

### 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.

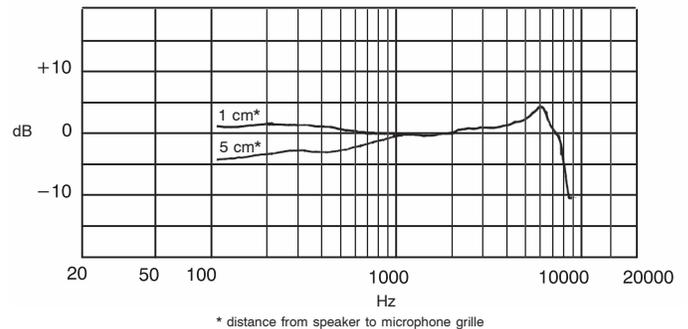
### SPECIFICATIONS

#### 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 (.84mV)\*

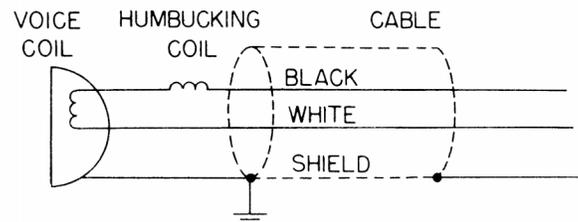
-41.5 dB (8.4 mV)\*\*

\*1 Pa = 94 dB SPL

\*\*0 dB = 1V/100  $\mu$ bar

#### Polarity

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



INTERNAL CONNECTIONS

FIGURE 2

#### Hum Pickup

Maximum 15 dB equivalent SPL in m0e field

#### Cable

1.2 m (4 ft) two-conductor shielded

#### Case

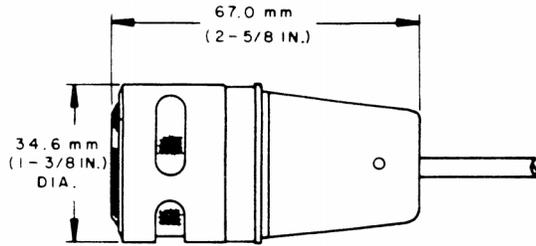
Aluminum with black enamel finish; stainless steel screen.

## Net Weight

128 g (4.5 oz)

## Dimensions

See Figure 3



**OVERALL DIMENSIONS**  
**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

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