

## INTEGRA III SYSTEM

**MODELS COVERED****588C**

Model 588C Shown

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

The 588C Noise Gate/Ducker is designed to operate as either a single channel noise gate, or as a noise gate/ducker. In the noise gate mode, the unit will gate off the input channel gain, until the input signal exceeds a preset threshold. It will then turn on the gain, and feed the amplified input signal through to the output. In the noise gate/ducker mode the unit will allow the input signal applied to input #2 to pass through the unit, with or without additional gain, until the signal applied to input #1 exceeds the preset threshold. At that point, the unit will attenuate (duck) the #2 input signal, and allow the #1 input signal to pass through to the output.

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, court-houses, casinos, convention centers, libraries, hotels, racetracks, training systems, corporate boardrooms, etc.,.

Both inputs may be used as either a microphone level input, or a line level input. Selection is made via the on-board slide switch at each input.

There are six trimpots mounted on the Model 588C. The first two are mounted near the middle of the unit, and are used to adjust the gain of each input. The other four are mounted on the front of the unit and are used to adjust gate threshold, gate attack time, gate release time, and amount of ducking. The gate adjustments work in conjunction with the signal being applied to input #1. The ducking adjustment determines how much attenuation will be applied to the input #2 signal.

In addition to the 2 main inputs, the Model 588C also features provision for direct inputs to be mixed into the final output stage. It also has a discrete, direct output available for both input #1 and #2. Both the main inputs, and the main output are balanced, transformer isolated.

The Model 588C is designed to mount in the Model 857/857B or 858/858B Card Frame Package. The unit may be mixed or matched with other INTEGRA III SYSTEM cards to create a complete audio system.

The Model 588C Noise Gate/Ducker may be expected to provide years of uninterrupted, quality service.

## INSTALLATION

The 588C Line Amplifier/Tone Control Card is designed to be mounted in the Model 857/857B Card Frame Package, or the Model 858/858B Card Frame Package. The Model 857/857B Card Frame Package will accommodate up to 10 audio cards, and requires an external power supply. The Model 858/858B Card Frame Package will accommodate 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.

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 588C Noise Gate/Ducker, 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, turn it on, 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, 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 588C has been shipped from the factory with the input selector switch in the line input position, and the gain aligned for unity gain (level in = level out with 600 ohm load). The gate adjustments, and the ducking adjustment have been set at the factory to the most used settings, and should not require adjustment. If other than unity gain is required, the following alignment is recommended.

1- Select Mic or Line inputs, via slide switches mounted on back end of PC Assembly.

2- Apply a signal representative of the actual signal to be used to input #2 (ducked channel) and adjust gain trimpot marked Duck on facing page, until the output reaches the desired level. (Recommended output level is -10 to 0dB).

3- Apply a signal representative of the actual signal to be used to input #1 (gate channel) and adjust gain at trimpot marked Gate on facing page, until the output reaches the desired level (Recommended output level is -10 to 0dB).

4- Adjust Attenuation trimpot, Attack and Release trimpots, and Threshold trimpot, as necessary.

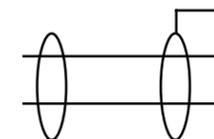
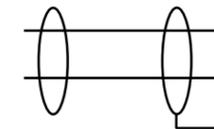
This completes the alignment procedure for the Model 588C Noise Gate/Ducker card. The card may be expected to provide years of quality audio service.

**PROTECH AUDIO®**

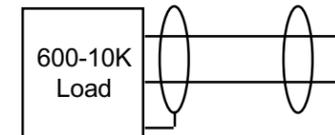
INTEGRA III SYSTEM

CONNECTOR & TRIMPOT DRAWING  
MODEL 588C NOISE GATE/DUCKER CARD

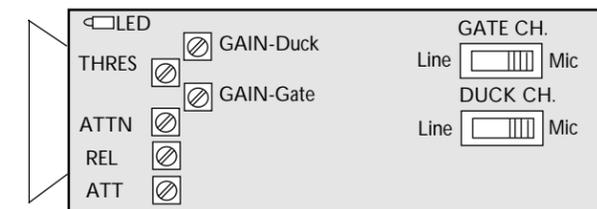
### 800 SERIES BACKPLANE CONNECTIONS



Shaded Area Connections Are Special Features, Not Used in Normal Noise Gate/Ducker Operation.



Audio In LO, Gate Channel		<b>1</b>
Audio In HI, Gate Channel		<b>2</b>
GROUND		<b>3</b>
GROUND		<b>4</b>
Audio In HI, Duck Channel		<b>5</b>
Audio In LO, Duck Channel		<b>6</b>
Discrete Output, Gate Channel		<b>7</b>
GROUND		<b>8</b>
Summing Junction Resistor Isolated Input		<b>9</b>
Summing Junction Resistor Isolated Input		<b>10</b>
Discrete Output, Duck Channel		<b>11</b>
Direct Summing Junction Input		<b>12</b>
GROUND		<b>13</b>
Audio Output LO, Summed Output		<b>14</b>
Audio Output HI, Summed Output		<b>15</b>



**Caution!**  
Mic Input has Phantom Power

- REL = Release Trimpot, CounterClockwise = Slower Release
- ATT = Attack Trimpot, Clockwise = Faster Attack
- ATTN = Attenuation (Duck) Trimpot, Clockwise = More Attenuation (Ducking)
- THRES = Threshold Trimpot, Counterclockwise = Lower Threshold
- GAIN, Gate = Gate Channel Gain, Clockwise = More Gain
- GAIN, Duck = Duck Channel Gain, Clockwise = More Gain