General Description

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.

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.

Specifications

Type
Dynamic (moving coil), Unidirectional (Cardioid)

Frequency Response
100 to 7,000 Hz

Impedance
170 Ω actual

Output Clipping Level
open circuit voltage
-61.5 dBV/Pa (.84 mV) [1]

Polarity
Positive pressure on diaphragm produces positive voltage on white conductor with respect to black conductor

Hum Pickup
Maximum 15 dB equivalent SPL in m0e field

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Cable
1.2 m (4 ft) two-conductor shielded

Housing
Aluminum with black enamel finish; stainless steel screen

Net Weight
128 g (4.5 oz.)

Typical Frequency Response

* distance from speaker to microphone grille

Internal Connections

0 [1] 1 Pa = 94 dB SPL
## Accessories

### Optional Accessories

<table>
<thead>
<tr>
<th>Accessories</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-Line On/Off Switch (No Connectors, Requires Soldering)</td>
<td>A120S</td>
</tr>
<tr>
<td>12” Gooseneck, Chrome</td>
<td>G-12</td>
</tr>
<tr>
<td>18” Gooseneck, Chrome</td>
<td>G-18</td>
</tr>
<tr>
<td>6” Gooseneck-Side Vent, Chrome</td>
<td>G6A</td>
</tr>
<tr>
<td>18” Gooseneck-Side Vent, Chrome</td>
<td>G18A</td>
</tr>
<tr>
<td>12” Gooseneck with Attached Female XLR Connector, Chrome</td>
<td>G12-CN</td>
</tr>
<tr>
<td>18” Gooseneck with Attached Female XLR Connector, Chrome</td>
<td>G18-CN</td>
</tr>
<tr>
<td>Mounting Flange, Matte Silver</td>
<td>A12</td>
</tr>
<tr>
<td>Mounting Flange, Heavy Duty, Matte Silver</td>
<td>A13HD</td>
</tr>
</tbody>
</table>

## Certifications

This product meets the Essential Requirements of all relevant European directives and is eligible for CE marking.

The CE Declaration of Conformity can be obtained from: www.shure.com/europe/compliance

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