

## HM1 Headset Microphone

- **Lightweight—just 1.3 ounces, less cable**
- **Behind-the-head headband is comfortable and stays in place**
- **Cardioid pickup pattern ensures good gain before feedback**
- **Frequency response and proximity effect similar to handheld vocal mics**

### SPECIFICATIONS

#### Generating Element:

Electret condenser

#### Frequency Response (1/2-in. distance; see Figure 1):

30-18,000 Hz

#### Sensitivity (open circuit voltage at 1,000 Hz):

22 mV/pascal

#### Polar Pattern (see Figure 2):

Cardioid

#### Maximum SPL, 1% Distortion:

146 dB

#### Power Requirements:

1 to 10 V dc

#### Operating Current at 9 V dc:

300-400  $\mu$ a

#### Finish:

Nonreflective black

#### Output Cable:

1.5 m (5 ft) long, 2.5 mm (0.10 in.) diameter; miniature audio cable permanently attached between microphone and connector

#### Output Connector:

Switchcraft TA4F (pin 1 power, pin 2 N/C, pin 3 audio, pin 4 shield)

#### Accessories Furnished :

Black windscreen

#### Optional Accessories:

Replacement windscreen EV part no. 71705

#### Dimensions,

##### Headset:

140 mm (5.5 in.) nominal at widest point; 160 mm (6.0 in.) boom arm

##### Microphone:

25.4 mm (1.0 in.) long, 10.6 mm (0.4 in.) high, 6.4 mm (0.25 in.) deep

#### Net Weight (less cable and connector):

37 grams (1.3 oz)

### DESCRIPTION AND APPLICATIONS

The Electro-Voice HM1 headset microphone, designed to be used with the MS-2000AB bodypack wireless system, is the ideal microphone for anyone who requires high-quality vocals in a hands-free application. The HM1 is perfect for use by lead vocalists, singing instrumentalists, dancers, aerobic instructors and other presenters.

The HM1 has a miniature, noise-cancelling electret condenser element designed with a cardioid polar pattern which attenuates background noises such as sound from nearby floor monitors, on-stage musical instruments and crowd noise. The furnished open-pore windscreen slips over the microphone element to reduce wind noise and minimize P-popping—the excessive explosive breath noise caused by overemphasized “p” and “t” sounds.

The Electro-Voice HM1 headset microphone employs a comfortable and inconspicuous behind-the-head headband and flexible boom arm in an attractive nonreflective black matte finish. The flexible boom, which descends from the right of the headband, is enclosed with protective shrink tubing to shield the boom arm from deterioration and to prevent the flexible tube from catching on facial hair. The facial features of the performer or speaker will not be obstructed due to the HM1's unobtrusive design. The headband and microphone boom adjust to fit any performer or speaker.

The HM1 is designed to have a frequency response similar to a handheld vocal microphone. The HM1 headset exhibits bass-boost (proximity-effect) warmth that many vocalists prefer. The amount of proximity effect can be adjusted by moving the microphone element closer or farther away from the mouth.

The HM1 is permanently connected to a 1.5-m (5-ft) two-conductor shielded cable terminated with a miniature Switchcraft TA4F 4-pin connector.

### MICROPHONE PLACEMENT

Place the curved portions of the headset over your ears with the microphone positioned to the right side of your mouth. The flexible boom allows adjustment relative to the right corner of your mouth. To find the optimum location of the microphone, perform the following steps during the sound check:

1. Center the microphone element in front of the right corner of your mouth by bending the flexible boom up or down.
2. If P-popping is detected, bend the flexible boom and move the microphone element further away from your mouth.
3. If the sound is thin and weak, move the microphone element closer to your mouth and try raising or lowering the microphone element.

Experiments indicate that the best control of P-popping is to position the microphone element off to the side of the mouth, away from the center.

### USING THE HM1 HEADSET WITH THE MS-2000AB WIRELESS SYSTEM

Plug the microphone connector into the bodypack and position the microphone element as described above. Sing or speak at performing level into the microphone while observing the LED audio level meter on the MR-2000A receiver. Voice peaks should be in the higher green or yellow LED's; average levels should normally light some of the green LED's.

FIGURE 1 — HM1 Frequency Response at 1/2 Inch

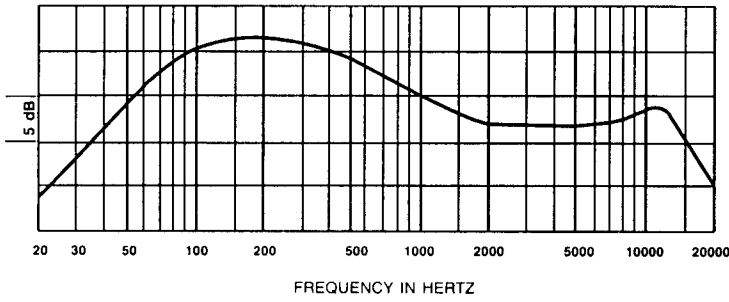
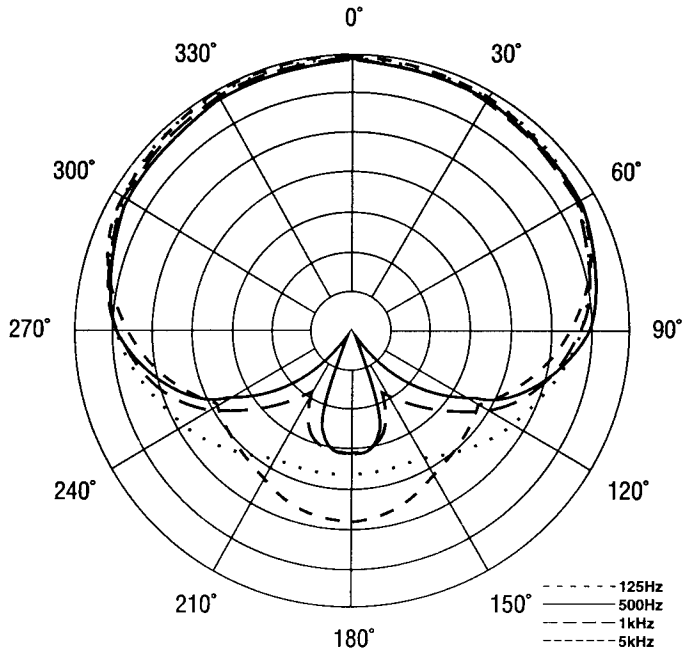


FIGURE 2 — HM1 Polar Response



If distortion or flawed audio is heard, check the LED located on the MB-2000A transmitter; if the LED is flashing with voice peaks, the transmitter is overloading. Adjust the transmitter's attenuation control counterclockwise until the flashing stops. Also, check the condition of the transmitter's battery and replace if necessary.

**WARRANTY (Limited)**

Electro-Voice products are guaranteed against malfunction due to defects in materials or workmanship for a specified period, as noted in the individual product-line statement(s) below, or in the individual product data sheet or owner's manual, beginning with the date of original purchase. If such malfunction occurs during the specified period, the product will be repaired or replaced (at our option) without charge. The product will be returned to the customer prepaid. **Exclusions and Limitations:** The Limited Warranty does not apply to: (a) exterior finish or appearance; (b) certain specific items described in the individual product-line statement(s) below, or in the individual product data sheet or owner's manual; (c) malfunction resulting from use or operation of the product other than as specified in the product data sheet or owner's manual; (d) malfunction resulting from misuse or abuse of the product; or (e) malfunction occurring at any time after repairs have been made to the product by anyone other than Electro-Voice or any of its authorized service representatives. **Obtaining Warranty Service:** To obtain warranty service, a customer must deliver the product, prepaid, to Electro-Voice or any of its authorized service representatives together with proof of purchase of the product in the form of a bill of sale or receipted invoice. A list of authorized service representatives is available from Electro-Voice at 600 Cecil Street, Buchanan, MI 49107 (616/695-6831 or 800/234-6831) and/or Electro-Voice West, at 8234 Doe Avenue, Visalia, CA 93291 (209/651-7777 or 800/825-1242). **Incidental and Consequential Damages Excluded:** Product repair or replacement and return to the customer are the only remedies provided to the customer. Electro-Voice shall not be liable for any incidental or consequential damages including, without limitation, injury to persons or property or loss of use. Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitation or exclusion may not apply to you. **Other Rights:** This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

**Electro-Voice Wireless Systems** are guaranteed against malfunction due to defects in materials or workmanship for a period of one (1) year from the date of original purchase. The Limited Warranty does not extend to cables or cable connectors. Additional details are included in the Uniform Limited Warranty Statement.

Service and repair address for this product: Electro-Voice, Inc., 600 Cecil Street, Buchanan, Michigan 49107 (616/695-6831 or 800/234-6831).

Specifications subject to change without notice.

