

# PRO-MATRIX AMPLIFIER



## Digitally Matrixed Amplifier PM3180

Removable front panel for optional wall mounting

The Pro-Matrix was developed expressly for the needs of restaurants, lounges, fitness centers, and other venues that require numerous input sources but have areas with distinctly different audio requirements. The Pro-Matrix amplifier provides 3 fully independent audio channels that can use any of the 6 different inputs in vastly different ways. The Pro-Matrix is designed to be as easy for users to operate as a home stereo, yet it provides the installer with a wide array of customizable features that are all password-protected from tampering.

### General Features:

- 3 Independent audio channels
- 100-, 60-, and 20-watt amplifier channels
- 8-ohm, 70V, and 25V transformer-coupled outputs
- 4-ohm direct output
- Audio inserts for connection to external signal-processing equipment
- Auto-switching of inputs based on custom assigned priorities and input audio activity
- 4 High-impedance, unbalanced auxiliary inputs
- 2 Microphone inputs; one input can be programmed to accept a telephone line for paging
- Auxiliary trim controls accommodate a wide range of auxiliary input signal levels
- Wireless infrared remote control unit
- Detachable front panel can be mounted up to 25 feet away from main unit using included accessory cable or up to 250 ft. with optional mounting kit (RMPWMK3)
- Output level metering for each audio channel
- Automatic fade-in of audio sources
- Automatic level control for microphones (selectable)
- Microphone page triggering by voice or switch (N.O. or N.C.)
- Phantom power for microphones (13V DC), selectable
- Rack-mountable with kit (RPK79)
- UL listed

### Installer Programmable Features:

- Easy to understand and operate
- Large 10-character alphanumeric display with prompted programming for quick setup
- Password-protected system settings for consistent, foolproof operation
- 6 user-assigned priority levels for inputs
- Each input can be assigned different priority levels for each of the 3 output channels
- Volume and tone control lockout, independently on each audio channel
- Configure microphone input (ALC, phantom power, VOX or contact triggered)
- Preset power-up levels of each input for volume, treble, and bass
- Programmable variable music mute levels during MIC or TEL page
- Preset bass and treble response of each input for each audio channel
- Limit maximum volume level a user can achieve, programmable for each audio channel
- Large display shows currently active input source
- Create custom names for input source display

### User Features:

- Manual or automatic selection of input source
- Volume, bass, and treble controls for each audio channel

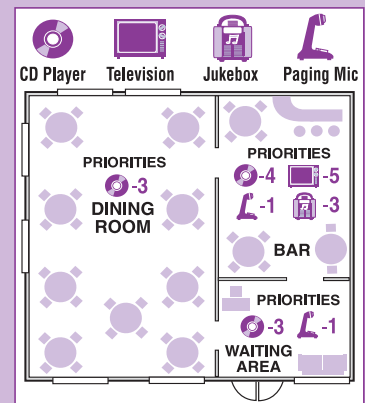
Technical Specifications, Dimensions, and Weights can be found on Page 79

### What Does The Pro-Matrix Do?

The Pro-Matrix Amplifier is ideally suited for restaurants and similar venues. It provides 4 AUX and 2 MIC inputs that can be distributed into 3 different zones. The Pro-Matrix automatically switches the different audio sources based on a preset, user-programmed priority hierarchy. This allows the correct audio to reach the correct areas without any user intervention, making operation ultra simple.

For example, suppose a restaurant has a dining area, lounge, and waiting area that are in need of the following audio sources:

- **The Dining Area** - Uninterrupted background music only, no other sources.
- **The Bar** - Hostess paging mic and either background music, jukebox, or TV audio.
- **The Waiting Area** - Hostess paging mic and background music only.



The Pro-Matrix adapts quickly to this situation. Connect each area to a different audio channel. Then connect the background music source, jukebox, and TV audio to the AUX inputs, and connect the hostess paging mic. The rest of the installation is completed using the detachable 10-character control panel. Using simple prompted programming, give each input the priority it should have relative to the other sources for each area. Undesired sources can be removed from the priority list in a particular area so they cannot cut in.

This flexible priority assignment allows all the sources needed in the lounge to be handled correctly and automatically, while the same source in the dining and waiting areas are automatically handled differently according to their needs.

In addition to flexible priority assignment of inputs, the Pro-Matrix has 10 different menus that allow control of a host of system operations from applying phantom power to mics to setting the muting level of music during mic pages and much more.

### Accessories



**RMPWMK3**  
Remote Wall Mounting Kit for Removable Front Panel



**RPK79**  
Rack Mounting Kit

# AMPLIFIER FEATURES CHART

Amplifier Output Power Rating/ Channel	Model Numbers	Amp Channels	Input Types						Signal Processing						Music Muting				Night Ringer	Remote Volume	Output Meter	Mounting			Page Number										
			TEL Input 600-ohm Balanced	MC Input <sup>†</sup> Lo-Z Balanced	AUX Input <sup>†</sup> Hi-Z Unbalanced	Balanced Inputs Hi-Z	Modular Inputs	Audio Enhancement	Loudness Contour	ALC	EQ	Bass/Treble	Tone Control	Variable Mute	Auto Mute	Manual Mute	Wall Mount	Shelf Mount				Rack Mount													
1.5W	GA2	1			1																												42		
5W	GAG	1			1																												42		
10W	C10	1	1	2 (1)	0 (1)																													42	
15W	TPU15A	1	1		1																													43	
20W	C20	1	1	2 (1)	0 (1)																													42	
35W	C35	1	1	2 (1)	1 (2)																													42	
35W	GS35	1	0 (1)	6 (4)	1 (2)																													41	
35W	TPU35B	1	1	1	1																													43	
35W	V35	1	1	1	1	8																												38	
60W	BPA60	1																																46	
60W	C60	1	1	2 (1)	1 (2)																														42
60W	GS60	1	0 (1)	6 (4)	1 (2)																														41
60W	TPU60B	1	1	1	1																														43
60W	V60	1	1	1	1	8																													38
100W	C100	1	1	2 (1)	1 (2)																														42
100W	GS100	1	0 (1)	6 (4)	1 (2)																														41
100W/60W/20W	PM3180	3	0 (1)	2 (1)	4																														47
100W	TPU100B	1	1	1	1																														43
100W	V100	1	1	1	1	8																													38
100W	WV100	1	1	1	1	8																													40
125W	HTA125A	1																																	46
150W	GS150	1	0 (1)	6 (4)	1 (2)																														41
150W	V150	1	1	1	1	8																													38
150W	WV150	1	1	1	1	8																													40
250W	GS250	1	0 (1)	6 (4)	1 (2)																														41
250W	HTA250A	1																																	46
250W	TPU250	1	1	1	1																														43
250W	V250	1	1	1	1	8																													38
250W	WV250	1	1	1	1	8																													40
300/600W	M300	2/1	1	1	1	2																													45
300W	X300	2																																	44
450/900W	M450	2/1	1	1	1	2																													45
450W	X450	2																																	44
600/1200W	M600	2/1	1	1	1	2																													45
600W	X600	2																																	44

● Feature Included  
 ● Features determined by type of module installed  
 ● Balanced input available with accessory plug-in transformer (TL100 or TL600)  
 ● Accessory kit required for mounting  
 ● Contact closure activation only

\* Some inputs are switch selectable. The number in parentheses shows the maximum number of inputs when switched.  
 † BALAS balanced input module included standard; uses one modular input bay.

Specifications subject to change without notice.

# AMPLIFIER SPECS CHART

Model Numbers	Output Power Rating/Channel	Channels	Frequency Response*	Distortion**	Speaker Outputs	AC Line Draw***	Dimensions	Product Weight
BP460	60W	1	20 Hz to 20 kHz	2% Max	8-ohm/25V, 16-ohm, 25VCT, 70V	180W	15-1/4" W x 3-1/2" H x 8-1/4" D	17 lb.
C10	10W	1	70 Hz to 16 kHz	1% Max	70V, 25V, 16-ohm, 8-ohm, 4-ohm	38W	11-3/8" W x 2-7/8" H x 7-3/8" D	5 lb.
C20	20W	1	70 Hz to 16 kHz	1% Max	70V, 25V, 16-ohm, 8-ohm, 4-ohm	50W	11-3/8" W x 2-7/8" H x 7-3/8" D	6 lb.
C35	35W	1	70 Hz to 16 kHz - Transformer; 20 Hz to 20 kHz - Direct	1% Max	70V, 25V, 16-ohm, 4-ohm direct	85W	14-1/2" W x 3-3/4" H x 11" D	15 lb.
C60	60W	1	70 Hz to 16 kHz - Transformer; 20 Hz to 20 kHz - Direct	1% Max	8-ohm on C35 and C60	148W	14-1/2" W x 3-3/4" H x 11" D	17 lb.
C100	100W	1	200 Hz to 15 kHz	2% Max	8- & 600-ohm	220W	5-1/2" W x 4-1/8" H x 2-1/4" D	19 lb.
GA2	1.5W	1	30 Hz to 12 kHz	2% Max	70V, 25V, 8-ohm	4W	8-1/2" W x 2-3/4" H x 6" D	2 lb.
GA6A	6W	1	30 Hz to 12 kHz	2% Max	70V, 25V, 8-ohm	16W	8-1/2" W x 2-3/4" H x 6" D	5 lb.
GS35	35W	1	65 Hz to 20 kHz - Transformer; 20 Hz to 20 kHz - Direct	0.5% Max	70V, 25V, 25VCT, 8-ohm, 4-ohm direct	0.9A	16-1/2" W x 3-1/2" H x 13-1/2" D	17 lb.
GS60	60W	1	65 Hz to 20 kHz - Transformer; 20 Hz to 20 kHz - Direct	0.5% Max	70V, 25V, 25VCT, 8-ohm, 4-ohm direct	1.3A	16-1/2" W x 3-1/2" H x 13-1/2" D	20 lb.
GS100	100W	1	65 Hz to 20 kHz - Transformer; 20 Hz to 20 kHz - Direct	0.5% Max	70V, 25V, 25VCT, 8-ohm, 4-ohm direct	2.2A	16-1/2" W x 3-1/2" H x 13-1/2" D	23 lb.
GS150	150W	1	65 Hz to 20 kHz - Transformer; 20 Hz to 20 kHz - Direct	0.5% Max	70V, 25V, 25VCT, 8-ohm, 4-ohm direct	3.0A	16-1/2" W x 3-1/2" H x 13-1/2" D	29 lb.
GS250	250W	1	65 Hz to 20 kHz - Transformer; 20 Hz to 20 kHz - Direct	0.5% Max	70V, 25V, 25VCT, 8-ohm, 4-ohm direct	5.0A	16-1/2" W x 3-1/2" H x 13-1/2" D	30 lb.
HTA125A	125W	1	20 Hz to 20 kHz	0.5% Max	70V, 25VCT, 25V, 8-ohm, 4-ohm	260W	19" W x 5-1/4" H x 11" D	36 lb.
HTA250A	250W	1	20 Hz to 20 kHz	0.5% Max	70V, 25VCT, 25V, 8-ohm, 4-ohm	520W	19" W x 5-1/4" H x 11" D	50 lb.
M300	300/600W	2	20 Hz to 20 kHz	0.5% Max	4- to 8-ohm (2 channel mode); 70V (1 channel mode)	12A	17" W x 3-1/2" H x 18-1/2" D (not including brackets)	41 lb.
M450	450/900W	or 1	20 Hz to 20 kHz	0.5% Max	4- to 8-ohm (2 channel mode); 70V (1 channel mode)	15A	17" W x 3-1/2" H x 18-1/2" D (not including brackets)	44 lb.
M600	600/1200W	1	20 Hz to 20 kHz	0.5% Max	4- to 8-ohm (2 channel mode); 70V (1 channel mode)	20A	17" W x 3-1/2" H x 18-1/2" D (not including brackets)	46 lb.
PMS180	100W 60W 20W	3	70 Hz to 20 kHz - Trans (Amp 1 & 2); 70 Hz to 15 kHz - Trans (Amp 3); 20 Hz to 20 kHz - Direct (Amp 1 & 2); 20 Hz to 15 kHz - Direct (Amp 3)	0.5% - Amp 1 & 2; 1% - Amp 3 (Max)	70V, 25V, 8-ohm, 4-ohm direct	430W	17" W x 5-1/2" H x 12-1/2" D	38 lb.
TPU15A	15W	1	70 Hz to 12 kHz	2% Max	70V, 25V, 8-ohm	0.5A	11" W x 2-3/4" H x 2-3/8" D	4 lb.
TPU35B	35W	1	70 Hz to 12 kHz	2% Max	70V, 25V, 8-ohm	0.75A	11" W x 2-3/4" H x 2-3/8" D	12 lb.
TPU60B	60W	1	70 Hz to 15 kHz	1% Max	70V, 25V, 25VCT, 16-ohm	1.5A	14-1/4" W x 8-3/8" H x 3-5/8" D	15 lb.
TPU100B	100W	1	70 Hz to 15 kHz	1% Max	70V, 25V, 25VCT, 16-ohm	2A	14-1/4" W x 8-3/8" H x 3-5/8" D	18 lb.
TPU250	250W	1	70 Hz to 15 kHz	1% Max	70V, 25V	5A	19" W x 10-1/2" H x 3-7/8" D	28 lb.
V35	35W	1	45 Hz to 20 kHz - Transformer; 20 Hz to 20 kHz - Direct	0.5% - Transformer; 0.1% - Direct (Max)	70V, 25V, 8-ohm, 4-ohm direct	0.6A	17" W x 3-7/8" H x 14-3/4" D	22 lb.
V60	60W	1	45 Hz to 20 kHz - Transformer; 20 Hz to 20 kHz - Direct	0.5% - Transformer; 0.1% - Direct (Max)	70V, 25V, 8-ohm, 4-ohm direct	1.3A	17" W x 3-7/8" H x 14-3/4" D	26 lb.
V100	100W	1	45 Hz to 20 kHz - Transformer; 20 Hz to 20 kHz - Direct	0.5% - Transformer; 0.1% - Direct (Max)	70V, 25V, 8-ohm, 4-ohm direct	2.0A	17" W x 3-7/8" H x 14-3/4" D	28 lb.
V150	150W	1	45 Hz to 20 kHz - Transformer; 20 Hz to 20 kHz - Direct	0.5% - Transformer; 0.1% - Direct (Max)	70V, 25V, 8-ohm, 4-ohm direct	3.5A	17" W x 3-7/8" H x 14-3/4" D	31 lb.
V250	250W	1	45 Hz to 20 kHz - Transformer; 20 Hz to 20 kHz - Direct	0.5% - Transformer; 0.1% - Direct (Max)	70V, 25V, 8-ohm, 4-ohm direct	5.5A	17" W x 3-7/8" H x 14-3/4" D	32 lb.
WV100	100W	1	20 Hz to 20 kHz	0.5% Max	70V direct	2.0A	14-1/8" W x 21" H	27 lb.
WV150	150W	1	20 Hz to 20 kHz	0.5% Max	70V direct	3.5A	14-1/8" W x 21" H	29 lb.
WV250	250W	1	20 Hz to 20 kHz	0.5% Max	70V direct	5.5A	14-1/8" W x 21" H	28 lb.
X300	300W	2	20 Hz to 20 kHz	0.5% Max	70V direct	12A	17" W x 3-1/2" H x 18-1/4" D (not including brackets)	41 lb.
X450	450W	2	20 Hz to 20 kHz	0.5% Max	70V direct	15A	17" W x 3-1/2" H x 18-1/4" D (not including brackets)	44 lb.
X600	600W	2	20 Hz to 20 kHz	0.5% Max	70V direct	20A	17" W x 3-1/2" H x 18-1/4" D (not including brackets)	46 lb.

\* @ -20dB FRP Transformer output;  
@ FRP for Direct outputs

\*\* Bandwidth limited to frequency response

\*\*\* FRP @ 120V AC line voltage

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