

2000-600 SERIES AUDIO DISTRIBUTION AMPLIFIERS INSTALLATION & OPERATION MANUAL

MODELS COVERED	
2000-662	
(1 x 2)	
2000-663	
(1 x 3)	
2000-664	
(1 x 4)	
2000.005	Model 2000-665 Shown
2000-665 (1 x 5)	

2/03

The 2000-600 Series Audio Distribution Amplifiers are designed for use in professional audio applications. Each model is designed to accept an audio signal in, and send the signal to multiple destinations.

Typical applications are public address announcements that must be fed to different zones or power amplifiers, program material that must be fed to different studios, headphone listening systems where the user can select different program sources, or audio recording systems where the program material must be fed to the recorders at the same time it is being fed to a public address system. The actual application of the distribution amplifiers is found in buildings such as airports, factories, courthouses, casinos, convention centers, libraries, racetracks, training systems, and corporate boardrooms, to mention a few.

The 2000-600 Series Audio Distribution Amplifiers are designed to incorporate a combination of features that will allow the units to deliver maximum performance and reliability. Each circuit is designed with a minimum of components, to reduce the possibility of failure, while still maintaing performance and feature criteria. Each one of the 2000-600 Series Audio Distribution Amplifiers is designed with the same combination of features. The number of outputs is the only variable between models.

The gain structure of the 2000-600 DA"s allows the level of each output to be individually adjusted. The output level may be adjusted up or down, with respect to the input level. If a low input level is present, and more gain is required, the input section has an additional 15dB of gain. The trimpots used to adjust the input and output levels are mounted on the PC board assembly. This feature allows the system gain settings to be adjusted from the front of the card frame, using an extender card. Since the 2000-600 Audio Distribution Amplifiers are used to connect multiple pieces of audio equipment, and there exists the potential for ground loops when doing so, the input section and output sections on each unit are individually isolated using high quality audio transformers. This feature provides the maximum in isolation and ground loop prevention.

These products are designed to provide the user with high quality audio, for years of uninterrupted service.

INSTALLATION

The 2000-600 Series Audio Distribution Amplifiers are designed to be mounted in the Model 2000-CH Card Frame.

The actual steps necessary for installation of the Model 2000-600 Distribution Amplifier cards, are comparable to those necessary for any of the 600 series cards. They are as follows;

- 1- Mount the card frame in an appropriate EIA 19" width rack, using 4 screws of sufficient strength to provide secure mounting.
- 2- Select the card slot to be used for the distribution amplifier card. Slots 1 to 8, starting with slot 1 on the left side of the card frame, as viewed from the front of the card frame, will accept any of the four models of distribution amplifier card.
- 3- Terminate all audio input and output connections, using the card connection drawing on the facing page. Double conductor shielded cable is recommended for all audio connections.

4- Unpack each individual card, inspect for shipping damage, and assuming none is found, slide the card

<u>half-way</u> into the appropriate slot. After all cards have been installed <u>half-way</u>into the card frame, plug in one card at a time and turn on the power supply. Make sure no unusual loading is indicated at the power supply. If loading is noticed, turn off the power supply, unplug the card and recheck terminations. If no loading is noticed, continue inserting each card in the card frame, checking power supply loading as each card is plugged in. When all the cards have been plugged in, the installation is complete, and all that remains is the alignment.

ALIGNMENT

Each 2000-600 Series card has been shipped from the factory aligned for unity gain. If additonal gain is required in the distribution amplifiers, the following alignment porcedure is recommended;

1- Remove the distribution amplifier from the card slot, plug in the Model 516 Extender Card, and plug the distribution amplifier into the extender card connector.

2- Apply a signal representative of the actual signal level to be used, to the input.

3- While monitoring the #1 output channel, turn the output #1 gain trimpot clockwise until the output signal reached the desired level.

4- Repeat step #3 for each output on your distribution amplifier, For any unused output, leave the gain trimpot in the maximum counterclockwise position.

This completes the installation and alignment of your 2000-600 Series Audio Distribution Amplifiers. The card may be expected to deliver years of uninterrupted service.

Note#1-

The alignment procedure outlined above will almost always provide the desired output level. However, when an unusually low input signal level is present (less than -20dB), the installer may wish to use the additional gain available in the input gain stage. This gain should be used only when each output has already been adjusted to the maximum gain setting. Using this gain in systems which do not require in excess of 20dB, will result in reduced headroom.

Note 2-

The alignment procedures for 2000-600 Series cards, differ from card type ot card type. Therefore it is necessary to consult the alignment procedure for each type of card being installed, to properly align a card frame using different card types.

BACKPLANE CONNECTIONS AND TRIMPOTS DRAWING 2000-662



$- \wedge$	- INPUT HI	1	\oslash
	INPUT LO	2	\oslash
	SHIELD	3	\oslash
	- OUT #1 HI	4	\oslash
-	OUT #1 LO	5	\oslash
$-\Delta$	- OUT#2 HI	6	\oslash
	- OUT #2 LO	7	\oslash
	SHIELD	8	
	- OUT #3 HI	9	\bigotimes
- V $$	- OUT #3 LO	10	$\overline{\oslash}$
$- \wedge$	- OUT #4 HI	11	\bigcirc
	- OUT #4 LO	12	
V	SHIELD	13	Ø
		14	Ø
	- OUT #5 LO	15	Ø
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SPECIFICATIONS

Maximum Input Level Gain	+15dB. Input Adjustable From -10 To +15dB, Referenced To Input Signal. Outputs Adjustable From -10 To +15dBm, Referenced To Output Of Input Amplifier.
Maximum Output	+20dBm.
Frequency Response	30Hz To 20KHz, <u>+</u> 1dB.
Distortion	0.35% Maximum @ +15dBm Out.*
Noise	-84dB Below +0dBm Out.
Power Requirements	±15-18VDC @ 50ma Per Section
	(70ma @ +18VDC and 70ma @ -18VDC.)
Operating Temperature	0 To 70 Degrees C
Size	2.5"H x 8.0"D x 1.1"W