

## B, C, AND F TEST CONNECTORS DESCRIPTION AND INSTALLATION

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	3. C TEST CONNECTOR . . . . .	3	• Include B test connector conversion information
	4. F TEST CONNECTOR . . . . .	4	• Identify D test connector case information
	5. P100A AND P100B CORDS . . . . .	5	• Make other minor change in text as indicated.
	6. PLACING B TEST CONNECTOR . . . . .	6	1.03 The B test connector is designed for use on C-50, C-52, E-50, E-52, and 1177 protector mountings.
	7. PLACING C TEST CONNECTOR . . . . .	7	1.04 The C test connector is designed for use on 300-type connectors.
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	9. B TEST CONNECTOR CONVERSION . . . . .	9	1.06 The P100A cords are used to connect test apparatus (such as the CB automatic pair identifier) to test connectors and to bridge test connectors.
	10. MAIN FRAME LADDER CLEARANCE . . . . .	9	1.07 The B test connector case is used for storing and transporting the C test connector.
	11. B TEST CONNECTOR CASE . . . . .	9	1.08 The D test connector case is used for storing and transporting the B test connector.
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1. GENERAL			
1.01	This section describes the B, C, and F test connectors, the P100A and P100B cords, and the B, C, and D connector cases. It also covers the method of installing the equipment at distributing frames.		

**NOTICE**

Not for use or disclosure outside the  
Bell System except under written agreement

## 2. B TEST CONNECTOR

2.01 The front and back views of the B test connector are shown in Fig. 1 and 2. The connector consists of a U-shaped main support, a cam, a lever which actuates a hinged plate, and 50 pushrods that press on the arms of contact supports. The contact supports are pulled together by extension coil springs, which cause the contacts to press firmly against the springs on the cable side of a protector mounting.

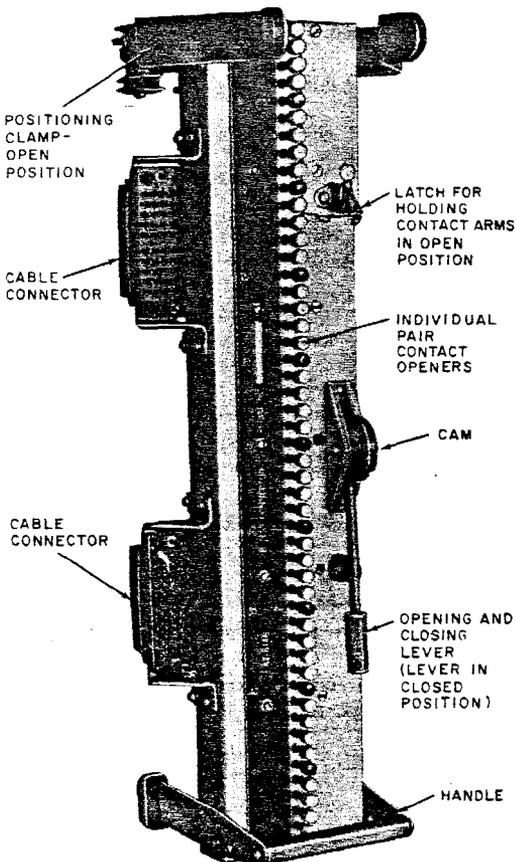


Fig. 1—B Test Connector—Front View

2.02 The B test connector is equipped with two 25-pair cable connectors for attaching a P100A or a P100B cord to the test connector.

2.03 The B test connector will not contact the springs of cable pairs equipped with markers designating special services. Contact to individual pairs may be avoided by moving the pair contact openers in toward the protector and locking them in the slots provided.

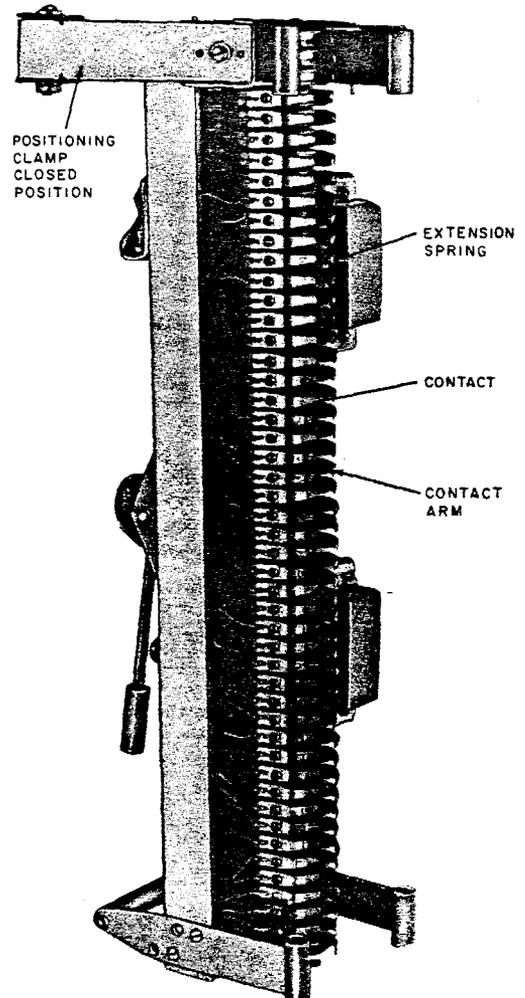


Fig. 2—B Test Connector—Rear View

### 3. C TEST CONNECTOR

3.01 The front and back views of the C test connector are shown in Fig. 3 and 4. The connector consists of a plastic baseplate containing an assembly of 100 spring-mounted plungers (50 pairs). The plungers are arranged to make positive contact with the cable pair test buttons located on the left side of 300-type connectors.

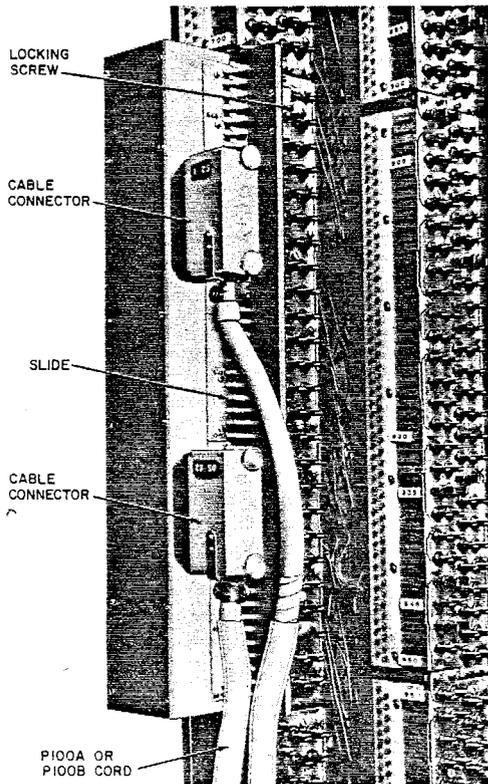


Fig. 3—C Test Connector on 300-Type Connector

3.02 The plungers make or break contact with the cable pair test buttons by hand-operated plastic slides. The plungers ride on top of special circuit markers, and thus avoid contact with pairs so equipped.

3.03 The C test connector is supported vertically on the test strip by a steel bracket at the

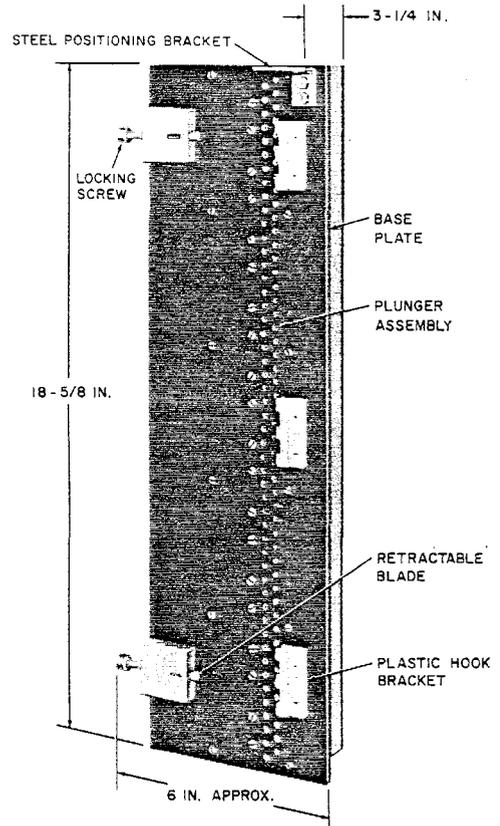


Fig. 4—C Test Connector—Rear View

top. The connector is held against the test strip by three molded plastic hook brackets which engage the test strip at the rear. Two retractable blades at the front of the connector engage slots in the faceplate of the 300-type connector.

3.04 The C test connector has two 25-pair connectors on the face for attaching a P100A or P100B cord.

3.05 In offices with shallow, double-sided protector frames, a test jack box may occasionally interfere with mounting the C test connector. The test connector can be mounted if the jack box is temporarily loosened at its frame mounting screws and moved as far to the left as possible. The C test connector may also interfere with speaker

system microphones which appear about one in every twelve verticals. Most of these microphones are on collapsible arms, but some are not. The latter must be unscrewed from the frame temporarily.

#### 4. F TEST CONNECTOR

4.01 The F test connector consists of a U-shaped main support (Fig. 5 and 6) containing 50 plungers, each equipped with a pair of contacts connected through flexible printed circuitry to a common terminal strip which in turn is wired to cable connectors.

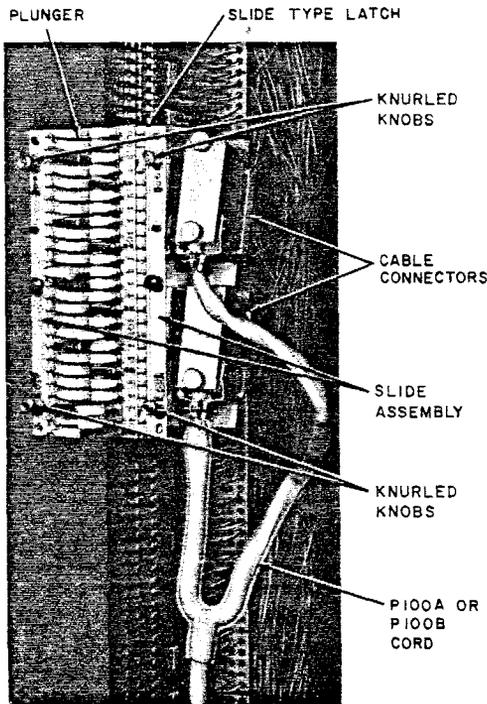


Fig. 5—F Test Connector on 444-Type Jack

4.02 The F test connector is equipped with two 25-pair cable connectors for attaching a P100A or a P100B cord to the test connector.

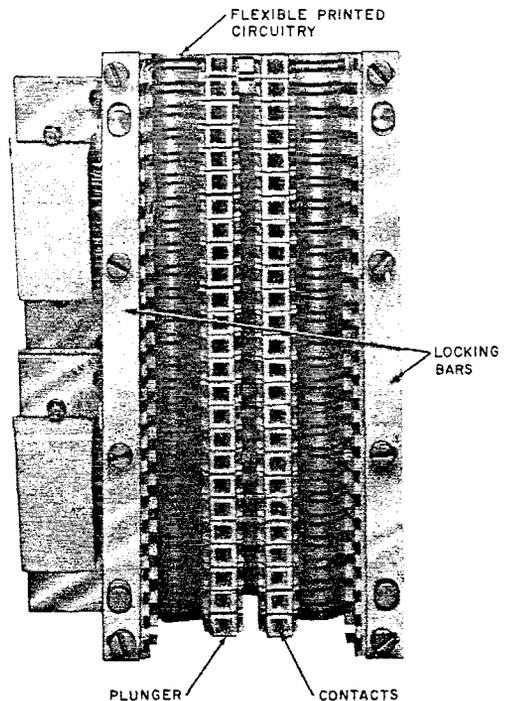


Fig. 6—F Test Connector—Rear View

4.03 The F test connector will not make contact with any circuit equipped with special circuit markers. Contact with other pairs can be avoided by not releasing the associated plungers after the connector has been mounted. The central office equipment may be removed from any pair by releasing the sliding latch and pushing the plunger all the way to the *in* position. When using the F test connector follow these steps:

- (1) The left and right slide assemblies (Fig. 5) should be in the *DOWN* position when the plungers are released to contact the cable pairs.
- (2) The left and right side assemblies (Fig. 5) should be in the *UP* position when the central office equipment is to be removed from any pair.

## 5. P100A AND P100B CORDS

5.01 The P100A and P100B cords are illustrated in Fig. 7 and 8. The cords are not supplied with the test connectors, but must be ordered separately.

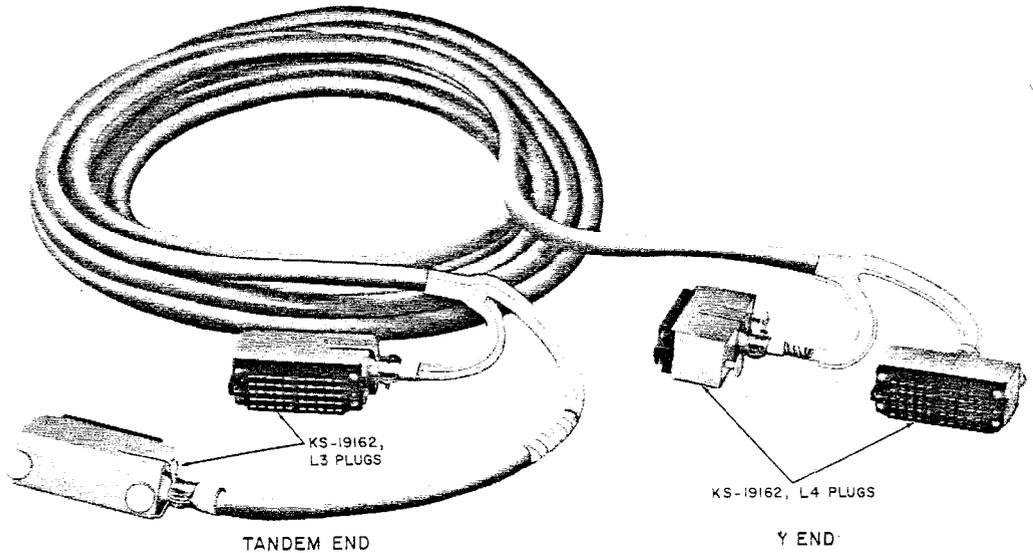


Fig. 7—P100A Cord

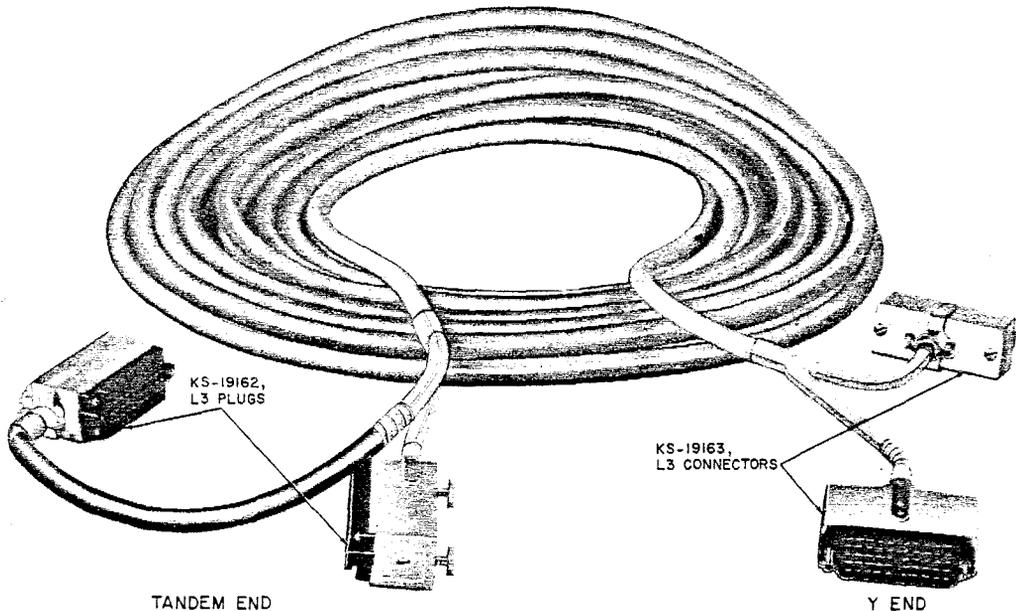


Fig. 8—P100B Cord

5.02 The P100A cord, which is 30 feet long, is required to connect test equipment to a test connector. The plugs on the Y end of the cord are engaged with mating connectors on test equipment. Plugs and connectors with similar numbers on the hoods of the cord plugs and on the test equipment should be mated. The screw jacks are engaged and turned simultaneously so the plugs and connectors mate squarely. The P100A cord is removed from the test equipment by reversing the screw jacks simultaneously.

5.03 The P100B cord is a 50-foot extension cord. One or more P100B cords and a P100A cord are required to bridge between test connectors. Screw jacks of the plugs on the Y end of the P100A cord mate with the connectors on the Y end of the P100B cord. Plugs on the tandem end of the P100B cord connect to a test connector or to connectors on the Y end of another P100B cord or test equipment. Turn screw jacks, as described in 5.02, when mating plugs and connectors.

## 6. PLACING B TEST CONNECTOR

6.01 Before placing the B test connector, check for lubrication. The cam of the B test connector should be lubricated with KS-19139 L2 lubricant to prevent excessive wear of the cam against the cam plate.

6.02 The B test connector is readied for placing on C-50 and similar type protectors by grasping the handle at the lower end of the connector with left hand, and moving the cam lever fully upward (until latched) with the right hand to open the contacts. The positioning clamps are extended or rotated from the closed position to the open position.

6.03 The test connector is then placed on a protector by inserting the metal guide at the top between the carbon blocks immediately above the blocks of the first pair to be contacted. The operating buttons on the positioning clamps

should be squeezed with the thumb and index finger of the right hand and then released to allow the clamps to close on the protector springs. This centers the **top** of the test connector about the protector.

**6.04** The cam lever is then unlatched and lowered with the right hand to its original position. This closes the contacts of the test connector on the springs of the protector. Individual pair contacts may be opened by pushing and locking the opener adjacent to the pair number on the number plate of the connector.

**6.05** *Make a visual inspection to determine that all the contacts are properly aligned on the protector mounting springs. Any contacts riding on the ceramic blocks should be pushed onto the protector springs with a nonmetallic tool.*

**6.06** To ensure satisfactory connection, hold the B test connector by the handle and with a slight upward pressure gently rock it from right to left several times. This motion will cause the sharp rhodium-plated tips of the contacts to penetrate any oxidation on the springs.

**6.07** *If two B test connectors are to be installed in tandem, install the lower test connector first.* This will avoid interference in placing the second connector.

**6.08** After the B test connector is installed on the protector, the P100A cord is connected to the test connector and secured with the screw jacks provided on the cord plugs. The plugs numbered 1 through 25 and 51 through 75 should be mated with the upper connector which is associated with numbers 1 through 25 and 51 through 75 on the B test connector number plate. The plugs numbered 26 through 50 and 76 through 100 are connected to the lower connector which is associated with those numbers on the number plate. Engage the screw jacks and turn the screws simultaneously so the plug will enter the connector without binding. The end of the P100A cord where one plug is in line with the other is attached to the connectors on the B test connector. The Y termination end of the P100A cord is connected to the test equipment.

**6.09** The tandem ends of the P100A and P100B cords (which attach to the test connectors) are provided with a clip about 1-1/2 feet behind the cordage breakout to the plugs. Attach the clips to a cable ring between verticals to relieve the strain on the test connectors due to the weight of the vertical portion of the cord. Adjust the portion of the cord hanging vertically to position within the space between the adjacent protector mountings. Do not allow the cord to protrude into the aisle space.

**6.10** Place the remaining cordage passing between verticals on the floor behind the ladder guard rail and neatly coil excess cordage so it does not protrude into the aisle space.

**6.11** Follow the procedures in 6.08 where the P100A cord is used alone to connect the test connectors with test equipment. Place the test equipment as close to the vertical containing the pairs under test as practicable, and allow only the minimum cordage needed to connect to the test equipment in the aisle space outside the guard rail.

**6.12** Remove the cords by unscrewing the screw jacks on them. Turn each screw jack simultaneously until the plugs come away squarely from the connectors. Move the lever on the B test connector to the upper position. Grasp the lifting handle at the **bottom** of the connector. Open the clamps at the **top** of the connector and move the test connector horizontally outward away from the protector. With the test connector standing vertically, move the lever downward again closing the contacts. The positioning clamps should then be returned to the position shown in Fig. 2.

## 7. PLACING C TEST CONNECTOR

**7.01** To place a C test connector, withdraw the plastic slides to the **out** position so all contact plungers are recessed into the baseplate.

**7.02** Place the steel bracket at the top of the test strip of the 300-type connector and engage the plastic hook brackets with the rear of the test strip. Hold the test connector in place against the 300-type connector and screw the retractable blades at the front of the test connector into the slots provided on the 300-type connector.

7.03 Contact to the cable pair test buttons is made in groups of ten or more by pushing the edge of one hand against the rear of the associated slides. *Do not operate the slides on special service pairs or on pairs involved on a cable transfer.*

7.04 After installing the C test connector a P100A cord is plugged to the connectors on the front face and secured with the screw jacks provided on the cord plugs. The plugs numbered 1 through 25 and 51 through 75 mate with the upper connector similarly numbered and plugs numbered 26 through 50 and 76 through 100 mate with the lower connector. To enable the plug to enter the connector squarely, engage the screw jacks and turn the screws simultaneously. The tandem end of the P100A cord is attached to the C test connector. The Y end is connected to a test set or to a P100B cord.

7.05 Attach the cords to the cable rings and store the excess cordage as described in 6.08 through 6.10.

7.06 When the C test connector is to be removed for storage or relocation to another 300-type connector the following steps should be followed:

- (1) Remove the cords.
- (2) Break contact with the test strip by pulling out the slides.
- (3) Turn out the knurled screws and remove the test connector.
- (4) Remove adapters.

## 8. PLACING F TEST CONNECTOR

8.01 Place the F connector as follows:

- (1) Pull the 50 plungers out to the latch position.
- (2) Place four adapters on jacks (in the 50-pair count to be tested) as near to the upper and lower extremes of the 50-pair count as special service markers permit (Fig. 9).

**Note:** The adapters (Fig. 9) used to place the F test connector should be those with the X marked on their side.

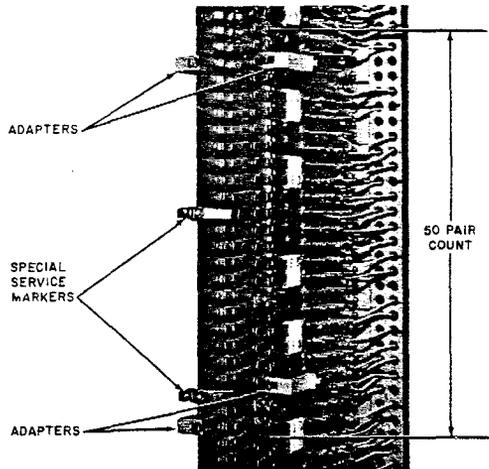


Fig. 9—Adapters Placed on 444-Type Jack

- (3) Place and lock the F test connector on the adapters by rotating the four knurled knobs so the locking plate positioning dots are adjacent to those on the chassis.
- (4) When using the F test connector make certain that:
  - The left and right side assemblies (Fig. 5) are in the **DOWN** position when the plungers are released to contact the cable pairs.
  - The left and right slide assemblies (Fig. 5) are in **UP** position when the central office equipment is removed from any pair.
- (5) To make contact with the springs of the 444-type jacks, release the latches on the plungers. (Special service markers prevent contact with the springs associated with special service pairs.)

8.02 After the F test connector is installed on the jack, the P100A or combination of a P100A and one or more P100B cords is plugged into its mating connectors. The plugs numbered 1 through 25 and 51 through 75 are connected to the upper mating connector on the F test connector and the plugs numbered 26 through 50 and 76

through 100 are connected to the lower mating connector. Engage the plugs as described in 6.08.

#### 9. **▶B TEST CONNECTOR CONVERSION◀**

9.01 ▶Conversion kit D-180538 is used for field modification of the B test connector. Complete information for the modification is given in Section 201-206-102.▶

#### 10. **MAIN FRAME LADDER CLEARANCE**

10.01 If the test connectors on the main frame extend beyond the guard rail at the bottom of the frame, clearance should be provided to prevent a moving ladder from causing damage to the test connectors.

10.02 Temporary clearance can be obtained by using a P-20A356 guard as shown in Section 106-310-120 (providing clearance for a 108A test set). This guard extends 7 inches out and 16 inches along the main frame guard rail. This clearance is sufficient to permit the ladder to pass the test connector.

10.03 Permanent clearance can be provided by extending the guard rail per ED-95099-70, furnished by the equipment engineer. However, temporary clearance is preferred for economic reasons.

#### 11. **B TEST CONNECTOR CASE**

11.01 The B test connector case is available on separate order to house and transport a B or a C test connector.

11.02 The B test connector case consists of a lightweight plastic box with a hinged cover, a carrying handle, a latch, and two snap catches. Supports are provided in the case for holding the B test connector in place as shown in Fig. 10.

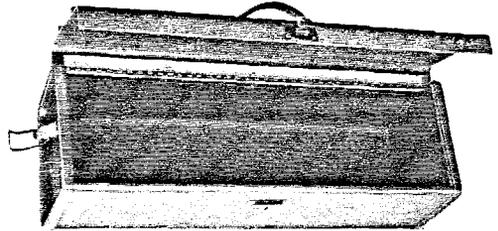


Fig. 10—B Test Connector Case for Storing C Test Connector

11.03 There are two longitudinal ribs on both the cover and the bottom of the case which along with the catches permit stacking two cases and carrying them as a unit.

12. C TEST CONNECTOR CASE

12.01 A C test connector case is supplied with each F test connector to provide protection during storage or transportation.

12.02 The C connector case (Fig. 11) consists of a plastic carrying case with a hinged cover, a carrying handle, and two snap catches. Supports are provided for holding the connector in place. The six adapters furnished with the F test connectors are supplied in a plastic bag.

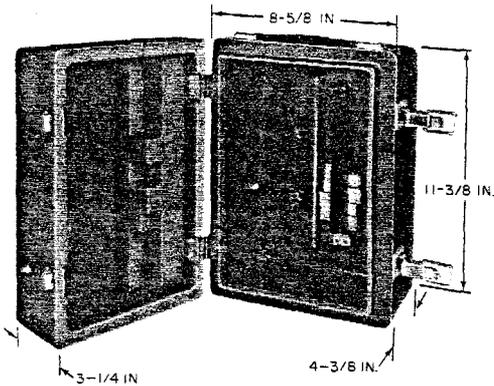


Fig. 11—C Test Connector Case for Storing F Test Connector

13. D TEST CONNECTOR CASE

13.01 The D test connector case is available on separate order to house and transport a B test connector.

13.02 The D test connector case (Fig. 12) consists of a lightweight plastic box with a hinged cover, a carrying handle, a latch, and two snap catches. Supports are provided for holding the test connector in place.

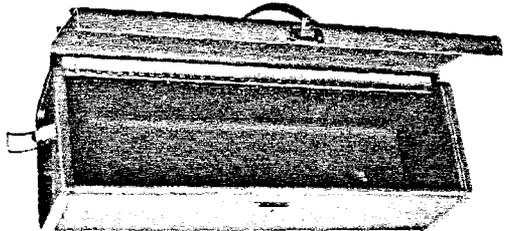


Fig. 12—D Test Connector Case for Storing B Test Connector

13.02 There are two longitudinal ribs on both the cover and the bottom of the case which, along with the catches, permit stacking two cases and carrying them as a unit.