

302- AND 308-TYPE CONNECTORS ASSOCIATED CORDS AND PLUGS

1. GENERAL

1.01 This section describes the plugs, cords, and test connectors used with 302- and 308-type connectors.

1.02 The reasons for reissuing this section are listed below. Since this reissue is a general revision, no revision arrows have been used to denote significant changes.

- (1) To add text for the P test connector
- (2) To remove text on H, M, and N test connectors; coverage is in Section 201-208-106
- (3) To update the section for the new 302A3- through 302E3-type connectors
- (4) To modify title to specify only 302- and 308-type connectors, cords and plugs.

1.03 Plugs, cords, and test connectors used on other than 302- and 308-type connectors are covered in Sections 201-206-102, 201-207-102, 201-208-106 and 201-216-102.

1.04 Test sets, jacks, plugs, and cords used on the 302-type connectors are also used on the 308-type connectors. The test connectors for the 302- and 308-type connectors are different.

2. CORDS AND TEST CONNECTORS

2.01 Table A lists the plugs and test connectors used with 302- and 308-type connectors.

2.02 Table B lists cords used with 302- and 308-type connectors.

2.03 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, W4BR,

and W4CL cords can all be adapted to function as W2HA, W4CP, and W4CR 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. D, G, AND P TEST CONNECTORS AND C-4920 AND C-4930 MULTIPLE PAIR TEST CONNECTORS

A. General

3.01 This part describes the D, G, and P test connectors and the Communications Technology Corporation C-4920 and C-4930 multiple pair test connectors (see Section 106-315-119) and covers their use in testing outside plant cable pairs terminated on 302- or 308-type connectors. The D test connector mounts on the test terminal field of the 302A1-, 302B1-, or 302E1-type connectors. The G test connector mounts on the test terminal field of the 302A3- through 302E3-type and the older 302A2 through 302E2-type (MD) connectors. The P test connector mounts on the test terminal field of the 308A1- and 308B1-type connectors. The C-4920 and C-4930 multiple pair test connectors connect the test terminal fields of the 302-type connectors to automatic pair identification equipment.

B. Description

3.02 The G test connector is used with the 302A3- through 302E3-type and the older 302A2 through 302E2-type (MD) connectors on the double-sided protector frame (Fig. 2). The test connector consists of a molded plastic housing which contains 100 (50 pairs) spring-loaded, gold-plated plungers appearing on one face and 100 gold-plated spikes bridged on the opposite face. When mounted on the 302-type connector, the spring-loaded plungers make contact with the 50-pair recessed test terminals. The spikes, in turn, provide access to the individual cable pairs and for attachment of test cords.

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3.03 The D test connector is used with the 302A1-, 302B1-, and 302E1-type connectors on the ED-1A220-31 modular protector frame (Fig. 3) and is similar to the G test connector except for the mounting arrangement (Fig. 4).

3.04 The P test connector (AT-8906), shown in Figure 5 is used with the 308-type connector on the high density modular protector frame (ED-97898-31). It contains 200 (100 pairs) spring-loaded contacts which are internally connected to two 50-pair sheathed test cords. Each 15-foot long test cord divides into two 25-pair branches which terminate on KS-19162, L4 connectors for attachment to automatic pair identification equipment. The P test connector, when mounted on the 308-type connector, makes contact with the entire 100-pair test terminal field. The test connector has two 50-pair cables entered into the back of the connector with the internal pair connections changed. The P test connector contacts the 200 recessed gold-plated test buttons (100 pairs) of the 308-type connector when properly mounted (Fig. 6).

Caution: *The P test connector must be properly oriented as shown in Figure 6 ("TOP" and "BOTTOM" markings must be correct).*

The P test connector is furnished with an F connector case (AT-8859) for protecting and storing the unit when not in use.

3.05 The C-4920 and C-4930 multiple pair test connectors (Fig. 7) consist of a plastic housing in which 100 (50 pairs) gold-plated test contacts are housed and internally connected to a sheathed 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.

3.06 The C-4920 multiple pair test connector is designed for use with either the 302A3-through 302E3-type or the older 302A2 through 302E2-type (MD) connectors.

3.07 The C-4930 multiple pair test connector is designed for use with the 302A1-, 302B1-, and 302E1-type connectors.

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 D or G test connector is placed onto the 50-pair test terminal field on the 302-type connector and held in place by slots in the modular protector frame (D test connector) or by hooks over the rear of the connector (G test connector). The P test connector is placed onto the 100-pair test terminal field on the 308-type connector and is held in place by two thumbscrew fasteners. The spikes on the face of the D and G test connectors will withstand repeated contacts (with an AT-7472 B test point), whereas, the recessed gold-plated test terminals on the 302- and 308-type connector test field will not.

3.09 The D and G test connectors can be used on either of the two test terminal fields of a 302-type connector. The D and G test connectors must be inverted from one test terminal field to another (top to bottom). They have two sets of pair numberings: one set (pairs 1 through 50) inverted from the other set (pairs 51 through 100).

3.10 The test connector plunger will not make contact with the recessed test field terminals on any special service pair that contains a KS-19478, L1 guard.

3.11 The spikes of the D or G test connector also accommodate the chuck-type connectors of the W2FH and W2FM cords (Fig. 8 and Table B) for connection to outside plant or other test equipment.

→TABLE A←

TEST CONNECTORS USED WITH 302- AND 308-TYPE CONNECTORS

TEST CONNECTOR	DESCRIPTION AND USE	ILLUSTRATION AND SCHEMATIC
D and G Test Connectors	Used for individual pair testing on each of the 50-pair test terminal fields of the 302-type connector.	See Figures 2 and 3 and paragraphs 3.02, 3.03.
P Test Connector	Used for multiple pair testing by interconnecting the entire 100-pair test terminal field of the 308-type connector to automatic pair identifying equipment.	See Figures 5 and 6 and paragraph 3.04
C-4920 Multiple Pair Test Connector	Used for multiple pair testing by interconnecting either one of the 50-pair test terminal fields on the 302A3- through 302E3-type connectors to automatic pair identifying equipment.	See Figure 7 and paragraph 3.05.
C-4930 Multiple Pair Test Connector	Used for multiple pair testing by interconnecting either of the 50-pair test terminal fields of the 302A1-, 302B1-, or 302E1-type connectors to automatic pair identifying equipment.	See Figure 7 and paragraph 3.05.

→TABLE B←

CORDS USED WITH 302- AND 308-TYPE CONNECTORS

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 302- or 308-type connectors.</p> <p>CAUTION: Not to be used as an adapter cord to interconnect longer cords.</p>	<p>RED BLACK 16 IN. 453A CLIP END 453A RED BLACK PLUG END</p>
W2FH	<p>Used to connect an outside plant test set to a cable pair on the 302-type connector via the spiked terminals of the D or G test connector.</p>	<p>5 IN. RED WHITE 6 IN. 5 IN. BLACK TEXTILE JACKET RED WHITE CLIP END CHUCK END</p>
W2FM	<p>Used to bridge a cable pair from a 302-type connector (via the spiked terminals of a D or G test connector) to a test desk trunk through a frame-mounted jack box.</p> <p>Note: Also see W2HA cord.</p>	<p>464A 16 FT. 5 IN. WHITE RED BLACK VINYL JACKET NOTCHED SIDE PLUG END CHUCK END</p>
W2GC	<p>Used to make a connection with a cable pair at a vacant protector unit socket on a 302- or 308-type connector. Allows testing to be accomplished while the central office equipment is disconnected from the outside plant and protection is removed.</p>	<p>5 IN. WHITE RED BLACK NYLON JACKET 3 FT. 463A FACE OF PLUG CLIP END PLUG END WHITE RED T R</p>

→TABLE B (Contd)←

CORDS USED WITH 302- AND 308-TYPE CONNECTORS

CORD	USE	ILLUSTRATION AND SCHEMATIC
<p>W4CL</p> <p>Used in making manual and automatic Varley measurements on 302- or 308-type connectors.</p> <p>Note: Also see W4CP cord.</p>		<p>Diagram illustrating the W4CL cord and its connection to 302- and 308-type connectors. The cord is labeled "BLACK NYLON BRAIDED CORD" and is shown with "PLUG END A", "PLUG END B", and "PLUG END C". The cord length is indicated as 6 IN. and 16 FT. The diagram shows the internal wiring and the use of tools (360B and 360A) to make connections to the "141 CORD TIP". The "NOTCHED SIDE 464A" and "FACE OF 463A PLUG" are also labeled.</p>
<p>W4CP</p> <p>A cord similar to W4BR and used for making In and Out Tests from 302- or 308-type connectors but on frames equipped with <i>Miniature Test/Talk System</i> equipment.</p>		<p>Diagram illustrating the W4CP cord and its connection to 302- or 308-type connectors. The cord is labeled "SWITCHCRAFT TT-261" and is shown with "PLUG END A" and "PLUG END B". The cord length is indicated as 16 FT 0 IN. The diagram shows the internal wiring and the use of tools (360B and 360A) to make connections to the "141 CORD TIP". The "NOTCHED SIDE" and "FACE OF PLUG" are also labeled.</p>

→TABLE B (Contd)←

CORDS USED WITH 302- AND 308-TYPE CONNECTORS

CORD	USE	ILLUSTRATION AND SCHEMATIC
W4CR	Used in making manual and automatic Varley measurements on 302- or 308-type connectors but on frames equipped with <i>Miniature Test/Talk System</i> equipment.	

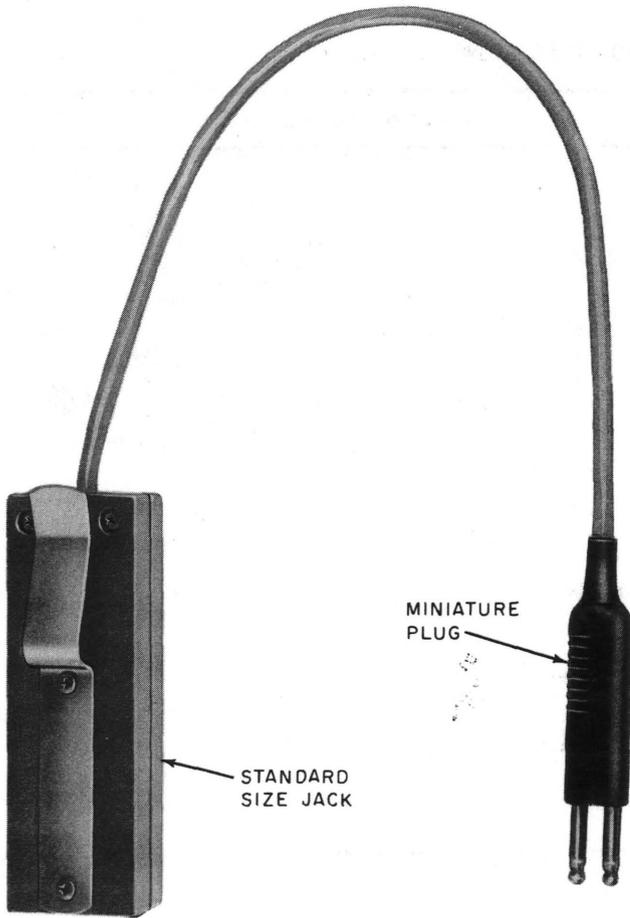


Fig. 1—KS-21386-L1 Miniature Plug Adapter

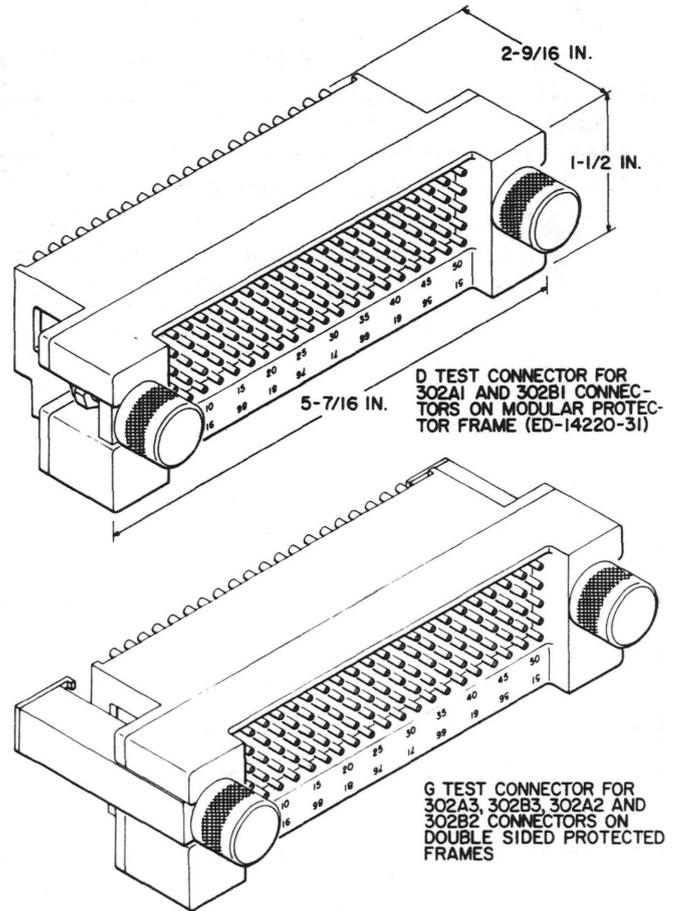


Fig. 3—D and G Test Connector Mounting Arrangement

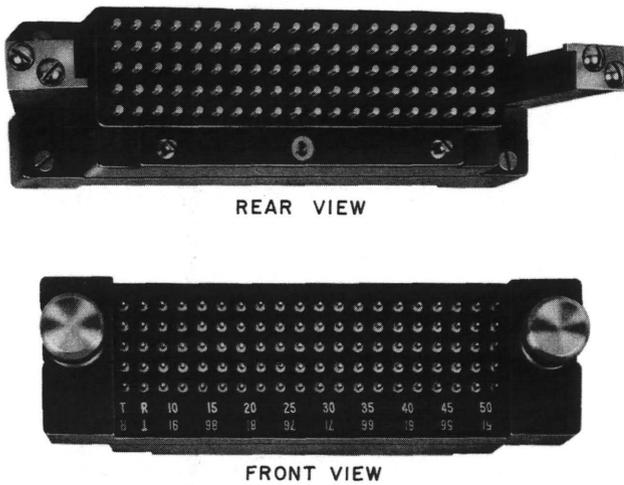
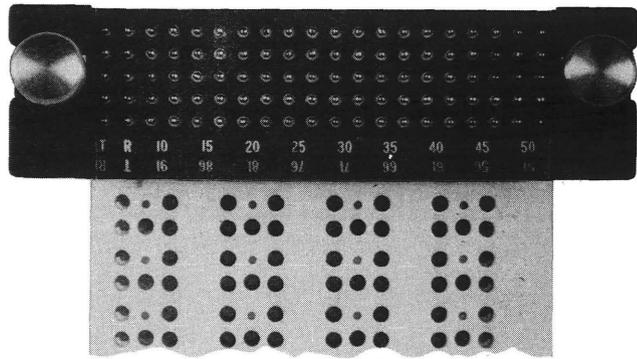
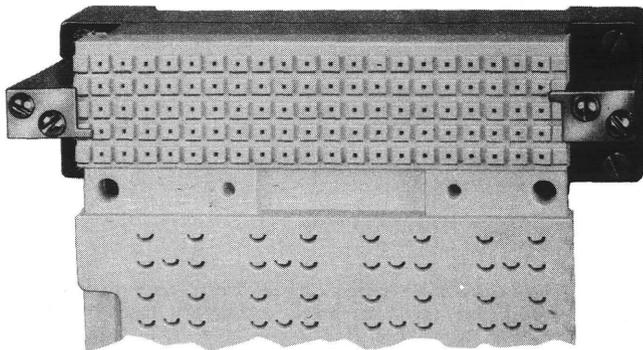


Fig. 2—G Test Connector (For 302A3- Through 302E3-Type Connector)



FRONT VIEW



REAR VIEW

Fig. 4—G Test Connector Mounted—(For 302A3-Through 302E3-Type Connectors Mounted on Double-Sided Protector Frame)

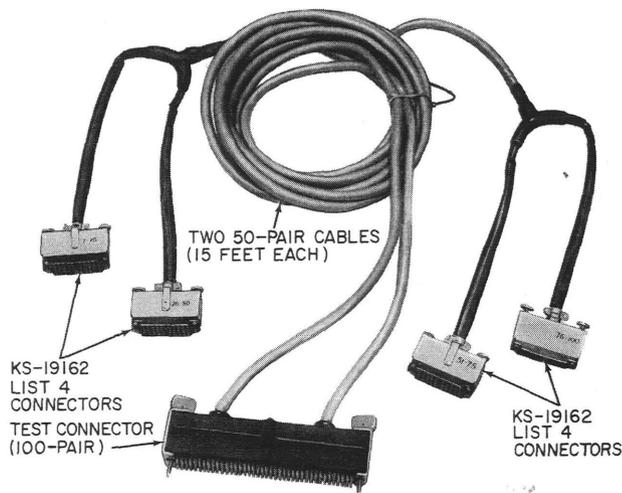


Fig. 5—P Test Connector (AT-8906)

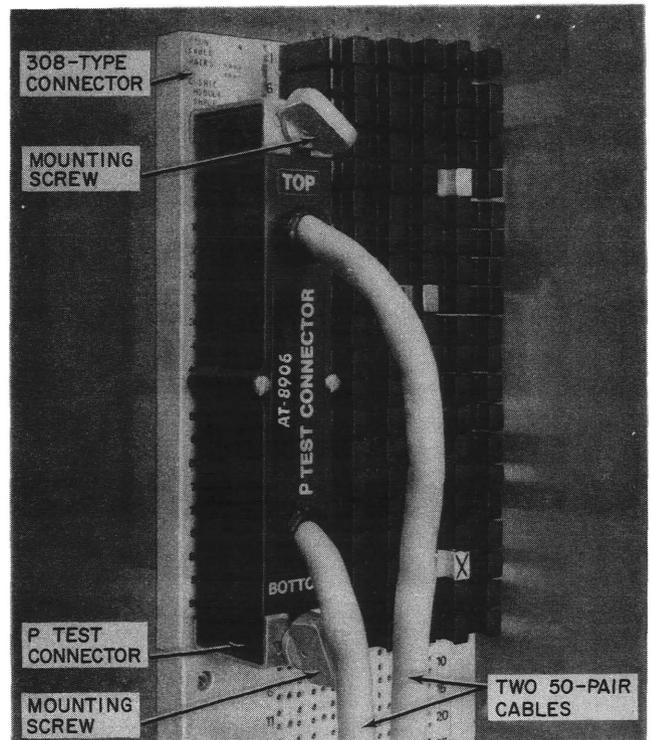


Fig. 6—P Test Connector (AT-8906) Mounted on 308-Type Connector

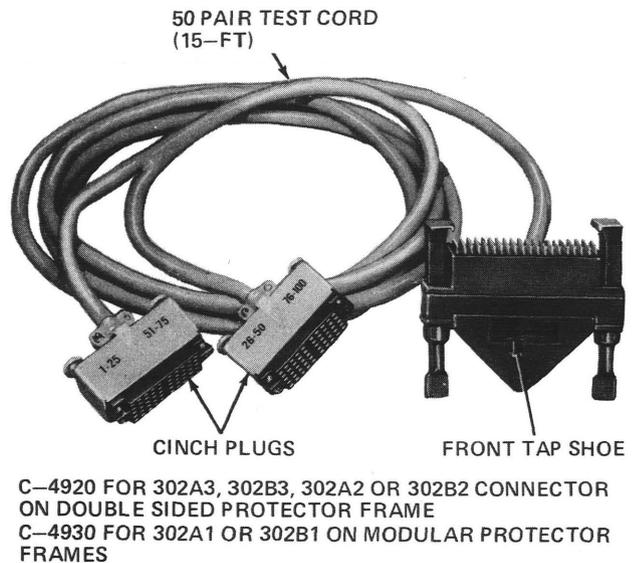


Fig. 7—C-4920 and C-4930 Multiple Pair Test Connector

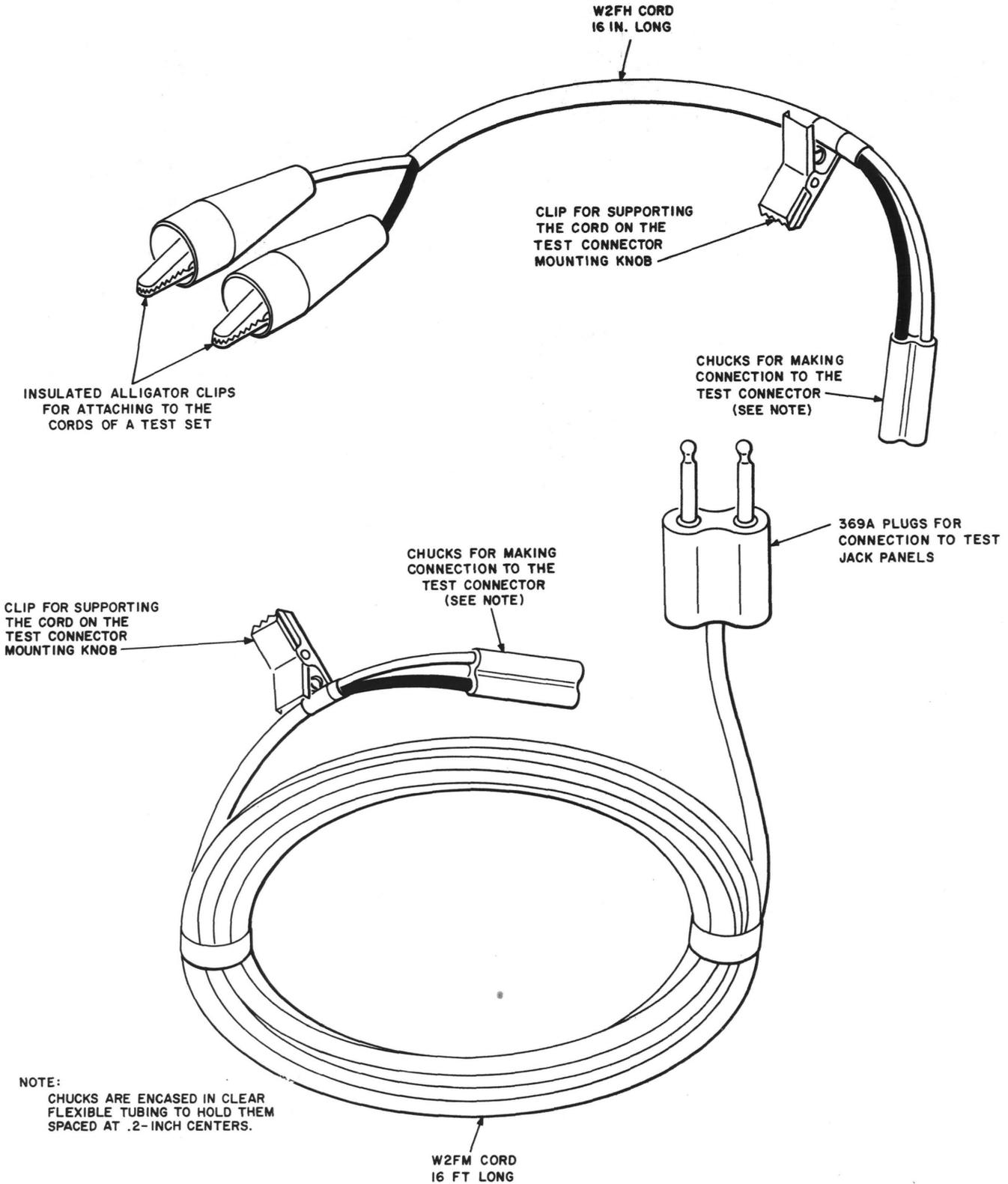


Fig. 8—W2FH and W2FM Cords