

# 180MAx System

The Crown® 180MAx System is the first tuner-mixer-amplifier and loudspeaker system designed for commercial use. It provides a unique, cost-competitive, higher-performance alternative to traditional programmed music services. Applications include restaurants, retail stores, coffee shops and other commercial establishments.

The system includes the Crown 180MAx tuner-mixer-amplifier, four JBL® Control® 1ST 2-way miniature loudspeakers with built-in 25V/70V transformers, XM antenna and a wireless remote control.

Built into the 180MAx is an XM Radio that receives satellite radio stations with digital sound quality. A front-panel LCD screen displays XM Radio channel data (channel number, channel name, artist name, song title) 16 station presets and signal strength.

The unit also accepts signals from line, telephone, or microphone (phantom power included). Bass and treble controls allow the user to tailor the tone quality of the sound system. The priority ducking feature drops the volume of the background music when a microphone is used. A VOX sensitivity setting controls how loud the voice must be before ducking occurs.

Units can be linked to increase the number of input and output channels.

The built-in power amplifier provides 80 watts into 4 ohms, 25V and 70V for use with the JBL Control 1ST loudspeakers. Current and thermal limiting protect the amplifier and loudspeakers from accidental overload.

## 180MAx 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.



### Features

- Ideal for commercial and industrial use
- 4 inputs (each with a volume control) and one 80W amplifier output channel
- Independent bass and treble controls for each input
- Balanced Phoenix-type mic/line inputs; touch-proof screw-terminal speaker outputs
- Programmable XM tuner with XM channel data display
- Priority ducking
- Music-On-Hold outputs
- Four JBL Control 1ST 2-way miniature speakers with transformer and mounting brackets included
- Three-Year, No-Fault, Fully Transferable Warranty completely protects your investment and guarantees its specifications

**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:**  $0^{\circ}$  C to  $40^{\circ}$  C at 95% relative humidity (non-condensing).

**Storage Temperature:**  $-20^{\circ}$  C to  $85^{\circ}$  C.

### Front Panel Controls and Indicators

**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  $\pm 10$  dB at 100 Hz, Treble  $\pm 10$  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, one for each input channel, 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

**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.

## 180MAx

\*1 kHz  
Power

Minimum guaranteed power  
into 4 ohms or 25V/70V output

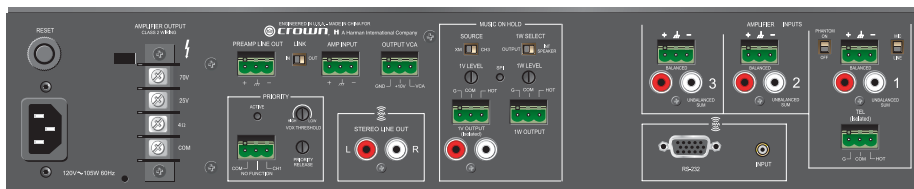
**80W**

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



INSTALLED

# 180Max System



180Max back panel

**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 approximately 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 tuner.

**Preamp Line Out Connector:** 3-pin balanced Phoenix-type connector. Post master, pre-VCA. Level controlled by master volume control.

**Output VCA Connector:** 3-pin Phoenix-type connector for two VCA control lines of +10 VDC and ground. Compatible with Crown 1-VCAP module.

**Priority Connector:** 3-pin Phoenix-type connector for push-to-talk mic switch. Contact closure activates duck-

ing. Ducking does not affect Music-On-Hold outputs or XM stereo line out.

**Active Indicator:** LED illuminates when 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.

## 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

XM antenna  
Remote control

## Optional Accessories

1-VCAP remote volume control.

## Dimensions

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).

## Net Weight (180Max tuner-mixer-amplifier only):

20 lb (9.07 kg).

## Shipping Weight (complete system):

55 lb (24.8 kg)

## JBL Control 1ST Loudspeaker Specifications

**Frequency Response:** 80 Hz - 20 kHz.

**Recommended Power Range:** 10 - 80W continuous average power.

**Sensitivity:** 89dB/1W/1m.

**Crossover Frequency:** 4 kHz.

**Low-Frequency Driver:** 4 in. (100 mm), shielded.

**High-Frequency Driver:** 0.5 in. (12 mm), titanium-laminate, shielded.

**70V Tap:** 20W.

**Dimensions (HxWxD):** 9 in. x 6-1/6 in. x 5-7/16 in. (228 mm x 155 mm x 139 mm).

**Net Weight (each):** 6.1 lb (2.8 kg)

**Included Accessory:** Mounting bracket.



# CROWN

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

Crown offers a Three-Year, No-Fault, Fully Transferable Warranty for every new Crown tuner-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 tuner-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.

Specifications subject to change without prior notice. Latest information available at [www.crownaudio.com](http://www.crownaudio.com).

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