

# GLM-100

# GLM-100E

# GLM-200



The Crown® GLM or “Great Little Mic” is a miniature electret condenser microphone designed for professional recording and sound reinforcement. It offers the quality of large studio microphones, yet is nearly invisible in use.

The GLM can be attached to an acoustic guitar, sax, flute or the performer’s face to allow freedom of movement. It can be attached to drum rims to pick up a drum set without the unsightly clutter of boom stands. These attachments can be made using the included mounting hardware or tape. Used as a lavalier microphone, or hidden on a film set, the GLM disappears in use yet provides excellent sound quality.

The **GLM-100** is an omnidirectional mic with a low-impedance balanced XLR-type output, powered by 12 to 48V phantom power.

The **GLM-100E** is an omnidirectional mic for wireless use. It has a medium impedance unbalanced, unterminated output and is powered by 1.1 to 20 VDC, unipolar or bipolar.

The **GLM-200** is a hypercardioid mic with a low-impedance balanced XLR-type output, powered by 12 to 48V phantom power.

The omnidirectional **GLM-100** or **GLM-100E** are the best choice if you need:

- Less wind noise
- Less pickup of mechanical vibration
- Deep low-frequency response down to 20 Hz
- 150 dB maximum SPL
- Smoother frequency response

The hypercardioid **GLM-200** is the best choice if you need:

- Rejection of background noise, room acoustics, feedback, and sounds behind the microphone.

The GLM-100 or GLM-100E may have adequate rejection of those unwanted sounds if they are used close to the sound source.

Made of a rugged, resilient space-age material, the GLM’s molded housing is designed to resist damage from demanding professional use.

Performance benefits of the GLM include: a wide, smooth frequency response; excellent transient response; and minimal off-axis coloration.

The GLM’s housing is designed to improve the high-frequency response of the microphone capsule. In contrast, the frequency response of large microphone capsules often is degraded by the microphone housing (due to sound diffraction).

Included with the GLM-100 and GLM-200 are a GLM-UM Universal Mount, a GLM-TB Tie Bar, GLM-BC Belt Clip, and a GLM-WS2 Windscreen. Included with the GLM-100E are a GLM-TB Tie Bar and GLM-WS2 Windscreen.

## MINIATURE OMNIDIRECTIONAL AND HYPERCARDIOID MICROPHONES

### Specifications

**Type:** Miniature condenser.

**Element:** Electret condenser.

#### Frequency Response (typical):

GLM-100 and GLM-100E: 20 Hz to 20,000 Hz.

See Fig. 1.

GLM-200: 60 Hz to 20,000 Hz. See Fig. 2.

#### Polar Pattern:

GLM-100 and GLM-100E: Omnidirectional

See Fig. 3 on other side.

GLM-200: Hypercardioid. See Fig. 4 on other side.

#### Impedance:

GLM-100: 240 ohms balanced. Recommended minimum load impedance 1000 ohms.

GLM-100E: 3500 ohms unbalanced with unipolar powering, 1140 ohms unbalanced with bipolar powering. Recommended minimum load impedance 8000 ohms.

GLM-200: 100 ohms, balanced. Recommended minimum load impedance 1000 ohms.

#### Open Circuit Sensitivity:

GLM-100: 3.2 mV/Pa\* (–50 dB re 1 volt/Pa\*)

GLM-100E: 8 mV/Pa\* (–42 dB re 1 volt/Pa\*)

GLM-200: 6 mV/Pa\* (–44.5 dB re 1 volt/Pa\*).

#### Power Sensitivity:

GLM-100: –50 dB re 1 mW/Pa\*.

GLM-200: –40.5 dBm/Pa\*.

#### Equivalent Noise Level:

GLM-100 and GLM-100E: 28 dB SPL

A-weighted, typical  
(0 dB = .0002 dyne/cm<sup>2</sup>).

GLM-200: 31 dB SPL A-weighted, typical  
(0 dB = .0002 dyne/cm<sup>2</sup>).

#### S/N Ratio:

GLM-100 and GLM-100E: 66 dB at 94 dB SPL.

GLM-200: 63 dB at 94 dB SPL.

#### Maximum Sound Pressure Level:

GLM-100: 150 dB SPL produces 3% THD.

GLM-100E: 148 dB SPL produces 3% THD with bipolar power; 120 dB SPL produces 3% THD with unipolar power.

GLM-200: 131 dB SPL produces 3% THD.

#### Polarity:

GLM-100 and GLM-200: Positive pressure on the diaphragm produces positive voltage on pin 2 with respect to pin 3 of output connector.

GLM-100E: Positive pressure on the diaphragm produces positive voltage on white lead with respect to shield.

#### Operating Voltage:

GLM-100 and GLM-200: Phantom power, 12 to 48 volts DC, positive voltage on pins 2 and 3 with respect to pin 1 of output connector.

GLM-100E: Unipolar powering is +1.1 to 20 VDC on red lead relative to shield. White lead is audio. Bipolar powering is + voltage on red lead and – voltage on white lead relative to shield.



Fig. 1. GLM-100/GLM-100E Frequency Response

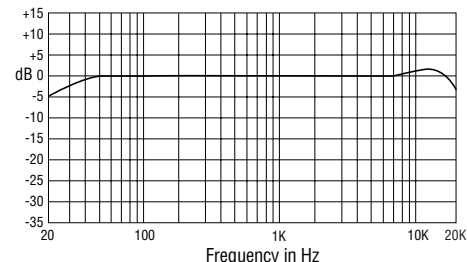
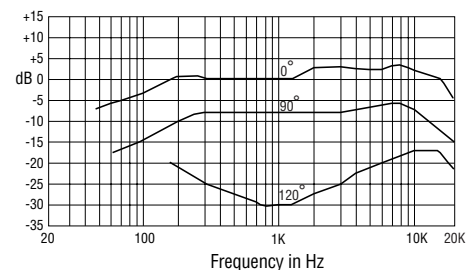


Fig. 2. GLM-200 Frequency Response



#### Current Drain:

GLM-100: 1.1 mA.

GLM-100E: 25 microamperes (unipolar power); 0.5 milliamperes (bipolar power).

GLM-200: 1.4 mA.

#### Materials:

Black PVC housing.

#### Cable:

GLM-100 and GLM-200: 8-foot, black, permanently attached cable with rugged strain/flex relief and 3-pin pro audio connector.

GLM-100E: 4-foot, black, two-conductor shielded cable with no connector. White: audio, red: B+, shield: ground.

**Weight:** 1 ounce (27.5 grams) without connector, 2.8 ounces (78.5 grams) with connector.

**Dimensions:** See Fig. 5 on other side.

#### Included Accessories:

GLM-100 and GLM-200: GLM-UM Universal Mount, GLM-TB Tie Bar, GLM-BC Belt Clip, and a GLM-WS2 Windscreen.

GLM-100E: GLM-TB Tie Bar and GLM-WS2 Windscreen.

**Optional Accessories:** Crown PH-1A Battery Phantom Supply (battery or AC adapter powered, single channel, 475 hours battery life with GLM-100, 375 hours battery life with GLM-200).

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



# GLM-100 GLM-100E GLM-200

cm<sup>2</sup>). SPL for 3% THD shall be 150 dB. The Crown GLM-100E microphone is specified.

### GLM-200

The microphone shall be the Crown GLM-200. The microphone shall be a hypercardioid electret condenser type requiring 12 to 48 volts phantom power. A smooth frequency response from 60 Hz to 20,000 Hz shall be obtained, with a uniform off-axis response. The microphone shall have an open-circuit sensitivity of 6 mV/Pa. A permanently attached, 8 foot (2.5m), two-conductor, shielded cable with XLR-type connector shall be supplied with the microphone. The microphone shall accept a 131 dB SPL input while providing no greater than 3% THD (open circuit termination). Equivalent noise shall be 31 dBA typical (0 dB = .0002 dyne/cm<sup>2</sup>). The Crown GLM-200 microphone is specified.

### Warranty

Crown professional microphones are guaranteed against malfunction for a period of three years from date of original purchase. Please refer to the enclosed full warranty statement for more detail.

### Service

If the unit fails to work, recheck all your connections as described in the Installation Section. Check the cables. Also check the power supply to verify that it is supplying correct voltage. 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). If service is required, return the microphone in its original packaging to: **Crown Factory Service, 1718 West Mishawaka Road, Elkhart, Indiana 46517-9439**. For further assistance or technical support call **800-342-6939**.



H A Harman International Company

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Fig. 3. GLM-100/GLM-100E Polar Response

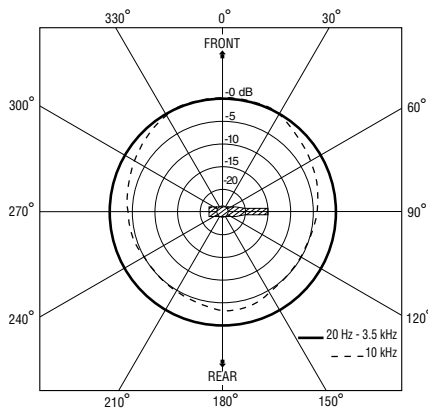
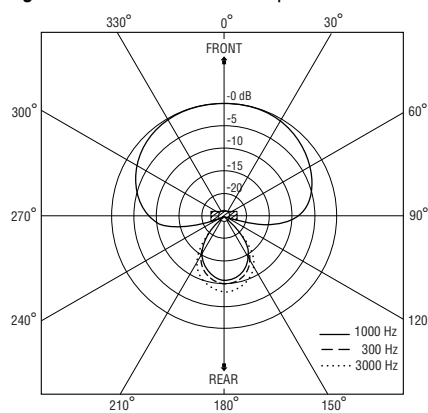


Fig. 4. GLM-200 Polar Response



### Operating Instructions

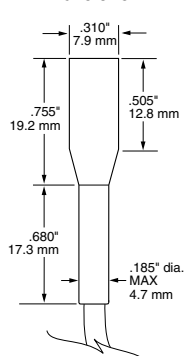
The GLM-100 and GLM-200 require 12 to 48V phantom power to operate. Crown makes a model PH-1A, a single-channel phantom supply powered by battery or AC adapter. For special applications you can make your own battery supply as suggested in Figure 6.

Using a microphone cable, plug the GLM-100 or GLM-200 into a phantom power supply. Connect the power-supply output to a mixer mic input, or if your mixer has phantom power built in, plug the GLM directly into a mixer mic input.

For outdoor or vocal use, place the included GLM-WS2 Windscreen on the microphone to reduce wind noise and breath popping.

The front of the microphone is indicated by the word "FRONT" on the microphone housing.

Fig. 5. Dimensions



Although the cable is rugged, excessive abuse such as tugging and twisting will shorten its life. It should last indefinitely if treated with care. The cable has been kept short to allow easy wrapping and to reduce the amount of thin cable on stage.

As with all electret condenser microphones, the GLM should be kept out of hot environments (greater than 130 degrees F or 54.5 degrees C). Following this suggestion will ensure years of reliable performance from the mic capsule.

### Suggestions for Use

Detailed GLM application notes are in the *Crown Microphone Application Guide* available free from your dealer, directly from Crown, or online at [www.crownaudio.com](http://www.crownaudio.com).

For wireless applications, use the GLM-100E. Wiring diagrams for various transmitter models are in *Crown Technical Bulletin #3, Connections for Wireless Microphone Applications*. This document is available free from your Crown dealer, directly from Crown, or online at [www.crownaudio.com](http://www.crownaudio.com).

### Architects' and Engineers' Specifications

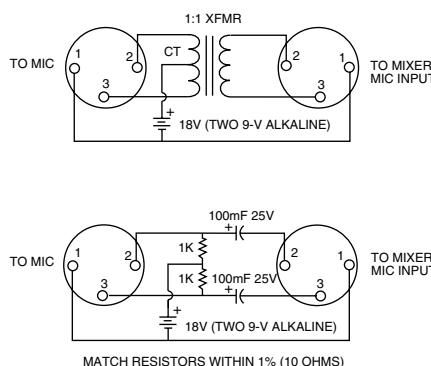
#### GLM-100

The microphone shall be the Crown GLM-100. The microphone shall be an omnidirectional electret condenser type requiring 12 to 48 volts phantom power. A smooth frequency response from 20 Hz to 20,000 Hz shall be obtained, with a uniform off-axis response. The microphone shall have an open-circuit sensitivity of 3.2 mV/Pa. A permanently attached, 8 foot (2.5m), two-conductor, shielded cable with 3-pin pro audio connector shall be supplied with the microphone. The microphone shall accept a 150 dB SPL input while providing no greater than 3% THD (open circuit termination). Equivalent noise shall be 28 dBA typical (0 dB = .0002 dyne/cm<sup>2</sup>). SPL for 3% THD shall be 150 dB. The Crown GLM-100 microphone is specified.

#### GLM-100E

The microphone shall be the Crown GLM-100E. The microphone shall be an omnidirectional electret condenser type requiring 1.2 to 20 VDC powering. A smooth frequency response from 20 Hz to 20,000 Hz shall be obtained, with a uniform off-axis response. The microphone shall have an open-circuit sensitivity of 8 mV/Pa. A permanently attached, 4 foot (1.2m), two-conductor, shielded cable with an unterminated end shall be supplied with the microphone. The microphone shall accept a 150 dB SPL input while providing no greater than 3% THD (open circuit termination). Equivalent noise shall be 28 dBA typical (0 dB = .0002 dyne/

Fig. 6. Battery Phantom Supplies



MATCH RESISTORS WITHIN 1% (10 OHMS)