

Mobile Communication Equipment



Installation Instructions

Base or Repeater Stations

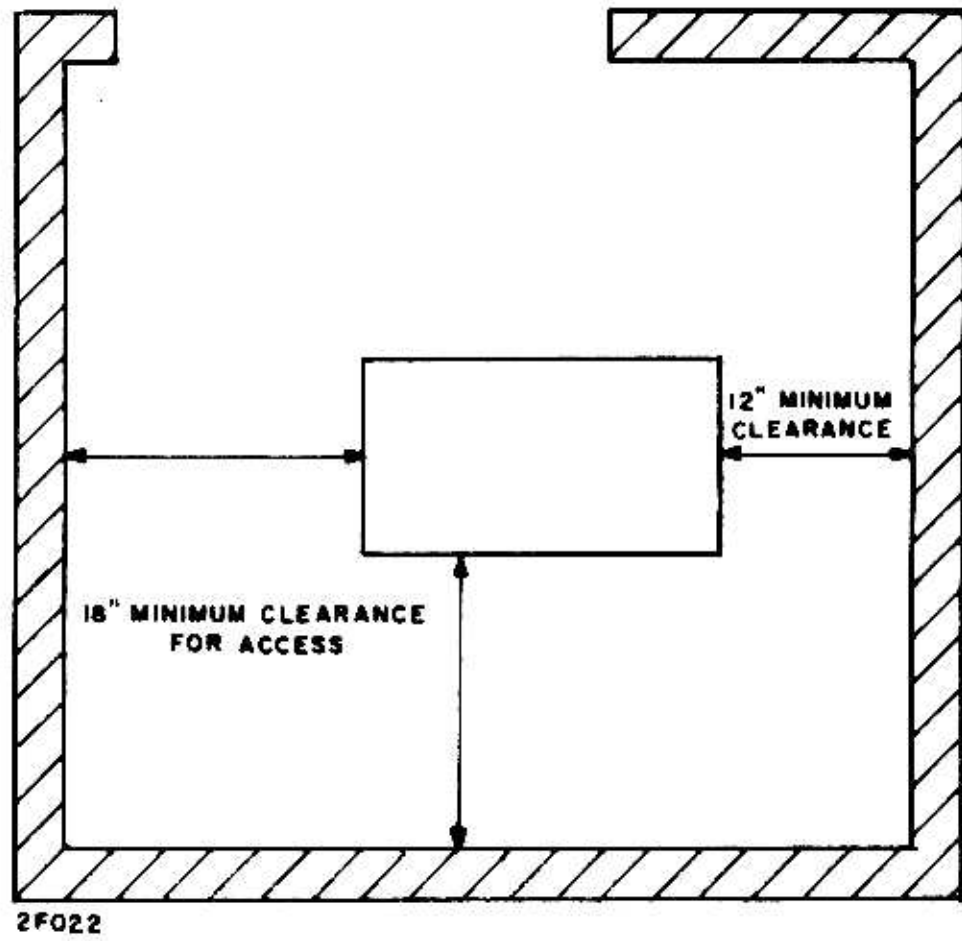


GENERAL INFORMATION

This instruction book provides installation information for RCA Base or Repeater Stations. Servicing information for these stations is provided in separate instruction books, which are listed on the System Index.

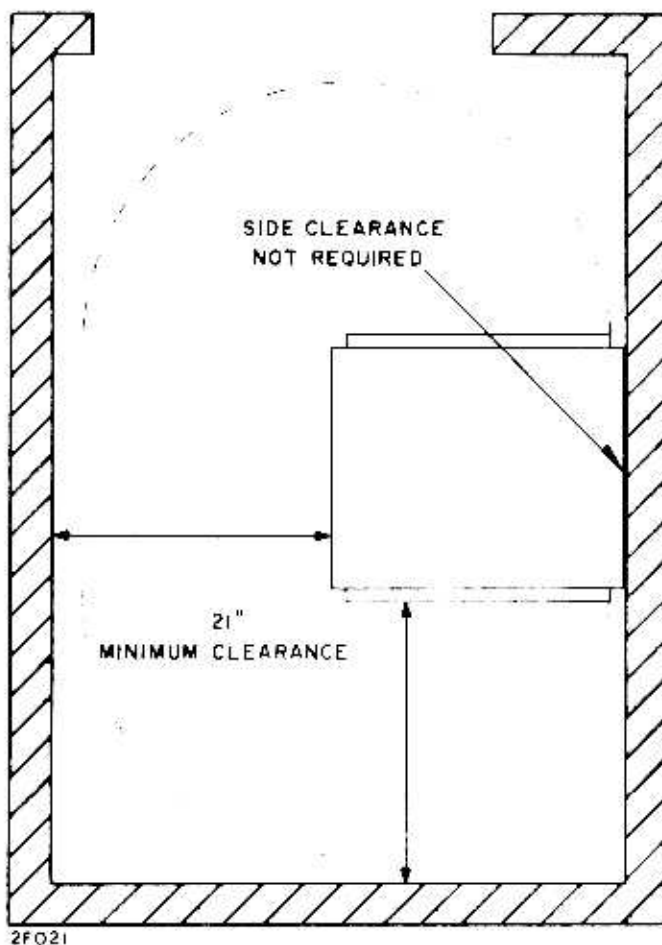
CABINET LOCATION

The permanent location of the station cabinet should be planned to provide maximum accessibility and adequate ventilation. Figures 1, 2, and 3 show the required clearances for the different cabinet styles.



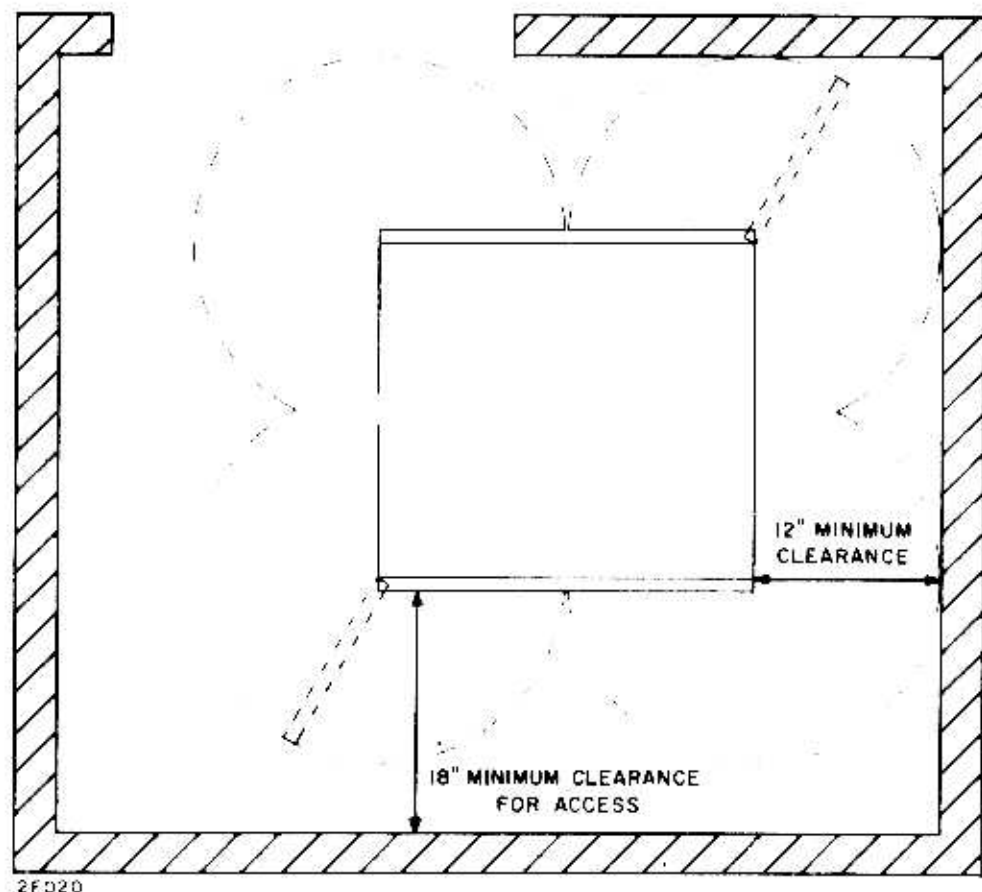
2F022

Figure 1. Desk Side Cabinet - Plan View



2F021

Figure 2. Utility Cabinet - Plan View



2F020

Figure 3. Free Standing Cabinet Plan View

WIRING

GENERAL

The station must be connected to the antenna system, ground system, power source (s), and control units(s). The desk-side and free-standing cabinets have knock-outs for conduit entry; however, holes must be punched in the utility cabinets at the desired locations.

NOTE: All wiring should conform to the National Electric Code and all local codes and ordinances.

ANTENNA CONNECTIONS

The antenna feedline is connected to simplex stations via a coaxial connector on the transmitter panel (power amplifier panel in high power stations). Duplex systems have a separate receiver antenna jack on the receiver panel. Stations having two receivers have a separate antenna jack for the second receiver on the second receiver panel.

GROUNDING

A fixed station installation that is not properly grounded may be damaged by voltage surges caused by lightning. A good source of ground system information is Chapter 14 of "Radio Transmitters" by Gray and Graham, McGraw-Hill Publishing Co. Recommended station grounding techniques are shown in Figure 5. Figure 4 shows a recommended circuit for suppression of transients on the telephone line in remote control stations.

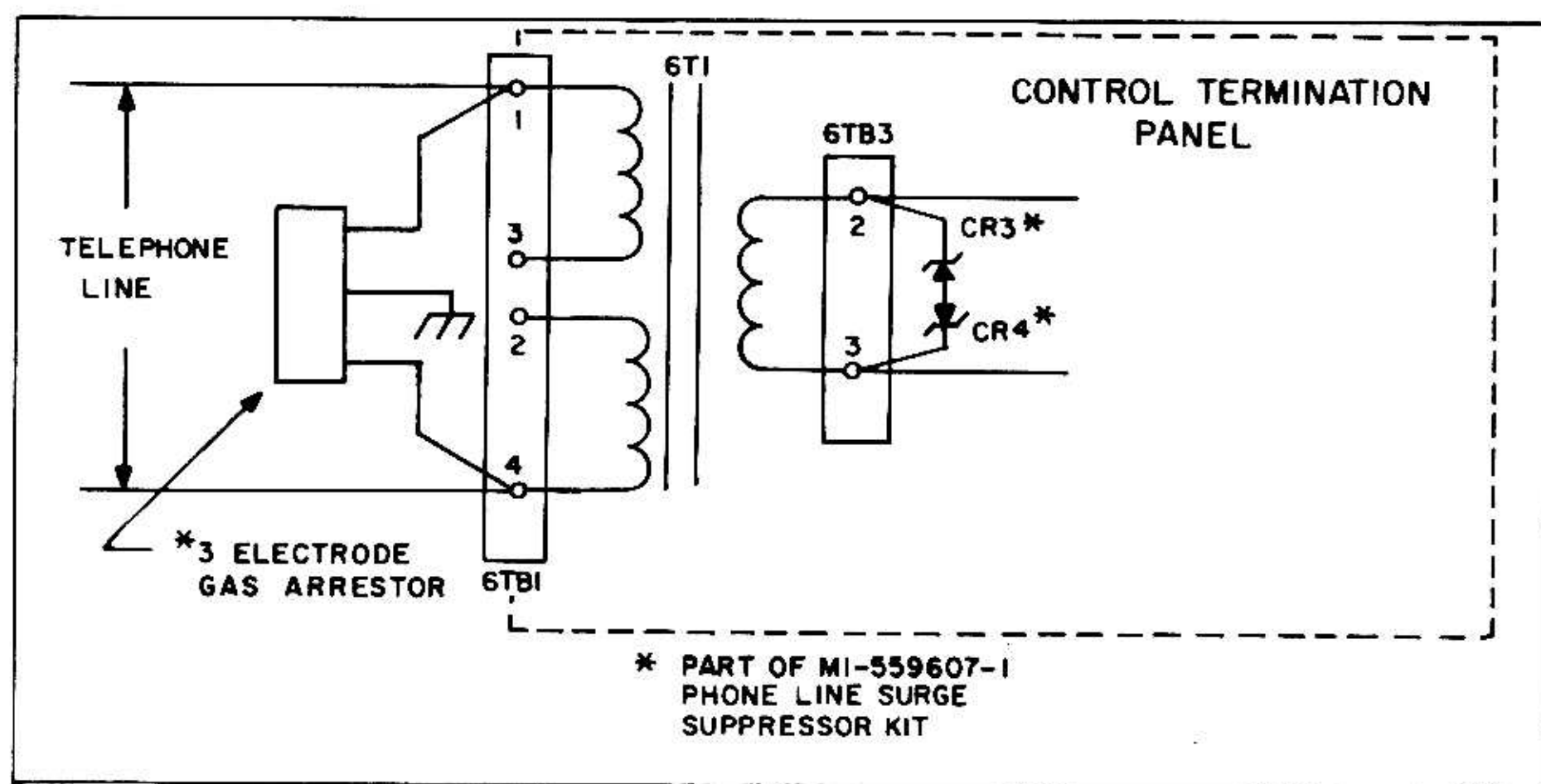
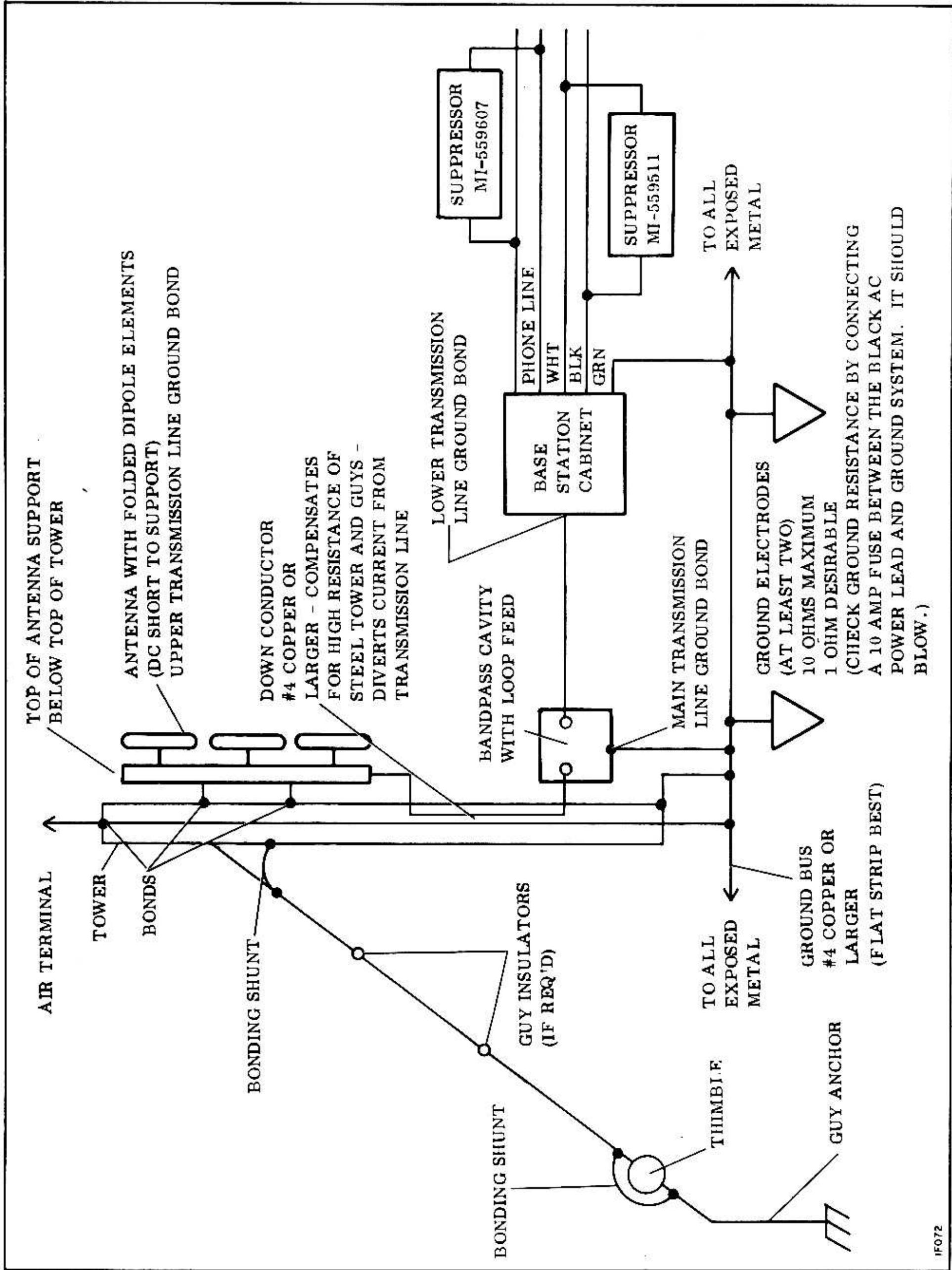


Figure 4. Telephone Line Suppression



1F072

Figure 5. Elements of Fixed Station Grounding

WIRING (Continued)

POWER WIRING

The AC power line is connected to the power supply panel in desk-side cabinets (Figure 6), or to the Power Distribution Panel in free-standing and utility cabinets (Figure 7).

Leads from the emergency power source are connected to the Power Supply Panel as shown in Figure 6. Use the wire sizes recommended in Table 1.

WARNING

AC Power Connections are to be made using a 3-Wire AC power cord with a 3-pronged plug. Make certain that the receptacle outlet is also connected to a 3-wire system.

TABLE 1. RECOMMENDED EMERGENCY POWER LEAD WIRE SIZES

Length of Power Leads	Recommended AWG Wire Size
25 feet or less	#6
26-75 feet	#4
76-100 feet	#2

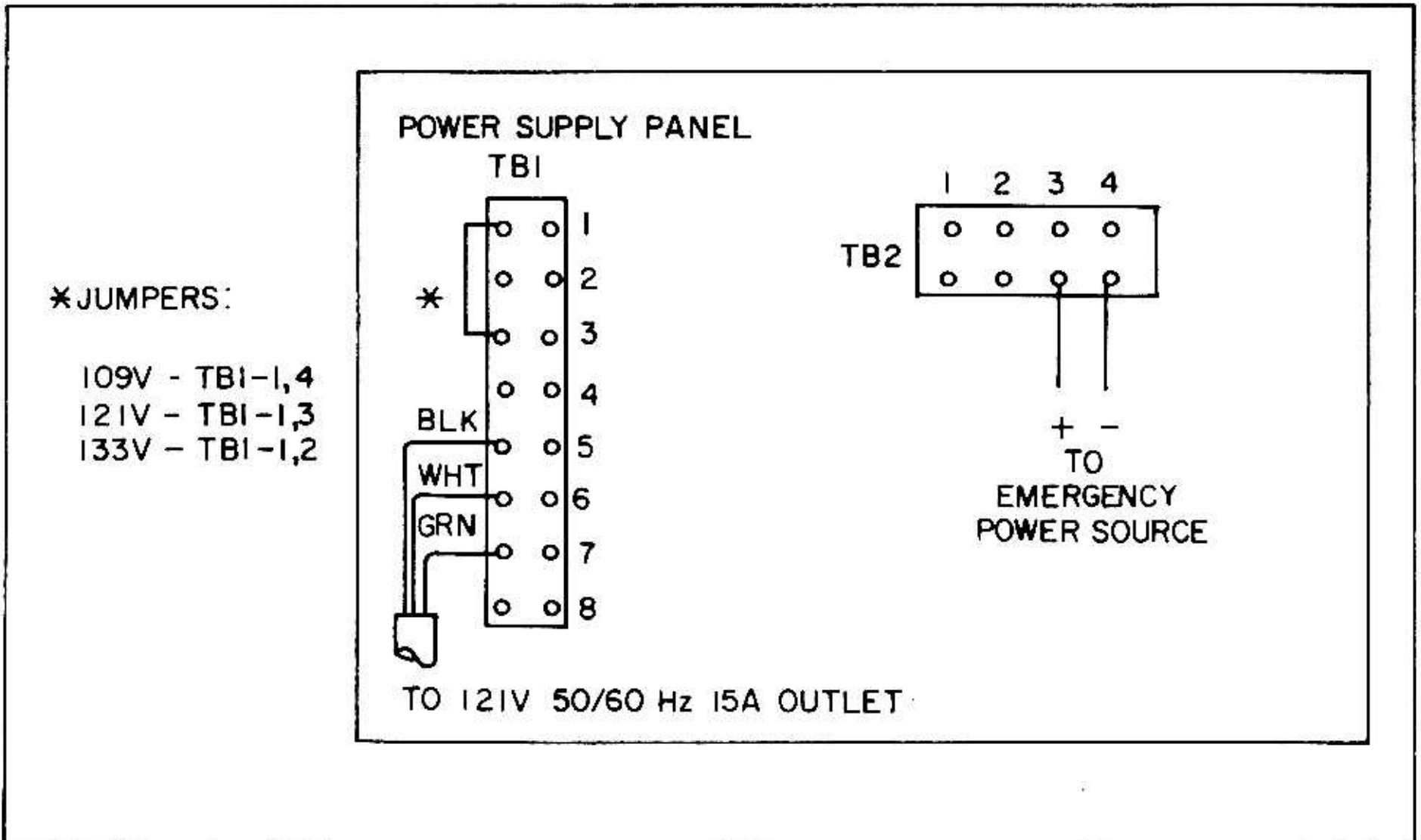


Figure 6. Power Connections - Desk Side Cabinets

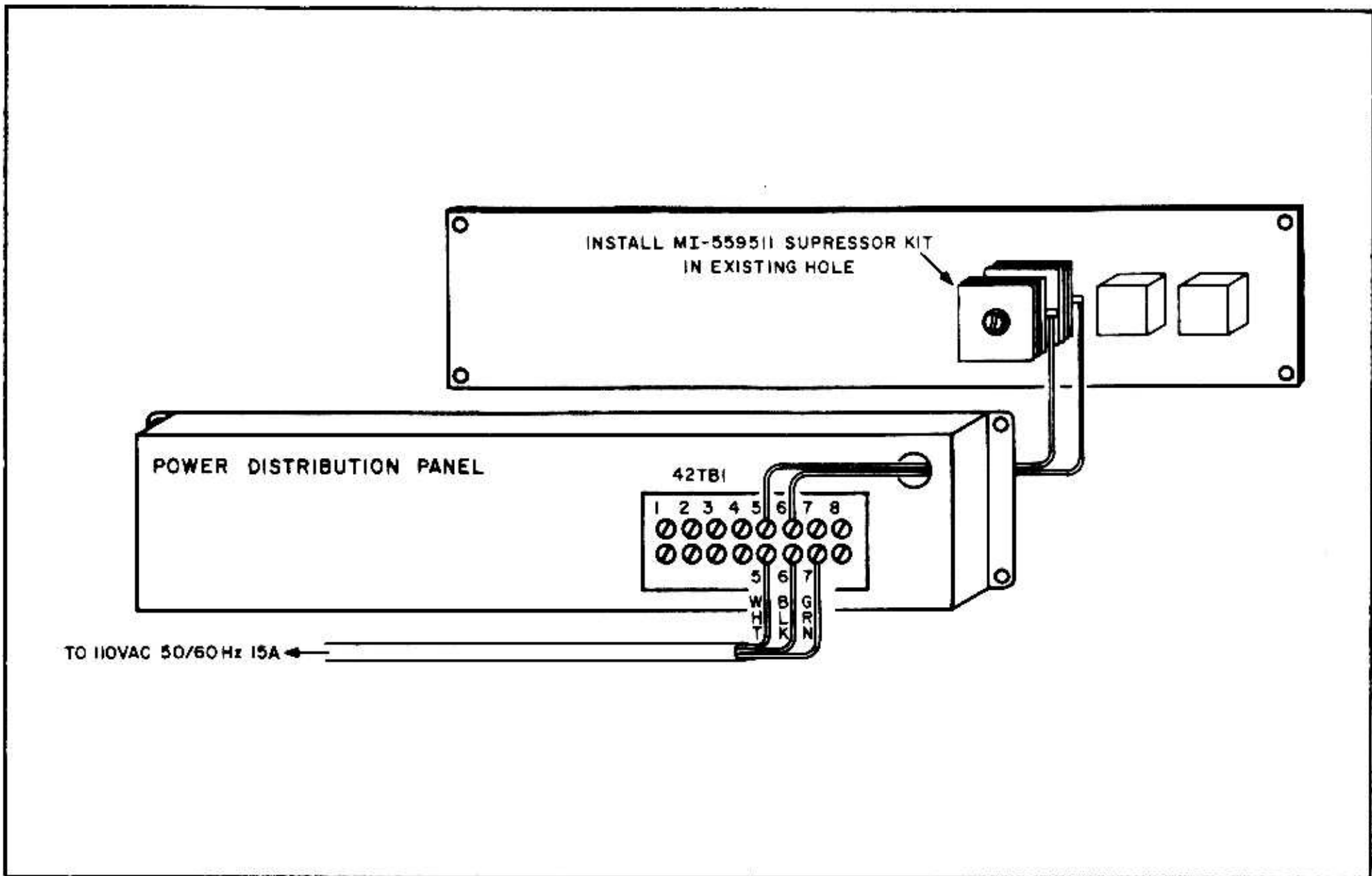


Figure 7. Power Connections - Free-Standing and Utility Cabinets

CONTROL UNIT CONNECTIONS

A variety of Control Units may be connected to the station depending upon the type of control system being used, i.e., DC remote control, tone remote control and/or extended local Control. For this reason, only typical connections are shown for stations employing a Local Test Panel (Figure 8) or a Control Termination Panel (Figure 9). Refer to the Control Unit Instruction Book for more detailed information on the specific unit being used.

In remote control systems, it may be desired to have separate audio and control lines. In such cases, the jumpers between terminal boards 6TB1 and 6TB3 on the Control Termination Panel must be clipped, as shown in Figure 10.

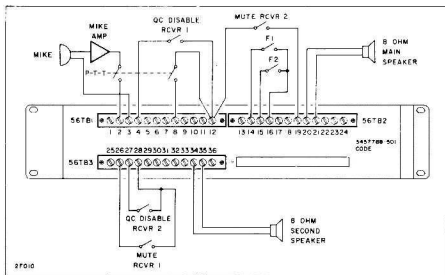


Figure 8. Typical External Connections for Local Test Panel.

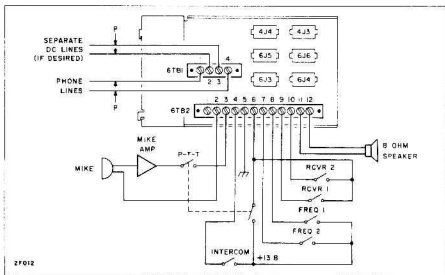


Figure 9. Typical External Connections for Control Termination Panel

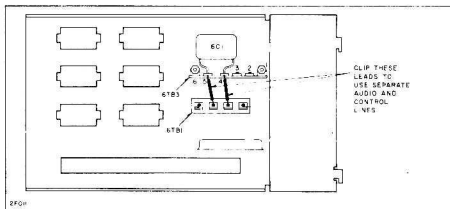


Figure 10. Control Termination Panel, Inside View