

303-TYPE CONNECTORS

DESCRIPTION, USE, INSTALLATION, AND REPAIR PROCEDURES

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7. AT-8697-F Designation Strip and AT-8696-B Designation Label	13	1.01 This practice covers the description, use, installation, and repair procedures for 303-type connectors.	
8. 303-Type Connector — Replacement Terminals	15	1.02 This practice is issued as part of a general restructuring, updating, and combining of the 201-series of practices. The following practices are combined with this practice:	
9. KS-20100, L5 Test Set	18	• 201-208-105	
10. 182A Test Set	19	• 201-208-805	
11. Jack For Protector Unit on 302- and 308-Type Connectors	19		

1.03 These connectors terminate outside plant cables requiring protection on conventional and low-profile conventional distributing frames. The 303-type connector can serve as a replacement for the 300-type connectors and C-type protectors in order to achieve a 100-percent increase in terminating capacity.

1.04 The 303-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.

1.05 The 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 303-type connector (Figure 1, 2, 3, and Table A) is a molded plastic panel 4-5/16 inches wide and 19-3/16 inches long. The connector has 100 of the 5-pin, socket-type terminals for 3-, 4-, or 5-type protector units. Four of the terminals (tips and rings) are gold plated. The fifth terminal (center) is solder plated and provides for a ground connection. A sixth hole (blind) is provided for inserting designation pins.

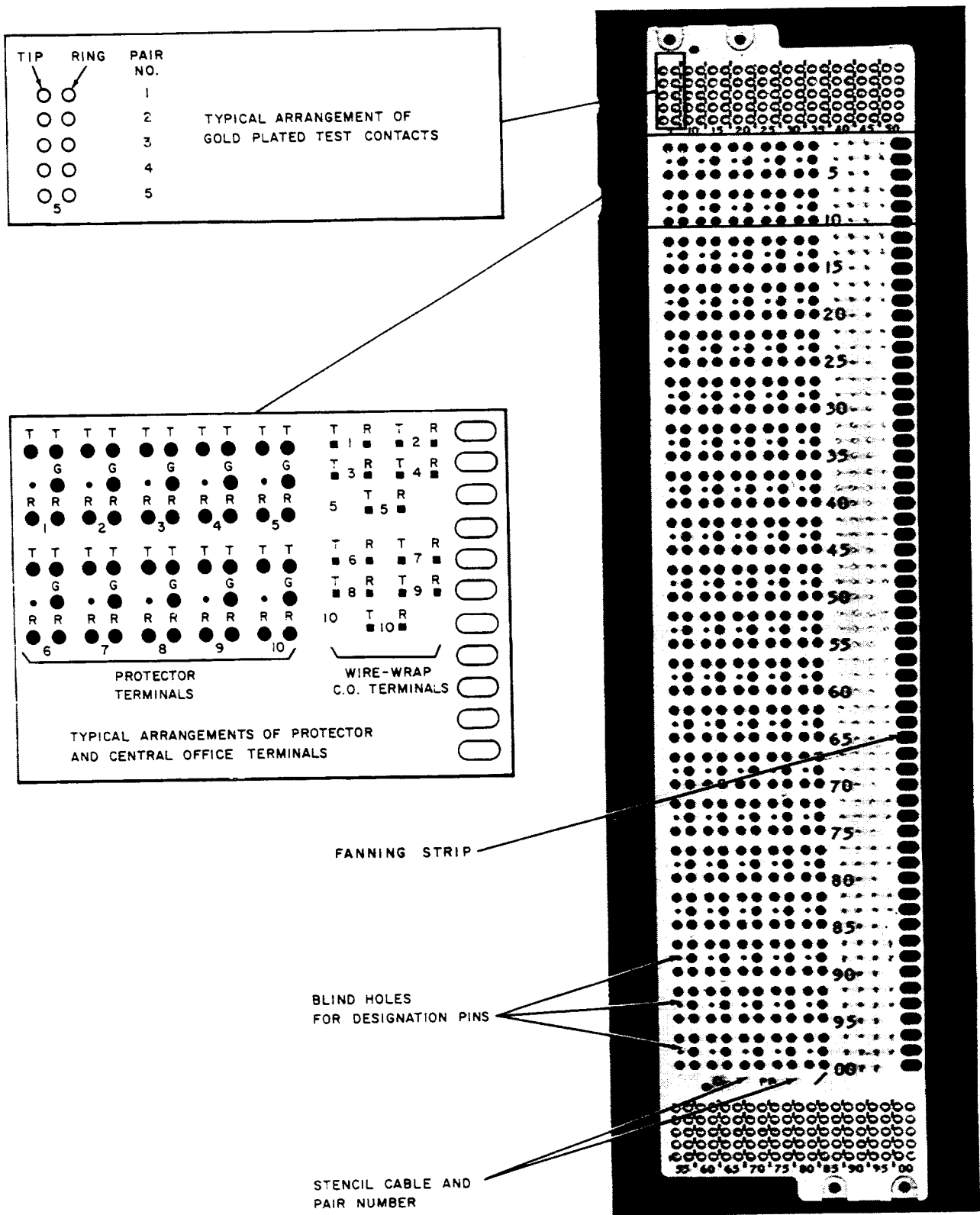


Figure 1—303-Type Connector Panel

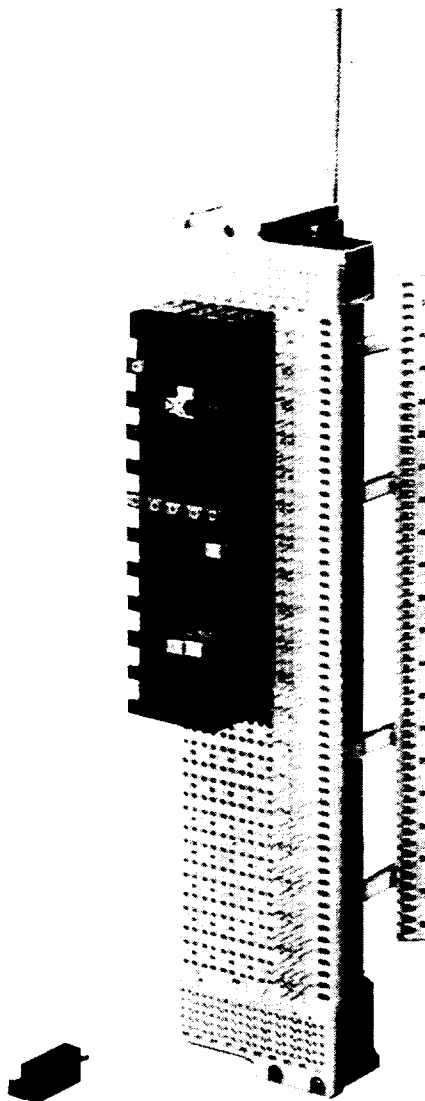


Figure 2—303-Type Connector

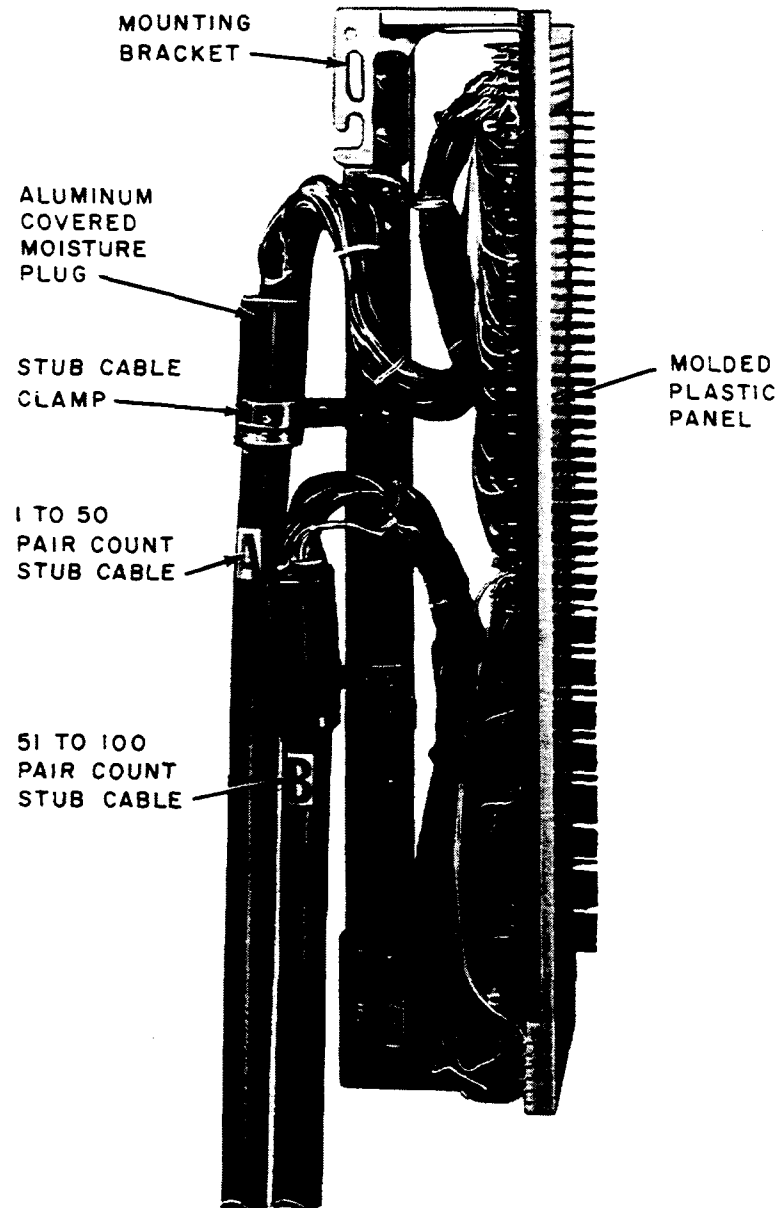


Figure 3—303B3-50 Connector

TABLE A
303-TYPE CONNECTORS

Application	Cross-Connect Terminal Type	Stub Cable			Item Code (Note)	Comcode	
		Wire Gauge	Length (Feet)	Cabling Direction			
Outside Plant Facility Pairs	Wire Wrap	24	30	Up/Down (Reversible Stubs)	303A4-100-30	103760815	
			50		303A4-100-50	103900023	
			80		303A4-100-80	103900031	
			100		303A4-100-100	103900049	
			150		303A4-100-150	103900056	
			200		303A4-100-200	103900064	
		22	30		303B4-100-30	103760823	
			50		303B4-100-50	103900072	
			80		303B4-100-80	103900080	
			100		303B4-100-100	103900098	
			150		303B4-100-150	103900106	
			200		303B4-100-200	103900114	
T1 Carrier Pairs			30	Down	303B3-50-30*	103047825	
			50		303B3-50-50*	103047833	
			80		303B3-50-80*	103047841	
			100		303B3-50-100*	103047858	
			150		303B3-50-150*	102867900	
			200		303B3-50-200*	102869385	
Pair Gain Systems			No Stub			303E3-100	103046132
Note: These connectors are not supplied with protector units. Required protector units must be ordered separately.							
* Two 50-pair cables.							

2.02 Adjacent to and associated with each horizontal row of socket-type terminals is a related grouping of five pairs of wire-wrap terminals for connection to central office jumpers. Each individual socket-type terminal is factory wired to a corresponding wire-wrap terminal. A fanning strip for disbursing the jumper wires to the wire-wrap terminal is a molded part of the plastic panel.

2.03 Pair identification is provided by hot stamping block numerals in increments of 5 on the connector panel. The numeric designations are between each horizontal row of pin-grip terminals and associated wire-wrap lugs. Outside plant cable and pair numbers are field stenciled at the bottom by field technicians.

2.04 A 50-pair group of individually recessed gold-plated test contacts is located at the top and bottom of each connector panel. Pair identification for the test terminals is stamped in black numerals under each double row of gold-plated test contacts.

2.05 The test contacts are accessible from the front for attaching the H test connector or P2EF test cord. Special service circuits may be protected at the test field from accidental contact by means of KS-19478, L1 guards.

2.06 The 303A4-100 and 303B4-100 connectors (Figure 2) have factory-connected color-coded 100-pair stub cable, consisting of 22- or 24-gauge tinned-copper PVC-insulated conductors, mylar tape core wrapper, and a corrugated aluminum shield under an olive-gray colored PVC jacket. The reversible stub cable can be placed in either the up or down position to facilitate installation (Table A).

2.07 The 303B3-50 connector (Figure 3) has two factory-connected color-coded 50-pair stub cables (CA-1932), consisting of 22-gauge tinned-copper PVC-insulated conductors, mylar tape core wrapper, and a corrugated aluminum shield under an olive-gray colored PVC jacket.

2.08 **Caution: The stub cable must not be maintained under continuous pressure.** A factory-installed plug at the terminated end of the stub cable prevents moisture from entering the CO splice due to condensation of the cable during changes in temperature.

2.09 The 100-pair 22-gauge stub cable can be identified by a red binder around the core wrapper.

The 50-pair 22-gauge stub cables have identical binder groups and are marked "A" and "B", having a pair count of 1 to 50 and 51 to 100, respectively.

2.10 When the 303B3-50 connector is bolted to the frame, electrical ground continuity is provided between the shield of the stub cable and the frame by the aluminum covered moisture plug and its associated cable clamp. A ground path is established through the mounting screws that secure the connector to the frame. The reversible stub arrangement on the other codes has its own bonding wire which is attached to the connector mounting bracket (Figure 2).

2.11 The stub cables in both 22- and 24-gauge conductor sizes are available in lengths of 30, 50, 80, 100, 150, and 200 feet.

2.12 Guides for selecting the appropriate stub cable gauge for the 303-type connector are covered in AT&T 916-559-220.

2.13 The 303A4-100 connector replaces the 303A3-100 and 303C3-100 connectors. The 303B4-100 connector replaces the 303B3-100 and 303D3-100 connectors. Other replaced codes are 303A2 through 303E2 which have soldered terminals. (See Table B).

TABLE B 303-TYPE CONNECTORS — REPLACED CODES	
STANDARD CODE	REPLACED CODE (DA)
303A4-100	303A2-100 303A3-100 303C2-100 303C3-100
303B3-50	303B2-50
303B4-100	303B2-100 303B3-100 303D2-100 303D3-100
303E3-100	303E2-100

3. INSTALLATION

PRECAUTIONS

3.01 Store the 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, nor to a 5-inch radius more than twice at the same general location.

3.04 To prevent damaging the wire-wrap terminals, do not remove the packing material from the connector until it is ready for installation on the vertical frame.

INSTALLING THE 303-TYPE CONNECTORS

3.05 The 303-type connectors are installed on conventional and low-profile conventional distributing frames. AT&T 201-220-101 describes the conventional distributing frames. The capacities of vertical main frames equipped with 303-type connectors are shown in Table C.

TABLE C 303-TYPE CONNECTOR TERMINATION CAPACITIES	
HEIGHT OF VERTICAL MAIN FRAME	NO. OF TERMINATIONS PER VERTICAL
8 Feet	400
9 Feet	500
11 Feet, 6 inches	600
12 Feet, 5 inches	600
14 Feet, 5 inches	800

3.06 The 303-type connector cannot be used on the modular protector frames.

3.07 The 303-type connector is furnished with a mounting bracket to facilitate installing the connector on the frame vertical. The bracket shown in Figure 4 has three mounting slots spaced to align with the holes on standard main frame verticals.

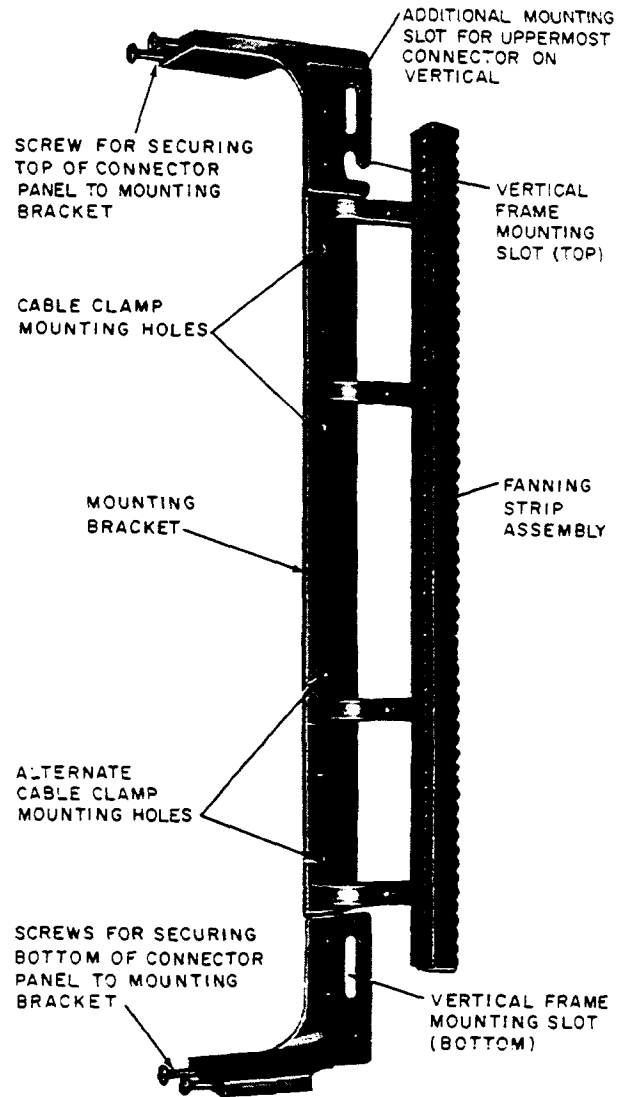


Figure 4—303-Type Connector Mounting Bracket

3.08 A number of nonstandard frames exist in telephone operating companies. These frames may have hole spacings on the vertical mounting bar that differ from those of standard frames. Special local measures, such as drilling the frame or the mounting bracket or fabricating an adapter bar, may be required to install 303-type connectors on these frames.

3.09 In a location where the stub cables are dressed downward, install the 303-type connector as follows:

- (1) Open the cable entrance slots or ferrules in the floor, consistent with local instructions.
- (2) Mark the cable number and pair count of each connector stub cable on a linen tag or glass tape and attach to the stub cable before placing it through the floor to the cable vault.
- (3) **Caution: If the stubs are not tagged, cable identification procedures will be required to identify each connector before splicing.**
- (4) Remove the connector from the shipping carton and route the stub cable into the cable vault from the vertical side of the distributing frame. Remove any cable twist that may be present.
- (5) Attach the 303-type connectors to the left side of the distributing frame vertical mounting bar, beginning at the lower end of the frame. Use the screws furnished with the connectors. Place only

one mounting screw (the top screw) in the vertical mounting bar for each connector until the connectors are mounted. For the uppermost connector on each vertical, use the additional mounting slot instead of the hooked slot. This will eliminate a 3/4-inch space between the top two connectors that would otherwise be present on frames originally arranged for mounting C-50 and C-52 protectors. Place the remaining mounting screws.

(6) **Warning: If a vertical is partially filled, special care must be taken not to disturb the cross-connections while placing the stub.**

(7) Tighten the mounting screws after all the connectors are placed on the vertical mounting bar.

(8) Lash the stub cables to the transverse arms on the frame in a neat manner.

(9) Seal the cable entrance slots or ferrules in the floor consistent with local instructions and/or fire protection practices.

3.10 In a location where the stub cables are dressed upward, install the 303-type connectors as follows:

- (1) The connectors are mounted in the same way as described in paragraph 3.09, (2) through (8), except that the stub cables are routed to the top of the frame.

3.11 Figure 5 illustrates a main frame with twenty-four 303-type connectors installed, thus providing for the termination of 2400 cable pairs. The

vacant frame verticals are for future connector installations.

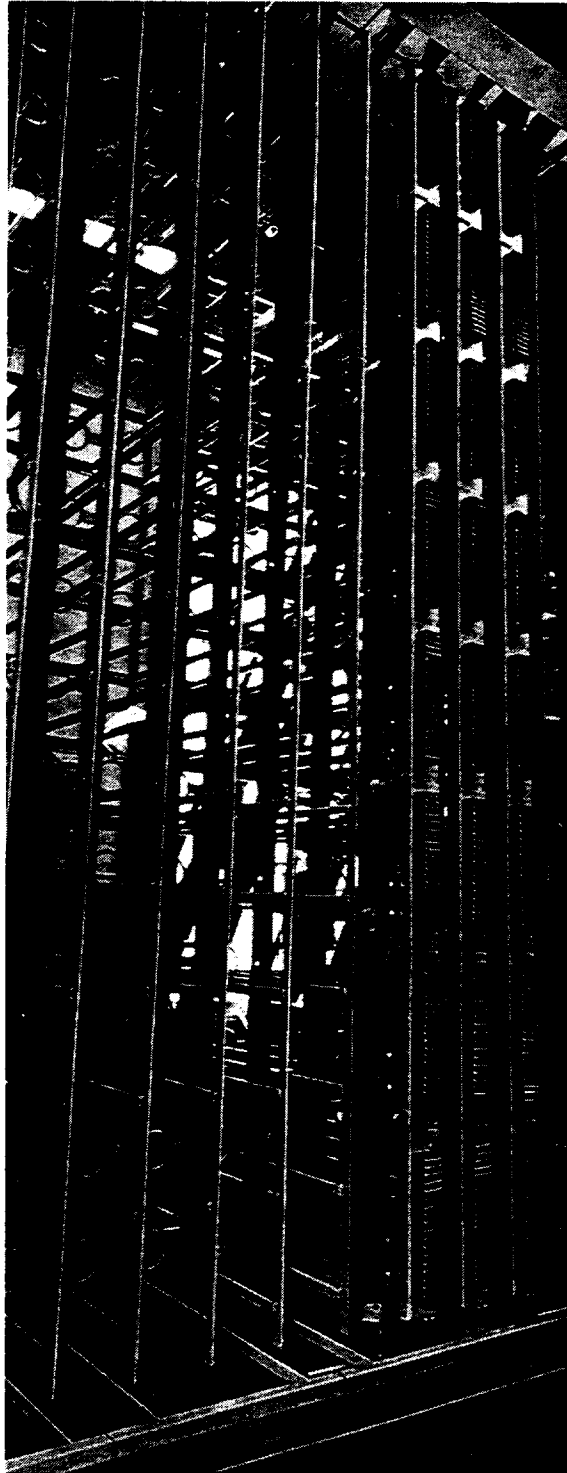


Figure 5—303-Type Connector Installed on Main Distributing Frame

MARKING THE 303-TYPE CONNECTOR

3.12 Use the transfer B&W stenciling kit as described in AT&T 081-860-105 for marking the cable and pair numbers on the connector panel.

3.13 Designation pins for use with special circuits are coded as listed in Table D.

(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.

3.14 When a split cable count occurs on a 303-type connector, the AT-8697-F designation strip is required as an accessory to the connector for cable and cable pair identification.

3.15 The AT-8697-F designation strip is a white polyvinyl chloride card, approximately 2 inches wide and 15 inches long, that is riveted to a full-length narrow steel hinge. The plastic card is lined vertically and horizontally to correspond to the 5 columns and 20 rows of protector locations on the 303-type connector.

3.16 As shown in Figure 6, the hinged portion of the designation strip is mounted to the left side of the 303-type connector by utilizing the three existing screws on the ground bar.

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

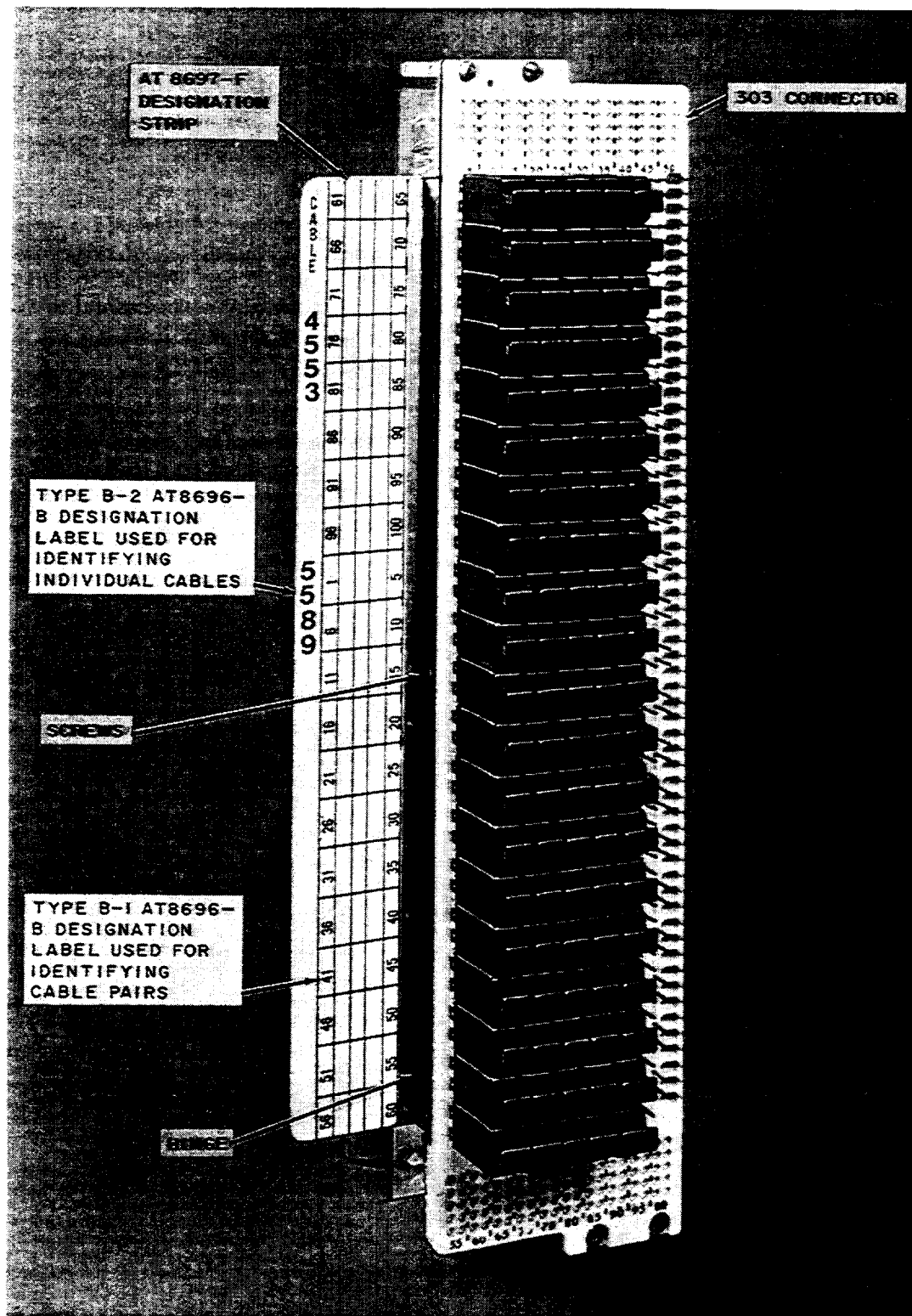


Figure 6—AT-8697-F Designation Strip Mounted on 303-Type Connector

3.17 The AT-8696-B designation labels are affixed to the AT-8697-F designation strip (Figure 7) for identifying the end of one cable and the beginning of

another. The labels are preprinted with black numerals and are made of a thin polyvinyl chloride film which is backed with a pressure sensitive adhesive.

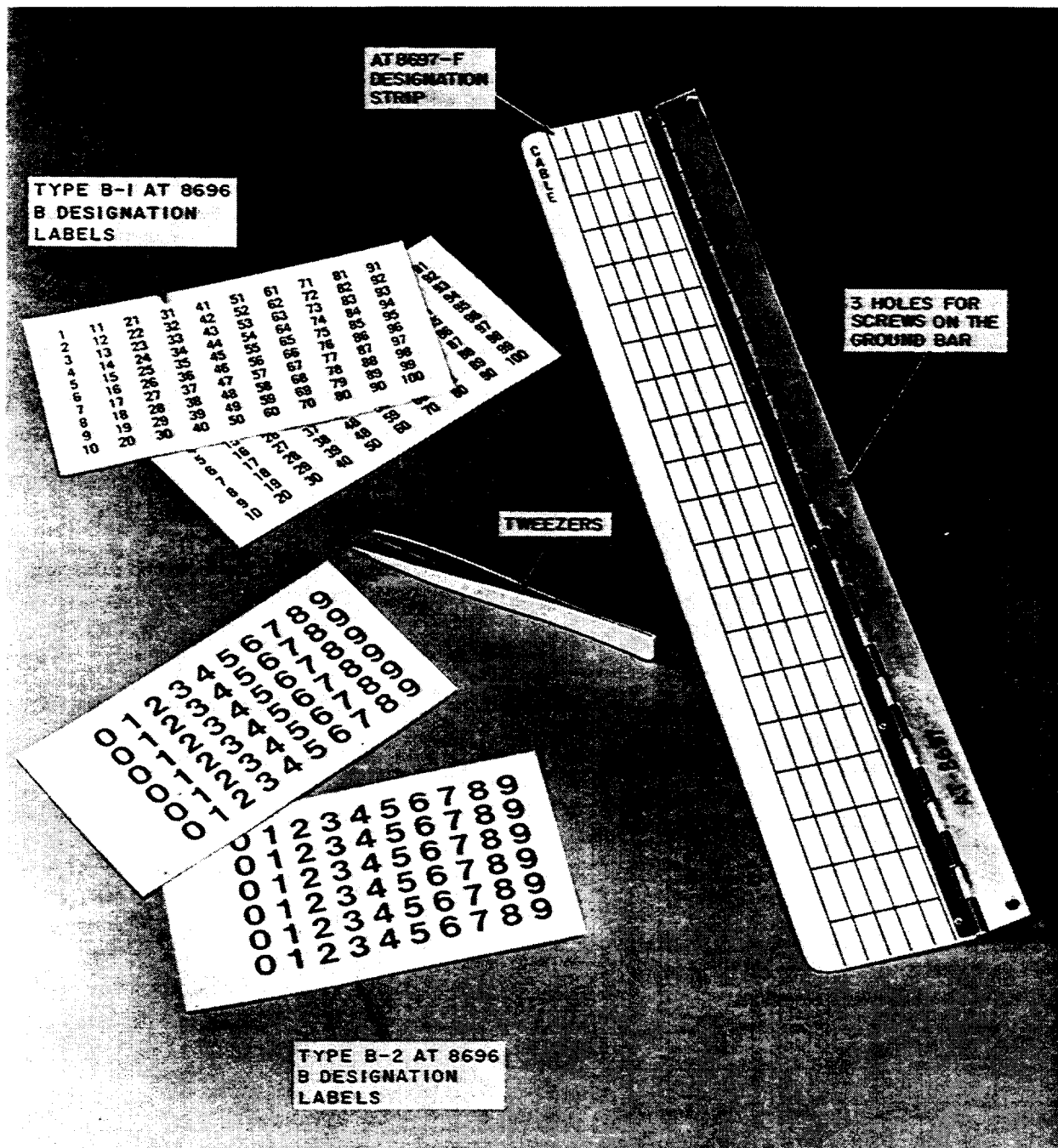


Figure 7—AT-8697-F Designation Strip and AT-8696-B Designation Label

3.18 The AT-8696-B designation labels are furnished in two different sizes. Type B-1 is 1/4-inch wide by 1/2-inch long and has 3/16-inch high black numerals. Type B-2 is 3/8-inch square and has 5/16-inch high black numerals. Both type labels are available in either a yellow (B-1Y) or B-2Y) or white (B-1W or B-2W) background to distinguish separate cable identities.

3.19 The type B-1 AT-8696-B designation labels are used to identify the cable pairs and are affixed to the respective lined blocks on the AT-8697-F designation strip. A complete set of type B-1 labels consists of 27 sheets, each sheet containing 100 labels, and is consecutively numbered from 1 to 2700.

3.20 The type B-2 AT-8696-B designation labels are used to identify the individual cables and are affixed under the "cable" heading on the AF-8697-F designation strip. Each sheet of labels contains 6 rows of numerals from 0 to 9 and 12 blank labels. The black labels are included in the event a cable suffix letter must be marked to identify a cable.

3.21 The AT-8696-B designation labels are furnished on paper-backed sheets and are scored for ease of removal. Pointed tweezers are recommended for removing the labels from the sheets and for applying the labels to the designation strip.

3.22 Labels should be applied carefully because after they adhere to the designation strip they are difficult to reposition or remove. If a label must be changed, it may be more convenient to apply a new label over the existing one rather than remove it.

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:

PRACTICE	TITLE
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 practice covers only those parts that can be replaced in the field. No attempt should be made to replace parts not designated.

4.03 Exercise extreme care when removing, connecting, and replacing terminals to prevent damage to adjacent connections and to avoid 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. Except in cross-connection fields, 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. In cross-connection fields, the wire shall be rerun to provide sufficient length for a solderless wrapped connection (AT&T 069-132-811).

TOOLS AND MATERIALS

4.05 The following is a list of the tools and materials used in repair procedures:

CODE/SPEC NO	DESCRIPTION
AT-7860	B long-nose pliers
658B	Terminal extractor
AT-7825	4-inch E screwdriver
—	Off-set screwdriver
—	Wrench, 5/16-inch box or open-ended
401787726	Cable ties
KS-6320	Orange stick
KS-16748	Insertor
—	Sleeving
AT-7424	E rosin-core solder
KS-8740	Soldering copper
KS-16363,L3	Wire-wrap gun

CODE/SPEC NO	DESCRIPTION
KS-20827,L1 or KS-20551	Wire unwrapping tool
R-2916	Twine.

ground, test, and cross-connect terminals. The following paragraphs detail the removing and replacing of these terminals.

Tip or Ring Terminal

4.07 The 840212476 terminal (solder-plated) and the 841634207 terminal (gold-plated) have been rated DA (Discontinued Availability) on all 303-type connectors and replaced with the 842360562 terminal (Figure 8) which has a gold-plated stripe inside the socket position.

REMOVING AND REPLACING DEFECTIVE TERMINALS

4.06 Four types of terminals are replaceable on the 303-type connector. They are the tip or ring,

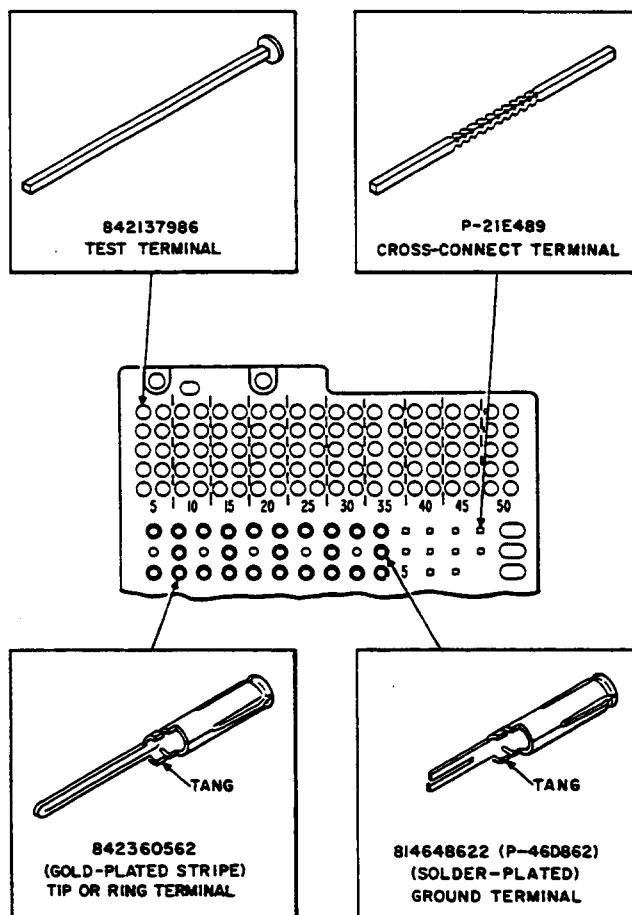


Figure 8—303-Type Connector — Replacement Terminals

4.08 To remove a broken or damaged tip or ring terminal, proceed as follows:

- (1) On the wiring side of the connector, tag and remove the leads from the terminal to be replaced.
- (2) Using the B long-nose pliers, close the tangs on the terminal or break the terminal flush with the back side of the connector panel.
- (3) Remove the terminal from the front side of the connector panel.

4.09 To replace the 842360562 tip or ring terminal (Figure 8), proceed as follows:

- (1) On the front of the connector panel, properly orient the new terminal and insert it into the same hole from which the old terminal was removed.
- (2) Using the fingers, push the terminal into the hole as far as possible.
- (3) Insert a protector unit into the connector to hold the terminal in place.
- (4) On the wiring side of the connector, use the B long-nose pliers to 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.
- (5) Using the B long-nose pliers, carefully spread the tangs of the terminal to lock the terminal in place in the connector panel.
- (6) Reconnect all leads to the terminal.

Note: Prior to making connections to the terminal, refer to paragraph 4.04.

- (7) Remove the protector unit.

Ground Terminal

4.10 To remove the 814648622 (P-46D862) ground terminal (Figure 8), proceed as follows:

- (1) On the wiring side of the connector, use a soldering copper to remove all solder from the terminal to be replaced.

- (2) Follow the procedure outlined in paragraph 4.08, Steps (2) and (3).

4.11 To replace the 814648622 (P-46D862) ground terminal, proceed as follows:

- (1) Follow the procedure outlined in paragraph 4.09, Steps (1) through (5).
- (2) Using the soldering copper, solder the terminal to the ground bus.

Note: Prior to making connections to the terminal, refer to paragraph 4.04.

- (3) Remove the protector unit.

Test Terminal

4.12 To remove the 842137986 test terminal (Figure 8), proceed as follows:

- (1) On the wiring side of the connector, tag and remove the leads from the terminal to be replaced.
- (2) Using a new terminal or a sharp instrument, such as a test probe, push the broken or damaged terminal through the connector about 1/8 inch.
- (3) On the test contact side of the connector, grasp the terminal head with the B long-nose pliers and pull the terminal from the connector block.

4.13 To replace the 842137986 test terminal, proceed as follows:

- (1) On the front side of the connector, insert the new terminal into the same hole from which the old terminal was removed.
- (2) Using the fingers, push the terminal into the hole as far as possible.
- (3) Using an orange stick, push the terminal into its seated position on the connector.
- (4) On the wiring side of the connector, reconnect all leads.

Note: Prior to making connections to the terminal, refer to paragraph 4.04.

Cross-Connect Terminal

4.14 To remove the P-21E489 cross-connect terminal (Figure 8), proceed as follows:

- (1) On the front and rear of the connector, tag and remove all leads from the terminal to be replaced.
- (2) If the wire is soldered, remove all solder from the terminal using a soldering copper.
- (3) Using the B long-nose pliers or the 658B terminal extractor, carefully remove the terminal from the front of the connector panel.

Note: Refer to Practice 201-220-801 for use of the 658B terminal extractor.

4.15 To replace the P-21E489 cross-connect terminal, proceed as follows:

- (1) On the front side of the connector, insert the new terminal into the same hole from which the old terminal was removed.
- (2) Using the B long-nose pliers or the KS-16748 inserter, properly seat the terminal in the connector block.

Note: Instructions for use of the KS-16748 inserter are given in Practice 201-220-801.

- (3) On the front and rear of the connector, reconnect all leads to the terminal.

Note: Prior to making connections to the terminal, refer to paragraph 4.04.

5. REPAIR OF BROKEN OR DAMAGED WIRE CONDUCTORS

5.01 To repair a broken or damaged wire conductor leading from the moisture plug of the stub cable, proceed as follows:

- (1) Identify the wire conductor to be repaired leading from the moisture plug of the stub cable.
- (2) Remove the wire-wrap connection at the corresponding terminal.
- (3) Cut the defective portion of the wire and splice a new length of wire to the remaining section. Provide sufficient length for the solderless wrapped connection.
- (4) Rerun the new length of wire back to the corresponding terminal.
- (5) Reconnect the wire conductor to the terminal.

6. TESTING

PROTECTOR UNITS

6.01 The 3-, 4-, and 5-type protector units are used with the 303-type connectors. The protector units are ordered separately from the connectors. The 3-, 4-, and 5-type protector units are described in AT&T 201-208-100.

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

6.03 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.*

6.04 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 9) 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 10) 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 test procedures, see AT&T 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 11 and 12).

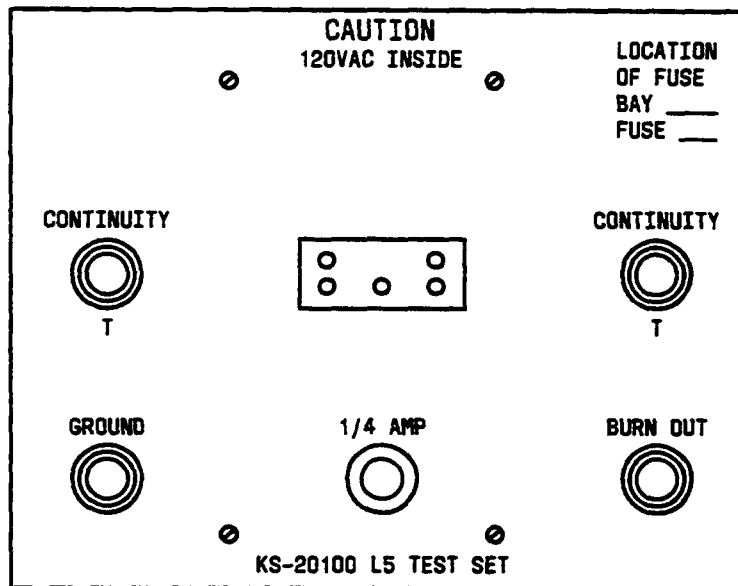
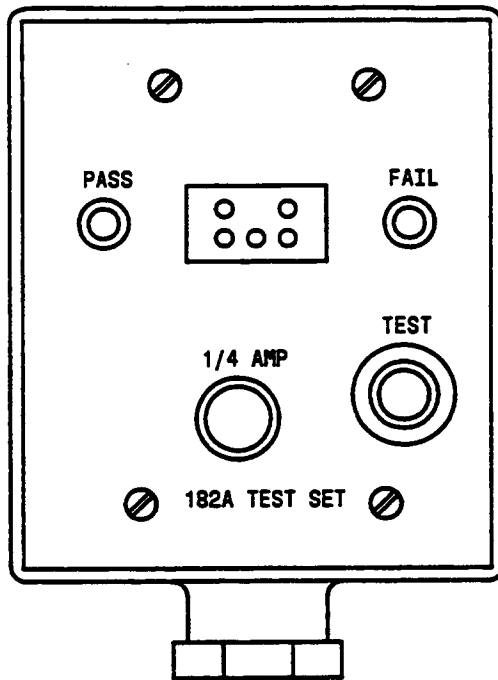


Figure 9—KS-20100, L5 Test Set



182A Test Set

Figure 10—182A Test Set

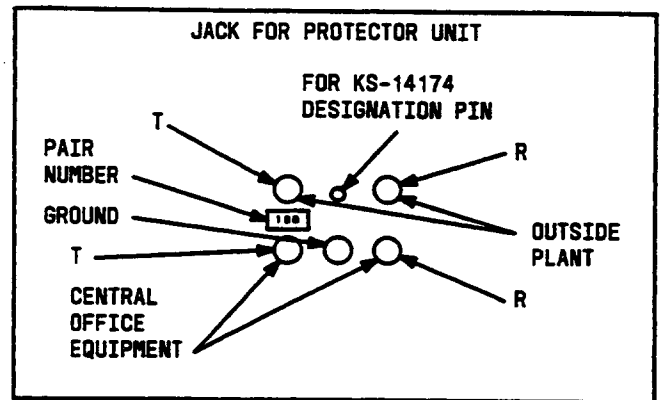


Figure 11—Jack For Protector Unit on 302- and 308-Type Connectors

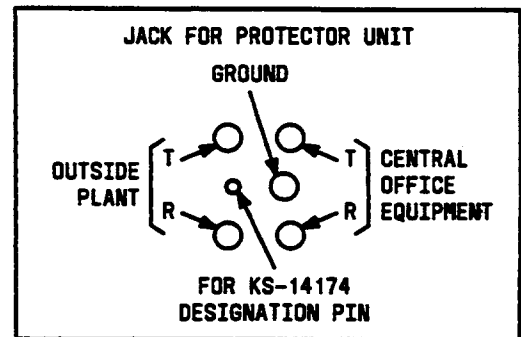


Figure 12—Jack For Protector Unit on 303-, 305-, 307-, 309-, 310-, 310M-, and 311-Type Connectors

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

6.05 The H test connector, the C-4920 multiple pair test connector, and cords and plugs may be used with the 303-type connectors for testing purposes. Warning markers, guards, insulators, and indicators are used on special service circuits to provide

additional visibility and protection. See Practice 201-208-106 for description and use of these items.

6.06 The H test connector shown in Figure 13 is used on the 50-pair test contacts located at the top and bottom of each connector panel.

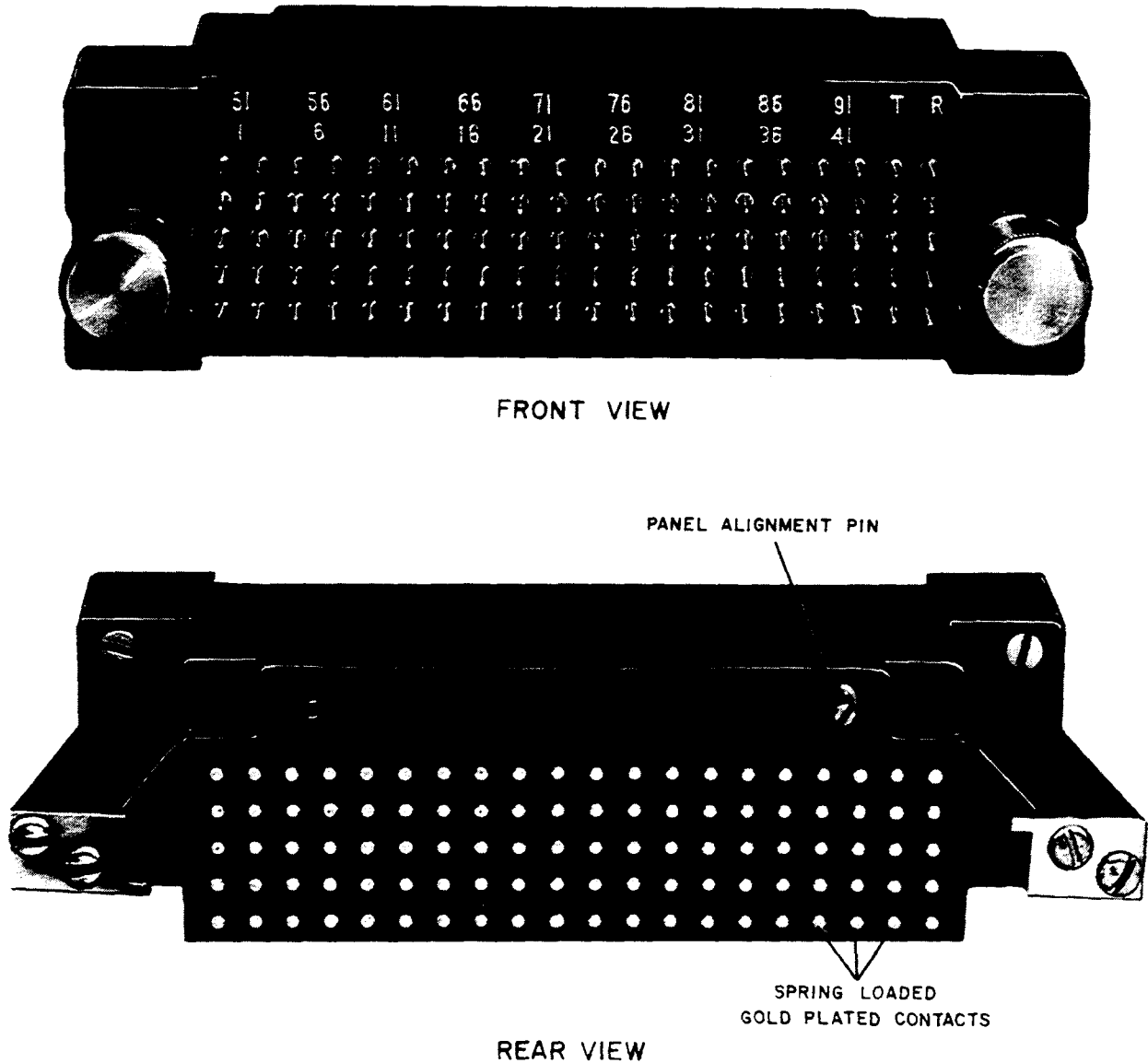


Figure 13—H Test Connector

6.07 The P2EF test cord (Figure 14) is available for testing individual cable pairs at the test terminal field without installing the H test connector. The 453A plug of the P2EF test cord is pressed into the holes containing a pair of recessed terminals. The test cord is used for shorting the tip and ring conductors and grounding the tip and/or ring conductors when testing of a few pairs is required.

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

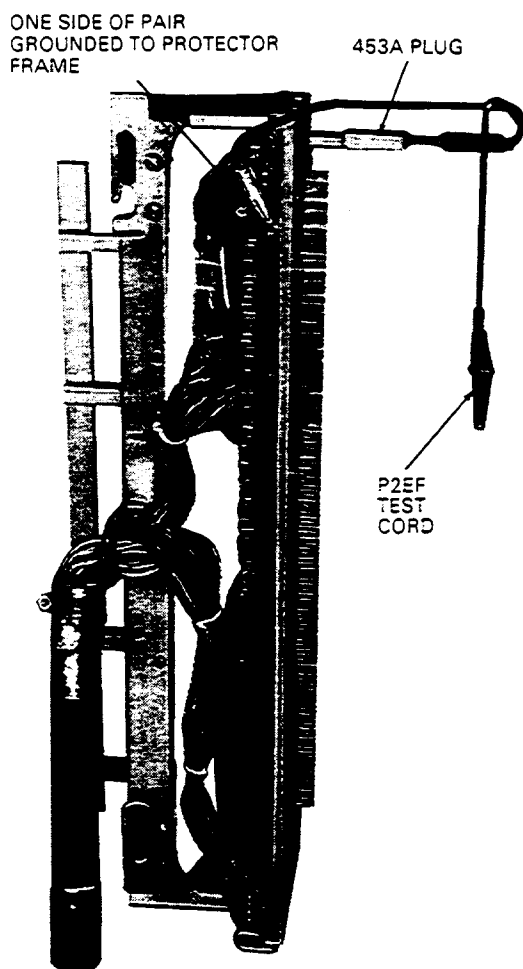


Figure 14—P2EF Test Cord for Testing Individual Pairs

6.08 The Communication Technology Corporation C-4920 multiple pair test connector (Figure 15) is used on the 303-type connector for pair identification.

6.09 The test connector mates with the 50-pair test field of the 303-type connector. The plastic housings are factory-marked to indicate pair count and proper orientation on the test field. The test connector and KS-19162 connectors are double numbered; the test connector 1-50 or 51-100, and the KS-19162 connectors 1-25, 51-75 and 26-50, 76-100.

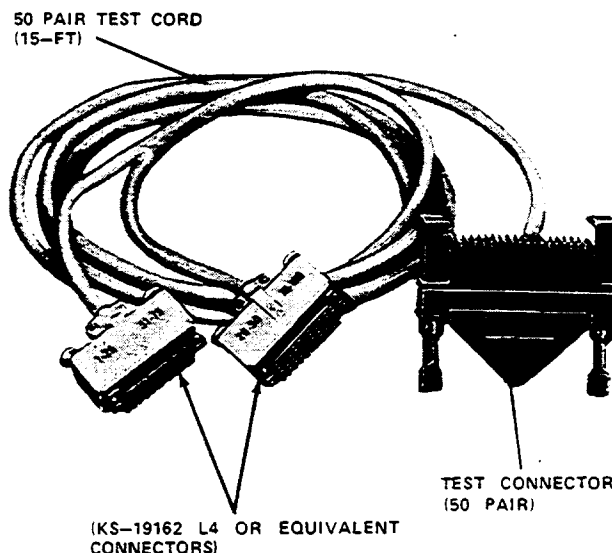


Figure 15—C-4920 Multiple Pair Test Connector — For 303-Type Connectors

6.10 To mount the test connector, spread the wing clamps (Figure 16) and fully insert the test pins into the 303-type connector test field jacks. Figure 17 shows the test connector mounted on a 303-type connector.

6.11 The test connector should be handled with extreme care to prevent deforming or breaking the test pins.

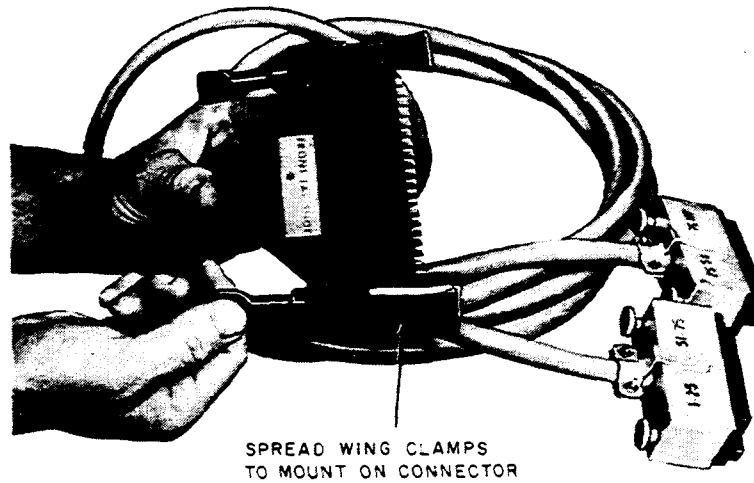


Figure 16—Test Connector Clamps

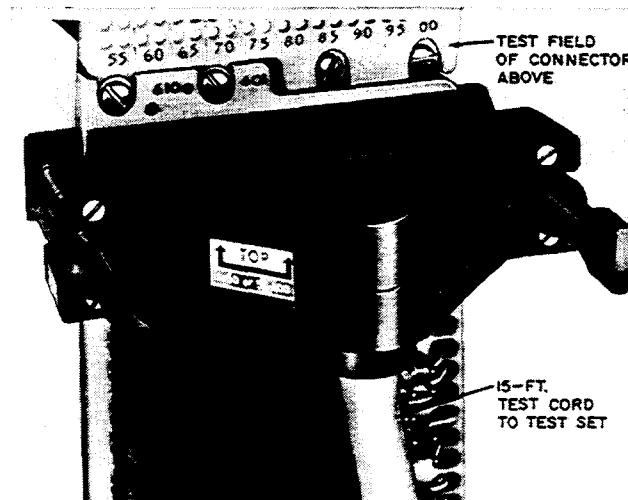


Figure 17—Test Connector Mounted on Connector Test Field

7. ASSOCIATED EQUIPMENT AND REFERENCES**ASSOCIATED EQUIPMENT**

3-, 4-, and 5-Type Protector Units

AT-8697F Designation Strip (Comcode 401246145)

AT-8696B Labels — Type B1 (Comcode 401885678),
Type B2 (Comcode 401885660)**Test Equipment (Practice 201-208-106)**

H Test Connector (AT-8461) (Comcode 400359758)

C-4920 Test Connector (Comcode 401887252)

P2DB Test Cord (Comcode 101433852)

P2EF Test Cord (Comcode 102808581)

W2FH Test Cord (Comcode 101616399)

W2FM Test Cord (Comcode 101616449)

W2GL Test Cord (Comcode 101945590)

W2GM Test Cord (Comcode 102490935)

W4CJ Test Cord (Comcode 101898633)

W4CM Test Cord (Comcode 101981603)

Warning Markers, Guard, Indicators, and Insulators (AT&T 201-208-106)

E Warning Marker (Comcode 400614202)

E Sign (Comcode 400359196)

KS-19478 Guard (Comcode 997161617)

KS-6660 Indicator (Comcode 996698239)

KS-16847 Indicator (Comcode 997726088)

KS-16604 Insulator (Comcode 401299474)

KS-21168 Insulator (Comcode 401206180)

REFERENCES**PRACTICE****TITLE**

069-132-811

Punched or Wire Terminals (Not
Having Notches or Perforations)
— Method of Making and
Removing Wrapped Connections

069-140-811

Soldered Connections Using Sol-
dering Coppers — Method of
Making and Removing**PRACTICE****TITLE**

081-860-105

Transfer Stenciling Kits —
Description and Use

106-315-119

Multiple Pair Test Connectors
for 302- and 303-Type Connec-
tors

201-208-100

3, 4-, and 5-Type Protector Units
— Description, Use, Mainte-
nance, and Test Procedures

201-208-103

Tools and Aids — Distributing
and Protector Frames

201-208-106

Test Equipment, Cords, Plugs,
Warning Markers, Guards, Insu-
lators, and Indicators — Descrip-
tion and Use

201-220-101

Conventional Distributing
Frames — Description

201-220-301

Terminal Strips — Method of
Making Connections

201-220-501

Conventional Distributing
Frames — Inspections

201-220-801

Terminal Strips — Repair Proce-
dures

636-200-011

Marking Main Frames — Pair
and Cable Numbers

916-559-770

Cable Terminating Facilities —
Central Office Type — General**8. ISSUING ORGANIZATION**

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