

# ProMatrix™ Digitally Matrixed Amplifier

## Model PM3180



### Features

- 100, 60, and 20 watt channels
- 6 Priority levels with auto-switching
- 4 Auxiliary inputs
- 2 Microphone inputs; one converts to a telephone input
- Wireless infrared remote controller
- Volume and tone control lockout
- User programmable LED display
- Remote mountable front display panel
- Password-protected system settings
- Simple programming of system settings
- 3 Independent audio channels
- Mounting kits available for wall (RMPWMK3) or rack (RPK79)

### Description

The PM3180 amplifier incorporates three independent amplifier channels with a unique digital interface, providing the ideal solution for restaurant, lounge/bar hotel, factory or similar facilities where multiple program and paging inputs need to be distributed to separate areas and automatically switched.

The PM3180 provides up to 4 AUX inputs and 2 MIC inputs that can be individually assigned to each amplifier channel (one of the mic inputs can be programmed for telephone paging applications). Each input on a particular channel can also be assigned a priority level; the amp channel will then automatically switch inputs based on input activity. Microphones can be assigned to the highest priority levels: 1 or 2; and aux sources to levels 3, 4, 5, or 6. For example, a paging microphone can be assigned priority level 1, a jukebox to level 3, and a radio to level 4. In this configuration, the radio will play until the jukebox becomes active; both inputs are overridden when the page microphone is activated.

The three integrated amplifier channels are rated at 100, 60, and 20 watts. All amplifiers have separate 4- and 8-ohm outputs as well as 25 and 70 volt taps. Audio processing inserts are also included for each amp channel to facilitate the connection of external signal processing equipment. Adjustable input trim controls adjust for differing audio source input levels.

The PM3180 includes a variety of useful features, including phantom power and automatic level control for microphones, choice of microphone precedence activation (VOX, Contact N.O., Contact N.C.), variable mute, and automatic fade-in of audio source after a mic page or when switching to a lower priority.

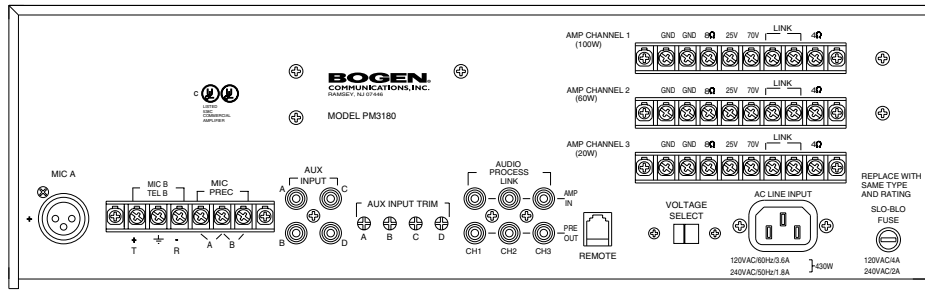
All control functions can be adjusted from the front control panel, which is itself removable for installation in a remote location away from the amp chassis. An infrared wireless remote control unit is also included and permits full control of all functions.

The amplifier has a **user mode** that lets personnel adjust the volume, bass and treble levels and manually select input sources. A separate **programming mode** lets the installer customize system operation, including the ability to preset the power-up volume level of each input, preset treble and bass responses, and lock-out or inhibit volume, bass and treble controls, set priorities, and many more system parameters. All programming steps are displayed and verified on the unit's large alphanumeric LED display panel. Programming can be accomplished using the control panel or infrared remote control unit. All programming is password-protected.

With tremendous flexibility, the PM3180 provides an elegant solution to multi-zone sound management.



Specifications subject to change without notice.  
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**Technical Specifications**

- Power Rating (RMS):** 3 Independent amplifier channels rated at 100 watts (Amp 1), 60 watts (Amp 2), and 20 watts (Amp 3) RMS continuous
- Frequency Response (Aux inputs):**
  - Transformer Outputs — 70Hz to 20kHz  $\pm 2$ dB (Amp 1 & 2), 100Hz to 15kHz  $\pm 2$ dB (Amp 3)
  - 4- $\Omega$  Direct — 20Hz to 20kHz  $\pm 2$ dB (Amp 1 & 2), 20Hz to 15kHz  $\pm 2$ dB (Amp 3)
- Distortion:** Less than 0.5% (Less than 1% on Amp 3)
- Signal-to-Noise Ratio:** -70dBr (Tel and Aux); -55dBr (Mic)
- Inputs:**
  - Mic — 2 Lo-Z balanced: Mic A has XLR-type connector; Mic B has screw terminal strip and can be configured as a 600-ohm transformer-balanced input for telephone paging applications
  - Aux — 4 unbalanced Aux inputs via RCA jacks
- Mic Precedence:** Via terminal strip. Programmable for Normally Open, Normally Closed or VOX
- Outputs:** Separate terminal strips for each channel provides 4- and 8-ohm output and 25V and 70V taps
- Tone Controls:** Bass —  $\pm 10$ dB @ 50Hz in 15 steps; Treble —  $\pm 10$ dB @ 15kHz in 15 steps
- Preamp Out/Power Amp In:** Separate link for each channel permits insertion of signal-processing equipment
- Controls:** Front-mounted, removable control panel with soft-touch buttons; Wireless infrared remote control
- User Mode:** Permits control of volume, bass, treble, manual input selection
- Programming Mode:** Password-protected mode permits setting of system functions
- Power Consumption:** 430 watts
- Dimensions:** 17"W x 5-1/2"H x 14"D
- Shipping Weight:** 40 lbs.

**Architect and Engineer Specifications**

The amplifier shall be a Bogen ProMatrix Digitally Matrixed Amplifier, Model PM3180. It shall incorporate three independent amplifier channels rated at 20, 60, and 100 watts. The user interface shall be all-digital and shall automatically control the distribution of multiple program and paging inputs to separate areas served by the amplifier. The amplifier shall provide 2 Lo-Z balanced Mic inputs. It shall be possible to configure Mic B as a 600-ohm transformer balanced input for telephone paging applications. There shall be automatic level control for Mic inputs as well as a choice of microphone precedence activation (VOX, Normally Open, Normally Closed) and available phantom power for use with condenser microphones. There shall be 4 auxiliary inputs (RCA unbalanced). Input trim controls shall be provided to adjust for differing audio source input levels. The amplifier shall provide for automatic switching of inputs based on input activity. It shall be possible to assign a priority level for each input on each amplifier channel. Each amplifier channel shall have separate 4- and 8-ohm outputs as well as 25 and 70 volt taps. Audio processing inserts shall be included for each amp channel to facilitate the insertion of external signal processing equipment. Front panel mounted LED output level meters shall be provided for each amp channel. The amplifier shall provide automatic fade-in of audio source after a microphone page or when switching to a lower priority input. The paging over music level shall be adjustable. A front-mounted, removable control panel and a wireless infrared remote control unit shall be provided.

There shall be two (2) modes of operation. The *User* mode shall permit the selection of an amplifier channel to perform the following operations: a) manual selection of an input source; b) adjustment of volume level; c) adjustment of bass and treble response. The *Programming* mode shall be password-protected and shall permit the following operations: a) Assignment of priority levels; b) Set microphone precedence activation, ALC, phantom power and mic/tel assignment; c) Preset volume, bass and treble levels; d) Limit maximum volume for each amp/input combination; e) Inhibit user's ability to make volume or tone adjustments; f) Set mute level of aux inputs during a microphone page; g) Set audio processing link operation; h) Change program mode password; i) Create custom display labels for input sources; j) Reset all features to factory defaults. All programming steps shall be displayed and verified on an alphanumeric display panel. It shall be possible to program the unit using the control panel or infrared remote control unit. Non-volatile memory shall be used to retain user control settings. The amplifier shall operate from a 110V AC source. The unit shall be rack-mounted with optional mounting kit (RPK79). The display panel shall be wall-mounted with optional mounting kit (RMPWMK3).

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