CONNECTING BLOCKS
30- AND 31-TYPE
IDENTIFICATION, INSTALLATION, AND WIRING

1. GENERAL

1.01 Information in this section was formerly contained in Sections 461-615-101, Issue 1; 461-615-201, Issue 1; and 461-617-101, Issue 2.

2. IDENTIFICATION

2.01 The 30-, 30-2-, and 31-type connecting blocks are available in sizes corresponding to various inside wiring cable capacities.

Note: The 30-, 30-2-, and 31-type connecting blocks should be used only on service where specifically required, or on station rearrangements where it is impractical to use the 66-type connecting block. The 66-type connecting block should be used for new station installations.

(a) ***Ordering Guide:*** Table A shows the connecting blocks, terminal boxes, and adapters.

2.02 ***30-Type Connecting Block:*** A molded insulating strip with inset threaded terminal lugs, nuts, and washers is used to terminate all conductors. The 30A connecting block is shown in Figure 1.

2.03 ***31-Type Connecting Block:*** The 31-type connecting block is similar to the 30-type block in appearance. The initial conductor is terminated on solder-type lugs projecting from the side of the block (Fig. 2).

TABLE A

BLOCK, CONNECTING	PAIRS	DIMENSIONS (INCHES)			ADAPTER†	TERMINAL BOXES†
		LENGTH	WIDTH	DEPTH		
30A	6	4 3/16	1 1/2	1 5/32	—	HS-6
30B	11	7 5/16	1 1/2	1 5/32	102B	GA-11, GB-11
30C	16	10 7/16	1 1/2	1 5/32	102C	GA-16, GB-16
30D	26	16 11/16	1 1/2	1 5/32	102D	GA-26, GB-26, GC-Type
30A2*	6	4 3/16	1 1/2	1 7/32	—	HS-6
30B2*	11	7 5/16	1 1/2	1 7/32	102B	GA-11, GB-11
30C2*	16	10 7/16	1 1/2	1 7/32	102C	GA-16, GB-16
30D2*	26	16 11/16	1 1/2	1 7/32	102D	GA-26, GB-26, GC-Type
31A	6	4 3/16	2	1	—	HS-6
31B	11	7 5/16	2	1	102B	GA-11, GB-11
31C	16	10 7/16	2	1	102C	GA-16, GB-16
31D	26	16 11/16	2	1	102D	GA-26, GB-26, GC-Type

* Furnished with insulation-crushing washers.
† Connecting blocks not furnished, but must be ordered separately.

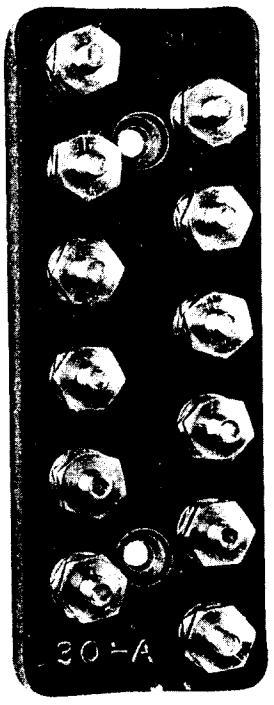

Fig. 1—30A Connecting Block

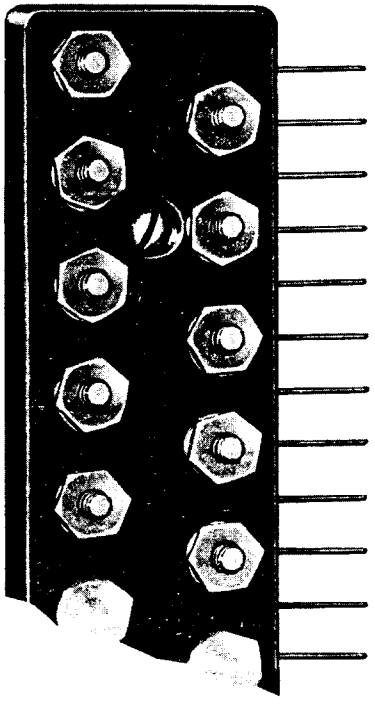

Fig. 2—31-Type Connecting Block—Partial View

2.04 The 30-2-type connecting block is similar to the 30-type block except that it is equipped with insulation-crushing washers, which permit terminating plastic insulated conductors without stripping or removing insulation. The 30-2-type connecting block has the following features:

- Used in building terminals for terminating PIC cable.
- Is equipped with hardware to make the first insulation-crushing connection. Also provided with hardware to make the second insulation-crushing connection (shipped loose).

2.05 Each post has shoulders with crushing flats. A separate insulation-crushing washer is not required for the first connection. Two PIC conductors can be terminated on each post.

Note: Binding posts of earlier models were not equipped with crushing flats and require a separate crushing washer for the first connection.

3. INSTALLATION

G-TYPE CABLE TERMINAL BOXES—ADAPTERS

3.01 The 102-type adapters are used as mountings for 30- or 31-type connecting blocks when inside wires or cables are terminated in G-type cable terminal boxes.

3.02 Mounting screws for 102-type adapters are furnished with the G-type cable terminal box. When these adapters are mounted in other than G-type cable terminal boxes, two 3/4-inch No. 8 RH blued wood screws may be used on wood backing, or two 3/8-inch No. 8 self-tapping screws on metal backing.

3.03 Two machine screws, P-210648, and two nuts, P-375850, are furnished with each adapter to secure the connecting block to the adapter. The fiber fanning strip serves to retain the cable or inside wire conductors in the proper positions. (See Fig. 3.)

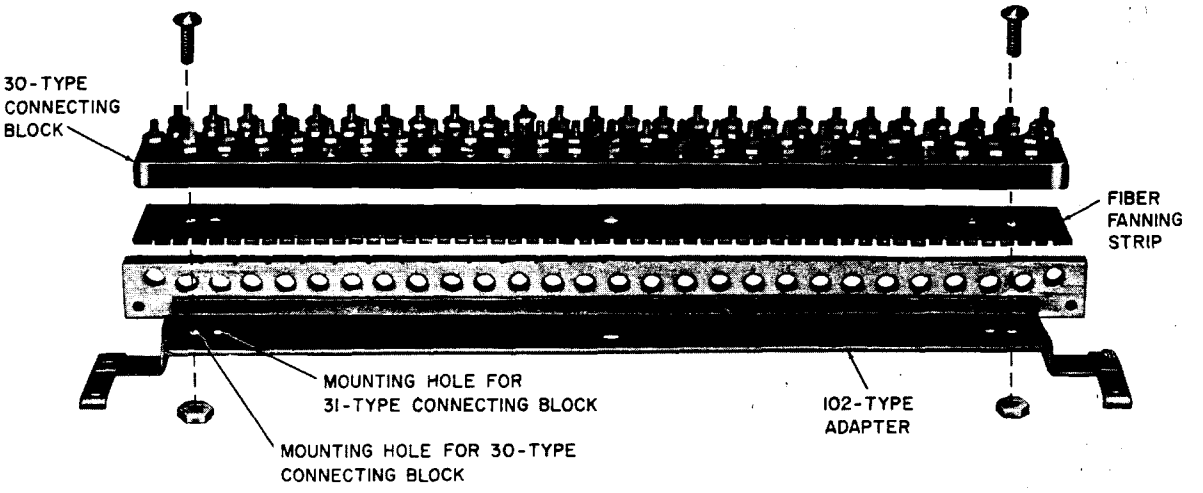

Fig. 3—Assembly of Connecting Block, Fanning Strip, and Adapter

MOUNTING ADAPTER AND CONNECTING BLOCK

3.04 Assemble 102-type adapter and 30- or 31-type connecting block in G-type cable terminal box in the following manner:

(1) Remove proper entrance hole knockout.

(2) Assemble adapter and connecting block.

(3) Mount adapter temporarily in box. This facilitates terminating inside wiring cable conductors. (See Fig. 4.)

(4) Terminate cable as outlined in Part 4.

(5) Complete mounting by detaching adapter from box and removing tubing, or equivalent, used to mount the adapter temporarily. (See Fig. 4.)

(6) Insert lower permanent mounting screw and lower U-shaped slot of the adapter on this screw.

(7) Insert other lower permanent mounting screw.

(8) Insert upper mounting screws.

(9) Tighten both upper and lower mounting screws.

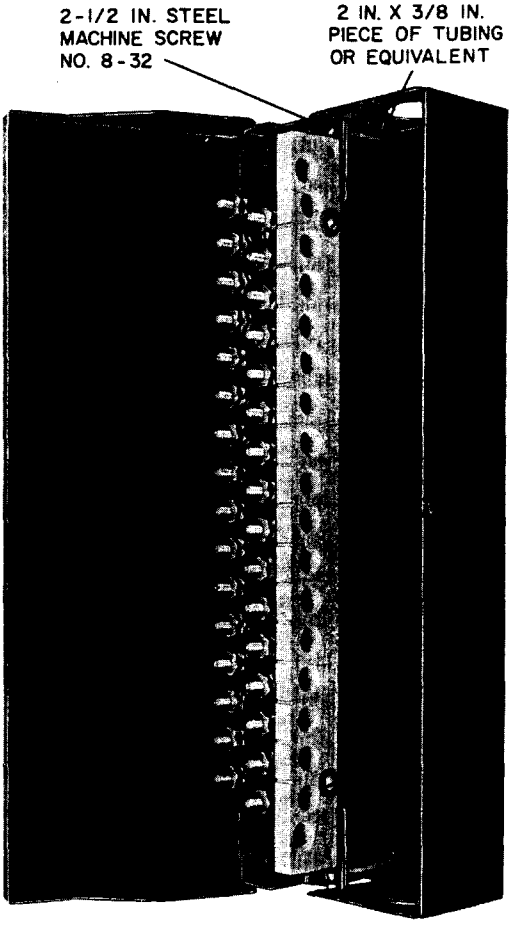

Fig. 4—Temporary Mounting of Adapter

GROUND STRIPS

3.05 Ground strips are used to terminate station signaling or coin collector grounds at cable terminals.

- Table B lists ground strips used with 30- and 31-type connecting blocks.
- Mounting screws used for installing ground strips are included as part of cable terminals.

TABLE B

GROUND STRIPS

TYPE	BINDING POSTS	WIRE CAPACITY	USED WITH	FIG. NO.
2B	2	14	30- and 31-type connecting blocks (surface-mounted without adapters)	5
4A	11	11	102B Adapters	6
4B	16	16	102C Adapters	—
4C	26	26	102D Adapters	9, 10

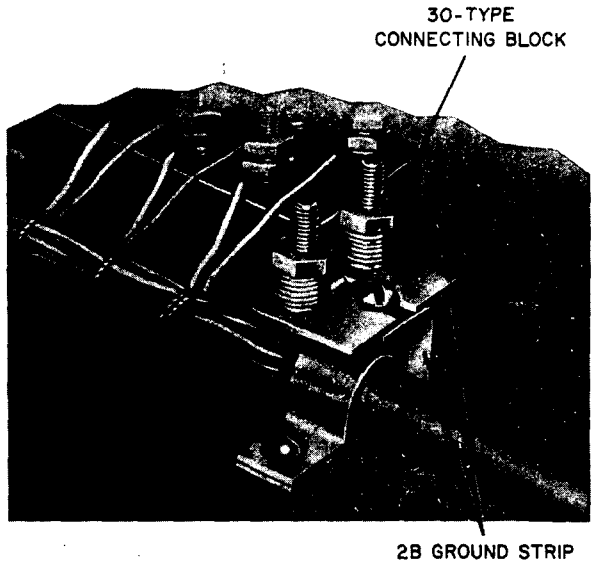

Fig. 5—Installation of 2B Ground Strip

CLOSURES FOR G-TYPE TERMINAL BOXES

3.06 Use closure P-375610 to reduce opening at wire entrance hole, and closure P-290231 to reduce inside wiring cable entrance hole. (See Fig. 7.) These closures prevent dust and dirt from entering and also may be used to close off any unoccupied openings.

4. WIRING

4.01 When terminating inside wire or cable on 30- or 31-type connecting blocks, the binding post on the right of the connecting block is considered the ring, and the binding post on the left, the tip.

4.02 The numbering sequence of the pairs is from top to bottom when the connecting block is mounted vertically, and from left to right when mounted horizontally.

4.03 ***Inside Wiring Cable is Terminated by:***

(1) Removing jacket from the cable as required to terminate conductors.

(2) Twisting pairs to prevent splitting.

(3) Fastening cable to the adapter, using size of cable clamp required.

(4) Fan in cable conductors, using standard color code. Place each conductor in the slot of the fiber fanning strip opposite the proper binding post. (See Fig. 8.)

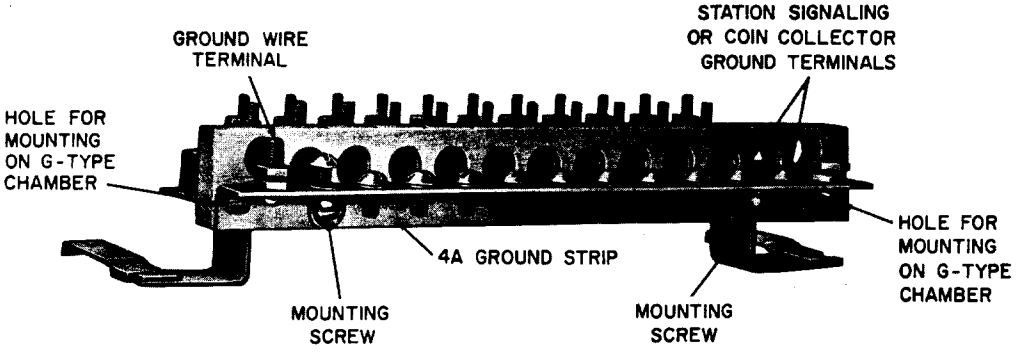

Fig. 6—Installation of 4-Type Ground Strip

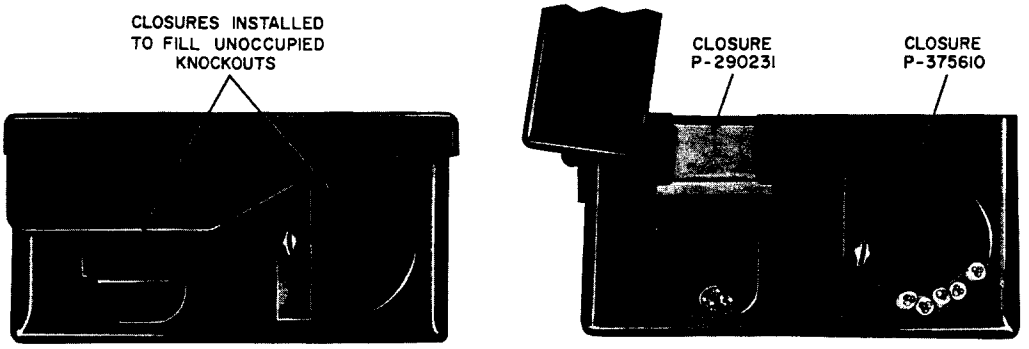

Fig. 7—Use of Closures

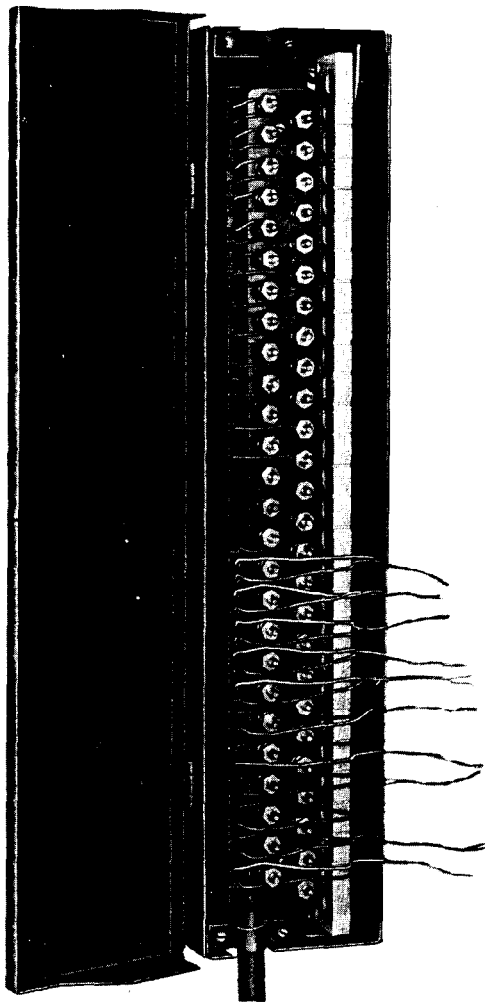

Fig. 8—Terminating Inside Wiring Cable

4.04 ***Terminating Inside Wires:*** The jacket should be removed approximately 1/2-inch from the wiring slots in the fiber fanning strip.

- The method of terminating triple-jacketed inside wire at a GC-type cable terminal is shown in Figure 9.

4.05 The method of terminating GS-type triple inside wire at a GC-type cable terminal is shown in Figure 10.

- Ground lead of station wires is run under ground strip and between ground strip and fanning strip before being terminated on ground strip.

- Washers are placed between ground strip and fanning strip to provide sufficient clearance for ground lead.

4.06 When terminating inside wire or cable conductors on 30- or 31-type connecting blocks, only enough slack should be left to enable the conductor to be reterminated in case of breakage at the time of termination. (See Fig. 11.)

Caution: Avoid pulling the conductors against the binding post threads, as the nut, when tightened, may cut the small gauge conductors.

4.07 The proper knockout should be removed from the HS-6 cable terminal box before the cable is placed and terminated. Figure 12 shows the termination of cable. Inside wire is terminated directly on connecting block without slack inside terminal box.

4.08 See Section 461-603-100 for information on wiring and terminating PIC cable when insulation-crushing washers are used.

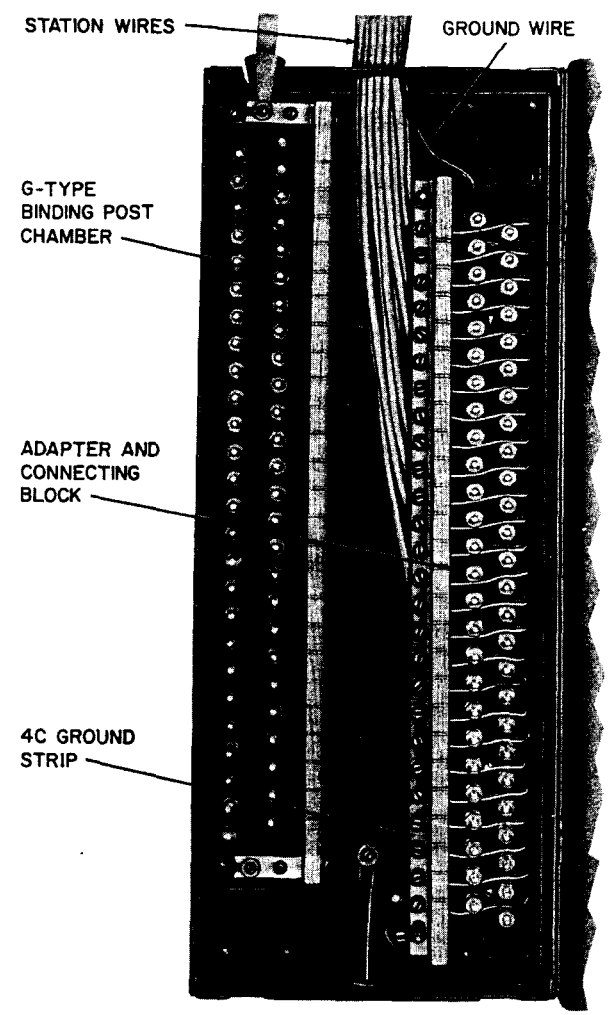

Fig. 9—Termination of Triple-Jacketed Inside Wire

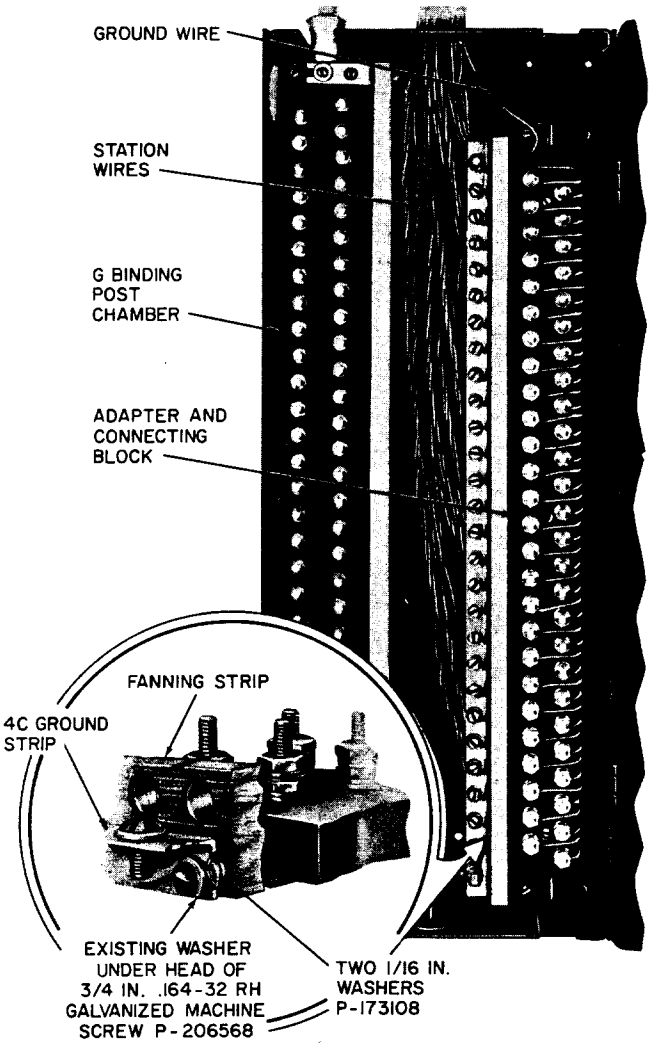

Fig. 10—Termination of GS-Type Triple Inside Wire

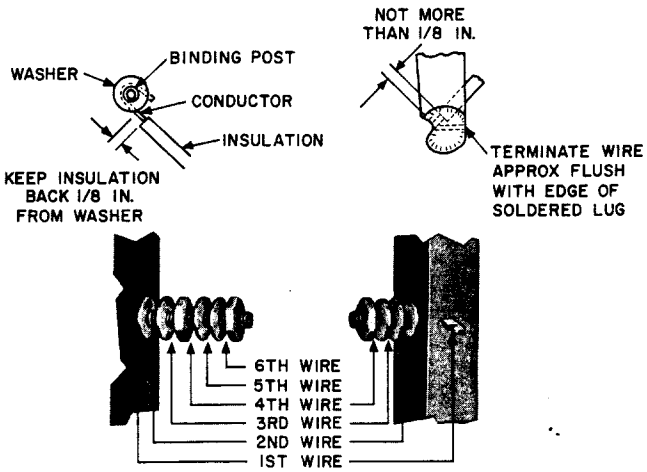

Fig. 11—Sequence and Method of Termination

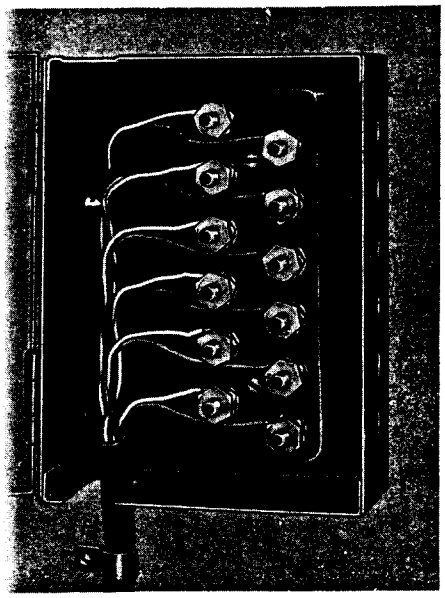

Fig. 12—Wiring of HS-6 Cable Terminal Box