



COMMERCIAL AUDIO SERIES

180MAX

Architectural & Engineering Specifications

180MAX

The Crown® 180MAX shall be a tuner-mixer-amplifier for commercial and industrial audio. It shall provide 4-ohm and constant-voltage outputs (25V and 70V).

The 180MAX shall have 4 inputs (each with a volume control) and one 80W power amplifier.

Specifications

The 180MAX shall have the following specifications:

Minimum guaranteed power into 4 ohms or 25V/70V 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: $< \pm 5$ 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, Isolated telephone input 75 mV. Input Impedance (nominal): Mic 400 ohms, line 100 kilohms, RCA 50 kilohms, Telephone 600 ohms. Crosstalk: -70 dB at 1kHz. Line Output Level (nominal): 1V into 10 kilohms. Phantom Power: 15 VDC. AC Line Voltages Available: 120V, 60 Hz. Line voltage tolerance $+10\%$, -20% . Operating Temperature/Humidity: 0° C to 40 degrees C at 95% relative humidity (non-condensing). Storage Temperature: -20° C to 85° C.

Front Panel Controls and Indicators

Front panel controls and indicators shall include the following:

Power Switch: Pushbutton on-off switch. Input Volume Controls: Four detented potentiometers with knobs. Input 1: Microphone/line (switchable)/telephone, Inputs 2 and 3: Line, Input 4: XM Radio. 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. XM Tuner Menu Button: Selects Direct, Preset, or Category mode. XM Tuner Category Buttons: Scrolls through categories (rock, classical, news, country, etc). XM Tuner Scroll Knob: Lets you scroll through channels and select them. XM Tuner Display: LCD screen displays XM channel data (channel number, channel name, artist name, song title), 16 station presets and signal strength. Power Indicator: Blue LED indicates power on. Input Signal Presence Indicator: Green LED illuminates when input signal exceeds -24 dBu (line) or -70 dBu (mic). Output Signal Presence Indicator: Green LED, illuminates when output signal level exceeds 100 mV (45 dB below full power) from the 4-ohm tap. Clip Indicator: Red LED on output illuminates at threshold of audible distortion. Output Volume Control: Detented potentiometer with knob.

Back Panel Controls, Connectors and Indicators

Back panel controls, connectors and indicators shall include the following:

Reset Switch: Resets the circuit breaker that protects the power supply. MOH 1V Level Control: Trim pot adjusts level for Music-On-Hold 1V output. MOH 1W Level Control: Trim pot adjusts level for Music-On-Hold 1W output. MOH Signal Presence Indicator: Flashes when MOH signal is present. MOH Source Switch: Switches between Input 3 or XM, and routes the source to MOH 1V Line Out and MOH 1W connectors. MOH 1W Select Switch: Feeds 1W MOH signal either to amplifier output or internal speaker. MOH 1V Line Output RCA Connectors: Two RCA connectors (mono) for 1-volt output (in parallel with 600-ohm connectors, so they are isolated). MOH 1W Line Output Connector: 3-pin Phoenix connector provides Music-On-Hold signal of approximately 1 watt. MOH 1V Line Output Phoenix Connector: 3-pin Phoenix connector, 600-ohm transformer-isolated output, provides Music-On-Hold signal of approxi-

mately 1 volt. Phantom Power Switch: Turns phantom power on or off for Input 1. Mic/line Switch: Selects mic-level or line-level signal for Input 1. Link In/Out Switch: Slide switch. When set to IN, any signal applied to the Amp Input connector will be mixed with the input signal(s); when set to OUT, only the signal from the Amp Input Connector will appear at the amplifier output. Amplifier Output Connectors: 4-position terminal strip with COM (Common), 4 ohms, 25V and 70V terminals; accepts up to 10 AWG crimp-on terminal forks; non-touch cover included. XM Radio Stereo Line Out Connector: Dual RCA jacks for stereo music out from XM Radio tuner. Preamp Line Out Connector: 3-pin balanced Phoenix-type connector; post master, pre-VCA; level controlled by master volume control. 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. Priority Connector: 3-pin Phoenix-type connector for push-to-talk mic switch; contact closure activates ducking; ducking does not affect Music-On-Hold outputs or XM stereo line out. Active Indicator: LED illuminates when VOX ducking is active. VOX Threshold: Trim pot adjusts how loud the voice must be before ducking occurs; can be set for no ducking. Priority Release Control: Trim pot adjusts release time of VOX ducking. Mic/Line Input Connector (Input 1 only): 3-pin Phoenix-type, balanced. Line Input Connectors (Inputs 2 and 3 only): 3-pin Phoenix-type, balanced. Dual RCA Input Connector: For stereo music signals, unbalanced, summed together, two connectors per input for inputs 1, 2 and 3. TEL Input Connector: Transformer-isolated 600-ohm input, summed into Input 1 for paging from a telephone system. Amp Input Connector: 3-pin Phoenix-type, high-impedance balanced. Used to link an additional mixer to the mixer-amplifier; can be used to connect an external processor. AC Power Inlet: Detachable IEC. XM Radio Antenna Input: Connects to the XM antenna cable.

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, spade lugs, XM antenna, and remote control. Optional accessories shall be a 1-VCAP remote volume control.

The dimensions of the tuner-mixer-amplifier shall be:

Width (without rack ears): 17.3 in. (43.8 cm). Width (with rack ears): EIA Standard 19 in. W (EIA RS-310-B). Height (front panel): 3.5 in. (8.9 cm). Height (including feet): 4.1 in. (10.5 cm). Depth (front panel to back panel): 12.2 in. (31.0 cm). Depth (front of knobs to back of non-touch cover): 13.9 in. (35.2 cm).

The tuner-mixer-amplifier shall weigh 20 lb (9.07 kg).



A Harman International Company

Crown International
1718 W. Mishawaka Rd.
Elkhart, IN 46517-9439
TEL: 574-294-8200
FAX: 574-294-8FAX
www.crownaudio.com

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