

COMMERCIAL AUDIO SERIES

180MA
280MA
1160MA



The Crown® 180MA, 280MA and 1160MA are high-value mixer-amplifiers for commercial and industrial audio. They provide 4-ohm and constant-voltage outputs (70V and 100V).

Some applications include schools, hospitals, factories, restaurant/retail, houses of worship, fitness facilities, A/V boardrooms, prisons, and small offices. Typical uses are paging, background music, security and evacuation instructions.

The mixer-amps vary in their number of inputs, number of outputs, and power range:

- 180MA has 4 inputs and one 80W power amplifier for single-zone systems.
- 280MA has 8 inputs and dual 80W power amplifiers for two-zone systems.
- 1160MA has 4 inputs and one 160W power amplifier for single-zone systems.

Input routing allows each input to be assigned to any output. This drastically reduces the need for additional mixers or amplifiers (or both) when systems require either more inputs or outputs.

However, each mixer-amplifier can be upgraded as a facility expands. For example, you can add more mixers for more inputs, or add more power amps to handle more zones.

Other features include priority muting, phantom power, and capability for remote volume control.

Specifications

Performance

Frequency Response (at 1 watt from 4-ohm tap): 70 Hz to 19 kHz \pm 1 dB.

Frequency Response (at line out): 20 Hz to 20 kHz \pm 1 dB.

Power Bandwidth (at 4-ohm tap, 2 dB below maximum 1 kHz power): 50 Hz to 20 kHz with $<$ 0.5% THD

Signal to Noise Ratio (ref. to rated power, master volume at minimum): 85 dB.

DC Output Offset: $<$ \pm 5 mV.

THD: Less than 0.5% at rated power at 1 kHz.

Input Sensitivity (for full output at maximum gain):

Balanced mic inputs: 3 mV.
Balanced line inputs: 800 mV.
RCA connectors: 400 mV.

Features

- 4 or 8 inputs, 1 or 2 amplifier output channels
- Ideal for commercial and industrial use
- Balanced Phoenix-type mic/line inputs; touch-proof screw-terminal speaker outputs
- Any input can be sent to any output
- Priority muting
- Independent bass and treble controls for each input
- Three-Year, No-Fault, Fully Transferable Warranty completely protects your investment and guarantees its specifications

180MA

*1 kHz Power

Minimum guaranteed power into 4 ohms or 70V/100V output **80W**

*1 kHz Power: refers to maximum power in watts at 1 kHz with 0.5% THD.

280MA

*1 kHz Power

Minimum guaranteed power per channel into 4 ohms or 70V/100V output **80W**

*1 kHz Power: refers to maximum power in watts at 1 kHz with 0.5% THD.

1160MA

*1 kHz Power

Minimum guaranteed power into 4 ohms or 70V/100V output **160W**

*1 kHz Power: refers to maximum power in watts at 1 kHz with 0.5% THD.

Input Impedance (nominal):

Mic: 400 ohms.
Line: 100 kilohms.
RCA: 50 kilohms.

Crosstalk: -70 dB at 1kHz.

Line Output Level (nominal): 1V into 10 kilohms.

Phantom Power: 15 VDC.

AC Line Voltages Available:

100V 50/60 Hz
120V 60 Hz
220V 50/60 Hz
230V 50/60 Hz
240V 50/60 Hz

Operating Temperature/Humidity: 0° C to 40° C at 95% relative humidity (non-condensing).

Storage Temperature: -20° C to 85° C.

Front Panel Controls and Indicators

Power Switch: Pushbutton on-off switch. The power switch does not affect the 24V DC auxiliary power input.

Input Volume Controls: Microphone/line, four in 180MA and 1160MA, eight in 280MA. Detented potentiometers with knobs.

Tone Controls: Bass and Treble non-detented recessed potentiometers on each input channel. Bass \pm 10 dB at 100 Hz, Treble \pm 10 dB at 10 kHz.

Power Indicator: Blue LED indicates power on.

Input Signal Presence Indicator: Green LED, one for each input channel, illuminates when input signal exceeds -24 dBu (line) or -70 dBu (mic).

Output Signal Presence Indicator: Green LED, one for each output channel, illuminates when output signal level exceeds 100 mV (45 dB below full power) from the 4-ohm tap. Does not respond to signals from the AMP INPUT connector.

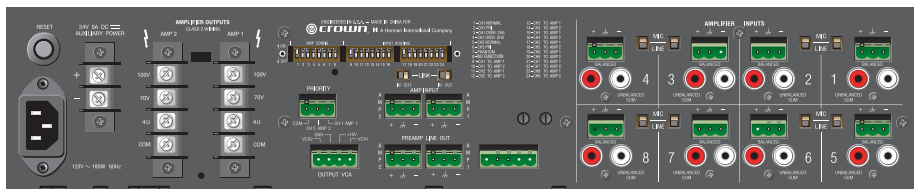


INSTALLED

180MA

280MA

1160MA



280MA back panel shown

Clip Indicators: Red LED, one per output channel. Illuminates at threshold of audible distortion. Does not respond to signals from the AMP INPUT connector.

Output Volume Controls: One per output channel. Detented potentiometer with knob.

Back Panel Controls and Connectors

Reset Switch: Resets the circuit breaker that protects the power supply. 220/230/240V units have a fuse instead.

AC Power Inlet: Detachable IEC.

Auxiliary Power Input: 2-position terminal strip for 24 VDC ($\pm 10\%$) backup power. Accepts up to 14 AWG terminal forks.

Amplifier Outputs Connectors: One per channel, 4-position terminal strip with COM (Common), 4 ohms, 70V and 100V terminals. Accepts up to 14 AWG terminal forks. Non-touch cover included.

Output VCA Connector: 4-pin Phoenix-type connector for two VCA control lines of +10 VDC and ground. Compatible with Crown 1-VCAP and 4-VCAP modules.

Amp Config Switch: A DIP switch with two functions:

1. Assigns an input as the priority input for each output, thereby temporarily muting the remaining inputs. Muting is activated by contact closure.
2. Global enable switch for phantom power. Does not affect RCA inputs. Default position is off.

Priority Connector: 3-pin Phoenix-type connector allows Input 1 or Input 5 (280MA only) to mute other input signals by contact closure.

Input Routing Switch (280MA only): DIP switches that assign each input signal to each output. Two switches per input.

Line Out Connector: One 3-pin balanced Phoenix-type connector per output channel. Post master, pre-VCA. Level controlled by master volume control.

The tone generator has been omitted. Call Crown Tech Support if you have a tone generator question.

Input Connectors:

Mic/Line Connector: 3-pin Phoenix-type, balanced, one per input channel.

Dual RCA Input Connector: For stereo music signals, unbalanced, summed together, two connectors per input channel.

Amp Input Connector: 3-pin Phoenix-type, high-impedance balanced, one per amplifier channel. Used to link an additional mixer to the mixer-amplifier. Can be used to connect an external processor.

Mic/line Switch: Selects mic-level or line-level signals. One switch for each balanced input.

Link In/Out Switch: Slide switch, one per channel. With the Link Switch IN, any signal applied to the Amp Input connector will be mixed with the input signal(s). With the Link Switch OUT, only the signal from the Amp Input Connector will appear at the amplifier output.

Cooling

Convection cooled.

Protection

Current Limit Protection: Included.

Thermal Limit Protection: Over-temperature thermal cutout.

DC-Fault Load Protection: Included.

Included Accessories

Power cord
Detachable rack ears
Screws for rack ears
Non-touch cover for output connectors
Phoenix-type connectors
Spade lugs

Optional Accessories

1-VCAP remote volume control for one channel.
4-VCAP remote volume control for four channels.

Dimensions

EIA Standard 19-inch (48.3-cm) rack mount width (EIA RS-310-B) with rack ears, 3.5-inch (8.9-cm) height and 12.2-inch (31.0-cm) depth behind the mounting surface (not including non-touch cover). 4.1 inches (10.5 cm) high including feet. 13.9 inches (35.2 cm) deep from front of knobs to back of non-touch cover.

Weight

Net Weight:

180MA: 21.0 lbs. (9.5 kg).
280MA: 25.3 lbs. (11.5 kg)
1160MA: 25.3 lbs. (11.5 kg)

Shipping Weight:

180MA: 26.0 lbs. (11.8 kg)
280MA: 30.3 lbs. (13.8 kg)
1160MA: 30.3 lbs. (13.8 kg)

Crown's Three-Year, No-Fault, Fully Transferable Warranty

Crown offers a Three-Year, No-Fault, Fully Transferable Warranty for every new Crown mixer-amplifier—an unsurpassed industry standard. With this unprecedented No-Fault protection, your new Crown mixer-amplifier is warranted to meet or exceed original specifications for the first three years of ownership. During this time, if your mixer-amplifier fails, or does not perform to original specifications, it will be repaired or replaced at our expense. About the only things not covered by this warranty are those losses normally covered by insurance and those caused by intentional abuse. And the coverage is transferable, should you sell your mixer-amplifier.

See your authorized Crown dealer for full warranty disclosure and details. For customers outside of the USA, please contact your authorized Crown distributor for warranty information or call 574-294-8200.



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