

SHURE **BETA GREEN**

BG 1.0

- Dynamic vocal mic
- Cardioid pattern
- Built-in shock mount
- Low or High impedance

BG 2.0

- Neodymium magnet for high output
- Dynamic vocal mic
- Cardioid pattern
- Improved shock mount
- Low impedance

BG 3.0

- Neodymium magnet for extra-high output
- Dynamic vocal mic
- Cardioid pattern
- Superior shock mount
- Low impedance

BG 4.0

- Condenser instrument recording mic
- Battery or phantom power
- Extended flat frequency response
- Cardioid pattern
- Low impedance

BG 5.0

- Condenser vocal mic
- Battery or phantom power
- Extended, tailored frequency response
- Cardioid pattern
- Low impedance



BetaGreen MODEL BG 1.0 UNIDIRECTIONAL DYNAMIC MICROPHONE

The BG 1.0 is an economical, reliable all-purpose microphone; well-suited to a variety of applications in live music, sound reinforcement, and home recording.

The BG 1.0 offers a great professional on-stage look, combined with the ability to handle various miking situations from closeup vocals to instruments. And the BG 1.0 can be set for either low or high impedance operation, making it compatible with almost any mic input.

Features:

- Rugged dynamic-type cartridge for high reliability
- Cardioid pickup pattern reduces feedback and pickup of unwanted noise
- Specially shaped frequency response for clear and natural voice reproduction
- Switchable impedance to match either Low Z or High Z inputs
- Internal shock mount for reduced pickup of handling noise and stand vibration
- On/Off switch for convenient control of audio signal by performer
- Sturdy ball-type grille with built-in wind and pop filter
- Zippered carrying bag and unbreakable swivel adapter included

Basic Microphone Technique

Good microphone technique will add to your effectiveness as a performer. Keep the following points in mind when using your Shure BetaGreen Microphone.

1. The distance from the performer or instrument to the microphone has a significant effect on the sound. For increased bass response, get close to the microphone (within 6 inches or less). The closer the microphone is to the sound source, the more the bass response will be increased.

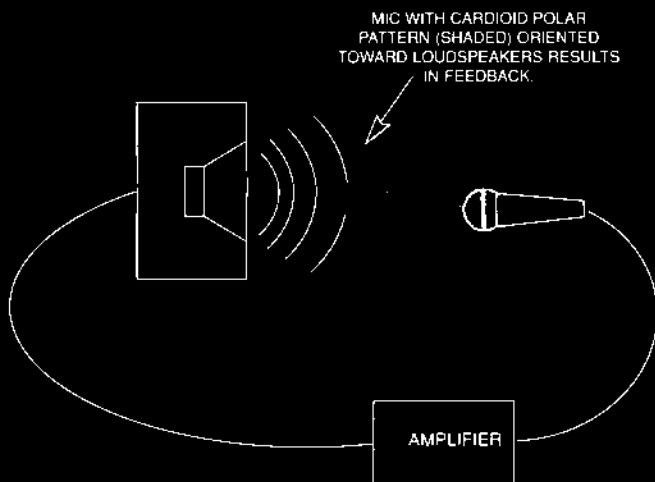


**DISTANCE FROM MICROPHONE AFFECTS PERFORMANCE
FIGURE 1**

- Beneficial changes in the level and character of sound coming from the loudspeakers can be achieved by changing your distance from the microphone. For instance, working up close can provide maximum bass enhancement without feedback. Practice and experience will develop your skill in varying your distance to achieve the desired effects.
- For maximum isolation from other sound sources and background noise, position the microphone as close to the source as practical, and aimed at the sound source.

Feedback and Directional Microphones

A performer's worst enemy in using a microphone is feedback. This is a harsh howl or squeal that occurs when the microphone picks up sound from the loudspeakers, reamplifies and reproduces it over and over again (see Figure 2). This vicious circle results in feedback.

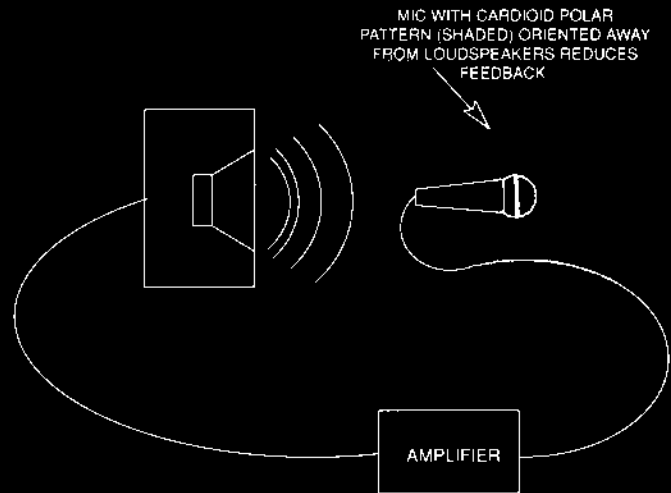


FEEDBACK LOOP
FIGURE 2

A directional microphone with a cardioid pickup pattern aids in preventing feedback because it rejects sound that originates from the sides and rear (see Figure 3). Sound pickup from the sides is reduced by about one half, and pickup from the rear is reduced by about nine tenths. You can hear this reduction in pickup by speaking into the microphone as you rotate it from front to back.

If you use your directional microphone close to the performer or instrument, you will ensure that the direct sound will be much louder than the feedback-producing amplified sound. Because less amplifier gain is required to achieve the desired overall loudness, the amplified sound will likely remain below the volume that triggers feedback.

Other hints in preventing feedback are: keep the loudspeakers as far to the sides as possible; be sure that the microphones point toward the performers and away from the loudspeakers; and make certain that any stage monitor speakers are positioned in front of the performers and face the insensitive rear of the microphone.



CARDIOID MICROPHONE MINIMIZES POSSIBILITY OF FEEDBACK
FIGURE 3

Directional Microphones and Proximity Effect

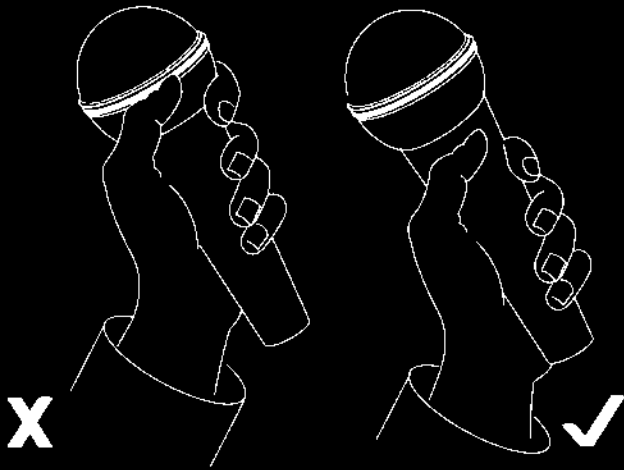
Because of their usefulness in reducing the likelihood of feedback, directional microphones are best in sound reinforcement and public address.

When directional microphones are used close to a vocalist or musical instrument, there is an increase in bass (low-frequency) output called proximity effect. Typical increases due to proximity are shown in Figure 5.

Proximity effect can be used to **improve** your sound.

- With vocalists**, it increases bass response, giving a fuller, more powerful quality to the voice. Proximity effect can be especially effective during soft passages where extra emphasis is needed.
- With instruments**, it allows the user to change bass output without tone controls, simply by changing the distance between source and microphone. In addition, close miking improves acoustical isolation by minimizing pickup of other instruments.

The cardioid directional characteristics of your microphone are provided by means of rear sound entry ports that cancel sounds originating from the sides and back of the microphone. It is therefore important that these ports not be covered at any time. When holding the microphone, do not allow your hand to partially cover the grille (see Figure 4).



DO NOT COVER THE GRILLE WITH YOUR HAND
FIGURE 4

Most Shure directional microphones are designed to provide satisfactory response at low frequencies yet still allow proximity effect to be used advantageously when desired. To learn how to use proximity effect, you need to hear the amplified result. Use monitor speakers or headphones, and, just as you practice your instrument, practice your microphone technique to get the precise sound you want.

OPTIONAL WINDSCREEN

If you notice excessive popping of p's and b's when the microphone is used closeup, a helpful accessory is the Shure A58WS windscreen in addition to the filter built-in to the ball grille. The windscreen will also minimize pickup of wind noise when the microphone is used outdoors.

SHOCK MOUNTING

Your Shure BetaGreen microphone features a carefully engineered shock mount to minimize transmission of mechanical noise. To reduce noise pickup when the microphone is handheld, take care to avoid unnecessarily handling it. To further reduce mechanical noise when the microphone is used on a stand, use a shock-mounted stand adapter such as the Shure A55HM. Also, be sure to locate the stand on a solid, flat surface.

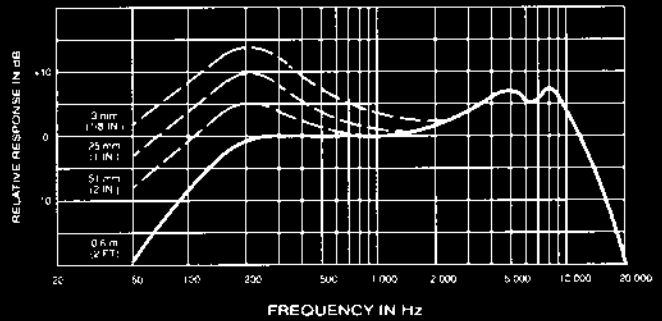
SPECIFICATIONS

Type

Dynamic

Frequency Response

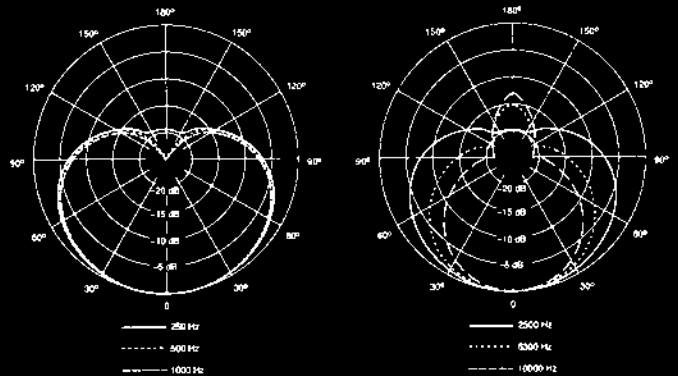
80 to 12,000 Hz (see Figure 5)



TYPICAL FREQUENCY RESPONSE
FIGURE 5

Polar Pattern

Cardioid (directional), symmetrical about axis (see Figure 6)



TYPICAL POLAR PATTERNS
FIGURE 6

Output Impedance

Dual: 600 Ω rated (Lo Z) and 10 kΩ rated (Hi Z). Solderless impedance change by means of internal socket on microphone connector

Output Level (at 1,000 Hz)

	<u>LO Z</u>	<u>HI Z</u>
Open Circuit Voltage	-77.0 dB (.141 mV)	-65.0 dB (.562 mV)

0 dB = 1 V/μbar

Phasing

Positive pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of the microphone output connector

Environmental Conditions

This microphone will operate over a temperature range of -29 to 57°C (-20 to 135°F), and at relative humidity of 0 to 95%.

Connector

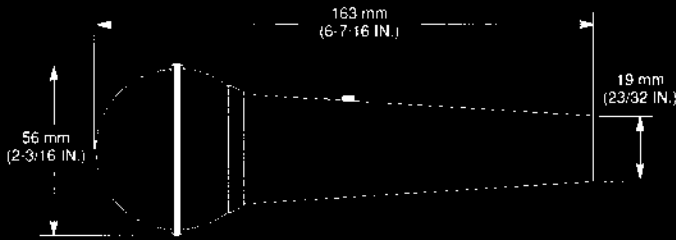
3-pin professional audio connector (XLR) designed to mate with Cannon XL series, Switchcraft A3 (Q.G.) series, or equivalent

Case

Die casting with black finish

Dimensions

See Figure 7



OVERALL DIMENSIONS
FIGURE 7

Net Weight

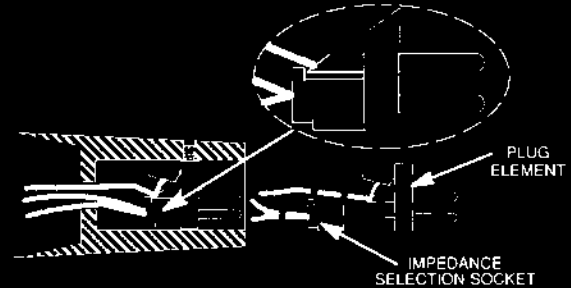
309 g (10.9 oz)

IMPEDANCE SELECTION

The microphone is shipped connected for low impedance operation. To change to high impedance (see Figure 8), proceed as follows.

1. Remove plug element by turning slotted setscrew in (counterclockwise); use long-nose pliers, and pull plug element from case being careful not to stretch and break wires.
2. Disconnect 2-terminal impedance selection socket from rear of plug element by pulling it off pin.
3. Reconnect impedance selection socket so that pin 3 of plug element is now connected to blue (high-impedance) lead.

4. Swivel socket so that it does not extend beyond edge of connector (see inset in Figure 8).
5. Reinsert plug element into microphone; and tighten setscrew securely by turning out (clockwise).



IMPEDANCE SELECTION – CONNECTOR END OF
MICROPHONE
FIGURE 8

FURNISHED ACCESSORIES

Swivel Adapter	A25C
Carrying/Storage Bag	26A13

OPTIONAL ACCESSORIES

Shock Stopper™ Isolation Mount	A55HM
Windscreen	A58WS Series
Cable (7.6 m [25 ft])	C25J

REPLACEMENT PARTS

Screen and Grille Assembly	90HH2600
Cartridge Assembly	99A914
Plug Element	95A2008

SHURE®

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