

[www.protechaudio.com](http://www.protechaudio.com)

All Inputs and Outputs Individually Adjustable.



Electronic or Transformer Balanced Inputs and Outputs.

The Models 5117, 5117T, 5217, 5217T audio distribution amplifiers are designed for use in professional audio systems.

The application of the ADA's is found in public address systems, communication systems, background music systems, recording systems, and broadcast systems.

Each of the four models offers one (1) input and seven (7) output configurations. The 5217 and 5217T offer two identical 1 x 7 sections.

The Models 5117 and 5217 have state-of-the-art electronically balanced input(s) and outputs. The 5117T and 5217T have transformer isolated input(s) and outputs.

The input gain stage(s) on all four models is adjustable from 0 to 20dB of gain. Each of the outputs has independently adjustable gain, from infinity to 20dB of gain. Adjusting the level of any output section does not effect the settings of any other output. Adjusting the input stage level will effect all of the output level settings in that section. The 20dB of gain available at the input stage should be used before the gain of the output section is utilized.

Using the output gain before the input gain has been exhausted, may result in lower headroom (less level increase before clipping). All units are shipped from the factory with gains adusted to unity, into a 600 ohm load.

The power supply section of all four models has been designed to achieve the lowest possible noise and hum specifications. The AC transformer is a UL recognized wall mount unit. Designing the transformer in this manner eliminates the AC field inside the chassis, and results in greatly improved noise and hum figures.

The power supply section also includes a rear mounted fuseholder, a front mounted power on indicator (green LED), and a ground lift switch. The switch is used to disconnect the audio amplifier ground from earth ground, if necessary. In almost all systems, the units will achieve best results with the ground lift switch in the ON position.

Each of the four models requires only a single unit of vertical rack space. The choice of single or dual units provides extreme circuit density in a minimum of rack space.

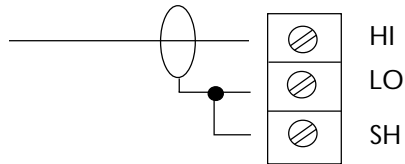
# INSTALLATION

The Toolbox Series Audio Distribution Amplifiers from Protech Audio are designed to be mounted in a standard 19 inch wide EIA rack. Each of the four models requires 1.75 inches of vertical rack space. The steps for installing the units are as follows;

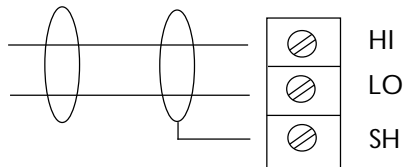
Mount unit in rack, using four machine screws of sufficient tensile strength to support unit properly.

Terminate all audio inputs and outputs, using double conductor shielded cable, as shown on facing page. The diagram on the facing page shows balanced line configurations. For unbalanced lines terminate line HI to DA HI, and line LO to DA SH connection;

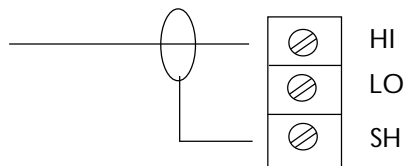
### UNBALANCED INPUT CONNECTION



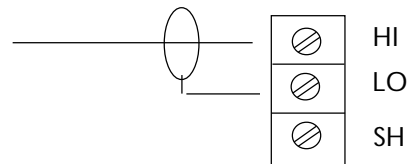
### BALANCED INPUT CONNECTION



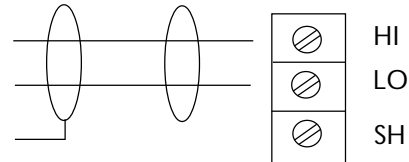
### UNBALANCED OUTPUT CONNECTION (Electronic)



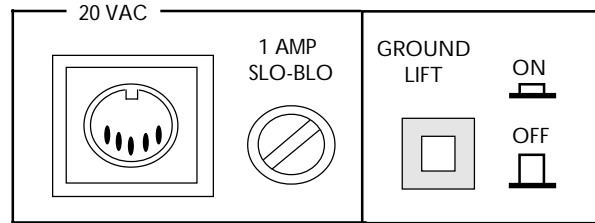
### UNBALANCED OUTPUT CONNECTION (Transformer)



### BALANCED OUTPUT CONNECTION



The wall mount power transformer plugs into the rear power connector marked 20VAC. Plug transformer jack into chassis connector first. Then plug wall transformer into three prong AC outlet.



Make sure ground lift switch is in the on position.

Check front panel power indicator (green LED) for proper illumination.

# ALIGNMENT

All four models have been shipped from the factory adjusted for unity gain. The input is adjustable from 0 to 20dB of gain. **THIS GAIN SHOULD BE USED BEFORE THE OUTPUT GAIN.**

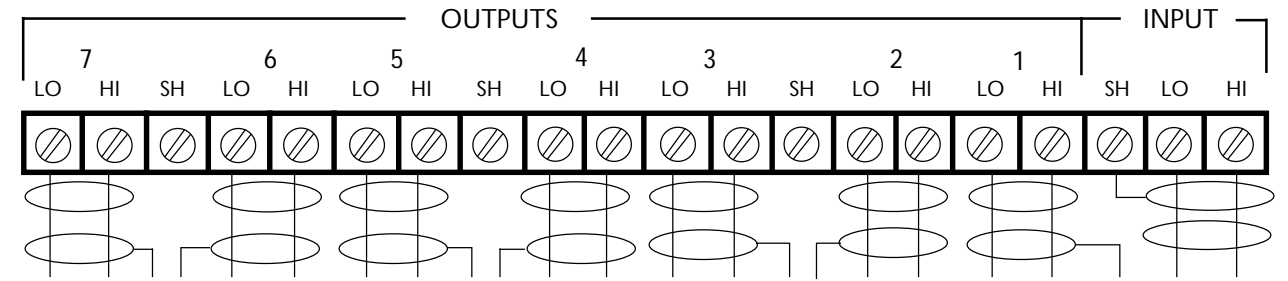
Each output is individually adjustable from infinity (completely off) to 20dB of gain. The input gain trimpot should be used to adjust the output setting to the desired level. If the input gain trimpot is adjusted to it's maximum clockwise position (maximum gain) and the output level is still not high enough, the output gain trimpot may be used to add additional gain.

Adjusting the individual output gain trimpot will not effect the any other output level setting.

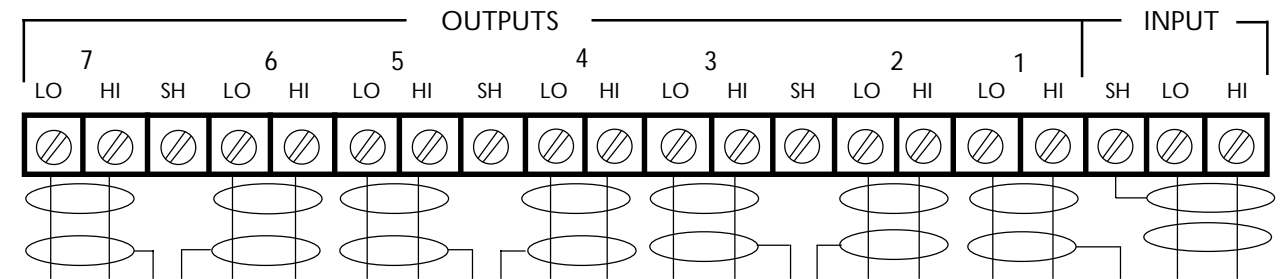
**PROTECH AUDIO®**

TOOLBOX SERIES  
MODELS 5117, 5217, 5117T, 5217T  
CONNECTOR & LAYOUT DRAWING

### OUTPUT SECTION 1



### OUTPUT SECTION 2



### FRONT VIEW



### REAR VIEW

