

**303-, 305-, AND 310-TYPE CONNECTORS
ASSOCIATED CORDS, PLUGS, AND TEST CONNECTORS**

DESCRIPTION

CONVENTIONAL DISTRIBUTING FRAMES

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| Figures | | 1. GENERAL | |
| 1. KS-21386, L1 Miniature Plug Adapter | 3 | 1.01 This section describes the cords, plugs, and test connectors used with the 303-, 305-, and 310-type connectors. | |
| 2. H Test Connector (AT-8461) (For 303-Type Connectors) | 4 | 1.02 This section is reissued for the reasons listed below. Since this is a general revision, revision arrows normally used to denote significant changes have not been used. The Equipment Test List is not affected. | |
| 3. M Test Connector (AT-8823) (For 305-Type Connector) | 5 | (1) Change title from "303- and 305-Type Connectors—Associated Cords and Plugs" to "303-, 305-, and 310-Type Connectors Associated Cords, Plugs, and Test Connectors—Description—Conventional Distributing Frames" | |
| 4. N Test Connector (AT-8882) (For 305-Type Connector) | 6 | (2) Add information throughout section to describe the T test connector and pick test panel used on the 310-type connector | |
| 5. C-4920 Multiple Pair Test Connector | 6 | (3) Change designation and title of Table B—"Cords Used with 303- and 305-Type Connectors" to Table A—"Cords" and add information on the P2FM cord used with the 310-type connector | |
| 6. T Test Connector (AT-8987) (Used on 310-Type Connector) | 7 | (4) Change designation and title of Table A—"Test Connectors Used with 303- and 305-Type Connectors" to Table B—"Test Connectors" and add information on T test connector and pick test panel used with the 310-type connector | |
| 7. Pick Test Panel—(Used with T Test Connector) | 8 | | |
| 8. T Test Connector (AT-8987) Mounted on a 310-Type Connector | 9 | | |
| 9. W2FH and W2FM Cords | 10 | | |

NOTICE

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- (5) Change numerical designation from Fig. 6 to Fig. 9 and add new Fig. 6, 7, and 8.

1.03 Cords, plugs, and test connectors used on other than 303-, 305- and 310-type connectors are covered in Sections 201-206-102, 201-207-102, 201-208-102, and 201-216-102.

1.04 Test sets, jacks, and cords (except the P2EF and P2FM cords) used on the 303-type connectors are also used on the 305- and 310-type connectors. The P2EF cord is used only on 303- and 305-type connectors. The P2FM cord is used only on 310-type connectors. The test connectors for the 303-, 305- and 310-type connectors are different.

2. CORDS AND PLUGS

2.01 Table A lists the cords used with the connectors. It also contains an illustration of each cord and defines its use.

2.02 A KS-21386, L1 miniature plug adapter (Fig. 1) is available to utilize test cords which have a standard size end finish (464A plug) for use with miniature jacks. The W2FM, W4CJ, and W4CM cords can all be adapted to function as W2HA, W4CT, and W4CU cords, respectively, by using the KS-21386, L1 adapter. The adapter also allows frame personnel to plug headsets, that are equipped with the 464A plugs, into miniature jacks.

3. TEST CONNECTORS

A. General

3.01 This part describes the H, M, N, and T test connectors, the pick test panel, the Communications Technology Corporations C-4920 multiple pair test connector (see Section 106-315-119) and covers their use in testing outside plant cable pairs terminated on 303-, 305-, or 310-type connectors. Table B lists the various test connectors. The H test connector mounts on the test terminal field of the 303-type connector. The M and N test connectors mount on the test terminal field of the 305-type connector. The T test connector mounts on the test terminal field of the 310-type connector. The pick test panel is connected to the T test connector. The C-4920 multiple pair test connector connects the test terminal field of the 303-type connector to automatic pair identification equipment.

B. Description

3.02 The H test connector (AT-8461) shown in Fig. 2 is used with the 303-type connector. It contains 100 (50 pairs) spring loaded contacts which provide access to the recessed test terminals of the 303-type connector. The H test connector should not be inverted from one test terminal field to another. Both sets of pair numbering on the test connector have the same orientation.

3.03 The M test connector (AT-8823) shown in Fig. 3 is used with the 305-type connector. The test connector housing consists of a plastic shell in which 200 (100 pairs) spring-loaded contacts are internally connected to two 50-pair, 15-foot long cables. Each of the cables terminates in two KS-19162, L4 (or equivalent) connectors for attachment to automatic pair identification equipment. The four connectors are numbered 1 through 25, 26 through 50, 51 through 75, and 76 through 100 to identify the respective cable pair count.

3.04 The N test connector (AT-8882) shown in Fig. 4 is used with the 305-type connector. The test connector has the test field spikes at right angles to the spring loaded contacts to facilitate testing due to the orientation of the 305-type connector mounting on the frame. The test connector is mounted to the connector test terminal field with captive thumb-screws. Connection is made to all 200 recessed gold-plated test terminals (100 pairs), providing a means of checking one cable pair at a time.

3.05 The C-4920 multiple pair test connector shown in Fig. 5 consists of a plastic shell in which 100 gold-plated pins (50 pairs) are housed. These gold-plated pins are internally connected to a 50-pair test cord. The 15-foot test cord divides into two 25-pair branches which terminate in two KS-19162, L4 (or equivalent) connectors, for attachment to automatic pair identification equipment.

3.06 The T test connector (AT-8987), shown in Fig. 6 and designed for use on the 310-type connector, consists of a housing in which 200 replaceable, spring-loaded contacts are connected internally to two 50-pair sheathed test cords or cables. Each cable is 15 feet long and divided into two 25-pair branches which terminate on KS-19162, L4 connectors for attachment to automatic pair identification equipment.

3.07 A pick test panel assembly (Fig. 7) is supplied (with the T test connector) and can be mated

with the four KS-19162, L4 connectors for pair-at-a-time testing. The T test connector and pick test panel come packed in the AT-8854F connector case.

C. Use

Warning: All test connectors must be handled and used carefully to avoid damage and contamination to spring loaded contacts and/or test field spikes.

3.08 The H test connector or C-4920 multiple pair test connector is placed onto a 50-pair test terminal field of the 303-type connector. The test connectors are held in place by hooks over the rear of the connector panel. The H test connector provides access for pair-at-a-time testing. The C-4920 test connector provides access for testing the entire 50-pair test terminal field when attached to automatic pair identification equipment.

3.09 The M and N test connectors are placed onto the 100-pair test terminal field of the 305-type connector. These test connectors are held in place by captive thumbscrews. The M test connector provides access for testing the entire 100-pair test terminal field where attached to automatic pair identification equipment. The N test connector provides access to the 100-pair test terminal field for pair-at-a-time testing.

3.10 The T test connector is held in place on the 310-type connector (Fig. 8) by captive thumbscrews and provides access to the 100-pair test terminal field for attachment to automatic pair identification equipment. The test panel is attached to the KS-19162, L4 connectors of the T test connector for pair-at-a-time testing.

3.11 The test connectors will not make contact with the test terminals on any special service pair that is protected and covered with a KS-19478 or KS-22596 guard.

3.12 The spikes of the H and N test connectors accommodate the chuck-type connectors of the

W2FH and W2FM cords (Fig. 9 and Table A) for connection of outside plant or other test equipment.

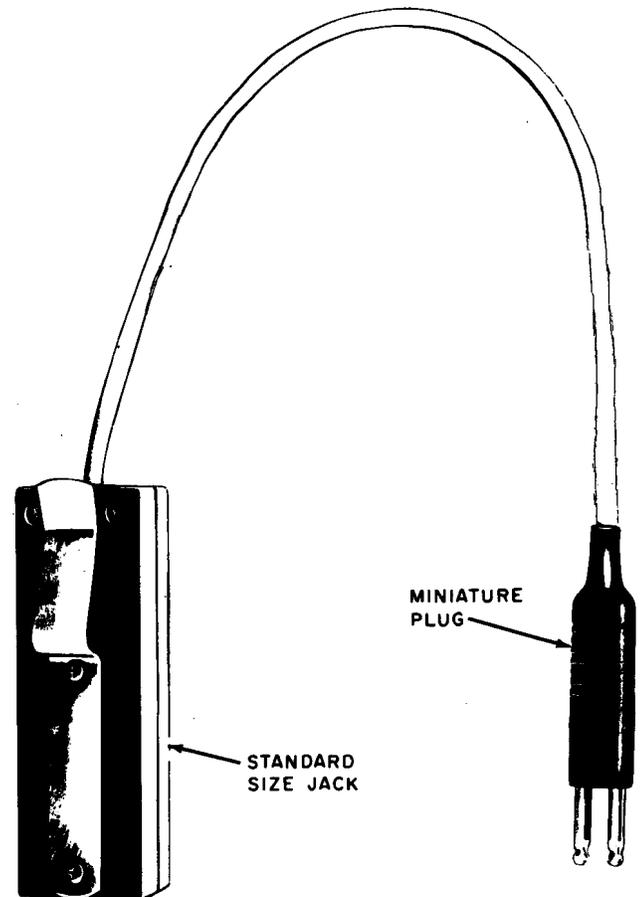
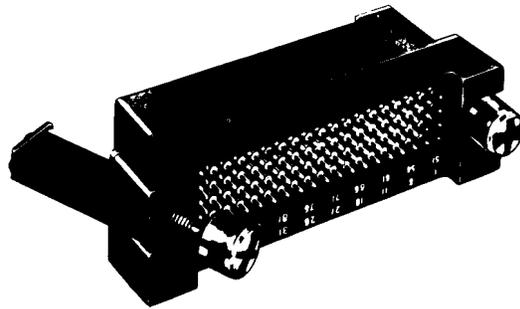
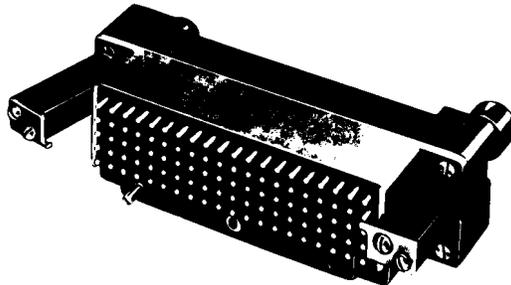


Fig. 1—KS-21386, L1 Miniature Plug Adapter



FRONT VIEW



REAR VIEW

Fig. 2—H Test Connector (AT-8461) (For 303-Type Connectors)

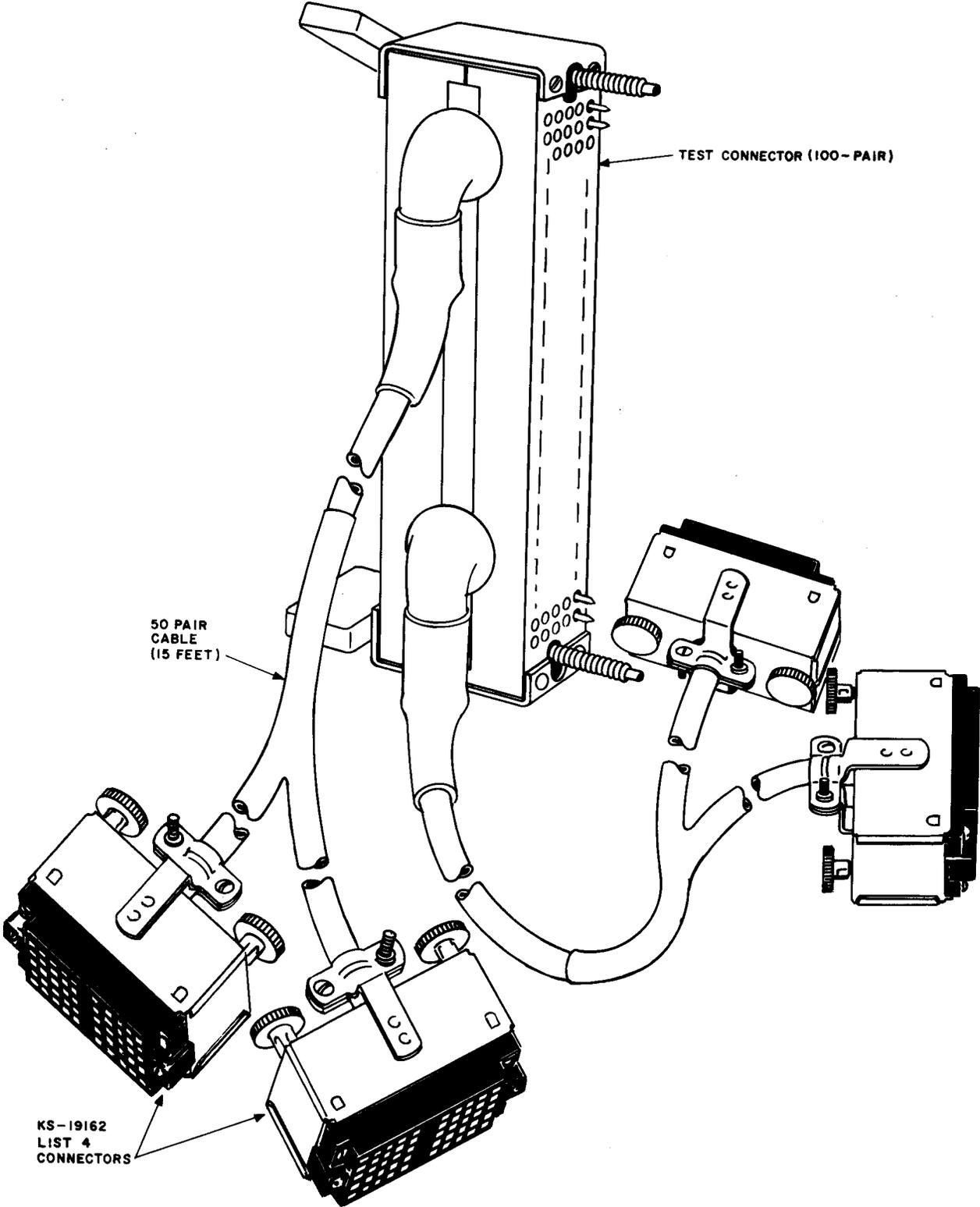


Fig. 3—M Test Connector (AT-8823) (For 305-Type Connector)

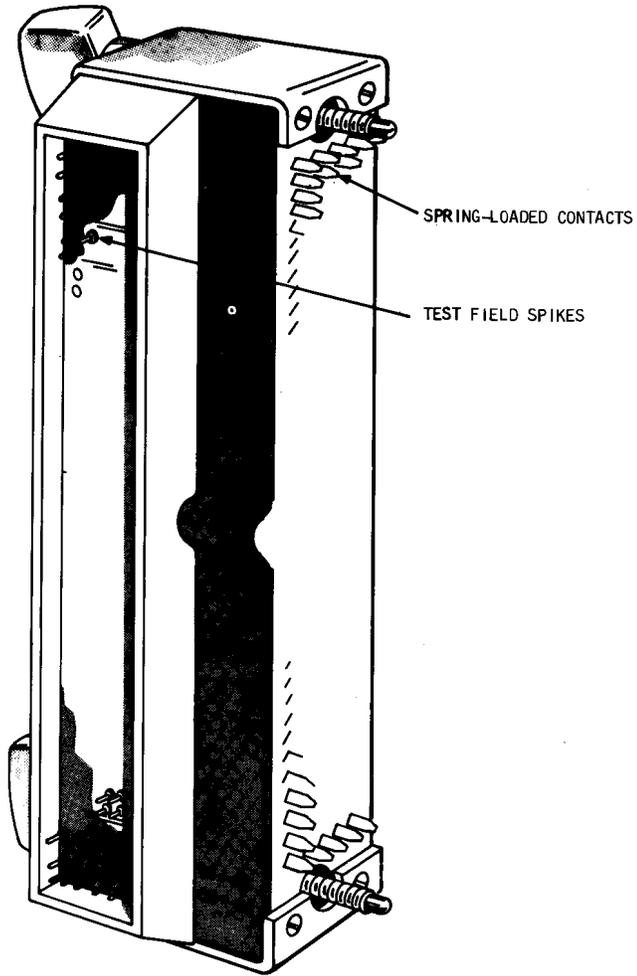


Fig. 4—N Test Connector (AT-8882) (For 305-Type Connector)

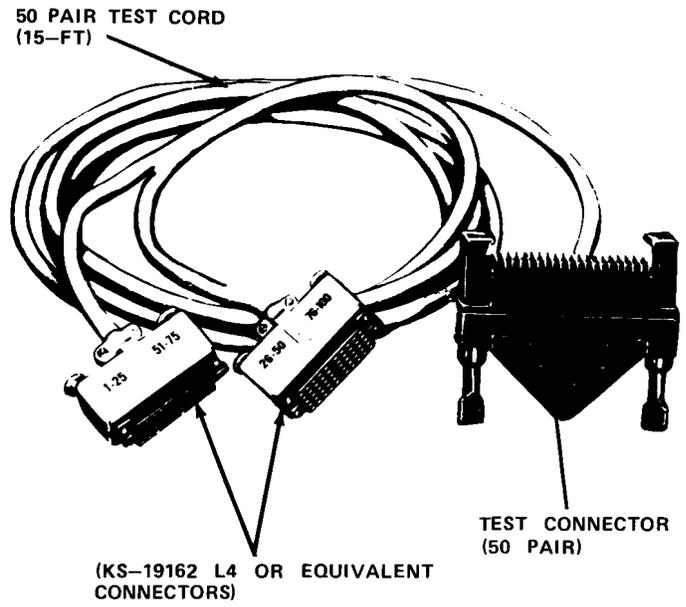


Fig. 5—C-4920 Multiple Pair Test Connector

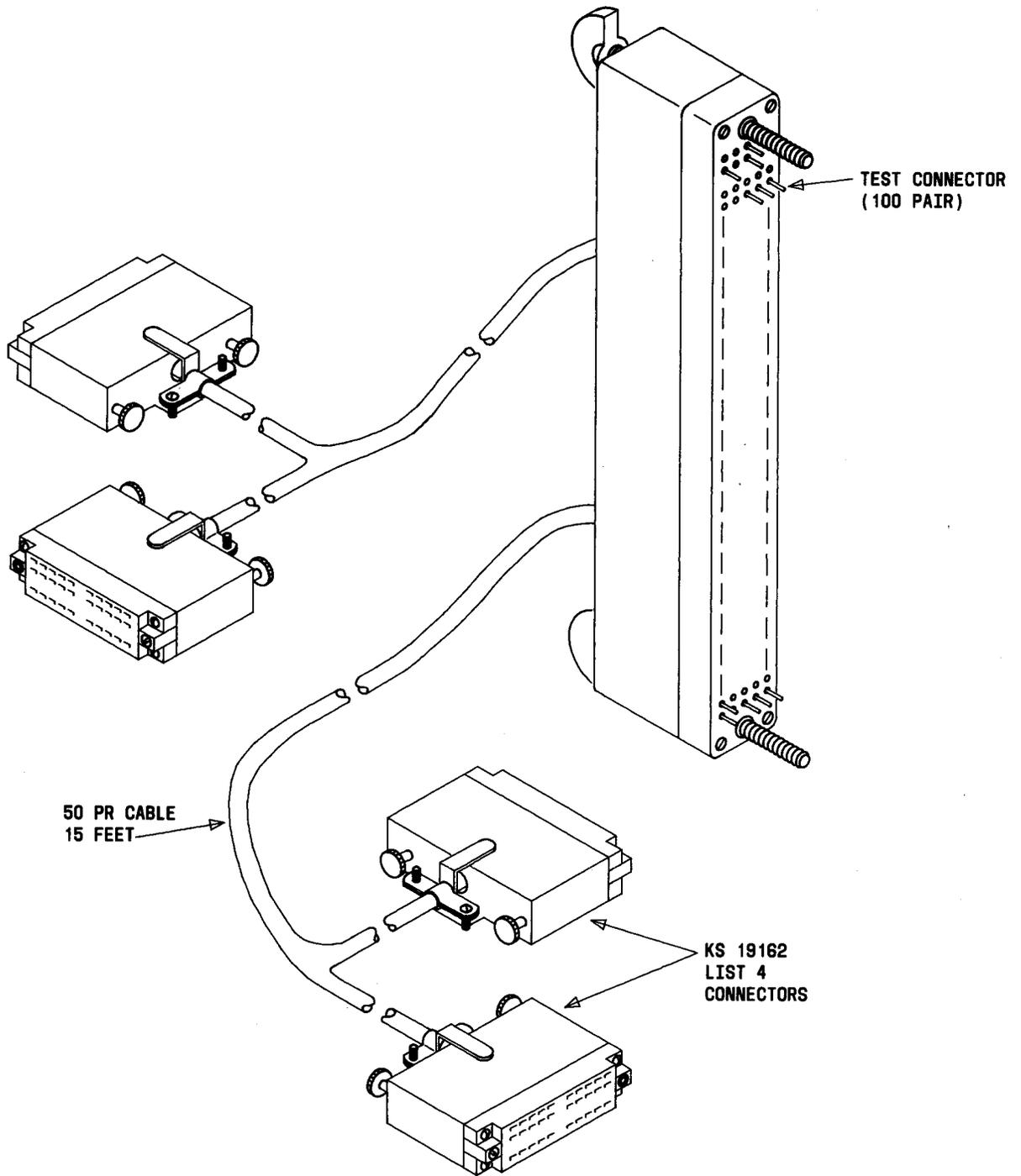


Fig. 6—T Test Connector (AT-8987) (Used on 310-Type Connector)

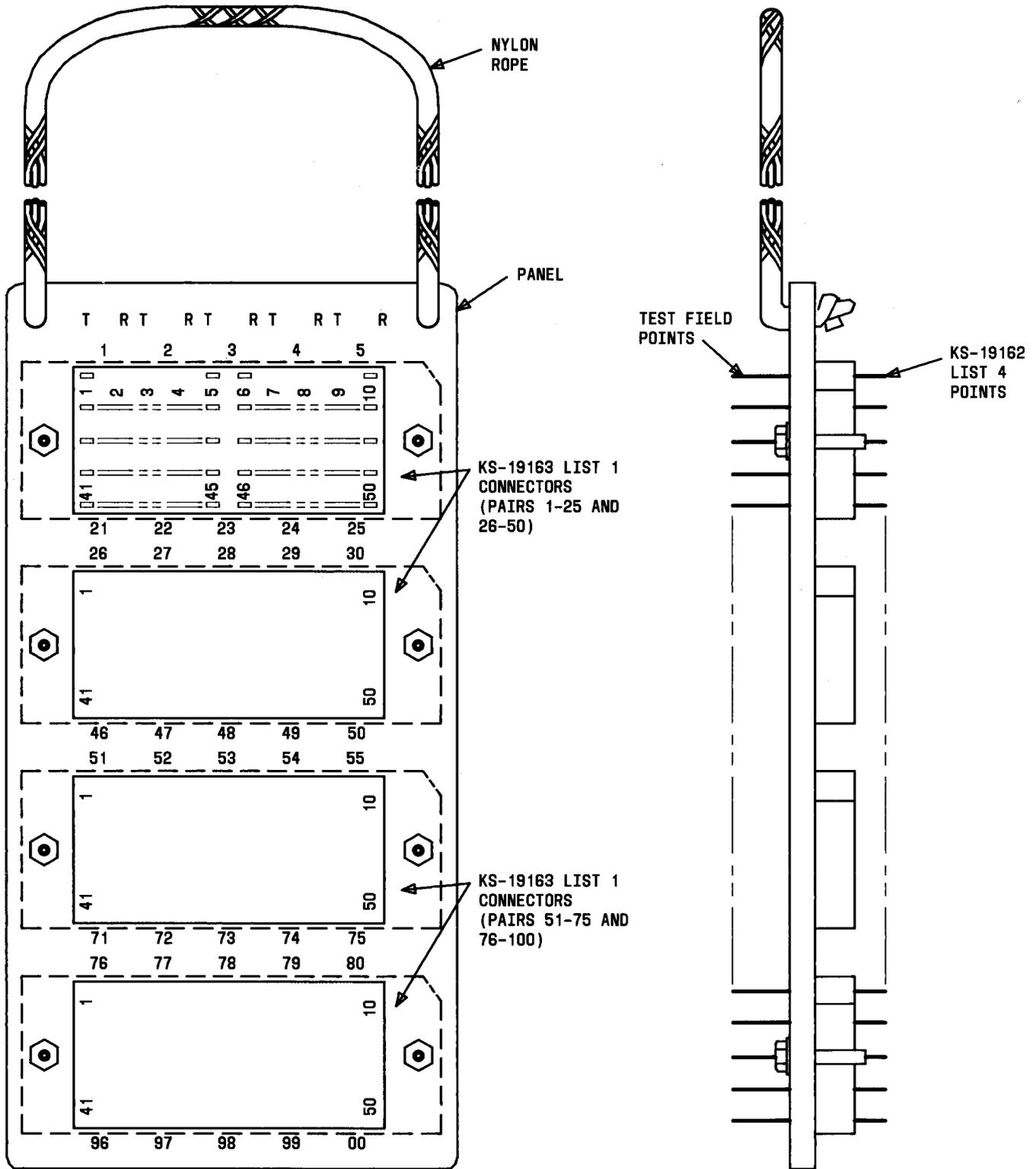


Fig. 7—Pick Test Panel— (Used with T Test Connector)

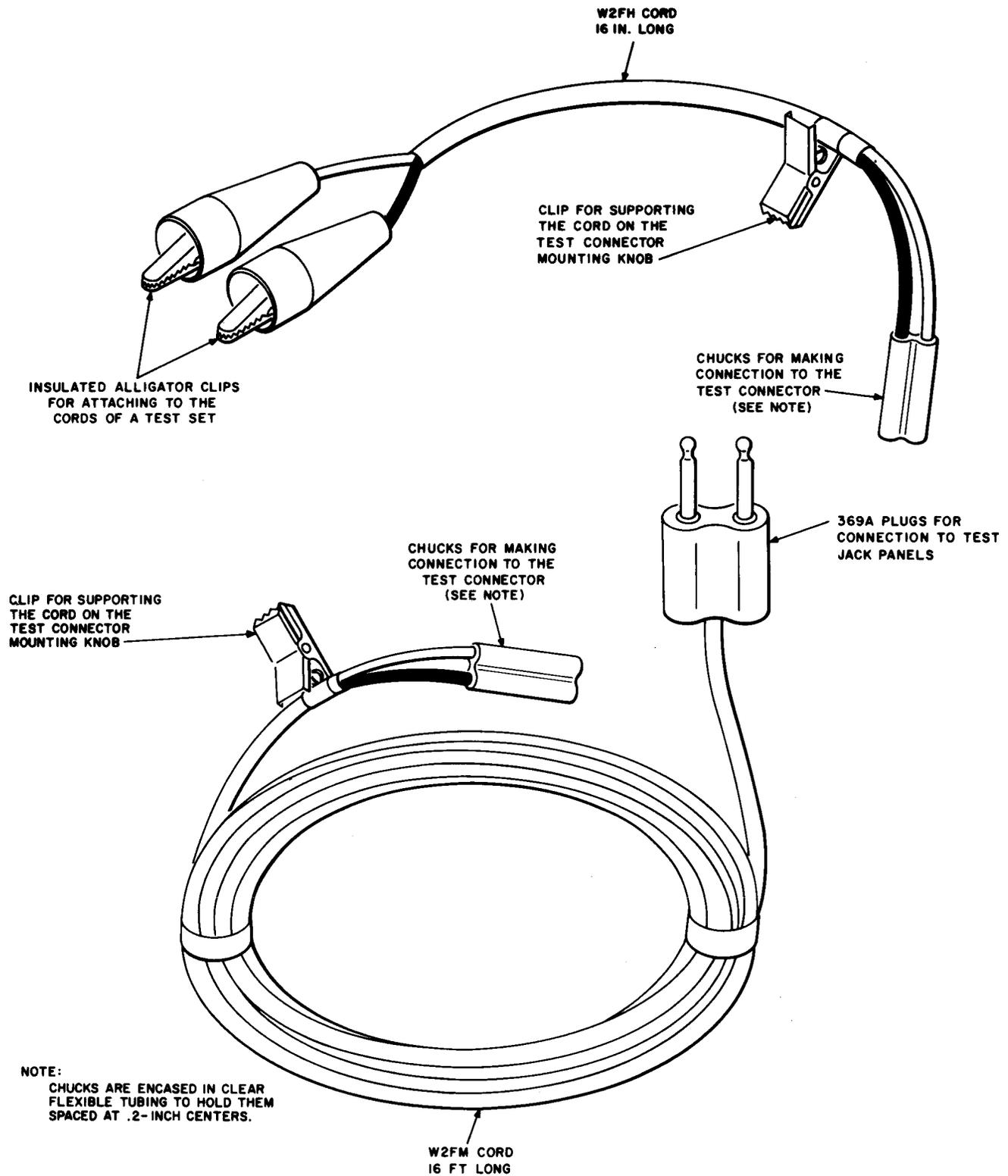


Fig. 9—W2FH and W2FM Cords

TABLE A
CORDS

| CORD | USE | ILLUSTRATION AND SCHEMATIC |
|------|---|----------------------------|
| P2EF | <p>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 303- or 305-type connector.</p> <p>CAUTION: Not to be used as an adapter for connecting longer cords.</p> | |
| P2FM | <p>Similar to the P2EF cord except it is used on the 310-type connector.</p> | |
| W2FM | <p>Used to bridge a cable pair from a connector (via the spiked terminals of an H or N test connector) to a test desk trunk through a frame mounted jack box.</p> <p>Note: Also see W2HA cord.</p> | |
| W2HA | <p>Bridging cord similar to W2FM. Used on frames equipped with Miniature Test/-Talk System equipment.</p> | |

TABLE A (Contd)

CORDS

| CORD | USE | ILLUSTRATION AND SCHEMATIC |
|------|---|----------------------------|
| W4CJ | Used for making In and Out Tests on connectors. | |
| W4CT | Same as W4CJ with miniature KS-22044 plug. Used on frames equipped with Miniature Test/Talk System equipment. | |
| W2FH | Used to connect an outside plant test set to a cable pair on the connectors (via the spiked terminals of the H or N test connector). | |
| W2GL | Used to make a connection with a cable pair at a vacant protector unit socket on a connector. Allows testing while the central office equipment is disconnected from the outside plant. | |
| W2GM | Used in a series with a P2DB cord to connect a KS-14103 breakdown test set to a cable pair at a protector unit socket on a connector. | |

TABLE A (Contd)

CORDS

| CORD | USE | ILLUSTRATION AND SCHEMATIC |
|------|---|--|
| W4CM | Used in making manual and automatic Varley measurements on connectors. | <p>The illustration shows a cord assembly with three plug ends: PLUG END A (left), PLUG END B (right), and PLUG END C (top). The cord is labeled 464A and 463A. Dimensions are given as 6 IN. and 16 FT 0 IN. The schematic below details the wiring. On the left, the NOTCHED SIDE of plug 464A has wires for BL, W, R, and G. On the right, the FACE OF PLUG 463A has terminals for G, R, and T. The schematic shows three parallel paths, each containing a 141 CORD TIP connected to a 360A TOOL or 360B TOOL. The connections are as follows: <ul style="list-style-type: none"> Path 1: 464A (W) to 360B TOOL to 463A (R) Path 2: 464A (R) to 360B TOOL to 463A (T) Path 3: 464A (G) to 360A TOOL to 463A (T) A 'GOOD' test point is shown between the 463A (R) and (T) terminals, and a 'BAD' test point is shown between the 463A (T) and (R) terminals. </p> |
| W4CU | Same as W4CM with miniature KS-22044 plug. Used on frames equipped with Miniature Test/Talk System equipment. | |

TABLE B
TEST CONNECTORS

| TEST CONNECTOR | DESCRIPTION AND USE | ILLUSTRATION AND SCHEMATIC |
|-------------------------------------|--|-------------------------------|
| H Test Connector | Used to provided access to all 50 test terminals on either one of the test terminal fields of 303-type connectors. | See Fig. 2 and Paragraph 3.02 |
| M Test Connector | Used with 305-type connectors for connecting the 100-pair test terminal field to automatic pair identification equipment. | See Fig. 3 and Paragraph 3.03 |
| N Test Connector | Used to provide access to all 100 test terminals on the test terminal field of the 305-type connectors. | See Fig. 4 and Paragraph 3.04 |
| C-4920 Multiple Pair Test Connector | Used with 303-type connectors to connect the test terminal fields to automatic pair identification equipment. | See Fig. 5 and Paragraph 3.05 |
| T Test Connector | Used with 310-type connectors for connecting the 100-pair test terminal field to automatic pair identification equipment. | See Fig. 6 and Paragraph 3.06 |
| Pick Test Connector | Used with the T test connector to access the 100-pair test teminal field of 310-type connectors. It has test points which provide single pair testing. | See Fig. 7 and Paragraph 3.07 |