PROTECH®

1/02

800 SERIES
MICROPHONE PREAMPLIFIER & LINE AMPLIFIERS
INSTALLATION & OPERATION MANUAL

MODELS COVERED	
806B	814B
807B	815B
808B*	816B*

*Microphone Preamplifier

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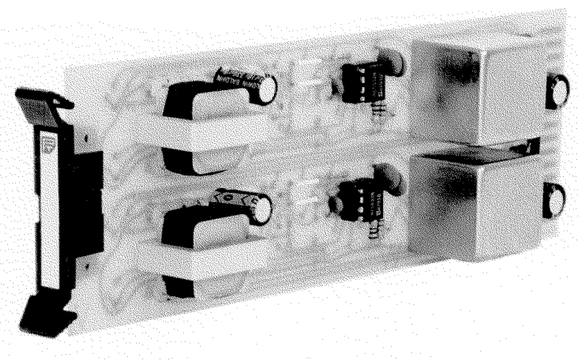
INTEGRA III SYSTEM



Model 816B Shown

The 800 Series Microphone Preamplifiers and Line Amplifiers are designed for use in professional audio appplications. Each model has either one or two channels, designed to operate as a discrete microphone preamplifier or line amplifier. Dual channel cards will have two identical channels constructed on one printed circuit board.

Typical applications are public address systems, broadcast studios, sales presentation rooms headphone listening systems, multi-room audio systems, and recording systems. The actual application of the amplifiers is found in buildings such as airports, factories, courthouses, casinos, convention centers, libraries, hotels, racetracks, training systems, corporate boardrooms, etc...

The 800 Series Microphone Preamplifiers come in two different models. There is a single channel, model 808B, and dual channel, model 816B. Both models have low impedance transformer isolated inputs, and a push-on red jumper, per channel, to enable 15 volt phantom power. The gain of each channel is adjustable, from 17 to 52dB.

The output section is balanced, transformer isolated.

The 800 Series Line Amplifiers offer 4 different models, 2 single channel versions, and 2 dual channel versions.

The input section of the line amplifiers is available in two different impedances. These are; bridging balanced-transformer isolated (10K ohm input impedance), and 600 ohm balanced-transformer isolated. This allows the user to match the line amplifiers to a variety of professional audio equipment.

The trimpots used to adjust the gain levels of the microphone preamplifiers and line amplifiers are mounted on the accompanying backplane assembly. This feature allows the system gain settings to remain adjusted, even when a line amplifier is removed from it's slot, and a spare unit is plugged into that slot.

The output section of the line amplifiers is balanced transformer isolated. On page 3 of this manual, you will find a table showing the model numbers, and features of each of the microphone preamplifiers, and the line amplifiers.

Each of these products is designed to provide the user with high quality audio, for years of uninterrupted service.

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INSTALLATION

The 800 Series Preamplifiers and Line Amplifiers are designed to be mounted in the Model 857B Card Frame Package or the Model 858B Card Frame Package. The Model 857B Card Frame Package will accomodate up to 10 audio cards, and requires an external power supply, Model 66708.
The Model 858B Card Frame Package will accomodate up to 9 audio cards, and has a built-in, unpluggable power supply card.

Both card frame assemblies buss the DC power to the individual card slots, and provide screw-type barrier termination points for audio and DC connections.

After receiving an order for 800 audio cards, and prior to shipping the order, the factory has requested from you or your firm, a card file layout sketch. Using this drawing, the factory has mounted the necessary trimpots in the backplane assembly. This service allows the factory to test each card in the card frame assembly, and saves the installer time when assembling the complete audio system. Also, the installer can be confident that each card received has been tested in the actual slot used.

The actual steps necessary for installation of the 800 Series Microphone Preamplifier and Line Amplifier cards, are comparable to those necessary for any of the 800 series cards. They are as follows:

1- Mount the card frame in an appropriate EIA 19" width rack, using 4 screws of sufficient tensile strength to provide secure mounting.

2- A determination has been made as to which type of power supply will be used on your system. Follow the instructions for the type of power supply you will be installing.

EXTERNAL POWER SUPPLY. If an external power supply is to be used, terminate the proper supply connections to pins 1, 2, & 3 of the DC barrier connector, as shown in the card frame layout drawing. Turn on the power supply, and using a DC voltmeter, check for correct voltage and polarity at pins 1, 2, & 3 of the barrier connector.

INTERNAL POWER SUPPLY. If a plug-in power supply card is to be used, plug in the supply card, turn it on, and check for proper illumination of the positive and negative voltage LED's, on the front of the power supply card.

3- Terminate all audio input and output connections, using the card connection drawing on page 3. Double conductor shielded cable is recommended for all audio connections. Terminate each unused input with a 1K ohm resistor.

4- Unpack each individual card, inspect for shipping damage, and assuming none is found, slide the card half-way into the appropriate slot. After all cards have been installed half-way into the card frame, plug in one card at a time and turn on the power supply. Make sure no unusual loading is noticed 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 800 Series card with microphone level inputs has been shipped from the factory aligned for 45dB of gain. Each Line amplifier card has been shipped with the gain set for unity. This alignment optimizes headroom. If additional gain is required, the following alignment procedure is recommended;

1 - Apply a signal representative of the actual signal level to be be used, to channel #1.
2 - While monitoring the ouput channel, turn the output gain gain trimpot clockwise until the output signal reaches the desired level. .
3 - Repeat steps 1 and 2 for each channel on your preamplifier or line amplifier.

This completes the installation and alignment of your 800 Series Limiter/Preamplifiers and Line Amplifiers. The cards may be expected to deliver years of uninterrupted service.

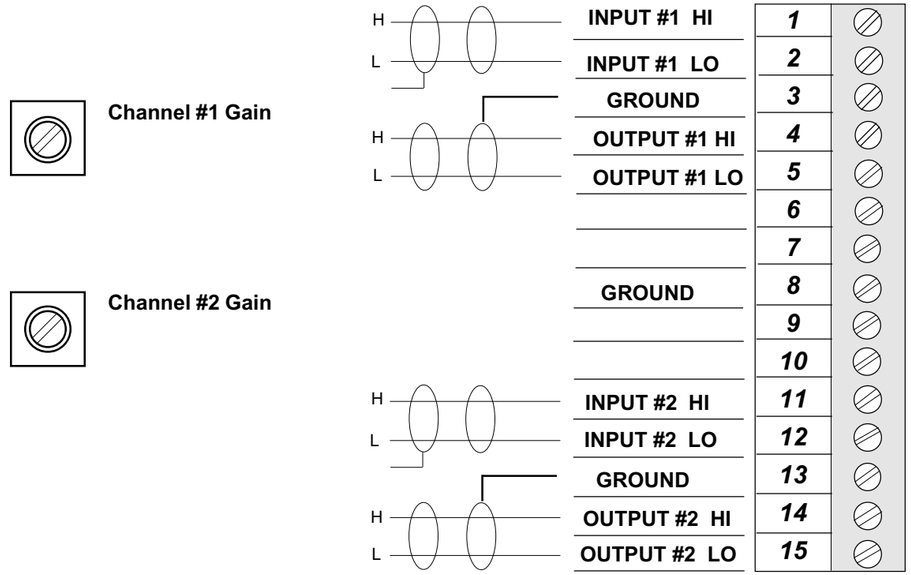
Note 1-
The alignment procedures for 800 Series cards, differ from card type to card type. Therefore it is necessary to consult the alignment procedure for each type of card being installed, to properly align a card frame using different card types.

PROTECH®

INTEGRA III SYSTEM

CONNECTOR & TRIMPOT DRAWING
MODELS 806B Through 816B

857B & 858B BACKPLANE CONNECTIONS



Model Number	Channels	600 Ohm Transformer Input	10K Ohm Transformer Input	150 Ohm Transformer Input	17-52dB Gain	-10 To 25dB Gain
806B	1	*				*
807B	1		*			*
808B	1			*	*	
814B	2	*				*
815B	2		*			*
816B	2			*	*	