MX395 -- Low-Profile Boundary Microphone

General Description

Shure® MX395 low-profile microphones are for use in boardrooms and other sites where aesthetics are important. The MX395 is only 2.5 cm (1 in.) in diameter, and extends just 2 cm above the mounting surface when installed. Despite its small size, the MX395 delivers clear, high quality sound.

Features

- Low profile, aesthetic design
- Wide dynamic range and smooth frequency response
- RF filtering with CommShield® technology
- Available with logic-controlled bi-color status indicator

Model Variations

The MX395 is available in cardioid, omnidirectional, and bidirectional polar patterns, with or without an LED status indicator, with a black, white, or aluminum finish.

Polar Patterns

The polar pattern is indicated by the molded grille.

Microphone Placement

For best low-frequency response and rejection of background noise, place the microphone on a large, flat surface, such as a floor, table, or lectern.

To reduce reverberance, avoid reflective surfaces above or to the side of the microphone, such as beveled sides of pulpits or overhanging shelves.
DIP Switches

Set DIP Switch 1 up to engage the low cut filter, which attenuates frequencies by 6 dB per octave below 150 Hz.

<table>
<thead>
<tr>
<th>Switch</th>
<th>Down (default)</th>
<th>Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Full frequency response</td>
<td>Low cut filter</td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

Installation

Install the microphone into a tabletop as shown.

Important:

- Align indentation toward talker
• Do not over tighten the wing nut, as this reduces shock isolation

LED Logic

For models equipped with an LED, use the included 5-pin XLR connector to wire the microphone to an automatic mixer or other logic device.

**Note:** Connect the LED IN to the gate output to illuminate the LED when the channel is gated on.

Do not use the relay ports on Crestron and AMX devices. Use the I/O logic ports instead.

The LED logic may not function when connecting to devices that do not have internal "pull-up resistor" logic circuits, such as ClearOne DSP products. External pull-up resistor circuits can be added for each microphone. Visit www.shure.com/FAQ for detailed instructions.

Logic Connection

Connection to device with internal "pull-up resistor" logic circuit
LED Indicator Response to Logic Signal at Pin 5

Pin Assignments

3-Pin XLR

5-Pin XLR
Accessories

Furnished Accessories

Wing Nut  
65A2190

Rubber Isolation Ring  
66A405

5-pin XLR, Female (MX395-LED variations)  
95A2529

Specifications

All measurements taken with microphone mounted on a wooden surface (76 x 76 cm)

Cartridge Type
Electret Condenser

Frequency Response
50–17000 Hz

Polar Pattern

<table>
<thead>
<tr>
<th>Polar Pattern</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MX395/O</td>
<td>Omnidirectional</td>
</tr>
<tr>
<td>MX395/C</td>
<td>Cardioid</td>
</tr>
<tr>
<td>MX395/BI</td>
<td>Bidirectional</td>
</tr>
</tbody>
</table>

Output Impedance
170 Ω
Output Configuration
Active Balanced

Sensitivity
@ 1 kHz, open circuit voltage

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardioid</td>
<td>-35 dBV/Pa (18 mV)</td>
</tr>
<tr>
<td>Omnidirectional</td>
<td>-28 dBV/Pa (42 mV)</td>
</tr>
<tr>
<td>Bidirectional</td>
<td>-37 dBV/Pa (14 mV)</td>
</tr>
</tbody>
</table>

1 Pa=94 dB SPL

Maximum SPL
1 kHz at 1% THD, 1 kΩ load

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardioid</td>
<td>121 dB</td>
</tr>
<tr>
<td>Omnidirectional</td>
<td>114 dB</td>
</tr>
<tr>
<td>Bidirectional</td>
<td>123 dB</td>
</tr>
</tbody>
</table>

Equivalent Output Noise
A-weighted

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardioid</td>
<td>28 dB SPL</td>
</tr>
<tr>
<td>Omnidirectional</td>
<td>21 dB SPL</td>
</tr>
<tr>
<td>Bidirectional</td>
<td>29 dB SPL</td>
</tr>
</tbody>
</table>

Signal-to-Noise Ratio
Ref. 94 dB SPL at 1 kHz

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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Cardioid</td>
<td>66 dB</td>
</tr>
<tr>
<td>Omnidirectional</td>
<td>73 dB</td>
</tr>
<tr>
<td>Bidirectional</td>
<td>65 dB</td>
</tr>
</tbody>
</table>

Dynamic Range
1 kΩ load, @ 1 kHz
<table>
<thead>
<tr>
<th>Source</th>
<th>Common Mode Rejection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10 to 100,000 kHz</td>
</tr>
<tr>
<td></td>
<td>45 dB, minimum</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>Preamplifier Output Clipping Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>at 1% THD</td>
</tr>
<tr>
<td></td>
<td>−8 dBV (0.4 V)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>Logic Connections</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>LED IN</strong></td>
</tr>
<tr>
<td></td>
<td>Active low (≤1.0V), TTL compatible. Absolute maximum voltage: -0.7V to 50V.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>Net Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>136 g (0.30 lbs)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>Environmental Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Operating Temperature</strong></td>
</tr>
<tr>
<td></td>
<td>−18–57°C (0–135°F)</td>
</tr>
<tr>
<td></td>
<td><strong>Storage Temperature</strong></td>
</tr>
<tr>
<td></td>
<td>−29–74°C (−20–165°F)</td>
</tr>
<tr>
<td></td>
<td><strong>Relative Humidity</strong></td>
</tr>
<tr>
<td></td>
<td>0–95%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>Power Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>MX395</td>
<td>11–52 V DC, 2.0 mA</td>
</tr>
<tr>
<td>MX395-LED</td>
<td>48–52 V DC, 8.0 mA</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

Authorized European representative:

Shure Europe GmbH

Headquarters Europe, Middle East & Africa

Department: EMEA Approval

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