

CONVERTER AND LINK FRAME

“TOUCH-TONE®” TYPE D

EQUIPMENT DESIGN REQUIREMENTS

STEP-BY-STEP SYSTEMS

1. GENERAL

SCOPE

1.01 This specification, together with the supplementary information listed herein, covers the equipment design requirements for the framework, equipment, and circuits to be used in the engineering, manufacture, and installation of the converter trunk and link frames in No. 1, 350A, 355A, or 35E97 step-by-step offices for converting TOUCH-TONE calling signals to dial pulses.

1.02 Whenever this section is reissued, the reason for reissue will be listed in this paragraph.

CAPACITY

1.03 TOUCH-TONE type D is designed to provide a maximum of 140 trunks and 12 converters, arranged on standard bulb-angle single-bay frames available in both 9-foot 0-inch and 11-foot 6-inch high frame sizes as follows:

J38936A—Converter and Link (CV&L) Frame—9 Feet 0 Inch

J38936B—Supplementary Converter and Link (SCV&L) Frame—9 Feet 0 Inch

J38936C—Converter and Link (CV&L) Frame—11 Feet 6 Inches

J38936D—Supplementary Converter and Link (SCV&L) Frame—11 Feet 6 Inches

DESCRIPTION

1.04 TOUCH-TONE type D is intended for use in No. 1, 350A, 355A, and 35E97 step-by-step offices requiring TOUCH-TONE calling capabilities. The system uses conventional electromechanical circuitry employing small crossbar switches and wire spring relays as the principle equipment elements. The equipment is arranged to provide

TABLE A

FRAME	CONV/FR	TRKS/FR	FR/SYS
CV&L 9'-0" or 11'-6"	4	20	1
SCV&L 9'-0" or 11'-6"	4	60	2

a compact, low maintenance system which is readily increased in size on a modular basis.

1.05 See Fig. 1 for functional block diagram.

1.06 When a subscriber in a TOUCH-TONE line finder group originates a call, a line relay operates and an idle line finder starts to hunt for the calling line. A sleeve ground, generated by the line finder, operates a converter trunk. The converter trunk bids for a connection to a converter via a crossbar link, splitting the paths between the line finder and the first selector. After the converter has been seized, it performs pre-dial tone tests which may include loop test, party test, 2-MR (message register) trunk signaling, and dial tone first trunk signaling. When the converter completes the necessary tests, the converter returns dial tone to the calling subscriber.

1.07 On TOUCH-TONE originated calls the keyed digits are detected by a TOUCH-TONE receiver, translated into 2-out-of-5 information and registered. After the first digit is registered, outpulsing to the switchtrain begins. When the last digit determined by translation or timing has been outpulsed, the converter signals the converter trunk to restore the connection between the line finder and the first selector, and then releases.

1.08 On rotary dial originated calls the first digit is pulse repeated to the first selector. The

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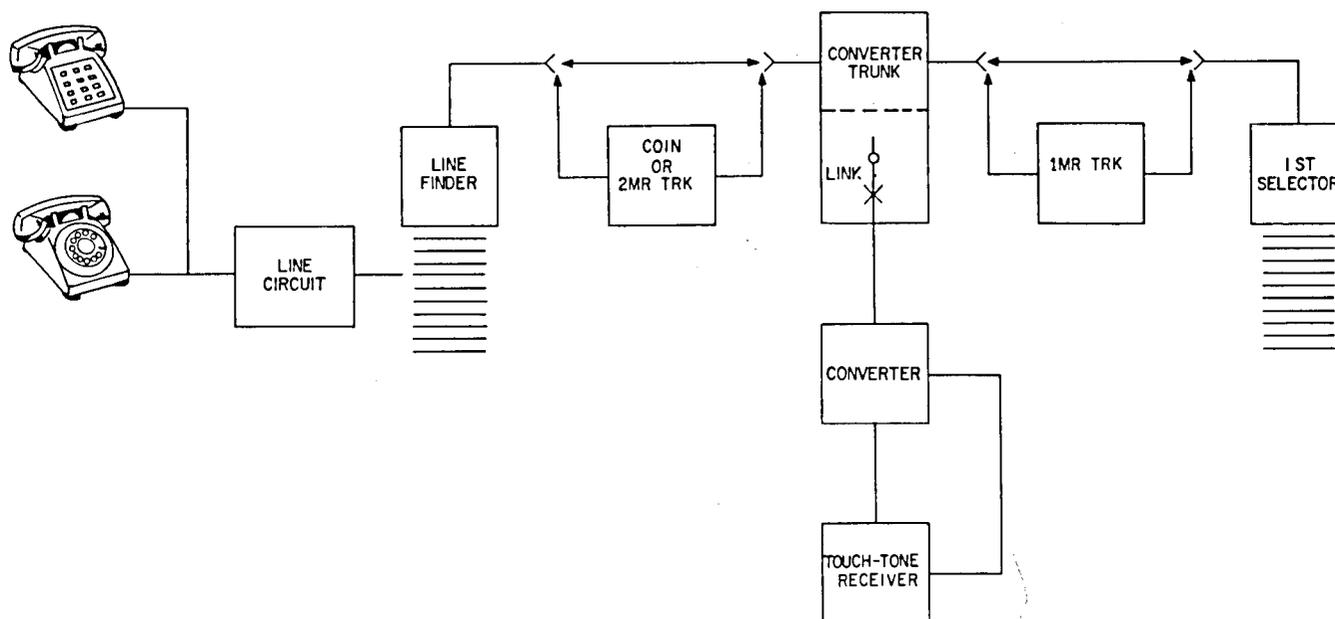


Fig. 1—Block Diagram—TOUCH-TONE Type D

converter signals the converter trunk to restore the connection between the line finder and the first selector and then releases during the interdigital interval.

1.09 Dial tone must be removed from all first selectors associated with TOUCH-TONE line finders since the converter provides dial tone. However, dial tone should not be removed from the balance of the first selectors. (See 5.03.)

1.10 A maximum of 7 fundamental line finder groups fully equipped with 20 line finders each would fully utilize the maximum capacity of the system. If traffic characteristics dictate less than 20 line finders per fundamental line finder group are used, then 8 line finder groups may be served. That is, the seven fundamental line finder groups plus one fill-in line finder group. When cabling line finder groups to the CV&L frame all fundamental groups shall enter the frame from the left side, and all fill-in groups shall enter the frame from the right side as viewed from the front of the frame.

EQUIPMENT ARRANGEMENT

1.11 The CV&L frame (J38936A), as illustrated in Fig. 2 is a standard bulb-angle single-bay frame 9 feet 0 inch high, 2 feet 8-1/8 inches wide and available with 10- or 12-inch guardrails. Frames with 12-inch guardrails have their own section of 5-inch cable each and should be used in No. 355A offices.

1.12 The frame is arranged and equipped with four converter units; one converter trunk and link unit (20 trunks); one TOUCH-TONE calling receiver unit equipped with four TOUCH-TONE receivers; one converter trunk, test, alarm, and release unit; a test panel; and one miscellaneous unit.

1.13 A -48 volt filter panel is also furnished with the frame. This filter is shipped separate and upon installation shall be mounted to the top of the frame or to the cable rack located directly above the frame. (See 1.38.)

1.14 Frame terminal strips, a modular frame fuse panel, and a factory formed frame local cable are also furnished with the frame. The frame terminal strips are used to connect a maximum of

140 line finders, plus interframe wiring to associated SCV&L frames. The frame local cable contains all wiring required to interconnect all frame components.

1.15 When equipment per J38936E (112 CAMA access or 15-digit storage for international direct distance dialing) is required for use with converters furnished on this frame, the equipment shall be miscellaneous relay-rack mounted and furnished on the basis of one unit per two converters.

1.16 The SCV&L frame (J38936B), as illustrated in Fig. 3, is a standard bulb-angle single-bay frame 9 feet 0 inch high, 2 feet 8-1/8 inches wide and available with 10- or 12-inch guardrails. Frames with 12-inch guardrails have their own section of 5-inch cable rack and should be used in No. 355A offices.

1.17 This frame shall be furnished when more than the initial four converters and 20 trunks, provided with CV&L frame (J38936A), are required. A maximum of two SCV&L frames per system may be furnished.

1.18 The frame is arranged but not equipped for four additional converter units; three additional converter trunk and link units (20 trunks each); and one additional TOUCH-TONE calling receiver unit arranged but not equipped for four TOUCH-TONE receivers.

1.19 A -48 volt filter panel may or may not be furnished with the frame. (See 1.38.) When required, the filter will be shipped separate and upon installation, shall be mounted to the top of the frame or to the cable rack located directly above the frame.

1.20 Frame terminal strips, a modular frame fuse panel, and a factory formed frame local cable are always provided with the frame. The frame terminal strips are used to connect interframe wiring to the associated CV&L frame plus one other SCV&L frame when furnished. The frame local cable is arranged for the ultimate capacity of the frame and interconnects all frame components when furnished.

1.21 When more than one converter trunk and link unit is furnished on the frame a vertical multiple local cable is provided on the basis of one per each additional unit. This cable is used to interconnect crossbar switch horizontals.

1.22 When equipment per J38936E (112 CAMA access or 15-digit storage for international direct distance dialing) is required for use with converters furnished on this frame, the equipment shall be miscellaneous relay-rack mounted and furnished on the basis of one unit per two converters.

1.23 The CV&L frame (J38936C), as illustrated in Fig. 4 is a standard bulb-angle single-bay frame, 11 feet 6 inches high, 2 feet 8-1/8 inches wide, with 10-inch guardrails.

1.24 The frame is arranged and equipped with four converter units; one converter trunk and link unit (20 trunks); one TOUCH-TONE calling receiver unit equipped with four TOUCH-TONE receivers; one converter trunk, test, alarm and release unit; a test panel; one miscellaneous unit; and one -48 volt filter panel. (See 1.38.) The frame is also arranged but not equipped for two 112 CAMA access or 15-digit storage for international direct distance dialing units. This equipment per J38936E, when required, shall be furnished on the basis of one unit per two converters.

1.25 Frame terminal strips, a modular frame fuse panel, and a factory formed frame local cable are also furnished with the frame. The frame terminal strips are used to connect a maximum of 140 line finders, plus interframe wiring to associated SCV&L frames. The frame local cable contains all wiring required to interconnect all frame components initially furnished. A supplementary frame local cable is provided on an optional basis and contains all wiring required to interconnect the direct distance dialing units to other frame components.

1.26 The SCV&L frame (J38936D), as illustrated in Fig. 5, is a standard bulb-angle single-bay frame 11 feet 6 inches high, 2 feet 8-1/8 inches wide with 10-inch guardrails.

1.27 This frame shall be furnished when more than the initial 4 converters and 20 trunks provided with CV&L frame (J38936C), are required. A maximum of two SCV&L frames per system may be furnished.

1.28 The frame is arranged but not equipped for four additional converter units; three additional converter trunk and link units (20 trunks each); one additional TOUCH-TONE calling receiver unit arranged but not equipped for four TOUCH-TONE receivers; a -48 volt filter panel (see 1.38); and

two additional 112 CAMA access or 15-digit storage for international direct distance dialing units.

1.29 Frame terminal strips, a modular frame fuse panel, and a factory formed frame local cable are always provided with the frame. The frame terminal strips are used to connect interframe wiring to the associated CV&L frame, plus one other SCV&L frame when furnished. The frame local cable is arranged for the ultimate capacity of the frame excluding the wiring for the two direct distance dialing units, and interconnects all frame components when furnished. A supplementary

frame local cable is provided on an optional basis and contains all wiring required to interconnect the direct distance dialing units to other frame components.

1.30 When more than one converter trunk and link unit is furnished on the frame a vertical multiple local cable is provided on the basis of one per each additional unit. This cable is used to interconnect crossbar switch horizontals.

1.31 The test panel, as illustrated in Fig. 6, is the central location for all operative equipment needed to initiate and control tests within the

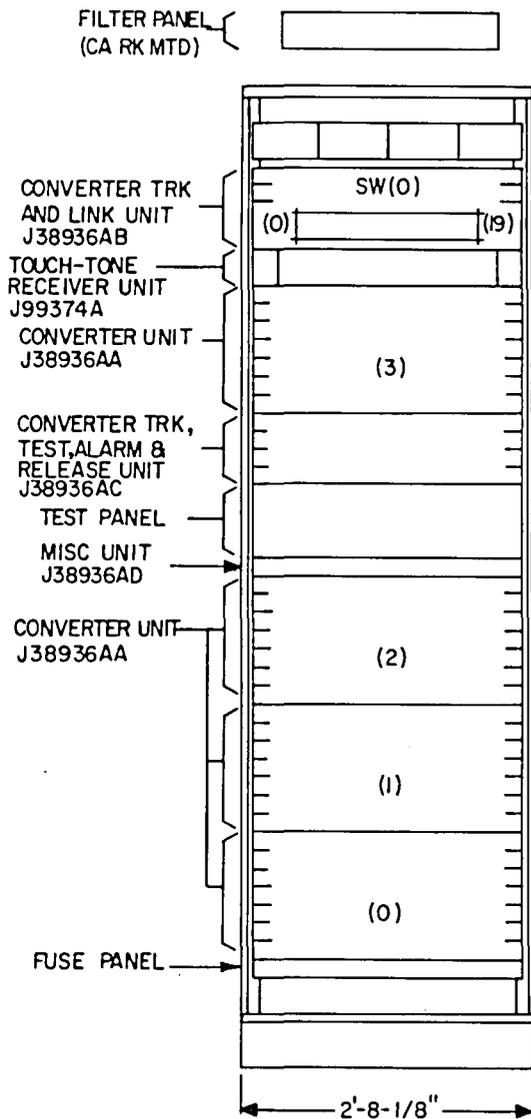


Fig. 2—Converter and Link Frame—J38936A

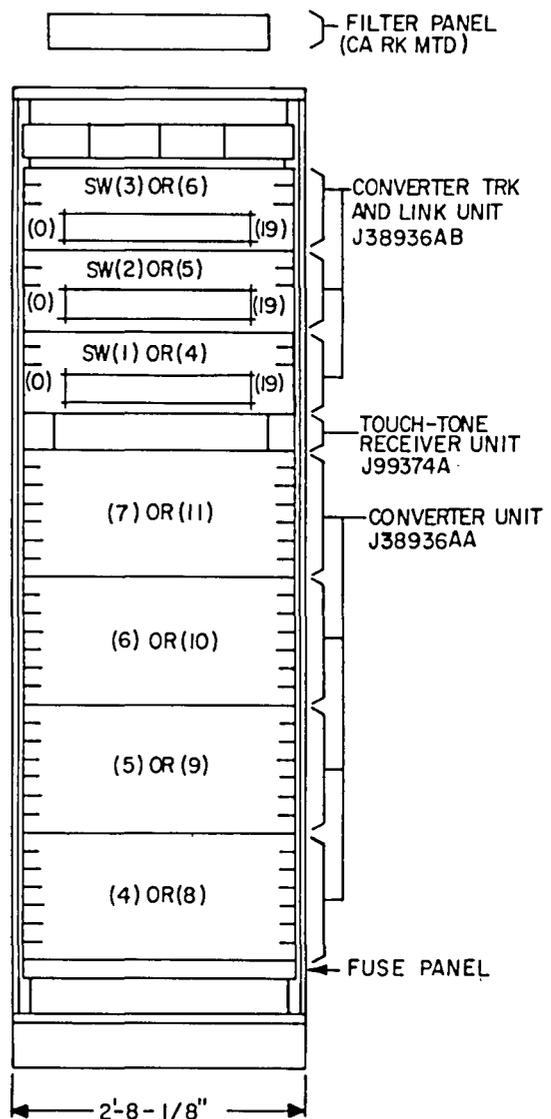


Fig. 3—Supplementary Converter and Link Frame—J38936B

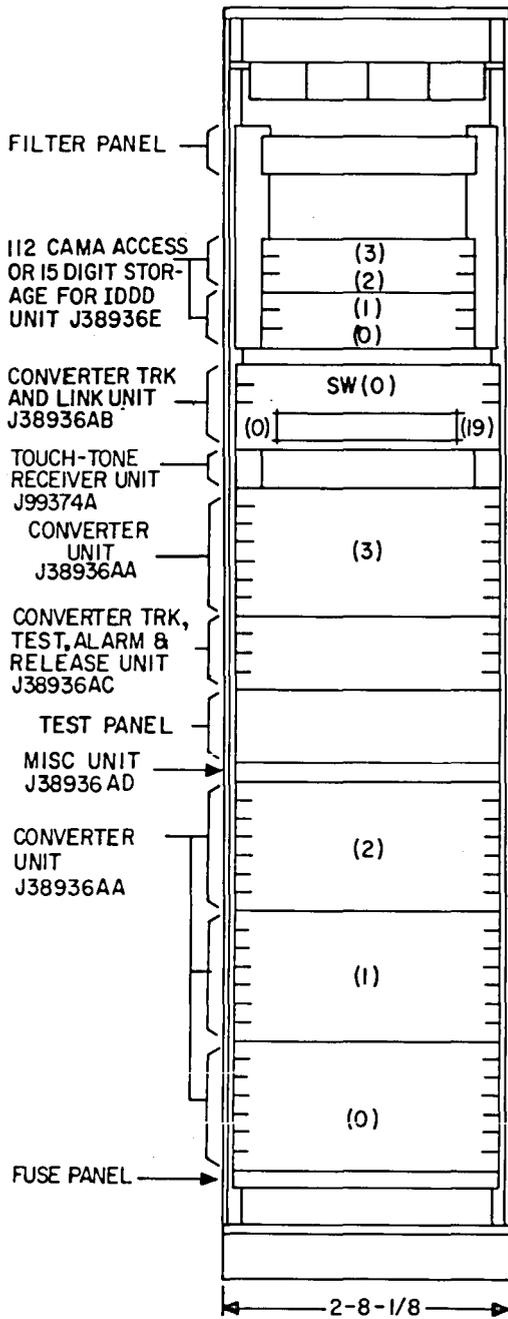


Fig. 4—Converter and Link Frame—J38936C

system. The panel occupies the space of four 2-by 30-1/2 inch mounting plates and is connected via frame local cabling furnished with the frame. The panel is always fully equipped and provides the following: rotary type switches for selecting converter trunks and/or converters for test; miniature toggle switches for test sequences and also for rendering converter busy; light emitting diodes

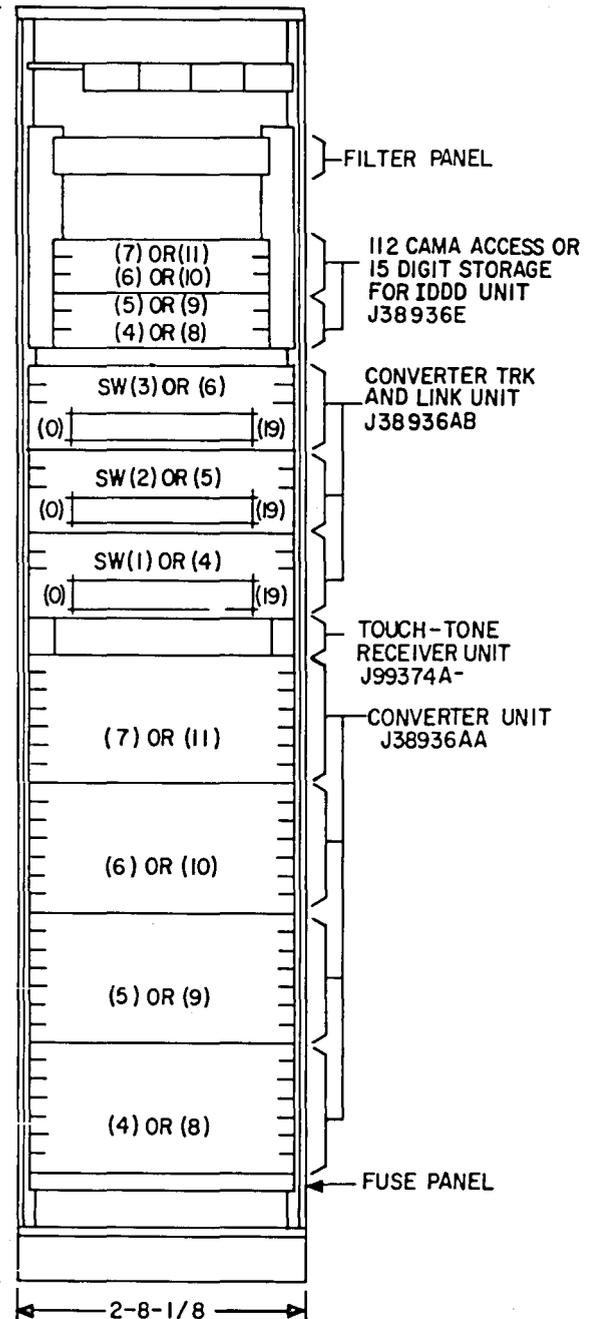


Fig. 5—Supplementary Converter and Link Frame—J38936D

for use as indicating devices; a 7-segment numeric display for indicating converter outpulsing; a TOUCH-TONE dial equipped with a high speed card dialer for simulating test calls and testing TOUCH-TONE receivers; a rotary dial for simulating test calls; and a loudspeaker for monitoring test calls.

- 1.32** The converter unit is a surface-wired unit arranged on six 2- by 30-1/2 inch mounting plates when party test is not required or seven 2- by 30-1/3 inch mounting plates when party test is required. Party test is required in converters serving 101 ESS central office trunks or 2-party flat rate (FR) lines associated with systems that make an interdigital party test such as ANI-type B or C. The unit is arranged with a cross connect field for code translation and D-type terminal strips to which all leads requiring external connections are made.
- 1.33** The converter trunk and link unit is comprised of two 2- by 30-1/2 inch mounting plates plus one 240-point, 6-wire single-stage small crossbar switch. This surface-wired unit occupies the space of four and one half 2- by 30-1/2 inch mounting plates and is arranged with D-type terminal strips to which all leads requiring external connections are made.
- 1.34** The converter trunk, test, alarm, and release unit is a surface-wired unit arranged on four 2- by 30-1/2 inch mounting plates. The unit is arranged with D-type terminal strips to which all leads requiring external connections are made.
- 1.35** The miscellaneous unit is a single-plate 2- by 30-1/2 inch surface-wired unit arranged with D-type terminal strips to which all leads requiring external connections are made.
- 1.36** The 112 CAMA access or 15-digit storage for international direct distance dialing unit is a 2-circuit surface-wired unit arranged on three 2- by 23-inch mounting plates. When required for use with converters furnished on frames 11 feet 6 inches high the unit mounts via adapters furnished with the frame, however, when required for use with converters furnished on 9-foot 0-inch high frames the unit must be miscellaneous relay-rack mounted. The unit is arranged with D-type terminal strips to which all leads requiring external connections are made.
- 1.37** The TOUCH-TONE calling receiver unit is a single-plate 4- by 23-inch surface-wired unit. This unit provides a maximum of four 7-channel TOUCH-TONE calling receivers arranged on standard A-coded circuit packs. The unit is arranged with spare 905-type connectors to which all leads requiring external connections are made.
- 1.38** A -48 volt filter panel per ED-92173-71, Group 10 is always furnished with the CV&L frame. This filter is capable of satisfying a full system, that is, one CV&L frame plus two SCV&L frames provided the two SCV&L frames are adjacent to one another and installed to the immediate left or right of the CV&L frame. When SCV&L frames are isolated from one another and/or isolated from the CV&L frame, each SCV&L frame must be furnished with this filter panel.

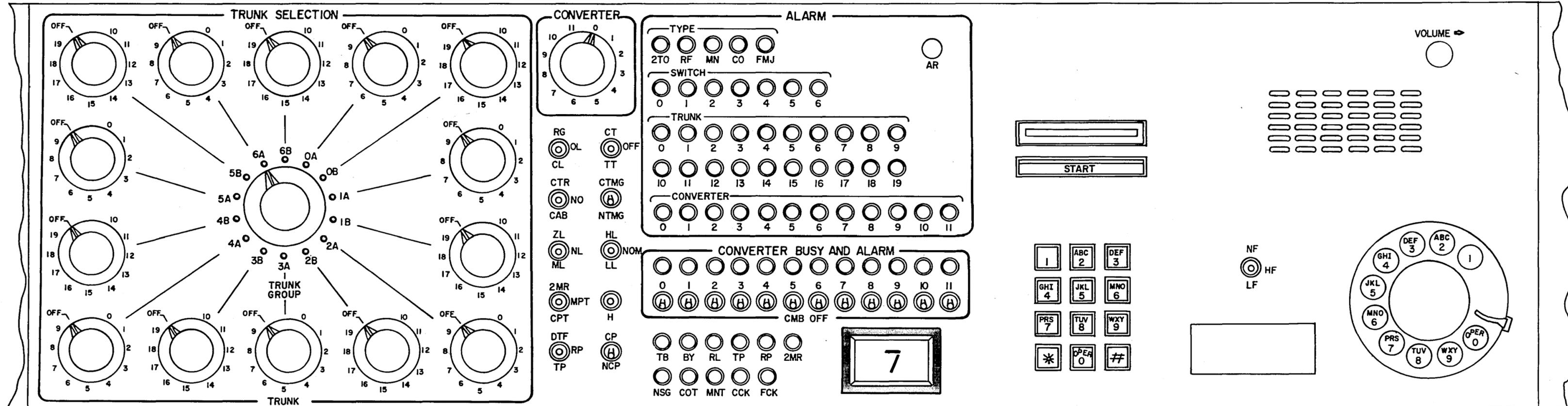


Fig. 6—Test Panel TOUCH-TONE Type D

SUBDIVISIONS OF EQUIPMENT AND DETAILED INDEX

WE J drawings should be ordered by referring to the prefix and base number and requesting the current dash (—) number.

EQUIPMENT CODE	RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	CKT PER UNIT	MTG PLATES PER UNIT
J38936A	AT&TCo Std	Converter and Link Frame, 9 Feet 0 Inch High	J38936A-()	SD-35032-01 SD-35033-01 SD-35034-01 SD-35035-01 SD-94842-01	Frame	
J38936B	AT&TCo Std	Supplementary Converter and Link Frame, 9 Feet 0 Inch High	J38936B-()	SD-35032-01 SD-35033-01 SD-35035-01 SD-94842-01	Frame	
J38936C	AT&TCo Std	Converter and Link Frame, 11 Feet 6 Inches High	J38936C-()	SD-35032-01 SD-35033-01 SD-35034-01 SD-35035-01 SD-94842-01	Frame	
J38936D	AT&TCo Std	Supplementary Converter and Link Frame, 11 Feet 6 Inches High	J38936D-()	SD-35032-01 SD-35033-01 SD-35035-01 SD-94842-01	Frame	
J38936E	AT&TCo Std	112 CAMA Access or 15-Digit Storage for International Direct Distance Dialing Unit	J38936E-()	SD-35032-01	2	3
J38936AA	AT&TCo Std	Converter Unit	J38936AA-()	SD-35032-01 SD-35033-01	1	7
J38936AB	AT&TCo Std	Converter Trunk and Link Unit	J38936AB-()	SD-35033-01	20	4-1/2
J38936AC	AT&TCo Std	Converter Trunk, Test Alarm, and Release Unit	J38936AC-()	SD-35033-01 SD-35034-01	1	4
J38936AD	AT&TCo Std	Miscellaneous Unit	J38936AD-()	SD-35035-01	1	1

Circuit Schematic Index

CIRCUIT DRAWING	J38936 EQPT CODE
SD-35032-01	A, B, C, D, E, AA
SD-35033-01	A, B, C, D, AA, AB, AC
SD-35034-01	A, C, AC
SD-35035-01	A, B, C, D, AD
SD-94842-01	A, B, C, D

2. SUPPLEMENTARY INFORMATION

814-000-000—Numerical Index—Step-By-Step Systems
800-600-000—Checking List—General Equipment Requirements

J38805—814-005-155—No. 355A Dial Office—General
J39206—814-005-150—List of Requirement Specifications for No. 1 and 350A Offices—General

J39210—814-008-150—No. 35E97 Dial Office
J99374—801-621-154—7 Channel TOUCH-TONE Calling Receiver

Floor Plan Data—Section 5.2, Sheet 83
Current Drain Data—

SD-31359-02—No. 1 Office
SD-31364-02—No. 350A Office
SD-31780-02—No. 355A Office
SD-32325-02—No. 35E97 Office

3. DRAWINGS

For additional drawings forming a part of this specification, see listings under Subdivisions of Equipment and Detailed Index.

Keysheets

SD-31359-01—No. 1 Office
SD-31364-01—No. 350A Office
SD-31780-01—No. 355A Office

SD-32325-01—No. 35E97 Office
SD-90250-01—Master Keysheet—All Systems

Equipment

J99374A-()—7-Channel TOUCH-TONE Calling Receiver Unit
ED-35008-()—Dial Pulse and MF Pulse Generator Circuit Pack
ED-35015-()—Party Test Detector Circuit Pack
ED-35040-()—Loop Detector Circuit Pack
ED-35042-()—1 out of 10 to 7 Segment Decoder Circuit Pack
ED-92173-()—Filters—10, 15, 25 and 50 Amperes—Relay Rack, Cable Rack, or Fuse Bay Mounted
ED-95131-()—Modular Fuse Blocks and Accessories for Fuse Panel Arrangements Adapted for 2-Inch Mounting Plates and 70-Type Fuses

Wiring and Cabling

ED-31296-()—Method of Running Power Feeders
ED-32264-()—Wire Gauges and Type of Insulation for Step-by-Step Frames
ED-35044-()—Switchboard Cabling Plan and Details—Converter and Link Frames, J38936A and J38936C—Supplementary Converter and Link Frames, J38936B and J38936D

4. EQUIPMENT

J38936A—AT&T Co Std—Converter and Link Frame—9 Feet 0 Inch High

Equipment—J38936A-()

List 1—Framework, assembly, wiring, and common equipment for one converter and link frame, 9 feet 0 inch high, with 10-inch guardrails. (See Notes A, B, C, and D.)

	WIRE	EQUIP	NOTES		WIRE	EQUIP	NOTES
TOUCH-TONE Clg Sig to D1 Pulse Conv Ckt, SD-35032-01:				<i>List 1</i> —Framework, assembly, wiring, and common equipment for one supplementary converter and link frame 9 feet 0 inch high, with 10-inch guardrails. (See Notes A, B, C, D and E.)			
Fig. 1	4	4					
Conv Trk & Lk Ckt, SD-35033-01:							
Fig. 1, 3	1	1		TOUCH-TONE Clg Sig to D1 Pulse Conv Ckt, SD-35032-01:			
Fig. 2	4	4		Fig. 1	4	0	
Trk & Conv Tst Ckt, SD-35034-01:				Conv Trk & Lk Ckt, SD-35033-01:			
Fig. 1, 2	1	1		Fig. 1	3	0	
Misc Ckt, SD-35035-01:				Fig. 2	4	0	
Fig. 1, 2, 3, 4, 6, 8	1	1		Misc Ckt, SD-35035-01:			
Fig. 7	43	43		Fig. 5, 6	1	1	
Fig. 9	4	4		Fig. 7	35	As Reqd	
Fig. 10	4	4		Fig. 9	4	As Reqd	
Fig. 11	6	6		Fig. 10	4	As Reqd	
TOUCH-TONE Clg Rcvr Ckt, SD-94842-01:				Fig. 11	6	As Reqd	
Fig. 1	4	4		TOUCH-TONE Clg Rcvr Ckt, SD-94842-01:			
Fig. 2	2	2		Fig. 1	4	0	
				Fig. 2	2	0	

Notes

- A. See Table B for equipping this frame.
- B. A -48 volt filter panel per ED-92173-71, Group 10, shall always be furnished with this frame. This filter is shipped loose and upon installation, shall be mounted to the top of the frame or to the cable rack located directly above the frame per ED-92173-71, Group 31 or 32.
- C. When this frame is furnished in a No. 355A office or any office requiring 12-inch guardrails and a 5-inch cable rack, omit ED-91710-76, Group 2 framework assembly furnished in list 1, and provide ED-91837-71, Group 21 framework assembly.
- D. When 112 CAMA access or 15-digit storage for international direct distance dialing units (J38936E) are required for use with converters furnished on this frame, the units shall be miscellaneous relay-rack mounted.

J38936B—AT&T Co Std—Supplementary Converter and Link Frame—9 Feet 0 Inch High

Equipment—J38936B()

Notes

- A. See Table C for equipping this frame.
- B. A -48 volt filter panel per ED-92173-71, Group 10, may or may not be required with this frame. (See 1.38.) When required the filter shall be mounted, upon installation, to the top of the frame or to the cable rack located directly above the frame per ED-92173-71, Group 31 or 32.
- C. When this frame is furnished in a No. 355A office or any office requiring 12-inch guardrails and 5-inch cable rack, omit ED-91710-76, Group 2, framework assembly furnished in list 1, and provide ED-91837-71, Group 21, framework assembly.
- D. When 112 CAMA access or 15-digit storage for international direct distance dialing units (J38936E) are required for use with converters furnished on this frame, the units shall be miscellaneous relay-rack mounted.

E. When this frame is arranged with more than one converter trunk and link unit (J38936AB), provide vertical multiple local cable as required per SD-35033-01, CAD6.

J38936C—AT&TCo Std—Converter and Link Frame—11 Feet 6 Inches High

Equipment—J38936C-()

List 1—Framework, assembly, wiring, and common equipment for one converter and link frame, 11 feet 6 inches high, with 10-inch guardrails. (See Notes A, B, and C.)

	WIRE	EQUIP	NOTES
TOUCH-TONE Clg Sig to D1 Pulse Conv Ckt, SD-35032-01:			
Fig. 1	4	4	
Conv Trk & Lk Ckt, SD-35033-01:			
Fig. 1, 3	1	1	
Fig. 2	4	4	
Trk & Conv Tst Ckt, SD-35034-01:			
Fig. 1, 2	1	1	
Misc Ckt, SD-35035-01:			
Fig. 1, 2, 3, 4, 6, 8	1	1	
Fig. 7	43	43	
Fig. 9	4	4	
Fig. 10	4	6	
Fig. 11	6	4	
TOUCH-TONE Clg Rcvr Ckt, SD-94842-01:			
Fig. 1	4	4	
Fig. 2	2	2	

Notes

- A. See Table D for equipping this frame.
- B. A -48 volt filter panel per ED-92173-71, Group 10 shall always be furnished with this frame. This filter is shipped loose and upon installation shall be mounted to the frame adapters located within the bay.
- C. When 112 CAMA access or 15-digit storage for international direct distance dialing per

J38936E is required, provide one supplementary frame local cable per SD-35032-01, CAD2.

J38936D—AT&TCo Std—Supplementary Converter and Link Frame—11 Feet 6 Inches High

Equipment—J38936D-()

List 1—Framework, assembly, wiring, and common equipment for one supplementary converter and link frame, 11 feet 6 inches high, with 10-inch guardrails. (See Notes A, B, C, and D.)

	WIRE	EQUIP	NOTES
TOUCH-TONE Clg Sig to D1 Pulse Conv Ckt, SD-35032-01:			
Fig. 1	4	0	
Conv Trk & Lk Ckt, SD-35033-01:			
Fig. 1	3	0	
Fig. 2	4	0	
Misc Ckt, SD-35035-01:			
Fig. 5, 6	1	1	
Fig. 7	35	As Reqd	
Fig. 9	4	As Reqd	
Fig. 10	4	As Reqd	
Fig. 11	6	As Reqd	
TOUCH-TONE Clg Rcvr Ckt, SD-94842-01:			
Fig. 1	4	0	
Fig. 2	2	0	

Notes

- A. See Table E for equipping this frame.
- B. A -48 volt filter panel per ED-92173-71, Group 10 may or may not be required with this frame. (See 1.38.) When required, the filter is shipped loose and upon installation shall be mounted to the frame adapters located within the bay.
- C. When this frame is arranged with more than one converter trunk and link unit per J38936AB, provide vertical multiple local cable as required per SD-35033-01, CAD6.

- D. When 112 CAMA access or 15-digit storage for international direct distance dialing per J38936E is required, provide one supplementary frame local cable per SD-35032-01, CAD2.

J38936E—AT&TCo Std—112 CAMA Access or 15-Digit Storage for International Direct Distance Dialing Unit

Equipment—J38936E-()

List 1—Framework, assembly, wiring, and equipment for one 2-circuit 112 CAMA access unit or one 2-circuit 15-digit storage for international direct distance dialing unit per SD-35032-01, two Fig. 7. (See Notes A, B, and C.)

List 2—Wiring and equipment per SD-35032-01, two Fig. 8 and options G and R, required in addition to list 1 when 112 CAMA access is required.

List 3—Wiring and equipment per SD-35032-01, two Fig. 9 and options J and Q, required in addition to list 1 when 15-digit storage for international direct distance dialing is required.

Notes

- A. This unit, when required, shall be provided on the basis of one unit per two converter units (J38936AA).
- B. When ordering this unit, list 1 and 2 or list 1 and 3 must be provided, but never together.
- C. This unit shall be miscellaneous relay-rack mounted when required for use with converters furnished on 9-foot 0-inch high frameworks.

J38936AA—AT&TCo Std—Converter Unit

Equipment—J38936AA-()

List 1—Framework, assembly, wiring, and equipment for one converter unit per SD-35032-01, Fig. 1 and 2, and options A, E, G, S, T, Y, and Z; SD-35033-01, Fig. 2. (See Notes A, B, C, and J.)

List 2—Wiring and equipment per SD-35032-01, Fig. 3, required in addition to list 1 when the converter serves 2-party message rate (MR) trunks; 2-party FR lines with an ANI-type B or C system only making an interdigital party test; 101 ESS CO trunks;

or coin trunks arranged for dial tone first. (See Notes D, E, F, and H.)

List 3—Wiring and equipment per SD-35032-01, Fig. 4, required in addition to list 2 when the converter serves 2-party MR trunks. (See Note E.)

List 4—Wiring and equipment per SD-35032-01, Fig. 5, required in addition to list 2 when the converter serves 2-party FR lines with an ANI-type B or C system only, making an interdigital party test and/or 101 ESS CO trunks. (See Note G.)

List 5—Wiring and equipment per SD-35032-01, Fig. 6, required in addition to list 2 when the converter serves coin trunks arranged for dial tone first. (See Note D.)

Notes

- A. Provide options J and Q per SD-35032-01, when CAMA access code is 1+ and 15-digit storage for international direct distance dialing is required. (Omit options G and S.)
- B. Provide option R per SD-35032-01, when CAMA access code is digits 112. (Omit options S and T.)
- C. When 15-digit storage for international direct distance dialing is required, CAMA access code 1+ must be provided.
- D. Provide option V per SD-35032-01, when dial tone first coin trunks are not served.
- E. Provide option W per SD-35032-01, when 2-party MR trunks are not served.
- F. Omit option Y per SD-35032-01, furnished in list 1.
- G. Omit option Z per SD-35032-01, furnished in list 1.
- H. In ANI type systems, party test is not required if no tip party flat rate TOUCH-TONE phone will be served.
- J. When this unit is furnished on (J38936A or B) and CAMA access code 112 or 15-digit storage for international direct distance dialing is required, provide one miscellaneous relay rack mounted unit per J38936E (one per two converters).

J38936AB—AT&TCo Std—Converter Trunk and Link Unit

Equipment—J38936AB-()

List 1—Framework, assembly, wiring, and equipment for one converter trunk and link unit arranged and equipped for 20 trunks per SD-35033-01, Fig. 1.

J38936AC—AT&TCo Std—Converter Trunk, Test, Alarm, and Release Unit

Equipment—J38936AC-()

List 1—Framework, assembly, wiring, and equipment for one converter trunk, test, alarm, and release unit per SD-35033-01, Fig. 3, and SD-35034-01, Fig. 1, and option Y.

List 2—Wiring and equipment per SD-35034-01, Fig. 3, required in addition to list 1 when dial tone first operation is required.

J38936AD—AT&TCo Std—Miscellaneous Unit

Equipment—J38936AD-()

List 1—Assembly, wiring, and equipment for one miscellaneous unit per SD-35035-01, Fig. 1, 4, and 5. (See Notes A, B, C, and D.)

List 2—Wiring and equipment per SD-35035-01, Fig. 12 and option V, required in addition to list 1 for use in a No. 35E97 office.

Notes

- A. Provide option Z per SD-35035-01, when used in No. 1 office with audible and visual alarm circuit.
- B. Provide option Y per SD-35035-01, when used in No. 1 office with pilot lamp circuit.
- C. Provide option X per SD-35035-01, when used in No. 350A office.
- D. Provide option W per SD-35035-01, when used in No. 355A office.

Miscellaneous Equipment***J99374A—7 Channel TOUCH-TONE Calling Receiver Unit*****5. GENERAL NOTES**

- 5.01** Codes J38936F through J38936Y are unassigned.
- 5.02** When the system is equipped to function with dial tone first coin trunks, the maximum resistance of the IC lead from the converter to the coin trunk shall not exceed 45 ohms.
- 5.03** A TOUCH-TONE dial tone supply must be furnished in offices utilizing TOUCH-TONE type D. The maximum length of the TT3 shielded wire shall be 600 feet per lead.
- 5.04** Party test is not required if no tip party flat rate TOUCH-TONE phone will be served.

TABLE B

CONVERTER AND LINK FRAME 9' - 0" J38936A

COMPONENT EQUIPMENT UNITS SHALL BE EQUIPPED AS FOLLOWS:				
UNIT		QUANTITY TO BE PROVIDED		DESCRIPTION
J CODE	LIST NO.	ALWAYS	FOR OPTION INDICATED	
J38936AA	1	4		Converter unit
	2		4	Converter serves 2-PTY MR trunks; 2-PTY FR lines with an ANI-type B or C system only making an interdigital party test; 101 ESS CO trunks; coin trunks arranged for dial tone first (See Note 5.04.)
	3		4	Converter serves 2-PTY MR trunks
	4		4	Converter serves 2-PTY FR Lines with an ANI-type B or C system only making an interdigital party test and/or 101 ESS CO trunks
	5		4	Converter serves coin trunks arranged for dial tone first
J38936AB	1	1		Converter trunk and link unit
J38936AC	1	1		Converter trunk, test, alarm and release unit
	2	1		When dial tone first is required
J38936AD	1	1		Miscellaneous unit
	2		1	When used in 35E97 office
J99374A	1	1		7-channel TOUCH-TONE calling receiver unit wired for two circuits, less circuit packs (max one per frame)
	2	1		Wiring and equipment for an additional two circuits, less circuit packs (max one per frame)
	3	4		Circuit packs required for one TOUCH-TONE receiver circuit, (max four per frame)
	4	2		Circuit packs required for a first or third TOUCH-TONE receiver circuit (max two per frame)

TABLE C

SUPPLEMENTARY CONVERTER AND LINK FRAME 9' - 0" J38936B

COMPONENT EQUIPMENT UNITS SHALL BE EQUIPPED AS FOLLOWS:				
UNIT		QUANTITY TO BE PROVIDED		DESCRIPTION
J CODE	LIST NO.	ALWAYS	FOR OPTION INDICATED	
J38936AA	1		4	Converter unit
	2		4	Converter serves 2-PTY MR trunks; 2-PTY FR lines with an ANI-type B or C system only making an interdigital party test; 101 ESS CO trunks; coin trunks arranged for dial tone first (See Note 5.04.)
	3		4	Converter serves 2-PTY MR trunks
	4		4	Converter serves 2-PTY FR lines with an ANI-type B or C system only making an interdigital party test and/or 101 ESS CO trunks
	5		4	Converter serves coin trunks arranged for dial tone first
J38936AB	1		3	Converter trunk and link unit
J99374A	1		1	7-channel TOUCH-TONE calling receiver unit wired for two circuits, less circuit packs (max one per frame)
	2		1	Wiring and equipment for an additional two circuits, less circuit packs (max one per frame)
	3		4	Circuit packs required for one TOUCH-TONE receiver circuit (max four per frame)
	4		2	Circuit packs required for a first or third TOUCH-TONE receiver circuit (max two per frame)

TABLE D
 CONVERTER AND LINK FRAME 11' - 6" J38936C

COMPONENT EQUIPMENT UNITS SHALL BE EQUIPPED AS FOLLOWS:				
UNIT		QUANTITY TO BE PROVIDED		DESCRIPTION
J CODE	LIST NO.	ALWAYS	FOR OPTION INDICATED	
J38936E	1,2		2	CAMA access code is digits 112 (one per two converters, max two per frame)
	1,3		2	15-digit storage for international direct distance dialing (one per two converters, max two per frame)
J38936AA	1	4		Converter unit
	2		4	Converter serves 2-PTY MR trunks; 2-PTY FR lines with an ANI-type B or C system only making an interdigital party test; 101 ESS CO trunks; coin trunks arranged for dial tone first (See Note 5.04.)
	3		4	Converter serves 2-PTY MR trunks
	4		4	Converter serves 2-PTY FR lines with an ANI-type B or C system only making an interdigital party test and/or 101 ESS CO trunks
	5		4	Converter serves coin trunks arranged for dial tone first
J38936AB	1	1		Converter trunk and link unit
J38936AC	1	1		Converter trunk, test, alarm, and release unit
	2		1	When dial tone first is required
J38936AD	1	1		Miscellaneous unit
	2		1	When used in 35E97 office
J99374A	1	1		7-channel TOUCH-TONE calling receiver unit wired for two circuits, less circuit packs (max one per frame)
	2	1		Wiring and equipment for an additional two circuits, less circuit packs (max one per frame)
	3	4		Circuit packs required for one TOUCH-TONE receiver circuit (max four per frame)
	4	2		Circuit packs required for a first or third TOUCH-TONE receiver circuit (max two per frame)

TABLE E

SUPPLEMENTARY CONVERTER AND LINK FRAME 11' - 6" J38936D

COMPONENT EQUIPMENT UNITS SHALL BE EQUIPPED AS FOLLOWS:

UNIT		QUANTITY TO BE PROVIDED		DESCRIPTION
J CODE	LIST NO.	ALWAYS	FOR OPTION INDICATED	
J38936E	1,2		2	CAMA access code is digits 112 (one per two converters, max two per frame)
	1,3		2	15-digit storage for international direct distance dialing (one per two converters, max two per frame)
J38936AA	1		4	Converter unit
	2		4	Converter serves 2-PTY MR trunks; 2-PTY FR lines with an ANI-type B or C system only making an interdigital party test; 101 ESS CO trunks; coin trunks arranged for dial tone first (See Note 5.04.)
	3		4	Converter serves 2-PTY MR trunks
	4		4	Converter serves 2-PTY FR lines with an ANI-type B or C system only making an interdigital party test and/or 101 ESS CO trunks
	5		4	Converter serves coin trunks arranged for dial tone first
J38936AB	1		3	Converter trunk and link unit
J99374A	1		1	7-channel TOUCH-TONE calling receiver unit wired for two circuits, less circuit packs (max one per frame)
	2		1	Wiring and equipment for an additional two circuits, less circuit packs (max one per frame)
	3		4	Circuit packs required for one TOUCH-TONE receiver circuit (max four per frame)
	4		2	Circuit packs required for a first or third TOUCH-TONE receiver circuit (max two per frame)

Bell Telephone Laboratories, Incorporated

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