51-TYPE POWER UNITS

IDENTIFICATION, INSTALLATION, AND CONNECTIONS

1. GENERAL

1.01 The 51-type power units are used to provide power for Key Service Units used with PICTUREPHONE® station sets. The power supplied to the Key Service Unit is used for switching circuits, cable equalizers, lamps, ringing, and for an interrupter.

1.02 This section is reissued to change the output voltage from 20 to 24 volts.

1.03 The power units are equipped with an input transformer having taps for connections to nominal 111-, 117-, or 123-volt, 60-Hz input power. The power units provide signal and talk outputs of ▶24◀ volts dc at 1.5 amperes total; +10 volts dc and −10 volts dc at 1.5 amperes total; 10 volts ac at 0.3 ampere; and 110 volts ac, 30 Hz. If the nominal ac input voltage to a power unit varies more than ±5 percent, the unit will not produce its required outputs within their allowable working limits.

1.04 This reissue is based on the following drawing: SD-82011-01, Issue 2D.

For detailed description of operation, see the corresponding circuit description. ▶If this section is to be used with equipment or apparatus that is associated with an earlier or later issue of the schematic drawing, reference should be made to the SDs and CDs to determine the extent of the changes and the manner in which the section may be affected.◀

1.05 The 51-type power unit uses a 113A frequency generator which is mounted in the power unit case.

2. INSTALLATION

2.01 The 51B1 power unit is designed for wall mounting. The power unit should be mounted on a wall bracket assembly. The power unit (including metal backboard and cover) measures 9-1/4 inches high, 8-3/4 inches wide, and 5 inches deep.

2.02 The 51C1 power unit is designed for rack mounting. The power unit should be mounted on horizontal bars drilled on 7/16-inch centers and vertically spaced at 7 inches. The unit requires 20 mounting spaces. The power unit measures 7 inches high, 8-1/2 inches wide, and 5 inches deep.

3. CONNECTIONS

3.01 To make the proper connnections to the 51-type power unit, refer to Fig. 1 and proceed as follows.

(1) Connect LOC GRD to ground.

(2) Verify that the 113A frequency generator is connected to the AC1 and AC2 terminals of the power unit.

(3) Connect the signal output leads to the ▶24VDC B SIG◀ terminal and to the GRD SIG terminal.

(4) Connect the talk output leads to the ▶24VDC A TLK◀ terminal and to the GRD TLK terminal.

(5) Connect the +10 volt dc output lamp leads to the LAMPS +10VDC terminal and GRD +10V terminal.

(6) Connect the −10 volt dc output lamp leads to the LAMPS −10VDC terminal and GRD −10V terminal.

(7) Connect the interrupter output leads to the INTER ±10VAC terminal and GRD ±10V terminal.

(8) Connect the ac power cord to both the power unit and the ac service receptacle.

Note: The power units have three input terminals to accomodate local ac service voltage

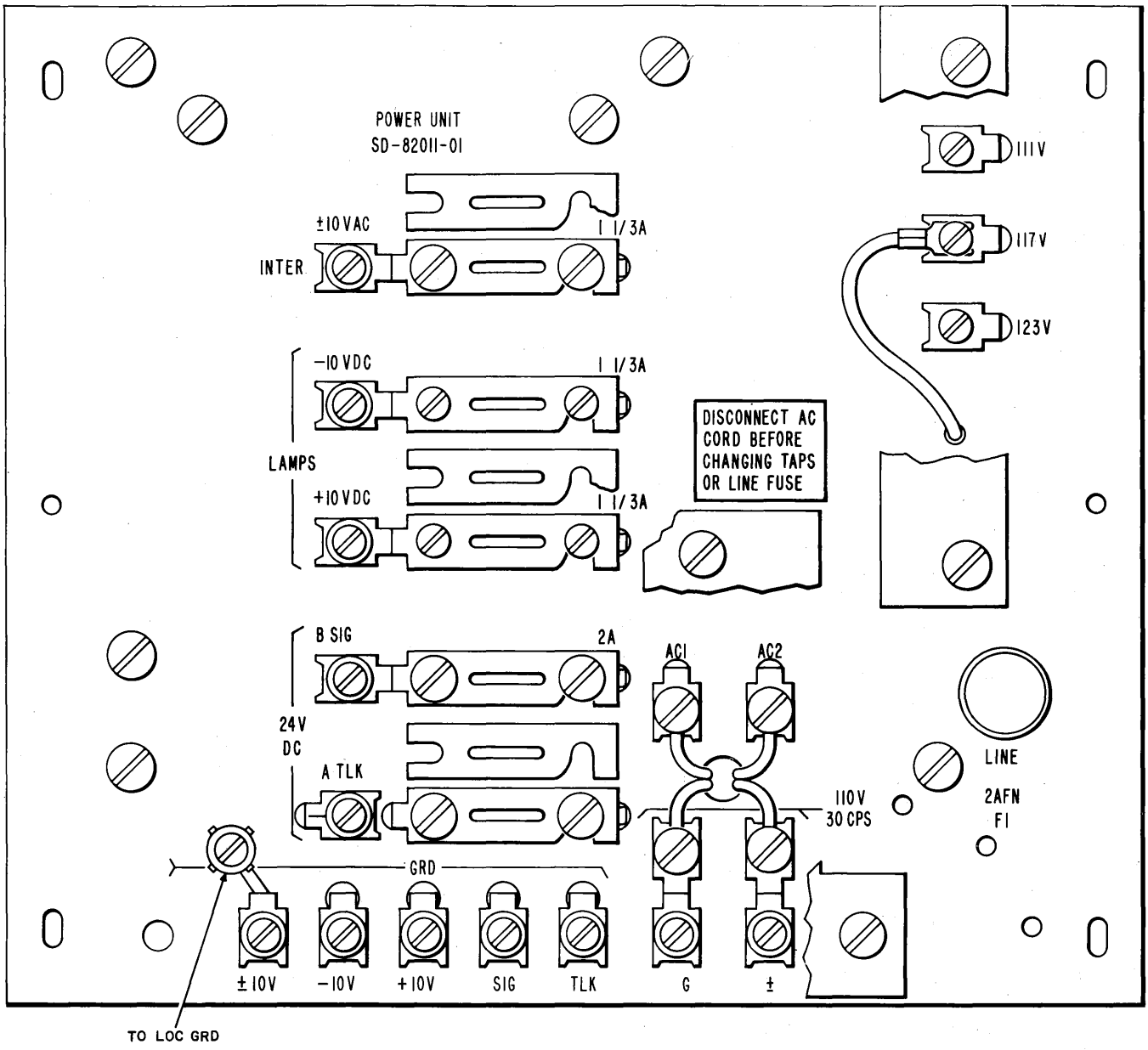

Fig. 1—Wiring Connections for 51-Type Power Unit

conditions. The units are shipped with the adjustment lead connected to the 117-volt ac terminal. With this connection the unit will perform satisfactorily for line voltages between 111 and 123 volts. If abnormal line voltage is suspected, the line voltage should be accurately checked. If high or low voltage is found, connect the adjustment lead to the terminal nearest the average line voltage.

4. MAINTENANCE

4.01 Keep the 51-type power unit clean and free of all foreign matter to ensure proper operation of the unit.