MODEL 503BG
Unidirectional Dynamic Microphone

Developed for computer voice recognition applications, the 503BG microphone offers excellent voice fidelity while reducing background noise. Also use the 503BG in other close-talking applications such as paging and talkback.

The 503BG features a low-impedance, moving coil type transducer with an integral humbucking coil and an attached two-conductor shielded cable with a built-in strain relief. It produces a frequency response with an essentially constant output voltage over the voice spectrum when used close to the sound source.

The 503BG’s case is aluminum with a black enamel finish. It mounts to a gooseneck, a fixed pipe or a microphone stand using a standard 5/8”-27 thread. To secure the mounted BG503, tighten the 4-40 screw with the supplied #4 Allen (hex-head) wrench.

Features
- Optimized performance in voice processing and computer voice recognition applications.
- Smooth frequency response with excellent fidelity in the voice range.
- Cardioid pickup pattern and close-talking operation keep unwanted signals and background noise at low levels.
- Constant output over voice spectrum when close talked.
- Humbucking coil minimizes undesirable hum effects such as CRT interference.
- Low-impedance design permits long cable runs in extreme hum fields.
- Small unobtrusive design does not interfere with CRT visibility.
- Rugged and reliable for years of consistent operation.

SPECIFICATIONS

Type
Dynamic, unidirectional (cardioid), close-talking

Frequency Response
100 to 7,000 Hz (Figure 1)

![Typical Frequency Response](FIGURE 1)

Impedance
170 ohms actual

Output Level (Open Circuit Voltage)
-61.5 dBV/Pa (.84 mV)*
-41.5 dB (8.4 mV)**

*1 Pa = 94 dBSPL
**0 dB = 1V/100 µbar

Polarity
Positive pressure on diaphragm produces positive voltage on white conductor with respect to black conductor (Figure 2)

Hum Pickup
Maximum 15 dB equivalent SPL in m0e field

Cable
1.2 m (4 ft) two-conductor shielded

Case
Aluminum with black enamel finish; stainless steel screen.

©2007 Shure Incorporated
27C8091 (Rev. 7)
Net Weight
128 g (4.5 oz)

Dimensions
See Figure 3

Operation
For best performance, speak as close to the 503BG as comfort permits. A distance of 1 to 5 cm (0.4 to 2 inches) provides the greatest discriminations between voice and background noise.

Acoustic Considerations
The 503BG maximizes performance in close-talking applications through its tailored frequency response, directionality and distance discrimination. It optimizes and controls sounds within the 100 to 7000 Hz frequency range and reduces sounds outside that range. The BG503 rejects noise through its inherent directional properties and discriminates against distant sounds in favor of close-range sounds.

OPTIONAL ACCESSORIES
In-Line On-Off-Momentary Switch ............... A120S
12-Inch Gooseneck .................................. G12
18-Inch Gooseneck ................................. G18
6-Inch Gooseneck (Side Vent) ................. G6A
18-Inch Gooseneck (Side Vent) ................. G18A
12-Inch Gooseneck (Side Vent, 3-Pin Conn.) .. G12-CN
18-Inch Gooseneck (Side Vent, 3-Pin Conn.) .. G18-CN
Mounting Flange ................................. A12
Heavy-Duty Mounting Flange ................. A13HD