

TRANSMITTER TRANSFER UNIT

DESCRIPTION AND INSTALLATION

1. GENERAL

1.01 This section covers the description and installation of the transmitter transfer unit.

1.02 The transmitter transfer unit is made by the American Radiotelephone Corporation. The manufacturer's number for the unit is DFS-105TT.

1.03 The unit is used to transfer the transmitter of an attendant head telephone set or handset from the attendant telephone circuit of a PBX to the input of a customer-provided paging system. No more than two positions of an installation may be equipped with the units.

1.04 **Description:** The unit is in three parts as follows:

(a) The **switching unit**, Fig. 1, consists of a chassis on which are mounted transfer relays, transmitter battery supply rectifier, holding resistor, pilot lamps, telephone cord and plug, telephone jacks, and Jones plug jacks. It is encased in a plastic cover measuring approximately 8 inches long, 4 inches wide, and 2-3/8 inches deep. The cover is held on the chassis by friction fit. To remove the cover, lift the rear end and push forward over the telephone jack mounting.

(b) The **foot switch**, Fig. 1, is equipped with a 6-foot cord wired permanently to the switching unit.

(c) The **power supply unit**, Fig. 1, is a fused step-down transformer encased in a plastic case, equipped with 4-1/2 foot plug-ended cords on primary and secondary sides.

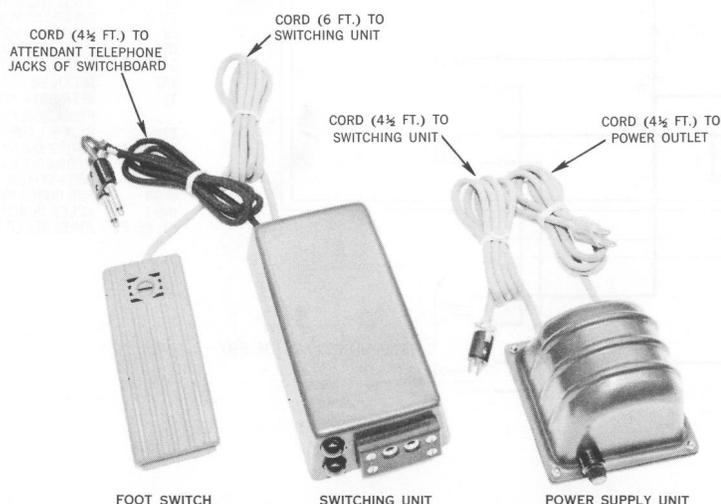
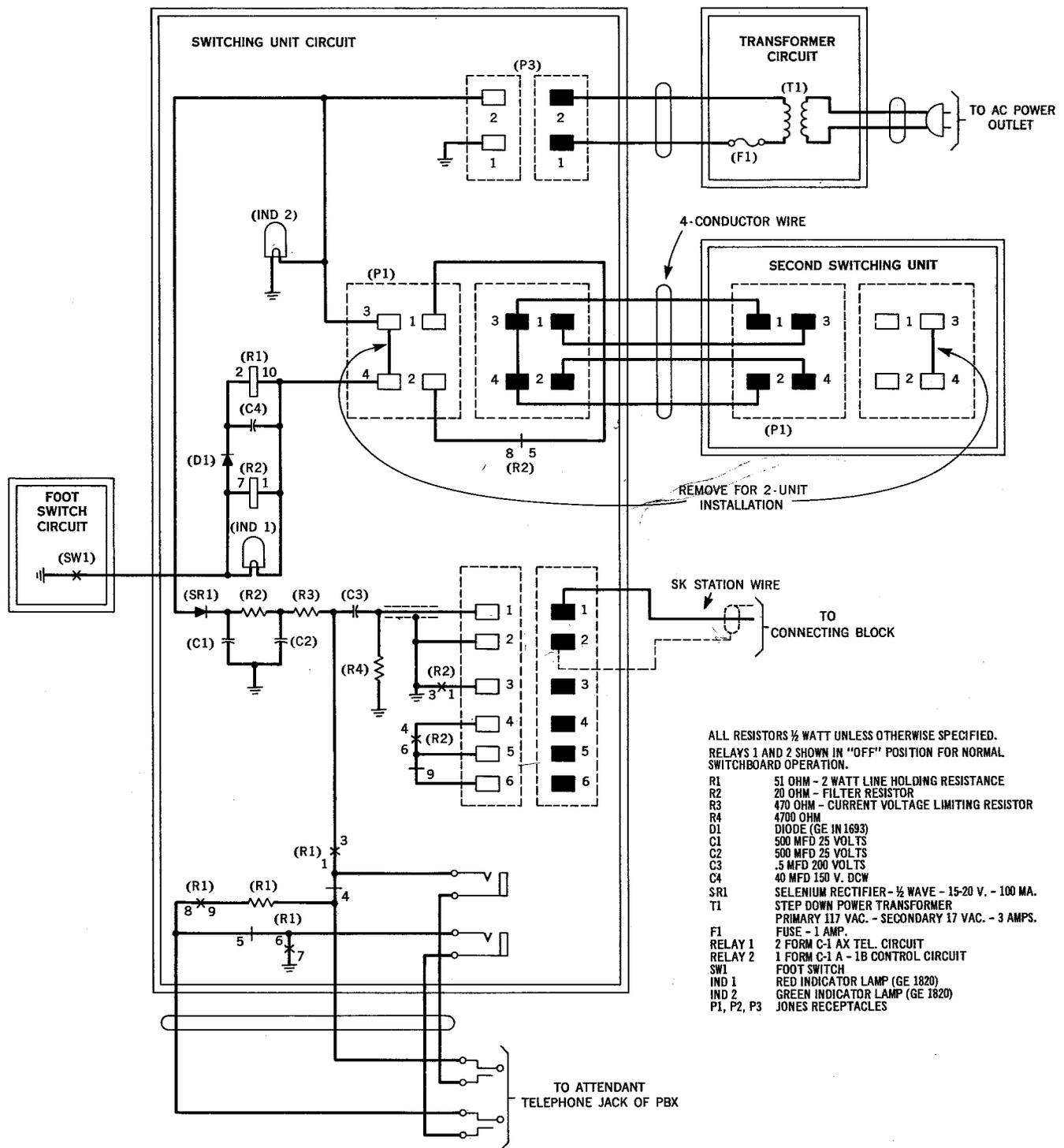


Fig. 1 — Transmitter Transfer Unit



**Fig. 2 - Schematic - Transmitter Transfer Unit
 DFS-105TT (8-31-59) Spec. N. 224-2**

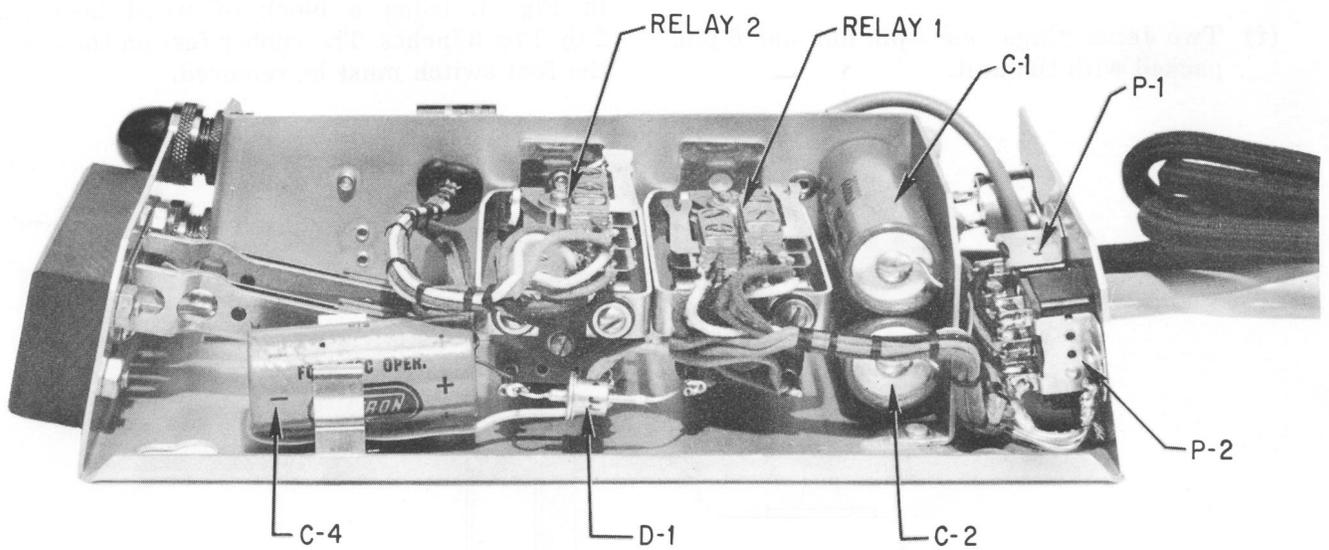
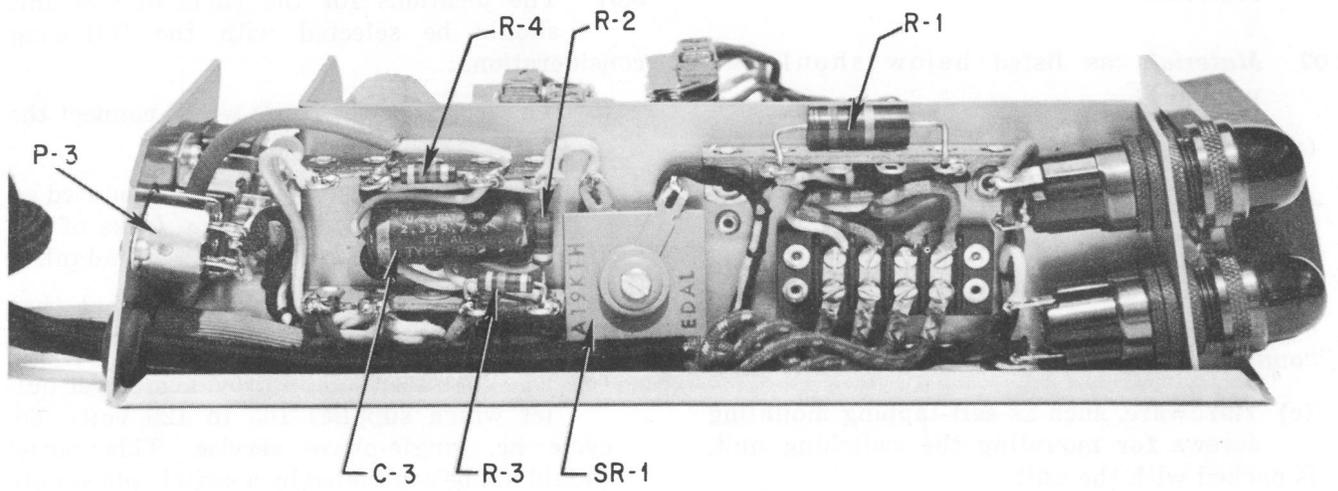


Fig. 3 — Switching Unit with Cover Removed

2. APPARATUS

2.01 *Tools* used for installing a PBX are required.

2.02 *Materials* as listed below should be provided:

- (a) Any material which might be required for protecting the customer's premises or the PBX during the installation.
- (b) SK station wire of sufficient length to reach between the selected location of the switching unit and the selected location of the connecting block.
- (c) Hardware, such as self-tapping mounting screws for mounting the switching unit, is packed with the unit.
- (d) Four 3/4-inch, No. 5 R.H. wood screws for mounting the power supply unit.
- (e) PBX equipped with footrail: Three 1-3/4 inch, No. 8 R.H. wood screws, two 3/4-inch No. 8 R.H. wood screws, and two No. 10 washers. See Fig. 4.
- (f) Two Jones plugs, one 4-pin and one 6-pin, packed with the unit.

3. REQUIREMENTS AND METHODS

A. Locating Equipment

3.01 The locations for the parts of the unit should be selected with the following considerations:

- (a) The length of the cords which connect the parts. See Fig. 1.
- (b) The switching unit should be mounted so that the attendant telephone jacks of the unit are within easy reach of the attendant.
- (c) All parts should be placed so that they will not obstruct any operating functions.
- (d) The customer should provide a power outlet which supplies 105 to 125 volts, 60-cycle ac, single-phase service. This outlet should not be controlled by a switch and should be located near the switchboard.

3.02 Typical locations for the equipment are shown in Fig. 4, 5, and 6.

3.03 Where footrails are provided on the PBX, the foot switch may be installed as shown in Fig. 4, using a block of wood measuring 2 by 1 by 3 inches. The rubber feet on the rear of the foot switch must be removed.

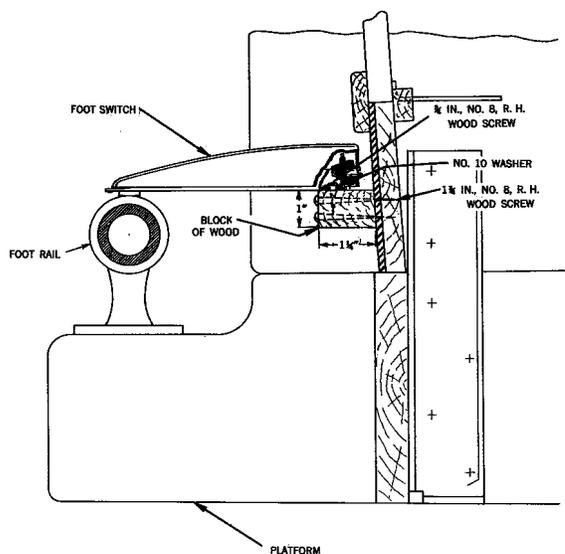


Fig. 4 — Mounting of Foot Switch in Installations Employing Platforms and Foot Rails

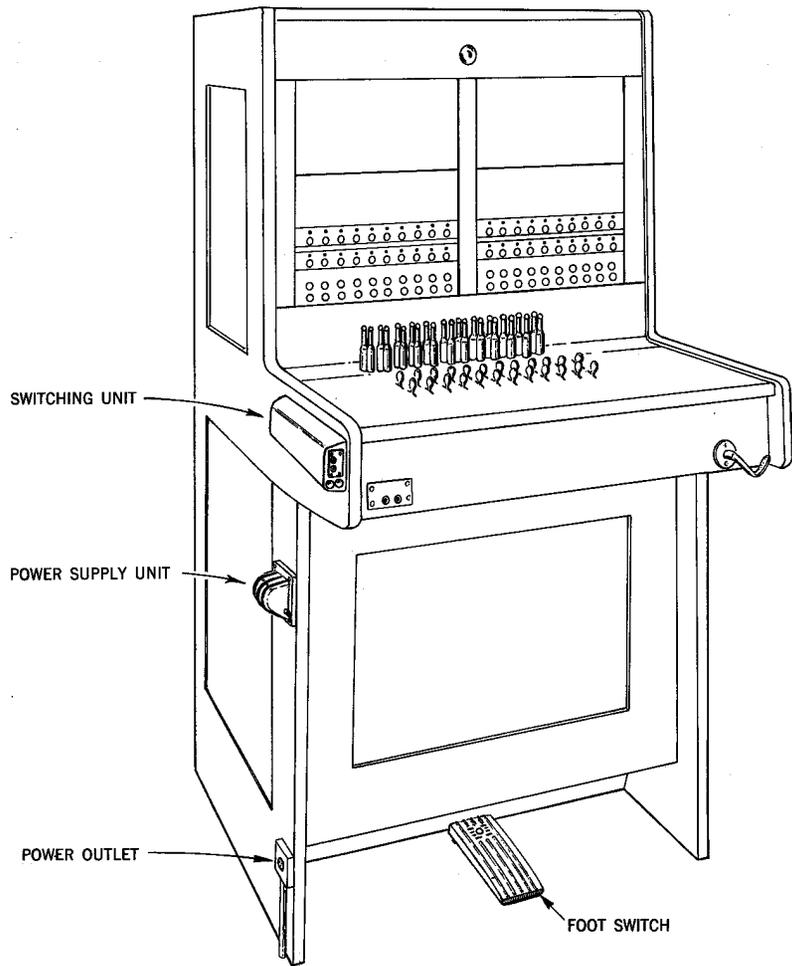


Fig. 5 — 551-type Switchboard Showing Typical Location of Parts

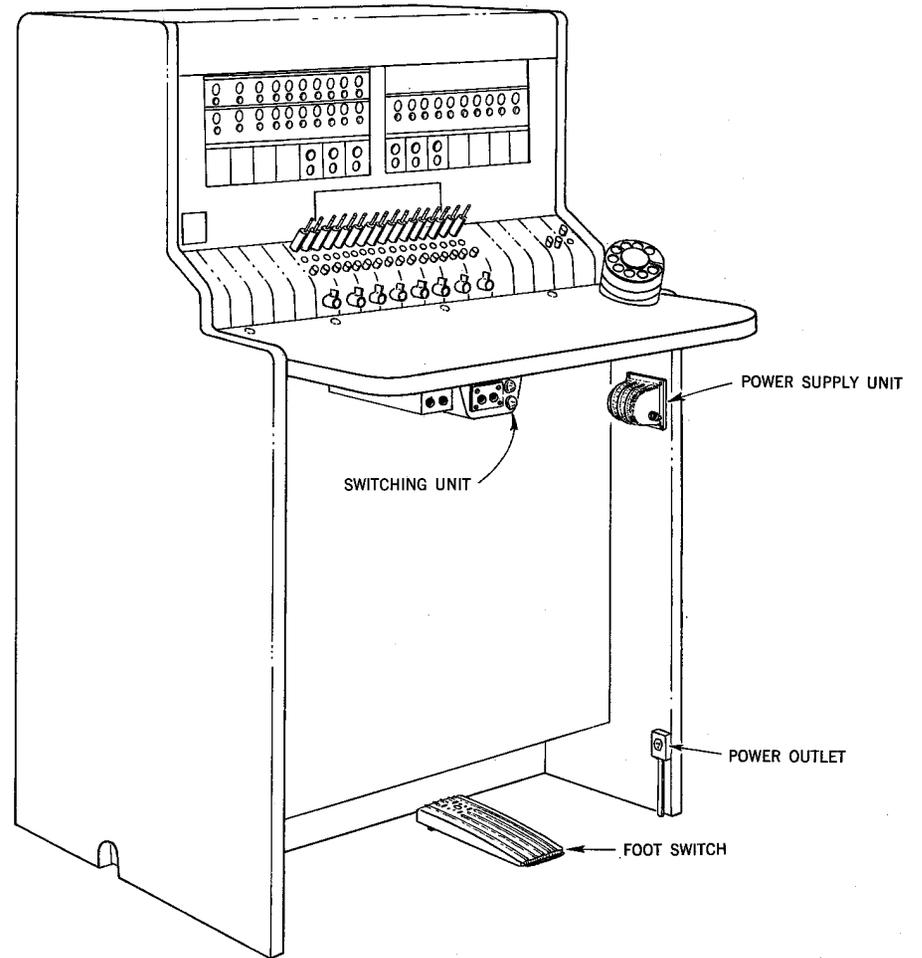


Fig. 6 — 555-type Switchboard Showing Typical Location of Parts

3.04 A 42A or appropriate connecting block should be provided to terminate the SK station wire which is run from the switching unit (3.05, (d), (3)). The customer will also use this connecting block to terminate the cable from the microphone input of his amplifier. The location of the connecting block should be governed by these conditions.

B. Installation

3.05 Single Unit Installation: A suggested procedure for the installation of the unit is as follows:

(a) **Switching Unit**

- (1) Remove cover of the unit and place in the desired location.
- (2) Mark the location of the mounting holes (key end of hole).
- (3) Drill lead holes (7/64-inch).

Caution: For switchboards of the 555-type, if the unit is mounted under the writing shelf, the depth of the hole cannot exceed 3/8-inch.

- (4) Place screws (packed with equipment) in slots but do not tighten.
 - (5) Place the unit in position. Note that the screw heads are properly positioned. Tighten screws and replace cover.
- (b) **Foot Switch:** Place foot switch and fasten if desired. Use 3/4-inch No. 8 R.H. wood screws.

(c) **Power Supply Unit**

- (1) To mount the unit, remove the cap nut and bolt holding the rubber foot from the corners of the unit. Place the 3/4-inch, No. 5 R.H. wood screws through the holes in the cover and base of the unit. Fasten the unit to PBX in desired location.
- (2) Insert the plug of the cord from secondary winding of the power supply unit (2-pin Jones plug attached) in the P3 jack of the switching unit. See Fig. 3.

(d) **SK Station Wire and Connecting Block**

- (1) Solder one conductor of the wire to pin 1 and the other conductor to pin 2 of the 6-pin Jones plug. The pins are numbered on the inside of the plug.
- (2) Insert plug into P2 jack. See Fig. 3.
- (3) Place and fasten wire to location for connecting block.
- (4) Place and fasten the connecting block and terminate wire on block.

3.06 Two Position Installations: Follow the same procedures for locating and installing a single unit and proceed as follows:

- (a) Remove the jumper between terminals 3 and 4 of the P1 jack of both switching units.
- (b) Measure the distance from the 4-pin (P1) jack of one switching unit to the same jack of the other unit. See Fig. 2 for connections.
- (c) Place and fasten 4-conductor wire between the switching units.
- (d) Solder the 4-pin Jones plugs on the ends of the 4-conductor wire and insert plugs into the P1 jacks of the switching units. See Fig. 2 for connections.

4. PLACING IN SERVICE

4.01 Insert the plug of the primary of the transformer into the power outlet. The green lamp on the front end of switching unit should light, and should remain lighted as long as the power is on.

4.02 Depress the foot switch. The relays will be heard to function and the red lamp should light. The red lamp indicates when the head telephone set transmitter is switched to the paging amplifier.

4.03 Have the cable from the microphone input of the customer's amplifier terminated on the connecting block.

4.04 Remove the plug of the attendant head telephone set from the attendant telephone jacks of the switchboard and insert it in the switching unit.

4.05 Insert the plug of the cord from the switching unit into the attendant telephone jacks of the switchboard. The attendant may then carry on with her normal board operation.

4.06 Dress and fasten all cords. Excess cordage may be neatly folded and tied. Fasten cords using cable clamps or other standard fasteners.