

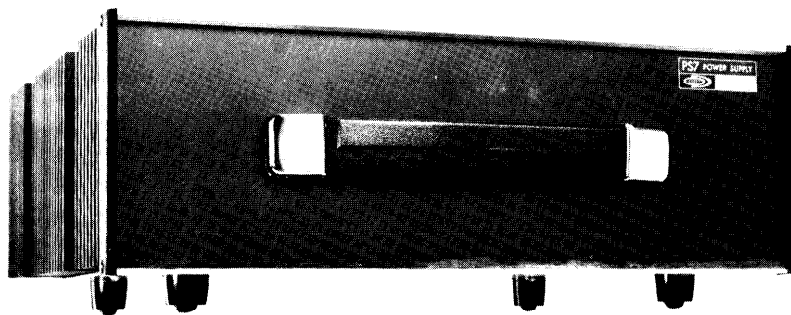


# PS7

POWER SUPPLY

MODEL 1502

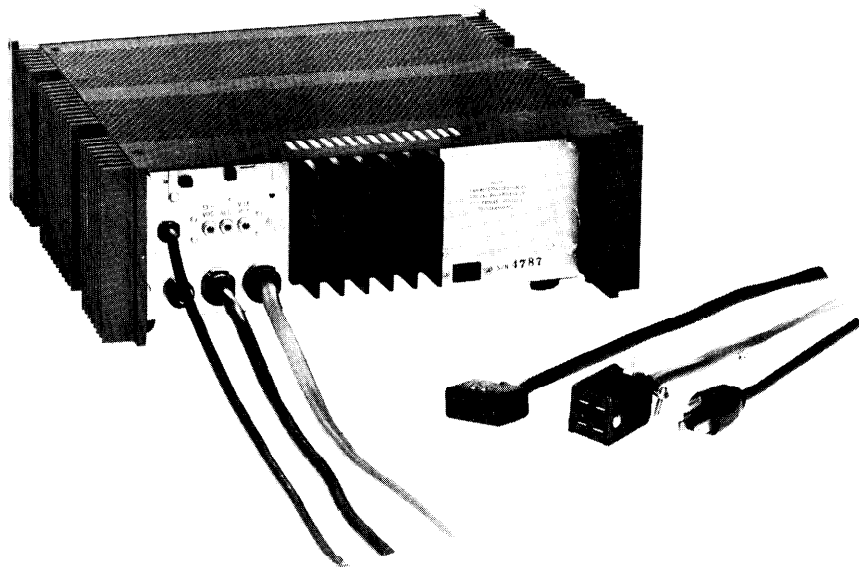
# INSTRUCTION MANUAL



*PS-7 Power Supply*

**NOTE:**

Care should be taken to insure that adequate clearance is provided around the PS-7 for proper circulation of air, especially around the heat sinks. Also, avoid placing books, papers, or other pieces of equipment on top of the unit as overheating could result.



*Fig. 1-Rear Panel Controls and Connections*

7-25-79

# PS-7 POWER SUPPLY, MODEL 1502

## General Description

The **PS-7** is a 13.6 volt, DC regulated power supply capable of delivering up to **25** amps of continuous current. Excellent voltage regulation is provided by a silicon monolithic integrated circuit and associated circuitry. Output voltage and current are adjustable with internal controls which have been factory set to provide 13.6 volts at up to 25 amps. Other features include short circuit and overvoltage protection and programmable primary voltages. An auxiliary 13.6 VDC output is provided on the rear panel and is fused internally at 1 amp. Primary voltages of 100, 120, 200, and 240 VAC, 50-60 Hz may be used with the PS-7 and may be quickly changed via the programming switches. For demanding duty cycles, such as extended RTTY or SSTV transmission, the model 1529 **FA-7** Cooling Fan is recommended for additional cooling, especially at ambient, temperatures above 25°C.

## Current Overload Protection

When the PS-7 is subjected to a current overload or short circuit condition, the regulator circuit will automatically shut down. The unit may be reset by momentarily switching the ON-OFF switch on the TR-7 to OFF or by removing the AC primary voltage to the PS-7. The power transformer is protected by an 8 ampere type ABC fuse on primary voltages of 100 or **120** VAC or a 4 ampere type M TH fuse on **200** or **240** VAC. Refer to Figure 1 for location on the rear panel. *This fuse should be replaced with another fuse of the same type and rating* The auxiliary DC output is internally fused with a 1 amp type MDL fuse. This is located inside the unit, on the regulator P.C. board. *This fuse should be replaced only with another fuse of the same type and rating.*

## Overvoltage Protection

If the **PS-7** regulator section should fail or one of the pass transistors should short, the unit will automatically shut down. If the DC output voltage should soar above 16 VDC, an SCR crowbar clamps the output to ground to protect the load and open the primary fuse. *This fuse should be replaced with another of the same type and rating after determining the cause of the overload.*

## Line Voltage Programming

The PS-7 comes factory set for 120 VAC 50-60 Hz operation. To change the primary input range, simply remove the four screws holding the programming plate. Refer to Figure 2. As an example, suppose the line voltage measured 200 VAC. Remove the plate and slide the voltage switch to 200/240. Then slide the HI/LO switch to LO. Rotate the plate until 200 shows up in the window and the LO switch fits through its locator hole. Reinstall the four screws. If 200 or 240 VAC operation is desired, be sure to replace the fuse with a 4 ampere type M TH fuse.

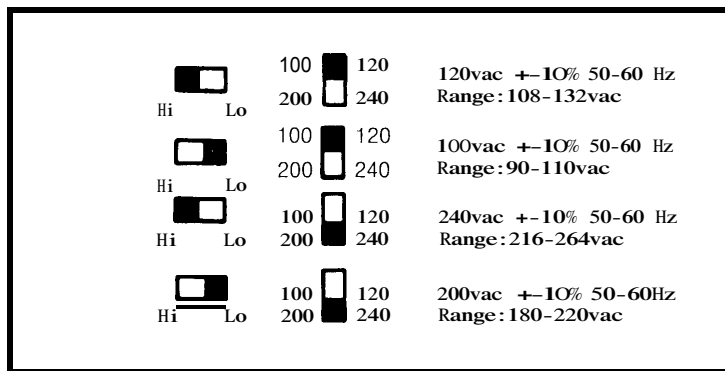


Fig. 2-PS-7 Line Voltage Programming

## Linear Amplifier

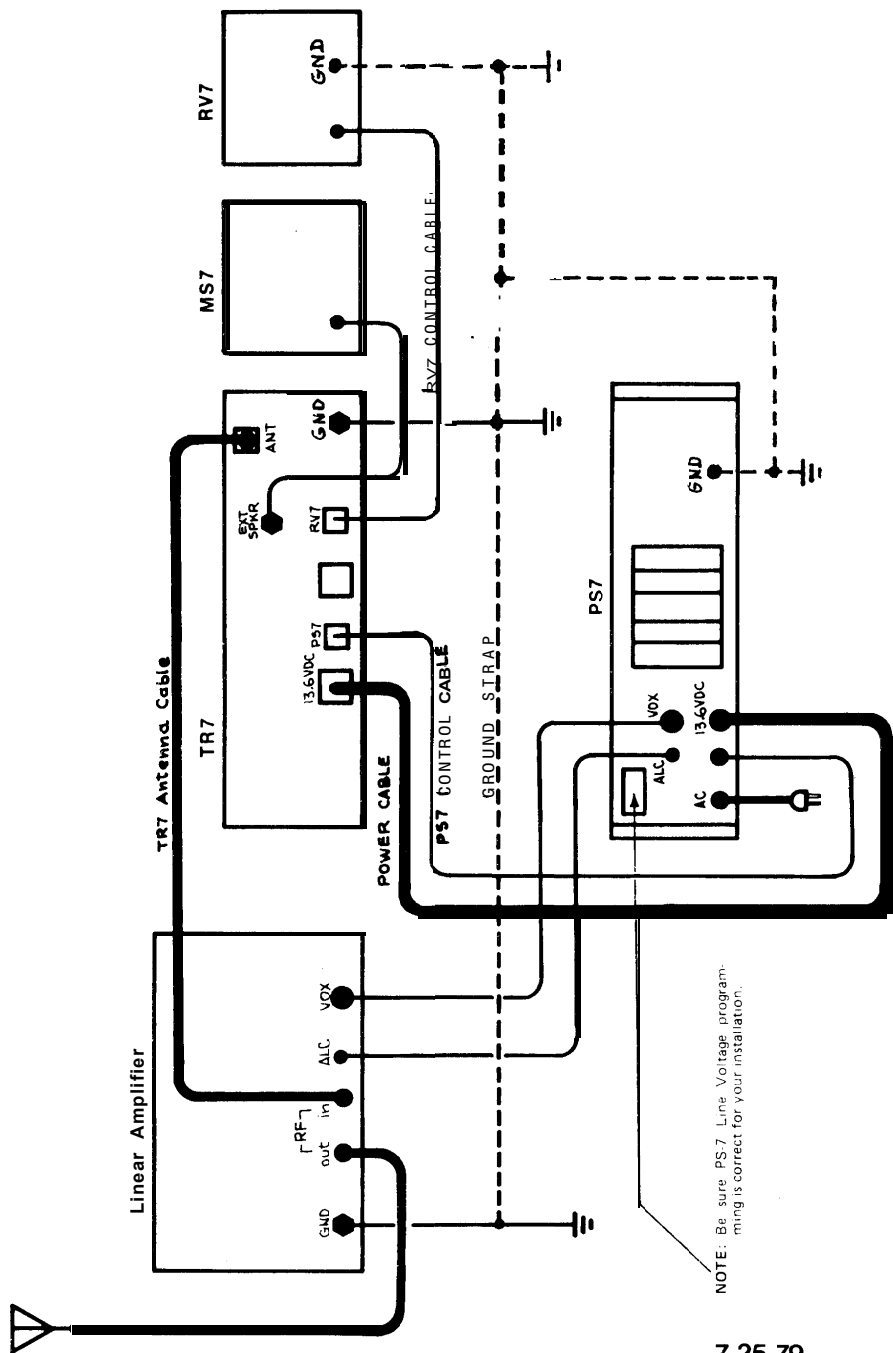
All necessary connections for use with a linear amplifier are provided on the rear panel of the PS-7. Refer to Figure 3. Connect a patch cord to the ALC Jack and the VOX Jack.

## Factory Service

The PS-7 will be checked and serviced at the factory for a nominal fee if there is no evidence of tampering. Transportation charges are extra. Any necessary repairs will be made on a time and material basis. Please write or call the factory for authorization before returning the unit for service. Requests for authorization should be addressed to:

R.L. DRAKE COMPANY  
540 Richard Street  
Miamisburg, OH 45342  
Attn: Customer Service Dept.  
Telephone: (Area Code 513) 866-3211  
Telex No. 288-017

Fig. 3-Interconnection of PS-7 and Linear Amplifier



# PS-7 POWER SUPPLY

## SPECIFICATIONS

**AC INPUT:** **100, 120, 200, or 240** Volts AC,  
+ 10% **50-60** HZ.

**DC OUTPUT:** **13.6** Volts DC with less than 3mV RMS  
of ripple at **25** amperes load. \*

**DC CURRENT:** **25** amperes continuous.( at 25°C. ambient )

**DC AUX VOLTS:** **13.6** VDC regulated.

**DC AUX CURRENT:** **1** ampere maximum.

**CONNECTORS:** Aux DC Phono Jack  
ALC Phono Jack  
VOX Contact Phono Jack  
Fan AC  
Ground Connection

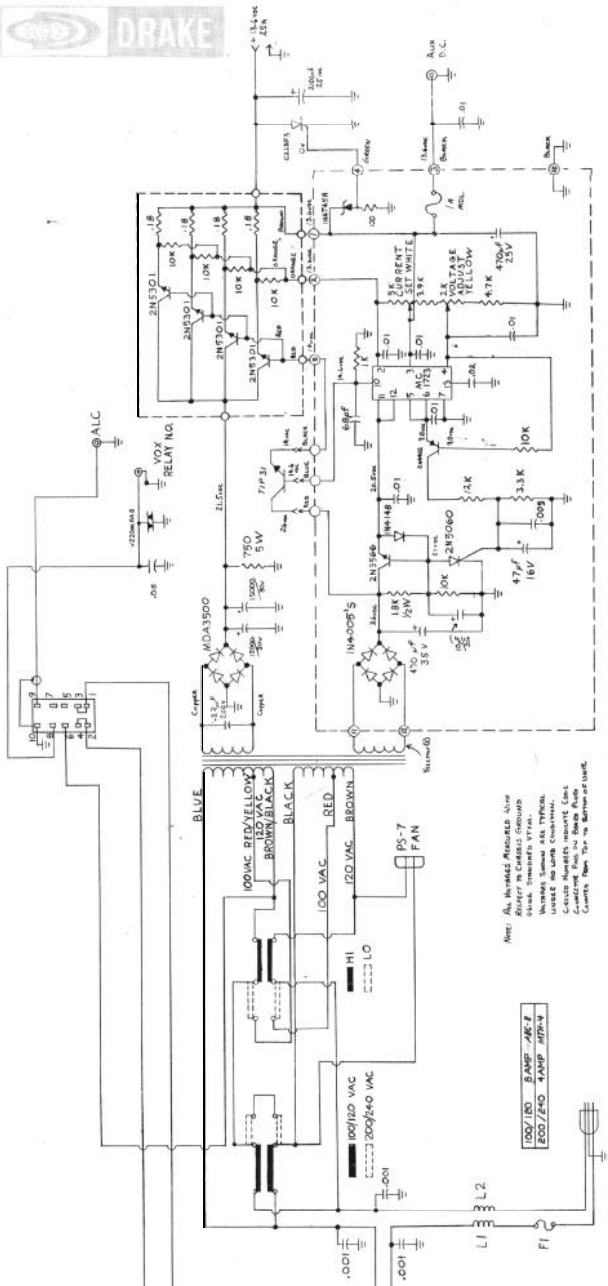
**DIMENSIONS:** Width-13-3/4" (34.93 cm.)  
Height-5-1/4" (13.34 cm.)  
Depth-12-1/2" (31.75 cm.)

**WEIGHT:** ~~32-14~~ lbs. (15 kg)

\*25 amperes continuous @ up to 40°C ambient with optional  
FA-7 FAN (Model 1529)

3-20-80





### PS-7 Schematic Diagram