

## TRANSMITTER TRANSFER UNIT

### IDENTIFICATION, INSTALLATION, CONNECTIONS, AND MAINTENANCE

#### 1. GENERAL

1.01 This section covers the identification, installation, connections, and maintenance of the transmitter transfer unit (DFS 105TT). ←

1.02 This section is reissued to furnish ordering information, correct listing of isolation coil in Fig. 9, and expand the identification of the three individual components.

1.03 The transmitter transfer unit provides for transferring the output of a plug-ended handset or headset via an isolation coil to the input of customer owned equipment.

1.04 A maximum of two transmitter transfer units may be installed per customer system. This limitation is necessary as mutual exclusion may only exist between two switching units.

#### 2. IDENTIFICATION

2.01 The unit consists of three components: power supply, switching unit, and foot switch. (See Fig. 1.)

2.02 The power supply is a fused step-down transformer encased in a 4-inch cubed plastic case and is equipped with 4-1/2 foot plug-ended cords connected to the primary and secondary windings.

2.03 The switching unit is a plastic-covered, encased chassis on which are mounted the transfer relays, transmitter battery supply, rectifier holding resistor, pilot lamps, telephone cord and plug, telephone jacks, and Jones plug receptacles. The encasing plastic cover is approxi-

mately 8 inches long, 4 inches wide, and 2-3/8 inches deep. ↗

2.04 The foot switch has a 6-foot cord wired permanently into the switching unit.

2.05 Orders for this equipment should be worded as follows: (Quantity) Unit, Transfer, Transmitter, DFS 105TT. Components cannot be ordered individually.

2.06 In addition to the equipment listed above an ED-91938-32 G10 & A isolation coil, 105 APP. box, and an HS-6 cable terminal box are needed for complete installation. (See Fig. 9.) ↘

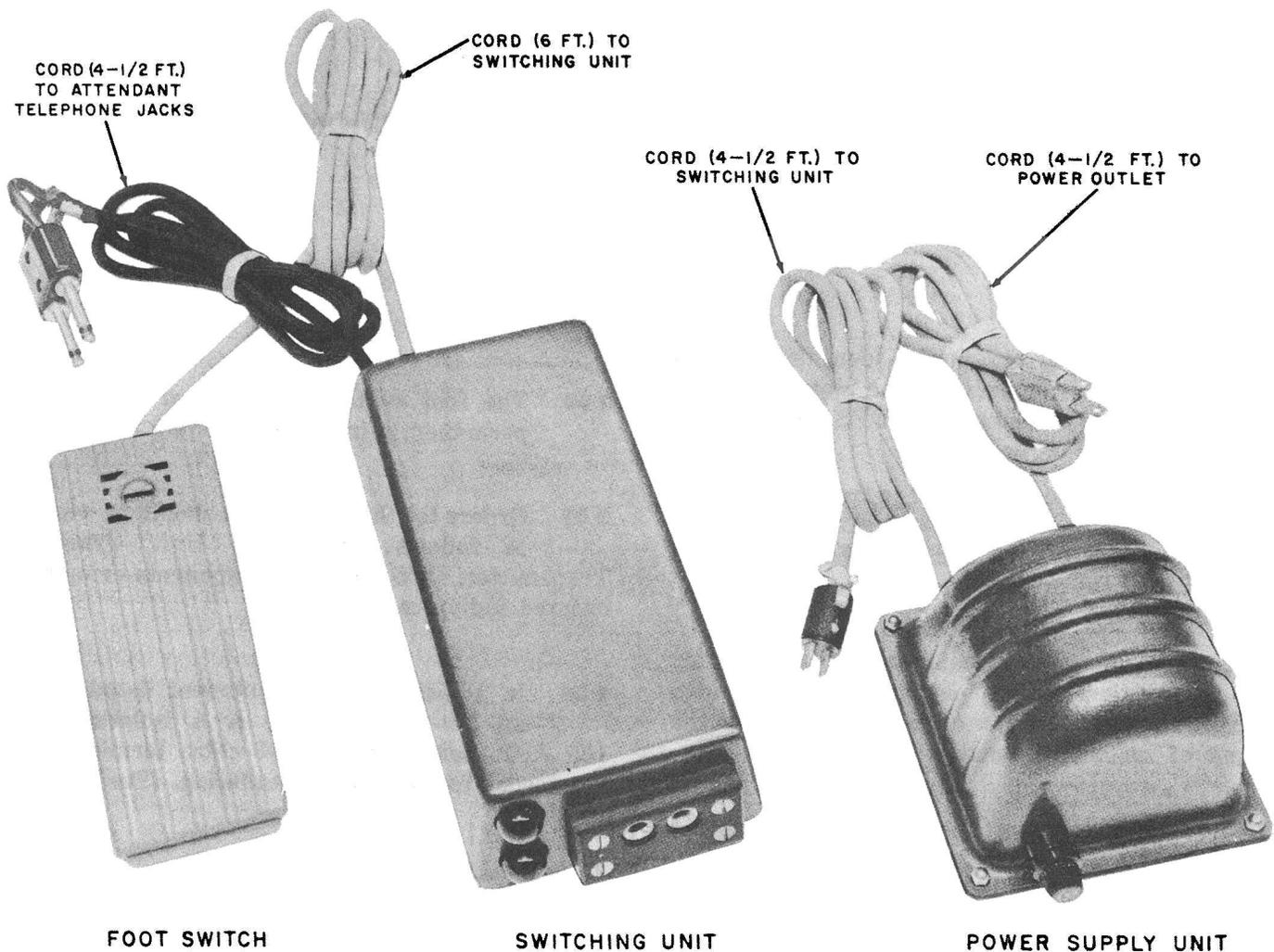
#### 3. INSTALLATION

3.01 In addition to the tools, material, and miscellaneous hardware required for installation, SK (shielded) station wire will be required for connection between the switching unit and the isolation coil housed in the 105 apparatus box. ↗

##### Locating and Mounting Equipment

3.02 Fig. 2, 3, 4, and 5 show typical mounting locations of equipment for various types of PBX and station equipment.

3.03 The customer shall supply commercial power wiring and a convenience outlet (110-120V 50-60 cycle ac). This outlet should not be controlled by a switch and should be located so that the power transformer cord may be plugged in without splicing or using a 4-1/2 foot extension cord. (See Fig. 1.) ↘



→ **Fig. 1 — Components of Transmitter Transfer Unit (DFS 105TT)**

**3.04** The 105 apparatus box housing the isolation coil and the HS-6 cable terminal box housing the 30A connecting block (Fig. 9) should be mounted near the customer equipment or where specified by local requirements and instructions.

**3.05** The maximum conductor loop between two switching units shall not exceed 4 ohms. When GS station wire is used between switching units, the maximum distance will be about 59 feet and about 65 feet when JKT wire is used.

**Foot Switch**

**3.06** The foot switch may be placed loose on the floor or may be permanently fastened to

the floor using fasteners appropriate to the flooring material.

**3.07** When switchboards are provided with foot rails, the foot switch may be mounted as shown in Fig. 6.

**Power Supply Unit**

**3.08** To mount the power supply unit permanently, remove the cap nuts and bolts holding the rubber feet from the corners of the unit and fasten the unit in desired location using appropriate screws. When possible the transformer should be mounted on a wall.

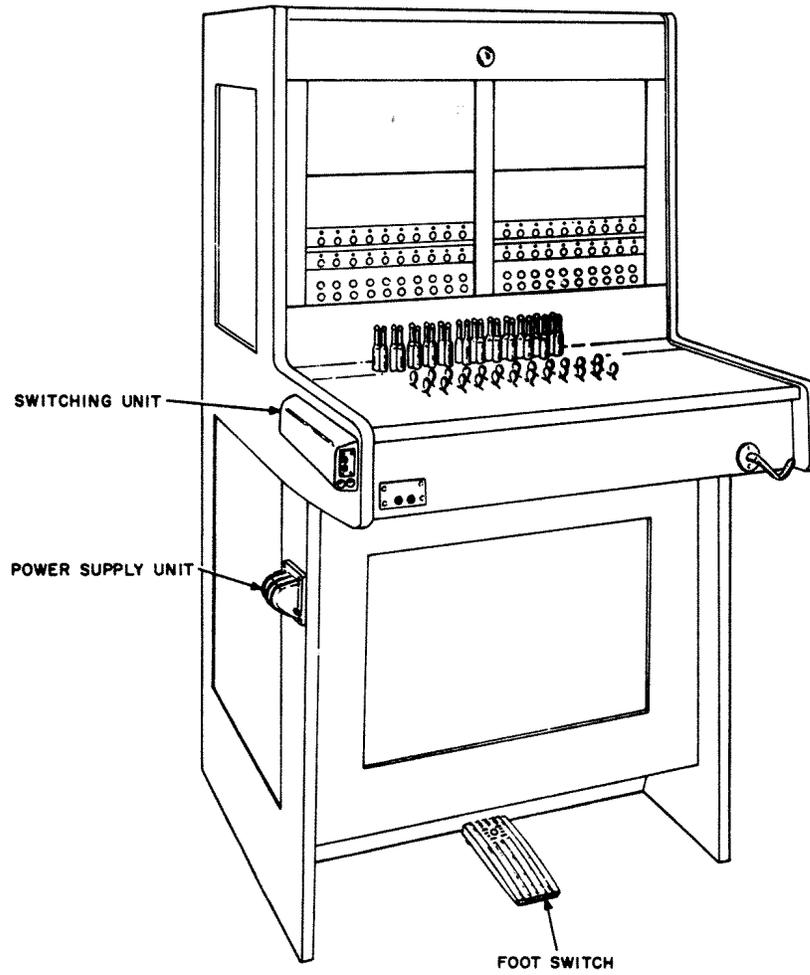


Fig. 2 — 551-Type PBX

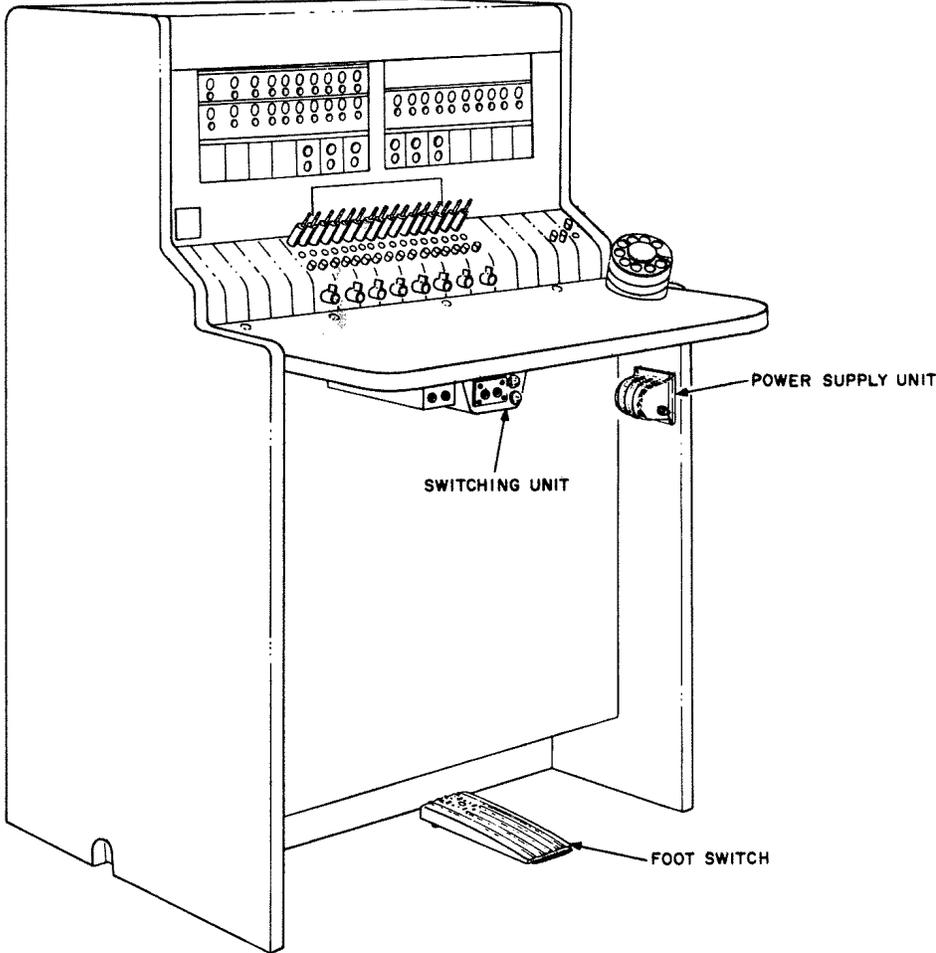


Fig. 3 — 555 PBX

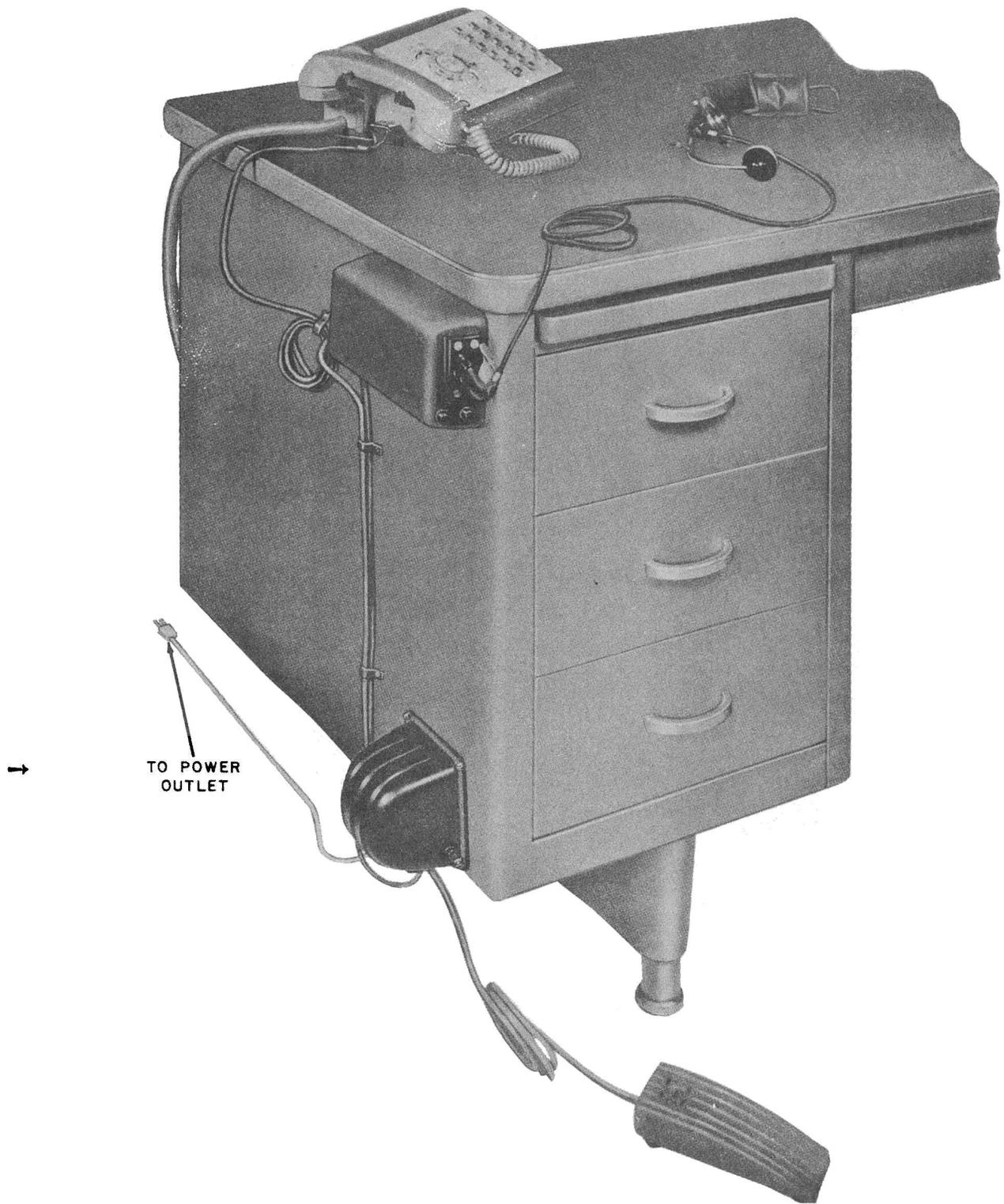
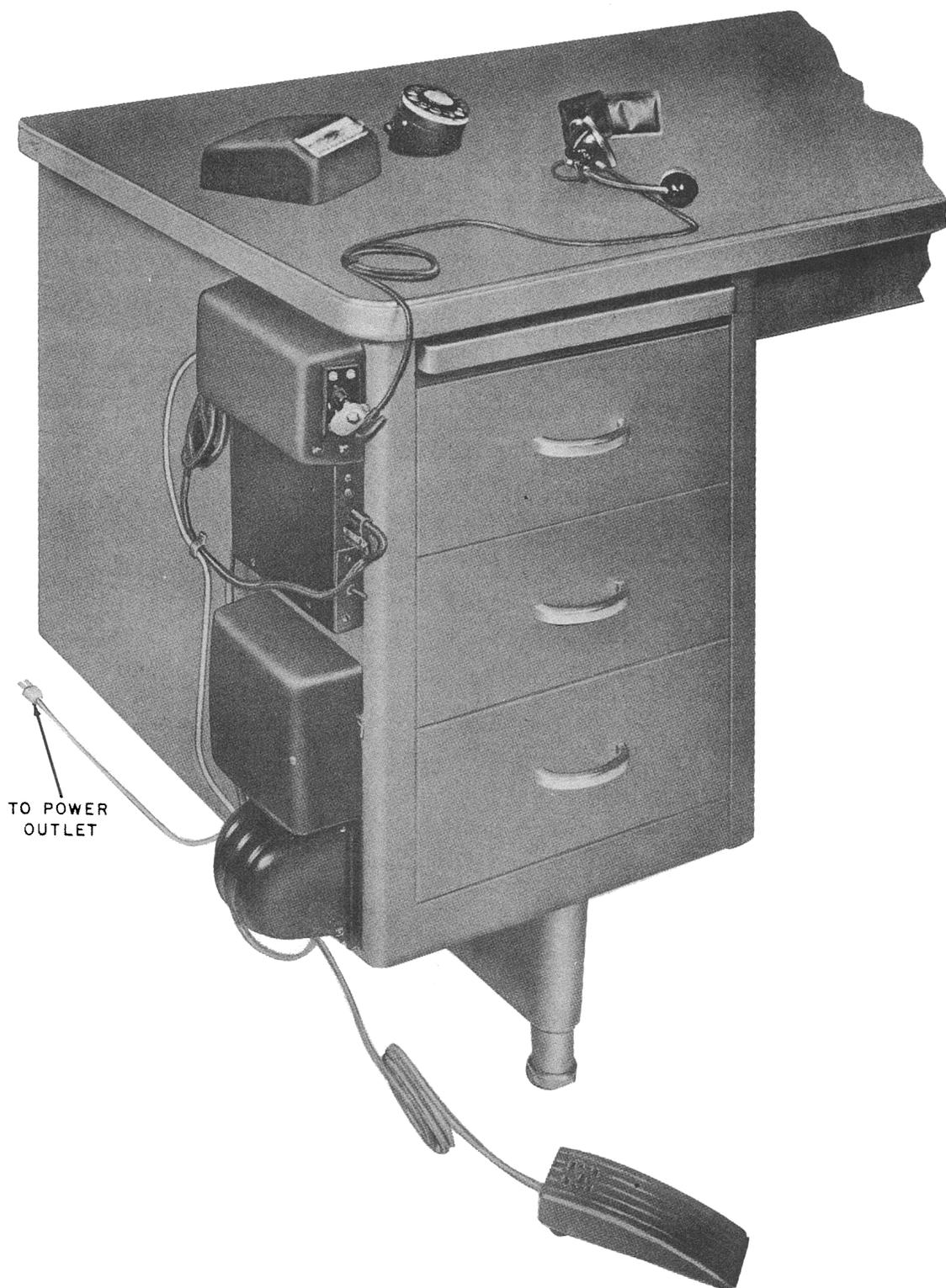
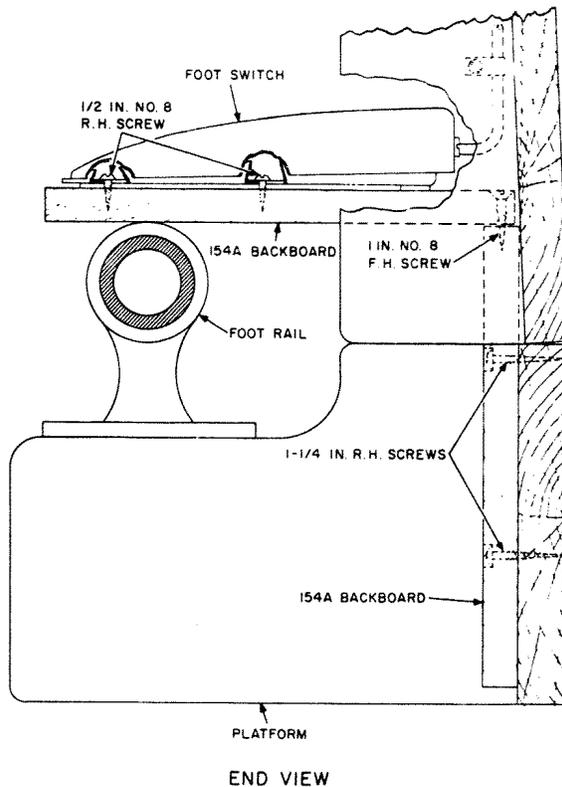


Fig. 4 — Call Director Equipped with Attendant Jacks



**Fig. 5 — Key Equipment with Attendant Jacks**



**Fig. 6 — Mounting Foot Switch on Switchboards Equipped with Foot Rails**

#### 4. CONNECTING

4.01 Fig. 7 shows the components of the switching unit. Fig. 8 shows the termination of the SK station wire (voice leads) and the 3-conductor station wire (control leads) at the 6-prong plug (P2). Fig. 8 also shows the termination of the 4-conductor station wire required when two switching units are installed.

*Note:* For single unit installations, check for presence of strap between terminals 3 and 4 of (P1) socket.

4.02 Fig. 9 shows the termination of the SK station wire on the isolation coil (ED-91938-32 G10 & A or equivalent) housed in a 105 apparatus box. Also shown are the termina-

tions of the 2- and 3-conductor wires at the connecting block.

4.03 Fig. 9 shows suggested stenciling for the 30A connecting block and inside the cover of the HS-6 cable terminal box. This will assist the customer in making connections to the output and control leads.

4.04 Place straps between the terminals of the 30A connecting block as shown in Fig. 9 so the customer may make connections to the terminals on the right side of the connecting block. This will enable the customer to make terminations without crossing over or disturbing telephone company connections.

#### 5. PLACING IN SERVICE

5.01 Insert the plug from the primary of the transformer into the convenience outlet. The green lamp on the switching unit should light and remain lighted as long as the power is connected.

5.02 Depress the foot switch. The operation of the relays in the switching unit will be heard and the red lamp will light. Release foot switch; red lamp goes out.

5.03 Move the plug of the handset or headset to the telephone jacks of the switching unit.

5.04 Insert the plug of the cord from the switching unit into the attendant telephone jacks of the switchboard or station equipment. The switchboard or station equipment may now perform its normal functions.

5.05 The continuity of the wiring and the switching unit may be checked by connecting a dial hand test set to terminals 1 and 2 of the connecting block. When the foot switch is operated, satisfactory speech from the handset or headset should be heard at the dial hand test set.

#### 6. CONNECTIONS FOR CUSTOMER EQUIPMENT

6.01 *The connection of customer owned equipment to the connecting block (Fig. 9) is the sole responsibility of the customer and shall not be attempted by Telephone Company personnel.*

**6.02** The information in 6.03 through 6.06 is provided for customer use and should be made available to the customer or his representative at the time of installation.

**6.03** Terminals 1 and 2 of the connecting block are for connecting to the input of the customer equipment. The operating characteristics of the transmitter transfer unit are:

**(a) *Output of Transmitter Transfer Unit in Volume Units***

USING TRANSMITTER TYPE	LEVEL
N1	-13 vu
T1	-4 vu

**(b) *Low Impedance — Output Characteristics***

CYCLES PER SECOND	IMPEDANCE
400	800 ohms
1000	350 ohms
2000	185 ohms

**6.04** Terminals 3 and 5 of the connecting block are associated with make contacts in the switching unit (normally open). These contacts may be used by the customer to close a loop for external relay operation or similar function if desired. (See 6.06.)

**6.05** Terminals 4 and 5 of the connecting block are associated with break contacts in the switching unit (normally closed). These contacts may be used by the customer to open a loop if this function is desired. (See 6.06.)

**6.06** *The contacts referred to in 6.04 and 6.05 are rated at 48V and 0.4 amperes. This rating shall not be exceeded.*

**7. MAINTENANCE**

**7.01** Fig. 7 shows the location of the various components of the switching unit. Fig. 8 shows the schematic and list of components. Local instructions should be followed during replacement of components for maintenance reasons. See 2.05 for ordering information.

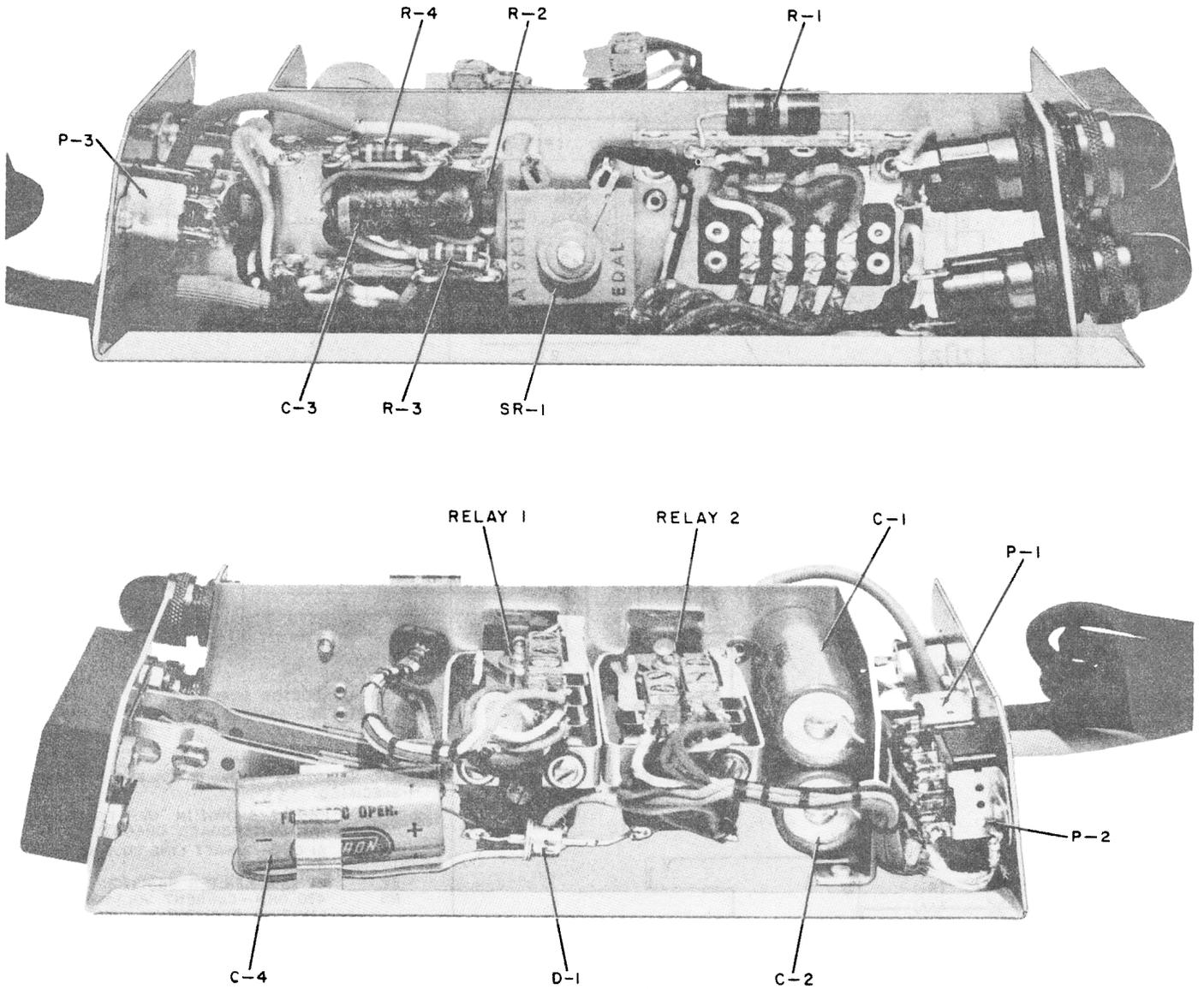


Fig. 7 — Switching Unit with Cover Removed

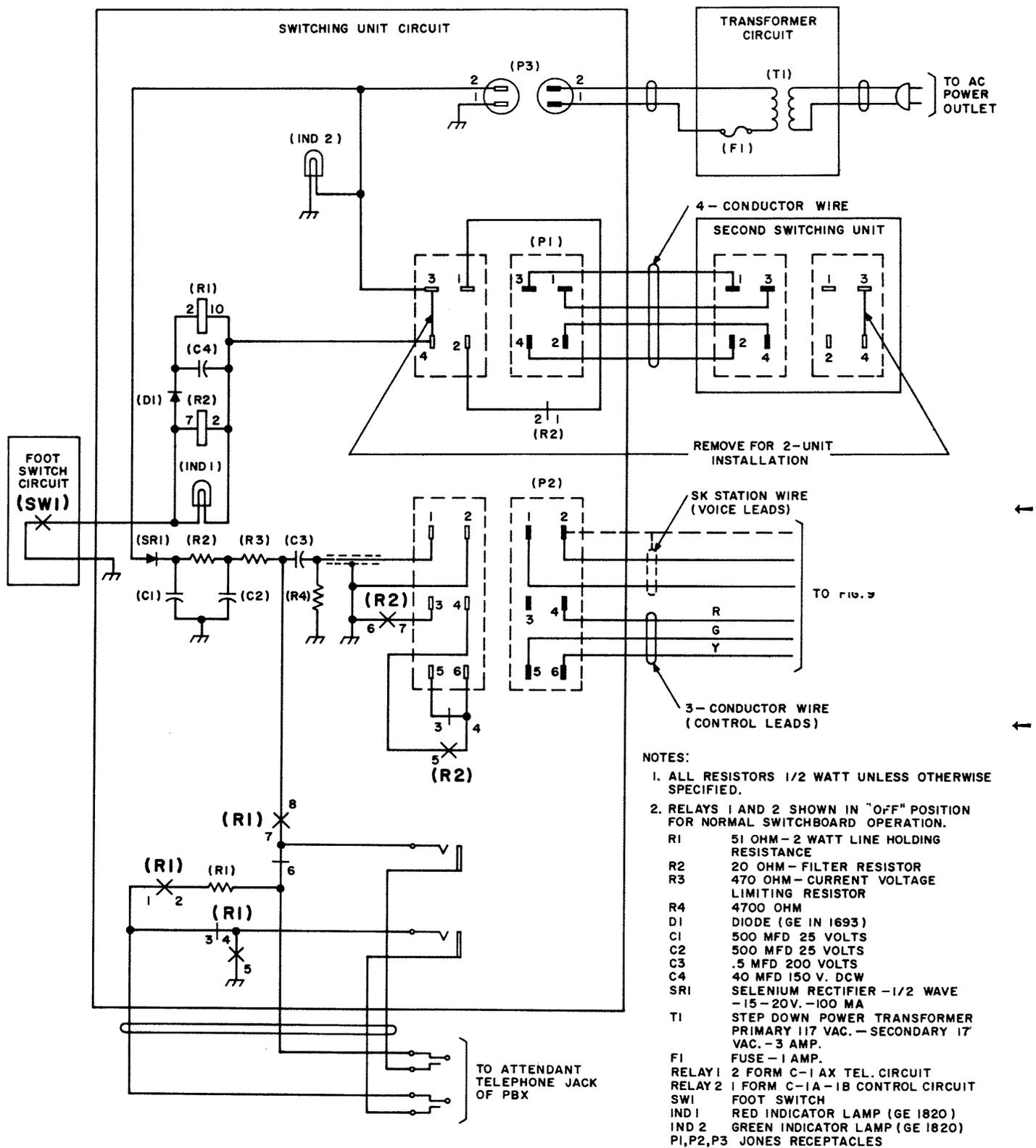


Fig. 8 — Transmitter Transfer Unit Schematic

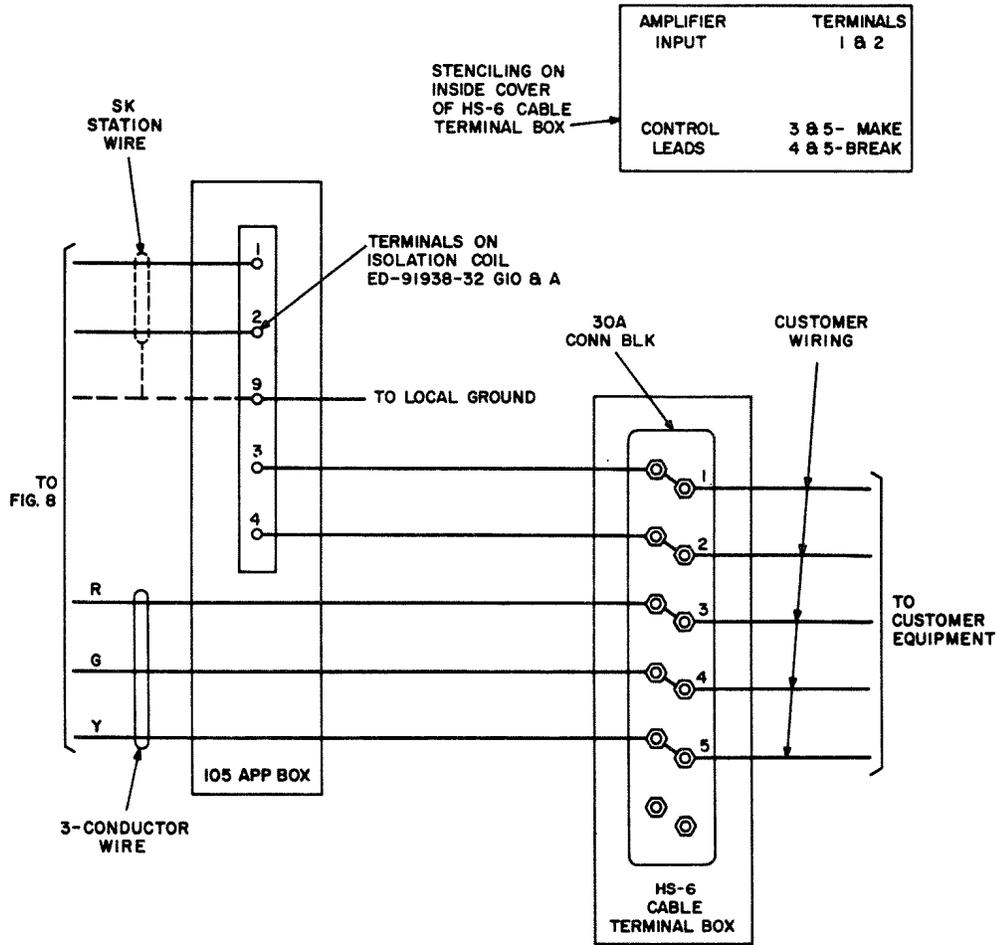


Fig. 9 — Connections — Isolation Coil and Connecting Block