

## CONNECTING BLOCKS

### 625-, 630-, AND 635-TYPE

### IDENTIFICATION, INSTALLATION, AND CONNECTIONS

#### 1. GENERAL

1.01 The 625-, 630-, and 635-type connecting blocks are wall-mounted connectors that provide a plug-in type termination for modular type telephone sets and ancillary devices equipped with a miniplug-ended mounting cord. The 630-type connecting block also provides for installation of a plug-equipped modular wall telephone set. This allows the customer to move the modular-portable telephone set to any location equipped with this type connecting block. The 635-type connecting block is designed to place equipment such as exclusion sets, alarm dialers, and automatic dialers in series with the telephone line and the station set when an 8-position modular plug is inserted into it. However, the 635B connecting block may also be used with the 4- and 6-position plugs to provide initial and/or bridged service. The 74D connecting block (Section 461-606-100) is also available for telephone sets requiring 6-conductor mounting cords.

1.02 This section is reissued to:

- Add information on the Federal Communications Commission (FCC) Registration Program
- Provide top/bottom orientation to modular connectors (Fig. 2, 3, and paragraph 3.11) and Warning to paragraph 3.01
- Delete statement in Fig. 3 for optional installation of 625F connecting block in woodwork
- Revise Fig. 6 to show current components of 625WP connecting block
- Add 934A tool (modular jack line polarity tester).

1.03 Use of the 625-, 630-, and 635-type connecting blocks as registration interface devices, as provided for under the Federal Communications Commission (FCC) Registration Program, is covered in:

- Section 463-400-120: Registration Interface RJ11C, RJ11W, RJ12C, RJ12W, RJ13C, RJ13W, RJ17C, RJ18C, RJ18W, RJ19C, and RJ19W—Bridged Single Line—Tip and Ring Arrangements
- Section 463-400-130: Registration Interface RJ16X, RJ31X, RJ32X, RJ33X, RJ34X, RJ35X, RJ36X, and RJ38X—Series Single Line—Tip and Ring Arrangements
- Section 463-400-140: Registration Interface RJ14C and RJ14W—Bridged Two Line—Tip and Ring Arrangements.♦

#### 2. IDENTIFICATION

##### ORDERING GUIDE

- Backboard, 191C (for use with 630A4, if required)
- Backboard, 168D (for surface-mounted blocks on masonry walls)
- Block, Connecting, 625A (Fig. 1)
- Block, Connecting, 625B (Fig. 2)
- Block, Connecting, 625C (Fig. 1)
- Block, Connecting, 625F (Fig. 3)
- Block, Connecting, 625FS (Fig. 4)
- Block, Connecting 625H (Fig. 4)

#### NOTICE

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

- Block, Connecting, 625S (Fig. 5)
- Block, Connecting, 625T (Fig. 5)
- Block, Connecting, 625WP (Fig. 6)
- Block, Connecting, 630A4 (Fig. 7, 8, and 9)
- Block, Connecting, 635A (MD) (Fig. 10 and 11)
- Block, Connecting, 635B (Fig. 12, 13, and 14)
- Assembly, Faceplate, 65A
- Blade, 8762D-630 (metal lead insertion tool for 630A4)
- Tool, Impact D, AT-8762 (for holding blade, 8762D-630)
- Tool, Handle, 788A1 (also for holding blade, 8762D-630, or 797A tool)
- Tool, 797A (plastic lead insertion tool for 630A4)
- Tool, 934A [modular jack line polarity tester (Fig. 15)].♦

## CONNECTING BLOCKS

**2.01** The **625-type** connecting blocks provide a termination for the D4BU miniplug-ended mounting cord used with the modular telephone sets.

**2.02** The **625A** connecting block (Fig. 1) is intended for new installations and is surface mounted. It contains a 42A connecting block base assembly which is used to terminate inside wire and spade-tipped leads from the jack in the cover. This connecting block replaces the 42A connecting block and the 549A jack. When mounting the 42A connecting block, leave at least 1/16-inch clearance between the bottom of the cover and the molding, carpet, or floor.

♦**Note:** Higher connecting block mountings are recommended as less troublesome while providing easier customer plug orientation.♦

**2.03** The **625B** connecting block (Fig. 2) includes the 625F connecting block, 65A faceplate package, and two mounting screws. It is intended for new installations or modular replacement of 548A jacks or 47F connecting blocks.

**2.04** The **625C** connecting block (Fig. 1) is the same as the 625A connecting block except the 625C does not include the 42A connecting block. The 625C connecting block may be used to convert the 42A connecting block in existing installations to modular installation.

**2.05** The **625F** connecting block (Fig. 3) is intended for use in new installations requiring a flush-type connecting block or for modular replacement of 548A jacks or 47F connecting blocks. It does not include faceplate or mounting bracket.

**2.06** The **625FS** connecting block (Fig. 4) is similar to the 625F except it has a molded faceplate and a customer-operable spring-loaded cover which protects the interior telephone line contact springs from contamination. It is intended for use in areas subject to high humidity and condensation or locations exposed to spray painting, washing, or foreign matter.

**2.07** The **625H** connecting block (Fig. 4) is constructed the same as the 625FS except for the modular jack which shall be a 645H2 jack. The tip and ring is provided on contacts 1 and 6 and will be designated GN and R. The 625H is intended for use in hospital critical care areas to provide connection by specially wired instruments to transmit electrocardiogram (EKG) signals or voice signals (using a TRIMLINE® telephone set with AD3H or AC2PH telephone set base) on the telephone network.

♦**Note:** The 625H connecting block is not applicable to wall-mounted TRIMLINE telephone sets.♦

**2.08** The **625S** connecting block (Fig. 5) is similar to the 625A except it has a customer-operable spring-loaded cover which protects the interior telephone line contact springs from contamination. It is intended for use in areas subject to high humidity and condensation or locations exposed to dripping, washing, or foreign matter. It contains a 42A block.

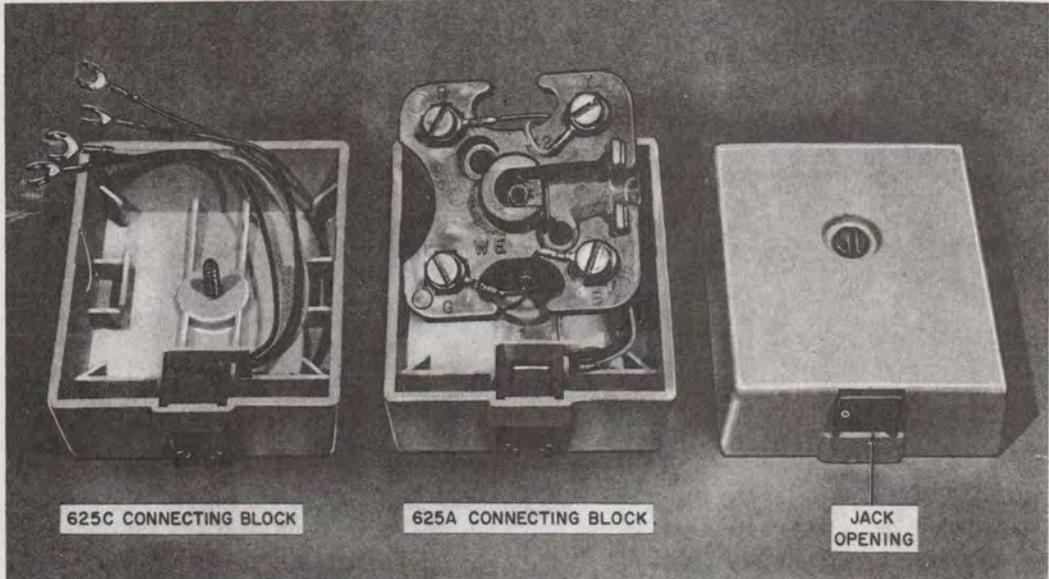


Fig. 1—625A- and 625C-Type Connecting Blocks

2.09 The **625T** connecting block (Fig. 5) is the same as the 625S except it does not contain a 42A connecting block. It is intended to convert existing 42A or 625-type connecting blocks where extra protection is needed.

2.10 The **625WP** connecting block (Fig. 6) is for use in outdoor locations and where severe environmental conditions exist. It is intended to mount on a B outlet box AT-8732. A gasket is provided to seal the faceplate assembly and box. A plastic screw-on cap, plastic washer, and split rubber grommet is provided to seal the connection between the telephone mounting cord and jack.

2.11 The **630A4** connecting block (Fig. 7) is a plug-in wall set mounting and will also accept a modular type mounting cord. It consists of a connecting block (Fig. 8) and 1034A mounting plate. Two 3/16-inch 800413577 (P-41357) cover mounting screws, two 5/16-inch 840705008, and two 1-1/8 inch 841065529 flathead machine screws are included in a fastener package. The 630A4 connecting block is now available as a replacement for the 630A6 and should be ordered accordingly.

2.12 ♦The 797A or 8762D-630 insertion tool head is used for terminating conductors on the 630A4 connecting block. The 8762D insertion tool is adaptable to either the 714B tool handle or the AT-8762 D impact tool; the 797A tool is used with the 714B tool handle *only*. The construction of the blade tips is the same except the 8762D-630 is made of steel instead of plastic. Termination will be the same as shown in Fig. 9.♦

2.13 The **635A (MD)** connecting block contains a 650-type, 8-contact modular jack which is wired to eight screw terminals (Fig. 10). The 8-position plug on the series equipment is plugged into the modular jack, and the line and controlled station connections are made at the screw terminals. When a plug is not inserted, lead 1 is shorted to lead 4, and lead 5 to lead 8. Insertion of the plug removes the shorts and puts leads 1 and 4 and 5 and 8 in series with the series or exclusion equipment (Fig. 11). In this mode, continuity to the downstream equipment must be maintained through the series or exclusion equipment.

2.14 The **635B** connecting block (Fig. 12) which replaces the 635A connecting block is used

- 4 CONTACTS
- FLUSH MOUNTED:  
FOR USE IN STANDARD ELECTRICAL  
OUTLET BOX  
NOTE:  
MOUNTING SCREWS, BRACKET, AND  
FACEPLATE PROVIDED
- MATES WITH D4BU MOUNTING CORD PLUG
- FOR NEW INSTALLATIONS OR MODULAR  
REPLACEMENT OF 548-TYPE JACKS

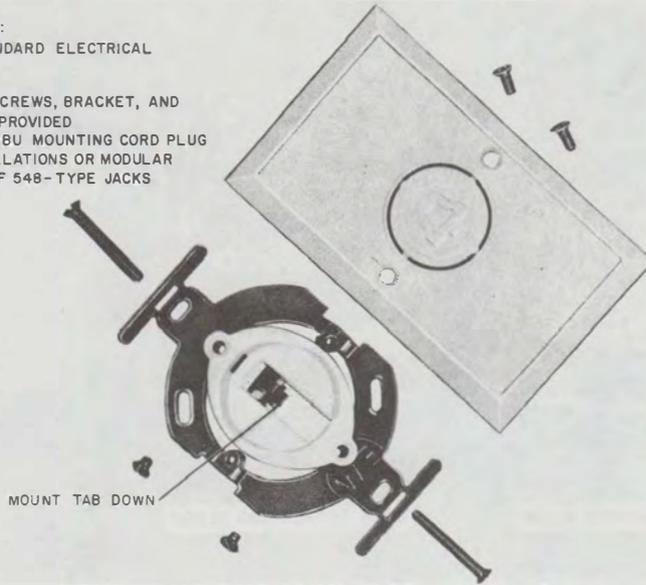


Fig. 2—625B Connecting Block (With Mounting Hardware)◆

- 4 CONTACTS
- FLUSH MOUNTED:  
USING 63-TYPE OR KS-20502, L2 BRACKET  
OR IN STANDARD ELECTRICAL OUTLET  
BOX USING 43B (MD) BRACKET OR  
65A FACEPLATE
- MATES WITH D4BU MOUNTING CORD PLUG
- MOUNTING SCREWS SUPPLIED
- FOR NEW INSTALLATIONS OR MODULAR  
REPLACEMENT OF 548-TYPE JACKS

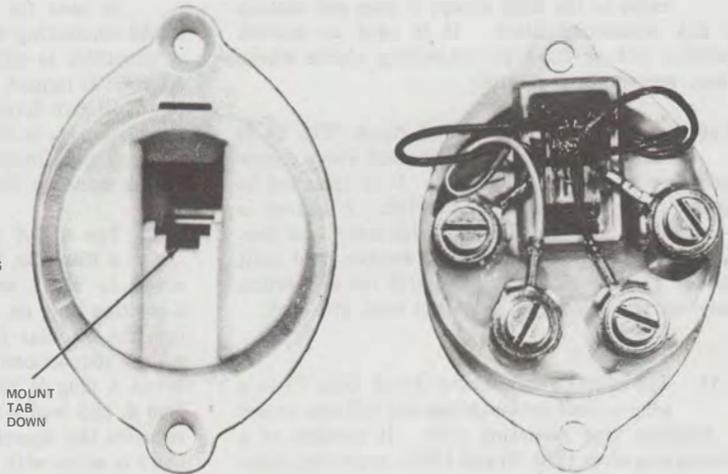


Fig. 3—625F Connecting Block (Without Mounting Hardware)◆

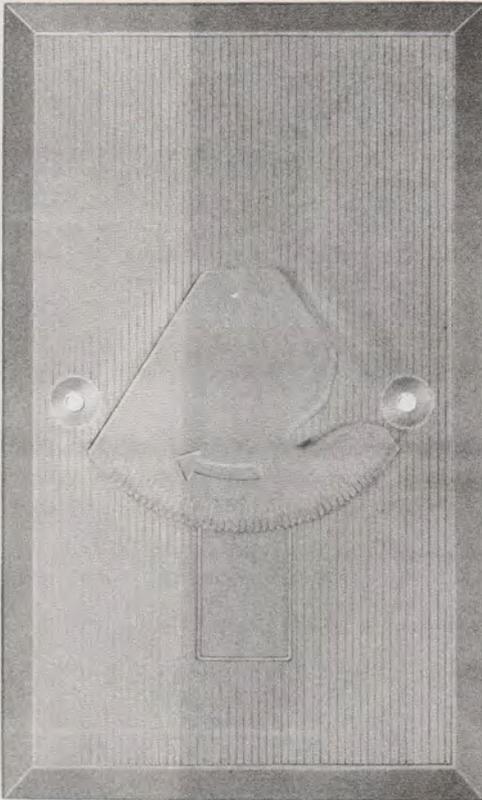


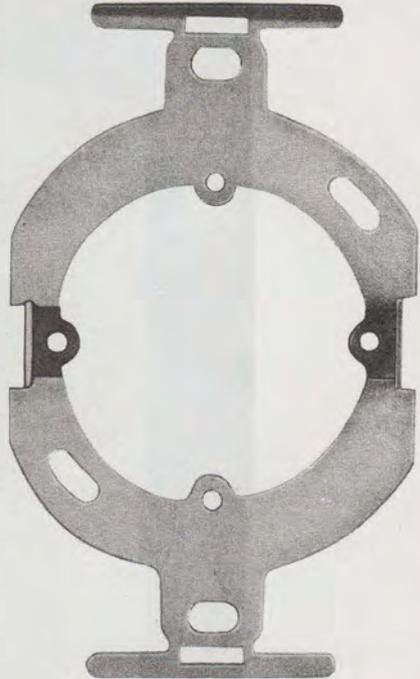
Fig. 4—625FS or 625H Connecting Block

to permit company-owned and customer-provided equipment using the D8AA mounting cord to be placed in series with telephone company equipment. This connecting block is equipped with a 651A series-bridged jack and a 10-position terminal board (Fig. 12 and 13).

**2.15** The **635B** connecting block has an optional feature which provides the field installation of a 652A jack. This jack is used to provide plug-in facilities for either bridged- or series-type arrangements as shown in Fig. 13 and 14.

**2.16** When a plug is not inserted in the 651A jack, lead 1 is shorted to lead 4, and lead 5 to 8. Insertion of an 8-position plug removes the shorts and puts leads 1 and 4 and 5 and 8 in

BRACKET  
(PROVIDED WITH CONNECTING BLOCKS)



NOTE:  
BRACKET IS USED TO MOUNT 625FS OR 625H TO GEM BOX, 63A, OR 63B MOUNTING BRACKET.

series with the series or exclusion equipment (Fig. 14). In this mode, continuity to the downstream equipment must be maintained through the series or exclusion equipment. If a 4- or 6-position plug is inserted, the short is not removed and the cord picks up tip and ring on a bridged basis.

### 3. INSTALLATION

**3.01** ♦To protect against contamination, 625- and 630-type connecting blocks are to be installed as follows:

- (a) **Surface-type:** Jack-opening to bottom (Fig. 1). Narrow baseboards will require mounting connecting block opening to left or right side and should be avoided whenever

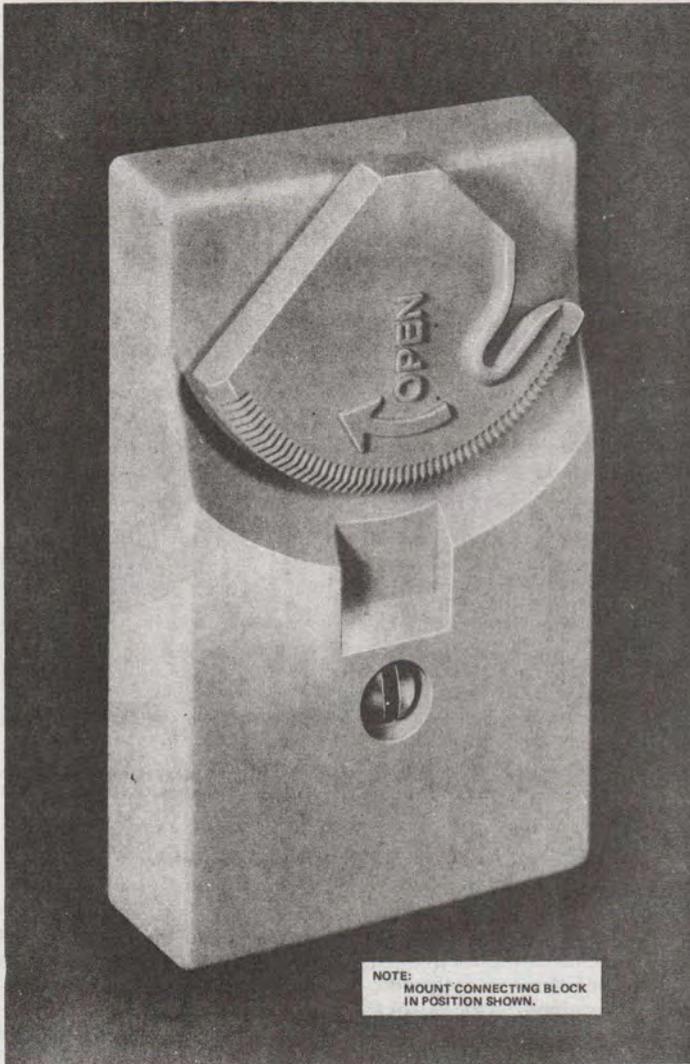


Fig. 5—625S or 625T Connecting Block

possible. Where permissible, mount the connecting block higher, affording easier jack-plug orientation and less troubles.

(b) **Flush-type:** Jack-opening oriented with spring contacts up and tab down (Fig. 2, 3, and 7).

**Warning:** Never mount with jack-opening up (surface-type) or spring-contacts down (flush-type).

**3.02 625A Connecting Block:** Mount the terminal block on a wall (preferred) or baseboard. Terminate the station wire and dress



Fig. 6—625WP Connecting Block (All Parts Included in Package)◆

leads as shown in Fig. 1. Terminals on the connecting block are lettered R, G, Y, and B as shown in Table A. When mounting on masonry walls, a backboard should always be used.

**Note:** Do not use on damp external walls (see paragraph 3.08).◆

**3.03 625B Connecting Block:** Mount the bracket on a standard electrical outlet box or directly to the wall (must have recessed area) using the mounting screws supplied (see Fig. 2). Feed the station wire through the center mounting hole of the bracket and terminate the leads on the connecting block as shown in Table A. Mount the connecting block on bracket and fasten with the two screws supplied. Attach faceplate with the two screws supplied.

**3.04 625C Connecting Block:** Remove cover from existing 42A connecting block. Connect leads from miniplug connector in 625C connecting block to terminals on 42A connecting block. Dress leads as shown in Fig. 1; terminate leads of connecting block as shown in Table A. Attach

the connecting block cover to the block using center captive screw in cover. Orient cover in same manner as 625A (see paragraph 3.01).

**3.05 625F Connecting Block:** Connect station wire to terminals on rear of 625F connecting block as shown in Table A. Mount 625F connecting block on bracket and attach faceplate.

**Note:** The 625A, B, C, and F connecting blocks are provided with a protective gummed label which is to be attached over the jack entrance if the connecting block is not in use.

**3.06 625FS or 625H Connecting Block:** Connect station wire to terminals on rear of connecting block as shown in Table A. Mount the block as shown in Fig. 4.

**3.07 625S Connecting Block:** Mount the 42A connecting block on the wall (preferred) or baseboard so that the 625S connecting block cover is positioned as shown in Fig. 5. When mounting on masonry walls, a backboard should always be used.

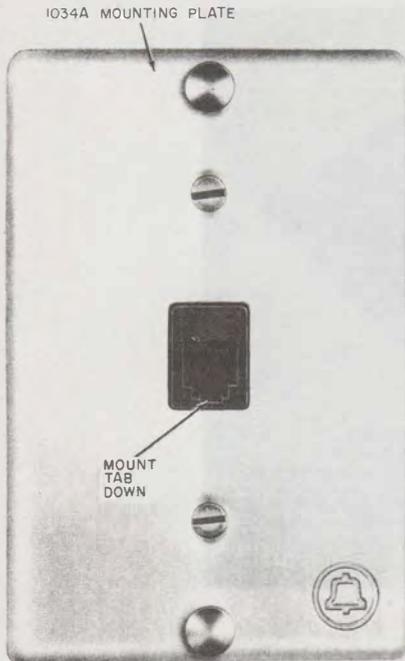


Fig. 7—630A4 Connecting Block (With Mounting Plate)

3.08 On damp external walls, the 625S connecting block should be wall mounted at the same height as electrical outlets. Where practical, the 625S should be used for this application mounted on either the KS-20502L2 bracket or the bracket provided.

3.09 **625T Connecting Block:** This connecting block is the same as the 625S except it does not contain a 42A connecting block. This connecting block is to be positioned over existing 42A connecting blocks as shown in Fig. 5.

3.10 **625WP Connecting Block:** This block (Fig. 6) should be mounted on a B outlet box. A parts package is provided with the 625WP connecting block consisting of a rubber gasket and four mounting screws to seal the mounting block to the outlet box. Also provided is a plastic screw-on cap, a plastic washer, and a split rubber

- (1) 63-TYPE BRACKET
- (2) GEM BOX AND NORMAL WALL SURFACE
- (3) OR (4) WEAK WALLS, OVERSIZE WIRING HOLE, LOCAL DAMAGE, ETC
- (5) 1034A MOUNTING PLATE

NOTE:  
IF MORE THAN 2 FASTENERS ARE NECESSARY, USE ADDITIONAL MOUNTING HOLES AS REQUIRED

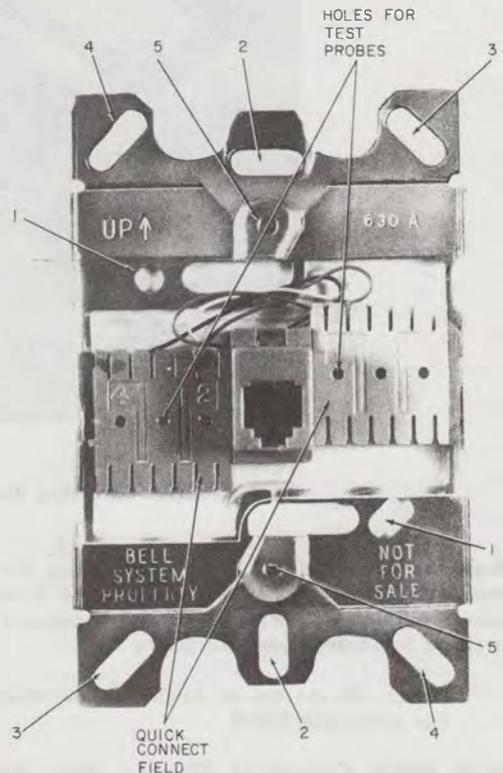


Fig. 8—630A4 Connecting Block (Current Model Without Mounting Plate)

grommet. The cap, washer, and grommet are installed on the mounting cord of the telephone to be used with the jack to seal out moisture. See Table B for appropriate fastener.

3.11 **630A4 Connecting Block:** This block (Fig. 7) may be flush mounted on a 63-type bracket or electrical type outlet box or surface mounted on a wall. In all cases, the block should

*be tightened just enough so that the assembly is tight on the wall once mounting plate is attached and tightened down. Further tightening will distort the bracket excessively.*

(b) The 191B or 191C backboard snaps over the 630A4 to cover wall imperfections when necessary.

(c) The 630A4 connecting block with the old and new bracket now contains an item called the spring block assembly 840696678 (not shown). This spring block assembly is inserted into the jack and is connected to the station wire by the quick-connect field. The four wires of the assembly have been placed in small slots (combs) to prevent shorting.

**3.12 635A (MD) Connecting Block:** Remove the cover from the block by loosening the screw in the center. Mount the block on a suitable vertical surface. Connect the line and control station leads (Fig. 11) to the screw terminals. Replace the cover. Connection of the series or excluded equipment is to be made by inserting the plug into the series jack.

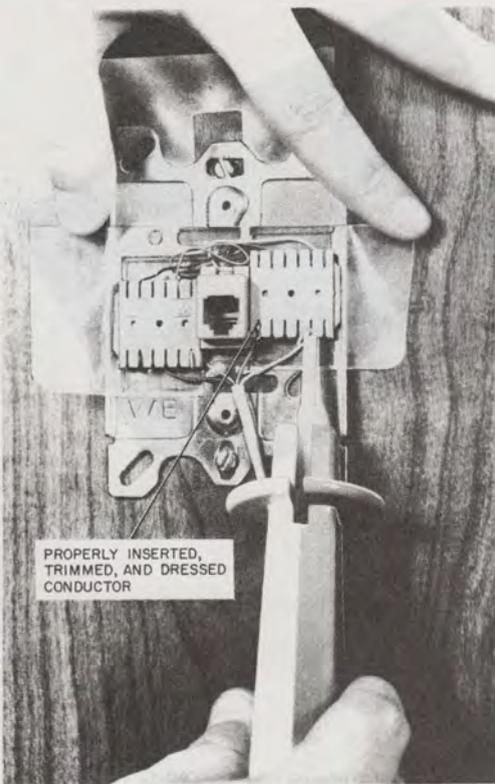
**3.13 635B Connecting Block:** Remove the cover from the block by loosening the screw in the center. Mount the block on a suitable vertical surface. Connect the line and control station leads to the screw terminals (Fig. 13). If the optional 652A jack is to be installed, connect as shown in Fig. 13 or 14.

#### 4. CONNECTIONS

##### 630A4 Connecting Block

**4.01** The 630A4 may be used with exposed or concealed station wire. Each quick-connect terminal (total of four) provides three station wire terminations per lead. One termination is required for the jack conductor. An access for a test point is also provided (Fig. 8).

**Note:** 630A4 connecting blocks manufactured after March 1977 will be received from the factory with a plastic protective wrapper folded around the quick-connect terminals. To connect station wire, fold out the front and side flaps, make connections and dress leads (Fig. 9), then refold wrapper across terminals. This



**Fig. 9—Terminating Wire With Lead Insertion Tool in 630A4 Connecting Block**

lie flat against the wall with connector springs oriented to the top and tab to the bottom (Fig. 7).

(a) A fastener package is provided with the 630A4 connecting block consisting of two 3/16-inch 800413577 (P-41357) cover mounting screws, two 5/16-inch 840705008, and two 1-1/8 inch 841065529 flathead machine screws. Depending on mounting arrangement, select proper fasteners from Table B and mount connecting block using holes designated in Fig. 8. The connecting block should be straight before tightening screws.

**Caution:** When installing on an underflush outlet box or plaster ring, the connecting block bracket should

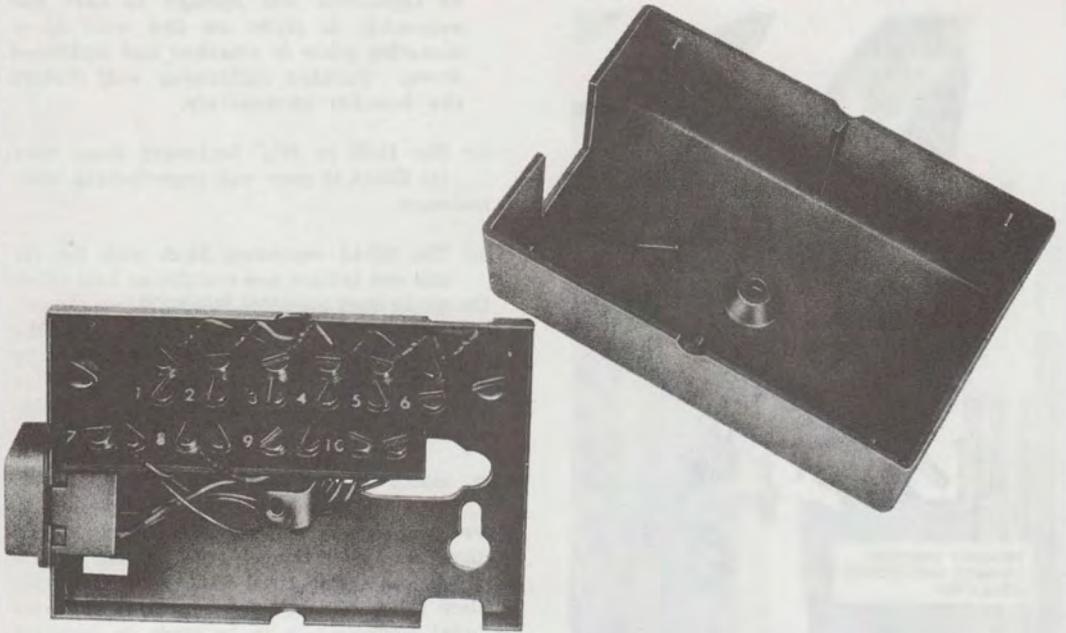


Fig. 10—635A (MD) Connecting Block

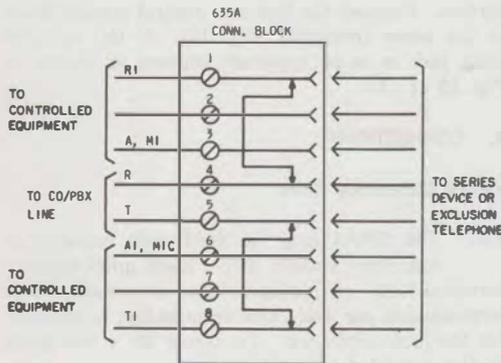


Fig. 11—Schematic Diagram, 635A (MD) Connecting Block

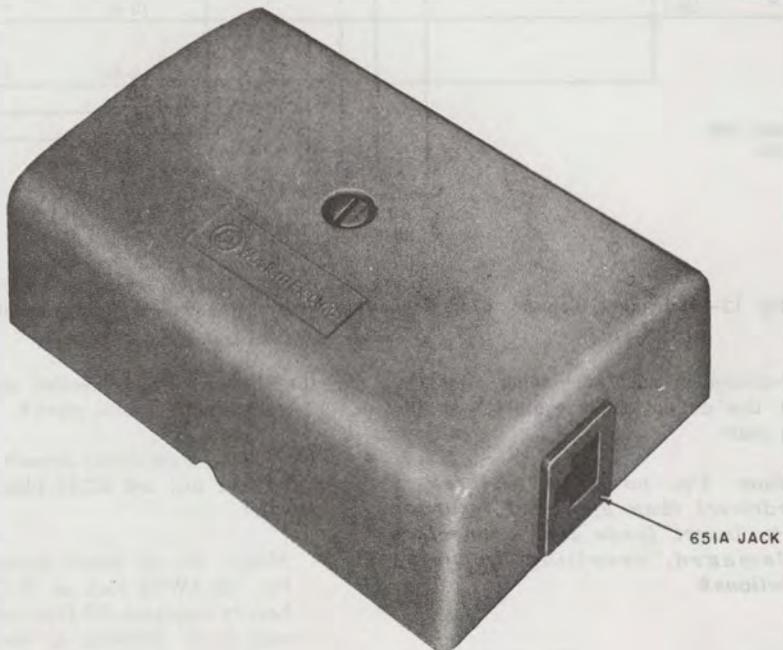
wrapper protects the terminals from foreign matter and also prevents wire ends from making contact with 1034A mounting plate. If a 630A4 connecting block without this protective wrapper is used, insulating tape should be applied to the inside surface of the 1034A mounting plate to prevent any wire ends from making contact with the plate.

4.02 Make connections as shown in Table A as follows:

- (1) Leave station wire conductors unstripped.
- (2) Dress the conductors so they will not be pinched or cross over each other.
- (3) Use the lead insertion tool to seat conductors in bottom of slots (Fig. 9). Do not twist or rock insertion tool and allow sufficient slack. Do not insert more than one conductor in each slot. Trim the terminated leads approximately 1/4 of an inch from the connecting surface and

**NOTE**

IF 652A JACK IS REQUIRED NOTCH  
CONNECTING BLOCK COVER WITH 798A TOOL  
THE SIZE OF THE ADHESIVE LABEL.  
CONNECT AS SHOWN IN SCHEMATIC DIAGRAMS.



**Fig. 12—635B Connecting Block**

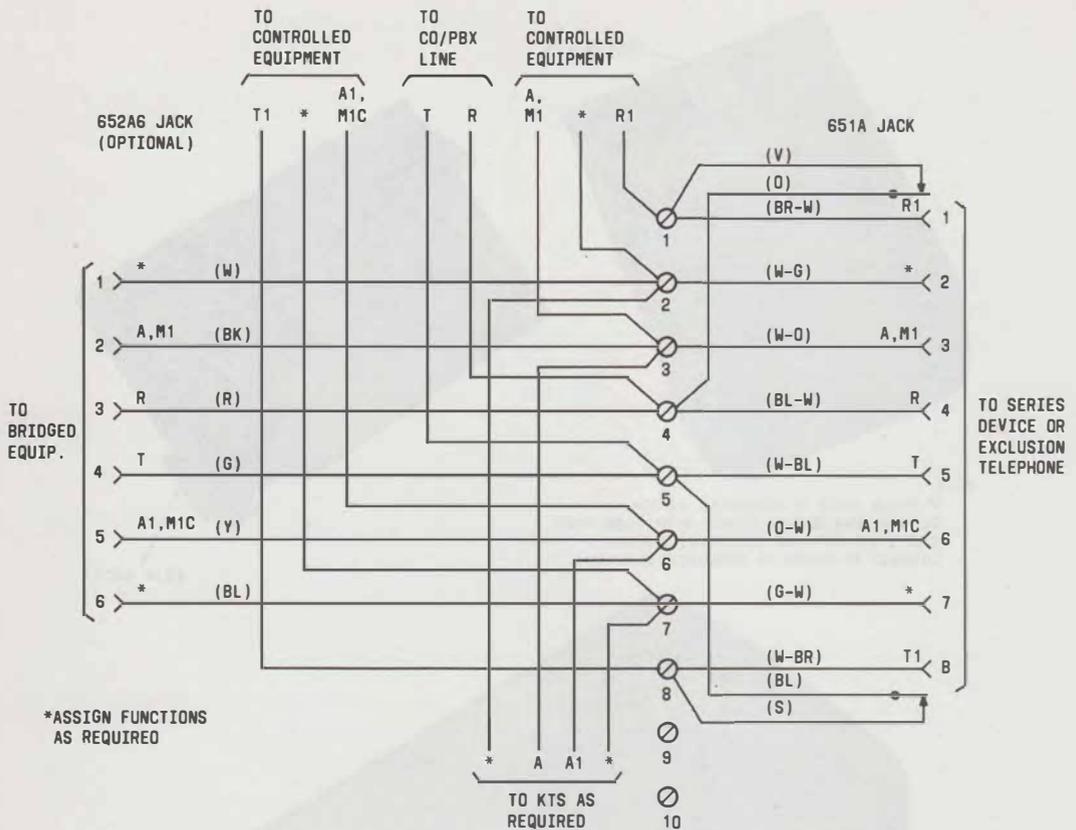


Fig. 13—Schematic Diagram, 635B Connecting Block (Series and/or Bridged Service)

bend downward in such a manner that the conductor tips do not make contact with the mounting plate.

**Caution:** Use no other tool (eg, a screwdriver) than approved insertion tool to insert leads lest connectors be damaged, resulting in noisy connections.

(4) Attach mounting plate (Fig. 7) using the two 3/16-inch 800413577 (P-41357) cover mounting screws or two 5/16-inch 840705008 flathead machine screws from the fastener package.

(5) Remove the protective mylar cover from the stainless steel plate.

(6) Check for continuity on each lead by inserting 934A tool or 523A4 plug and connecting test set.

**Note:** Use of heavy gauge (greater than No. 22 AWG), such as JKT station wire or heavily insulated GS-type station (MD) wire, may cause difficulty in installation and/or damage to the connecting block. Such wire should be used only where it is impossible to provide appropriate types (D, G, or H station wire or E inside wire). Do not strip insulation from conductors.

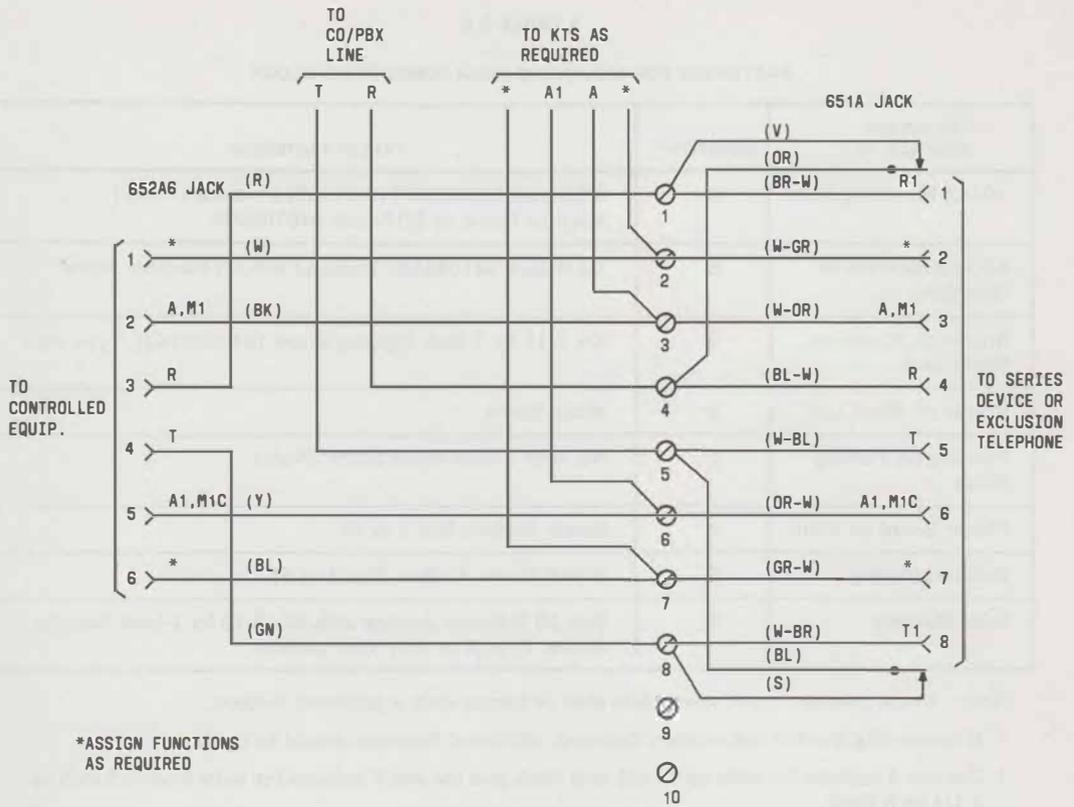


Fig. 14—Schematic Diagram, 635B Connecting Block (Series Service Same Location)

TABLE A

MODULAR CONNECTING BLOCK CONNECTIONS

INSIDE WIRE					CONNECTING BLOCK		
HOSPITAL EKG LINE	1A1 OR 1A2 KTS	ONE-LINE SERVICE		TWO-LINE SERVICE	TERMINAL		LEAD COLOR
		NO DIAL LIGHT	DIAL LIGHT		625-TYPE	630A4	
Tip	Tip	Tip	Tip	Line 1 Tip	G	1	Green
Ring	Ring	Ring	Ring	Line 1 Ring	R	2	Red
	A		TRNSF	Line 2 Tip	B	4	Black
	A1		TRNSF	Line 2 Ring	Y	3	Yellow

◆ TABLE B ◆

FASTENERS FOR MOUNTING 630A4 CONNECTING BLOCK

TO FASTEN CONN BLK TO	QUANTITY*	TYPE OF FASTENERS
1034A Mounting Plate	2	3/16-Inch 800413577 (P-41357) Flathead (#6-32) Machine Screw or 5/16-Inch 840705008
63-Type Bracket or Gem Box	2	1-1/8 Inch 841065529 Flathead (#6-32) Machine Screw
Stucco or Plaster on Wood Lath	2	No. 8-15 by 1-Inch Tapping Screw (840502744), Type AB‡
Plaster on Metal Lath	2	Molly Screw
Paneling on Furring Strips	2	No. 6 by 1-Inch Wood Screw (Note)
Plaster Board on Studs	2	Screw Anchor, Size 4 or 6†
Hollow Masonry	2	B Wall Screw Anchor, Size 4 or 6†
Solid Masonry	2	Size 10 D Plastic Anchor with No. 8-15 by 1-Inch Tapping Screw, Type B or AB‡ steel anchors

*Note:* Where possible, wood screws into stud or furring strip is preferred method.

\* If connecting block is not securely fastened, additional fasteners should be used.

† Use size 4 anchors for walls up to 5/8-inch thick and use size 6 anchors for walls from 5/8-inch to 1-1/4 inch thick.

‡ Equivalent size and thread engagement or greater. Tapping screws must always be sunk into lath, furring strips, or studs.

## 5. ◆ TESTING

### 934A Tool (Fig. 15)

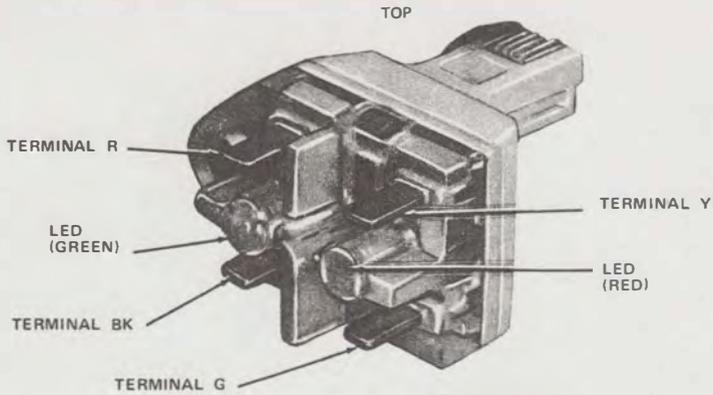
**5.01** The 934A tool is designed for testing telephone line polarity in modular jacks and connecting blocks. It consists of a plastic body with modular plug and two light-emitting diodes (LEDs), one green and one red, to indicate line polarity status.

**5.02** The 934A tool also has four brass terminals extending from it, one for each lead of the four-wire modular jack it is testing, on which hand telephone test set, other test set, tone generator, etc, leads can be clipped in place.

**5.03** When placed in a modular jack or connecting block, the following 934A tool LED indications are possible:

- Green LED lights—line tip and ring polarity is correct
- Red LED lights—line tip and ring polarity is reversed
- Neither LED lights—line tip and/or ring lead(s) open or not energized.

*Note:* To verify 934A tool is in good working order, it should first be tested in a known-to-be correct circuit.◆



## LED INDICATIONS

GREEN - TIP/RING POLARITY CORRECT

RED - TIP/RING POLARITY REVERSED

NEITHER - TIP AND/OR RING OPEN  
OR NOT ENERGIZED

Fig. 15—0934A Tool