

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.) ↵

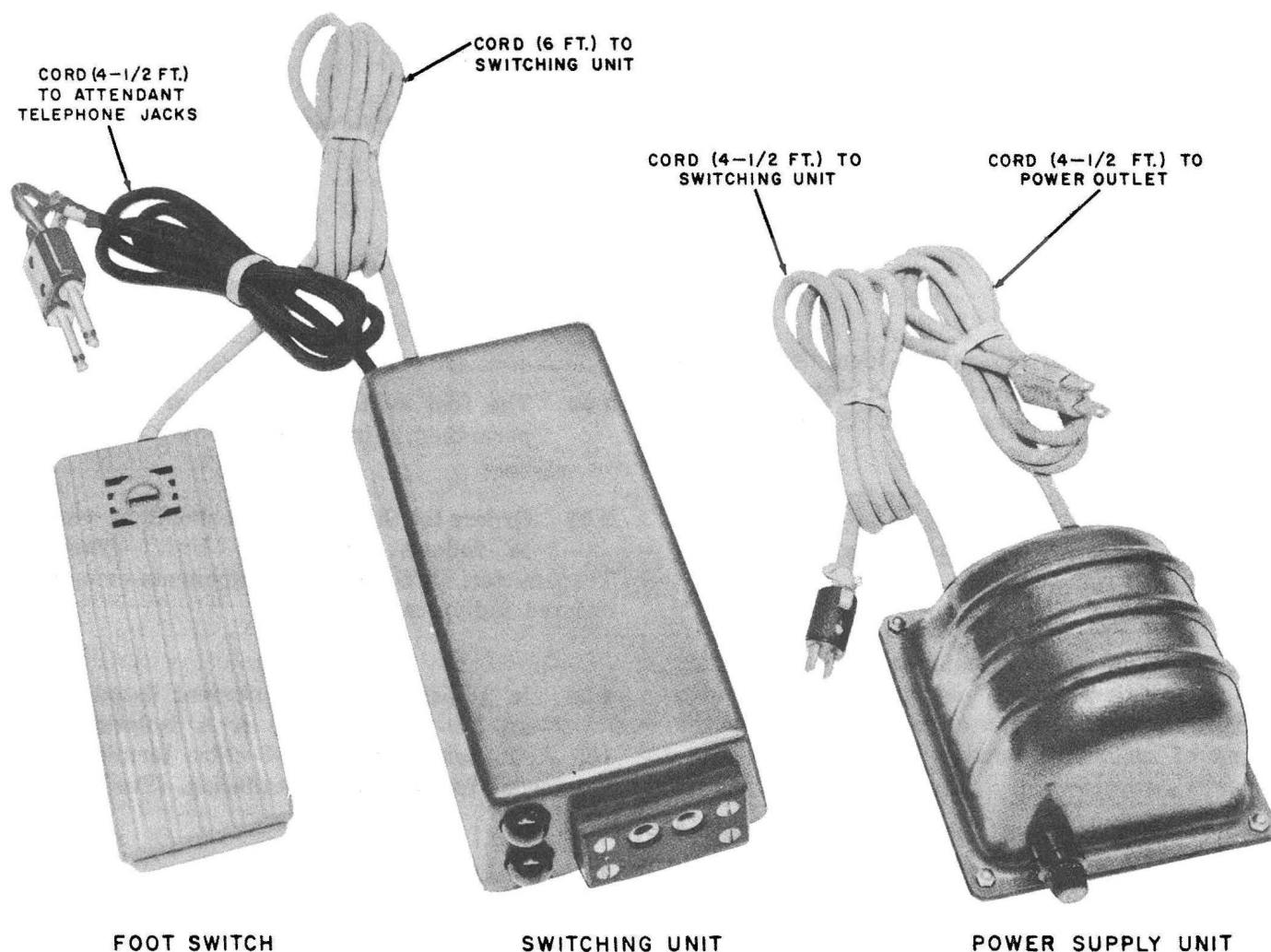
3. INSTALLATION

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 trans-
→ former should be mounted on a wall.

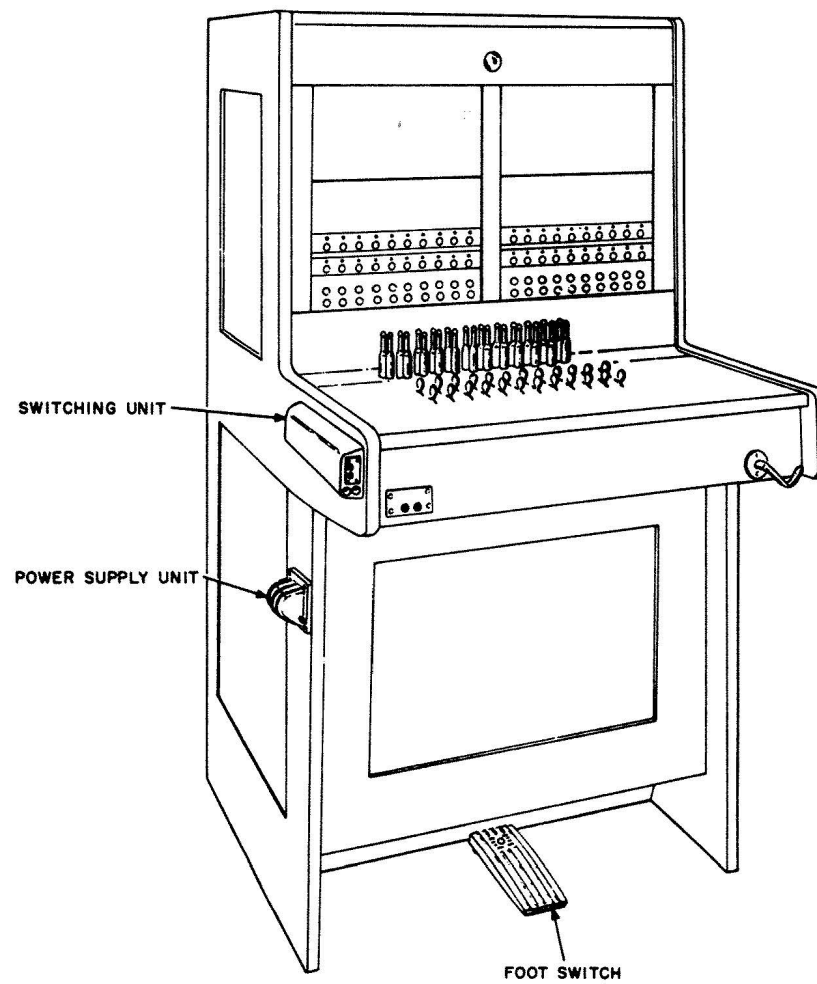


Fig. 2 — 551-Type PBX

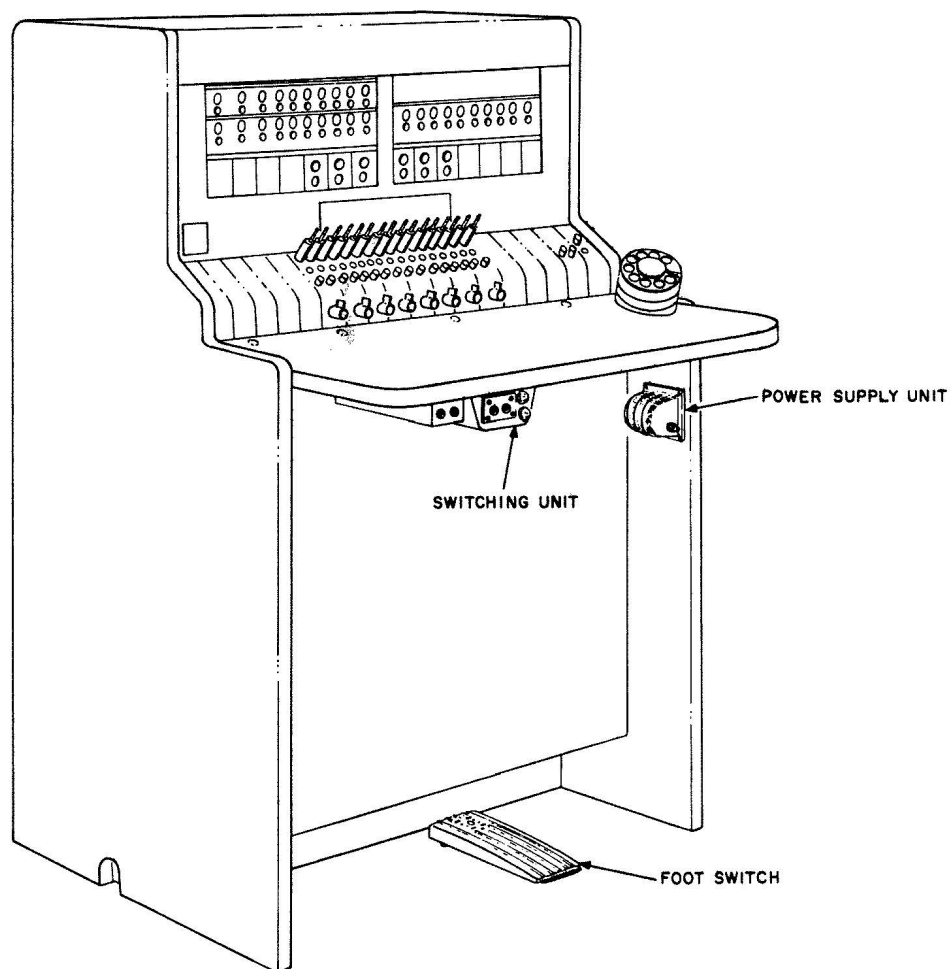


Fig. 3 — 555 PBX

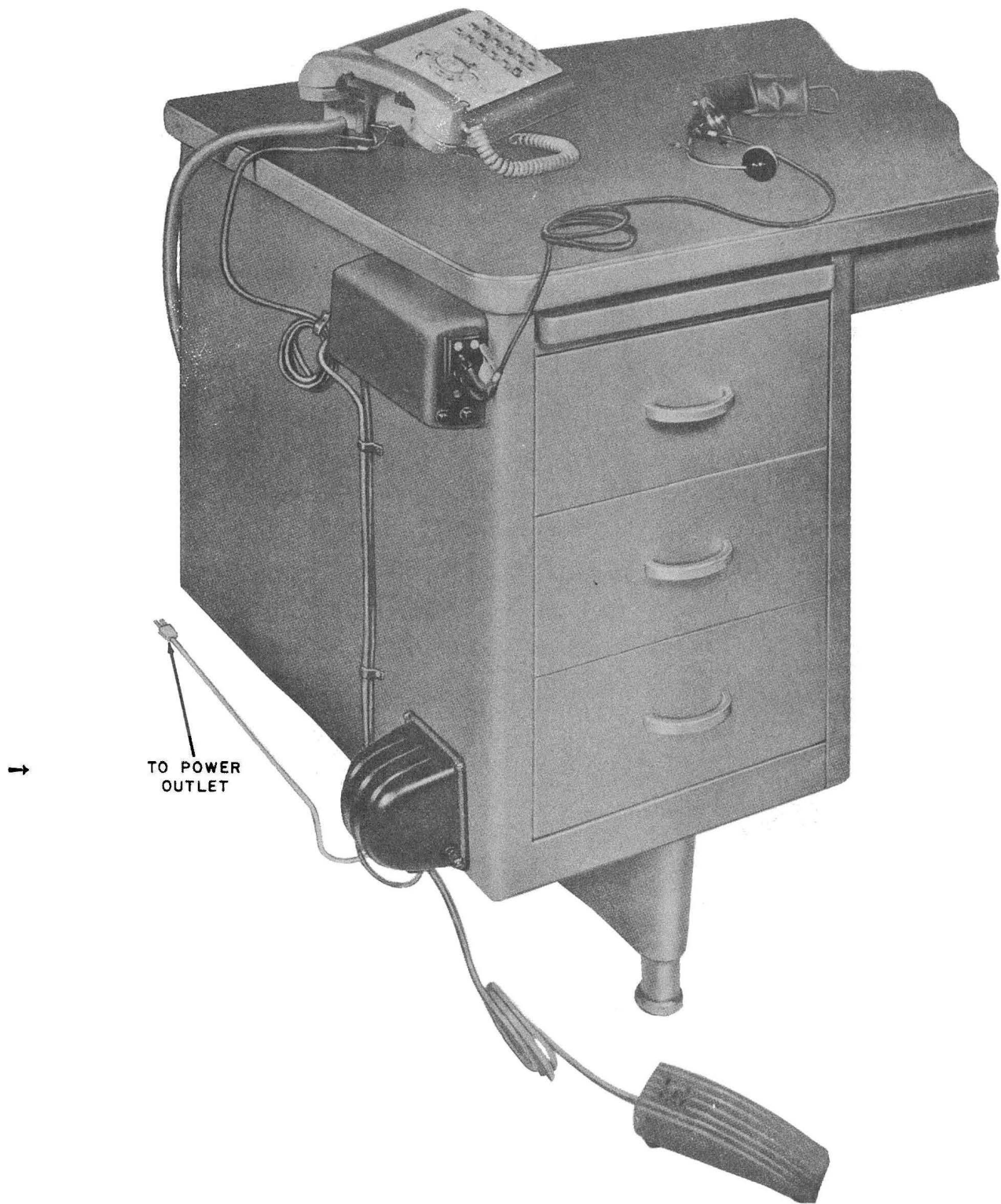


Fig. 4 — Call Director Equipped with Attendant Jacks

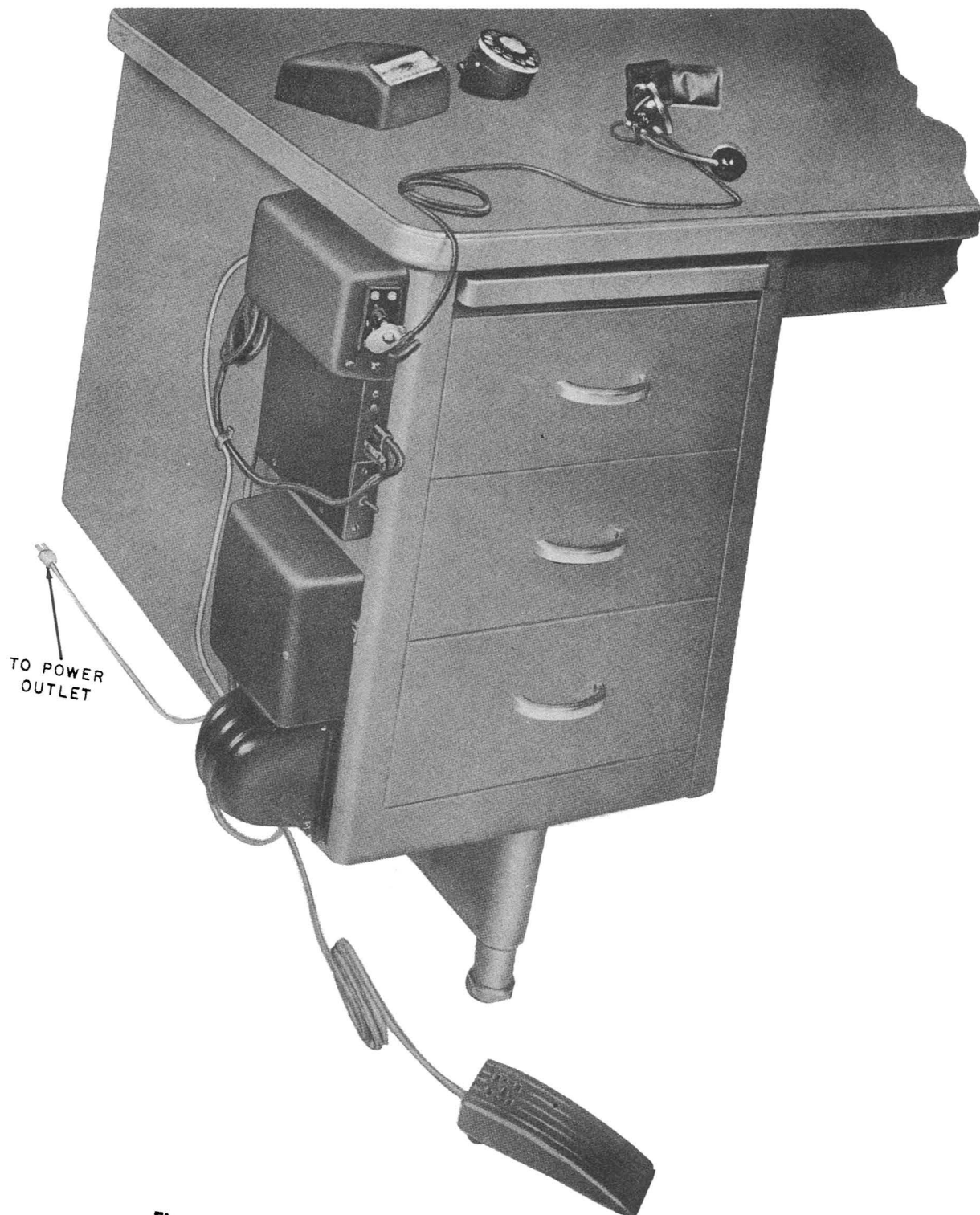


Fig. 5 — Key Equipment with Attendant Jacks

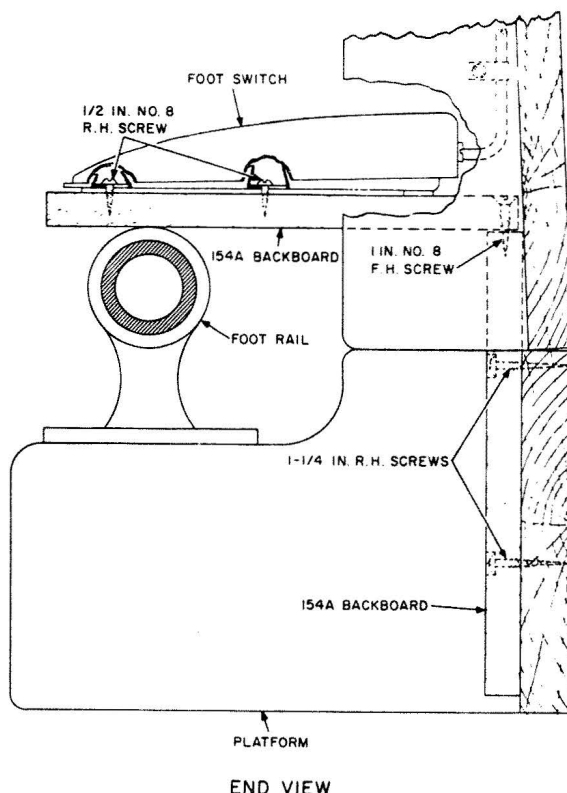


Fig. 6 — Mounting Foot Switch on Switchboards Equipped with Foot Rails

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.

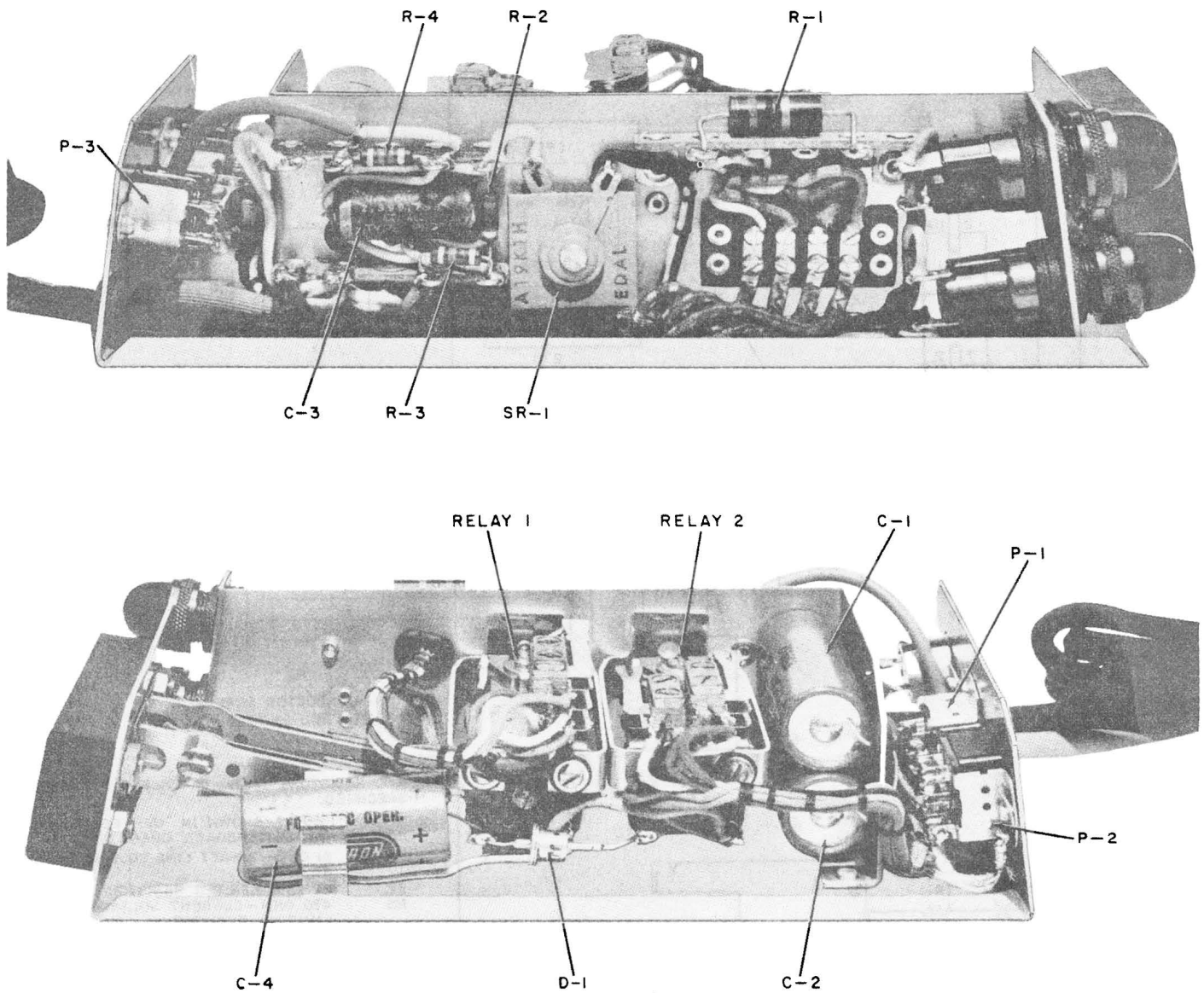


Fig. 7 — Switching Unit with Cover Removed

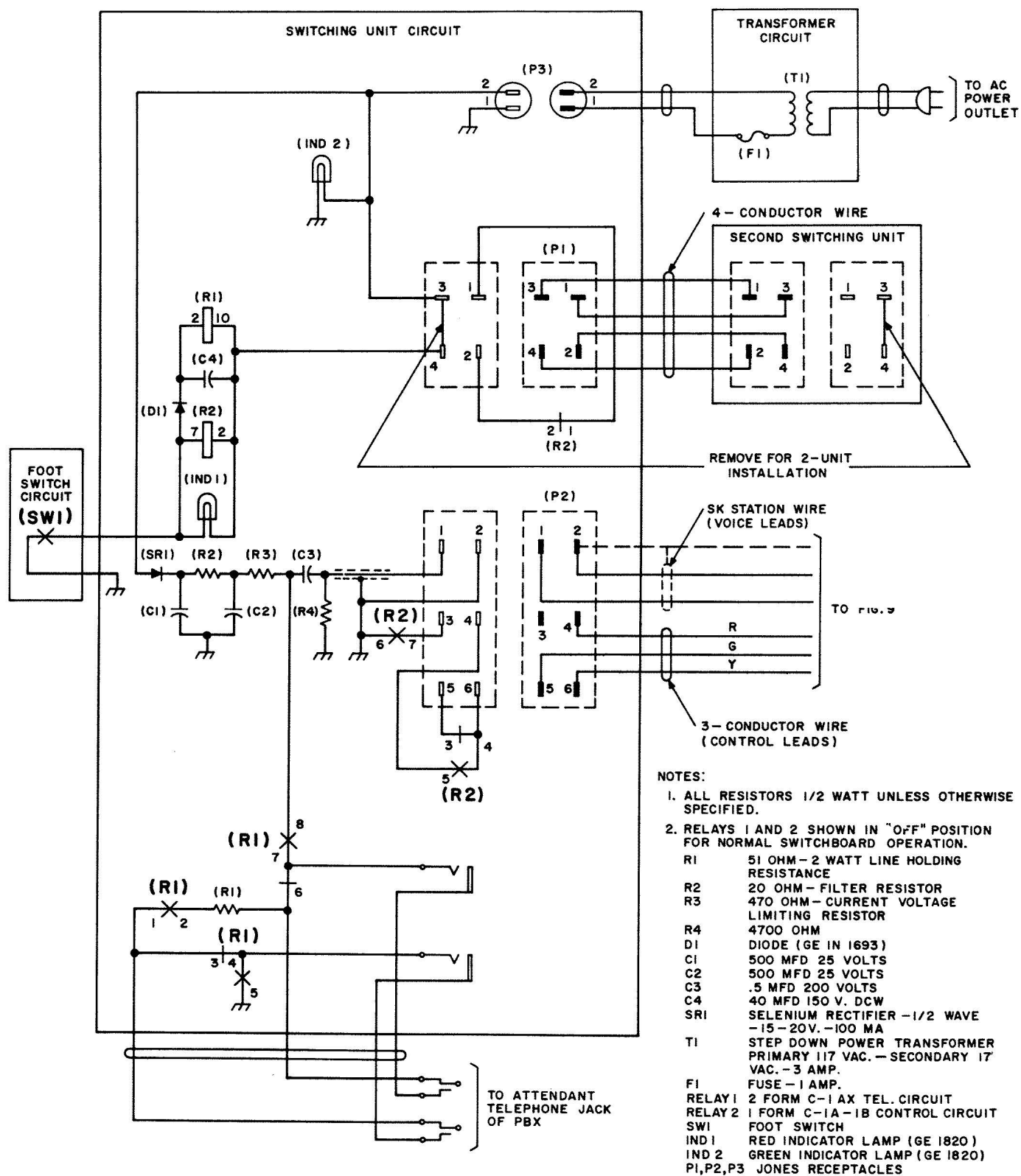


Fig. 8 — Transmitter Transfer Unit Schematic

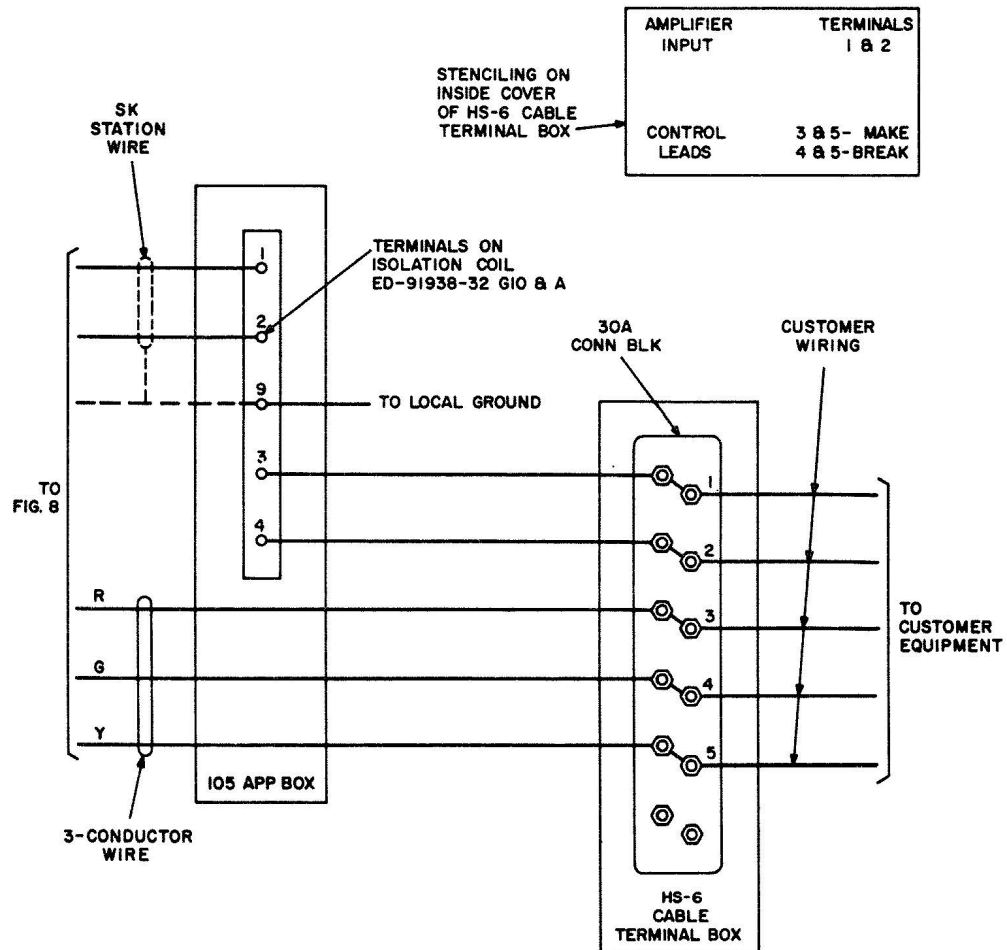


Fig. 9 — Connections — Isolation Coil and Connecting Block

GB105TTA* TRANSMITTER TRANSFER UNIT

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1. GENERAL

1.01 This section contains information on the GB105TTA Telephone Operators Transmitter Transfer Unit.

1.02 The transmitter transfer unit, a switchboard mounted device, enables an operator to transfer the headset transmitter from the switchboard communications function to another communication function (eg, paging).

1.03 A maximum of two GB105TTAs may be installed per customer system. This limitation is necessary because mutual exclusion cannot be extended beyond two units.

1.04 This unit meets the off-line transmitter monitoring requirements.

2. DESCRIPTION

2.01 The GB105TTA consists of a power transformer, footswitch, and transfer unit (Fig. 1).

2.02 The transmitter transfer unit is a box-type assembly with a front panel containing a double jack for the operators headset, a red power-on lamp, and a green unit-operating lamp. The rear

panel contains plugs for switchboard and footswitch connections. The power cord enters through the rear and is terminated inside the unit. An optional plug used for dual operation is also included on the rear of the unit.

2.03 This unit mounts under the switchboard. It is 3-1/2 inches wide, 1-1/2 inches high, and 8-1/2 inches long. An additional space of 2 inches is required behind the unit to accommodate plugs and wiring.

2.04 The cover of the unit is fastened via a quarter turn quick-release screw. It must be removed to mount the unit and to adjust unit output level.

2.05 The power supply consists of a 2012-type transformer which plugs directly into an electrical outlet. Unit must be located within 10 feet of the outlet.

2.06 When a call is received and paging is required, the calling party is placed on hold. The operator depresses the footswitch to transfer the headset transmitter from the switchboard circuit to the paging circuit.

2.07 When two switchboard operators have access to the same paging system (dual operation), a lockout feature is provided. This feature is mutually exclusive. When one operator is using the system, the other operator's position is automatically locked out.

3. INSTALLATION

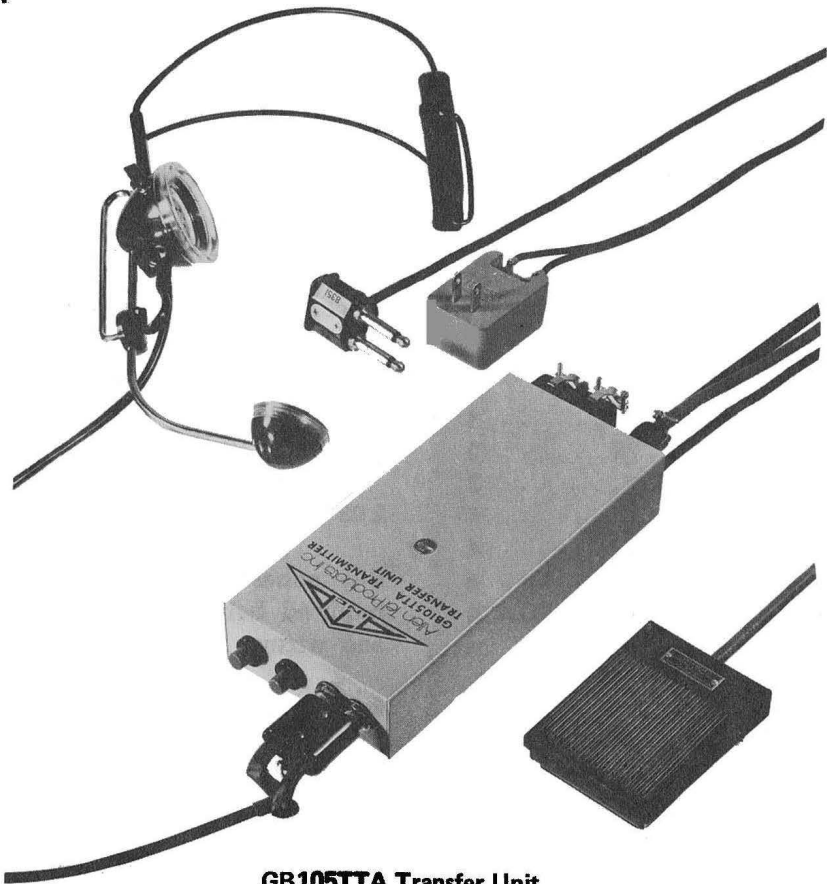
Single Position

3.01 The GB105TTA is shipped with the cord for the power transformer connected to the transfer unit. The footswitch is plug-ended and is connected to receptacle SK3 on rear of unit (Fig. 2).

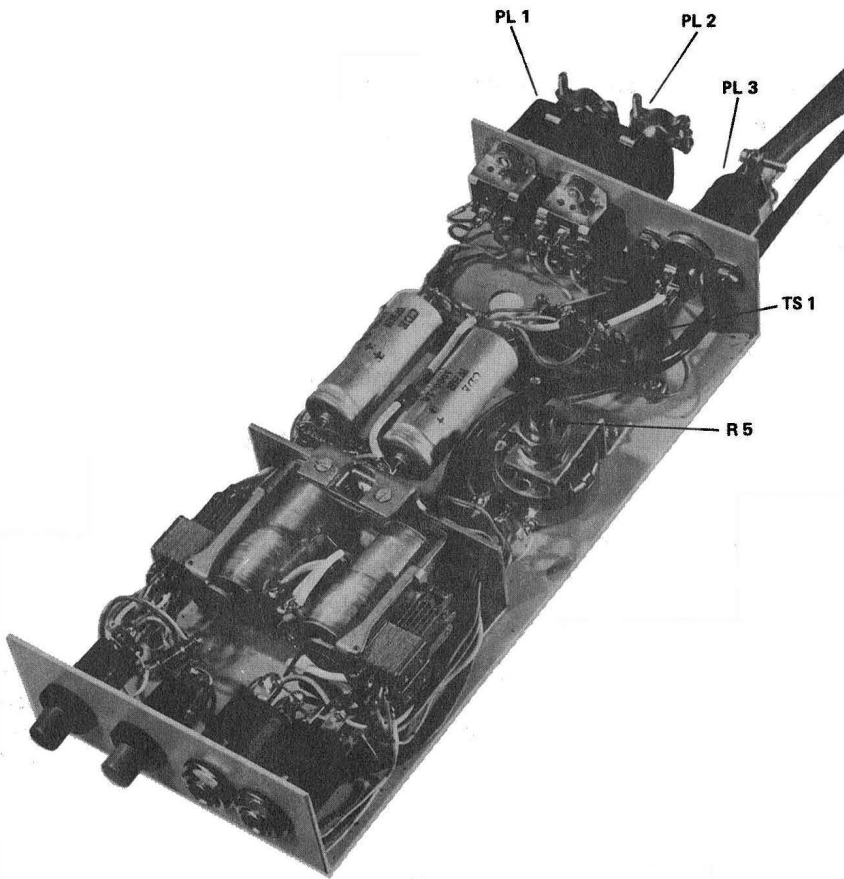
* Trademark of Allen Tel. Products, Incorporated

NOTICE

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



GB105TTA Transfer Unit
Fig. 1



GB105TTA Transfer Unit With Cover Removed
Fig. 2

Note: An ac supply outlet must be available within 10 feet of where the unit is to be installed.

3.02 To mount unit, release quarter turn screw and remove cover. Fasten unit under switchboard using the two slotted holes on base of the unit.

3.03 Locate transfer unit where it will be accessible for operator headset plug.

Note: A minimum 2-inch rear clearance must be available to allow for plugs and wiring.

3.04 Plug PL2 on rear of unit is provided for connection to the paging or other type of communication system. It can be wired as shown in Fig. 3A of Fig. 3.

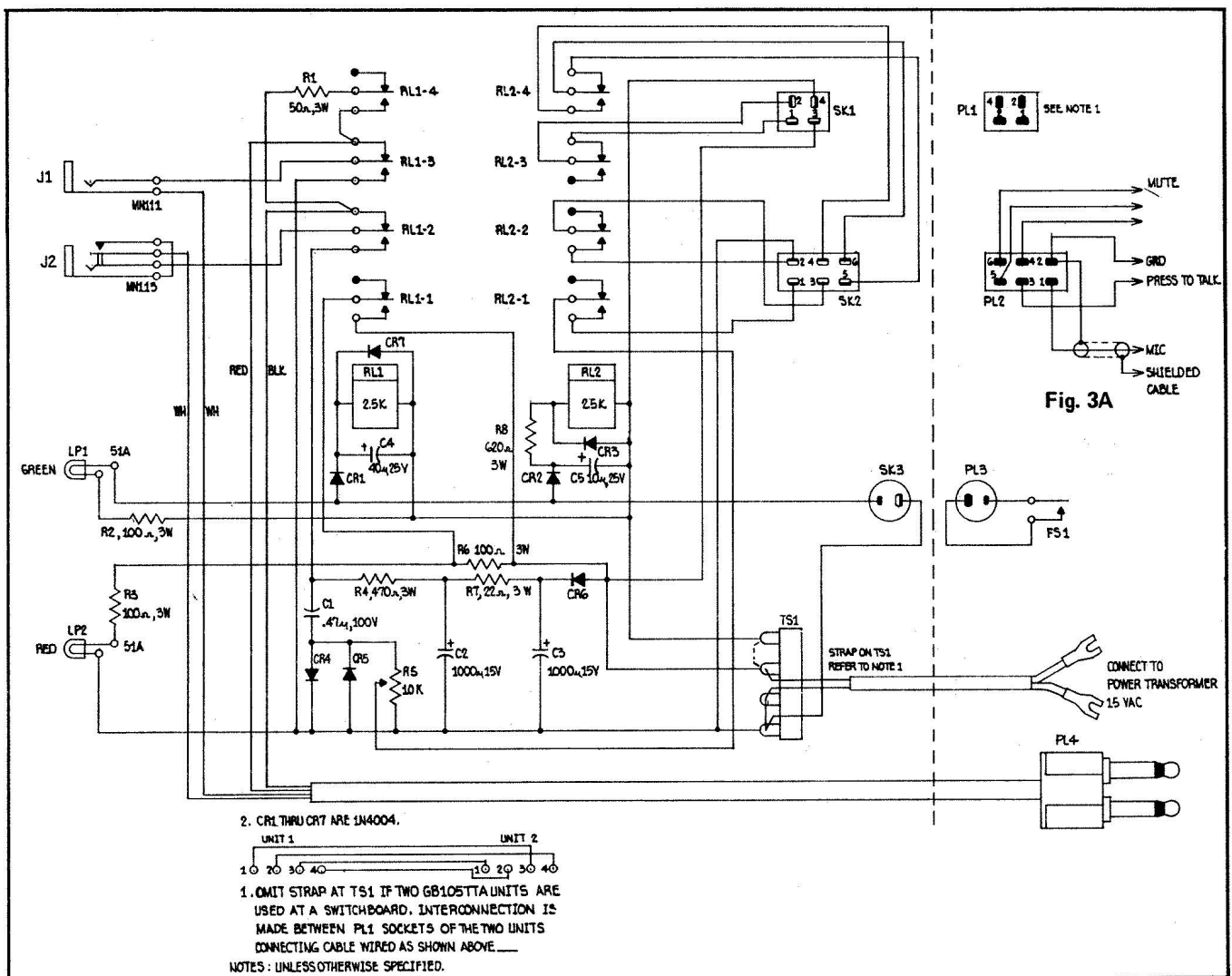
3.05 Plug PL4 is similar to the operator headset plug and is plugged into the existing switchboard jack.

3.06 The operator headset plugs into the front of the transfer unit.

Dual Position

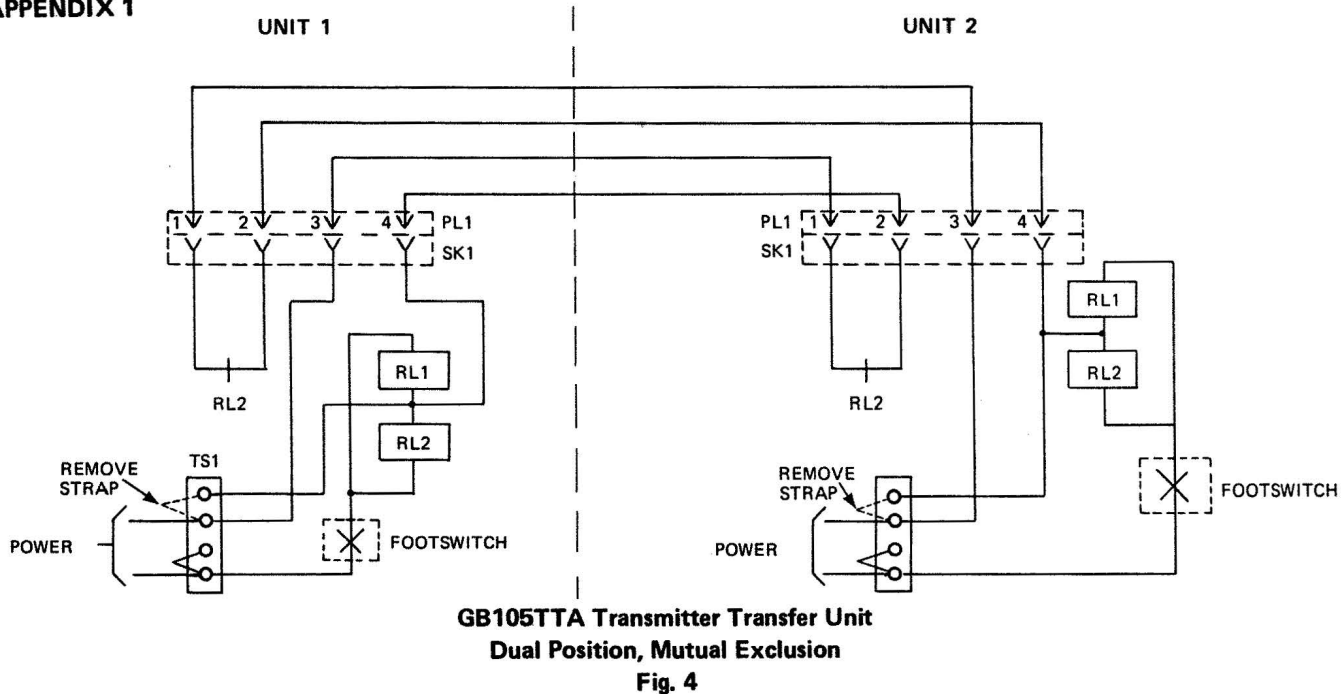
3.07 Plug PL1, located on the back of each unit, is used to interconnect the two units for dual operation with mutual exclusion. This option is used when both operator positions have access to the same paging system.

3.08 When mutual exclusion is required, run wiring straps between PL1 of each unit as shown in Fig. 3 (Note 1) and 4. The strap on TS1 of both units must be removed as shown in Fig. 3 and 4.



GB105TTA Transfer Unit

Fig. 3



4. OPERATIONAL TESTS

Single Position

- 4.01 When power transformer is plugged into electrical outlet, the red power-on lamp on the transfer unit should light.
- 4.02 Make a switchboard test call to a distant party and ask them to stay on the line. Then place the party on hold.
- 4.03 Depress footswitch. The green unit-operating lamp should light and an announcement can be made over the paging system.
- 4.04 Release footswitch and ensure that a holding condition was maintained with the distant party during the transfer operation. The connection can then be released.

Dual Position

Note: In addition to making the above tests for each position in a mutually exclusive arrangement, the following tests should be made.

- 4.05 Check lockout feature between the two positions by depressing the footswitch on one unit and talking over the paging system. While this occurs, depress footswitch at other position. It should not be possible to transfer the second unit, either to light the green lamp or to page. Release both footswitches.

- 4.06 Move to other switchboard position and perform tests described in 4.05. The results should be the same.

- 4.07 To change an unsatisfactory paging level, remove cover on the transfer unit and adjust potentiometer R5. (Figure 2 shows the location and identification of R5.)

5. ORDERING

- 5.01 Order the GB105TTA unit on Form GTP2 as described in the General Trade Products and Service Catalog under "Communications Equipment — Graybar Electric Company."

- 5.02 Send blue copy of purchase order to:

- Northern California and Nevada —
District Manager — Cable Management
Room 204
1661 Doolittle Drive
San Leandro, CA 94577
- Southern California —
District Manager — Regional Supplies
Room 238
2420 Yates Avenue
Commerce, CA 90040

- 5.03 Order Wording —

(Qty) Transfer, Transmitter, Mod GB105TTA