302- AND 308-TYPE CONNECTORS
ASSOCIATED TEST CONNECTORS AND CORDS
DESCRIPTION
PROTECTOR FRAMES

CONTENTS PAGE

1. GENERAL

1.01 This section describes the test connectors and cords used with 302- and 308-type connectors mounted on protector frames.

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.

(a) Change title of section from 302-and 308-Type Connector— Associated Cords and Plugs to 302- and 308-Type Connectors— Associated Test Connectors and Cords—Description—Protector Frames

(b) Change title of Table A from Test Connectors used with 302- and 308-Type Connectors to Test Connectors and add R-test connector used with 308-type 1 and 308-type 2 (hinged) connectors

(c) Change title of Table B from Cords used with 302- and 308-Type Connectors to Cords

(d) Change heading of Part 2 from Cords and Test Connectors to Test Connectors and revise entire Part 2

(e) Change heading of Part 3 from D, G, and P Test Connectors and C-4920 and C-4930 Multiple Pair Test Connectors to Cords and revise entire Part 3

(f) Change numerical designation of figures. Figures 5, 6, and 8 are added.

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 1 and 308-type 2 (hinged) connectors. However, the W2FH, W2FM, and W2HA cords are only used on the 302-type connectors. The test connectors for the 302- and 308-type connectors are different.

2. TEST CONNECTORS

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

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

D TEST CONNECTOR (Fig. 1)

2.02 The D test connector (AT-8265) is used with the 302A1-, 302B1-, and 302E1-type connectors on the ED-1A220-31 modular protector frame for single pair testing. It is held in place by slots in the sheet metal framework.

2.03 It consists of a molded plastic housing which contains 100 (50 pairs) spring-loaded, gold-plated plungers on one face which are bridged to gold-plated spikes on the opposite face. When mounted on the 302-connector, the spring-loaded plungers make contact with the 50-pair recessed test field terminals. The spikes, in turn, provide access to the individual cable pairs for attachment of test cords. The spikes will withstand repeated contacts (with an AT-7472B test point), whereas, the recessed gold-plated test field terminals on the 302-connector will not.

2.04 The test connector can be mounted on either the tip (cable pairs 1-50) test terminal field of the 302-connector or the bottom (cable pairs 51-100) test terminal field. The test connector has two sets of pair numberings and must be inverted when mounted on the bottom test terminal field.

2.05 The plungers on the test connector will not make contact with the recessed test field terminals equipped with KS-19478, L1 special service guards. The spikes on the test connector can accommodate the chuck-type connectors of the W2FM and W2FH cords (Fig. 2) for connection to outside plant or other test equipment.

G TEST CONNECTOR (Fig. 1, 3, and 4)

2.06 The G test connector (AT-8353) is used with the 302A3- through 302E3-type connectors and the older 302A2- through 302E2-type, manufacture discontinued (MD) connectors on the double-sided protector frame for single pair testing. It is held in place by hooking onto the rear of the connector (Fig. 3).

2.07 Except for the difference in application described in the previous paragraph, the D and G connectors are alike. See paragraphs 2.03 through 2.05.

R TEST CONNECTOR (Fig. 5 and 6)

2.08 The R test connector (AT-8916) is used with both types of 308-connectors for single pair testing. It consists of a four-piece molded plastic body. The 200 spring-loaded contacts or plungers are connected internally to 200 test field spikes located on the front of the connector. The spikes permit the attachment of test cords for checking one cable pair at a time.

2.09 The test connector is placed over the 100-pair test terminal field of the 308-type connector and held in place by means of two thumb screw fasteners which engage threaded inserts at the top and bottom of the connector test terminal field. The plungers will not make contact with the recessed test field terminals equipped with KS-19478, L1 special service guards.

C-4920 and C-4930 MULTIPLE PAIR TEST CONNECTORS (Fig. 7 and 8)

2.10 The Communications Technology Corporation C-4920 and C-4930 multiple pair test connectors are used to connect 302-type connectors to automatic pair indentification equipment. The C-4930 is designed for use with 302A1-, 302B1-, and 302E1-type connectors on the ED-1A220-31 modular protector frames. The C-4920 is designed for use with the 302A3- through 302E3-type connectors as well as the 302A2- through 302E2-connectors (MD) used on double-sided protector frames.

2.11 Both the C-4920 and C-4930 test connectors consist of a plastic shell in which 100 gold-plated test pins are housed and connected internally to the jacketed 50-pair test cord. The 15-foot test cord divides into two 25-pair branches which terminate on cinch plugs for attachment to automatic pair identification equipment.

2.12 The test connector mates with the 50-pair test field of the 302-type connector. The plastic housing is factory marked to indicate pair count and proper orientation on the test field. The connector and cinch plugs are double-numbered; the connector 1-50, 51-100 and the cinch plugs 1-25, 51-75 and 26-50, 76-100. The test connector is attached to the 302-type connector by means of two wing-type clamps tightened by thumbscrews. Like the D and G single pair test connectors, the C-4920 and C-4930 test connector will not make contact with the recessed test field terminals that are equipped with KS-19478, L1 special service guards.

2.13 The C-4914 carrying case is used for protecting and storing the test connector. The carrying case will accommodate two test connectors.

P TEST CONNECTOR (Fig. 9 and 10)

2.14 The P multiple pair test connector (AT-8906) is used with 308-type connectors for attachment to automatic pair identification equipment. 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. When mounted on the 308-type connector, it makes contact with the entire 100-pair test terminal field except no contact is made with pairs that are equipped with KS-19478, L1 special guards.

Caution: The P test connector must be properly oriented as shown in Fig. 10. ("TOP" and "BOTTOM" markings must be correctly oriented).

2.15 The P test connector is furnished with an F connector case (AT-8854) for protecting and storing the unit.

3. CORDS

3.01 Table B contains a listing of the cords used with 302- and 308-type connectors. The table also defines the use of, and contains an illustration of, each cord.

3.02 A KS-21386, L1 miniature plug adapter (Fig. 11) 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.

TABLE A

TEST CONNECTORS

TEST CONNECTOR	APPLICATION	FIGURES AND PARAGRAPHS
D (AT-8265)	Individual pair testing on each of the 50-pair test terminal fields of the 302A1-, 302B1-, or 302E1-type connector	Fig. 1 Paragraphs 2.02 through 2.05
G (AT-8353)	Same as the D connector except it is used on the 302A3- through 302E3-type connectors	Fig. 1, 3 and 4 Paragraphs 2.06 and 2.07
R (AT-8916)	Individual pair testing on each of the 100-pair test terminal fields of the 308-type connector	Fig. 5 and 6 Paragraphs 2.08 and 2.09
C-4920	Multiple pair testing by interconnecting one of the 50-pair test terminal fields on the 302A3-through 302E3 type connectors to automatic pair identifying equipment	Fig. 7 and 8 Paragraphs 2.10 through 2.13
C-4930	Same as the C-4920 except it is used on 302A1-, 302B1, or 302E1-type connectors	Fig. 7 Paragraphs 2.10 through 2.13
P (AT-8906)	Multiple pair testing by interconnecting the entire 100-pair test terminal field of the 308-connector to automatic pair identifying equipment	Fig. 9 and 10 Paragraphs 2.14 and 2.15

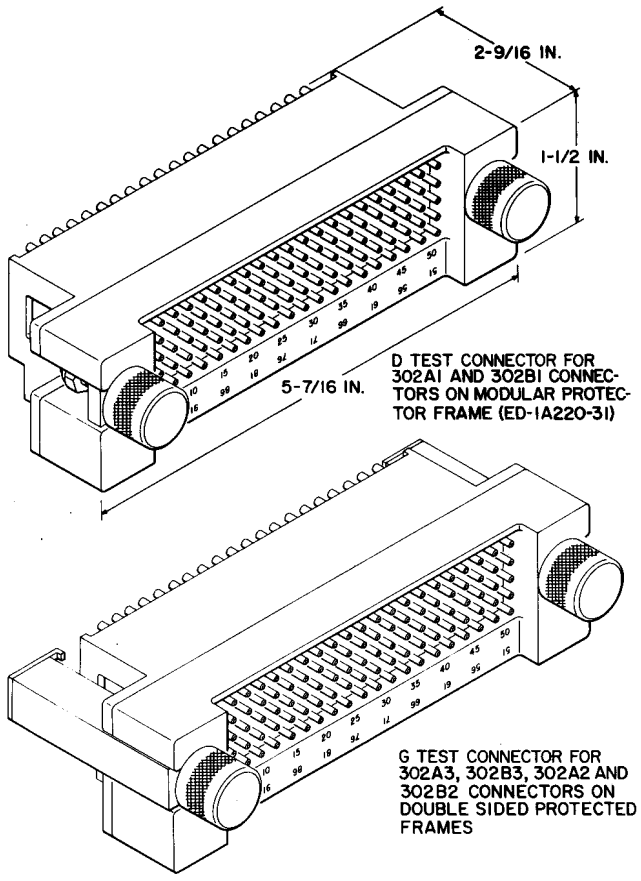


Fig. 1 — D and G Test Connectors—Mounting Arrangement

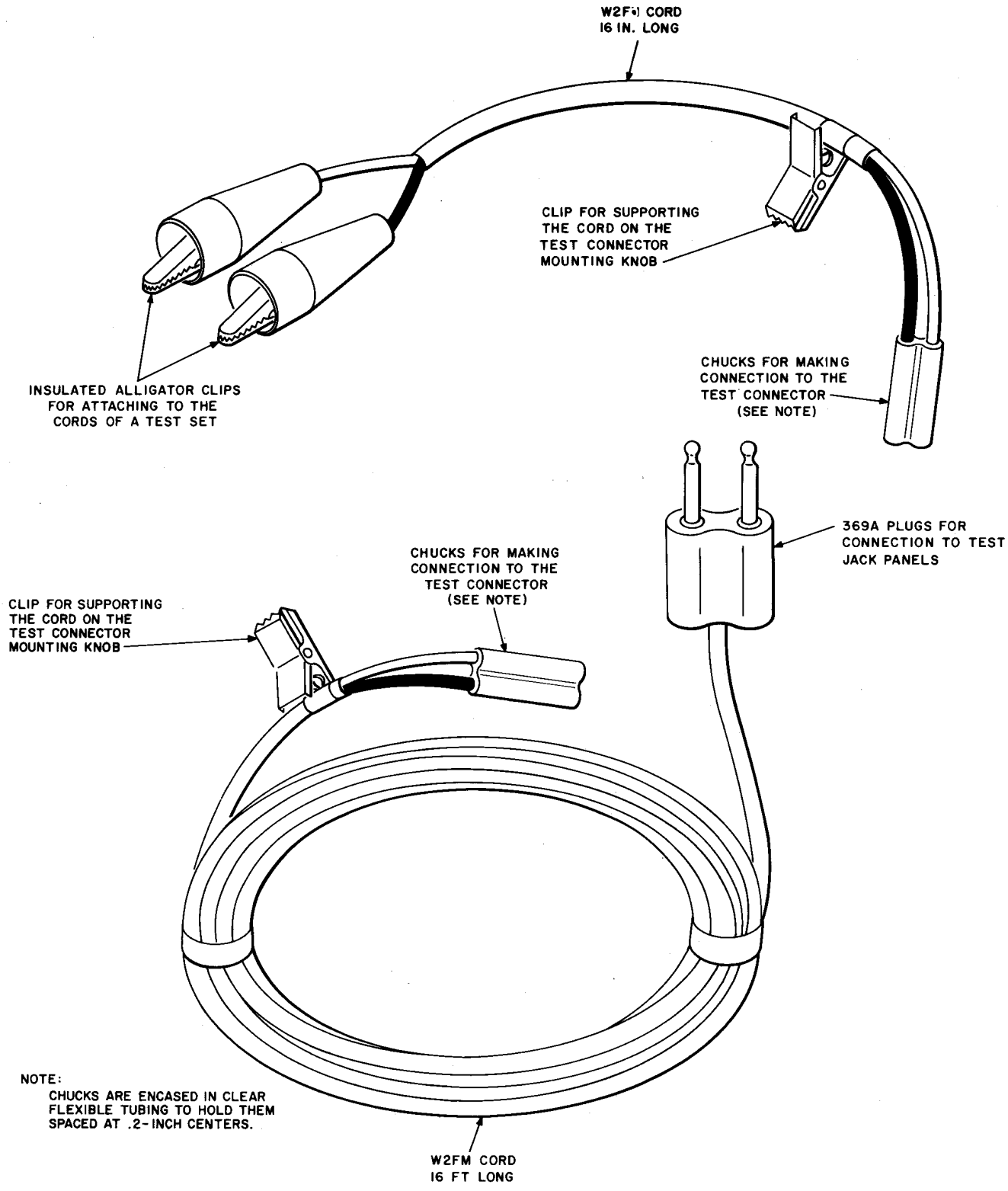
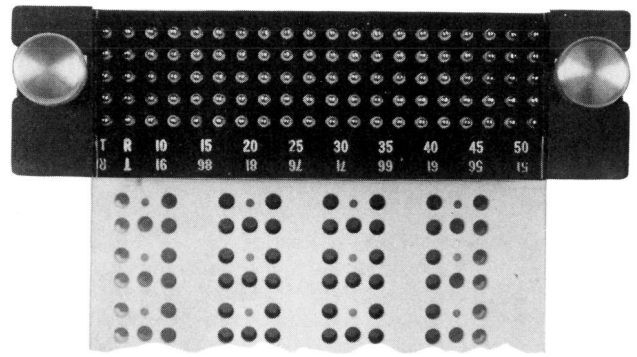
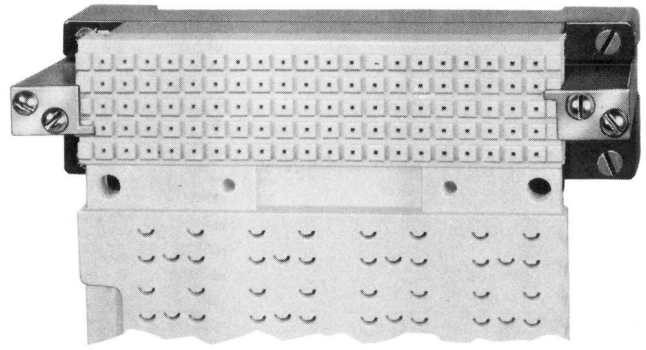


Fig. 2—W2FH and W2FM Cords

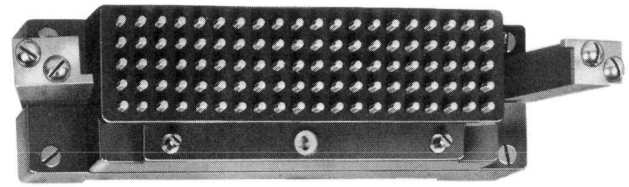


FRONT VIEW

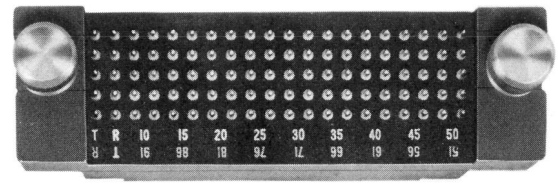


REAR VIEW

Fig. 3 — G Test and Connector—Mounted (For 302A3- through 302E3-Type Connectors on Double-Sided Protector Frame)

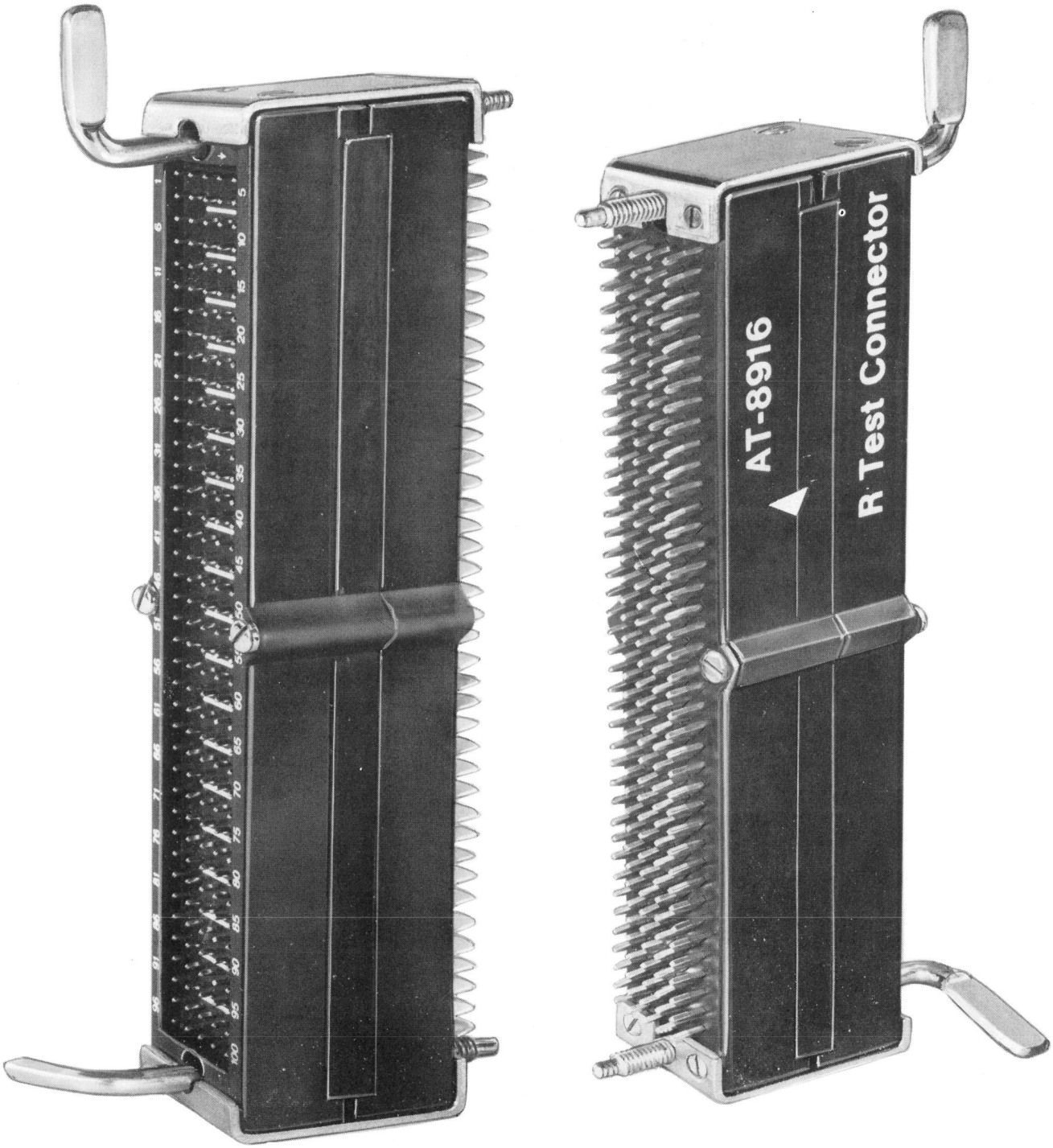


REAR VIEW



FRONT VIEW

Fig. 4—G Test Connector (For 302A3- through 302E3-Type Connectors)



FRONT VIEW

REAR VIEW

Fig. 5—R Test Connector (AT-8916)

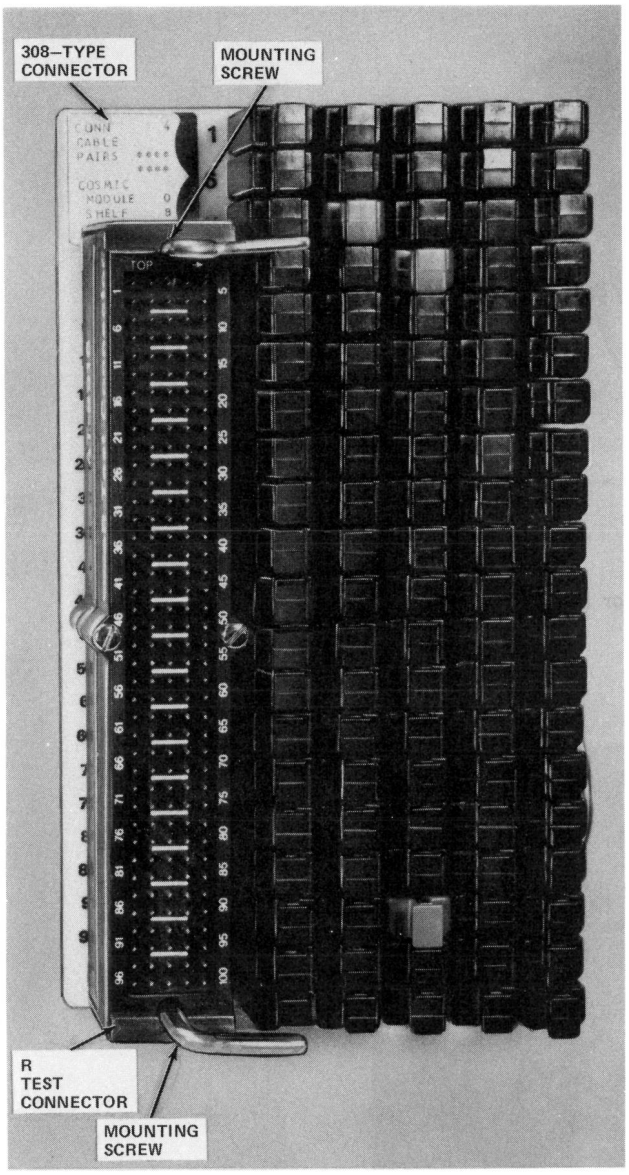
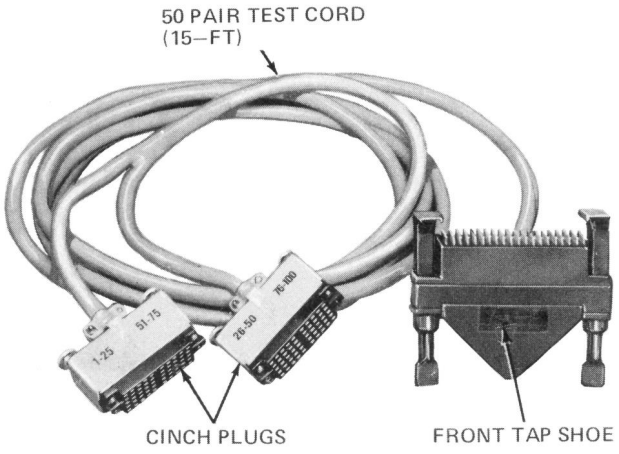


Fig. 6—R Test Connector (AT-8916)—Mounted



C–4920 FOR 302A3, 302B3, 302A2 OR 302B2 CONNECTOR ON DOUBLE SIDED PROTECTOR FRAME
C–4930 FOR 302A1 OR 302B1 ON MODULAR PROTECTOR FRAMES

Fig. 7—C4920 and C4930 Multiple Pair Test Connectors

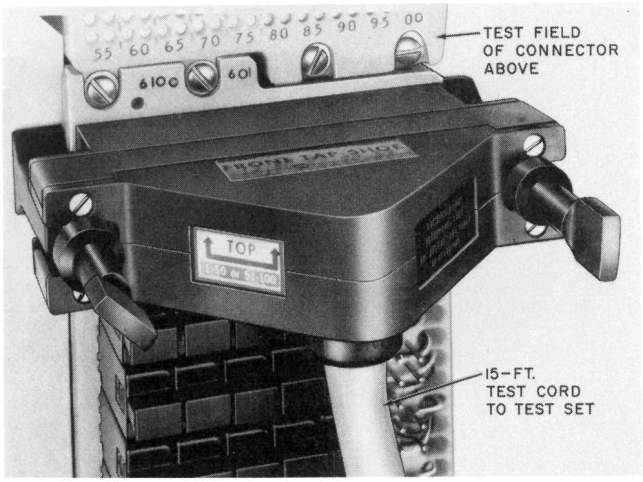


Fig. 8—C4920 Test Connector Mounted on Connector

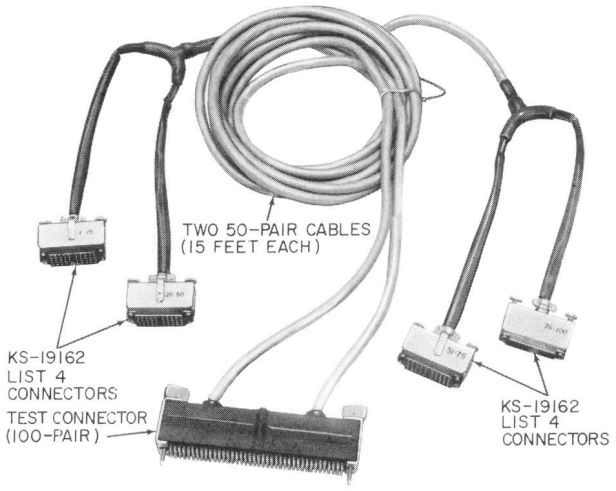


Fig. 9—P Test Connector (AT-8906)

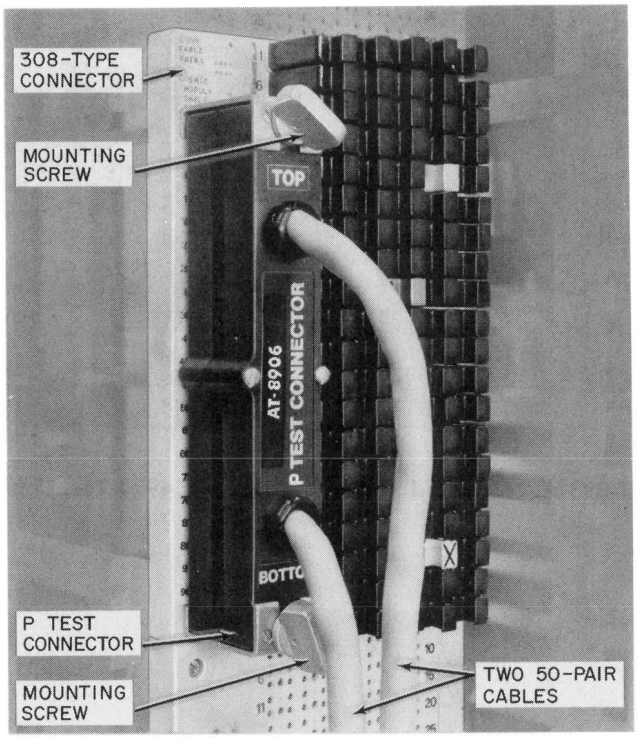


Fig. 10—P Test Connector (AT-8906) Mounted on 308-Type Connector

TABLE B

CORDS

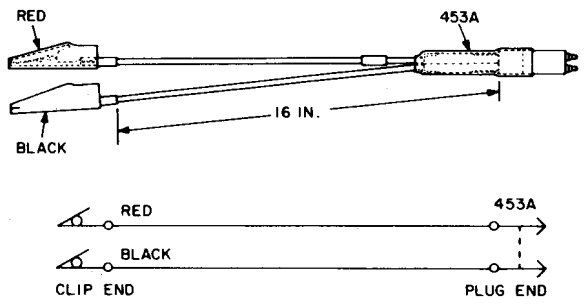
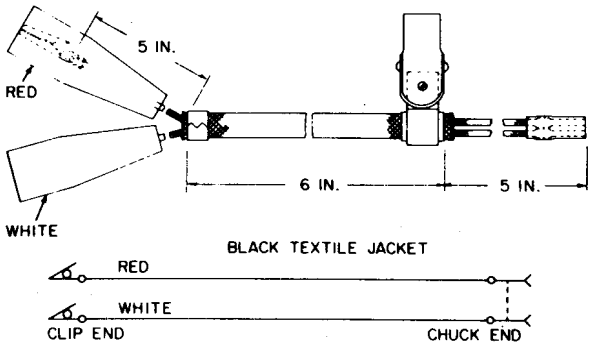
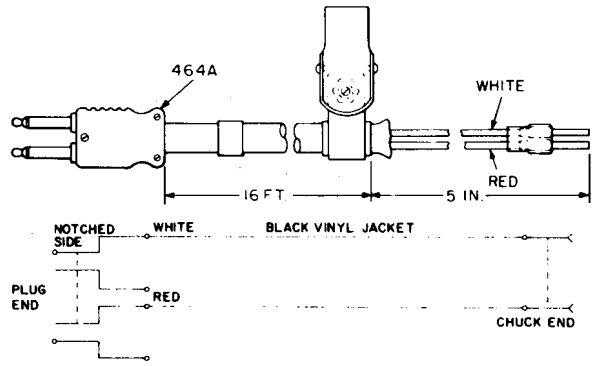
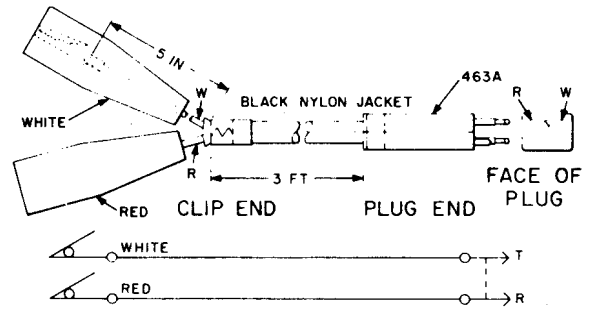
CORD	USE	ILLUSTRATION AND SCHEMATIC
P2EF	Used to short the tip and ring, or to ground the tip and/or ring, of an individual cable pair by inserting the plug end into a pair of recessed test terminals on the 302- or 308-type connectors. ***CAUTION: Not to be used as an adapter cord to interconnect longer cords.***	
W2FH	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.	
W2FM	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. ***Note:*** Also see W2HA cord.	
W2GC	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.	

TABLE B (Contd)

CORDS

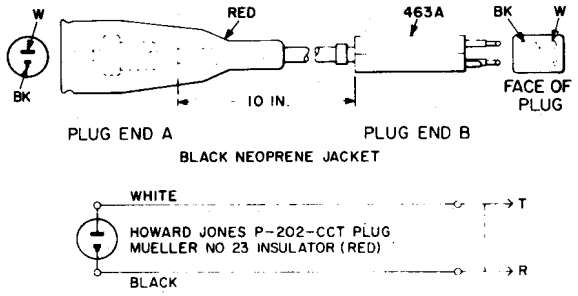
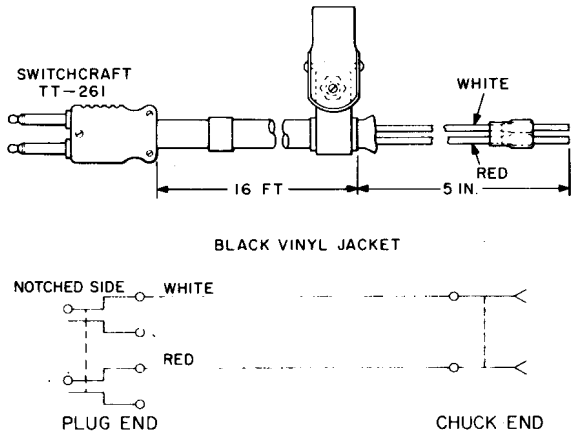
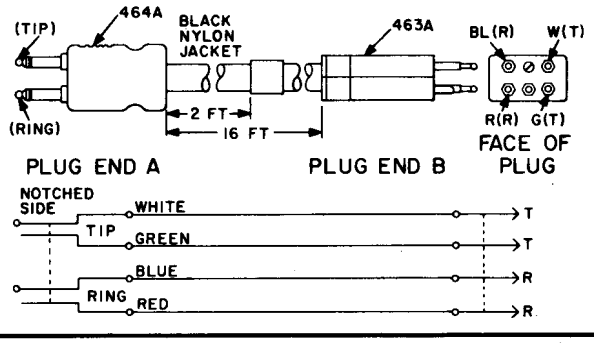
CORD	USE	ILLUSTRATION AND SCHEMATIC
W2GD	Used in series with a P2DB cord to connect the KS-14103 breakdown test set to a cable pair at a vacant protector socket on a 302- or 308-type connector.	
W2HA	Bridging cord similar to W2FM and used with 302-type connectors but on frames equipped with ***Miniature Test/Talk System*** hardware.	
W4BR	Used for making In and Out Tests from 302- or 308-type connectors. ***Note:*** Also see W4CP cord.	

TABLE B (Contd)

CORDS

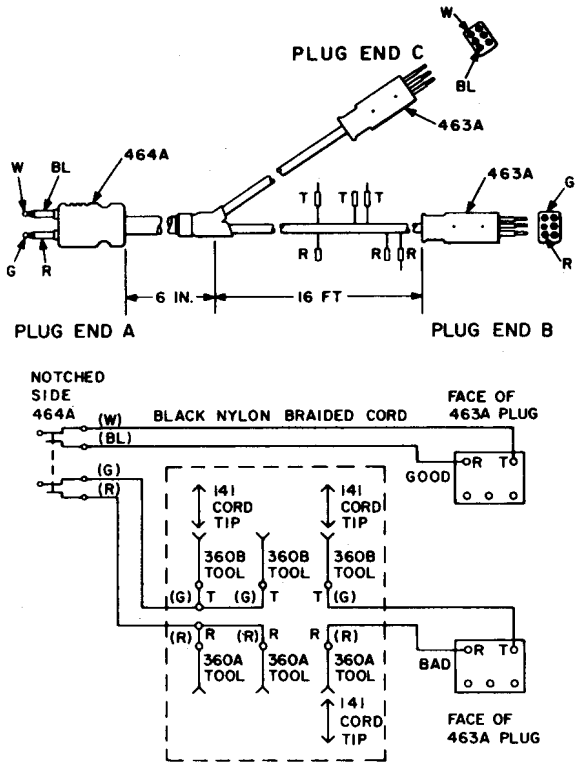
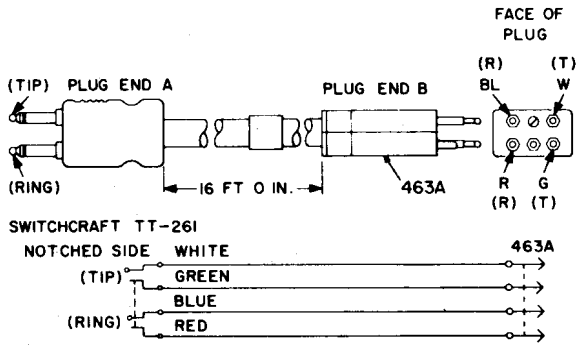
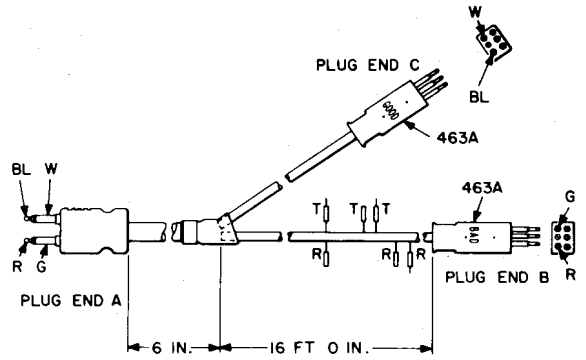
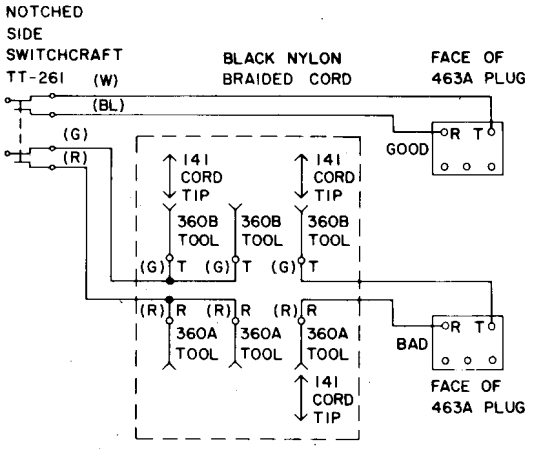
CORD	USE	ILLUSTRATION AND SCHEMATIC
W4CL	Used in making manual and automatic Varley measurements on 302- or 308-type connectors. ***Note:*** Also see W4CP cord.	
W4CP	A cord similar to W4BR and used for making In and Out Tests from 302- or 308-type connectors but on frames equipped with ***Miniature Test/Talk System*** equipment.	

TABLE B (Contd)

CORDS

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 ***Miniature Test/Talk System*** equipment.	 

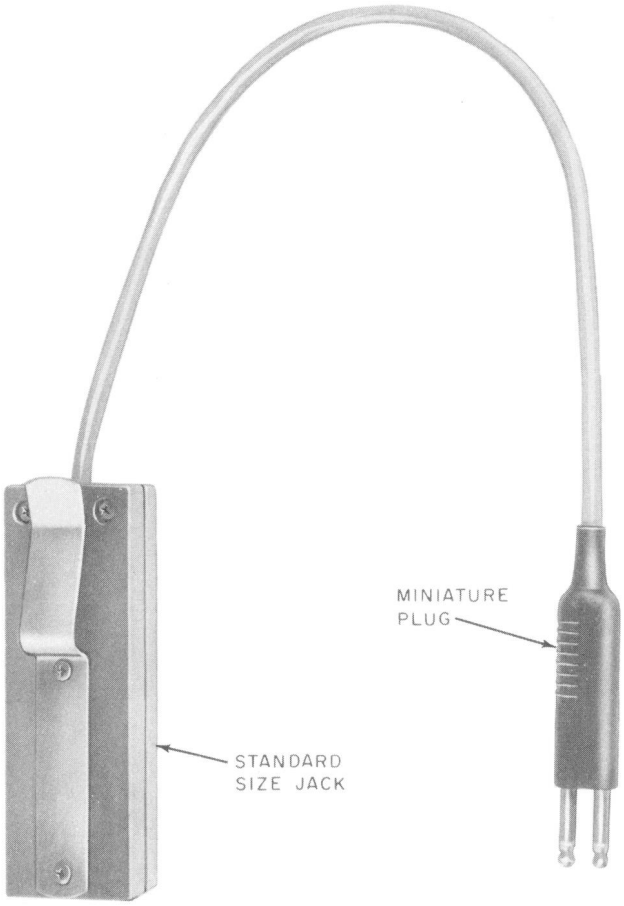


Fig. 11—KS—21386, L1 Miniature Plug Adapter