

# P O W E R   S U P P L Y



## PS-452 TWO-CHANNEL POWER SUPPLY

### F E A T U R E S

- Supports up to 100 Remote Stations on two channels
- Accepts 1 or 2 Program inputs, assignable to one or both channels
- Individual Program volume controls
- Power Monitor checks current drain of each channel
- Line-and load regulation & over-voltage protection
- Compatible with all Clear-Com Intercoms
- Operates from 105-125 VAC or 210-260 VAC
- May be paralleled with other Power Supplies/Main Stations for increased system capacity & back-up support



### D E S C R I P T I O N

The PS-452 is a fail-safe, broadcast-standard power supply that supports a two-channel Clear-Com System. It supplies 30 volts at two amperes (total for both channels). The PS-452 provides the intercom system with circuit-breaker protection against shorts in the cabling. In addition, over-voltage protection saves the system in the rare case of internal power supply failure.

The PS-452 provides power for as many as 100 remote headset stations or 20 remote speaker stations. It features a Power Monitor that keeps constant check of each channel's current drain. With two rows of red and amber LEDs, the Power Monitor provides instant fault indication to help determine potential line problems in the intercom system.

The PS-452 rear panel has six 3-pin, XLR connectors for intercom output (three in parallel for Channel A, the same for Channel B). It also contains two auxiliary inputs (3-pin XLR) for external program audio signals. The PS-452 can mix one or two program signals with the intercom audio on one or both channels. Volume controls on the front panel allow level adjustment of each Program individually.

The PS-452 contains two easily accessible, internal slide-switches to provide the necessary audio termination for each channel.

The Power Supply connects to remote stations with standard, two-conductor shielded mic cable. The unit mounts in a standard 19"

equipment rack, using only 3-1/2" vertically.

Clear-Com designed the PS-452 as a "half-regulated" supply, which means that, up to a certain point (approximately half the rated output), it provides a regulated 30 volts. When the current drain goes over 1 amp, the output is reduced. The PS-452 efficiently continues to support a full-capacity system at the reduced output, unlike standard types of regulator circuits that shut down when current drain increases.

The PS-452 conforms to the highest standards of reliability and performance, providing trouble-free service over a wide range of environmental conditions. It may be rack-mounted in an enclosed space and can tolerate an ambient temperature of 32°-120°F without failure.

## SPECIFICATIONS

### POWER SUPPLY:

Output Voltage: 30v  
 Circuit Breaker Rating: 0.8 amp hold (each channel)  
 Output Current: 2 amp hold (total)  
 Load Regulation: 30v,  $\pm 1v$ , 0-1 amp; 24v at 2 amps  
 Line Regulation: 0.1 volt from 105-125 VAC input voltage  
 Ripple: <1 mv  
 Protection Circuitry: Circuit breaker, internal primary fuse, and over-voltage crowbar circuit

### PROGRAM AMPLIFIERS:

Transformerless Balanced Differential Input  
 Frequency Response: 150-18kHz ( $\pm 2dB$ )  
 Input Impedance: 47k $\Omega$  balanced  
 Input Level: +2dBv for maximum output; -15dBv\* nominal

### SYSTEM SPECS:

Impedance: 200 $\Omega$   
 Level: 15dBv nominal; 0dBv before clipping\*  
 Remote Station Capacity: 100 headset stations; 20 speaker stations

### CONNECTORS:

Program Input: 2 D3F (3-pin female)  
 Intercom Output: 6 D3M (3-pin male/3 in parallel for Channel A; 3 in parallel for Channel B)

POWER REQUIREMENTS: 105-125 VAC, 50-60Hz, 80 watts maximum. Maximum power consumption 110VA. May be wired for 210-260 VAC.

### ENVIRONMENTAL:

Temperature range: 0-50° C (32-122° F)

### DIMENSIONS:

19" x 3.5" x 7" deep, standard rack mount  
 483mm x 89mm x 178mm

Specifications subject to change without notice

\*0 dBv is referenced to 0.775 volts rms.

## ARCH/ENG SPECS

The power supply shall be a solid-state, rack-mount unit. It shall supply an output of up to 2 amperes a two-channel intercom system. The power supply shall have line-and-load regulation and over-voltage protection. It shall have short circuit protection with an LED indicator. When the power supply detects a short circuit, the LED shall illuminate; removal of the short shall restore the power supply to normal operation. The power supply's front panel shall contain a Power Monitor that checks the current drain of each channel and uses red and amber LEDs to indicate potential line problems. The power supply shall have the capacity to power 100 remote headset stations or 20 remote speaker stations. The power supply shall accept two auxiliary program inputs, and each input shall have a volume control on the front panel. The program inputs shall be selectively assignable to Channel A, B, or both. The power supply shall have six 3-pin XLR-type male connectors on the rear panel for Channel A and B outputs. The power supply shall have two 3-pin XLR-type female connectors on the rear panel for the auxiliary program inputs. The auxiliary program inputs shall have a frequency response of 150Hz-18kHz ( $\pm 2dB$ ), and an input impedance of 47k $\Omega$  (balanced or unbalanced) with an input level of +2dB for maximum output. The power supply shall terminate the intercom system with an impedance of 200 $\Omega$  for each channel. It shall have a hum and ripple factor of less than 1 mv. The power supply shall operate from 105-125 VAC or 210-260 VAC, 50-60Hz, at 80 watts maximum with maximum power consumption of 110 VA. It shall have an operating temperature range of 0-50° C, 32-122° F. The dimensions shall not exceed 19" x 3.5" x 7" deep, and the weight shall not exceed 10 pounds. The power supply shall have all the necessary controls and connectors to interface to all Clear-Com products. The power supply shall be called a Clear-Com PS-452.

## PS-452 BLOCK DIAGRAM

