

88-TYPE CONNECTING BLOCKS AND ASSOCIATED HARDWARE IN BUILDING APPLICATIONS DESCRIPTION AND USE

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			1.02 This section is reissued to:
1.	GENERAL	1	• Indicate that the 88BBW1-type connecting blocks are superseded by the 88BSW1-type connecting blocks
2.	DESCRIPTION	2	
3.	TOOLS	8	• Include information on white wiring blocks and show colored wiring blocks rated MD
4.	TERMINATING CABLE PAIRS ON WIRING BLOCKS	10	• Include information on colored designation strips
5.	PLACING CONNECTING BLOCK ON WIRING BLOCK	10	• Include the 188B1 backboard
6.	TERMINATING CROSS-CONNECTING WIRE	14	• Update text and illustrations.
7.	REMOVING CROSS-CONNECTING WIRE	14	Since this is a general revision, arrows ordinarily used to indicate changes have been omitted.
8.	MAINTENANCE	15	
1.	GENERAL		1.03 Procedures for installing 88-type connecting blocks and their associated hardware are outlined in Sections 462-265-202 and 462-265-212.
1.01	This section covers the description and use of the 88-type connecting block and the associated hardware for terminating PIC cables in building applications.		1.04 The procedure for running cross-connecting wires is covered in the 462 Division of the Practices.

**Reprinted to comply with modified final judgment.

2. DESCRIPTION

88-Type Wiring Block

2.01 The **88-type wiring block** is a fire retardant molded plastic block. Each wiring block consists of index strips, each of which will

terminate 25 pairs and each is marked with the five tip colors to establish pair location. In building entrance terminals, riser, and distribution terminals, use the wiring blocks illustrated in Fig. 1. Information on color codes, pair sizes, and application is contained in Table A.

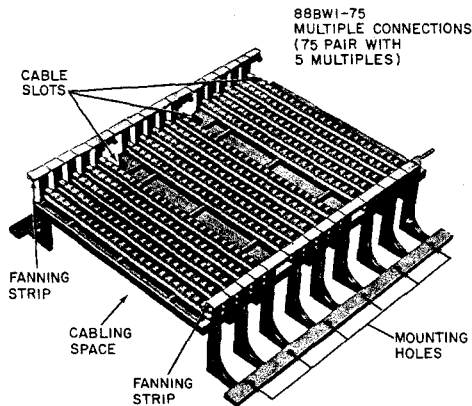
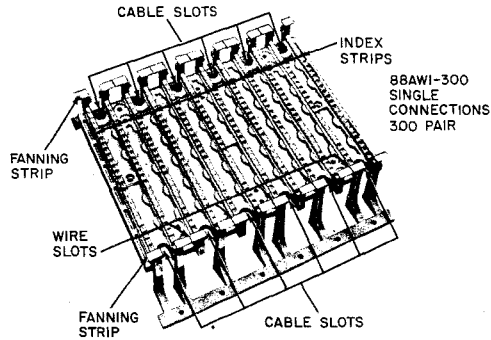


Fig. 1—Wiring Block Used in Main, Riser, and Distribution Terminals

TABLE A

88-TYPE WIRING AND CONNECTING BLOCKS

CODE NO.	RATING	COLOR	NO. OF PAIRS	APPLICATION
88AW1-100 88AW1-300	STD STD	White	100 300	Wiring Blocks for Building Terminals (Single Connection)
88BW1-25 88BW1-25C* 88BW1-75 88BW1-75C*	STD STD STD STD	White	25 25 75 75	Wiring Blocks for Key Telephone System Equipment (Multiple Connections)
88BSW1-3 88BSW1-5	STD STD	Slate- White	3 5	Connecting Blocks
88AG1-100 88AG1-300 88AB1-100 88AB1-300	MD	Green Green Blue Blue	100 300 100 300	Wiring Blocks for Building Terminals — Feeder and Stations
88BR1-25 88BR1-25C* 88BR1-75 88BR1-75C*	MD	Red Red Red Red	25 25 75 75	Wiring Blocks for Key Telephone System Equipment
88AY1-100 88AP1-100	MD	Yellow Purple	100 100	Wiring Blocks for PBX and Misc Equipment
88BBW1-3 88BBW1-5	MD	BL-W BL-W	3 5	Connecting Blocks

* Wiring block equipped with stub cable

2.02 The following is the coding arrangement of the 88-type wiring block illustrated by this example: **88AW1-300 wiring block**. The components of the complete code designation provides the following information:

- (1) 88—Basic family identification
- (2) A—First suffix letter indicates basic style as follows:
 - A—Legs with feet—single connections (no multiples)—25 pairs per index strip
 - B—Legs with feet—multiple connections—25 pairs per index strip, groups of 5 strips are multiples.

The A and B styles are for wall mounting in customer premises.

Note: The single connection (A style) wiring blocks are used for building terminals. When terminating Key Telephone System (KTS) equipment, the multiple connection (B style) wiring blocks are used (see Fig. 1).

- (3) W—Second suffix letter denotes white color. The codes B-Blue, G-Green, R-Red, Y-Yellow, and P-Purple have been rated MD.
- (4) 1—Suffix numeral assignment to identify minor design differences resulting from engineering or manufacturing improvement

- (5) 300—Number following hyphen indicates number of pairs
- (6) Wiring block—Code name.

the cable conductors. The connecting blocks are white on one side and slate on the other. They are installed with alternate colors facing upward to aid in pair identification.

88-Type Connecting Block

2.03 The *88-type connecting block* (Fig. 2) is a molded, flame retardant plastic housing, containing gold-plated quick clips with insulation slicing features. The clips will terminate 22-, 24-, or 26-gauge plastic insulating conductors (PIC) without the removal of insulation. These clips are double ended, one end to accept 24-gauge cross-connecting wire and the other to terminate

Note: Waterproof cable should not be used for general distribution within buildings. It may be used as an entrance facility provided a transition to air-core cable is made within a metallic, sealed splice case prior to appearance of exposed pairs in any terminal or cabinet. It should never be fanned out and terminated directly on protectors and connectors within buildings.



Fig. 2—88-Type Connecting Block

2.04 For building entrance terminals, the connecting blocks are available in a 5-pair configuration. For station cable termination in riser and distribution terminal applications, the connecting blocks are also available in a 3-pair configuration. Refer to Table A for information on codes, pair sizes, and use.

2.05 The following is the coding arrangement for the 88-type connection block illustrated by this example: *88BSW1-5 connecting block*. The components of the complete code designation provide the following information:

- (1) 88—Basic family identification.
- (2) B—First suffix letter indicates basic style such as the letter B indicates that the clips are gold plated and protrude from one side of the connecting block.

(3) SW—Suffix letters denote color of top and bottom surfaces (slate-white).

(4) 1—Suffix numeral assigned to identify minor design difference resulting from engineering or manufacturing improvement.

(5) 5—Number following dash indicates the number of pairs.

(6) Connecting block—Code name.

88A Retainer

2.06 The **88A retainer** (Fig. 3) is used to retain the cross-connecting wires at the top or bottom of a column of the 88-type wiring blocks. It is a small molded plastic part that attaches to the leg of the 88-type wiring block to complete its fanning strip.

Designation Strips

2.07 The 188-type **designation strips** are "snapped in" on alternate rows of the 88-type wiring block to identify cable count and to conceal the cable conductors. They are color coded for identification of wiring functions as shown in Table B.

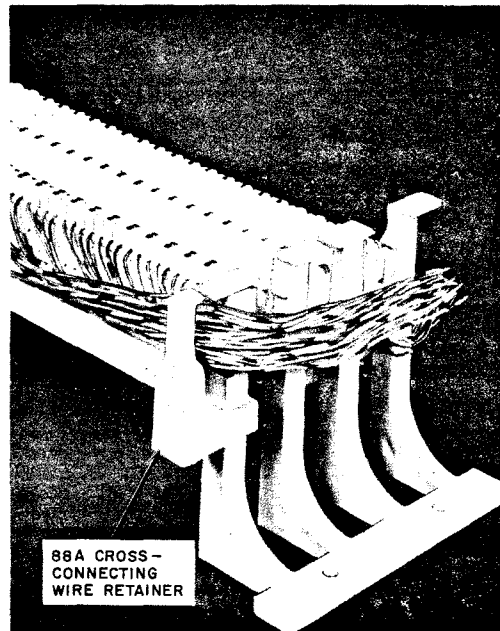

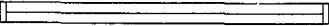
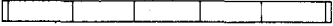


Fig. 3—88A Retainer

TABLE B

188-TYPE DESIGNATION STRIPS

IDENTIFICATION AND (COMCODE)	COLOR	DESCRIPTION	USE
188AB1-100 ¹ (102579794)	Blue	 (one strip used to identify 50 pairs)	Distribution
188AG1-100 ¹ (102579802)	Green		Feeder
188BB1-100 ² (102579810)	Blue	 (one strip used to identify 50 pairs)	Station
188BP1-100 ² (102579828)	Purple		PBX
188BR1-100 ² (102579836)	Red		Automatic Call Distributor
188BY1-100 ² (102593761)	Yellow		Miscellaneous
188CR1-25 ³ (102579844)	Red	 (one strip used to identify 25 pairs)	Key Telephone Systems Equipment

Note 1: Provided two in a package premarked from 1-50 and 51-100 only. For higher numbered designation strips, re-mark the first and last numbers of each 100-pair increment (eg,101 and 200, 201 and 300, 301 and 400, etc).

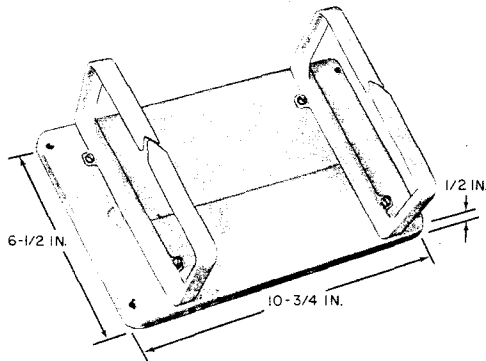
Note 2: Provided two in a package. Are not premarked with pair numbers.

Note 3: Provided one in a package. Are not premarked with pair numbers.

188B1 Backboard

2.08 The *188B1 backboard* (Fig. 4) is used to channel the cross-connecting wire between

the wiring blocks. It consists of a metal panel equipped with two closed formed plastic distributing rings.



- USED WITH 88-TYPE MODULAR CONNECTING BLOCKS TO RETAIN CROSS-CONNECTING WIRES.

Fig. 4—188B1 Backboard

Special Service Protection (SSP) or Special Safeguarding Measures (SSM)

2.09 The AT-8660 F clip terminal insulator (Fig. 5) is used to mark special service circuits requiring SSP or SSM. The F clip terminal insulator mechanically protects one pair and may be located in adjacent pair position without interference to protect any number of pairs.

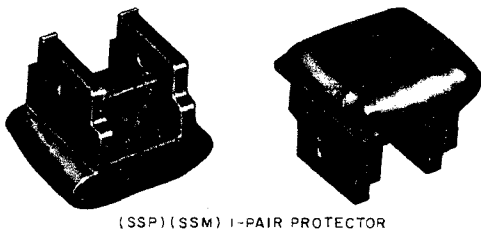


Fig. 5—AT-8660 F Clip Terminal Insulator

C Test Cord

2.10 The *C test cord* (Fig. 6) is attached to a wall-mounted wire terminal and should be

located so the cord plug will reach all 88-type blocks and is left in place for testing purposes. It is available in 4- and 8-foot lengths.

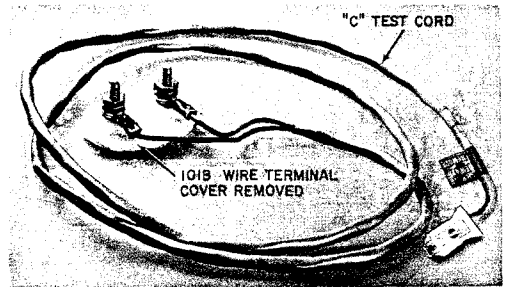


Fig. 6—C Test Cord and 101B Wire Terminal

B Key Equipment Test Block

2.11 The *B key equipment test block* (Fig. 7) is designed to be attached to 88-type connecting blocks. It is used for checkout of key equipment circuitry at the termination field. The test block permits connections to be made to terminated cable pairs, with or without the cross-connecting wire in place.

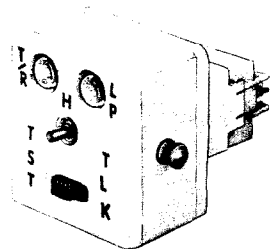


Fig. 7—B Key Equipment Test Block

3. TOOLS

3.01 The *5-pair insertion tool* (Fig. 8) consists of a 788A-type tool handle and a 788B-type tool head. The tool is used to seat five cable pairs at one time or to insert a 3- or 5-pair connecting block on the index strip of the wiring block.

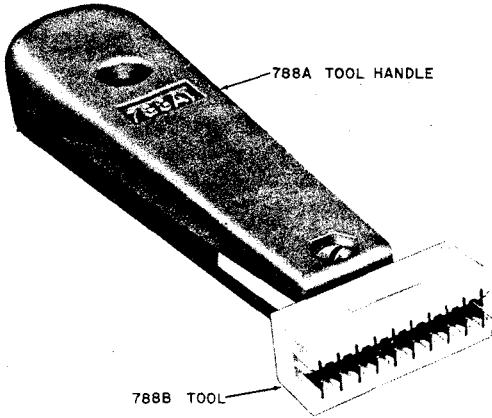


Fig. 8—5-Pair Insertion Tool (with Handle)

3.02 The *5-pair cutoff tool* consists of a 788A-type tool handle plus a 788C-type tool head (Fig. 9), is used to cut five cable pairs at one time on the index strip after proper wire insertion.

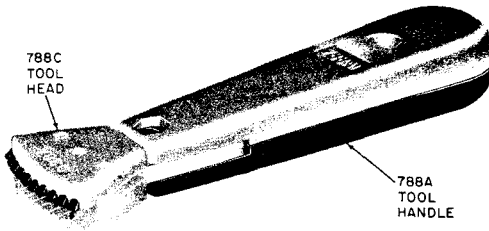


Fig. 9—5-Pair Cutoff Tool Head (788C Tool)

3.03 The *788D-type (1-pair insertion/cutoff tool)* features a tool head that may be rotated to provide either insertion/cutoff or insertion only on a single conductor pair. (See Fig. 10.)

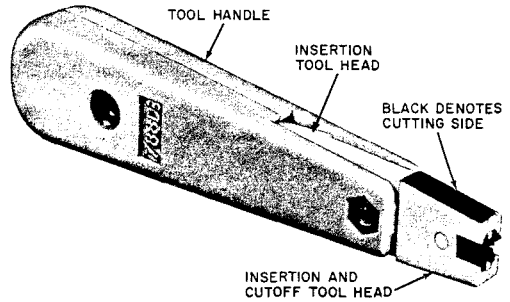


Fig. 10—1-Pair Insertion/Cutoff Tool (788D Tool)

3.04 The *D impact tool (AT-8762)* (Fig. 11) is a single wire impact-type tool with a reversible blade for insertion/cutoff or insertion only.

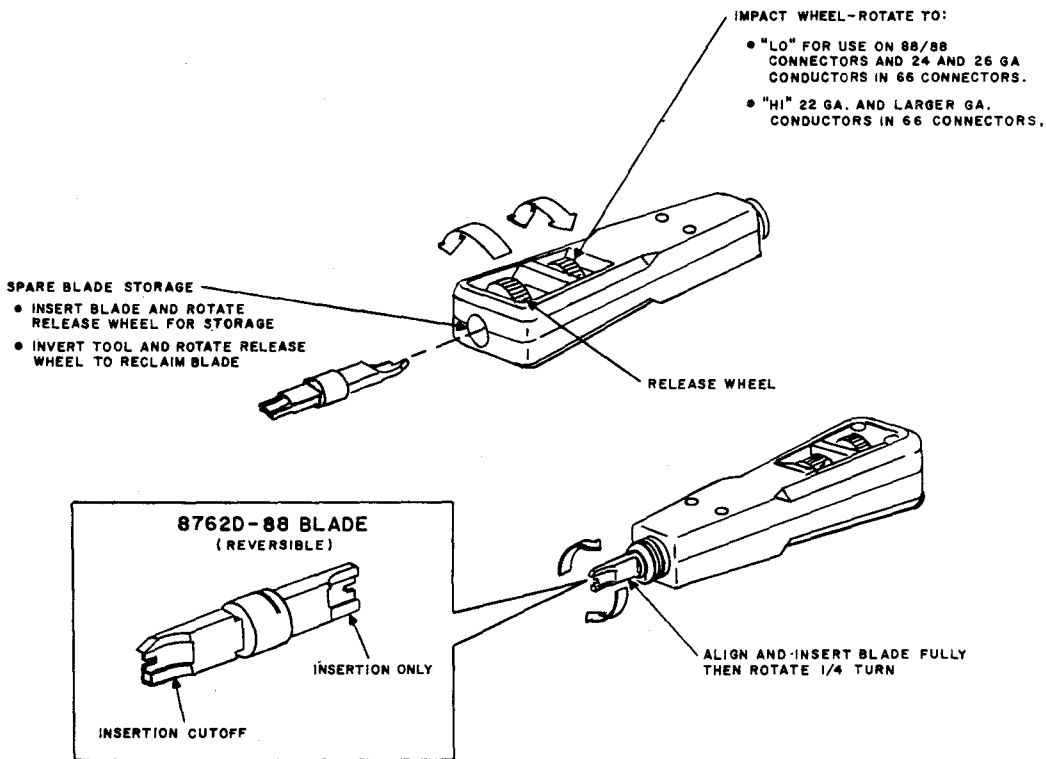


Fig. 11—D Impact Tool

3.05 The 788J-type (impact) tool (Fig. 12)

is a combination impact-type tool used to seat and trim 5 pairs of conductors on 88-type wiring blocks or to seat 88-type connecting blocks. The blade section of the tool head is removable to facilitate replacement and can be reversed to provide wire insertion only. The 788J-type tool should *not* be used to terminate cross-connecting wire on the top side of the 88-type connecting blocks.

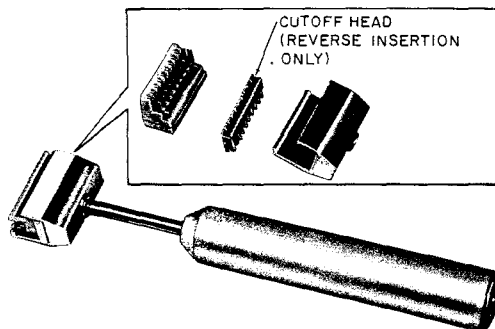


Fig. 12—788J Impact Tool

3.06 The **788K-type (lead retention) tool** (Fig. 13) is intended for use as a hold-down aid for incoming cable pairs during maintenance removal of 88-type connecting blocks.

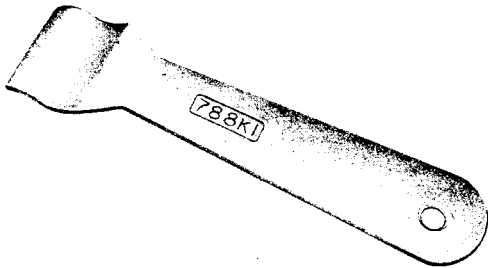


Fig. 13—788K Lead Retention Tool

4. TERMINATING CABLE PAIRS ON WIRING BLOCKS

4.01 The wiring blocks should be loosely mounted with the top slanted outward to facilitate routing the cable(s) behind the wiring blocks.

4.02 Remove the jacket and metallic shield from the cable(s). Feed the cable binder groups behind the wiring block(s) and in color code sequence through the cable slots on each side of the wiring block. Place the blue-white binder group (pairs 1-25) in the top left cable slot, orange-white binder group (pairs 26-50) in the top right cable slot, etc. Binder groups entering on the left side of the wiring block shall be terminated on the **top** index strip and binder groups entering on the right side shall be terminated on the **bottom** index strip adjacent to the cable slot. Place the cable conductors in the index strip following the even-count color code starting with white-blue in slot one, white-orange in slot two, etc. The high tooth on the index strip splits the pair. Light finger pressure is sufficient for the conductor to be held in the index strip.

4.03 Dress cable conductors in the wiring slot of the wiring block, then using the 788J-type impact tool, seat and trim the conductors in the index strip. **Exercise care to prevent cutting wrong side. Remove cut conductors and check the index strip to assure that no short pieces of the cut conductors are wedged in the wiring slots thus preventing a solid connection when the connecting blocks are seated.**

Note: If desired, conductors may be seated in the index strip using the **788B-type** 5-pair insertion tool. Conductors must then be trimmed using the **788C-type** 5-pair cutoff tool.



Avoid movement of cables after the conductors have been seated and cut to prevent the conductors from being pulled out of the index strip prior to placing the connecting blocks.

5. PLACING CONNECTING BLOCK ON WIRING BLOCK

5.01 The 88-type connecting blocks are placed on the 88-type wiring block using the 5-pair insertion tool or the 788J-type impact tool.

5.02 The 88-type connecting blocks are white on one side and slate on the other. They are installed with alternate colors facing upward to aid in pair identification. Place the connecting blocks on the index strip, starting with the **white** side of the connecting block facing up at the extreme left, and alternating colors for the remainder of the setup (Fig. 14).

CAUTION: **Be sure to align the clips of the connecting block and the slots in the index strip before applying insertion tool. This prevents damage to the conductors and reduces the effort required.**

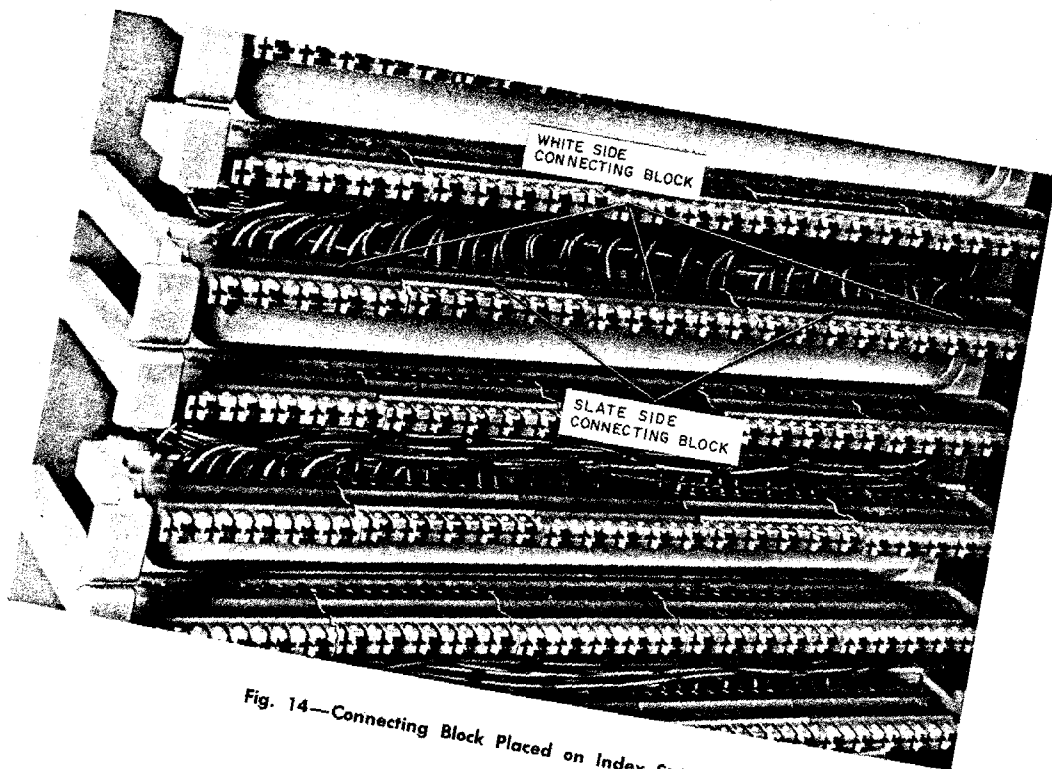


Fig. 14—Connecting Block Placed on Index Strip

5.03 Properly align connecting block in index strip (Fig. 15). Seat block as shown in Fig. 16.

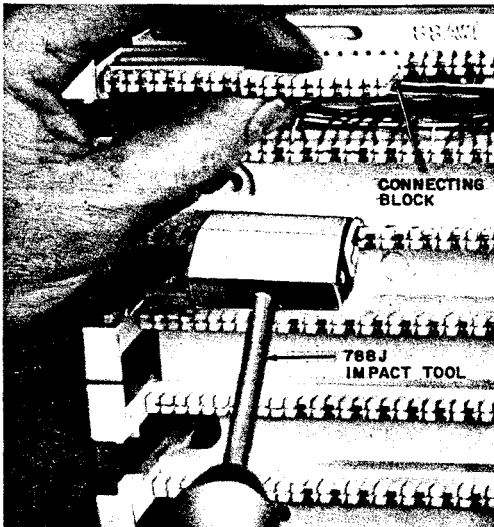


Fig. 15—Aligning Connecting Block in Index Strip

5.04 After all connecting blocks have been seated, install the appropriately marked designation strips on the wiring block (Fig. 17).

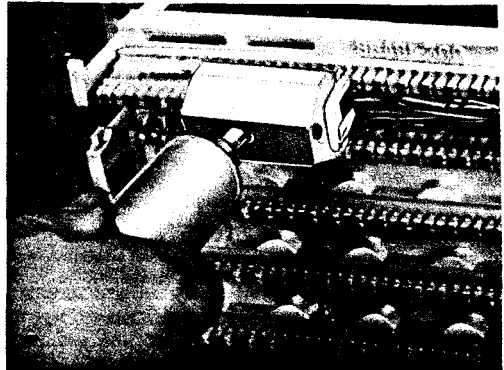


Fig. 16—Connecting Block Seated With Impact Tool

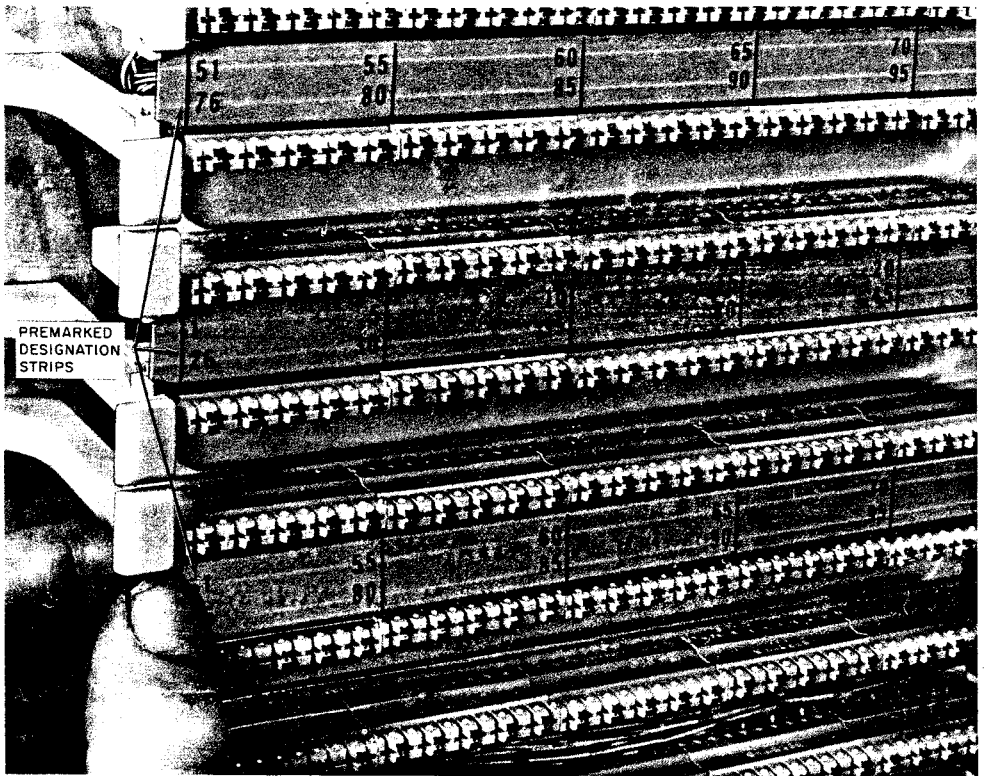


Fig. 17—Designation Strip Placed on Wiring Block

6. TERMINATING CROSS-CONNECTING WIRE

6.01 Insert cross-connecting wire (24-gauge plastic insulated) into the connecting block as shown in Fig. 18. Light finger pressure is sufficient to temporarily retain the cross-connecting wire in its proper location.

6.02 Using a single pair wire insertion tool (see Note) seat the cross-connecting wire into the connecting blocks as shown in Fig. 19.

Note: Single pair wire insertion tool may be 788D-type tool or D impact tool. When using the 788D-type tool, remember the black side of the tool head is the cutting side.

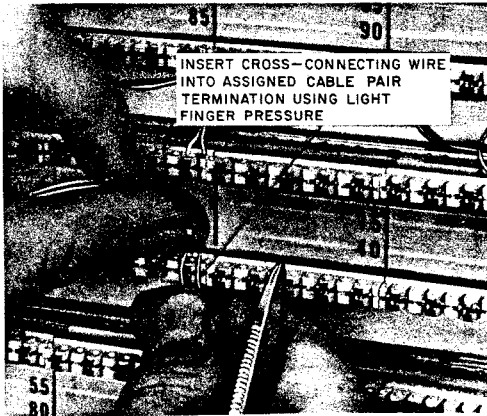


Fig. 18—Inserting Cross-Connecting Wire

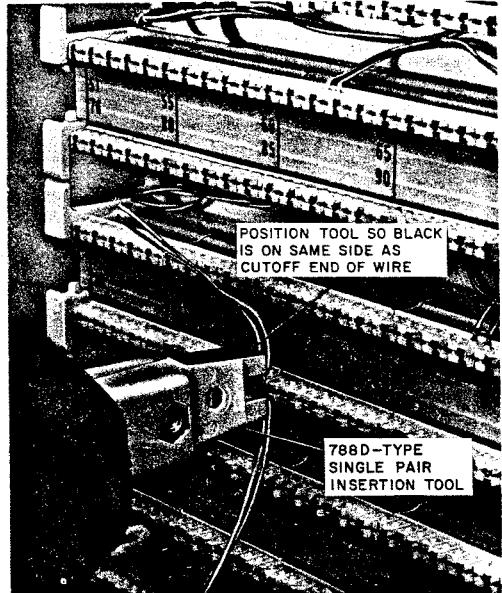


Fig. 19—Seating Cross-Connecting Wire

7. REMOVING CROSS-CONNECTING WIRE

7.01 Remove the cross-connecting wire with long-nose pliers as shown in Fig. 20.

7.02 Remove any small pieces of insulation remaining around the terminals with an insulated tool such as a KS-6320 tool (orange stick).

7.03 To reterminate a wire which has been removed for rearrangement, cut off the old contact portion and terminate as outlined in Part 6. If the wire is too short to reterminate, *do not splice*. Run a new cross-connecting wire.

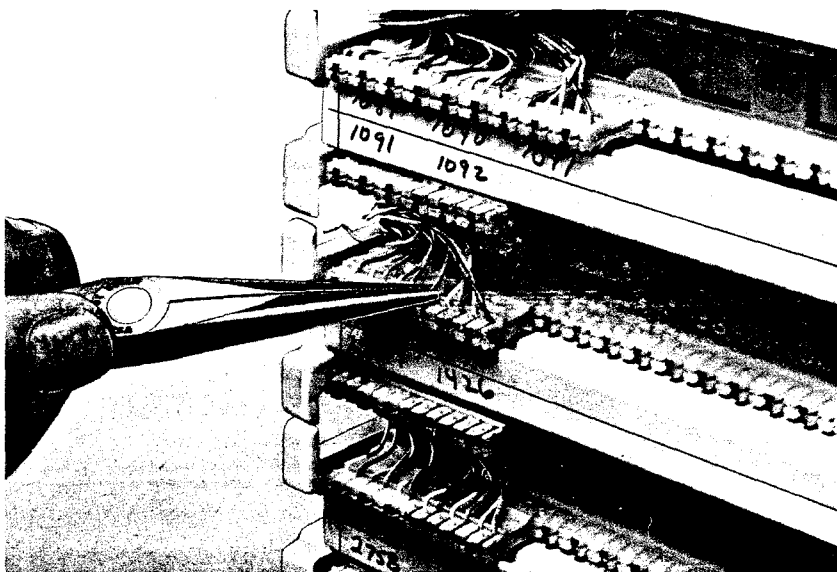


Fig. 20—Removing Cross-Connecting Wire

8. MAINTENANCE

8.01 There is no prescribed method of repairing a damaged connecting block; the connecting block must be replaced as follows:

- (a) Tag and remove the cross-connecting wires from the connecting block.
- (b) Remove the designation strip from the wiring block.
- (c) Using a pair of pliers, grip the 88-type connecting block firmly in the center as shown in Fig. 21, then gently pull with a slight up and down motion to release the connecting block from index strip. Use the 788K lead retaining tool to retain cable pairs in index strip. Discard the damaged connecting block.
- (d) If the cable conductors were accidentally pulled out of the index strip, replace them

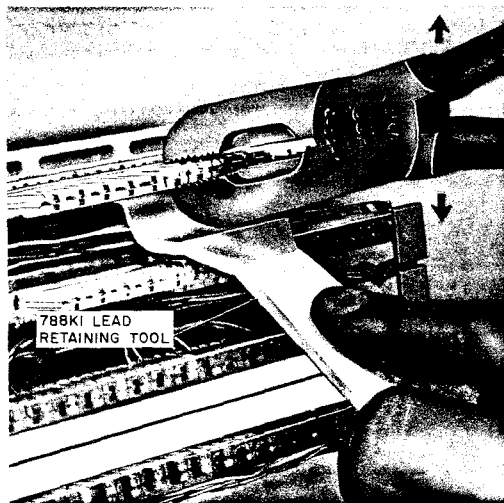


Fig. 21—Removing Connecting Block While Holding Cable Conductors in Place With 788K Lead Retention Tool

as follows after cutting off old contact portion of wire:

- (1) Using long-nose pliers as shown in Fig. 22, grip the cable conductor to be replaced and pull to obtain slack, then reposition the conductor in its original position on the index strip. If enough slack cannot be obtained to reposition the conductor in the index strip, it will be necessary to piece out the conductor as outlined in Section 631-620-105.

- (2) Using the single pair insertion tool (788D-type) or D impact tool, seat the conductor firmly in the bottom of the index strip and cut off the excess.

- (e) Install a new 88-type connecting block as outlined in Part 5.
- (f) Replace the tagged cross-connecting wires in their original position as outlined in Part 6.

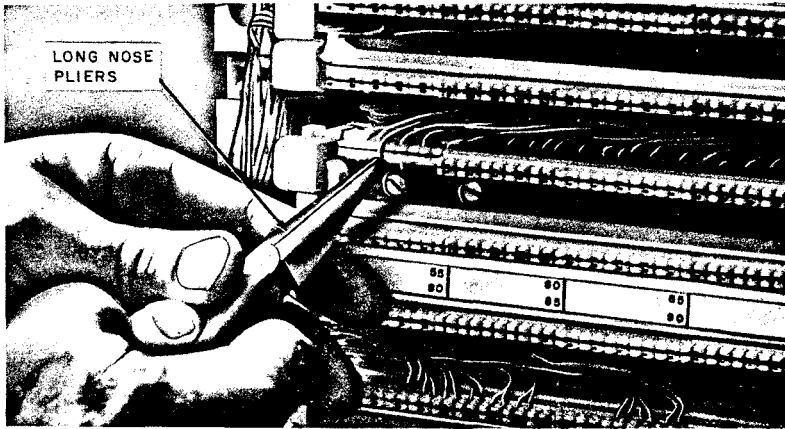


Fig. 22—Replacing Cable Conductor With Long-Nose Pliers