(continued)

Procedure 10-25
Diagnostic test failure messages - procedures (continued)

6 (cont'd)



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

b. Replace the 56K Interface PCA in slot 7 of the standby chassis.

   i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

   ii) If unsuccessful after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

c. Call for technical assistance.

End

Procedure 10-26
Diagnostic test failure messages - procedures

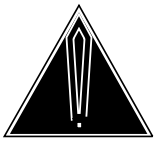
1	(log message) `CTC MP-ST-ALM` (Counter Timer Circuit Microprocessor-Status-Alarm)	cause: prints out to report a processor status alarm.
2	Alarm Level: Processor switch	Reason Code = 17 Corresponds to ERRMAP entry: PROC STAT ALARM System Default: Type: Major Level: 2
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	Processor system is made non-redundant.

(continued)

Procedure 10-26
Diagnostic test failure messages - procedures

6 Craftsperson Activity

a. RAM (A3), EPROM (A2), or CLOCK (transformer) messages also print out, indicating which assembly to replace.



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If unsuccessful after PCA replacement and restart, proceed to step b. Return the original PCA to its position before proceeding.

b. Replace the CPU PCA in slot 1 of the standby chassis.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If unsuccessful after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

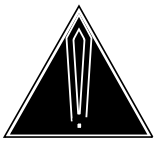
c. Call for technical assistance.

End

Procedure 10-27
Diagnostic test failure messages - procedures

1	(log message)
	`DPR TEST FAILED`
	`ADR:xxxx RD:yy WR:zz`
		where: xxxx = the DPR (Dual-Port-RAM) address where the fault occurred (in Hex)
		yy = the incorrect value read from memory (to be read as byte 'zz', in Hex)
		zz = the value (expected) which was written to memory (in Hex)
		
		cause: printed out when the DPR test, initiated by the TEST command, or the DPRTST command, and executed on the standby processor, does not obtain the expected results

2	Alarm Level: Processor switch	Reason Code = 21 Corresponds to ERRMAP entry: DSK DPR, QUE ERR System Default: Type: Major Level: 2
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. Replace the Disk (or SCSI) Interface PCA in slot 11 of the standby chassis.



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

(continued)

Procedure 10-27
Diagnostic test failure messages - procedures (continued)

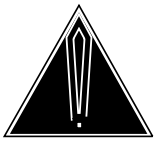
6 (cont'd)

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) Repeat the DPRTST or TEST command; look for the DPR TEST PASSED message. If this message does not appear, proceed to step c.

iii) If the problem is not cleared after PCA replacement and restart, proceed to step b. Return the original PCA to its position before proceeding.

b. Replace the CPU PCA in slot 1 of the same chassis as in step a.



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) Repeat the DPRTST or TEST command; look for the DPR TEST PASSED message. If this message does not appear, proceed to step c.

iii) If the problem is not cleared after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

c. Call for technical assistance.

End

Procedure 10-28
Diagnostic test failure messages - procedures

1	(log message) `DSK TEST FAILED`	cause: the disk test requested on the active disk has failed.
2	Alarm Level: Critical, disk mode non-redundant	Reason Code = 27 Corresponds to ERRMAP entry: DSK ERROR ALARM System Default: Type: Critical Level: 0

(continued)

Procedure 10-28
Diagnostic test failure messages - procedures (continued)

3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Critical Audible: Critical Customer-Selected Status Panel: Audible:
5	System Recovery Action	a. Disk system is made non-redundant. b. As specified for the associated disk error message.

6	Craftsperson Activity	a. Clear the active alarms: follow the procedures below to determine the active alarms and the procedures for clearing.
		i) To display a list of alarms and level assignments,
		- Enter: (at the terminal)
		>ERRMAP ACT (cr) <----active processor)
		>ERRMAP STDBY (cr) <----standby processor)
		- Example of response:
		`CURRENT ALARM ASSIGNMENTS ARE:`
		`DEV/EVT # NAME ALARM LEVEL`
		`* 1 DISK FULL CRITICAL 0`
		`2 DSI TIMEOUT CRITICAL 1`
		`3 COMM FAIL MAJOR 3`
		`* 4 DMA ALARM MINOR 3`
		`* INDICATES ALARM CURRENTLY ACTIVE`

(continued)

Procedure 10-28
Diagnostic test failure messages - procedures (continued)

6
(cont'd)

ii) To clear the alarms.[1]

- Enter: (at the terminal: to clear any alarms on the active processor. Alarms clear if no fault conditions exist.)

  >RSERR ACT (cr)

- Enter: (at the terminal: to clear any alarms on the active processor. Alarms clear if no fault conditions exist.)

  >RSERR STDBY (cr)

b. If the alarms cannot be cleared, or if the message prints repeatedly, refer to the associated disk error message for more definitive information of the fault.

i) Reference the procedure sheet for any other disk error messages that appear.

ii) Do any Craftsperson activity procedures in the associated disk error procedure sheets. (If unsuccessful, proceed with step c.)

c. Call for technical assistance.

Notes:
Note 1: To clear an active alarm, after the condition is no longer present, enter RSERR ACT and 00 to reset all alarms, or DEVICE/EVENT/Number (2 digits) to clear a specific alarm. For more information, refer to the RSERR command.

End

Procedure 10-29
Diagnostic test failure messages - procedures

1 (log message)
`D-RAM ERROR xx AT yyyy`

where: xx = interrupt register value (page number, hi bit is parity bit).
yyyy = next program address to be executed.

cause: printed when a parity error interrupt is received from the D-RAM memory assembly.

(continued)

Procedure 10-29
Diagnostic test failure messages - procedures

2	Alarm Level: Processor switch	Reason Code = 9 Corresponds to ERRMAP entry: D_RAM ERROR System Default: Type: Major Level: 1
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	Processor switch; after five consecutive attempts in one hour.
6	Craftsperson Activity	a. Replace the Extended Memory PCA in slot 3 of the same chassis.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If unsuccessful after PCA replacement and restart, proceed to step b. Return the original PCA to its position before proceeding.

b. Call for technical assistance.

End

Procedure 10-30
Diagnostic test failure messages - procedures

1	(log message) EC-CF-ALM (Error Control-Conflict-Alarm)	cause: printed out after a conflict in error control commands. A conflict can occur when both processors are in the same state (both active or both standby).

(continued)

Procedure 10-30
Diagnostic test failure messages - procedures (continued)

2	Alarm Level: No processor switch	Reason Code = 14 Corresponds to ERRMAP entry: ERR CTL CONFL System Default: Type: Major Level: 0
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	System selects one processor to be active.
6	Craftsperson Activity	a. Replace the Error Control II PCA in slot A5.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. (If unsuccessful, proceed with step b.) Return the original PCA to its position before proceeding.

b. Call for technical assistance.

End

Procedure 10-31
Diagnostic test failure messages - procedures

1	(log message) `EC-IC-ALM` (Error Control-Illegal Command-Alarm)	cause: printed out automatically after an illegal error control command.

(continued)

Procedure 10-31
Diagnostic test failure messages - procedures (continued)

2	Alarm Level: No processor switch	Reason Code = 18 Corresponds to ERRMAP entry: ERROR CTL INCON System Default: Type: Major Level: 0
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	None

6	Craftsperson Activity	a. Clear active alarms: perform the following procedures to determine which alarms are active, and the procedures for clearing those alarms.
		i) To display a list of alarms and level assignments,
		- Enter: (at the terminal)
		>ERRMAP ALARMS (cr)
		- Example of response:
		`CURRENT ALARM ASSIGNMENTS ARE:`
		`DEV/EVT # NAME ALARM LEVEL`
		`* 1 DISK FULL CRITICAL 0`
		`2 DSI TIMEOUT CRITICAL 1`
		`3 COMM FAIL MAJOR 3`
		`* 4 DMA ALARM MINOR 3`
		`* INDICATES ALARM CURRENTLY ACTIVE`
		
		ii) To assign or change an alarm event, alarm type, alarm level,[1]

CAUTION
Consult with technical assistance personnel before changing any alarm level assignments. Such actions may effect data gathering capabilities.

(continued)

Procedure 10-31
Diagnostic test failure messages - procedures (continued)

6
(cont'd)

- Enter: (at the terminal)

  >ERRMAP ACT (cr)
  in either case, followed by:

  Event Alarmtype Level (cr)

  where: Event = 0 - 99 = device/ event number
  Alarmtype = Inhibit, Minor, Major, or CRITICAL.
  Level = 0 = no switch (processor)
  = 1 = least serious
  = 2
  = 3 = most serious

b. Clear the alarms

- Enter: (at the terminal to clear all alarms in the active processor)

  >RSERR ACT 00 (cr)
  Proper response = `ALL ALARMS CLEARED`

- Enter: (at the terminal to clear all alarms in the standby processor)

  >RSERR STDBY 00 (cr)
  Proper response = `ALL ALARMS CLEARED`

  - For any other response, refer to the procedure sheet for that message and perform the Craftsperson activities listed.
  - If message repeats, proceed to step c.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

(continued)

Procedure 10-31 **Diagnostic test failure messages - procedures**	
6 (cont'd)	c. If alarms cannot be cleared, or if message prints repeatedly, replace the Error Control II PCA in slot A5. i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. (If unsuccessful, proceed to step d.) Return the original PCA to its position before proceeding. d. Call for technical assistance.
Notes: ***Note 1:*** If a level 0 alarm occurs, no processor switch takes place. Levels 1 - 3 establish the priorities of the remaining alarms. If an alarm occurs that is a higher level alarm than the highest level active alarm on the standby side, a processor switch takes place.	
End	

Procedure 10-32 **Diagnostic test failure messages - procedures**		
1	(log message) `ERROR DETECTED ON PROC x`	cause: message displayed in response to the TEST (keyboard entry) command, where the DPP processor detects a problem with one or more of the PCAs. (This message is accompanied by a card entry message, listing the potential assembly failures.)
2	Alarm Level: No processor switch	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
(continued)		

Procedure 10-32 **Diagnostic test failure messages - procedures** (continued)		
5	System Recovery Action	As specified for the associated PCA error message.
6	Craftsperson Activity	a. Refer to the associated PCA error message for more definitive information of the fault. i) Reference the procedure sheet for any other PCA error messages that appear. ii) Do any Craftsperson activity procedures in the associated PCA error procedure sheets. (If unsuccessful, proceed with step b.) b. Call for technical assistance.
		End

Procedure 10-33 **Diagnostic test failure messages - procedures**		
1	(log message) `IPCOM LOAD ERROR`	cause: the booting of the standby processor failed because a program block Inter-Processor Communications (IPCOM) transfer failed and was detected by the standby. (Message is from the standby processor.)
2	Alarm Level: Processor switch inhibited	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: Major Level: 3
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	DPP system makes 3 attempts to load.
		(continued)

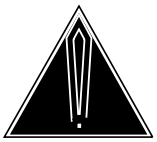
Procedure 10-33
Diagnostic test failure messages - procedures (continued)

6	Craftsperson Activity	a. Power down the standby processor. i) Refer to 297-1001-536 for power down procedures. ii) Proceed to step b. b. Reseat the CPU (A1) and the Disk Interface (A11) PCAs in the standby processor (the one that is now powered down). i) Proceed to step c. c. Power up the standby processor. i) Refer to 297-1001-536 for power up procedure. ii) Wait for start-up activity to cease; check printouts to see if the error message repeats. iii) If the message does not repeat, perform the following procedure. - Clear all alarms. Enter: (at the terminal to clear all alarms in the active processor) **>RSERR ACT 00 (cr)** Proper response = `ALL ALARM CLEARED` Enter: (at the terminal to clear all alarms in the standby processor) **>RSERR STDBY 00 (cr)** Proper response = `ALL ALARMS CLEARED` - For any other response, refer to the procedure sheet for that message and perform the activities listed. iv) If the message repeats, proceed to step d. d. Replace the CPU PCA in slot 1 of the standby chassis.

(continued)

Procedure 10-33
Diagnostic test failure messages - procedures

6 (cont'd)



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. (If unsuccessful, proceed to step e.) Return the original PCA to its position before proceeding.

e. Call for technical assistance.

End

Procedure 10-34
Diagnostic test failure messages - procedures

1	(log message) MP-CK-ALM (Microprocessor-Clock-Alarm)	cause: prints out automatically to report a processor clock alarm.
2	Alarm Level: No processor switch	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None

(continued)

Procedure 10-34
Diagnostic test failure messages - procedures (continued)

6 Craftsperson Activity[1]

a. Check incoming ac power, if used.

i) Check the voltage levels and wiring connections; correct as necessary.

- Refer to Chapter 3 for power and ground requirements.

ii) If the wiring connections and voltage levels are correct, proceed to step b, else go to step e.

b. Restore ac power.

i) If the problem still exists, proceed to step c.

c. Replace the faulty Power and Alarm Communication PCA.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If message does not repeat, proceed to step d.

iii) If the problem is not cleared after PCA replacement and restart, proceed to step e. Return the original PCA to its position before proceeding.

d. Enter ACR at the terminal to restore ac clock circuits.

e. If the problem is not cleared, call for technical assistance.

Notes:
Note 1: Determine if the DPP system uses the optional ac clock feature. If it does not, ignore this message. If it does use the optional ac clock feature, perform the following steps.

End

Procedure 10-35
Diagnostic test failure messages - procedures

1	PARITY ERROR: x DETECTED (w/56K polling)	where: x = indicate which side detected the error. = disk interface = main processor cause: printed whenever a parity error is detected by the Main processor in DPR, or buy Disk Interface in DPR or PRAM.
2	Alarm Level: Major	Reason Code = N/A Corresponds to ERRMAP entry: DSK CARD HW ERR System Default: Type: Major Level: 2
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	Processor switch.
6	Craftsperson Activity	a. Replace the SCSI Interface PCA in slot 11 of the standby chassis.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If unsuccessful after PCA replacement and restart, proceed to step b. Return the original PCA to its position before proceeding.

b. Call for technical assistance.

Procedure 10-36
Diagnostic test failure messages - procedures

1	(log message) `PROG CHKSUM ALM VAL=nn`	where: Val = nn = difference from 0 of the calculated checksum cause: prints when a program memory verification has failed for a downloaded program.
2	Alarm Level: Processor switch	Reason Code = 10 Corresponds to ERRMAP entry: PROG CKSUM ALM System Default: Type: Major Level: 3
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	A processor switch occurs and an attempt is made to reload from the standby processor.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

6 Craftsperson Activity

a. If the program successfully reloaded itself from the standby, clear the alarms;

- Enter: (at the terminal to clear all alarms in the active processor)

>RSERR ACT 00 (cr)

Proper response = `ALL ALARM CLEARED`

Enter: (at the terminal to clear all alarms in the standby processor)

>RSERR STDBY 00 (cr)

Proper response = `ALL ALARMS CLEARED`

(continued)

Procedure 10-36
Diagnostic test failure messages - procedures (continued)

6
(cont'd)

i) For any other response, refer to the procedure sheet for that message and perform the activities listed.

ii) Monitor the system for a reoccurrence of this message.

iii) If the program did not successfully reload itself from the standby, or if the problem (message) reoccurs, perform the following steps:

b. Download new software from disk.

i) Change the ONLY processor to the PRIME mode.[1]

CAUTION
This action may cause a loss of data.

ii) Refer to Chapter 4 for switch and status panel operation.

iii) If unsuccessful, proceed to step c.

c. Download new software from the DMS-100.

i) Consult with technical assistance personnel to perform this activity.

ii) Establish a time when this can be accomplished with minimum impact on data collection activity.

iii) If unsuccessful, proceed to step d.

d. Replace the Disk (SCSI Intf) Interface PCA in slot 11 of the standby chassis.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

(continued)

Procedure 10-36
Diagnostic test failure messages - procedures

6 (cont'd)

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. (If successful, procedure complete.)

ii) If the problem is not cleared after PCA replacement and restart, proceed to step e. Return the original PCA to its position before proceeding.

e. Replace the Extended Memory PCA in slot 3 of the standby chassis.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. (If successful, procedure complete.)

ii) If the problem is not cleared after PCA replacement and restart, proceed to step f. Return the original PCA to its position before proceeding.

f. Call for technical assistance.

Notes:
Note 1: This action attempts to bring the other processor on-line in a standby mode.

End

Procedure 10-37
Diagnostic test failure messages - procedures

1 (log message)
`PROM CHKSUM ALM VAL=nn`

where: Val = nn = difference from 0 of the calculated checksum

cause: prints when a PROM program memory verification has failed.

2 Alarm Level:
Processor switch

Reason Code = 16

Corresponds to ERRMAP entry: PROG CKSUM FAIL

System Default:
Type: Major Level: 3

(continued)

Procedure 10-37
Diagnostic test failure messages - procedures (continued)

3	Customer-Selected Alarm Level	Type:	Level:
4	Other Alarm Indications	Default: Status Panel: Major Customer-Selected Status Panel:	Audible: Major Audible:
5	System Recovery Action	Processor switch.	

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

6 Craftsperson Activity

a. Replace the EPROM PCA in slot 2 of the standby chassis.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. (If successful, procedure complete.)

ii) If the problem is not cleared after PCA replacement and restart, proceed to step b. Return the original PCA to its position before proceeding.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

b. Replace the Extended Memory PCA in slot 3 of the standby chassis.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. (If successful, procedure complete.)

ii) If the problem is not cleared after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

c. Call for technical assistance.

End

Procedure 10-38
Diagnostic test failure messages - procedures

1	`RAM PAGE a FAILURE/ ADR:nnnn RD:xx WR:yy`	where: a = page number = 0 - 7 nnnn = address at which the failure occurred. xx = read byte (after byte 'yy' is written). yy = write byte (to be read as byte 'xx'). cause: RAM data byte check fails. Displays the difference (comparison) between byte read after byte written.
2	Alarm Level: Processor switch	Reason Code = 11 Corresponds to ERRMAP entry: PROC STAT ALARM System Default: Type: Major Level: 2
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	Processor switch.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

6	Craftsperson Activity	a. Replace the EPROM PCA in slot 3 of the standby chassis. i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. (If successful, procedure complete.) ii) If the problem is not cleared after PCA replacement and restart, proceed to step b. Return the original PCA to its position before proceeding. b. Call for technical assistance.

Operator command entry error messages

The operator command entry error messages are those messages (responses primarily) which occur when a mistake is made while entering a command. These messages also appear when a requested function cannot be executed because another function is already being processed.

Refer to the appendix (Chapter 19) for these messages. Procedures 11-1 through 11-31 provide the steps for the conditions described by the message.

Table 11-1
Operator command entry error messages - index

Message	Page
?	11-3
AMA FILE NOT OPEN	11-34
AMA SEQ #yyyyyy NOT IN FILE	11-35
BAD BAUD RATE	11-4
BAD LINK #	11-6
COMMAND ALREADY IN PROGRESS	11-8
CP ACTIVE	11-9
CYLINDER # OUT OF RANGE	11-10
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DEFECT MAPPING NOT ALLOWED, DRIVE ON LINE	11-12
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DEL. FAIL or DELETE FILE FAILED	11-13
DISK PARAMETER CHANGE NOT ALLOWED	11-14
DISK: PROCEDURE IN PROGRESS	11-15
EXC FILE NOT OPEN	11-34

(continued)

Table 11-1
Operator command entry error messages - index

Message	Page
EXC SEQ #yyyyyy NOT IN FILE	11-35
FILE BUSY, TRY AGAIN	11-17
FORMAT IN PROGRESS	11-18
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ILLEGAL ENTRY	11-23
ILLEGAL COMMAND	11-20
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IMPROPER FORMAT TYPE	11-25
IMPROPER FILE TYPE	11-24
INVALID NUMBER ENTERED	11-26
INVALID RANGE	11-27
KEY COMMAND NOT AVAILABLE	11-27
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LOG SEQ #yyyyyy NOT IN FILE	11-35
NO FILE AVAILABLE	11-28
NO COMMAND IN PROGRESS	11-29
POLLING IN PROCESS	11-30
READ FILE CLOSED	11-31
REPORT IN PROGRESS	11-32
x day yr mo/dy hr:mn:sc abbcddef	11-33

End

Procedure 11-1
Operator command entry error messages - procedures

1	?	cause: bell (chime) sounds and the ? prints out automatically when the system does not understand a user command that has been entered.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	Verify the message and reenter correctly; DPP system did not understand your input.[1]

Notes:
Note 1: Appears only at EAT terminal.

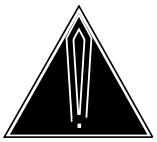
Procedure 11-2
Operator command entry error messages - procedures

1	`BAD BAUD RATE`
	`VALID RATES ARE 1200 2400 4800 9600`
	(w/o 56K polling)
	`BAD BAUD RATE`
	`VALID RATES - 1200, 2400, 4800, 9600, 56K`
	(w/ 56K polling)
		cause: printed when a baud rate other than one of the options listed above is used in the BAUD command.

2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None; (the message is printed in response to a faulty keyboard entry).
6	Craftsperson Activity	a. Reenter the message using the correct baud rate. Read the label on the modem. Make the BAUD rate entry according to the information contained on the label. LABEL DESIGNATION[1] — BAUD RATE 212 compatible — 1200 201 compatible — 2400 208 compatible — 4800 209 compatible — 9600 b. Refer to the Office Configuration Documentation for Office Dependent Site Data to obtain the correct baud rate data for the link under consideration. c. Correct (set) the correct BAUD rate for the link.

(continued)

Procedure 11-2
Operator command entry error messages - procedures



CAUTION
Use of this command may effect polling activity. Consult with technical assistance personnel to verify entry values before proceeding.

6 (cont'd)

i) Enter: (at the terminal)

>BAUD x y [2]
where:
x = Link Number = 1
y = Baud Rate = 1200, 2400, 4800, 9600, 56K

d. If the system does not accept input (change), call for technical assistance.

Notes:
Note 1: If the modem installed at the site is not one of the above, or if it has no designator label, proceed with step b.

End

Procedure 11-3
Operator command entry error messages - procedures

1	`BAD LINK #`
	`VALID LINK # IS 1`
	`BAD LINK #`
	`VALID LINK #S ARE 1`
	`OR 2`
		cause: printed when a link number other than 1 is used in the BAUD command.

2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:

(continued)

Procedure 11-3
Operator command entry error messages - procedures

5	System Recovery Action	None, faulty keyboard entry.
6	Craftsperson Activity	a. Check for the correct link number. i) To determine the correct link number, refer to the Office Configuration Documentation for Office Dependent Site Data. b. Reenter the BAUD message with the correct link number.

CAUTION
Use of this command may effect polling activity. Consult with technical assistance personnel to verify entry values before proceeding.

i) Enter: (at the terminal)

>BAUD x y (at the terminal)
where:
x = Link Number = 1
y = Baud Rate = 1200, 2400, 4800, 9600, 56K

c. If the problem persists, call for technical assistance.

End

Procedure 11-4 Operator command entry error messages - procedures		
1	COMMAND ALREADY IN PROGRESS	cause: output in response to commands (those which generate large amounts of output) if the user tries to execute other commands before completion of the active command. An I/O process can only be created if no other I/O task is currently scheduled.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None; DPP system ignores the newly input command.
6	Craftsperson Activity	a. Retry command at a later time (wait for the present command to complete execution). b. If message repeats after 3 retries, call for technical assistance.

Procedure 11-5 **Operator command entry error messages - procedures**		
1	`CP ACTIVE`	cause: printed when the 56K Interface completes a successful restart. This occurs normally when the Main processor is reset or rebooted, or following an activity switch. Successful recovery from fault conditions are also indicated by a CP ACTIVE message.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	All 56K Interface application tasks running on both the 56K Interface and the Main processor remain in their initial states.
6	Craftsperson Activity	None

Procedure 11-6
Operator command entry error messages - procedures

1	`CYLINDER # OUT OF RANGE`	cause: message output in response to the DISK DEFMAP x command, where the cylinder number entered under the CYLINDER> prompt is out of the designated range.[1]
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. Reenter, using the correct value (CYLINDER No.; 1, 2, or 3 digits). b. If the message repeats, the DPP does not use that part of the disk; continued with the next number on the list.

Notes:
Note 1: This message is not valid for DPP systems equipped with 380- or 760-Mbyte disk drives.

Procedure 11-7 **Operator command entry error messages - procedures**		
1	DATA IGNORED	cause: indicates a program data record was incorrectly entered while using a patch file command.
2	Alarm Level: N/A; response	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	Input is rejected.
6	Craftsperson Activity	a. Correct input; retry. b. If the system continues to reject the input, call for technical assistance.

Procedure 11-8
Operator command entry error messages - procedures

1	`DEFECT MAPPING NOT ALLOWED, DRIVE ON LINE`	cause: message output in response to the DISK DEFMAP x command, where the designated disk drive is on line at the time the command is executed.[1]
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None, request is terminated.
6	Craftsperson Activity	a. Cease activity; disk drives are already on line. i) If required, proceed as follows: - Put the disk under consideration off-line. Enter: (at the terminal) **>DISK MODE AO (cr)** (A disk on line; B disk off-line) **>DISK MODE BO (cr)** (B disk on line; A disk off-line) - Proceed to step b. b. Repeat DEFMAP activity; if error message repeats, proceed to step c. c. Contact technical assistance personnel to determine actions.

Notes:
Note 1: This message is not valid for DPP systems equipped with 380- or 760-Mbyte disk drives.

Procedure 11-9 **Operator command entry error messages - procedures**		
1	`DEFMAP NOT SUPPORTED`	cause: message output in response to the DISK DEFMAP x keyboard command and the disk program does not support defect track mapping. This message is true when the disk drives installed are the 380-Mbyte disk drives or the 760-Mbyte disk drives.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None, request is terminated.
6	Craftsperson Activity	None (return to the disk error message procedure sheet that you were working on and continue the Craftsperson activities).

Procedure 11-10 **Operator command entry error messages - procedures**		
1	`DEL. FAIL or DELETE FILE FAILED`	cause: the attempt to delete a file failed due to a lack of the file (file does not exist) or other problem.
2	Alarm Level: Based on the corresponding disk error message	Reason Code = N/A Corresponds to ERRMAP entry: See Alarm Level System Default: Type: See Alarm Level Level: N/A
3	Customer-Selected Alarm Level	Type: Level:

(continued)

Procedure 11-10
Operator command entry error messages - procedures

4	Other Alarm Indications	Default: Status Panel: See Alarm Level Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	Based on corresponding disk error message.
6	Craftsperson Activity	a. Refer to the disk error message printed along with this message for more definitive information of the fault. i) Reference the procedure sheet for any other disk error messages that appear. ii) Do any Craftsperson activity procedures in the associated disk error procedure sheets. (If unsuccessful, proceed to step b.) b. Call for technical assistance.

End

Procedure 11-11
Operator command entry error messages - procedures

1	`DISK PARAMETER CHANGE NOT ALLOWED`	cause: output in response to the DISK PARAM command when the system is in a PRIME disk mode, since parameter changes are not allowed in this mode. The message also appears when in an ONLY disk mode when the changes result in a quantity of useable tracks that is less than the current system value.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:

(continued)

Procedure 11-11
Operator command entry error messages - procedures (continued)

4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None; input is rejected.
6	Craftsperson Activity	a. Do not enter this command (DISK PARAM) if the disk mode is PRIME. b. The standby disk must be of an equal or larger size than the active disk.

End

Procedure 11-12
Operator command entry error messages - procedures

1	`DISK: PROCEDURE IN PROGRESS`	cause: printed if any of the following are attempted while any of the following are already in progress. a. disk format b. disk initialization. c. disk mode changes.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None; input request is rejected.

(continued)

Procedure 11-12
Operator command entry error messages - procedures

6 Craftsperson Activity

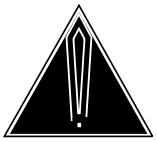
a. Retry command at a later time (when the other procedure is completed).

i) Enter **DISK (cr)** (at the terminal; determine the current disk operating mode)

b. If the condition persists after 3 attempts at step i) over a one hour time period, switch processors.

i) If a disk initialization, alternate procedure, is in progress, disregard this message. The alternate procedure can take up to four hours, depending on disk size.

c. Switch processors.



CAUTION
This action may cause a loss of data.

i) Refer to Chapter 4 for switch and status panel operation.

ii) Repeat step a.

d. Call for technical assistance if:

i) Condition does not clear, or,

ii) System does not accept command input after task completes.

End

Procedure 11-13 **Operator command entry error messages - procedures**		
1	`FILE BUSY, TRY AGAIN`	cause: response to an IDXMAINT EXAMINE or IDXMAINT SUMMARY command while the file is temporarily unavailable.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	Request is aborted
6	Craftsperson Activity	a. Attempt procedure at a later time. b. If message repeats after 3 attempts over a 1 hour time period, proceed to step c. c. Call for technical assistance.

Procedure 11-14 **Operator command entry error messages - procedures**		
1	`FORMAT IN PROGRESS`	cause: output if the DISK FORMAT x or DISK MODE x command is entered and either disk is currently being formatted.
2	Alarm Level: N/A; response	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:

(continued)

Procedure 11-14 **Operator command entry error messages - procedures**		
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. Reevaluate what you are trying to do; and what you entered at the keyboard. b. If there is any doubt about what to do next, call for technical assistance.
		End

Procedure 11-15 **Operator command entry error messages - procedures**		
1	`HEAD # OUT OF RANGE`	cause: message displayed in response to the DISK DEFMAP x command, where the HEAD number entered under the HEAD> prompt is out of range.[1]
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
		(continued)

Procedure 11-15 **Operator command entry error messages - procedures**		
6	Craftsperson Activity	a. Reenter, using correct value for HEAD No. (1 or 2 digits). b. If the message repeats, the DPP does not use that part of the disk; continued with the next number on the list.
Notes: ***Note 1:*** This message is not valid for DPP systems equipped with 380- or 760-Mbyte disk drives.		
End		

Procedure 11-16 **Operator command entry error messages - procedures**		
1	`ILLEGAL COMMAND`	cause: firmware message that responds, when: a. a user enters a command that was not recognized by the system. b. the user has an insufficient priority level to use the command.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. Verify the command (input) format; spelling, parameters, and reenter the message. b. Call for technical assistance if problem persists.

Procedure 11-17
Operator command entry error messages - procedures

1	`ILLEGAL DISK MODE CHANGE REQUEST`	cause: printed in response to DISK MODE command when requested mode change is illegal. Message is printed whenever one of the following disk mode changes is requested: A ONLY to A ONLY B ONLY to B ONLY B ONLY to A PRIME A PRIME to A PRIME NONE to A PRIME A ONLY to B PRIME B PRIME to B PRIME NONE to B PRIME A PRIME to NONE B PRIME to NONE NONE to NONE
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	Termination of input request job.
6	Craftsperson Activity	a. Reevaluate what you are trying to do; and what you entered at the keyboard. Determine the current disk drive operating mode:

(continued)

Procedure 11-17
Operator command entry error messages - procedures (continued)

6
(cont'd)

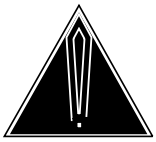
- Enter: (at the terminal)

  >DISK MODE (cr)
  System response = DISK MODE: xx
  where: xx = disk mode = AO = A Only
  = BO = B Only
  = AP = A Prime
  = BP = B Prime
  = NONE = No mode
  Note: For the response DISK MODE: NONE

i) Refer to the procedure sheet for that message and perform the Craftsperson activity listed, or

ii) Call for technical assistance immediately.

b. Reenter the correct disk mode change.



CAUTION
This action may cause a loss of data.

- Enter: (at the terminal)

  >DISK MODE xx (cr)
  where: xx = disk mode = AO = A Only
  = BO = B Only
  = AP = A Prime
  = BP = B Prime
  = NONE = No mode
  Proper Response
  = DISK MODE: AP = A PRIME
  = DISK MODE: BP = B PRIME
  = DISK MODE: AO = A ONLY
  = DISK MODE: BO = B ONLY
  = DISK MODE: NONE = NO MODE

i) Refer to Chapter 13 for the allowable disk mode changes.

ii) For any other response, refer to the procedure sheet for that message and perform the activities listed. (If unsuccessful, proceed to step c.)

c. Call for technical assistance.

End

Procedure 11-18
Operator command entry error messages - procedures

1	`ILLEGAL ENTRY`	cause: message displayed when a range of 0 is entered in the LSTDIR FILE or DELFILE keyboard commands.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. Verify input (command entry); reenter. i) If unsuccessful, proceed to step b. b. Call for technical assistance.

Procedure 11-19
Operator command entry error messages - procedures

1	`IMPROPER FILE TYPE`	cause: output in response to the IDXMAINT command, if the user enters an unknown FILE TYPE keyboard command argument. (valid entries are: AMA, EXC, or LOG)
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:

(continued)

Procedure 11-19 **Operator command entry error messages - procedures**		
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	Requested action is terminated.
6	Craftsperson Activity	a. Reenter command with file type: i) LOG ii) EXC iii) AMA (If unsuccessful, proceed to step b.) b. Call for technical assistance.
		End

Procedure 11-20 **Operator command entry error messages - procedures**		
1	`IMPROPER FORMAT TYPE`	cause: printed in response to the IDXMAINT EXAMINE keyboard command, when the specified format type is inappropriate for the given file type.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
		(continued)

Procedure 11-20 Operator command entry error messages - procedures		
5	System Recovery Action	None
6	Craftsperson Activity	a. Verify the input (format type); reenter. i) Valid entries for format type are: ASCII, EBCDIC, HEX, or PACKED ii) If unsuccessful, proceed to step b. b. Call for technical assistance.
		End

Procedure 11-21 Operator command entry error messages - procedures		
1	`INVALID NUMBER ENTERED`	cause: output in response to an IDXMAINT EXAMINE keyboard command when a numerical field is entered incorrectly.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. Verify the input (numerical field); reenter. (If unsuccessful, proceed to step b.) b. Call for technical assistance.

Procedure 11-22 **Operator command entry error messages - procedures**		
1	`INVALID RANGE`	cause: output when incorrect parameters are entered in conjunction with the AMAHRS command.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. Verify the input (parameters); retry. (If unsuccessful, proceed to step b.) b. If the message repeats, call for technical assistance.

Procedure 11-23 **Operator command entry error messages - procedures**		
1	`KEY COMMAND NOT AVAIL-ABLE`	cause: printed if: a. a firmware keyboard command is entered when an equivalent software command is available. (Software is running in the DPP system.) b. the message (input) is a keyboard command involving a disk operation that was given to the standby processor.
		(continued)

Procedure 11-23 Operator command entry error messages - procedures		
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	Request is aborted.
6	Craftsperson Activity	a. For reason a above, use the appropriate software command for the required operation. i) Refer to 297-1001-331 to identify the equivalent software command. b. For cause b above, perform the required operation on the active disk, or, contact technical assistance personnel to make certain that it is alright to do so.
End		

Procedure 11-24 Operator command entry error messages - procedures		
1	`NO COMMAND IN PROGRESS`	cause: output in response to the HXDPP command, when no command is running.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
(continued)		

Procedure 11-24 **Operator command entry error messages - procedures**		
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. 1st occurrence - none. b. If message repeats in response to inputs over a period of time (one hour), call for technical assistance.
		End

Procedure 11-25 **Operator command entry error messages - procedures**		
1	`NO FILE AVAILABLE`	cause: printed when the requested file does not exist, is not open, or does not have the necessary characteristics for the designated operation.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
		(continued)

Procedure 11-25
Operator command entry error messages - procedures

6	Craftsperson Activity	a. Recheck command entry. i) Verify that the data requested is not the open active file. ii) Contact technical assistance personnel to perform this activity. b. Retry command entry. c. If the error message repeats, call for technical assistance.

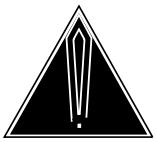
End

Procedure 11-26
Operator command entry error messages - procedures

1	`POLLING IN PROCESS`	cause: printed in response to the IDXMAINT EXAMINE FILE keyboard (command) request, when: a. call record polling is under way b. an attempt is made to read from a new file before the last file is closed.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	The request is aborted.
6	Craftsperson Activity	a. Retry the input at a later time. b. Enter: (at the terminal) **>IDXMAINT CLOSE (cr)**

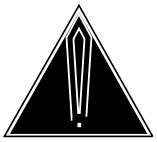
(continued)

Procedure 11-26
Operator command entry error messages - procedures



CAUTION
This input aborts the polling session and may cause a loss of data.

c. If the problem persists, switch processors.



CAUTION
This action may cause a loss of data.

i) Refer to Switch and Status Panel Operation on page 4-1. (If unsuccessful, proceed to step d.)

d. If message continues to be output after several attempts over a period of time, call for technical assistance.

End

Procedure 11-27
Operator command entry error messages - procedures

1	`READ FILE CLOSED`	cause: output in response to the IDXMAINT EXAMINE/CLOSE command, if an attempt is made to examine a non-existing version of a file or attempting to examine data (AMA) upon reaching the end of a file.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:

(continued)

Procedure 11-27 Operator command entry error messages - procedures		
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None, request is terminated.
6	Craftsperson Activity	a. Normal operation. b. Verify what you are trying to do. i) Call for technical assistance.
		End

Procedure 11-28 Operator command entry error messages - procedures		
1	`REPORT IN PROGRESS`	cause: prints out if a report request is attempted while a report is being generated.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None; response to keyboard entry.
6	Craftsperson Activity	a. Retry input at a later time, after the current activity has completed execution. b. If the message repeats after 3 subsequent attempts over a period of time, call for technical assistance.

Procedure 11-29
Operator command entry error messages - procedures

1	`x day yr mo/dy` `hr:mn:sc abbcddef`	where: Computer Sentinel = x = A = A Computer Sentinel = B = B Computer Sentinel Day = day = SUN, MON, TUE, WED, THU, FRI, SAT Year = yr = 00-99 Month and Day = mo/dy = 01/31 thru 12/31 Hour = hr = 00-23 Minutes = mn = 00-59 Seconds = sc = 00-59 Alarm = a = 0 = No alarm = 1 = Minor alarm = 2 = Major alarm = 3 = Critical alarm Reason Code = bb = 00-FF (Hex) Reserved = c = 0 (future use) Sequence Number = dd = 00-FF (Hex, wrap-around after FFH) Processor Status Indicator = e = Null = Active = > = Standby Processor ID = f = A = A processor = B = B processor cause: additional data added to all exception messages printed out, for record keeping and log purposes.
2	Alarm Level: N/A; (part of all log messages)	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:

(continued)

Procedure 11-29 Operator command entry error messages - procedures		
5	System Recovery Action	None
6	Craftsperson Activity	None a. Appears only at EAT terminal. b. This output is referred to as (log message) elsewhere in this document.
		End

Procedure 11-30 Operator command entry error messages - procedures		

1	`AMA FILE NOT OPEN ,or,`
	`EXC FILE NOT OPEN ,or,`
	`LOG FILE NOT OPEN`
		cause: response to the IDXMAINT EXAMINE keyboard entry if an attempt to examine a file other than the first file is made while the file is still closed. Normally, the DPP must examine the first Call Record Block within a given file in order to open that file. This function is accomplished through use of IDXMAINT EXAMINE keyboard command sequence.

2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None; input request is rejected
6	Craftsperson Activity	Call for technical assistance.

Procedure 11-31
Operator command entry error messages - procedures

1	`AMA SEQ #yyyyyy NOT IN FILE ,or, EXC SEQ #yyyyyy NOT IN FILE ,or, LOG SEQ #yyyyyy NOT IN FILE`	where: yyyyyy = Sequence Number = 0 - 999999 cause: response to IDXMAINT EXAMINE keyboard request, when a sequence number for specified file type cannot be found on disk.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	The display function requested is terminated.
6	Craftsperson Activity	a. Verify what you are trying to do. i) Identify the sequence number of the file. - Enter: (at the terminal) **>IDXMAINT DIR CLOSED xxx 55 (cr)** where: xxx = File Type = AMA = LOG = EXC System response = Output of data as requested ii) Verify that the SEQ No. you are trying to examine is not on the list. - Reenter the IDXMAINT EXAMINE command, using the correct SEQ No. iii) If the SEQ No. you are trying to examine is on the list, proceed to step b. b. Call for technical assistance.

End

DPP System conditions and failure messages

The following procedures are concerned with conditions which are symptomatic of difficulties that occur between the DMS-100 and the DPP.

Refer to the appendix (Chapter 19) for DPP messages that concern the system. Procedures 12-1 through 12-20 provide the procedures for the system conditions and fail messages.

Table 12-1
System conditions and fail messages - index

Message	Page
BOTH MMI LINKS DOWN	12-2
CLOCK ALARM RESET	12-3
COMM DOWN TO STANDBY PROCESSOR	12-4
DMA BUSY	12-6
DPP STANDBY FAULT	12-7
FALSE DMA INTERRUPT	12-8
FALSE DMA TIMEOUT	12-10
FL EOB	12-12
LINK DISCONNECTED	12-14
NO CMD	12-15
NO RECEIVE NODE	12-17
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PROC FORCE SELECTED - NON REDUNDANT	12-19
QUENOD-CAN'T DISPATCH LINK LAYERS	12-20
RELNOD-CAN'T DISPATCH LINK LAYERS	12-22

(continued)

Table 12-1
System conditions and fail messages - index (continued)

Message	Page
STANDBY PROC NOT AVAILABLE	12-23
STBY BOOT FAIL	12-25
TAPE BLOCKS LOST = xxx	12-26
WR CMD	12-27
xx BLKS NOT UPDATED	12-29

End

Procedure 12-1
System conditions and fail messages - procedures

1	(log message) BOTH MMI LINKS DOWN	cause: output when MMI link sanity check fails for both links.
2	Alarm Level: No processor switch	Reason Code = 37 Corresponds to ERRMAP entry: 2 MMI LINKS DOWN System Default: Type: Major Level: 0
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. Attach an I/O terminal to the EAI port (Rover) on the DPP. i) Refer to Figure 9-2 for the location of this port. b. Enter: (at the Rover terminal; to initiate the DPP internal test command functions) **>TEST ACT (cr)**

(continued)

Procedure 12-1
System conditions and fail messages - procedures (continued)

6 (cont'd)	c. Watch for the results of the SIO port test. i) If the message, `xx SIO TEST FAILED` (is output, go to the procedure sheet for that message and perform the activities listed.) ii) If the activities fail to clear the problem, the fault may be in the DMS-100. Contact technical assistance personnel before proceeding.

End

Procedure 12-2
System conditions and fail messages - procedures

1	(log message) `CLOCK ALARM RESET`	cause: message generated in response to the SETCLK key command when the system clock has been manually reset.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	None; response to Craftsperson input.

Procedure 12-3 **System conditions and fail messages - procedures**		
1	COMM DOWN TO STANDBY PROCESSOR	cause: processor communication with the standby processor is not possible for one of the following reasons[1]: a. standby processor is turned off b. standby processor is in the monitor mode c. standby processor is in a fault condition.
2	Alarm Level: No processor switch possible	Reason Code = 38 Corresponds to ERRMAP entry: STANBY PROC N/A System Default: Type: Major Level: 0
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	None; DPP is unable to switch processors.
6	Craftsperson Activity	a. Check power to the standby chassis. i) If the standby chassis is powered down, determine the reason it is powered down (for instance, is maintenance activity in progress already?). - Power up the chassis if technical assistance personnel verify the activity. ▪ Refer to 297-1001-536 for the procedure to power the chassis back up. ii) Check the fuses. - Refer to 297-1001-536 for fuse values and locations. iii) Check the voltage levels to the standby chassis. - Call for technical assistance to perform this activity.

(continued)

Procedure 12-3
System conditions and fail messages - procedures (continued)

6
(cont'd)

iv) If the chassis is still unavailable, proceed to step b.

b. Change the CPU PCA in slot 1 of the standby chassis.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the message repeats, proceed to step c. Return the original PCA to its position before proceeding.

iii) If the message does not repeat, procedure complete; proceed to step d.

c. Change the EPROM PCA in slot 2 of the standby chassis.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the message repeats, proceed to step e. Return the original PCA to its position before proceeding.

iii) If the message does not repeat, procedure complete; proceed to step d.

d. Clear the active alarms: perform the following procedures to determine the active alarms and the procedures for clearing those alarms.

i) To display a list of alarms and level assignments,

Enter: (at the terminal)

>ERRMAP ACT (cr) <--active processor)

>ERRMAP STDBY (cr) <--standby processor)

(continued)

Procedure 12-3
System conditions and fail messages - procedures (continued)

6 (cont'd)

Example of response:

```
CURRENT ALARM ASSIGNMENTS ARE:
DEV/EVT # NAME        ALARM    LEVEL
*   1     DISK FULL   CRITICAL   0
    2     DSI TIMEOUT CRITICAL   1
    3     COMM FAIL   MAJOR      3
*   4     DMA ALARM   MINOR      3
* INDICATES ALARM CURRENTLY ACTIVE
```

ii) To clear any alarms on the active processor. (Alarms clear if no fault conditions exist.)
Enter: (at the terminal)

>RSERR ACT (cr)

iii) To clear any alarms on the standby processor. (Alarms clear if no fault conditions exist.)
Enter: (at the terminal)

>RSERR STDBY (cr)[2]

iv) If the alarms cannot be cleared, proceed to step e.

e. Call for technical assistance.

Notes:
Note 1: This alarm is cleared automatically when the condition causing it to occur is corrected.
Note 2: Perform any necessary activities in response to any alarms or error messages.

End

Procedure 12-4
System conditions and fail messages - procedures

1	DMA BUSY	cause: output when a DMA function is requested while the DMA is busy (while TEST command is running).
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A

(continued)

Procedure 12-4 **System conditions and fail messages - procedures** (continued)			
3	Customer-Selected Alarm Level	Type:	Level:
4	Other Alarm Indications	Default: Status Panel:	Audible:
		Customer-Selected Status Panel:	Audible:
5	System Recovery Action	None	
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.	
		End	

Procedure 12-5 **System conditions and fail messages - procedures**		
1	DPP STANDBY FAULT	cause: firmware message that is output in response to an unsuccessful attempt to communicate with the standby processor. May be generated in response to any command incorporating the STDBY parameter, or any command preceded by DOS S.
2	Alarm Level: No processor switch possible	Reason Code = N/A Corresponds to ERRMAP entry: STANBY PROC N/A System Default: Type: Major Level: 0
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	Processor system is non-redundant.
		(continued)

Procedure 12-5
System conditions and fail messages - procedures (continued)

6	Craftsperson Activity	a. Make the processors redundant (one processor PRIME mode).

CAUTION
This action may cause a loss of data.

i) Refer to Chapter 4 for switch and status panel operation.

ii) If unsuccessful, proceed to step b.

b. Call for technical assistance.

End

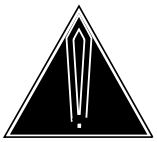
Procedure 12-6
System conditions and fail messages - procedures

1	FALSE DMA INTERRUPT	cause: output when an erroneous interrupt signal is received indicating the end of a DMA transfer that has never occurred.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	May cause a processor switch.
6	Craftsperson Activity	a. If the system did not switch processors, switch processors.

(continued)

Procedure 12-6
System conditions and fail messages - procedures (continued)

6 (cont'd)



CAUTION
This action may cause a loss of data.

i) Switch away from the processor that was active when the message appeared.

- Refer to Chapter 4 for switch and status panel operation.

ii) If the message does not repeat, the problem is in the other processor; the one that is now standby. Proceed to step b.

iii) If the message repeats, proceed to step e.

b. Replace the DSI PCA in slot 13 of the standby chassis.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the message repeats, proceed to step d. Return the original PCA to its position before proceeding.

iii) If the message does not repeat, procedure complete.

c. Replace the DSI in slot 12 of the standby chassis.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the message repeats, proceed to step c. Return the original PCA to its position before proceeding.

(continued)

Procedure 12-6
System conditions and fail messages - procedures (continued)

6 (cont'd)

iii) If the message does not repeat, procedure complete.

d. Replace the CPU PCA in slot 1 of the standby chassis.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the message repeats, proceed to step e. Return the original PCA to its position before proceeding.

iii) If the message does not repeat, procedure complete.

e. Call for technical assistance.

End

Procedure 12-7
System conditions and fail messages - procedures

1	`FALSE DMA TIMEOUT`	cause: output when an erroneous interrupt signal is received indicating the end of a DMA transfer that has never occurred, resulting in an expiration of the DMA transfer timer.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:

(continued)

Procedure 12-7
System conditions and fail messages - procedures (continued)

4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	May cause a processor switch.
6	Craftsperson Activity	a. If the system did not switch processors, switch processors.

CAUTION
This action may cause a loss of data.

i) Switch away from the processor that was active when the message appeared.

- Refer to Chapter 4 for switch and status panel operation.

ii) If the message does not repeat, the problem is in the other processor; the one that is now standby. Proceed to step b.

iii) If the message repeats, proceed to step e.

b. Replace the DSI PCA in slot 13 of the standby chassis.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the message repeats, proceed to step c. Return the original PCA to its position before proceeding.

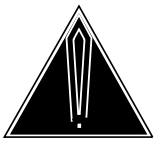
iii) If the message does not repeat, procedure complete.

c. Replace the DSI in slot 12 of the standby chassis.

(continued)

Procedure 12-7
System conditions and fail messages - procedures (continued)

6 (cont'd)



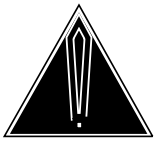
CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the message repeats, proceed to step d. Return the original PCA to its position before proceeding.

iii) If the message does not repeat, procedure complete.

d. Replace the CPU PCA in slot 1 of the standby chassis.



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the message repeats, proceed to step e. Return the original PCA to its position before proceeding.

iii) If the message does not repeat, procedure complete.

e. Call for technical assistance.

End

Procedure 12-8
System conditions and fail messages - procedures

1 (log message)
FL E0B
(False End-of-Block)

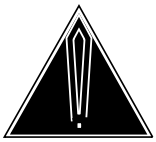
cause: prints out when a tape command line goes true, when it was expected to go false. The command line is not equal to 0.

This output should not appear during normal operation; used by NT for test and verification purposes only.[1]

(continued)

Procedure 12-8
System conditions and fail messages - procedures (continued)

2	Alarm Level: if active unit = processor switch = Major alarm; Level 1 if standby unit = no processor switch = Minor alarm; Level 0	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: See Alarm Level Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: See Alarm Level Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	a. If the message is from the active unit (Major Alarm, Level 1), a processor switch occurs. b. If the message is from the standby unit (Minor Alarm, Level 0), no processor switch occurs.
6	Craftsperson Activity	a. Replace the DSI PCA in slot 13 of the chassis identified in the (log message).



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the problem is not cleared after PCA replacement and restart, proceed to step b. Return the original PCA to its position before proceeding.

b. Replace the Mag Tape Controller PCA (NT1X68) in the DMS-100 that is associated with this DSI Interface channel.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

(continued)

Procedure 12-8
System conditions and fail messages - procedures (continued)

6 (cont'd)

i) Refer to the PCA replacement procedures as provided for the DMS-100.

ii) If the problem is not cleared after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

c. Call for technical assistance.

Notes:
Note 1: Ignore this message if it appears when changing DSI PCAs or removing DSI cables.

End

Procedure 12-9
System conditions and fail messages - procedures

1	`LINK DISCONNECTED`	cause: message output when a Collector-to-DPP Session has ended.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	Session is terminated.

(continued)

Procedure 12-9
System conditions and fail messages - procedures (continued)

6	Craftsperson Activity	a. Check any accompanying printouts for indications of (if any) abnormal termination. b. Respond to any error messages that may be present. (Refer to the appropriate procedure sheets for the Craftsperson activity procedures to follow). c. If the problem persists, notify technical assistance personnel.

End

Procedure 12-10
System conditions and fail messages - procedures

1	(log message) NO CMD (No Command)	cause: prints out when a tape command line goes false, when it was expected to go true. The command code is 0. This output should not appear during normal operation; used by NT for test and verification purposes only.[1]
2	Alarm Level: if active unit = processor switch = Major alarm; Level 1 if standby unit = no processor switch = Minor alarm; Level 0	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: See Alarm Level Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: See Alarm Level Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	a. If the message is from the active unit (Major Alarm, Level 1), a processor switch occurs. b. If the message is from the standby unit (Minor Alarm, Level 0), no processor switch occurs.

(continued)

Procedure 12-10
System conditions and fail messages - procedures (continued)

6 Craftsperson Activity

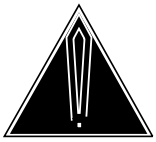
a. Replace the DSI PCA in slot 13 of the chassis identified in the (log message).

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the problem is not cleared after PCA replacement and restart, proceed to step b. Return the original PCA to its position before proceeding.

b. Replace the Mag Tape Controller PCA (NT1X68) in the DMS-100 that is associated with this DSI Interface channel.



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to the PCA replacement procedures as provided for the DMS-100.

ii) If the problem is not cleared after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

c. Call for technical assistance.

Notes:
Note 1: Ignore this message if it appears when changing DSI PCAs or removing DSI cables.

End

Procedure 12-11
System conditions and fail messages - procedures

1	(log message) `NO RECEIVE NODE`	cause: output when no receive node is available for the communication protocol.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	Retry.
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.

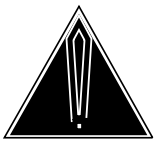
Procedure 12-12
System conditions and fail messages - procedures

1	(log message) `NO SEL` (No Select)	cause: prints out when a tape command line status is TRUE, but is not accompanied by Unit Select Status (USEL). This output should not appear during normal operation; used by NT for test and verification purposes only.[1]
2	Alarm Level: if active unit = processor switch = Major alarm; Level 1 if standby unit = no processor switch = Minor alarm; Level 0	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: See Alarm Level Level: N/A
3	Customer-Selected Alarm Level	Type: Level:

(continued)

Procedure 12-12
System conditions and fail messages - procedures (continued)

4	Other Alarm Indications	Default: Status Panel: See Alarm Level Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	a. If the message is from the active unit (Major Alarm, Level 1), a processor switch occurs. b. If the message is from the standby unit (Minor Alarm, Level 0), no processor switch occurs.
6	Craftsperson Activity	a. Replace the DSI PCA in slot 13 of the chassis identified in the (log message).

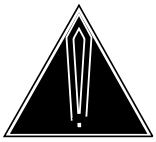


CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the problem is not cleared after PCA replacement and restart, proceed to step b. Return the original PCA to its position before proceeding.

b. Replace the Mag Tape Controller PCA (NT1X68) in the DMS-100 that is associated with this DSI Interface channel.



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

(continued)

Procedure 12-12
System conditions and fail messages - procedures (continued)

6 (cont'd)	i) Refer to the PCA replacement procedures as provided for the DMS-100. ii) If the problem is not cleared after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding. c. Call for technical assistance.

Notes:
Note 1: Ignore this message if it appears when changing DSI PCAs or removing DSI cables.

End

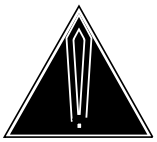
Procedure 12-13
System conditions and fail messages - procedures

1	(log message) `PROC FORCE SELECTED - NON REDUNDANT`	cause: processor has been set to ONLY mode manually at the Switch and Status Panel. Processor cannot be switched away from automatically in the event of malfunction in the active processor.
2	Alarm Level: No processor switch possible	Reason Code = 39 Corresponds to ERRMAP entry: STANBY PROC N/A System Default: Type: Major Level: 0
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. Return the processor system to PRIME mode.

(continued)

Procedure 12-13
System conditions and fail messages - procedures (continued)

6 (cont'd)



CAUTION
This action may cause a loss of data.

i) Refer to Chapter 4 switch and status panel operation.

ii) If unsuccessful, proceed to step b.

b. Refer to the error message(s) printed along with this message for more definitive information of the fault.

i) Reference the procedure sheet for any other error messages that appear.

ii) Do any Craftsperson activity procedures in the associated error procedure sheets. (If unsuccessful, proceed to step c.)

c. Call for technical assistance.

End

Procedure 12-14
System conditions and fail messages - procedures

1	(log message) `QUENOD-CAN'T DISPATCH LINK LAYERS`	cause: message indicates that an internal software error has occurred. One of the protocol tasks has attempted to queue a node to another task and the queuing function is interpreting the "other task" as one of the link layers. This is an invalid condition.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:

(continued)

Procedure 12-14
System conditions and fail messages - procedures (continued)

4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	Polling may be affected by the error condition that caused the message to print.
6	Craftsperson Activity	a. Reboot the Main processor. If problem is not cleared, proceed to step b. b. Verify the integrity of the backplane wiring. i) If wiring is not correct, make the necessary repairs. ii) Consult with technical assistance personnel before moving any wiring connections. iii) If cable connections are correct, and the problem is not resolved, proceed to step c.

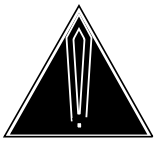
CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

c. Replace the 56K Interface PCA in slot A7 of the standby chassis.
   i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.
   ii) If unsuccessful after PCA replacement and restart, proceed to step d. Return the original PCA to its position before proceeding.
d. Call for technical assistance.

End

Procedure 12-15
System conditions and fail messages - procedures

1	(log message) `RELNOD-CAN'T DISPATCH LINK LAYERS`	cause: message indicates that an internal software error has occurred. One of the protocol tasks has attempted to queue a node to another task and the queuing function is interpreting the "other task" as one of the link layers. This is an invalid condition.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	Polling may be affected by the error condition that caused the message to print.
6	Craftsperson Activity	a. Reboot the Main processor. If problem is not cleared, proceed to step b. b. Verify the integrity of the backplane wiring. i) If wiring is not correct, make the necessary repairs. ii) Consult with technical assistance personnel before moving any wiring connections. iii) If cable connections are correct, and the problem is not resolved, proceed to step c.



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

(continued)

Procedure 12-15
System conditions and fail messages - procedures (continued)

6 (cont'd)	c. Replace the 56K Interface PCA in slot A7 of the standby chassis. i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. ii) If unsuccessful after PCA replacement and restart, proceed to step d. Return the original PCA to its position before proceeding. d. Call for technical assistance.

End

Procedure 12-16
System conditions and fail messages - procedures

1	(log message) `STANDBY PROC NOT AVAILABLE`	cause: a. the Error Control Circuit has determined that either the standby processor is in a higher alarm condition than the active processor, or that it is not powered up. b. output in response to a SWACT key command, or at 3:00 a.m. when a PREPARE TO SWITCH STATUS is not received from the Error Control II PCA.
2	Alarm Level: No processor switch possible	Reason Code = 40 Corresponds to ERRMAP entry: STANBY PROC N/A System Default: Type: Major Level: 0
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	Processor system non-redundant

(continued)

Procedure 12-16
System conditions and fail messages - procedures (continued)

6 Craftsperson Activity

a. Consult with technical assistance personnel to determine the reason for the standby processor being unavailable. Maintenance activity may already be in progress.

   i) If no maintenance activity is in progress, perform the procedure on the following page.

b. Replace the Error Control II PCA in slot 5 of the A chassis.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

   i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

   ii) If the problem is not cleared after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

c. Replace the CPU PCA in slot 1 of the same chassis as in step b.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

   i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

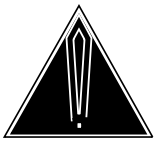
   ii) If the problem is not cleared after PCA replacement and restart, proceed to step d. Return the original PCA to its position before proceeding.

d. Call for technical assistance.

End

Procedure 12-17
System conditions and fail messages - procedures

1	STBY BOOT FAIL	cause: an attempt at booting the standby processor has failed due to the active processor detecting an IPCOM transfer problem, or because the standby processor has requested a premature halt to the operation from the active due to an error on the standby side.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	Based on the corresponding error message(s).
6	Craftsperson Activity	a. Refer to the error message(s) printed along with this message for more definitive information of the fault. i) Reference the procedure sheet for any other error messages that appear. ii) Do any Craftsperson activity procedures in the associated error procedure sheets. (If unsuccessful, proceed to step b.) b. Replace the Disk Interface (SCSI Intf) PCA in slot 11 of the standby chassis.



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

(continued)

Procedure 12-17
System conditions and fail messages - procedures (continued)

6 (cont'd)	i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. ii) If unsuccessful after PCA replacement and restart, proceed to step c.) Return the original PCA to its position before proceeding. c. Call for technical assistance.

End

Procedure 12-18
System conditions and fail messages - procedures

1	(log message) TAPE BLOCKS LOST = xxx	where: xxx = the number of tape blocks lost (at the DSI PCA). cause: output when AMA tape data block(s) are lost. Tape blocks can be lost for the following reasons: a. when the current active AMA validation process has used up all of the available AMA buffers b. no buffers are available to handle the incoming block from the DSI PCA and the data block is lost. c. during a CPU switch: i) if this is an unscheduled (not at 3 a.m.) switch ii) unplanned switch (not done manually) during heavy traffic.
2	Alarm Level: No processor switch	Reason Code = 21 Corresponds to ERRMAP entry: TAPE BLOCK LOST System Default: Type: Major Level: 0
3	Customer-Selected Alarm Level	Type: Level:

(continued)

Procedure 12-18
System conditions and fail messages - procedures (continued)

4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	Call for technical assistance, problem may be in the DMS-100.

End

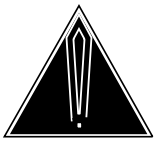
Procedure 12-19
System conditions and fail messages - procedures

1	(log message) `WR CMD` (Wrong Command)	cause: prints out when an illogical combination of tape commands is sensed. Forward and reverse bits are set. This output should not appear during normal operation; used by NT for test and verification purposes only.[1]
2	Alarm Level: if active unit = processor switch = Major alarm; Level 1 if standby unit = no processor switch = Minor alarm; Level 0	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: See Alarm Level Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: See Alarm Level Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	a. If the message is from the active unit (Major Alarm, Level 1), a processor switch occurs. b. If the message is from the standby unit (Minor Alarm, Level 0), no processor switch occurs.

(continued)

Procedure 12-19
System conditions and fail messages - procedures (continued)

6	Craftsperson Activity	a. Verify the integrity of the backplane wiring. i) Consult Office Cabling drawings. ii) Verify wiring connections at the interface box. - If cabling is not correct, make the necessary repairs. - Consult with technical assistance personnel before moving any cable connections. iii) If cable connections are correct, proceed to step b. b. Verify wiring (integrity) of tape interface connections. i) Consult Office Cabling drawings. - If cabling is not correct, make the necessary repairs. - Consult with technical assistance personnel before moving any cable connections. ii) If cable are connections are correct, proceed to step c. c. Perform tests/replace DMS-100 IOC PCA, or equivalent. i) As described in the documentation series for the DMS-100. Refer to the DMS-100 documentation for requirements and procedures. ii) If unsuccessful, proceed to step d. d. Replace the DSI PCA in slot 13.



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

(continued)

Procedure 12-19
System conditions and fail messages - procedures (continued)

6 (cont'd)	i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. ii) If the problem is not cleared after PCA replacement and restart, proceed to step e. Return the original PCA to its position before proceeding. e. Call for technical assistance.

Notes:
Note 1: Ignore this message if it appears when changing DSI PCAs or removing DSI cables.

End

Procedure 12-20
System conditions and fail messages - procedures

1	(log message) `xx BLKS NOT UPDATED`	where: xx = the excess block count. cause: printed when the update count (number of call record blocks sent) exceeds the number of call record blocks on disk remaining to be polled. This condition should never occur.
2	Alarm Level: N/A	Reason Code = 02 Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None

(continued)

Procedure 12-20
System conditions and fail messages - procedures (continued)

6	Craftsperson Activity	a. Notify the Collector that “xx” blocks may be sent again on the next polling session. b. Respond to any other disk (error) messages that may be output for more definitive information of the fault. i) Reference the procedure sheet for any other disk error message that appears. ii) Do any Craftsperson activity procedures in the associated disk error procedure sheets. (If unsuccessful, proceed to step c.) c. Call for technical assistance.

End

DPP Information messages

Information messages in the DPP are designed to provide the user with data concerning system operating conditions. These messages in and of themselves do not indicate trouble, but are indicative that a trend or event, or series of events, may be developing that needs to be monitored.

Refer to the appendix (Chapter 19) for a list of Information messages. Procedures 13-1 through 13-11 provide the steps to follow in response to these messages.

Table 13-1
Information messages - index

Message	Page
AMA FILE DELETED	13-13
COMMAND STOPPED	13-2
DPR TEST NOT SUPPORTED	13-2
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KEY “ACR” ON AC RECV.	13-4
LOG FILES DELETED	13-7
LOG FILE DELETED	13-13
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NO SECONDARY FILES TO DELETE	13-10
OFF-LINE DISK HAS UNPOLLED DATA	13-11
STANDBY PROC ON LINE - ALARM RESET	13-12

Procedure 13-1 **Information messages - procedures**		
1	COMMAND STOPPED	cause: message output in response to the HXDPP command, where either the command has stopped or an executed command has progressed too far to stop.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. None, this message is in response to the HXDPP (keyboard entry) command. b. This message is the normal response to the reset (keyboard entry) commands.

Procedure 13-2 **Information messages - procedures**		
1	DPR TEST NOT SUPPORTED	cause: a DPR test is normally conducted automatically at 24-hour intervals. This test is conducted in order to verify that communication is possible with the Disk Interface. If the Disk Interface processor did not understand (recognize) the type of message it receives, this message is displayed.

(continued)

Procedure 13-2 **Information messages - procedures** (continued)		
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. 1st occurrence - none b. If message repeats, call for technical assistance to determine if the DPR test is active for your DPP system.
		End

Procedure 13-3 **Information messages - procedures**		
1	`INCORRECT RU LENGTH`	cause: message generated when the Raw Unit (RU) length established by the DMS-100 for call record data is unacceptable.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
		(continued)

Procedure 13-3 **Information messages - procedures**		
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	Call for technical assistance; problem may be in the Switching System.
		End

Procedure 13-4 **Information messages - procedures**		
1	(log message) KEY "ACR" ON AC RECV.	cause: indicates that a 60Hz interrupt failure has occurred and that the processor is now timing from the internal clock. When ac is restored, entering the ACR command switches the timing clock back to the 60Hz input.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	If ac power is not restored when ACR is entered at the terminal, the DPP system operates on the internal dc clock (CPU PCA).
		(continued)

Procedure 13-4
Information messages - procedures (continued)

Notes:

1 Determine if the DPP system uses the optional ac clock feature. If it does not, ignore this message.

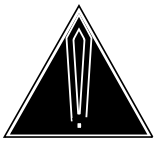
2 This message is not valid for DPP systems equipped with:
   a. 380-Mbyte disk drives with the 56KB polling feature; presence of 56K polling can be verified by observing that an NT6M94AA 56K Interface PCA is mounted in slots A7 and B7 of the DPP.
   b. 760-Mbyte disk drives, all instances.

3 If the optional ac clock feature is in use, proceed as indicated in the following steps.

6 Craftsperson Activity

a. Enter ACR at the terminal to restore the ac clock circuits.
   i) Check the ac transformer (if present) and voltages.
      - Refer to Chapter 3 for the power and ground requirements.
        - Check the voltage levels and wiring connections, correct as necessary.
        - If the wiring connections and voltage levels are correct, proceed to step b, else go to step e.
   ii) Replace the transformer (if equipped), if necessary.

b. Restore the ac power, if used.
   i) Enter ACR at the terminal to restore the ac clock circuits. (If successful, procedure complete.)
   ii) If the problem still exists, proceed to step c.



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

(continued)

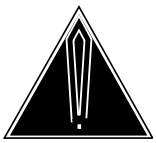
Procedure 13-4
Information messages - procedures (continued)

6
(cont'd)

c. Replace the CPU PCA in slot 1 of the standby chassis.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. (If successful, procedure complete.)

ii) If the problem is not cleared after PCA replacement and restart, proceed to step d. Return the original PCA to its position before proceeding.



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

d. Replace the P/A Comm PCA in position A16; auxiliary PCA gate in the back.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. (If successful, procedure complete.)

ii) If the problem is not cleared after PCA replacement and restart, proceed to step e. Return the original PCA to its position before proceeding.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

(continued)

Procedure 13-4
Information messages - procedures (continued)

6 (cont'd)	e. RAM (slot 3) and EPROM (slot 2) messages also print out, indicating which PCA assembly to replace. i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. (If successful, procedure complete.) ii) If the problem is not cleared after PCA replacement and restart, proceed to step f. Return the original PCA to its position before proceeding. f. If the problem is not cleared, call for technical assistance.

End

Procedure 13-5
Information messages - procedures

1	(log message) `LOG FILES DELETED`	cause: output when the LOG files are deleted to make room for primary AMA files; occurs when disk usage percentage reaches 90%.
2	Alarm Level: No processor switch	Reason Code = 07 Corresponds to ERRMAP entry: LOG FILES DELETED System Default: Type: Major Level: 0
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:

(continued)

Procedure 13-5 **Information messages - procedures**		
5	System Recovery Action	None
6	Craftsperson Activity	a. The disks are filling up with Call Record Files. Refer to Chapter 5 for the BOTH DISKS FULL message procedure or refer to 297-1001-537 for DISK USE > xx% message procedure and DISK USE > xx% PRIMARY DATA message procedure. b. Call for technical assistance; a polling session is required.
		End

Procedure 13-6 **Information messages - procedures**		
1	(log message) `MMI LINK #n DOWN`	where: n = 1 or 2 = MMI link number. cause: output when the MMI link sanity check fails.
2	Alarm Level: No processor switch	Reason Code = 36 Corresponds to ERRMAP entry: 1 MMI LINK DOWN System Default: Type: Minor Level: 0
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Minor Audible: Minor Customer-Selected Status Panel: Audible:
5	System Recovery Action	The other MMI link is made the ONLY link.
		(continued)

Procedure 13-6
Information messages - procedures (continued)

6	Craftsperson Activity	a. Check the MMI cables between DMS and the DPP. b. Refer to 297-1001-556 to test the DMS-100 IOC Card that is associated with this MMI link. c. If you are unable to clear the problem, call for technical assistance.

End

Procedure 13-7
Information messages - procedures

1	(log message) `MP SWITCH` (Microprocessor Switch)	cause: indicates a processor switch occurred and which processor is on-line (from the processor ID of the log message). Prints out: a. when the automatic 3:00 a.m. processor switch occurs, b. when a processor switch occurs manually (Craftsperson activity) c. to report a processor switch alarm.
2	Alarm Level: No processor switch	Reason Code = 12 Corresponds to ERRMAP entry: none System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	Processor switch occurred.

(continued)

Procedure 13-7 **Information messages - procedures**		
6	Craftsperson Activity	a. If this message appears, and there was no manual activity (a processor switch at the Switch and Status Panel) in progress, and it is not 3 a.m., examine the printouts immediately before this message for any error indications. b. If this printout appears as a result of an error, perform the following: i) Refer to any error messages printed along with this message for more definitive information of fault. ii) Reference the procedure sheet for any other error messages that appear. iii) Do any Craftsperson activity procedures in the associated error procedure sheets. (If unsuccessful, proceed to step c.) c. Call for technical assistance.
		End

Procedure 13-8 **Information messages - procedures**		
1	(log message) `NO SECONDARY FILES TO DELETE`	cause: output when no secondary files can be deleted to make room for primary files.
2	Alarm Level: no disk mode change occurs; to do so would cause a loss of call record data	Reason Code = 06 Corresponds to ERRMAP entry: SECND FILES DEL System Default: Type: Minor Level: 0
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Minor Audible: Minor Customer-Selected Status Panel: Audible:
		(continued)

Procedure 13-8
Information messages - procedures (continued)

5	System Recovery Action	None
6	Craftsperson Activity	a. Request a polling session. b. Refer to: i) Refer to Chapter 5 for BOTH DISKS FULL message procedure, or ii) Refer to 297-1001-537 for DISK USE > xx% message procedure and DISK USE > xx% PRIMARY DATA message procedure. c. Call for technical assistance if you encounter any difficulty at any time.

End

Procedure 13-9
Information messages - procedures

1	(log message) `OFF-LINE DISK HAS UNPOLLED DATA`	cause: when the DPP disk system becomes filled up with call record data while in a PRIME disk mode, the standby disk automatically goes to off-line mode. The PRIME disk becomes DISK ONLY mode. This message is displayed immediately after the establishment of the DISK ONLY mode.
2	Alarm Level: disk mode is non-redundant	Reason Code = 28 Corresponds to ERRMAP entry: RESERV DSK FULL System Default: Type: Major Level: 0
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:

(continued)

Procedure 13-9 **Information messages - procedures**		
5	System Recovery Action	None
6	Craftsperson Activity	a. Request a polling session. b. Refer to: i) Refer to Chapter 5 for BOTH DISKS FULL message procedure, or ii) Refer to 297-1001-537 for DISK USE > xx% message procedure and DISK USE > xx% PRIMARY DATA message procedure. c. Call for technical assistance if you encounter any difficulty at any time.
		End

Procedure 13-10 **Information messages - procedures**		
1	(log message) `STANDBY PROC ON LINE - ALARM RESET`	cause: the DPP conducts an automatic check every minute to verify communication with the standby processor. If the communication check fails, a system alarm is generated. If communication has been restored at the next minute check, this message is displayed.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
		(continued)

Procedure 13-10
Information messages - procedures (continued)

5	System Recovery Action	If communication is not possible after subsequent checking, a system alarm is generated.
6	Craftsperson Activity	a. None; information message. b. Monitor the DPP system for a reoccurrence of the (log message) error message that produced the alarm for more definitive information of the fault. i) Reference the procedure sheet for any other error messages that appear. ii) Perform the Craftsperson activity procedures in the associated error procedure sheets. (If unsuccessful, proceed to step c.) c. Call for technical assistance.

End

Procedure 13-11
Information messages - procedures

1	(log message)
	`AMA FILE DELETED`
	(log message)
	`EXC FILE DELETED`
	(log message)
	`LOG FILE DELETED`
		cause: printed when a data file has been deleted using the IDXMAINT DELETE keyboard sequence, or at predetermined intervals.

2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:

(continued)

Procedure 13-11 **Information messages - procedures**		
5	System Recovery Action	None
6	Craftsperson Activity	None (information message only).
	End	

File layer error message procedures

Refer to the appendix (Chapter 19) for the File layer error messages. Procedures 14-1 through 14-15 provide the steps for the file layer error messages.

Table 14-1
File layer error messages - index

Message	Page
ERR UPDATING MAINT FILE	14-3
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FIL - ERR UPDATING MAINT FILE	14-3
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FIL - ERROR SENDING TIME TO MP (w/56K polling)	14-4
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FIL - FILE REJ xx	14-6
FIL-INTERNAL SOFTWARE ERROR (w/56K polling)	14-7
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FIL-MP SHUTDOWN ERR (w/56K polling)	14-11
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FIL - TEST FILE CLOSE FAIL AFTER XFER	14-10
FIL - TEST FILE DELETE FAIL AFTER XFER	14-15
FIL - TEST FILE REJECTED	14-16
FIL - UNABLE TO XFER TEST FILE	14-17
MAINT FILE INIT ERROR	14-10

Procedure 14-1 **File layer error messages - procedures**		
1	(log message) `FIL - ERR MAINT FILE POLL`	cause: printed when a disk error was encountered while processing a poll for the maintenance file. The appropriate disk message also appears in the printout.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	As specified for the associated disk error message.
6	Craftsperson Activity	a. Refer to the associated disk error message for more definitive information of the fault. i) Reference the procedure sheet for any other disk error messages that appear. ii) Do any Craftsperson activity procedures in the associated disk error procedure sheets. (If unsuccessful, proceed with step b.) b. Call for technical assistance.

Procedure 14-2 File layer error messages - procedures		

1	(log message)
	`ERR UPDATING MAINT FILE`
	(log message)
	`FIL - ERR UPDATING MAINT FILE`
		cause: printed when a disk error was encountered while performing the midnight update of the maintenance file. The appropriate disk message also appears in the printout.

2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	As specified for the associated disk error message.
6	Craftsperson Activity	a. Refer to the associated disk error message for more definitive information of the fault. i) Reference the procedure sheet for any other disk error messages that appear. ii) Do any Craftsperson activity procedures in the associated disk error procedure sheets. (If unsuccessful, proceed with step b.) b. Call for technical assistance.

Procedure 14-3 **File layer error messages - procedures**		
1	(log message) `FIL-ERROR GETTING TIME FROM MP`	cause: the file layer task on the Comm processor on the 56K Intf PCA has encountered an error requesting the Main processor time. This is probably due to an internal software error.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	A polling session in progress is aborted.
6	Craftsperson Activity	a. 1st occurrence - none. b. If the problem persists, notify technical assistance personnel.

Procedure 14-4 **File layer error messages - procedures**		
1	(log message) `FIL - ERROR SENDING TIME TO MP` (w/56K polling)	cause: the file layer task on the Comm processor on the 56K Intf PCA has encountered an error sending the Collector time to the Main processor to force the Main processor to update its time. This is probably due to an internal software error.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
		(continued)

Procedure 14-4 **File layer error messages - procedures** (continued)		
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	A polling session in progress is aborted.
6	Craftsperson Activity	a. 1st occurrence - none. b. If the problem persists, notify technical assistance personnel.
		End

Procedure 14-5 **File layer error messages - procedures**		
1	(log message) `FIL - FILE INTERRUPT`	cause: printed when a file interrupt message is received from the Collector. Any file processing is immediately terminated upon receipt of this message.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	Based on Interrupt reason (supplied by Collector).
6	Craftsperson Activity	Coordinate activity with Collector personnel to respond to the cause of the Interrupt.
		End

Procedure 14-6 **File layer error messages - procedures**		
1	(log message) `FIL - FILE REJ xx`	where: xx = the reason for the rejection = 00 = bad incoming file size = 01 = file cannot be charged = 02 = file not available to be transmitted = 03 = file size does not agree with header = 04 = file not available but another is = 05 = invalid data = 06 = invalid file type For more information, refer to 297-1001-138. cause: a file sent from the Collector is rejected for one of the reasons specified by “xx”.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	a. Based on interrupt reason (supplied by Collector). b. Retry; a file reject is sent to the Collector.
6	Craftsperson Activity	a. Coordinate activity with Collector personnel to respond to the cause of the interrupt. b. If persistent, call for technical assistance.
		End

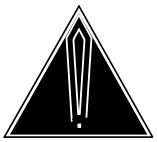
Procedure 14-7
File layer error messages - procedures

1	(log message) `FIL-INTERNAL SOFTWARE ERROR` (w/56K polling)	cause: the file layer task on the Communications processor on the 56K Intf PCA has been scheduled with an invalid function code or it has called the routine SNDNOD, which communicates between the File and Session layers, with invalid input parameters.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. If the message persists, reboot the Comm processor. i) Enter: (at the terminal) **>CP BOOT ACT (cr** (to load the contents of the BOOTCP file to the active 56K Comm processor) System response = list of file names and version numbers stored in the file BOOTCP, as they are loaded. ii) If the error message does not repeat, procedure complete. iii) If the error message repeats, proceed to step b. b. Replace the SCSI Intf PCA in slot 7 of the standby chassis.

(continued)

Procedure 14-7
File layer error messages - procedures (continued)

6 (cont'd)



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If unsuccessful after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

c. Call for technical assistance.

End

Procedure 14-8
File layer error messages - procedures

1	(log message) `FIL - INTERRUPT`	cause: printed when a file interrupt message is sent to the Collector as a result of a hardware or software error at the DPP. Any file processing is immediately terminated upon receipt of this message.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:

(continued)

Procedure 14-8
File layer error messages - procedures (continued)

5	System Recovery Action	As specified for the associated disk error message.
6	Craftsperson Activity	a. Refer to the associated disk error message for more definitive information of the fault. i) Reference the procedure sheet for any other disk error messages that appear. ii) Do any Craftsperson activity procedures in the associated disk error procedure sheets. (If unsuccessful, proceed with step b.) b. Call for technical assistance.

End

Procedure 14-9 **File layer error messages - procedures**		

1	(log message)
	`MAINT FILE INIT ERROR`
	(log message)
	`FIL - MAINT FILE INIT ERROR`
		cause: an error occurred while creating the maintenance file. The appropriate disk error message is also printed.

2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	As specified for the associated disk error message.
6	Craftsperson Activity	a. Refer to the associated disk error message for more definitive information of the fault. i) Reference the procedure sheet for any other disk error messages that appear. ii) Do any Craftsperson activity procedures in the associated disk error procedure sheets. (If unsuccessful, proceed with step b.) b. Call for technical assistance.
		End

Procedure 14-10
File layer error messages - procedures

1	(log message) `FIL-MP SHUTDOWN ERR` (w/56K polling)	cause: printed when the 56k Comm processor on the 56K Intf PCA in unable to inform the Main processor that a protocol shutdown has occurred. The message implies that the Main processor and the Comm processor are not communicating correctly with each other. Failure of the Comm processor to inform the Main processor of protocol shutdown means that certain Main processor functions, such as processor switches and secondary AMA file deletion may be inhibited.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. Attempt to correct the problem on the link. i) Disconnect the polling link. Enter: (at the terminal) **>LNKDSC (cr)** (causes the DTR on the active link to drop for five seconds, which disconnects the link) Proper response = `LINK DISCONNECTED`

CAUTION
Use of this command aborts a polling session in progress.

(continued)

Procedure 14-10
File layer error messages - procedures (continued)

6
(cont'd)

ii) Immediately follow this command with the LINIT command. Proceed immediately to step b.

b. Reinitialize the disk.

i) Enter: (at the terminal)

>LINIT (cr)
(initializes the data areas used for the collection of incoming frames from the incoming polling link)

CAUTION
Use of this command aborts a polling session, if there is one in progress.

Proper response =
LINK INITIALIZED

ii) If the error message does not repeat, procedure complete.

iii) If the error message repeats, proceed to step c.

c. Reboot the Comm processor.

i) Enter: (at the terminal)

>CP BOOT ACT (cr)
(to load the contents of the BOOTCP file to the active 56K Comm processor)

System response =
list of file names and version numbers stored in the file BOOTCP, as they are loaded.

ii) If the error message does not repeat, procedure complete.

iii) If the error message repeats, proceed to step d.

d. Call for technical assistance.

End

Procedure 14-11
File layer error messages - procedures

1	(log message) `FIL-NO XMIT NODE` (w/56K polling)	cause: the file layer on the Comm processor on the 56K Intf PCA is unable to get a transmit node for use in the protocol. It is unable to satisfy any requests from the Collector.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	a. Comm processor aborts the polling session. b. Attempts to send a “FILE REJECT 02” message to the Collector. c. May output the “KERNEL SERVICE ERROR - xxx” message.
6	Craftsperson Activity	a. If the message persists, reboot the Comm processor. i) Enter: (at the terminal) **>CP BOOT ACT (cr** (to load the contents of the BOOTCP file to the active 56K Comm processor) System response = list of file names and version numbers stored in the file BOOTCP, as they are loaded. ii) If the error message does not repeat, procedure complete. iii) If the error message repeats, proceed to step b.

(continued)

Procedure 14-11
File layer error messages - procedures (continued)

6 (cont'd)

b. Replace the SCSI Intf PCA in slot 7 of the standby chassis.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If unsuccessful after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

c. Call for technical assistance.

End

Procedure 14-12
File layer error messages - procedures

1	(log message) `FIL - TEST FILE CLOSE FAIL AFTER XFER`	cause: printed when error occurs while closing the test file after sending it to the Collector. The appropriate disk error message is also printed.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	As specified for the associated disk error message.

(continued)

Procedure 14-12
File layer error messages - procedures (continued)

6	Craftsperson Activity	a. Refer to the associated disk error message for more definitive information of the fault. i) Reference the procedure sheet for any other disk error messages that appear. ii) Do any Craftsperson activity procedures in the associated disk error procedure sheets. (If unsuccessful, proceed with step b.) b. Call for technical assistance.

End

Procedure 14-13
File layer error messages - procedures

1	(log message) `FIL - TEST FILE DELETE FAIL AFTER XFER`	cause: printed when error occurs while deleting the test file after sending it to the Collector. The appropriate disk error message is also printed.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	As specified for the associated disk error message.

(continued)

Procedure 14-13
File layer error messages - procedures (continued)

6	Craftsperson Activity	a. Refer to the associated disk error message for more definitive information of the fault. i) Reference the procedure sheet for any other disk error messages that appear. ii) Do any Craftsperson activity procedures in the associated disk error procedure sheets. (If unsuccessful, proceed with step b.) b. Call for technical assistance.

End

Procedure 14-14
File layer error messages - procedures

1	(log message) `FIL - TEST FILE RE-JECTED`	cause: printed when the system is unable to save the test file on disk. The appropriate disk error message is also printed.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	As specified for the associated disk error message.

(continued)

Procedure 14-14
File layer error messages - procedures (continued)

6	Craftsperson Activity	a. Refer to the associated disk error message for more definitive information of the fault. i) Reference the procedure sheet for any other disk error messages that appear. ii) Do any Craftsperson activity procedures in the associated disk error procedure sheets. (If unsuccessful, proceed with step b.) b. Call for technical assistance.

End

Procedure 14-15
File layer error messages - procedures

1	(log message) `FIL - UNABLE TO XFER TEST FILE`	cause: printed when an error occurs while trying to retrieve the test file from disk. The appropriate disk error message is also printed.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	As specified for the associated disk error message.

(continued)

Procedure 14-15
File layer error messages - procedures (continued)

6	Craftsperson Activity	a. Refer to the associated disk error message for more definitive information of the fault. i) Reference the procedure sheet for any other disk error messages that appear. ii) Do any Craftsperson activity procedures in the associated disk error procedure sheets. (If unsuccessful, proceed with step b.) b. Call for technical assistance.

End

Session layer error message procedures

Refer to the appendix (Chapter 19) for the session layer error messages. Procedures 15-1 through 15-13 provide the procedures for the session layer error messages.

Table 15-1
Session layer error messages - index

Message	Page
SES-DIS	15-2
SES-BAD HOST ADDR	15-2
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SES-ILL MSG RCVD	15-6
SES-INV FUNCTION CODE (w/56K polling)	15-7
SES-INV RELEASE TASK ID (w/56K polling)	15-8
SES-NO MEM	15-10
SES-NO NODES	15-11
SES-TIME EXP	15-11
SES-UNABLE TO RELEASE NODE (w/56K polling)	15-12

Procedure 15-1 **Session layer error messages - procedures**		
1	(log message) SES-DIS	cause: indicates a session is disconnected, either normally or abnormally.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	Session is terminated.
6	Craftsperson Activity	a. Check accompanying printouts for indication of (if any) abnormal termination. b. Respond to any error messages that may be present. (Refer to the appropriate procedure sheets for the Craftsperson activity procedures to follow.) c. If the problem persists, notify technical assistance personnel.

Procedure 15-2 **Session layer error messages - procedures**		
1	(log message) SES-BAD HOST ADDR	cause: prints when the session connect message from the Collector contains an illegal Collector address.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A

(continued)

Procedure 15-2
Session layer error messages - procedures (continued)

3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	Session is rejected.
6	Craftsperson Activity	a. 1st occurrence - none. b. If the problem persists, notify technical assistance personnel.

End

Procedure 15-3
Session layer error messages - procedures

1	(log message) SES-BAD HOST P/W	cause: prints when the session connect message from the Collector contains an illegal password.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:

(continued)

Procedure 15-3 **Session layer error messages - procedures** (continued)		
5	System Recovery Action	Session is rejected.
6	Craftsperson Activity	a. 1st occurrence - none. b. If the problem persists, notify technical assistance personnel.
		End

Procedure 15-4 **Session layer error messages - procedures**		
1	(log message) `SES-BAD M(R) CONFIRM RCVD`	cause: prints when a message is received from the Collector which has a wrong message sequence number.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	Session is rejected.
6	Craftsperson Activity	a. 1st occurrence - none. b. If the problem persists, notify technical assistance personnel.

Procedure 15-5 Session layer error messages - procedures		
1	(log message) SES-BAD M(S) CONFIRM RCVD	cause: prints when a message confirm message is received from the Collector which has a wrong message sequence number.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	A session disconnect is issued to the Collector, terminating the session.
6	Craftsperson Activity	a. 1st occurrence - none. b. If the problem persists, notify technical assistance personnel.

Procedure 15-6 Session layer error messages - procedures		
1	(log message) SES-BAD MSG RCVD	cause: prints when an unrecognizable, improperly formatted message is received from the Collector.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:

(continued)

Procedure 15-6 **Session layer error messages - procedures** (continued)		
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	a. If currently in a session connect state, a session disconnect is issued to the Collector, terminating the session. b. If in an idle state, a session reject message is issued to the Collector.
6	Craftsperson Activity	a. 1st occurrence - none. b. If the problem persists, notify technical assistance personnel.
		End

Procedure 15-7 **Session layer error messages - procedures**		
1	(log message) `SES-ILL MSG RCVD`	cause: prints when a message is received from the Collector which is not legal in the current session state, that is, any message other than a session connect while in the idle state, or a session connect while already connected.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
		(continued)

Procedure 15-7 **Session layer error messages - procedures** (continued)		
5	System Recovery Action	a. If in the idle state, a session reject message is sent to the Collector. b. If in the connect state, the session is disconnected by sending a session disconnect message to the Collector.
6	Craftsperson Activity	a. 1st occurrence - none. b. If the problem persists, notify technical assistance personnel.
		End

Procedure 15-8 **Session layer error messages - procedures**		
1	`SES-INV FUNCTION CODE` (w/56K polling)	cause: the Session layer task on the Communications processor on the 56K Intf PCA has been scheduled with an invalid code.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
		(continued)

Procedure 15-8
Session layer error messages - procedures (continued)

6 Craftsperson Activity

a. If the message persists, reboot the Comm processor.

i) Enter: (at the terminal)

>CP BOOT ACT (cr

(to load the contents of the BOOTCP file to the active 56K Comm processor)

System response =
list of file names and version numbers stored in the file BOOTCP, as they are loaded.

ii) If the error message does not repeat, procedure complete.

iii) If the error message repeats, proceed to step b.

b. Replace the SCSI Intf PCA in slot 7 of the standby chassis.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If unsuccessful after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

c. Call for technical assistance.

End

Procedure 15-9
Session layer error messages - procedures

1 `SES-INV RELEASE TASK ID`

cause: the Session layer on the Communications processor on the 56K Intf PCA has been scheduled with a node to be released, however, the task id of the task sending node to the Session layer is invalid.

(continued)

Procedure 15-9
Session layer error messages - procedures (continued)

2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None; the node is not released.
6	Craftsperson Activity	a. If the message persists, reboot the Comm processor. i) Enter: (at the terminal) **>CP BOOT ACT (cr)** (to load the contents of the BOOTCP file to the active 56K Comm processor) System response = list of file names and version numbers stored in the file BOOTCP, as they are loaded. ii) If the error message does not repeat, procedure complete. iii) If the error message repeats, proceed to step b. b. Replace the Disk Intfc PCA in slot 11 of the standby chassis.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

(continued)

Procedure 15-9 **Session layer error messages - procedures** (continued)	
6 (cont'd)	i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. ii) If unsuccessful after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding. c. Call for technical assistance.
End	

Procedure 15-10 **Session layer error messages - procedures**		
1	(log message) SES-NO MEM	cause: prints when there are no temporary memory buffers left.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	a. If three successive attempts are made with unsuccessful results, the session is disconnected automatically. b. DPP sends a session disconnect message to the Collector.
6	Craftsperson Activity	a. 1st occurrence - none. b. If the problem persists, notify technical assistance personnel.

Procedure 15-11 Session layer error messages - procedures		
1	(log message) SES-NO NODES	cause: prints when there are no transmit nodes available to send a message to the Collector.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	a. If three successive attempts to obtain a node are made with unsuccessful results, the session is disconnected. b. A session disconnect message is sent to the Collector as soon as a node becomes available.
6	Craftsperson Activity	a. 1st occurrence - none. b. If the problem persists, notify technical assistance personnel.

Procedure 15-12 Session layer error messages - procedures		
1	(log message) SES-TIME EXP	cause: prints when a message confirm message is not received from the Collector within 60 seconds of sending a message to the Collector.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A

(continued)

Procedure 15-12 **Session layer error messages - procedures** (continued)		
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	The session is disconnected by sending a session disconnect message to the Collector.
6	Craftsperson Activity	a. 1st occurrence - none. b. If the problem persists, notify technical assistance personnel.
	End	

Procedure 15-13 **Session layer error messages - procedures**		
1	`SES-UNABLE TO RELEASE NODE`	cause: the session layer task on the Communications processor on the 56K Intf PCA has attempted to release a node back to dynamic memory and an error was returned.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None; the node is not released.
	(continued)	

Procedure 15-13
Session layer error messages - procedures (continued)

6 Craftsperson Activity

a. If the message persists, reboot the Comm processor.

i) Enter: (at the terminal)

>CP BOOT ACT (cr)
(to load the contents of the BOOTCP file to the active 56K Comm processor)

System response =
list of file names and version numbers stored in the file BOOTCP, as they are loaded.

ii) If the error message does not repeat, procedure complete.

iii) If the error message repeats, proceed to step b.

b. Replace the Disk Intfc PCA in slot 11 of the standby chassis.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If unsuccessful after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

c. Call for technical assistance.

End

Packet layer error message procedures

Refer to the appendix (Chapter 19) for the packet layer error messages in this section. Procedures 16-1 through 16-25 provide the procedures for the packet layer error messages.

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(continued)

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Packet layer error messages - index

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PKT - RESTART REQ N/A	16-17
PKT - RNR PKT N/A	16-18
PKT - RR PKT N/A	16-18
PKT - TIMEOUT COUNTER - OVERFLOW	16-19
PKT - TRANSMIT COUNTER - OVERFLOW	16-20

End

Procedure 16-1
Packet layer error messages - procedures

1	PKT - CORRUPTED INTPKT PACKET	cause: an internal data structure has been corrupted.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.

Procedure 16-2 Packet layer error messages - procedures		
1	PKT - CURRENT STATE VALUE OUT OF RANGE	cause: during a state table look-up, the current state value was found to be invalid. The node received is not processed further.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.

Procedure 16-3 Packet layer error messages - procedures		
1	(log message) PKT - DATA HEADER N/A	cause: an unsuccessful attempt was made to obtain a data packet header.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:

(continued)

Procedure 16-3 **Packet layer error messages - procedures** (continued)		
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	The data packet header is pushed back to the internal packet header until a header is available.
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.
		End

Procedure 16-4 **Packet layer error messages - procedures**		
1	(log message) `PKT - DIAGNOSTIC PACKET N/A`	cause: an unsuccessful attempt was made to obtain a diagnostic packet header.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
		(continued)

Procedure 16-4 **Packet layer error messages - procedures** (continued)		
5	System Recovery Action	Retry.
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.
		End

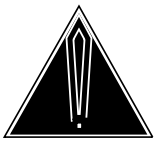
Procedure 16-5 **Packet layer error messages - procedures**		
1	(log message) `PKT - ERROR COUNTER - OVERFLOW`	cause: the count of the number of packet layer errors has exceeded the limit of the counter.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	The counter restarts again at zero.
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.

Procedure 16-6 **Packet layer error messages - procedures**		
1	PKT - INTERNAL SOFT-WARE ERROR	cause: the Packet layer task on the Communications processor on the 56K Intf PCA has been scheduled with an invalid function code.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. If the message persists, reboot the Comm processor. i) Enter: (at the terminal) **>CP BOOT ACT (cr)** (to load the contents of the BOOTCP file to the active 56K Comm processor) System response = list of file names and version numbers stored in the file BOOTCP, as they are loaded. ii) If the error message does not repeat, procedure complete. iii) If the error message repeats, proceed to step b. b. Replace the SCSI Intf PCA in slot 7 of the standby chassis.

(continued)

Procedure 16-6
Packet layer error messages - procedures (continued)

6 (cont'd)



CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If unsuccessful after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

c. Call for technical assistance.

End

Procedure 16-7
Packet layer error messages - procedures

1	(log message) `PKT - INTERRUPT CON-FIRM PKT - N/A`	cause: an unsuccessful attempt was made to obtain an interrupt confirmation packet header.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:

(continued)

Procedure 16-7 **Packet layer error messages - procedures** (continued)		
5	System Recovery Action	System retry.
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.
		End

Procedure 16-8 **Packet layer error messages - procedures**		
1	(log message) `PKT - INTERRUPT PKT - N/A`	cause: an unsuccessful attempt was made to obtain an interrupt packet header.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	System retry.
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.

Procedure 16-9 Packet layer error messages - procedures		
1	(log message) `PKT - INVALID CHANNEL NUMBER`	cause: output when a packet is received with an invalid channel number.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	System retry.
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.

Procedure 16-10 Packet layer error messages - procedures		
1	(log message) `PKT - INVALID USER DATA FIELD`	cause: output if the user data field parameter in a received packet is invalid.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:

(continued)

Procedure 16-10 **Packet layer error messages - procedures** (continued)		
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	System retry.
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.
		End

Procedure 16-11 **Packet layer error messages - procedures**		
1	(log message) `PKT - INVALID WINDOW SIZE-EXPECTED 1-7`	cause: the packet window size did not fall within the specified range.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	System retry.
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.

Procedure 16-12 Packet layer error messages - procedures		
1	(log message) `PKT - LC REQUESTED BY SESSION TO XMIT UNASSIGNED`	cause: the logical channel number received in vertical communication between the session and packet layers references an unassigned logical channel number.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	System retry.
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.

Procedure 16-13 Packet layer error messages - procedures		
1	(log message) `PKT - MESSAGE REAS-SEMBLY AREA UNAVAIL-ABLE`	cause: an unsuccessful attempt was made to allocate space for message reassembly.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:

(continued)

Procedure 16-13 **Packet layer error messages - procedures** (continued)		
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	The packet is returned to the Link queue until a reassembly area is available.
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.
		End

Procedure 16-14 **Packet layer error messages - procedures**		
1	(log message) `PKT - NO FRENOD FOR PLPLST`	cause: an unsuccessful attempt was made to obtain a node from the transmit pool for vertical communication between the packet and link layers. All nodes in the transmit pool are in use.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
		(continued)

Procedure 16-14 **Packet layer error messages - procedures** (continued)		
5	System Recovery Action	None
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.
		End

Procedure 16-15 **Packet layer error messages - procedures**		
1	(log message) PKT - NO FRENOD FOR PSPLST	cause: an unsuccessful attempt was made to obtain a node from the transmit pool for vertical communication between the packet and link layers. All nodes in the transmit pool are in use.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.

Procedure 16-16 **Packet layer error messages - procedures**		
1	(log message) `PKT - NO PKTS IN IN-TERNAL PACKET QUEUE`	cause: indicates a discrepancy between the information in the channel management area regarding partial transmitted messages and the failure to find a partial message in the internal packet queue.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.

Procedure 16-17 **Packet layer error messages - procedures**		
1	(log message) `PKT - RECEIVE COUNTER - OVERFLOW`	cause: the count of the number of packets received has exceeded the limit of the counter.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:

(continued)

Procedure 16-17 **Packet layer error messages - procedures** (continued)		
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	The counter rolls over to zero and begins again.
6	Craftsperson Activity	None
		End

Procedure 16-18 **Packet layer error messages - procedures**		

1	(log message)
	`PKT - RESET CONFIRM`
	`PKT - N/A`
		cause: an unsuccessful attempt was made to obtain a reset confirmation packet header.

2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.

Procedure 16-19 **Packet layer error messages - procedures**		

1	(log message)
	`PKT - RESET REQ PKT`
	`N/A`
		cause: an unsuccessful attempt was made to obtain a reset request packet header.

2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.

Procedure 16-20 **Packet layer error messages - procedures**		

1	(log message)
	`PKT - RESTART CONFIRM`
	`PKT N/A`
		cause: an unsuccessful attempt was made to obtain a restart confirmation packet header.

2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:

(continued)

Procedure 16-20 **Packet layer error messages - procedures** (continued)		
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.
		End

Procedure 16-21 **Packet layer error messages - procedures**		
1	(log message) `PKT - RESTART REQ N/A`	cause: an unsuccessful attempt was made to obtain a restart packet header.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.

Procedure 16-22 **Packet layer error messages - procedures**		
1	(log message) `PKT - RNR PKT N/A`	cause: an unsuccessful attempt was made to obtain a receiver not ready packet header.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.

Procedure 16-23 **Packet layer error messages - procedures**		
1	(log message) `PKT - RR PKT N/A`	cause: an unsuccessful attempt was made to obtain a receiver ready packet header.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:

(continued)

Procedure 16-23 **Packet layer error messages - procedures** (continued)		
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.
		End

Procedure 16-24 **Packet layer error messages - procedures**		
1	(log message) `PKT - TIMEOUT COUNTER - OVERFLOW`	cause: the number of timeouts has exceeded the limit of the counter.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	The counter rolls over to zero and begins again.
6	Craftsperson Activity	None

Procedure 16-25 **Packet layer error messages - procedures**		
1	(log message) `PKT - TRANSMIT COUNTER - OVERFLOW`	cause: the number of packets transmitted has exceeded the limit of the counter.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	The counter rolls over to zero and begins again.
6	Craftsperson Activity	None

Link layer error message procedures

Refer to the appendix (Chapter 19) for the link layer error messages. Procedures 17-1 through 17-3 provide the procedures for the link layer error messages.

Table 17-1
Link layer error messages - index

Message	Page
LNK-DISCONNECTED	17-1
LNK - RCV BFR N/A	17-3
NO XMIT NODE TO BE RELEASED	17-3

Procedure 17-1
Link layer error messages - procedures

1	LNK-DISCONNECTED	cause: the Link layer task on the Communications processor on the 56K Intfc PCA has initiated a protocol shutdown because it has detected the failure of the physical link or other failure in the protocol.	
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A	Level: N/A
3	Customer-Selected Alarm Level	Type:	Level:

(continued)

Procedure 17-1
Link layer error messages - procedures (continued)

4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	Output of this message does not necessarily indicate an error condition. If the message occurs unexpectedly: a. Reboot the Comm processor. i) Enter: (at the terminal) **>CP BOOT ACT (cr)** (to load the contents of the BOOTCP file to the active 56K Comm processor) System response = list of file names and version numbers stored in the file BOOTCP, as they are loaded. ii) If the error message does not repeat, procedure complete. iii) If the error message repeats, proceed to step b. b. Replace the SCSI Intf PCA in slot 7 of the standby chassis.

CAUTION
All circuit assemblies in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If unsuccessful after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

c. Call for technical assistance.

End

Procedure 17-2 **Link layer error messages - procedures**		
1	(log message) `LNK - RCV BFR N/A`	cause: output when the Collector-to-DPP link is initialized, but no data buffers are available.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	Retry.
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.

Procedure 17-3 **Link layer error messages - procedures**		
1	(log message) `NO XMIT NODE TO BE RELEASED`	cause: output when no transmit node is available for release to asynchronous protocol.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:

(continued)

Procedure 17-3 **Link layer error messages - procedures** (continued)		
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	Retry.
6	Craftsperson Activity	a. 1st occurrence - none. b. Call for technical assistance if the problem persists.
		End

Data stream interface (DSI) circuit

Refer to the appendix (Chapter 19) for the data stream interface circuit error messages. The procedures for data stream interface circuit errors are provided in Procedures 18-1 through 18-13.

Table 18-1
Data stream interface circuit error messages - index

Message	Page
B0 DSI BUSY	18-2
B0 DSI COLD START	18-3
B0 DSI COMM FAIL	18-5
B0 DSI DMA FAIL	18-7
B0 DSI TIME OUT	18-10
B0 DSI WARM START	18-12
B2 DSI BUSY	18-2
B2 DSI COLD START	18-3
B2 DSI COMM FAIL	18-5
B2 DSI DMA FAIL	18-7
B2 DSI TIME OUT	18-10
B2 DSI WARM START	18-12
BLOCK REJECTED: xxxx BYTES	18-14
CALL RECORD BLOCK FROM DSI INCORRECT	18-15
CRC/PAR/COM = ww,xx,yy,zz	18-16
DATA BUFFER EXCEEDED ALARM	18-17
DMA TIME OUT ALARM	18-20

(continued)

Table 18-1
Data stream interface circuit error messages - index (continued)

Message	Page
DSI BUFFER OVERFLOW: xx BLOCKS	18-27
MTUxx: CMD-yy, STA-zz, BLK-aaaaa	18-29

End

Procedure 18-1
Data stream interface circuit error messages - procedures

1	Bx DSI BUSY	where: x = DSI Port ID = 0 = message is from the DSI PCA in slot 13 = 2 = message is from the DSI PCA in slot 12 cause: output during TEST command execution if the standby DSI PCA is busy.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None
6	Craftsperson Activity	None

Procedure 18-2
Data stream interface circuit error messages - procedures

1	(log message) `Bx DSI COLD START`	where: x = DSI Port ID = 0 = message is from the DSI PCA in slot 13 = 2 = message is from the DSI PCA in slot 12 cause: prints out at initial power up, or after four warm starts. (Message is from the DSI PCA.)
2	Alarm Level: Processor switch: if the message is from the active DSI PCA during normal operation = Major Alarm, Level 1. No switch: if the message is from the standby DSI PCA during normal operation = Minor Alarm, Level 0. None: if at power-up.	Reason Code = 25 Corresponds to ERRMAP entry: DSI STNBY FAIL Minor Alarm, Level 0, (or) DSI PRIME FAIL Major Alarm, Level 1 System Default: Type: See Alarm Level Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: See Alarm Level Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	a. Normal printout, immediately after power up. b. Processor switch if the message is from the active DSI PCA port. c. No processor switch if the message is from the standby DSI PCA port.
6	Craftsperson Activity	a. Replace the DSI PCA identified by “x” in the message if the problem is persistent (in the standby chassis ONLY).

CAUTION
All circuit assemblies, disk drives, and other operational hardware in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

(continued)

Procedure 18-2
Data stream interface circuit error messages - procedures (continued)

6
(cont'd)

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the problem is not cleared after PCA replacement and restart, proceed to step b. Return the original PCA to its position before proceeding.

b. Switch active ports in the DMS-100.

i) If the DMS-100 has already switched active ports, put the active chassis in the DPP in standby status.

- Refer to Chapter 4 for switch and status panel operation.

ii) Put the Inactive port on the DMS-100 to standby and then back to active status.

iii) If COLD STARTS reappear, replace the DSI PCA indicated by "x" in the (log message).

CAUTION
All circuit assemblies, disk drives, and other operational hardware in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

- Refer to 297-1001-536 for printed circuit assembly replacement procedures.

- If the problem is not cleared after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

iv) If no alarms appear, switch DPP processors and verify that Call Record (AMA) data is properly going to disk.

(continued)

Procedure 18-2
Data stream interface circuit error messages - procedures (continued)

6 (cont'd)	- Refer to Chapter 4 for switch and status panel operation. - Refer to local procedures to place test calls at the DMS-100. - If the problem is not cleared, proceed to step c. c. Call for technical assistance.

End

Procedure 18-3
Data stream interface circuit error messages - procedures

1	(log message) `Bx DSI COMM FAIL`	where: x = DSI Port ID = 0 = message is from the DSI PCA in slot 13 = 2 = message is from the DSI PCA in slot 12 cause: prints out when the processor can not communicate with the DSI PCA. Tested automatically every 20 minutes. Refer to Chapter 8 for DPP test functions.
2	Alarm Level: Processor switch: if the message is from the active DSI PCA during normal operation = Major Alarm, Level 1. No switch: if the message is from the standby DSI PCA during normal operation = Minor Alarm, Level 0. None: if at power-up.	Reason Code = 24 Corresponds to ERRMAP entry: DSI STNBY FAIL Minor Alarm, Level 0, (or) DSI PRIME FAIL Major Alarm, Level 1 System Default: Type: See Alarm Level Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: See Alarm Level Audible: Customer-Selected Status Panel: Audible:

(continued)

Procedure 18-3
Data stream interface circuit error messages - procedures (continued)

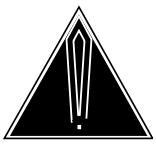
5 System Recovery Action

a. Processor switch if the message is from the active DSI PCA port.

b. No processor switch if the message is from the standby DSI PCA port.

6 Craftsperson Activity

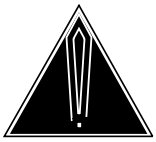
a. If the failure occurs immediately after power-up, power down the chassis, reseat the DSI PCA indicated by “x” in the message, and reapply power.



CAUTION
All circuit assemblies, disk drives, and other operational hardware in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) If the problem is not cleared after PCA replacement and restart, proceed to step b. Return the original PCA to its position before proceeding.

b. Replace the DSI PCA identified by “x” in the message if the problem is persistent.



CAUTION
All circuit assemblies, disk drives, and other operational hardware in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the problem is not cleared after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

c. Call for technical assistance.

End

Procedure 18-4
Data stream interface circuit error messages - procedures

1	(log message) `Bx DSI DMA FAIL`	where: x = DSI Port ID = 0 = message is from the DSI PCA in slot 13 = 2 = message is from the DSI PCA in slot 12 cause: prints out when a DMA transfer of a data block has not been initiated within 16 milliseconds of the acknowledged request. Message is from the DSI PCA.
2	Alarm Level: Processor switch: if the message is from the active DSI PCA during normal operation = Major Alarm, Level 1. No switch: if the message is from the standby DSI PCA during normal operation = Minor Alarm, Level 0. None: if at power-up.	Reason Code = 25 Corresponds to ERRMAP entry: DSI STNBY FAIL Minor Alarm, Level 0 (or) DSI PRIME FAIL Major Alarm, Level 1 System Default: Type: See Alarm Level Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: See Alarm Level Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	a. Processor switch if the message is from the active DSI PCA port. b. No processor switch if the message is from the standby DSI PCA port.
6	Craftsperson Activity	a. Replace the DSI PCA in slot 13 identified in the corresponding ERRMAP entry (active or standby).

CAUTION
All circuit assemblies, disk drives, and other operational hardware in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

(continued)

Procedure 18-4
Data stream interface circuit error messages - procedures (continued)

6
(cont'd)

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the problem is not cleared after PCA replacement and restart, proceed to step b. Return the original PCA to its position before proceeding.

b. Replace the DSI PCA in slot 12 identified in the corresponding ERRMAP entry (active or standby).

CAUTION
All circuit assemblies, disk drives, and other operational hardware in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the problem is not cleared after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

c. Replace the CPU PCA in slot 1 of the same chassis.

CAUTION
All circuit assemblies, disk drives, and other operational hardware in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

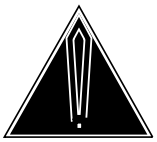
i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the problem is not cleared after PCA replacement and restart, proceed to step d. Return the original PCA to its position before proceeding.

d. Replace the Extended Memory PCA in slot 3 of the same chassis.

(continued)

Procedure 18-4
Data stream interface circuit error messages - procedures (continued)



CAUTION
All circuit assemblies, disk drives, and other operational hardware in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

6 (cont'd)

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the problem is not cleared after PCA replacement and restart, proceed to step e. Return the original PCA to its position before proceeding.

e. Call for technical assistance.

End

Procedure 18-5
Data stream interface circuit error messages - procedures

1 (log message)
`Bx DSI TIME OUT`

where: x = DSI Port ID
= 0 = message is from the DSI PCA in slot 13
= 2 = message is from the DSI PCA in slot 12

cause: prints out when a request for the transfer of a data block, read or write, is ignored. Message is from the DSI PCA. May be caused by the DMS-100 attempting to read data that the DPP does not presently have available, usually during a test sequence, (that is, attempt to read header data without a rewind command first).

2 Alarm Level:
Processor switch:
if the message is from the active DSI PCA during normal operation = Major Alarm, Level 1.
No switch: if the message is from the standby DSI PCA during normal operation = Minor Alarm, Level 0.
None: if at power-up.

Reason Code = 24

Corresponds to ERRMAP entry:
DSI STNBY FAIL Minor Alarm, Level 0, (or)
DSI PRIME FAIL Major Alarm, Level 1

System Default:
Type: See Alarm Level Level: N/A

(continued)

Procedure 18-5
Data stream interface circuit error messages - procedures (continued)

3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: See Alarm Level Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	a. Processor switch if the message is from the active DSI PCA port. b. No processor switch if the message is from the standby DSI PCA port.
6	Craftsperson Activity	a. Verify that the data sent to the DSI PCA is correct. i) Enter: (at the terminal) **>TEST (cr)** (invoke DPP TEST routines) Proper response = no error messages are printed out - For any other response (error messages), refer to the procedure sheet for that message and perform the activities listed. b. Replace the DSI PCA in slot 13 identified in the corresponding ERRMAP entry (active or standby).

CAUTION
All circuit assemblies, disk drives, and other operational hardware in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

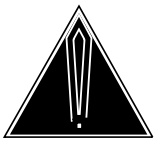
i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the problem is not cleared after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

c. Replace the DSI PCA in slot 12 identified in the corresponding ERRMAP entry (Primary or standby).

(continued)

Procedure 18-5
Data stream interface circuit error messages - procedures (continued)



CAUTION
All circuit assemblies, disk drives, and other operational hardware in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

6 (cont'd)

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the problem is not cleared after PCA replacement and restart, proceed to step d. Return the original PCA to its position before proceeding.

d. Replace the Extended Memory PCA in slot 3 of the same chassis.

CAUTION
All circuit assemblies, disk drives, and other operational hardware in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the problem is not cleared after PCA replacement and restart, proceed to step e. Return the original PCA to its position before proceeding.

e. Call for technical assistance.

End

Procedure 18-6
Data stream interface circuit error messages - procedures

1 (log message)
`Bx DSI WARM START`

where: x = DSI Port ID
= 0 = message is from the DSI PCA in slot 13
= 2 = message is from the DSI PCA in slot 12

cause: prints out at restart with RAM memory intact (program not returning watchdog command). (Message is from the DSI PCA.)

(continued)

Procedure 18-6
Data stream interface circuit error messages - procedures (continued)

2	Alarm Level: Processor switch: if the message is from the active DSI PCA during normal operation = Major Alarm, Level 1. No switch: if the message is from the standby DSI PCA during normal operation = Minor Alarm, Level 0. None: if at power-up.	Reason Code = 25 Corresponds to ERRMAP entry: DSI STNBY FAIL Minor Alarm, Level 0 (or) DSI PRIME FAIL Major Alarm, Level 1 System Default: Type: See Alarm Level Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: See Alarm Level Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	a. Normal after power-up. b. Processor switch if the message is from the active DSI PCA port. c. No processor switch if the message is from the standby DSI PCA port.
6	Craftsperson Activity	a. Replace the DSI PCA identified by “x” in the message if the problem is persistent.

CAUTION
All circuit assemblies, disk drives, and other operational hardware in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

(continued)

Procedure 18-6
Data stream interface circuit error messages - procedures (continued)

6 (cont'd)	i) Refer to 297-1001-536 for printed circuit assembly replacement procedures. ii) If the problem is not cleared after PCA replacement and restart, proceed to step b. Return the original PCA to its position before proceeding. b. Call for technical assistance.
	End

Procedure 18-7
Data stream interface circuit error messages - procedures

1	BLOCK REJECTED: xxxx BYTES	where: xxxx = the number of bytes in the rejected block. cause: a data block from the DMS-100 is rejected by the DPP. This occurs if the number of bytes in the block is greater than 2K+2 (2050 bytes; K = 1024). The block is not read into the main CPU at slot 1.
2	Alarm Level: No processor switch	Reason Code = 42 Corresponds to ERRMAP entry: TAPE BLOCK LOST System Default: Type: Major Level: 0
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:
5	System Recovery Action	None; incoming block is rejected.
6	Craftsperson Activity	Call for technical assistance; problem may be in the DMS-100.

Procedure 18-8
Data stream interface circuit error messages - procedures

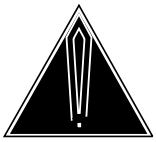
1	(log message) `CALL RECORD BLOCK FROM DSI INCORRECT`	cause: printed for one of the following reasons: a. a data block received from the DMS-100 is not a valid billing data block b. communications between the DPP main processor and a DSI PCA is faulty c. communication between DMS-100 and a DSI is faulty.
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	The first 2048 bytes of the data block are recorded in the exception file.
6	Craftsperson Activity	a. Switch AMA ports at the DMS-100. i) Monitor for a repeat of this message. - If the message repeats, switch processors at the DPP. ▪ Refer to Chapter 4 for switch and status panel operation. ▪ If the message does not repeat for this chassis, perform tests to verify the integrity of the DMS-100 Interface. Refer to 297-1001-536 for testing IOC card and port hosting DPP DSI procedures. ▪ If the message does not repeat for this chassis, proceed to step b.

(continued)

Procedure 18-8
Data stream interface circuit error messages - procedures (continued)

6 (cont'd)

b. Replace the DSI PCA in the other DPP chassis; the DSI PCA to replace is identified in the accompanying DSI message(s).



CAUTION
All circuit assemblies, disk drives, and other operational hardware in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the problem is not cleared after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

c. Call for technical assistance to determine if a problem exists in the DMS-100.

End

Procedure 18-9
Data stream interface circuit error messages - procedures

1 (log message)
`CRC/PAR/COM = ww,xx,yy,zz`

where: ww= number of CRC (Cyclic Redundancy Check) errors detected since last rewind.
xx = number of PAR (Byte Parity) errors detected since the last rewind.
yy = number of DSI communication failures to send messages to the main CPU since the last rewind.
zz = number of System communication failures to send messages to the DSI since the last key request.

cause: prints out automatically on a rewind command, or may be requested by keying the DSIMAINT SHOW ERROR command. (DSI ERROR STATISTICS)

(continued)

Procedure 18-9
Data stream interface circuit error messages - procedures (continued)

2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: N/A Audible: N/A Customer-Selected Status Panel: Audible:
5	System Recovery Action	a. Response to keyboard input. b. Response to command from the DMS-100.
6	Craftsperson Activity	None

End

Procedure 18-10
Data stream interface circuit error messages - procedures

1	DATA BUFFER EXCEEDED ALARM	cause: a block has been received which overwrites the oldest data block not yet processed (buffer full). The DPP was not able to write a block to disk because the buffers were full. This condition results in a loss of AMA data. This can occur if: a. the amount of traffic (AMA data) from the DMS-100 is too fast for the DPP to accept; exceeds 4 blocks per second (more blocks have been received by the CPU from the DSI than can be processed; some blocks have been lost) or b. the Disk Interface (SCSI Intf) PCA is faulty.

(continued)

Procedure 18-10
Data stream interface circuit error messages - procedures (continued)

2	Alarm Level: No processor switch	Reason Code = 22 Corresponds to ERRMAP entry: DSI DATA OVERFLO System Default: Type: Critical Level: 0
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Critical Audible: Critical Customer-Selected Status Panel: Audible:
5	System Recovery Action	The block is rejected (written to the exception file).
6	Craftsperson Activity	a. Switch processors in the DPP. i) Refer to Chapter 4 for switch and status panel operation. ii) If the message does not repeat, switch back to the original processor; if the message repeats, proceed to step c. iii) If the message repeats after the switch back to the original processor, proceed to step c. iv) If the message does not repeat after the switch back to the original processor, monitor the DPP for a reoccurrence.

(continued)

Procedure 18-10
Data stream interface circuit error messages - procedures (continued)

6
(cont'd)

- Clear the alarms.
  - Enter: (at the terminal)

    >RSERR ACT (cr)
    to clear any alarms on the active processor. (Alarms clear if no fault conditions exist.)

    >RSERR STDBY (cr)
    to clear all alarms on the stand-by processor. (Alarms clear if no fault conditions exist.)

    where: Event = optional entry = device/event No. of alarm (2 digits) as indicated by the output of the ERRMAP command. An event parameter entry of 00, or no entry, clears all active alarms.

v) If the message (error message) reappears, go to step b.

b. Replace the Disk Interface (SCSI Intf) PCA in slot 11 of the original chassis.

CAUTION
All circuit assemblies, disk drives, and other operational hardware in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If unsuccessful after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

c. Call for technical assistance; problem may be in the DMS-100.

End

Procedure 18-11
Data stream interface circuit error messages - procedures

1	(log message)
	`DMA TIME OUT ALARM`
	`PORT RAM BYTES STAT`
	`DMA aa bbbb cccc dd`
	`DSI ee ffff gggg z`
		where: (1st line)
		aa = port address used by DMA
		bbbb = address of last byte written.
		cccc = bytes transferred -1.
		dd = DMA status byte.
		
		(2nd line)
		ee = DSI port address
		ffff = address of first byte written
		gggg = block size
		zz = command byte. (11 = DMA time out)
		
		Note: Data shown in sample above is for example purposes only; refer to the chart starting on page 18-20 for details concerning the values for zz. In the event this printout indicates a faulty condition, record the values for use in conjunction with NT field service personnel in the troubleshooting efforts.
		
		cause: prints out as a DMA status report from the main command. (DMA status report)

2	Alarm Level: Processor switch	Reason Code = 35 Corresponds to ERRMAP entry: DMA COMM FAIL System Default: Type: Major Level: 2
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Major Audible: Major Customer-Selected Status Panel: Audible:

(continued)

Procedure 18-11
Data stream interface circuit error messages - procedures (continued)

5 System Recovery Action None

Command Input (Craftsperson):

>DMASTAT (IMMED or LAST) (cr)

System Response:
PORT RAM BYTES STAT
DMA aa bbbb cccc dd
DSI ee ffff gggg zz

zz = DESCRIPTION

00 =
01 = WRITE
02 = READ
03 = BACKSPACE
04 = ERASE
05 = FILEMARK
06 = REWIND TAPE
08 = OPERATION
09 = TAPE OPERATION, WRITE
0A = TAPE OPERATION, READ
0B = TAPE OPERATION, BACKSPACE
0C = TAPE OPERATION, ERASE
0D = TAPE OPERATION, FILEMARK
0E = TAPE OPERATION, REWIND
10 = DMA TIMEOUT
11 = DMA TIMEOUT, WRITE
12 = DMA TIMEOUT, READ
13 = DMA TIMEOUT, BACKSPACE
14 = DMA TIMEOUT, ERASE
15 = DMA TIMEOUT, FILEMARK
16 = DMA TIMEOUT, REWIND
18 = DMA TIMEOUT, TAPE OPERATION
19 = DMA TIMEOUT, TAPE OPERATION, WRITE
1A = DMA TIMEOUT, TAPE OPERATION, READ
1B = DMA TIMEOUT, TAPE OPERATION, BACKSPACE
1C = DMA TIMEOUT, TAPE OPERATION, ERASE
1D = DMA TIMEOUT, TAPE OPERATION, FILEMARK
1E = DMA TIMEOUT, TAPE OPERATION, REWIND
20 = DMA OR CMD ERROR
21 = DMA OR CMD ERROR, WRITE
22 = DMA OR CMD ERROR, READ
23 = DMA OR CMD ERROR, BACKSPACE
24 = DMA OR CMD ERROR, ERASE
25 = DMA OR CMD ERROR, FILEMARK

(continued)

Procedure 18-11
Data stream interface circuit error messages - procedures (continued)

5
(cont'd)

Command Input (Craftsperson):

>DMASTAT (IMMED or LAST) (cr)

System Response:
PORT RAM BYTES STAT
DMA aa bbbb cccc dd
DSI ee ffff gggg zz

zz = DESCRIPTION

26 = DMA OR CMD ERROR, REWIND
28 = DMA OR CMD ERROR, TAPE OPERATION
29 = DMA OR CMD ERROR, TAPE OPERATION, WRITE
2A = DMA OR CMD ERROR, TAPE OPERATION, READ
2B = DMA OR CMD ERROR, TAPE OPERATION, BACKSPACE
2C = DMA OR CMD ERROR, TAPE OPERATION, ERASE
2D = DMA OR CMD ERROR, TAPE OPERATION, FILEMARK
2E = DMA OR CMD ERROR, TAPE OPERATION, REWIND
30 = DMA TIMEOUT, DMA OR CMD ERROR
31 = DMA TIMEOUT, DMA OR CMD ERROR, WRITE
32 = DMA TIMEOUT, DMA OR CMD ERROR, READ
33 = DMA TIMEOUT, DMA OR CMD ERROR, BACKSPACE
34 = DMA TIMEOUT, DMA OR CMD ERROR, ERASE
35 = DMA TIMEOUT, DMA OR CMD ERROR, FILEMARK
36 = DMA TIMEOUT, DMA OR CMD ERROR, REWIND
38 = DMA TIMEOUT, DMA OR CMD ERROR, TAPE OPERATION
39 = DMA TIMEOUT, DMA OR CMD ERROR, TAPE OPERATION, WRITE
3A = DMA TIMEOUT, DMA OR CMD ERROR, TAPE OPERATION, READ
3B = DMA TIMEOUT, DMA OR CMD ERROR, TAPE OPERATION, BACKSPACE
3C = DMA TIMEOUT, DMA OR CMD ERROR, TAPE OPERATION, ERASE
3D = DMA TIMEOUT, DMA OR CMD ERROR, TAPE OPERATION, FILEMARK

(continued)

Procedure 18-11
Data stream interface circuit error messages - procedures (continued)

5
(cont'd)

Command Input (Craftsperson):

>DMASTAT (IMMED or LAST) (cr)

System Response:
PORT RAM BYTES STAT
DMA aa bbbb cccc dd
DSI ee ffff gggg zz

zz = DESCRIPTION

3E = DMA TIMEOUT, DMA OR CMD ERROR, TAPE OPERATION, REWIND
40 = DMA IN PROGRESS
41 = DMA IN PROGRESS, WRITE
42 = DMA IN PROGRESS, READ
43 = DMA IN PROGRESS, BACKSPACE
44 = DMA IN PROGRESS, ERASE
45 = DMA IN PROGRESS, FILEMARK
46 = DMA IN PROGRESS, REWIND
48 = DMA IN PROGRESS, TAPE OPERATION
49 = DMA IN PROGRESS, TAPE OPERATION, WRITE
4A = DMA IN PROGRESS, TAPE OPERATION, READ
4B = DMA IN PROGRESS, TAPE OPERATION, BACKSPACE
4C = DMA IN PROGRESS, TAPE OPERATION, ERASE
4D = DMA IN PROGRESS, TAPE OPERATION, FILEMARK
4E = DMA IN PROGRESS, TAPE OPERATION, REWIND
50 = DMA TIMEOUT, DMA IN PROGRESS
51 = DMA TIMEOUT, DMA IN PROGRESS, WRITE
52 = DMA TIMEOUT, DMA IN PROGRESS, READ
53 = DMA TIMEOUT, DMA IN PROGRESS, BACKSPACE
54 = DMA TIMEOUT, DMA IN PROGRESS, ERASE
55 = DMA TIMEOUT, DMA IN PROGRESS, FILEMARK
56 = DMA TIMEOUT, DMA IN PROGRESS, REWIND
58 = DMA TIMEOUT, DMA IN PROGRESS, TAPE OPERATION
59 = DMA TIMEOUT, DMA IN PROGRESS, TAPE OPERATION, WRITE
5A = DMA TIMEOUT, DMA IN PROGRESS, TAPE OPERATION, READ
5B = DMA TIMEOUT, DMA IN PROGRESS, TAPE OPERATION, BACKSPACE

(continued)

Procedure 18-11
Data stream interface circuit error messages - procedures (continued)

5
(cont'd)

Command Input (Craftsperson):

>DMASTAT (IMMED or LAST) (cr)

System Response:
PORT RAM BYTES STAT
DMA aa bbbb cccc dd
DSI ee ffff gggg zz

zz = DESCRIPTION

5C = DMA TIMEOUT, DMA IN PROGRESS, TAPE OPERATION, ERASE
5D = DMA TIMEOUT, DMA IN PROGRESS, TAPE OPERATION, FILEMARK
5E = DMA TIMEOUT, DMA IN PROGRESS, TAPE OPERATION, REWIND
60 = DMA OR CMD ERROR, DMA IN PROGRESS
61 = DMA OR CMD ERROR, DMA IN PROGRESS, WRITE
62 = DMA OR CMD ERROR, DMA IN PROGRESS, READ
63 = DMA OR CMD ERROR, DMA IN PROGRESS, BACKSPACE
64 = DMA OR CMD ERROR, DMA IN PROGRESS, ERASE
65 = DMA OR CMD ERROR, DMA IN PROGRESS, FILEMARK
66 = DMA OR CMD ERROR, DMA IN PROGRESS, REWIND
68 = DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION
69 = DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, WRITE
6A = DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, READ
6B = DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, BACKSPACE
6C = DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, ERASE
6D = DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, FILEMARK
6E = DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, REWIND
70 = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS

(continued)

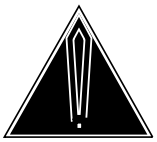
Procedure 18-11
Data stream interface circuit error messages - procedures (continued)

5 (cont'd)		Command Input (Craftsperson): **>DMASTAT (IMMED or LAST) (cr)** System Response: PORT RAM BYTES STAT DMA aa bbbb cccc dd DSI ee ffff gggg zz zz = DESCRIPTION 71 = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, WRITE 72 = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, READ 73 = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, BACKSPACE 74 = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, ERASE 75 = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, FILEMARK 76 = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, REWIND 78 = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION 79 = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, WRITE 7A = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, READ 7B = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, BACKSPACE 7C = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, ERASE 7D = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, FILEMARK 7D = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, FILEMARK 7E = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, REWIND
6	Craftsperson Activity	a. Replace the DSI PCA identified by "Bx" in line 2 of the message.

(continued)

Procedure 18-11
Data stream interface circuit error messages - procedures (continued)

6
(cont'd)



CAUTION
All circuit assemblies, disk drives, and other operational hardware in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the problem is not cleared after PCA replacement and restart, proceed to step b. Return the original PCA to its position before proceeding.

b. Replace the CPU PCA in slot 1 of the same chassis as in step a.

CAUTION
All circuit assemblies, disk drives, and other operational hardware in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the problem is not cleared after PCA replacement and restart, proceed to step c. Return the original PCA to its position before proceeding.

c. Call for technical assistance.

End

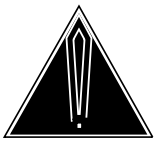
Procedure 18-12
Data stream interface circuit error messages - procedures

1	(log message)
	`DSI BUFFER OVERFLOW:`
	`xx BLOCKS`
		where: xx = the number of blocks not yet processed and overwritten by new blocks from the DSI PCA, when no empty buffers are available.
		
		cause: printed when:
		a. call records from the DMS-100 are not being read from the buffer
		b. block size is incorrect from the buffer
		c. input block rate from the DMS-100 is excessive.

2	Alarm Level: No processor switch	Reason Code = 22 Corresponds to ERRMAP entry: DSI DATA OVERFLO System Default: Type: Critical Level: 0
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Critical Audible: Critical Customer-Selected Status Panel: Audible:
5	System Recovery Action	No processor switch.
6	Craftsperson Activity[1]	a. If message appears after initial power-up, contact technical assistance personnel to examine site data entries. Settings may have been incorrectly established, (wrong block size). b. If this message appears after the system has been in operation for a period of time, perform the following procedure. i) Switch AMA ports at the DMS-100 or processors at the DPP. - Refer to Chapter 4 for switch and status panel operation. ii) If the message repeats, proceed to step c. c. Replace the DSI PCA at slot 13 in the off-line chassis.

(continued)

Procedure 18-12
Data stream interface circuit error messages - procedures (continued)



CAUTION
All circuit assemblies, disk drives, and other operational hardware in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

6
(cont'd)

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the problem is not cleared after PCA replacement and restart, proceed to step d. Return the original PCA to its position before proceeding.

d. Replace the DSI PCA at slot 12 in the off-line chassis. pertains to the handling of static sensitive materials.

CAUTION
All circuit assemblies, disk drives, and other operational hardware in the DPP system are static sensitive. Ensure that all precautionary measures are observed as pertains to the handling of static sensitive materials.

i) Refer to 297-1001-536 for printed circuit assembly replacement procedures.

ii) If the problem is not cleared after PCA replacement and restart, proceed to step e. Return the original PCA to its position before proceeding.

e. Call for technical assistance.

Notes:
Note 1: If the message is caused by the input block rate from the DMS-100:
a. refrain from any extraneous keyboard input
b. abort any polling session activity that may be in progress
c. abort any download activity that may be in progress.

End

Procedure 18-13
Data stream interface circuit error messages - procedures

1	(log message) `MTUxx: CMD-yy, STA-zz, BLK-aaaaa`	where: MTU = xx = DSI prot address = B0 = message is from DSI PCA in slot 13 = B2 = message is from DSI PCA in slot 12 CMD = yy = Command STA = zz = Status BLK = block = aaaaa = number of data blocks received since the last tape rewind. Note: Refer to the chart on page 18-29 for details concerning the values for CMD-xx and STA-yy. In the event this printout indicates a faulty condition, record the values for use in conjunction with NT field service personnel in the troubleshooting efforts. cause: prints out at DSI error. (DSI status report.)
2	Alarm Level: N/A	Reason Code = N/A Corresponds to ERRMAP entry: N/A System Default: Type: N/A Level: N/A
3	Customer-Selected Alarm Level	Type: Level:
4	Other Alarm Indications	Default: Status Panel: Audible: Customer-Selected Status Panel: Audible:
5	System Recovery Action	None

(continued)

Procedure 18-13
Data stream interface circuit error messages - procedures (continued)

5 (cont'd) Command Input (Craftsperson):

>DSIMAINT SHOW x STATUS (cr)

System Response:
`MTUxx: CMD-yy, STA-zz, BLK-aaaaa`

yy = DESCRIPTION	zz = DESCRIPTION
00 =	00 =
01 = WRITE	01 = BUSY
02 = READ	02 = READY
03 = ERASE	03 = READY, BUSY
04 = BACKSPACE	04 = WRITE ENABLED
05 = FILEMARK	05 = WRITE ENABLED, BUSY
06 = REWIND	06 = WRITE ENABLED, READY
08 = TAPE OPERATION,	07 = WRITE ENABLED, READY, BUSY
09 = TAPE OPERATION, WRITE	08 = AT LOAD POINT
0A = TAPE OPERATION, READ	09 = AT LOAD POINT, BUSY
0B = TAPE OPERATION, ERASE	0A = AT LOAD POINT, READY
0C = TAPE OPERATION, BACKSPACE	0B = AT LOAD POINT, READY, BUSY
0D = TAPE OPERATION, FILEMARK	0C = AT LOAD POINT, WRITE ENABLED,
0E = TAPE OPERATION, REWIND	0D = AT LOAD POINT, WRITE ENABLED, BUSY
10 = DMA TIMEOUT,	0E = AT LOAD POINT, WRITE ENABLED, READY
11 = DMA TIMEOUT, WRITE	0F = AT LOAD POINT, WRITE ENABLED, READY, BUSY
12 = DMA TIMEOUT, READ	10 = AT EOT
13 = DMA TIMEOUT, ERASE	11 = AT EOT, BUSY
14 = DMA TIMEOUT, BACKSPACE	12 = AT EOT, READY
15 = DMA TIMEOUT, FILEMARK	13 = AT EOT, READY, BUSY
16 = DMA TIMEOUT, REWIND	14 = AT EOT, WRITE ENABLED
18 = DMA TIMEOUT, TAPE OPERATION,	15 = AT EOT, WRITE ENABLED, BUSY
19 = DMA TIMEOUT, TAPE OPERATION, WRITE	16 = AT EOT, WRITE ENABLED, READY
1A = DMA TIMEOUT, TAPE OPERATION, READ	17 = AT EOT, WRITE ENABLED, READY BUSY
1B = DMA TIMEOUT, TAPE OPERATION, ERASE	18 = AT EOT, AT LOAD POINT
1C = DMA TIMEOUT, TAPE OPERATION, BACKSPACE	19 = AT EOT, AT LOAD POINT, BUSY
1D = DMA TIMEOUT, TAPE OPERATION, FILEMARK	1A = AT EOT, AT LOAD POINT, READY
1E = DMA TIMEOUT, TAPE OPERATION, REWIND	1B = AT EOT, AT LOAD POINT, READY
20 = DMA OR CMD ERROR,	1C = AT EOT, AT LOAD POINT, WRITE ENABLED
21 = DMA OR CMD ERROR, WRITE	1D = AT EOT, AT LOAD WRITE ENABLED, BUSY

(continued)

Procedure 18-13
Data stream interface circuit error messages - procedures (continued)

5 (cont'd) Command Input (Craftsperson):

>DSIMAINT SHOW x STATUS (cr)

System Response:
`MTUxx: CMD-yy, STA-zz, BLK-aaaaa`

yy = DESCRIPTION	zz = DESCRIPTION
22 = DMA OR CMD ERROR, READ	1E = AT EOT, AT LOAD POINT, WRITE ENABLED
23 = DMA OR CMD ERROR, ERASE	1F = AT EOT, AT LOAD POINT, WRITE ENABLED, BUSY
24 = DMA OR CMD ERROR, BACKSPACE	20 = REWIND
25 = DMA OR CMD ERROR, FILEMARK	21 = REWIND, BUSY
26 = DMA OR CMD ERROR, REWIND	22 = REWIND, READY
28 = DMA OR CMD ERROR, TAPE OPERATION	23 = REWIND, READY, BUSY
29 = DMA OR CMD ERROR, TAPE OPERATION, WRITE	24 = REWIND, WRITE ENABLED
2A = DMA OR CMD ERROR, TAPE OPERATION, READ	25 = REWIND, WRITE ENABLED, BUSY
2B = DMA OR CMD ERROR, TAPE OPERATION, ERASE	26 = REWIND, WRITE ENABLED, READY
2C = DMA OR CMD ERROR, TAPE OPERATION, BACKSPACE	27 = REWIND, WRITE ENABLED, READY BUSY
2D = DMA OR CMD ERROR, TAPE OPERATION, FILEMARK	28 = REWIND, AT LOAD POINT
2E = DMA OR CMD ERROR, TAPE OPERATION, REWIND	29 = REWIND, AT LOAD POINT, BUSY
30 = DMA TIMEOUT, DMA OR CMD ERROR	2A = REWIND, AT LOAD POINT, READY
31 = DMA TIMEOUT, DMA OR CMD ERROR, WRITE	2B = REWIND, AT LOAD POINT, READY
32 = DMA TIMEOUT, DMA OR CMD ERROR, READ	2C = REWIND, AT LOAD POINT, WRITE ENABLED
33 = DMA TIMEOUT, DMA OR CMD ERROR	2D = REWIND, AT LOAD POINT, WRITE ENABLED, BUSY
34 = DMA TIMEOUT, DMA OR CMD ERROR, BACKSPACE	2E = REWIND, AT LOAD POINT, WRITE ENABLED, READY
35 = DMA TIMEOUT, DMA OR CMD ERROR, FILEMARK	2F = REWIND, AT LOAD POINT, WRITE ENABLED, READY, BUSY
36 = DMA TIMEOUT, DMA OR CMD ERROR, REWIND	30 = REWIND, AT EOT
38 = DMA TIMEOUT, DMA OR CMD ERROR, TAPE OPERATION	31 = REWIND, AT EOT, BUSY ERASE
39 = DMA TIMEOUT, DMA OR CMD ERROR, TAPE OPERATION, WRITE	32 = REWIND, AT EOT, READY
3A = DMA TIMEOUT, DMA OR CMD ERROR, TAPE OPERATION, READ	33 = REWIND, AT EOT, READY, BUSY
3B = DMA TIMEOUT, DMA OR CMD ERROR, TAPE OPERATION, ERASE	34 = REWIND, AT EOT, WRITE ENABLED
	35 = REWIND, AT EOT, WRITE ENABLED
	36 = REWIND, AT EOT, WRITE ENABLED READY
	37 = REWIND, AT EOT, WRITE ENABLED READY, BUSY
	38 = REWIND, AT EOT, AT LOAD POINT
	39 = REWIND, AT EOT, AT LOAD POINT BUSY

(continued)

Procedure 18-13
Data stream interface circuit error messages - procedures (continued)

5 (cont'd) Command Input (Craftsperson):

>DSIMAINT SHOW x STATUS (cr)

System Response:
`MTUxx: CMD-yy, STA-zz, BLK-aaaaa`

yy = DESCRIPTION	zz = DESCRIPTION
3C = DMA TIMEOUT, DMA OR CMD ERROR, TAPE OPERATION, BACKSPACE	3A = REWIND, AT EOT, AT LOAD POINT READY
3D = DMA TIMEOUT, DMA OR CMD ERROR, TAPE OPERATION, FILEMARK	3B = REWIND, AT EOT, AT LOAD POINT READY, BUSY
3E = DMA TIMEOUT, DMA OR CMD ERROR, TAPE OPERATION, REWIND	3C = REWIND, AT EOT, AT LOAD POINT WRITE ENABLED
40 = DMA IN PROGRESS	3D = REWIND, AT EOT, AT LOAD POINT, WRITE ENABLED, BUSY
41 = DMA IN PROGRESS, WRITE	3E = REWIND, AT EOT, AT LOAD POINT WRITE ENABLED, READY
42 = DMA IN PROGRESS, READ	3F = REWIND, AT EOT, AT LOAD POINT, WRITE ENABLED, READY, BUSY
43 = DMA IN PROGRESS, ERASE	40 = ALARM
44 = DMA IN PROGRESS, BACKSPACE	41 = ALARM, BUSY
45 = DMA IN PROGRESS, FILEMARK	42 = ALARM, READY
46 = DMA IN PROGRESS, REWIND	43 = ALARM, READY, BUSY
48 = DMA IN PROGRESS, TAPE OPERATION	44 = ALARM, WRITE ENABLED
49 = DMA IN PROGRESS, TAPE OPERATION, WRITE	45 = ALARM, WRITE ENABLED, BUSY
4A = DMA IN PROGRESS, TAPE OPERATION, READ	46 = ALARM, WRITE ENABLED, READY
4B = DMA IN PROGRESS, TAPE OPERATION, ERASE	47 = ALARM, WRITE ENABLED, READY, BUSY
4C = DMA IN PROGRESS, TAPE OPERATION, BACKSPACE	48 = ALARM, AT LOAD POINT ERASE
4D = DMA IN PROGRESS, TAPE OPERATION, FILEMARK	49 = ALARM, AT LOAD POINT, BUSY
4E = DMA IN PROGRESS, TAPE OPERATION, REWIND	4A = ALARM, AT LOAD POINT, READY
50 = DMA TIMEOUT, DMA IN PROGRESS	4B = ALARM, AT LOAD POINT, READY, BUSY
51 = DMA TIMEOUT, DMA IN PROGRESS WRITE	4C = ALARM, AT LOAD POINT, WRITE ENABLED
52 = DMA TIMEOUT, DMA IN PROGRESS READ	4D = ALARM, AT LOAD POINT, WRITE ENABLED, BUSY
53 = DMA TIMEOUT, DMA IN PROGRESS	4E = ALARM, AT LOAD POINT, WRITE ENABLED, READY
54 = DMA TIMEOUT, DMA IN PROGRESS BACKSPACE	4F = ALARM, AT LOAD POINT, WRITE ENABLED, READY, BUSY
55 = DMA TIMEOUT, DMA IN PROGRESS, FILEMARK	50 = ALARM, AT EOT
56 = DMA TIMEOUT,DMA IN PROGRESS, REWIND	51 = ALARM, AT EOT, BUSY
	52 = ALARM, AT EOT, READY

(continued)

Procedure 18-13
Data stream interface circuit error messages - procedures (continued)

5 (cont'd) Command Input (Craftsperson):

>DSIMAINT SHOW x STATUS (cr)

System Response:
`MTUxx: CMD-yy, STA-zz, BLK-aaaaa`

yy = DESCRIPTION	zz = DESCRIPTION
58 = DMA TIMEOUT, DMA IN PROGRESS, TAPE OPERATION,	53 = ALARM, AT EOT, READY, BUSY
59 = DMA TIMEOUT, DMA IN PROGRESS TAPE OPERATION, WRITE	54 = ALARM, AT EOT, WRITE ENABLED
5A = DMA TIMEOUT, DMA IN PROGRESS, TAPE OPERATION, READ	55 = ALARM, AT EOT, WRITE ENABLED, BUSY
5B = DMA TIMEOUT, DMA IN PROGRESS, TAPE OPERATION, ERASE	56 = ALARM, AT EOT, WRITE ENABLED, READY,
5C = DMA TIMEOUT, DMA IN PROGRESS, TAPE OPERATION, BACKSPACE	57 = ALARM, AT EOT, WRITE ENABLED, READY, BUSY
5D = DMA TIMEOUT, DMA IN PROGRESS, TAPE OPERATION, FILEMARK	58 = ALARM, AT EOT, AT LOAD POINT,
5E = DMA TIMEOUT, DMA IN PROGRESS, TAPE OPERATION, REWIND	59 = ALARM, AT EOT, AT LOAD POINT, BUSY
60 = DMA OR CMD ERROR, DMA IN PROGRESS	5A = ALARM, AT EOT, AT LOAD POINT, READY
61 = DMA OR CMD ERROR, DMA IN PROGRESS, WRITE	5B = ALARM, AT EOT, AT LOAD POINT, READY, BUSY
62 = DMA OR CMD ERROR, DMA IN PROGRESS, READ	5C = ALARM, AT EOT, AT LOAD POINT, WRITE ENABLED,
63 = DMA OR CMD ERROR, DMA IN PROGRESS, ERASE	5D = ALARM, AT EOT, AT LOAD POINT, WRITE ENABLED, BUSY
64 = DMA OR CMD ERROR, DMA IN PROGRESS, BACKSPACE	5E = ALARM, AT EOT, AT LOAD POINT, WRITE ENABLED, READY
65 = DMA OR CMD ERROR, DMA IN PROGRESS, FILEMARK	5F = ALARM, AT EOT, AT LOAD POINT, WRITE ENABLED, READY, BUSY
66 = DMA OR CMD ERROR, DMA IN PROGRESS, REWIND	60 = ALARM, REWIND
68 = DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION	61 = ALARM, REWIND, BUSY
69 = DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, WRITE	62 = ALARM, REWIND, READY
6A = DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, READ	63 = ALARM, REWIND, READY, BUSY
6B = DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, ERASE	64 = ALARM, REWIND, WRITE ENABLED
	65 = ALARM, REWIND, WRITE ENABLED, BUSY
	66 = ALARM, REWIND, WRITE ENABLED, READY
	67 = ALARM, REWIND, WRITE ENABLED, READY, BUSY
	68 = ALARM, REWIND, AT LOAD POINT
	69 = ALARM, REWIND, AT LOAD POINT, BUSY

(continued)

Procedure 18-13
Data stream interface circuit error messages - procedures (continued)

5 (cont'd) Command Input (Craftsperson):

>DSIMAINT SHOW x STATUS (cr)

System Response:
`MTUxx: CMD-yy, STA-zz, BLK-aaaaa`

yy = DESCRIPTION

6C = DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, BACKSPACE
6D = DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, FILEMARK
6E = DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, REWIND
70 = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS
71 = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS
72 = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, READ
73 = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, ERASE
74 = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, BACKSPACE
75 = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, FILEMARK
76 = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, REWIND
78 = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION
79 = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, WRITE
7A = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, READ

zz = DESCRIPTION

6A = ALARM, REWIND, AT LOAD POINT, READY
6B = ALARM, REWIND, AT LOAD POINT, READY, BUSY
6C = ALARM, REWIND, AT LOAD POINT, WRITE ENABLED
6D = ALARM, REWIND, AT LOAD POINT, WRITE ENABLED, BUSY
6E = ALARM, REWIND, AT LOAD POINT, WRITE ENABLED, READY
6F = ALARM, REWIND, AT LOAD POINT, WRITE ENABLED, READY, BUSY

(continued)

Procedure 18-13
Data stream interface circuit error messages - procedures (continued)

5 (cont'd) Command Input (Craftsperson):

>DSIMAINT SHOW x STATUS (cr)

System Response:
`MTUxx: CMD-yy, STA-zz, BLK-aaaaa`

yy = DESCRIPTION zz = DESCRIPTION

7B = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, ERASE
7C = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, BACKSPACE
7D = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, FILEMARK
7E = DMA TIMEOUT, DMA OR CMD ERROR, DMA IN PROGRESS, TAPE OPERATION, REWIND

(continued)

Procedure 18-13
Data stream interface circuit error messages - procedures (continued)

5 (cont'd) Command Input (Craftsperson):

>DSIMAINT SHOW x STATUS (cr)

System Response:
`MTUxx: CMD-yy, STA-zz, BLK-aaaaa`

yy = DESCRIPTION zz = DESCRIPTION

70 = ALARM, REWIND, AT EOT
71 = ALARM, REWIND, AT EOT, BUSY
72 = ALARM, REWIND, AT EOT, READY
73 = ALARM, REWIND, AT EOT, READY, BUSY
74 = ALARM, REWIND, AT EOT, WRITE ENABLED
75 = ALARM, REWIND, AT EOT, WRITE ENABLED, BUSY
76 = ALARM, REWIND, EOT, WRITE ENABLED, READY
77 = ALARM, REWIND, AT EOT, WRITE ENABLED, READY, BUSY
78 = ALARM, REWIND, AT EOT, AT LOAD POINT,
79 = ALARM, REWIND, AT EOT, AT LOAD POINT, BUSY
7A = ALARM, REWIND, AT EOT, AT LOAD POINT, READY
7B = ALARM, REWIND, AT EOT, AT LOAD POINT, READY, BUSY
7C = ALARM, REWIND, AT EOT, AT LOAD POINT, WRITE ENABLED
7D = ALARM, REWIND, AT EOT, AT LOAD POINT, WRITE ENABLED, BUSY
7E = ALARM, REWIND, AT EOT, AT LOAD POINT, WRITE ENABLED, READY
7F = ALARM, REWIND, AT EOT, AT LOAD POINT, WRITE ENABLED, READY, BUSY
80 = ON LINE
81 = ON LINE, BUSY
82 = ON LINE READY
83 = ON LINE, READY, BUSY
84 = ON LINE, WRITE ENABLED
85 = ON LINE, WRITE ENABLED, BUSY
86 = ON LINE, WRITE ENABLED, READY
87 = ON LINE, WRITE ENABLED, READY, BUSY
88 = ON LINE, AT LOAD POINT

(continued)

Procedure 18-13
Data stream interface circuit error messages - procedures (continued)

5 (cont'd) Command Input (Craftsperson):

>DSIMAINT SHOW x STATUS (cr)

System Response:
`MTUxx: CMD-yy, STA-zz, BLK-aaaaa`

yy = DESCRIPTION zz = DESCRIPTION

89 = ON LINE, AT LOAD POINT, BUSY
8A = ON LINE, AT LOAD POINT, READY
8B = ON LINE, AT LOAD POINT, READY, BUSY
8C = ON LINE, AT LOAD POINT, WRITE ENABLED
8D = ON LINE, AT LOAD POINT, WRITE ENABLED, BUSY
8E = ON LINE, AT LOAD POINT, WRITE ENABLED, READY
8F = ON LINE, AT LOAD POINT, WRITE ENABLED, READY, BUSY
90 = ON LINE, AT EOT
91 = ON LINE, AT EOT, BUSY
92 = ON LINE, AT EOT, READY
93 = ON LINE, AT EOT, READY, BUSY
94 = ON LINE, AT EOT, WRITE ENABLED
95 = ON LINE, AT EOT, WRITE ENABLED BUSY
96 = ON LINE, AT EOT, WRITE ENABLED, READY
97 = ON LINE, AT EOT, WRITE ENABLED, READY, BUSY
98 = ON LINE, AT EOT, AT LOAD POINT
99 = ON LINE, AT EOT, AT LOAD POINT, BUSY
9A = ON LINE, AT EOT, AT LOAD POINT, READY
9B = ON LINE, AT EOT, AT LOAD POINT, READY, BUSY
9C = ON LINE, AT EOT, AT LOAD POINT, WRITE ENABLED
9D = ON LINE, AT EOT, AT LOAD POINT, WRITE ENABLED, BUSY
9E = ON LINE, AT EOT, AT LOAD POINT, WRITE ENABLED, READY
9F = ON LINE, AT EOT, AT LOAD POINT, WRITE ENABLED, READY, BUSY
A0 = ON LINE, REWIND
A1 = ON LINE, REWIND, BUSY
A2 = ON LINE, REWIND, READY
A3 = ON LINE, REWIND, READY, BUSY
A4 = ON LINE, REWIND, WRITE ENABLED
A5 = ON LINE, REWIND, WRITE ENABLED, BUSY
A6 = ON LINE, REWIND, WRITE ENABLED, READY
A7 = ON LINE, REWIND, WRITE ENABLED, READY, BUSY
A8 = ON LINE, REWIND, AT LOAD POINT
A9 = ON LINE, REWIND, AT LOAD POINT, BUSY
AA = ON LINE, REWIND, AT LOAD POINT, READY
AB = ON LINE, REWIND, AT LOAD POINT, READY, BUSY
AC =ON LINE, REWIND, AT LOAD POINT, WRITE ENABLED
AD =ON LINE, REWIND, AT LOAD POINT, WRITE ENABLED, BUSY

(continued)

Procedure 18-13
Data stream interface circuit error messages - procedures (continued)

5 (cont'd) Command Input (Craftsperson):

>DSIMAINT SHOW x STATUS (cr)

System Response:
`MTUxx: CMD-yy, STA-zz, BLK-aaaaa`

yy = DESCRIPTION zz = DESCRIPTION

AE = ON LINE, REWIND, AT LOAD POINT, WRITE ENABLED, READY
AF = ON LINE, REWIND, AT LOAD POINT, WRITE ENABLED, READY, BUSY
B0 = ON LINE, REWIND, AT EOT
B1 = ON LINE, REWIND, AT EOT, BUSY
B2 = ON LINE, REWIND, AT EOT, READY
B3 = ON LINE, REWIND, AT EOT, READY, BUSY
B4 = ON LINE, REWIND, AT EOT, WRITE ENABLED
B5 = ON LINE, REWIND, AT EOT, WRITE ENABLED, BUSY
B6 = ON LINE, REWIND, AT EOT, WRITE ENABLED, READY
B7 = ON LINE, REWIND, AT EOT, WRITE ENABLED, READY, BUSY
B8 = ON LINE, REWIND, AT EOT, AT LOAD POINT
B9 = ON LINE, REWIND, AT EOT, AT LOAD POINT, BUSY
BA = ON LINE, REWIND, AT EOT, AT LOAD POINT, READY
BB = ON LINE, REWIND, AT EOT, AT LOAD POINT, READY, BUSY
BC =ON LINE, REWIND, AT EOT, AT LOAD POINT, WRITE ENABLED
BD =ON LINE, REWIND, AT EOT, AT LOAD POINT, WRITE ENABLED, BUSY
BE = ON LINE, REWIND, AT EOT, AT LOAD POINT, WRITE ENABLED, READY
BF = ON LINE, REWIND, AT EOT, AT LOAD POINT, WRITE ENABLED, READY, BUSY
C0 = ON LINE, ALARM
C1 = ON LINE, ALARM, BUSY
C2 = ON LINE, ALARM, READY
C3 = ON LINE, ALARM, READY, BUSY
C4 = ON LINE, ALARM, WRITE ENABLED
C5 = ON LINE, ALARM, WRITE ENABLED, BUSY
C6 = ON LINE, ALARM, WRITE ENABLED, READY,
C7 = ON LINE, ALARM, WRITE ENABLED, READY, BUSY
C8 = ON LINE, ALARM, AT LOAD POINT
C9 = ON LINE, ALARM, AT LOAD POINT, BUSY
CA =ON LINE, ALARM, AT LOAD POINT, READY
CB =ON LINE, ALARM, AT LOAD POINT, READY, BUSY
CC =ON LINE, ALARM, AT LOAD POINT, WRITE ENABLED
CD =ON LINE, ALARM, AT LOAD POINT, WRITE ENABLED, BUSY

(continued)

Procedure 18-13
Data stream interface circuit error messages - procedures (continued)

5 (cont'd) Command Input (Craftsperson):

>DSIMAINT SHOW x STATUS (cr)

System Response:
`MTUxx: CMD-yy, STA-zz, BLK-aaaaa`

yy = DESCRIPTION zz = DESCRIPTION

CE = ON LINE, ALARM, AT LOAD POINT, WRITE ENABLED, READY
CF = ON LINE, ALARM, AT LOAD POINT, WRITE ENABLED, READY, BUSY
D0 = ON LINE, ALARM, AT EOT
D1 = ON LINE, ALARM, AT EOT, BUSY
D2 = ON LINE, ALARM, AT EOT, READY
D3 = ON LINE, ALARM, AT EOT, READY, BUSY
D4 = ON LINE, ALARM, AT EOT, WRITE ENABLED
D5 = ON LINE, ALARM, AT EOT, WRITE ENABLED, BUSY
D6 = ON LINE, ALARM, AT EOT, WRITE ENABLED, READY
D7 = ON LINE, ALARM, AT EOT, WRITE ENABLED, READY, BUSY
D8 = ON LINE, ALARM, AT EOT, AT LOAD POINT
D9 = ON LINE, ALARM, AT EOT, AT LOAD POINT, BUSY
DA =ON LINE, ALARM, AT EOT, AT LOAD POINT, READY
DB =ON LINE, ALARM, AT EOT, AT LOAD POINT, READY, BUSY
DC = ON LINE, ALARM, AT EOT, AT LOAD POINT, WRITE ENABLED
DD =ON LINE, ALARM, AT EOT, AT LOAD POINT, WRITE ENABLED, BUSY
DE =ON LINE, ALARM, AT EOT, AT LOAD POINT, WRITE ENABLED, READY
DF = ON LINE, ALARM, AT EOT, AT LOAD POINT, WRITE ENABLED, READY, BUSY
E0 = ON LINE, ALARM, REWIND
E1 = ON LINE, ALARM, REWIND, BUSY
E2 = ON LINE, ALARM, REWIND, READY
E3 = ON LINE, ALARM, REWIND, READY, BUSY
E4 = ON LINE, ALARM, REWIND, WRITE ENABLED
E5 = ON LINE, ALARM, REWIND, WRITE ENABLED, BUSY
E6 = ON LINE, ALARM, REWIND, WRITE ENABLED, READY
E7 = ON LINE, ALARM, REWIND, WRITE ENABLED, READY, BUSY
E8 = ON LINE, ALARM, REWIND, AT LOAD POINT
E9 = ON LINE, ALARM, REWIND, AT LOAD POINT, BUSY
EA = ON LINE, ALARM, REWIND, AT LOAD POINT, READY
EB = ON LINE, ALARM, REWIND, AT LOAD POINT, READY, BUSY
EC =ON LINE, ALARM, REWIND, AT LOAD POINT, WRITE ENABLED
ED =ON LINE, ALARM, REWIND, AT LOAD POINT, WRITE ENABLED, BUSY

(continued)

Procedure 18-13
Data stream interface circuit error messages - procedures (continued)

5 (cont'd) Command Input (Craftsperson):

>DSIMAINT SHOW x STATUS (cr)

System Response:
`MTUxx: CMD-yy, STA-zz, BLK-aaaaa`

yy = DESCRIPTION zz = DESCRIPTION

EE = ON LINE, ALARM, REWIND, AT LOAD POINT, WRITE ENABLED, READY
EF = ON LINE, ALARM, REWIND, AT LOAD POINT, WRITE ENABLED, READY, BUSY
F0 = ON LINE, ALARM, REWIND, AT EOT
F1 = ON LINE, ALARM, REWIND, AT EOT, BUSY
F2 = ON LINE, ALARM, REWIND, AT EOT, READY
F3 = ON LINE, ALARM, REWIND, AT EOT, READY, BUSY
F4 = ON LINE, ALARM, REWIND, AT EOT, WRITE ENABLED
F5 = ON LINE, ALARM, REWIND, AT EOT, WRITE ENABLED, BUSY
F6 = ON LINE, ALARM, REWIND, AT EOT, WRITE ENABLED, READY
F7 = ON LINE, ALARM, REWIND, AT EOT, WRITE ENABLED, READY, BUSY
F8 = ON LINE, ALARM, REWIND, AT EOT, AT LOAD POINT
F9 = ON LINE, ALARM, REWIND, AT EOT, AT LOAD POINT, BUSY
FA = ON LINE, ALARM, REWIND, AT EOT, AT LOAD POINT, READY
FB = ON LINE, ALARM, REWIND, AT EOT, AT LOAD POINT, READY, BUSY
FC = ON LINE, ALARM, REWIND, AT EOT, AT LOAD POINT, WRITE ENABLED

6 Craftsperson Activity

a. Response to input status request.

b. Response to a rewind command, or test commands, from the DMS-100; this is normal.

c. If the response indicates bad status, call for technical assistance.

End

Alphabetical listing of DPP messages

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List of terms

AMA

Automatic Message Accounting

An automatic recording system which documents all of the necessary billing data of subscriber-dialed long distance.

AMATPS

AMA Teleprocessing System

An AMA data management system in the DMS-100 designed for use with BELLCORE AMA data. AMATPS consists of the DMS-100 Device Independent Recording Package (DIRP), the DPP, and a remote data collection center. The DMS-100 DIRP manages the flow of AMA data from the DMS-100 to the DPP. The DPP functions as the AMA data formatter (BCS25-28) and collector, and as the AMA transmitter. The remote polling center acts as the AMA data polling system.

BELLCORE

Bell Communications Research

A group responsible for coordinating Bell Operating Company projects and setting guidelines for DMS-100s.

BPS

Bits per second

CO

Central Office

A switching office arranged for terminating subscriber lines and provided with equipment and trunks for establishing connections to and from other switching offices.

CC

Central Control Complex

Comprises all Central Control functions of the DMS-100. It consists of the Central Message Controller, CPU, and Data Store.

CPU

Central Processor Unit

CTC

Counter Timer Circuit

A circuit on the DPP CPU PCA that handles vectored interrupts from various devices within the DPP that request access to the data bus for data transfer.

DIRP

Device Independent Recording Package

Software which automatically directs data from the various administrative and maintenance facilities to the appropriate recording devices.

DMA

Direct Memory Access

The use of special hardware for transferring data to and from memory to reduce the number of interrupts required for program data transfers.

DPP

Distributed Processing Peripheral

A peripheral device of the DMS-100 that functions as an AMA data collector and an AMA transmitter in the AMATPS of the DMS-100. The DPP collects AMA data from the DIRP, formats the data (BCS25-28), stores the data on its own internal disk, and transmits the data to a data collection center when polled by the collection center. The DPP performs the AMAT functions independently of the DMS-100, thereby off-loading the AMA T functions from the DMS-100 CC.

DRAM

Dynamic Random Access Memory

A Random Access Memory system that employs transistor capacitor storage cells. The logic state is stored in the capacitor and buffered by the transistor. The capacitive charge is only held for a short duration and must be refreshed at a periodic rate to maintain its programmed state.

DSI

Data Stream Interface

A circuit of the DPP that accepts AMA data from the DMS-100 MTDs. The DSI emulates a Magnetic Tape Drive on DMS-100 MTD Ports, duplicating all of the communications signals normally exchanged between the DMS-100 and an MTD.

DTR

Data Terminal Ready

A signal sent from a terminal device indicating to the host device its readiness to communicate.

EAI

Emergency Administrative Interface

A terminal port at the DPP to support the Emergency Administrative Terminal.

EAT

Emergency Administrative Terminal

A maintenance terminal connected directly to the DPP that is used for performing various maintenance functions on the DPP. The EAT connects to the DPP emergency administrative interface.

EIA

Electronic Industries Association

EMI

Electromagnetic Interference

Emissions given off by all electronic devices which may interfere with TV, radio, police radio, and other forms of electronic communication if emitting devices are not properly shielded.

EOT

End of Tape

A signal sent from an MTD to its host indicating that no more data should be recorded on the currently loaded tape.

EPROM

Erasable Programmable Read Only Memory

A read-only memory in which stored can be erased by ultraviolet light and reprogrammed.

ESD

Electro-Static Discharge

The passing of electrical energy from a statically charged body to a discharged body or ground. Statically charged bodies may store several thousand volts, which has potential to severely damage or even destroy static sensitive electronic components such as Metal Oxide Semiconductor devices.

HOC

Host Office Collector

An AMA data collection center that polls Central Offices in its region on a prescheduled basis and compiles the collected data onto a magnetic tape. The tape is used by the Revenue Accounting Office for computing customer billing.

IC

Integrated Circuit

A series of interconnected active and passive electronic devices integrated into a single semi-conductor substrate (typically silicone) or deposited on a single substrate, and capable of performing one or more complete electronic functions.

IOC

Input/Output Controller

An equipment shelf which provides an interface between up to 36 Input/Output devices and the Central Message Controller. The IOC contains a Peripheral processor which independently performs local tasks, thus relieving the load on the CPU.

MAP

Maintenance and Administrative Position

A group of components which provide a Man-Machine Interface between OTC personnel and the DMS-100 Family. A MAP consists of Visual Display Unit, voice communications module, testing facilities, and MAP furniture.

MODEM

MOdulator/DEModulator

A device which modulates and demodulates signals for transmission and reception, respectively, over communication facilities. A modem is used to permit digital signals to be sent out over analog lines.

PIO

Port Input/Output

A device on the DPP CPU PCA that controls a communications bus between the DPP processors.

RAM

Random Access Memory

A static, read/write memory system in which information is stored in discrete, individually addressable locations such that access time is independent of location.

SIO

Serial Input/Output

Circuitry in the DPP that passes data from the DPP to external devices. The DPP employs four such circuits in its serial I/O PCA that provides communications paths between the DPP and DMS-100/DPP maintenance interface, the DPP EAT, and the remote polling center link (BCS25-28).

DMS-100 Family

Data Processing Peripheral (DPP)

Alarm Clearing and Performance Monitoring Guide

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