



## COMMERCIAL AUDIO SERIES

# 280MA

## Architectural & Engineering Specifications

### 280MA

The Crown® 280MA shall be a mixer-amplifier for commercial and industrial audio. It provides 4-ohm and constant-voltage outputs (70V and 100V).

The 280MA has 8 inputs and dual 80W power amplifiers for two-zone systems.

### Specifications

The 280MA shall have the following specifications:

Minimum guaranteed power into 4 ohms or 70V/100V output: 80W maximum power at 1 kHz with 0.5% THD. Frequency Response (at 1 watt from 4-ohm tap, 70 Hz - 19 kHz): +/- 1 dB. Frequency Response (at line out, 20 Hz to 20 kHz): +/- 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: < ±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. Input Impedance (nominal): Mic 400 ohms, line 100 kilohms, RCA 50 kilohms. Crosstalk: -70dB 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 degrees C to 40 degrees C at 95% relative humidity (non-condensing). Storage Temperature: -20 degrees C to 85 degrees C.

### Front Panel Controls and Indicators

Front panel controls and indicators shall include the following:

Power Switch: Pushbutton on-off switch. Input Volume Controls: eight microphone/line, detented potentiometers with knobs. Output Volume Controls: One per output channel, detented potentiometer with knob. Tone Controls: Bass and Treble non-detented recessed potentiometers on each input channel, Bass ±10 dB at 100 Hz, Treble ±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 100 mV (45 dB below full power) from the 4-ohm tap; shall not respond to signals from the AMP INPUT connector. Output Signal Presence Indicator: Green LED, one for each output channel, illuminates when output signal exceeds 100 mV (45 dB below full power) from the 4-ohm tap; shall not respond to signals from the AMP INPUT connector. Clip Indicators: Red LED, one per output channel, illuminates at threshold of audible distortion, shall not respond to signals from the AMP INPUT connector.

### Rear Panel Controls and Connectors

Rear panel controls and connectors shall include the following:

Reset Switch: Resets the circuit breaker that protects the power supply; 220/230/240V units shall have a fuse instead. AC Power Inlet: Detachable IEC. Auxiliary Power Input: 2-position terminal strip for 24 VDC(±10%) backup power; accepts up to 14 AWG terminal forks. Amplifier Outputs Connectors: One per channel, 4-position terminal strip with Com, 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 which shall be 1. Assign 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,

shall not affect RCA inputs. Priority Connector: 3-pin Phoenix-type connector shall allow Input 1 or Input 5 to mute other input signals by contact closure. Input Routing Switch: DIP switches shall 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, with level control. Input Connectors shall include a Mic/Line Connector of 3-pin Phoenix-type, balanced, one per input channel, and a dual RCA Input Connector for stereo music signals, unbalanced, summed together, two connectors per input channel. 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 shall be mixed with the input signal(s). With the Link Switch OUT, only the signal from the Amp Input Connector shall appear at the amplifier output.

### Miscellaneous

Cooling shall be by convection. Included protection mechanisms shall be current limiting, over-temperature thermal cutout, and DC-fault load protection.

Included accessories shall be a power cord, detachable rack ears, screws for rack ears, non-touch cover for output connectors, Phoenix-type connectors, and spade lugs. Optional accessories shall be a 1-VCAP remote volume control for one channel, and a 4-VCAP remote volume control for four channels.

The dimensions of the mixer-amplifier shall allow for 19 inch (48.3 cm) EIA standard (RS-310-B) rack mounting. The mixer-amplifier shall be 3.5 inches (8.9 cm) tall, and 12.2 inches (31 cm) deep behind the rack-mounting surface (not including the non-touch cover).

The mixer-amplifier shall weigh 25.3 lb (11.5 kg).

The mixer-amplifier shall be designated the Crown 280MA.



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