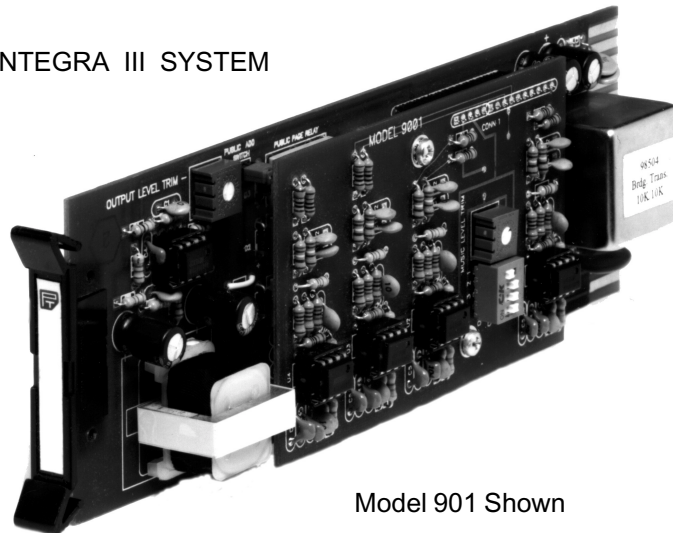


### MODELS COVERED

901

### INTEGRA III SYSTEM



Model 901 Shown

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

The Model 901 Modular Matrix Mixing Card is designed for use in professional audio applications. Each unit features four (4) selectable music inputs, three (3) paging inputs, one (1) line level output, and a switch closure circuit for control of priority bypass relays. Typical applications are public address systems in buildings such as airports, factories, hospitals, courthouses, casinos, convention centers, libraries, hotels, racetracks, and office buildings.

The mechanical construction of the Model 901 allows mounting of up to ten (10) units in a standard Model 857B Card Frame, or 9 units in a Model 858B Card Frame. Each Model 901 card unplugs from the front of the card frame, without the need for removing any wires from the rear of the card frame. Spare units may be placed into service in a matter of minutes.

Each Model 901 has four user adjustable features, in addition to the actual wiring hierarchy. There are two level adjustments, one for the page output level, and one for the music output level. There is one four position DIP switch for selecting any of four music input channels, or no music input at all. The fourth adjustment is the push-on jumper which allows public paging to enter a zone.

The Model 901 Modular Matrix Mixing Card is built using two separate printed circuit board assemblies. The two boards are connected together using a high quality, gold-plated 15 pin connector. The main printed circuit board contains all audio input and output connection points, the page output level adjustment, the public add enable jumper, and all relay control circuitry. The smaller printed circuit board is piggy-backed to the main printed circuit board, and contains all background music channel circuitry, including the channel selector switch and the background music level adjusting trimpot.

All integrated circuits used in the Model 901 are mounted in plug-in IC sockets, to facilitate maintenance of the system. The DC power supply connections are protected by self-resetting electronic fuses. If a card should malfunction, the electronic fuses will disconnect the card from the power supply. The same type of fusing is provided in the priority bypass relay control circuit.

Other INTEGRA III SYSTEM cards, such as distribution amplifiers or compressors, may be used in the same card frame assembly, to allow construction of complete audio systems.

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

---

## INSTALLATION

---

The Model 901 Modular Matrix Mixing Card is designed to be mounted in the Model 857B Card Frame, or the Model 858B Card Frame. The Model 857B Card Frame will accommodate up to 10 audio cards, and requires an external power supply (Model 66708). The Model 858B Card Frame will accommodate up to 9 audio cards (depending upon AC current requirements), and has a built-in, unpluggable power supply card. All 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 backplane assembly to use in your project, was made prior to our factory receiving the order. The backplane assembly you have received will accommodate the group of cards you or your designer have specified.

The actual steps necessary for installation of the INTEGRA III SYSTEM Modular Matrix Mixing Cards, are comparable to those necessary for any of the 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 3 pin 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 3 pin 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 DC voltage green LED's.

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 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, 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 Model 901 Modular Matrix Mixing Card with has been shipped from the factory aligned for unity gain on both the background music and paging channels. The public page function on the card is active as shipped from the factory. If the public page is not to be allowed in the zone being set-up, remove the red push-on jumper located on the lower pc board assembly. If gain adjustment is required, the following procedure is recommended:

- 1- Remove the Model 901 card from the card slot, and place a Model 516 extender card in the slot.
- 2- Select the background music input to be used by turning on one of the DIP switch channels on the top PC board assembly.
- 3- Place the Model 901 into the mating connector on the model 516 extender card.
- 4- Apply background music to the selected channel, and adjust output level by turning trimpot mounted on the top pc board assembly.
- 5- Actuate any on the 3 paging channel input relays, apply a signal representative of the page input level to the selected channel, and adjust the output level by turning the trimpot mounted on the lower (main) pc board assembly.
- 6- Remove the Model 901 from the Model 516 Extender card, remove the extender card from the card slot, and place the Model 9001 into the card slot, making sure it is seated properly.

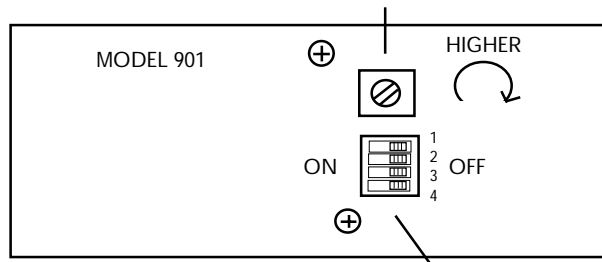
This completes the installation and alignment of your INTEGRA III SYSTEM Modular Matrix Mixing. The cards may be expected to deliver year of uninterrupted service.

## 857B & 858B Backplane Connections

		<b>16</b>	<b>1</b>		Public Page Input Hi
		<b>17</b>	<b>2</b>		Public Page Input Lo
Music 1 Input Hi		<b>18</b>	<b>3</b>		Ground
Music 1 Input Lo		<b>19</b>	<b>4</b>		TIC Input Hi
Music 2 Input Hi		<b>20</b>	<b>5</b>		TIC Input Lo
Music 2 Input Lo		<b>21</b>	<b>6</b>		Code Blue Input Hi
Music 3 Input Hi		<b>22</b>	<b>7</b>		Code Blue Input Lo
Music 3 Input Lo		<b>23</b>	<b>8</b>		Ground
Music 4 Input Hi		<b>24</b>	<b>9</b>		
Music 4 Input Lo		<b>25</b>	<b>10</b>		
		<b>26</b>	<b>11</b>		Bypass Relay Control Output
		<b>27</b>	<b>12</b>		Bypass Relay Control Input
Code Blue Relay Control		<b>28</b>	<b>13</b>		Ground
TIC Relay Control		<b>29</b>	<b>14</b>		Zone Output Hi
Public Page Relay Control		<b>30</b>	<b>15</b>		Zone Output Lo

### BACKGROUND MUSIC BOARD

#### BACKGROUND MUSIC OUTPUT LEVEL CONTROL

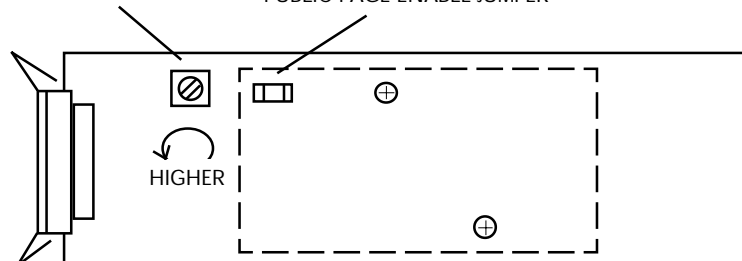


BACKGROUND MUSIC INPUT SELECTOR SWITCH

### MAIN PAGE BOARD

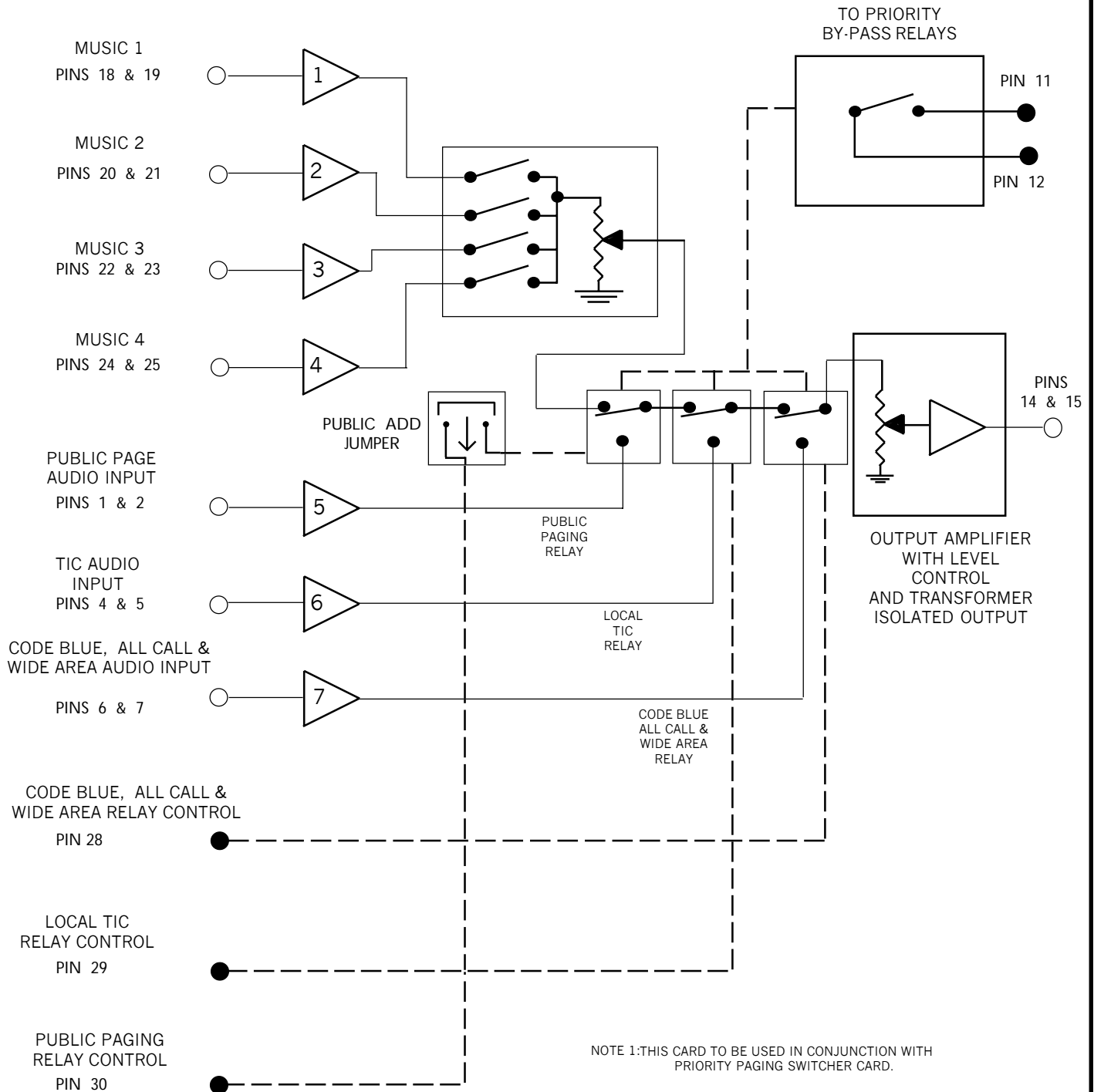
#### PAGE OUTPUT LEVEL CONTROL

#### PUBLIC PAGE ENABLE JUMPER



**MODEL 901  
MODULAR MATRIX SWITCHING CARD  
BLOCK DIAGRAM**

PIN NUMBERS SHOWN ARE CONNECTION POINTS ON CORRESPONDING MODEL 857B AND 858B CARD FRAME ASSEMBLYIES



NOTE 1: THIS CARD TO BE USED IN CONJUNCTION WITH PRIORITY PAGING SWITCHER CARD.

NOTE 2: STANDARD INTEGRA III SYSTEM CARD FRAME MOUNTING.