MODEL 882
LINE AMPLIFIER/TONE CONTROL

FREQUENCY ADJUSTMENT CHART

FREQUENCY	LOW FREQUENCY		HIGH FREQUENCY	
	CUT (dB) Full CCW	BOOST (dB) Full CW	CUT Full CCW	BOOST Full CW
20 Hz	-16.25	+16.25		
30 Hz	-15.75	+15.25		
40 Hz	-15.00	+14.75		
50 Hz	-14.50	+14.25		
60 Hz	-14.00	+13.50		
80 Hz	-12.75	+12.50		
100 Hz	-11.50	+11.75		
150 Hz	-9.50	+9.50		
200 Hz	-7.50	+7.50		
300 Hz	-4.75	+4.75		
400 Hz	-3.00	+3.00		
500 Hz	-1.90	+2.00	-0.75	+1.50
600 Hz	-1.25	+1.50		
700 Hz	-0.75	+0.90		
800 Hz	-0.50	+0.40		
900 Hz	-0.25	+0.25		
1 KHz	0.00	0.00	-2.00	+2.00
2 KHz			-5.00	+4.50
4 KHz			-9.00	+8.25
6 KHz			-10.50	+10.00
8 KHz			-11.75	+10.75
10 Khz			-12.00	+11.25
12 KHz			-12.50	+11.50
14 KHz			-13.00	+11.50
16 KHz			-13.25	+11.50
18 KHz			-13.75	+11.50
20 KHz			-14.00	+11.50

NOTE: Gain at Unity.
Gain settings made with pots at flat position, and 1KHz as reference frequency.

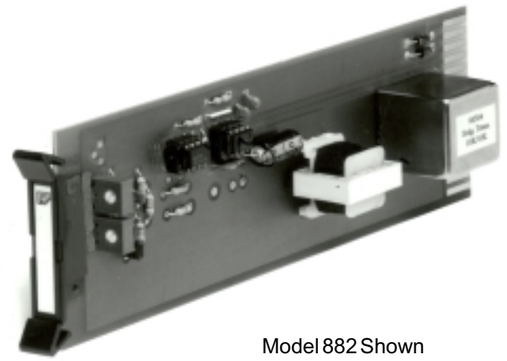
PROTECH®

1/06

INSTALLATION & OPERATION MANUAL
LINE AMP/TONE CONTROL CARD

MODELS COVERED
882

INTEGRA III SYSTEM



Model 882 Shown

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The Model 882 Line Amplifier/Tone Control card is designed for frequency response shaping in professional audio systems.
Typical applications are public address systems, broadcast studios, sound reinforcement systems, headphone listening systems, room combining systems, and recording systems. The actual application of the line amp/tone control card is found in such buildings as airports, factories, courthouses, casinos, convention centers, hotels, racetracks, training systems, corporate boardrooms, etc.,.
The input section of the Model 882 is balanced, transformer isolated, using a high quality bridging type line transformer. The transformer is followed by an op-amp input buffer stage. The gain of the input stage is fixed, at unity, in order to prevent overdriving of the frequency shaping section.
The frequency shaping section provides a low frequency adjustment capable of 12dB of cut and boost, and a high frequency adjustment, also capable of 12dB of cut and boost. Both sections are adjusted via separate trimpots, accessible from the front of the plug-in card. The characteristics of the frequency shaping circuit are classified as shelving type, and centered at 1KHz.
The frequency shaping section is followed by a buffer amplifier, to prevent changes in frequency response settings from occuring, when the output load changes.
The output section consists of a low noise op-amp, with adjustable gain, followed by a high quality output transformer. The gain of the output section is adjustable via a trimpot mounted on the backplane assembly. Adjustment of the gain will have no effect on the low frequency or high frequency settings.
The Model 882 may be mixed or matched or matched with other INTEGRA III SYSTEM components, within the same card frame, without degradation in performance. The Model 858B Card Frame Package is a self powered card farme with 9 slots available for audio cards. The Model 857B Card Frame Package is a 10 slot card frame assembly intended for use with an external power supply. Both card frame packages require just 3.5 inches of vertical rack space.
The Model 882 Line Amplifier/Tone Control Card may be expected to provide the user with years of dependable, uninterrupted quality service. For additional information, ordesign assistance, contact:

APPLICATIONS ASSISTANCE

Protech Audio Corporation, PO Box 597, 192 Cedar River Road, Indian Lake, New York, 12842, Voice 518-648-6410 Fax 518-648-6395

INSTALLATION

The 882 Line Amplifier/Tone Control Card is 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. 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 bus the DC power to the individual card slots, and provide screw-type barrier termination points for audio and DC connections.

The determination as to which card frame assembly to use in your project, was made prior to our factory receiving the order. The card frame assembly you have received will accommodate the group of cards you or your designer have specified.

The actual steps necessary for installation of the Model 882 Line Amplifier/Tone Control cards, are comparable to those necessary for any of the INTEGRA III SYSTEM 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, and check for proper illumination of both the positive and negative voltage LED's, on the power supply card front panel.

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. 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 INTEGRA III SYSTEM card with line level inputs has been shipped from the factory aligned for unity gain. 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 used, to the input.

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

3 - Using whatever measuring system is appropriate for the particular installation, adjust the low frequency trimpot until the desired low frequency response is achieved.

4 - Repeat step 3, now adjusting the high frequency trimpot.

This completes the installation and alignment of your Line Amplifier/Tone Control cards. The cards may be expected to deliver years of uninterrupted service.

Note 1 -
The alignment procedures for INTEGRA III SYSTEM 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 AUDIO®

INTEGRA III SYSTEM

CONNECTOR & TRIMPOT DRAWING
MODEL 882

857B & 858B BACKPLANE CONNECTIONS