



# MB-2

## MINI-BOUNDARY™ MICROPHONE



The Crown® MB-2 is a miniature boundary microphone for multi-miking applications such as teleconferencing, distance learning, boardrooms, and courtrooms. This tiny mic plugs into a table-mounted jack.

A low-profile rectangular microphone, the MB-2 has a bottom-mounted phone plug. It plugs into a stereo phone jack previously installed in the table. The contractor supplies the phone jack, which is a Switchcraft 152B Thick Panel Phone Jack or equivalent. A locating pin (removable) prevents the microphone from being rotated.

Thanks to its supercardioid pickup pattern, the MB-2 greatly reduces ambient noise and pickup of room reverberation. The result is a clearer sound.

**The MB-2 must be used with an MB-100 interface (not included). The interface performs these functions:**

- Powers and equalizes up to four mics.
- Provides programmable switching to turn the mic on or off if desired (switches not provided).
- Plug-in microphone inputs.
- Provides balanced outputs from the interface.

### MB-2 Advanced Features

- Paintable removable grille assembly.
- A common interface for up to four mics reduces the size and cost of the system.
- Low-Z balanced output prevents hum and high-frequency loss.
- On/off switches can be added.
- Switches can be internally programmed for touch-on/touch off, momentary on, or momentary off.
- Defeatable LED.

### How to Paint the Microphone

1. Using a small screwdriver, pry open one side of the base, then the other side (Fig. 5).
2. Remove foam liner.
3. Wearing a dust mask, spray-paint the grille assembly. Be sure grille holes are not clogged.
4. Allow paint to completely dry.
5. Make sure the LED is properly aligned.
6. Carefully place the grille assembly over the LED and snap in place.

### Features

- Ideal for teleconferencing, distance learning, boardrooms and courtrooms
- Plugs into a table-mounted jack

- Half-supercardioid polar pattern reduces feedback, room acoustics and background noise
- Clear, natural sound
- Small and inconspicuous

### Specifications

**All specs apply to each output of the interface with a mic connected.**

**Type:** Phase Coherent Cardioid.

**Element:** Electret condenser.

**Frequency response (typical):** 50 Hz to 15,000 Hz at 30 degrees incidence to surface (see Fig. 1).

**Polar pattern:** Half-supercardioid (supercardioid in the hemisphere above the primary boundary). See Figs. 2 and 3.

**Impedance:** 150 ohms, balanced. Recommended load impedance 1000 ohms or greater.

**Open-circuit sensitivity (typical):** 22 mV/Pa\* (-33 dB re 1 volt/Pa).

**Power sensitivity:** -30.5 dB re 1 mW/Pa\*. EIA rating -125 dBm.

**Equivalent noise level (self-noise):** 22 dB SPL typical (0 dB=0.0002 dyne/cm<sup>2</sup>), A-weighted.

**S/N ratio:** 72 dB at 94 dB SPL.

**Maximum SPL:** 120 dB SPL at 3% THD.

**Polarity:** Positive (inward) pressure on the diaphragm produces positive voltage on interface output terminal 1 with respect to terminal 3, and on terminal 4 with respect to terminal 6.

**Operating voltage:** Interface requires 18-48V phantom power.

**Current drain:** 5 mA nominal with LED on, 4 mA nominal with LED off.

**Mic connector:** Stereo phone plug. Mates with Switchcraft 152B Thick Panel Phone Jack or equivalent (not supplied). Order from Crown as an MB-JK.

**Cable connectors (supplied with MB-100 interface):**

- Two pluggable terminal blocks (PTBs) in line with the microphones. Each input connector handles up to two mics.
- Two PTBs for output connectors to your mixer. Each output connector feeds two mixer mic inputs.
- Two PTBs for remote switch sensing. Each PTB connects to two remote switch sensors.

**Cable:** None supplied. Use two-conductor shielded mic cable between phone jack and pluggable terminal block. Use two-conductor shielded mic cable between interface output and mixer input.

Use twisted-pair cable between each user switch and interface.

**Safe operating temperature range:** -10° to +50° C, or +14° to +122° F.

**Materials:** High-impact molded plastic and steel mesh mic grille, steel chassis.

**Finish:** Satin black.

**Net weight:** 0.7 ounce (20.1 grams).

**Dimensions:** See Fig. 4.

**Required accessory:** MB-100 interface.

\*1 pascal = 10 dynes/cm<sup>2</sup> = 10 microbars = 94 dB SPL.

Fig. 1

Frequency Response

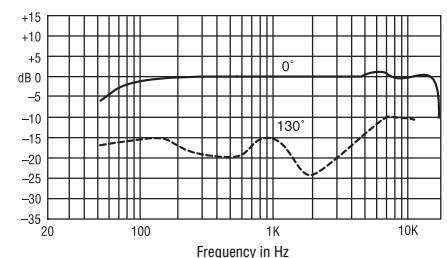
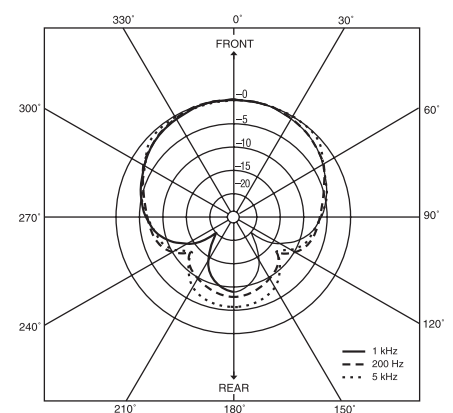


Fig. 2

Horizontal-Plane Polar Response





# MB-2

Fig. 3

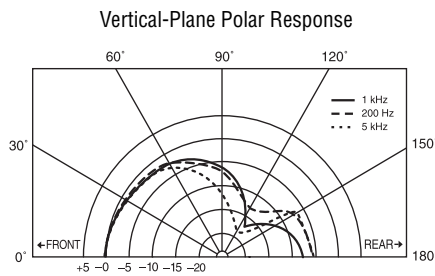


Fig. 4

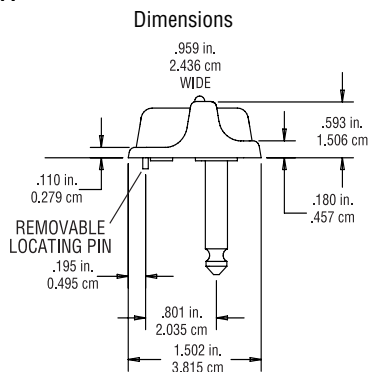
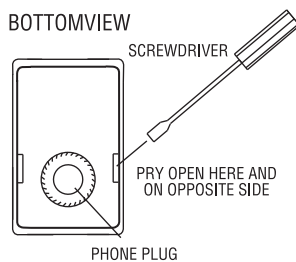


Fig. 5



## Installation

1. Typical placement for each mic is at arm's length from the user. Install one microphone in front of each person, or one between every two people.

If the microphone will be used on a lectern, install it on an open surface, do not install in a cavity or recessed area as the frequency response and polar pattern will be degraded.

2. If you want to flush-mount the jack, counter-bore a hole 0.625-in. (1.59-cm) diameter, 0.10-in. (0.254-cm) deep. In the center of the counterbore, drill a hole 0.5-in. (1.27-cm) diameter for each mic's cylindrical phone jack. Insert the jack in the hole and thread on the nut.

If you do not want to flush-mount the jack, drill a hole 0.5-in. (1.27-cm) diameter for each mic's cylindrical phone jack. Insert the jack in the hole and thread on the nut.

On the bottom of the MB-2 is a removable 0.0625-in. (0.159-cm) diameter pin to secure the mic in position. Drill a hole for this pin 0.801 in. (2.0345 cm) from the center of the phone-jack hole, in the desired direction.

3. Wire the mic to the MB-100 interface as described in the interface data sheet.

4. Plug each mic into its jack. Orient the mic so the word "Crown" is readable by the user (right-side-up).

## Architects' and Engineers' Specifications

The microphone shall be the Crown model MB-2 or equivalent. The microphone shall be a half-super-cardioid electret condenser type. The microphone shall use the principle of phase coherency achieved by mounting a small-diameter element very near a boundary. This eliminates comb filtering in the audible spectrum.

The microphone shall exhibit excellent off-axis response and gain-before-feedback. Each mic shall have a bottom-mounted stereo phone plug.

The user shall supply a cylindrical phone jack. The mic shall be used with a pluggable terminal block and an MB-100 interface (not included). The interface shall provide operating voltage to each microphone, and convert its output signal to low-impedance balanced.

Nominal sensitivity shall be 22 mV/Pa. Maximum SPL shall be 120 dB SPL for 3% THD. Equivalent noise shall be 22 dBA nominal. Frequency response shall be 50 Hz to 15 kHz with a uniform off-axis response, about 20 dB down at the rear nulls.

The Crown model MB-2 is specified.

## Warranty

Crown professional microphones are guaranteed against malfunction for a period of three years from date of original purchase. See enclosed warranty sheet for additional information.

## Service

If the microphone does not function properly, check that it is aimed correctly and is configured and connected as described in the MB-100 interface data sheet. Check the slide-switch setting in the interface. If there is hum or no signal, first repair or replace the cable.

If you determine the microphone product(s) is defective, return the complete product in its original packaging to: **Crown Factory Service, 1718 West Mishawaka Road, Elkhart, IN 46517-9439. A Service Return Authorization (SRA) is required for product being sent to the factory for service. An SRA can be completed on line at [www.crownaudio.com/support/factserv.htm](http://www.crownaudio.com/support/factserv.htm).**

For further assistance or technical support call **800-342-6939**.



**H** A Harman International Company

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