

302-TYPE CONNECTORS

DESCRIPTION, USE, INSTALLATION, AND REPAIR PROCEDURES

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7. Modular Type Protector Frame	12	1. GENERAL	
8. Stenciled 302-Type Connector	13	1.01 This practice covers the description, use, instal- lation, and repair procedures for 302-type con- nectors.	
9. Plastic Number Plates	14	1.02 This practice is issued as a part of a general restructuring, updating, and combining of the 201-series of practices. The following practices are combined with this practice:	
10. 302-Type Connector—Replacement Termi- nals	16	• 201-208-101	
11. KS-20100, L5 Test Set	18	• 201-208-802	

1.03 The 302A1, B1, and E1 connectors are used to terminate outside plant cables on the ED-1A220-31 modular protector frame. When the high density modular protector frame (ED-97898-31) is utilized, the high density 308-type connector should be used to terminate outside plant cables. The 308-type connector is covered in detail in AT&T 201-208-111.

1.04 The 302A4, B4, and E3 connectors are used to terminate outside plant cables and provide facilities for tie pairs to the MDF on the low profile and tall double-sided conventional protector frame. These connectors, used for double-sided protector frames, have a

hinged mounting bracket that allows the connector panel to swing out for access to the backplane cable.

1.05 The 302-type connectors, with protector units, provide features for voltage protection, current protection, testing, identification of special circuits, and disconnection of the outside cable pair from the central office equipment.

1.06 The primary purpose of central office protection is to ensure the safety of telephone personnel and to reduce the possibility and extent of equipment damage in the event that foreign potential contacts the outside plant.

2. DESCRIPTION

2.01 The 302-type connector (Figure 1, 2, and Table A) is a molded plastic panel 16-1/4 inches high. The connector has 100 groups of 5-pin terminals that accept 3-, 4-, and 5-type protector units (ordered separately). Four of the terminals (tips and rings) are gold plated. The fifth terminal (center) is solder plated and provides a ground connection. A sixth hole (blind) is provided for inserting designation pins.

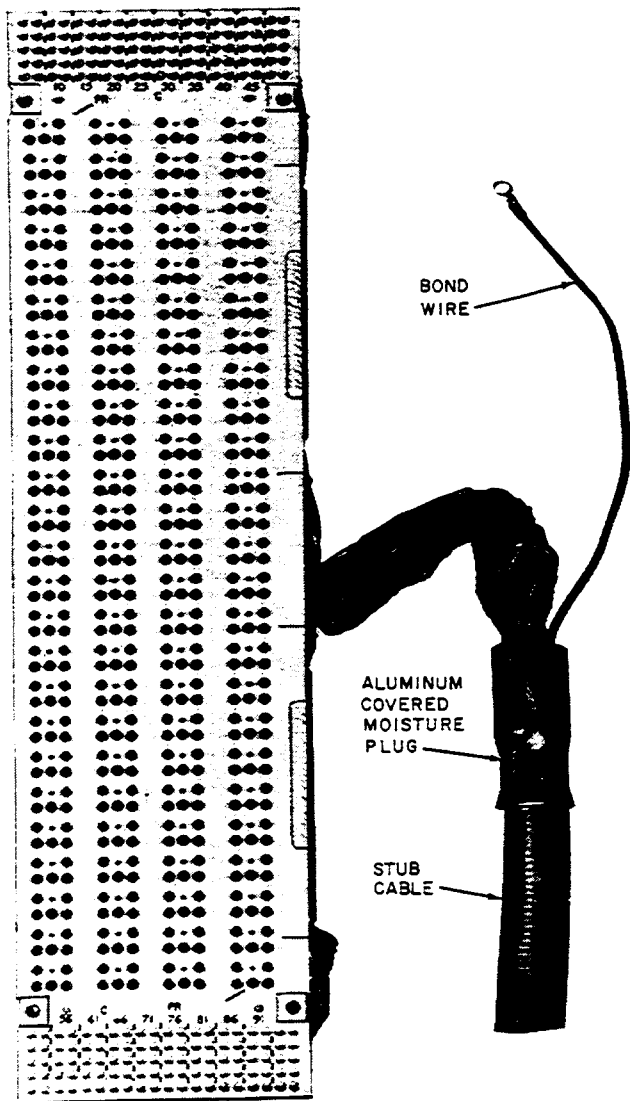


Figure 1—302-Type Connector for use on Modular Protector Frame

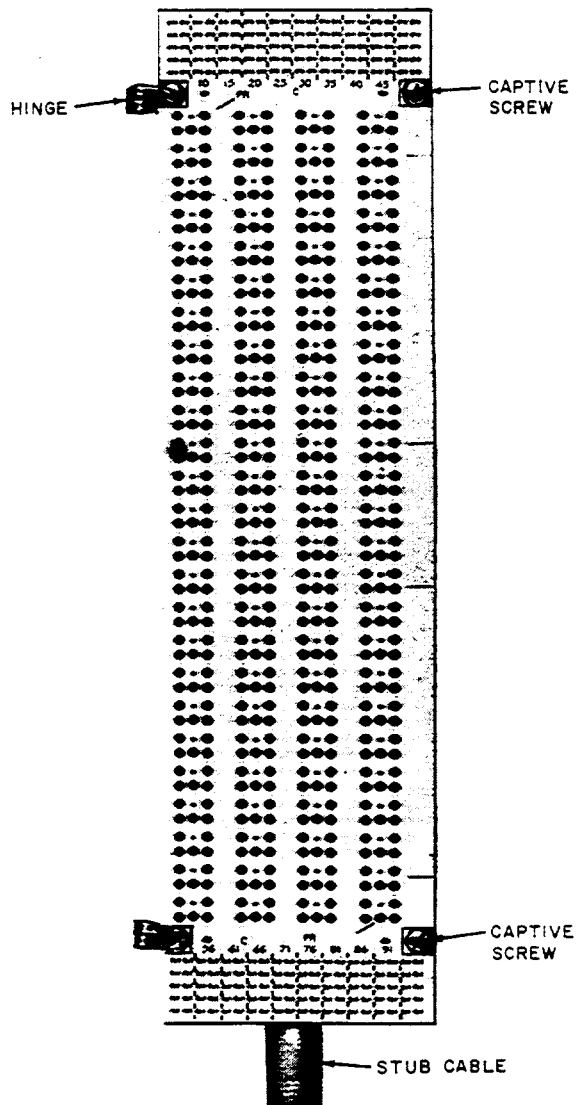


Figure 2—302-Type Connector for use on Double-Sided Protector Frame

TABLE A							
302-TYPE CONNECTORS							
Frame Application	Stub Cable			Item Code (Note)	Comcode		
	Wire Gauge	Length (Feet)	Cabling Direction				
Modular Protector Frame (ED-1A220-31 Only)	24	30	Up/Down	302A1-100-30*	101642817		
		50		302A1-100-50*	101642825		
		80		302A1-100-80*	101642833		
		100		302A1-100-100*	101642841		
		150		302A1-100-150*	102759826		
		200		302A1-100-200*	102759834		
	22	30		302B1-100-30*	101642858		
		50		302B1-100-50*	101642866		
		80		302B1-100-80*	101642874		
		100		302B1-100-100*	101642882		
		150		302B1-100-150*	102759867		
		200		302B1-100-200*	102759875		
	No Stub†			302E1-100	102861614		
	Low-Profile and Tall Double-Sided Conventional Protector Frame	24		30	Up/Down	302A4-100-30	103760799
50			302A4-100-50	103904728			
80			302A4-100-80	103904736			
100			302A4-100-100	103904744			
150			302A4-100-150	103904751			
200			302A4-100-200	103904769			
22		30	Up/Down	302B4-100-30		103760807	
		50		302B4-100-50		103904777	
		80		302B4-100-80		103904785	
		100		302B4-100-100		103904793	
		150		302B4-100-150		103904801	
		200		302B4-100-200		103904819	
No Stub†				302E3-100		103046074	

Note: 302A4-100 replaces 302A3-100 and 302C3-100.
 302B4-100 replaces 302D3-100.

* Cannot be modified to provide hinged arrangement.
 † Two 50-pair cables.
 ‡ Typically used for pair gain system terminals cabled to the connectors with switchboard cable.

2.02 The terminal field on the rear of the connector has wire-wrap terminals. The 302A4-100 connector replaces the 302A3-100 and 302C3-100 connectors. The 302B4-100 connector replaces the 302D3-100. Other replaced codes are 302A2 through 302E2 which have soldered terminals (see Table B). Two 50-pair test terminal fields located at the top and bottom of the connector are used with D or G test connectors.

TABLE B	
302-TYPE CONNECTORS — REPLACED CODES	
STANDARD CODE	REPLACED CODE
302A1-100	—
302A4-100	302A2-100 302A3-100 302C2-100 302C3-100
302B1-100	—
302B4-100	302B2-100 302D2-100 302D3-100
302E1-100	—
302E3-100	302E2-100

2.03 Pair identification is provided on both the front and back of the connector with pair numbers molded into the connector. When protector units are installed in the connector, pair designation plates should be inserted between every five rows of protector units. These designation plates are marked on the top and bottom to indicate the tens and unit number of the adjacent jack or protector unit. Intermediate numbers are then easily obtained by their relative location to the identification plates.

2.04 The 302A1 and 302B1 do not require additional mounting hardware. However, to modify the verticals of a double-sided conventional protector frame for installing other 302-type codes, the following adapters are required per vertical:

- (a) 14-foot 6-inch vertical — 176A adapters consisting of three aluminum bars.
- (b) 11-foot or 12-foot 6-inch vertical — 176B adapters consisting of two aluminum bars.

2.05 Adapters are not required for mounting on the low profile double-sided protector frame.

2.06 The 86A brackets (101213718) should be ordered for codes with hinged mounting brackets to hold the connector panel open for terminating cables and maintenance.

2.07 The protector frame is the interface dividing point between outside plant and the central office equipment. All pairs on the central office side of the connector are tie cabled to a distributing frame to facilitate cross-connect operations.

2.08 The 302-type connectors have factory-connected, color coded, 100-pair stub cable consisting of 22- or 24-gauge tinned-copper PVC (polyvinyl chloride) insulated conductors, mylar tape core wrapper, a corrugated aluminum shield under an olive gray colored PVC sheath, and an aluminum-covered moisture plug at the terminated end of the stub cable.

2.09 Selected codes provide combinations of 22- or 24-gauge cable stubs in 30-, 50-, 80-, 100-, 150-, or 200-foot lengths.

2.10 The 302-type connectors are also available in "E" codes which do not have factory-connected stubs and are typically used for pair gain system terminals cabled to the connectors with switchboard cable (Table A).

2.11 Table C is a stub cable gauge selection guide. Other guidelines for selecting the appropriate stub cable gauge for the 302-type connector and the appropriate gauge and length of fuse cable are in AT&T 201-206-050.

TABLE C STUB CABLE GAUGE SELECTION GUIDE	
ENTRANCE CABLE GAUGE	CONNECTOR STUB CABLE
26 Exposed or unexposed	22 or 24
24 Exposed or unexposed	22
22 Exposed	22*
19 Exposed	22*
22 Unexposed	22
19 Unexposed	22
* Provide a length of 24- or 26-gauge protective fusing cable.	

3. INSTALLATION

PRECAUTIONS

- 3.01 Store the 302-type connectors in a dry location. Do not leave these units on loading docks or in locations exposed to the weather.
- 3.02 When unpacking the connector, open the carton on the side marked OPEN FROM THIS SIDE.
- 3.03 Do not bend the cable stubs in a radius of less than 5 inches.
- 3.04 Do not bend the cable stubs to a 5-inch radius more than twice at the same general location.
- 3.05 Do not remove the Plypak cushion from the connector until it is ready for installation on the protector frame.

INSTALLING 302-TYPE CONNECTORS ON MPF (MODULAR PROTECTOR FRAME)

- 3.06 The MPF is 8 feet high and 6-1/2 feet long. The connectors are mounted to the upright members on the frame with five connectors per vertical. Verticals are on 6-inch centers with oblong slots provided on the vertical frames adjacent to 50-pair test contacts for mounting cable test shoes.
- 3.07 The MPF is the dividing point between outside plant and the central office equipment. All pairs

on the central office side of the connector are tied-cabled to the main distributing frame.

3.08 In locations *where the stub cables are dressed downward*, install the connectors on the modular type protector frame as follows:

- (1) Remove and retain the screws and metal plates from the base of the MPF to facilitate stub cable entrance to the cable entrance facility.
- (2) Mark the cable number and pair count of each stub on a linen tag or glass tape and attach to the stub cable before it is placed into the cable entrance facility.
- (3) Remove the connector from the shipping carton and route the stub cable into the cable entrance facility from the rear of the protector frame. Remove any cable twist that may be present.

Warning: *To prevent damage to the contact pins, do not remove the Plypak cushion from the connector until it is ready for installation on the MPF.*

- (4) From the *wiring side* of the MPF, install the connector between the vertical members of the MPF, starting at the bottom and working toward the top. It is recommended that the entire vertical be filled and the connectors be installed in the direction of growth on the frame.

Warning: *If a vertical is partially filled, special care must be taken not to disturb cable pair connections while placing growth stub.*

- (5) From the protector unit side of the connector, secure the connector to the frame by using the screws furnished with the connector.
- (6) Position and secure the stub cable to the horns of the protector frame as shown in Figure 3.
- (7) Connect the bond wire to the same cable horn that is immediately above the aluminum covered moisture plug by using the self-tapping screw furnished with the connector. This provides electrical ground continuity between the shield of the stub cable and the MPF ground.
- (8) Cut the metal plates (Figure 3) to fit around the stub cables in accordance with local instructions and/or fire protection practices. Secure the metal plates to the protector frame using the screws removed in (1).

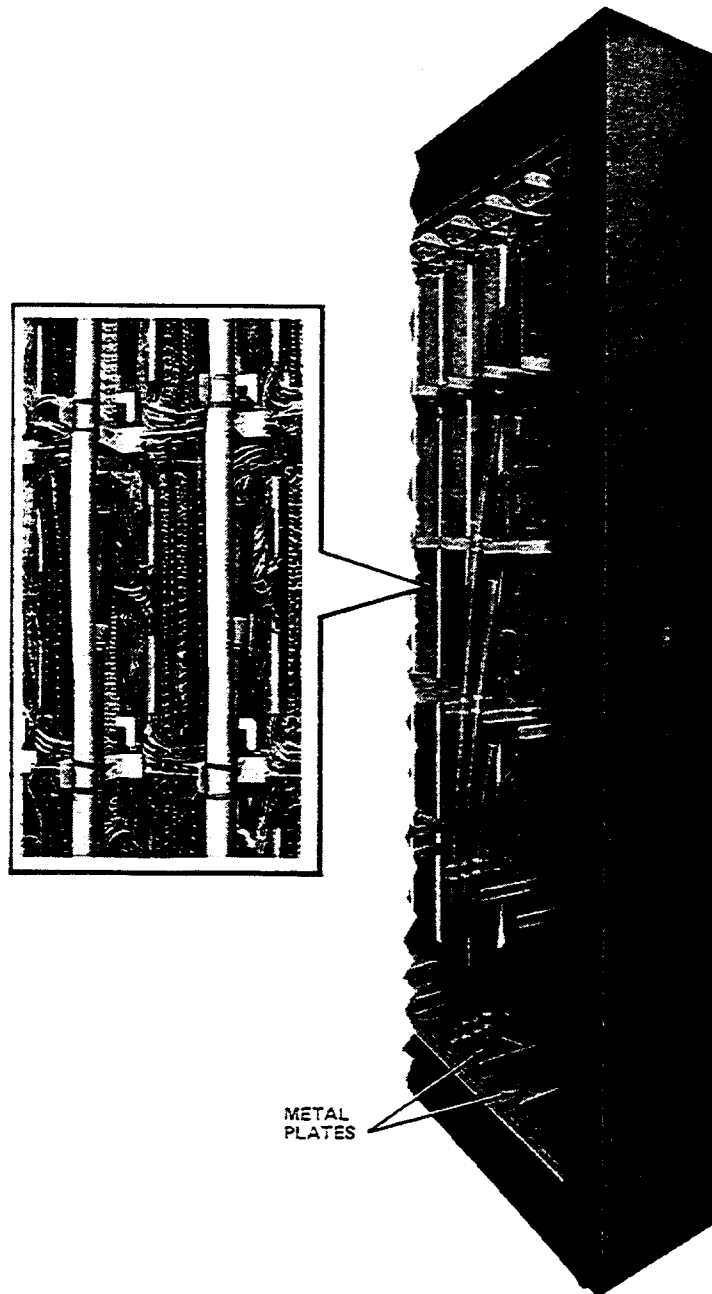


Figure 3—Position of Bottom-Mounted Stub Cables on Modular Type Protector Frame

3.09 In the location *where the stub cables are dressed upward*, install the connectors on the MPF as follows:

(1) The connectors are mounted in the same manner as described in paragraph 3.08 (2) through (7), except that the stub cables are routed through the top of the frame. Install the connectors to the

vertical members, starting at the bottom and working toward the top.

(2) Position and secure the top-mounted stub cables on the protector frame as shown in Figure 4.

(3) Connect the bond wire as outlined in paragraph 3.08 (7).

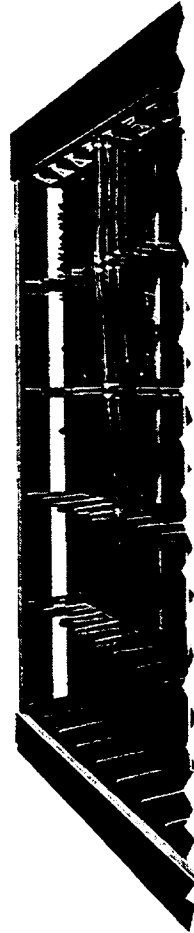


Figure 4—Position of Top-Mounted Stub Cables on Modular Type Protector Frame

INSTALLING 302-TYPE CONNECTORS IN LOW PROFILE AND TALL DOUBLE-SIDED PROTECTOR FRAMES

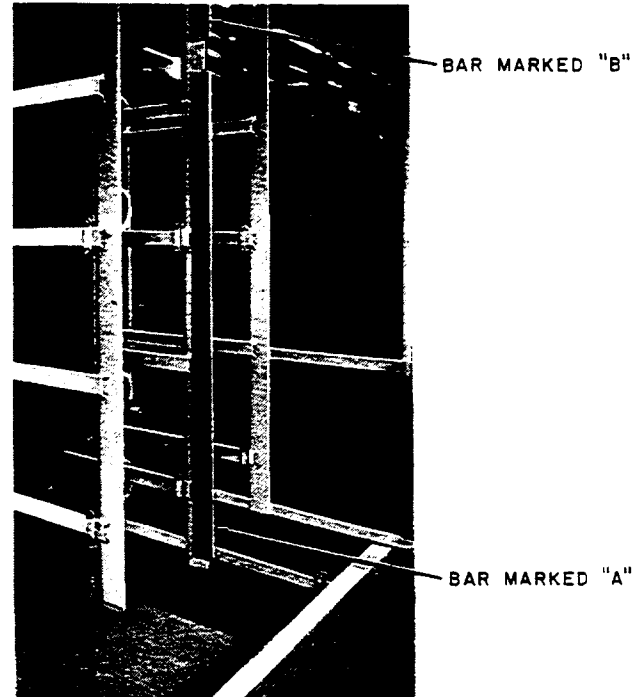
3.10 To modify the verticals of a double-sided conventional type protector frame for installing the connector, the following adapters are required:

- (a) *14-foot 6-inch Vertical*—176A adapter consisting of three aluminum bars marked A, B, and C.
- (b) *11-foot or 12-foot 6-inch Vertical*—176B adapter consisting of two aluminum bars marked A and B.
- (c) *8-foot low profile double-sided frames* have factory-drilled holes to accommodate the connectors. No adapters are required.

3.11 To install the adapters on the verticals, proceed as follows.

Note: The adapters are placed on the left-hand side of the verticals as determined by the technician facing the verticals.

- (a) *176A Adapter*—Place the bar marked A at the bottom of the vertical with the A mark at the bottom. Align the unthreaded holes in the adapter with the mounting holes in the vertical. Starting with the bottom hole, use the No. 12-24 screws furnished and attach the adapter to the vertical. Place the bar marked B with the B mark toward the bottom and above the A bar. (There will be about 2-1/2 inches of space between the bars.) Align the unthreaded holes in the B bar with the mounting holes in the vertical and attach to vertical. The C bar is placed in the same manner as the B bar (Figure 5).
- (b) *176B Adapter*—Place the A and B bars as outlined in paragraph 3.11 (a).



NOTE:

THE ADAPTERS MUST BE PLACED ON THE LEFT HAND SIDE OF THE VERTICAL AS YOU FACE THE VERTICAL

Figure 5—176A Adapter

3.12 In locations *where the stub cable is dressed downward*, install the connector on the adapters as follows:

- (1) See paragraph 3.08 (2).
- (2) Remove the connector from the shipping carton. Route the stub cable into the cable entrance facility. Install the No. 12-24 screws (furnished with the connector) in the threaded holes on the left-hand side of the adapters. Starting at the bottom, hook the L-shaped mounting holes in the connector over the screws in the adapter. Place all of the connectors on the vertical. Tighten the screws before starting the next vertical. Dress the stub cable.

3.13 Position and secure the stub cables to the transverse arms with waxed cotton twine.

3.14 When the connector is bolted to the frame, electrical ground continuity is provided between the shield of the stub cable and frame.

3.15 The connectors are then mounted in the same manner as described in paragraphs 3.12 and 3.13, except that the stubs are taken to the top of the frame and are then taken on cable racks to the splice location.

3.16 The 86A brackets hold the panel open for facilitating the termination of tie cables to the MPF and for future maintenance. To place the 86A bracket:

- (1) Loosen the two captive screws located on the right side of each connector and swing panel open.
- (2) Bolt two 86A brackets to the panel and mounting bracket, one at each captive screw location (Figure 6).

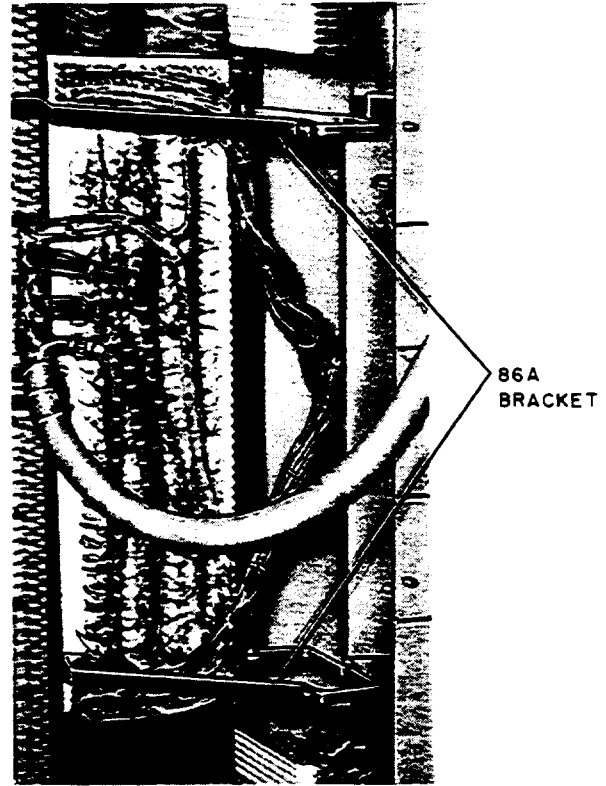


Figure 6—86A Bracket Attached to Connector Mounting Bracket

MARKING THE 302-TYPE CONNECTOR

3.17 When the 302-type connectors are used on modular protector frames in conjunction with the *COSMIC*® Frame System, MELD (mechanized engineering and layout for distributing frames) or its predecessor PACE (program for arrangement of cables and equipment) will generate adhesive-backet labels. These modular protector frame labels identify the

cable and low-high pairs terminated on the connector, and the *COSMIC* frame location (module, shelf, and block) where the tie cable from the connector is terminated.

3.18 When the MELD/PACE label is used, place it on the protector frame to the left of the connector at about the middle of the connector (Figure 7).

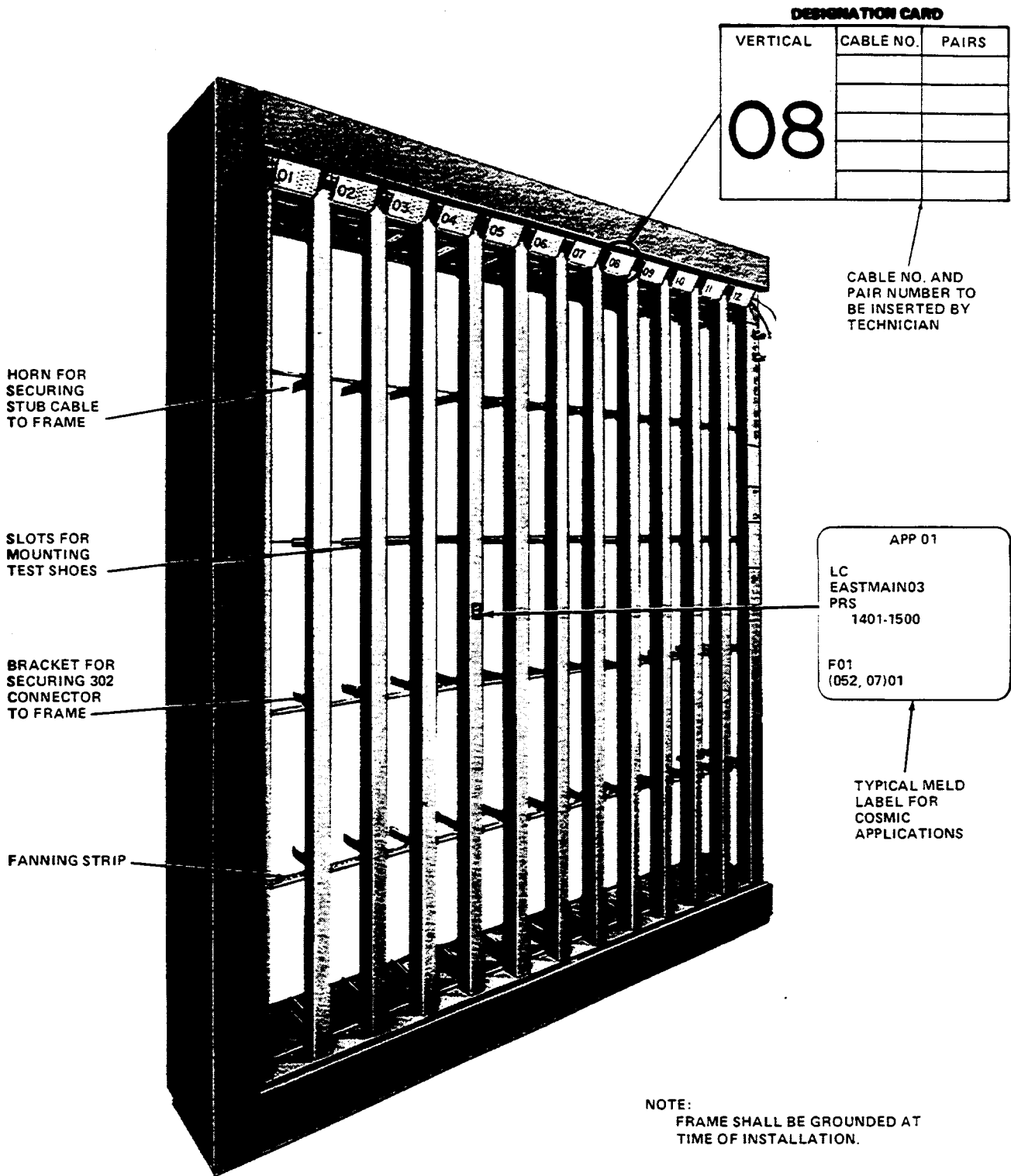


Figure 7—Modular Type Protector Frame

3.19 If MELD or PACE is not available, use B or W transfer stenciling kit as indicated in Practice 081-860-105, stencil each connector as follows (Figure 8):

(1) Stencil the cable number adjacent to the factory-stenciled C.

(2) Stencil the first hundred pair number of the connector adjacent to the factory-stenciled PR at the upper left-hand protector unit.

(3) Stencil the last hundred pair number of the connector adjacent to the factory-stenciled PR at the bottom right-hand protector unit.

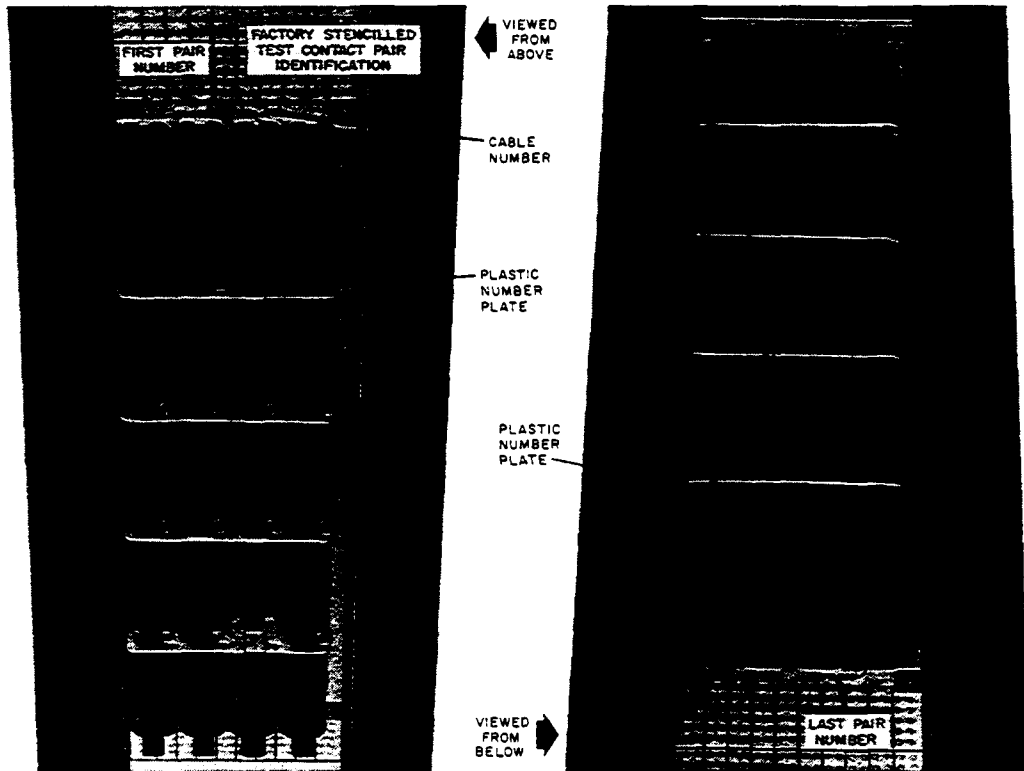


Figure 8—Stenciled 302-Type Connector

3.20 Pair identification is provided by the use of four plastic number plates (Figure 9). These plates should be inserted horizontally under every fifth row of protector units as shown in Figure 8. Numbers 5-6,

30-31, 55-56, 80-81 will be designated on the uppermost plate; 10-11, 35-36, 60-61, 85-86 on the second number plate; and similarly on the two remaining plates. The plastic number plates are available in three different sizes as listed in Table D and must be ordered separately.

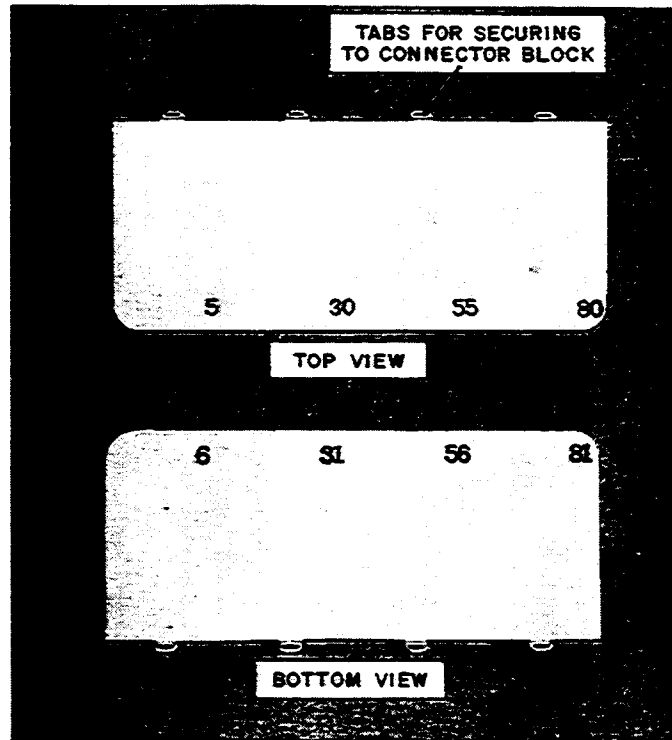


Figure 9—Plastic Number Plates

TABLE D NUMBER PLATES		
USED WITH	PLATE NUMBER	STENCILED
3B-Type Protector Unit	P19E131	5-6, 30-31, 55-56, 80-81
	P19E132	10-11, 35-36, 60-61, 85-86
	P19E133	15-16, 40-41, 65-66, 90-91
	P19E134	20-21, 45-46, 70-71, 95-96
4B-Type Protector Unit	P46L642	5-6, 30-31, 55-56, 80-81
	P46L643	10-11, 35-36, 60-61, 85-86
	P46L644	15-16, 40-41, 65-66, 90-91
	P46L645	20-21, 45-46, 70-71, 95-96
5A-Type Protector Unit	P19E127	5-6, 30-31, 55-56, 80-81
	P19E128	10-11, 35-36, 60-61, 85-86
	P19E129	15-16, 40-41, 65-66, 90-91
	P19E130	20-21, 45-46, 70-71, 95-96

3.21 Each modular type protector frame (Figure 7) is equipped with protector frame designation cards for identifying cable number and pair count. The craftsperson will insert the cable number and pair count on the designation card located at the top of the frame adjacent to the vertical number.

3.22 Designation pins for use with special circuits are coded as listed in Table E.

(a) Using fingers or long-nose pliers, insert the designation pin in the blind hole provided on the face of the connector.

(b) The head of the designation pin has been redesigned to provide two flat surfaces for easy removal of the installed pin with long-nose pliers.

TABLE E DESIGNATION PINS		
PART NO.	COLOR	DESIGNATION
KS-14174 L4	Green	Denied Service
KS-14174 L5	Yellow	PBX Battery
KS-14174 L7	Red	Special Circuit

4. REPAIR PROCEDURES

4.01 Before making repairs to the apparatus referred to in this part, craft personnel should be familiar with the contents of the following practices.

- 069-132-811—Punched or Wire-Type Terminals (Not Having Notches or Perforations) — Method of Making and Removing Wrapped Connections
- 069-140-811—Soldered Connections — Using Soldering Coppers — Method of Making and Removing.

PRECAUTIONS

4.02 This part covers only those parts which can be replaced in the field. No attempt should be made to replace parts not designated. All terminals are replaceable. The number plates on 302-type connectors are also replaceable.

4.03 Exercise extreme care when removing and connecting wires and replacing terminals to prevent damage to adjacent connections and to avoid shorts, grounds, and crosses to operating circuits.

4.04 The ends of wire previously used for a solderless wrapped connection or soldered connection shall not be reused for subsequent connections. The

end of the wire must be cut off and reconnected by solderless wrapping or soldering. It will be necessary to splice the wire if there is not enough slack to provide the number of turns required for solderless wrapped connections. (See AT&T 069-132-811.)

TOOLS AND MATERIALS

4.05 The following are the tools and materials needed to perform the repair procedures:

CODE OR SPEC NO	DESCRIPTION
AT-7860	B long-nose pliers
AT-7825	4-inch E screwdriver
KS-6320	Orange stick
86A	Bracket (two)
AT-7424	Solder
KS-8740	Soldering copper (or other KS-8740 coppers rated at 95 watts)
KS-16363, L3	Wire wrap gun
KS-20551 or KS-20827, L1	Wire unwrapping tool.

REPLACING DEFECTIVE TERMINALS

4.06 Figure 10 illustrates the 302-type connectors and the relationship of piece parts.

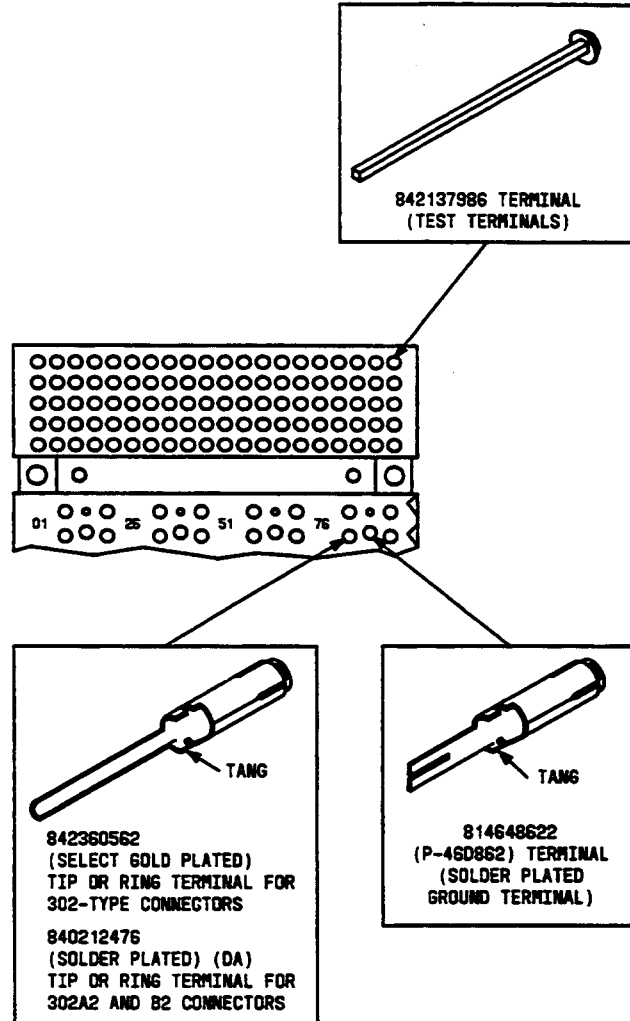


Figure 10—302-Type Connector—Replacement Terminals

REMOVING TERMINALS**A. Tip and Ring Terminals**

4.07 On the wiring side of the connector, tag and remove the leads from the broken or damaged terminal.

4.08 Using B long-nose pliers, close the tangs on the terminal or break the terminal flush with the back side of the connector panel and remove the terminal from the front side of the connector panel.

B. Ground Terminals

4.09 On wiring side of the connector, use a soldering copper and remove all solder from the terminal to be replaced.

4.10 Using B long-nose pliers, close the tangs on the damaged or broken terminal or break the terminal flush with the back side of the connector panel and remove the terminal from the front side of the connector panel.

C. Test Terminals

4.11 From the wiring side of the connector, tag and remove the leads from the terminal to be replaced.

4.12 Using a new terminal or a sharp instrument, such as a test probe, push the broken terminal through to the front of the connector about 1/8 inch.

4.13 From the test contact or front side of the connector, grasp the terminal head with the B long-nose pliers and pull the terminal from the block.

INSTALLING TERMINALS**A. Tip and Ring Terminals**

4.14 Using the fingers, properly orient the new terminal and insert into the same hole from which the old terminal was removed. Push the terminal into the hole as far as possible.

4.15 Insert a protector unit into the connector to hold the terminal in place.

4.16 On the wiring side of the connector, use the B long-nose pliers and pull the terminal into its proper position. Pay attention to the orientation of the terminal. Determine that the terminal is in the correct position by observing the position of adjacent terminals.

4.17 Using B long-nose pliers, carefully spread the tangs of the terminal to lock the terminal in place in the connector panel.

4.18 Reconnect all leads to the terminal.

4.19 Remove the protector unit.

B. Ground Terminals

4.20 Using the fingers, properly orient the new terminal and insert into the same hole from which the old terminal was removed. Push the terminal into the hole as far as possible.

4.21 Insert a protector unit into the connector to hold the terminal in place.

4.22 On the wiring side of the connector, use the B long-nose pliers and pull the terminal into its proper position. Pay attention to the orientation of the terminal. Determine that the terminal is in the correct position by observing the position of adjacent ground terminals.

4.23 Using B long-nose pliers, carefully spread the tangs of the terminal to lock the terminal in place in the connector panel.

4.24 Remove the protector unit.

4.25 Using the soldering copper, solder the terminal to the ground bus.

C. Test Terminals

4.26 From the front side of the connector, insert the new terminal into the same hole from which the old terminal was removed.

4.27 Using the fingers, push the terminal into the hole as far as possible.

4.28 Using an orange stick, push the terminal into its seated position on the connector.

4.29 From the wiring side of the connector, reconnect all leads.

5. TESTING

PROTECTOR UNITS

5.01 The 3-, 4-, or 5-type protector units are used with the 302-type connectors. The protector units are ordered separately from the connectors. The 3-, 4-, and 5-type protector units are described in Practice 201-208-100.

5.02 All standard plug-in protector units are equipped with four gold-plated tip and ring pins and a solder-plated ground pin.

5.03 Protector units with gold-plated pins should be used with connectors containing gold-plated socket terminals (i.e., all current protector units and connector codes). Protector units with gold-plated or solder-plated pins can be used in vintage connectors containing solder-plated socket terminals.

Caution: Protector units with solder-plated pins should not be used on connectors with gold-plated socket terminals. This combination of plating and contact surfaces results in higher contact resistance, and surface degradation of gold-plated socket terminals.

5.04 Before installing the 3-, 4-, or 5-type protector units onto the connectors, each unit may be tested. The KS-20100, L5 test set (Figure 11) is used to test for the presence or absence of tip and ring continuity and ground and also provides a burnout feature to clear protector units shorted by carbon or dust particles. The 182A test set (Figure 12) is used to test the minibridge lifter protector units for tip and ring continuity and for shorted protector blocks. It also tests the function of the 410A switch contained in the protector unit. For the test procedures, see Practice 201-208-100.

Note: The jacks (receptacles) for the protector units in the 303-, 305-, 307-, 309-, 310-, 310M-, and 311 connectors have reversed tip and ring orientation from the 302- and 308-type connectors (See Figure 13 and 14).

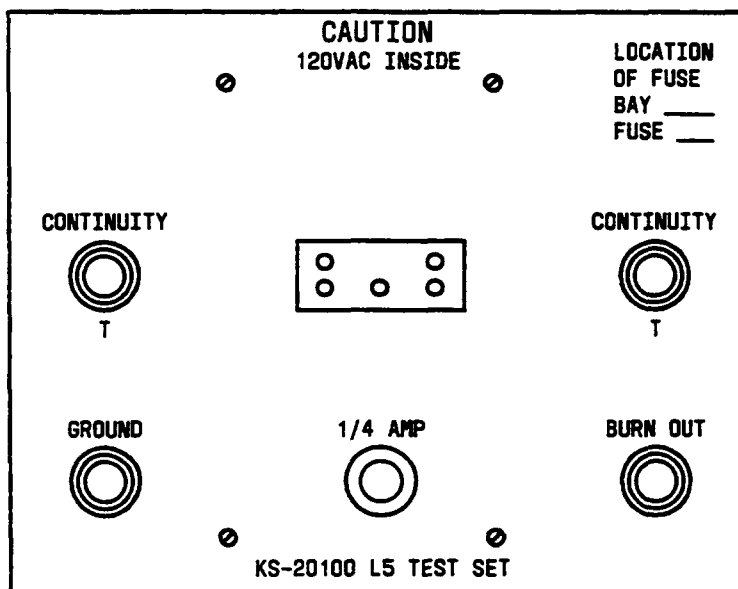
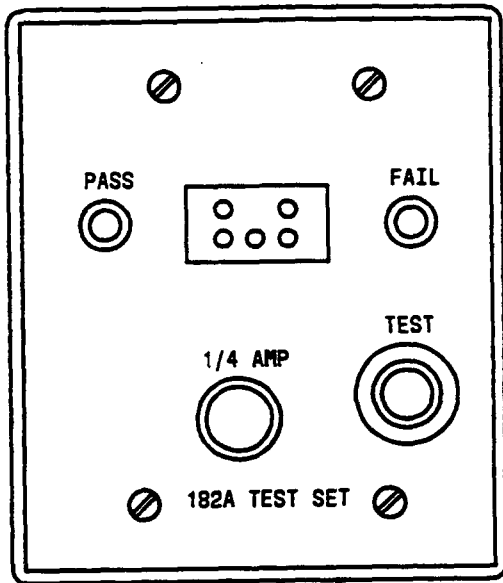


Figure 11—KS-20100, L5 Test Set



182A Test Set

Figure 12—182A Test Set

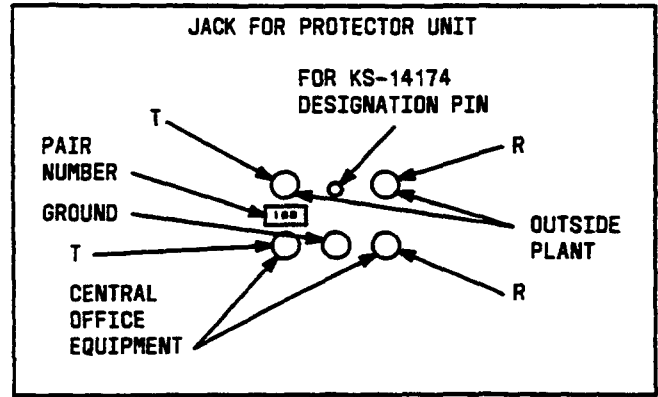


Figure 13—Jack For Protector Unit on 302- and 308-Type Connectors

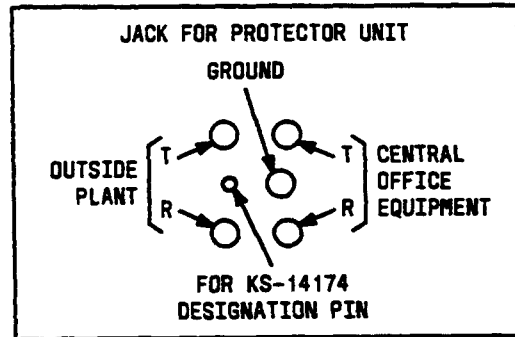


Figure 14—Jack For Protector Unit on 303-, 305-, 307-, 309-, 310-, 310M-, and 311-Type Connectors

TEST CONNECTORS, CORDS, PLUGS, WARNING MARKERS, AND GUARDS

5.05 The D test connector (for 302A1, B1, E1) and the G test connector (for 302A4, B4, E3) is used with the 302-type connector. Cords and plugs are also used for testing purposes. The warning markers and guards are used on special service circuits to provide additional visibility and protection. See Practice 201-208-106 for description and use of these items.

5.06 The D test connector (Figure 15) is used to make test contacts with the 50 pairs of recessed, gold-plated test terminals on either of the two test terminal fields of the 302A1, 302B1, or 302E1 connector used on the modular protector frames. This test connector is used for one pair-at-a-time testing.

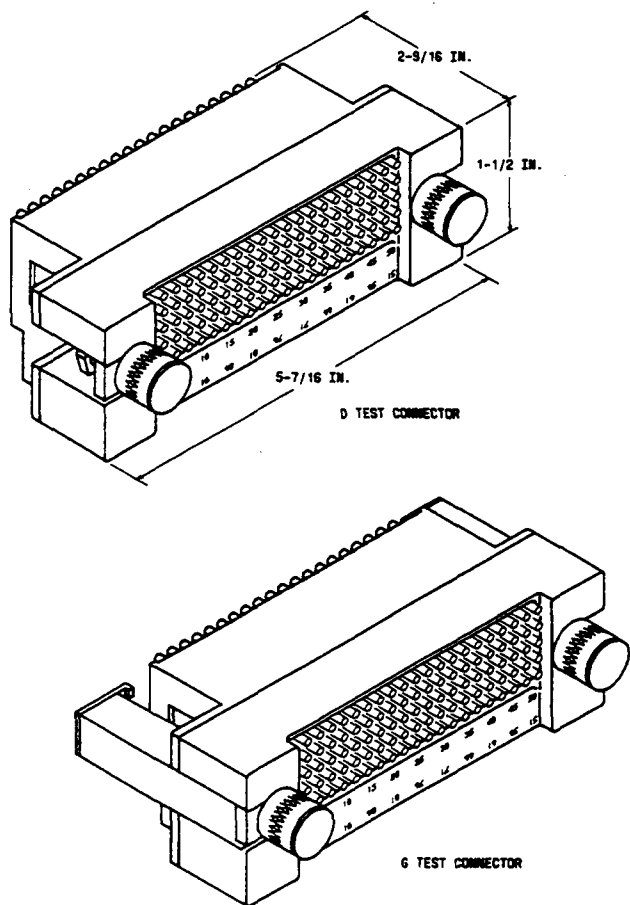


Figure 15—D and G Test Connectors — Mounting Arrangements — For 302-Type Connectors

5.07 The G test connector (Figure 16) is used to make test contacts with the 50 pairs of recessed, gold-plated test terminals on either of the two test terminal fields of the 302A4, 302B4, or 302E3 connector used on the double-sided protector frames. The test connector contains 100 (50 pairs) spring-loaded contacts. It has two sets of pair numbering, one inverted from the other for use on either test field of the connector.

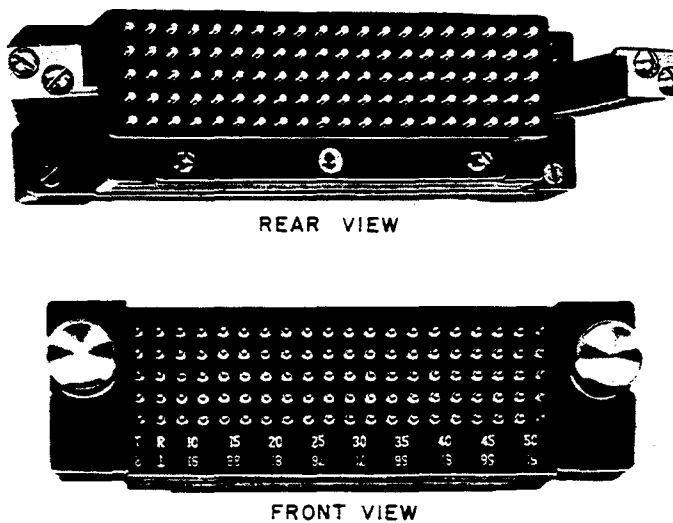


Figure 16—G Test Connector (AT-8353) — For 302-Type Connectors

5.08 The P2EF test cord (Figure 17) is used to short the tip and ring or to ground the tip and/or ring of an individual cable pair by inserting the plug end into a pair of recessed test terminals on the 302-type connector.

Caution: *The P2EF test cord is designed to support only its own weight. Do not use it as an adapter cord for access to the test terminal field.*

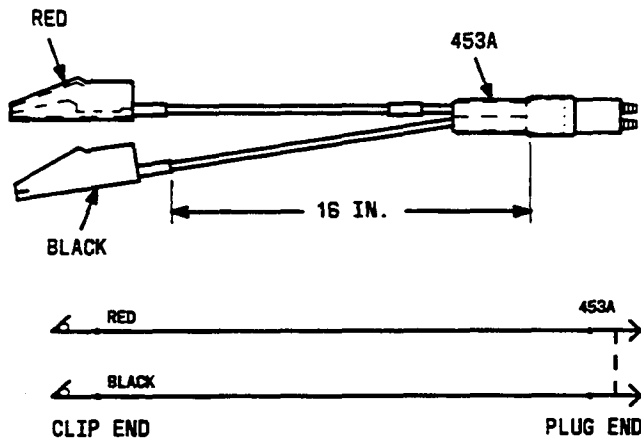


Figure 17—P2EF Test Cord

6. ASSOCIATED EQUIPMENT AND REFERENCES

ASSOCIATED EQUIPMENT

3-, 4-, and 5-Type Protector Units
 176A Adapter (14'6" vertical) (3 aluminum bars)
 176B Adapter (12'6" vertical) (2 aluminum bars)
 86A Brackets (Comcode 101213718)
 P19E (131 through 134) Number Plates for 3-Type Protector Units
 P46L (642 through 645) Number Plates for 4-Type Protector Units
 P19E (127 through 130) Number Plates for 5-Type Protector Units

Test Equipment (Practice 201-208-106)

D Test Connector (AT-8265) for 302A1, B1, E1 (Comcode 400129359)
 G Test Connector (AT-8353) for 302A4, B4, E3 (Comcode 400318689)
 P2EF Test Cord (Comcode 102808581)
 W2FH Test Cord (Comcode 101616399)
 W2FM Test Cord (Comcode 101616449)
 W2GC Test Cord (Comcode 102959088)
 W2GD Test Cord (Comcode 101636959)
 W4BR Test Cord (Comcode 102530821)
 W4CL Test Cord (Comcode 101981611)

Warning Markers and Guard (Practice 201-208-106)

E Warning Marker (Comcode 400614202)
 E Sign (Comcode 400359196)
 KS-19478 Guard (Comcode 997161617)

REFERENCES

PRACTICE	TITLE
069-132-811	Punched or Wire-Type Terminations (Not Having Notches or Perforations)—Method of Making and Removing Wrapped Connections
069-140-811	Soldered Connections — Using Soldering Coppers — Method of Making and Removing
081-860-105	Transfer Stenciling Kits — Description and Use
106-315-119	Multiple Pair Test Connectors for 302- and 303-Type Connectors

PRACTICE	TITLE	PRACTICE	TITLE
201-206-050	Cable Terminating Apparatus Selection — Distributing and Protector Frames	201-219-101	Protector Frames — Description
201-208-100	3-, 4-, and 5-Type Protector Units — Description, Use, Maintenance, and Test Procedures	201-119-501	Protector Frames — Inspections
201-208-103	Tools and Aids — Distributing and Protector Frames	201-220-101	Conventional Distributing Frames — Description
201-208-106	Test Equipment, Cords, Plugs, Warning Markers, Guards, Insulators, and Indicators — Distributing and Protector Frames	201-220-501	Conventional Distributing Frames — Inspections

7. ISSUING ORGANIZATION

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