BETA 98AMP
Instrument Microphone
Microphone pour instruments
Instrumentenmikrofon
Microfono per strumento
Micrófono para instrumentos
Инструментальный микрофон
楽器用マイクロホン
악기 마이크
乐器话筒
General Description
The Shure Beta 98AMP is a compact, high-output, condenser microphone for professional sound reinforcement and studio recording. An extremely uniform cardioid polar pattern provides excellent gain-before-feedback, off-axis rejection of unwanted noise, and performance in high sound pressure level (SPL) environments.

The Beta 98AMP features an integrated preamplifier with XLR connection, a flexible gooseneck, and is packaged with the A75M Universal Microphone Mount accessory for precision adjustments and minimal stage clutter. For use with drums, percussion, and other fixed-placement applications.

Features
- Premier live performance microphone with Shure quality, ruggedness, and reliability
- Uniform cardioid polar pattern for maximum gain before feedback and superior rejection of off-axis sound
- Tailored frequency response shaped for drums and percussion
- Wide dynamic range for use in high SPL environments
- Compact design and integrated preamp reduce stage clutter and ease setup
- Flexible gooseneck for precise placement and easy adjustments
- Enamel coated metal construction and stainless steel inner grille resist wear and abuse

Performance Characteristics
- Exceptional low-frequency reproduction
- Extremely high SPL handling
- High output level
- No crossover distortion

Applications and Placement

General Rules for Use
- Aim the microphone toward the desired sound source; angle unwanted sounds toward its null point.
- Use the fewest amount of microphones as practical to increase the Potential Acoustic Gain and prevent feedback.
- Follow the 3 to 1 Rule by spacing each microphone by at least three times the distance to its source to reduce Phase Cancellation.
- Place microphones as far as possible from reflective surfaces to reduce Comb Filtering.
- When using directional microphones, work closely to the microphone for extra bass response to take advantage of Proximity Effect.
- Avoid excessive handling to minimize pickup of mechanical noise and vibration.
- Do not cover any part of the microphone grille, as this will adversely affect microphone performance.
- Add a windscreen when using the microphone outdoors.

The following table lists the most common applications and placement techniques. Keep in mind that microphone technique is largely a matter of personal taste; there is no one “correct” microphone position.

<table>
<thead>
<tr>
<th>APPLICATION</th>
<th>SUGGESTED MICROPHONE PLACEMENT</th>
<th>TONE QUALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tom-Toms</td>
<td>One mic on each tom or between a pair of toms, 2.5 to 7.5 cm (1 to 3 in.) above drum heads.</td>
<td>Medium attack; full, balanced sound.</td>
</tr>
<tr>
<td></td>
<td>Remove bottom head and place a mic inside pointing up toward top drum head.</td>
<td>Maximum isolation; full, balanced sound.</td>
</tr>
<tr>
<td>Snare Drum</td>
<td>2.5 to 7.5 cm (1 to 3 in.) above rim of top head of drum. Aim mic at drum head.</td>
<td>Most “snap” from drumstick.</td>
</tr>
<tr>
<td>Cymbals</td>
<td>Close-mike with A75M mount, avoiding range of cymbal movement</td>
<td>Maximum isolation; bright, with plenty of attack.</td>
</tr>
</tbody>
</table>

NOTE: Before each use, make sure the cartridge is tightly secured on the microphone, as vibration and accidental hits with drumsticks may loosen it, resulting in signal loss.

Positioning the Microphone
The flexible gooseneck allows precise adjustments to the microphone without moving the mount.

Note: Excessive twisting or forcing the gooseneck into extreme positions can permanently damage the microphone.

A75M Universal Microphone Mount
The Shure A75M mounts the Beta 98AMP on a variety of surfaces and instrument hardware. Reference the furnished A75M guide to correctly mount the microphone.
Load Impedance
Maximum SPL capability, output clipping level, and dynamic range vary with the input load impedance of the preamplifier to which you connect the microphone. Shure recommends a minimum input load impedance of 1000 Ω. Most modern microphone preamplifiers meet this requirement. Higher impedance results in better performance for these specifications.

Power Requirements
This microphone requires phantom power and performs best with a 48 Vdc supply (IEC-61938). However, it will operate with slightly decreased headroom and sensitivity with supplies as low as 11 Vdc.

Most modern mixers provide phantom power. You must use a balanced microphone cable: XLR-to-XLR or XLR-to-TRS.

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Cartridge Type</th>
<th>Electret Condenser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polar Pattern</td>
<td>Cardioid</td>
</tr>
<tr>
<td>Frequency Response</td>
<td>20 to 20,000 Hz</td>
</tr>
<tr>
<td>Output Impedance</td>
<td>150 Ω</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>-50.5 dBV/Pa(^1) (2.5 mV)</td>
</tr>
<tr>
<td>Maximum SPL</td>
<td></td>
</tr>
<tr>
<td>1 kHz at 1% THD(^2)</td>
<td>2500 Ω load: 157.5 dB SPL</td>
</tr>
<tr>
<td></td>
<td>1000 Ω load: 153.0 dB SPL</td>
</tr>
<tr>
<td>Dynamic Range</td>
<td></td>
</tr>
<tr>
<td>@ 1 kHz</td>
<td>2500 Ω load: 126.5 dB</td>
</tr>
<tr>
<td></td>
<td>1000 Ω load: 122.0 dB</td>
</tr>
<tr>
<td>Clipping Level</td>
<td></td>
</tr>
<tr>
<td>@ 1 kHz, 1% THD</td>
<td>2500 Ω load: 12.5 dBV</td>
</tr>
<tr>
<td></td>
<td>1000 Ω load: 7.5 dBV</td>
</tr>
<tr>
<td>Self Noise</td>
<td></td>
</tr>
<tr>
<td>equivalent SPL, A-weighted, typical</td>
<td>31.0 dB SPL-A</td>
</tr>
<tr>
<td>Common Mode Rejection</td>
<td>≥60 dB</td>
</tr>
<tr>
<td>10 to 100,000 kHz</td>
<td></td>
</tr>
<tr>
<td>Polarity</td>
<td>Positive pressure on diaphragm produces positive voltage on pin 2 with respect to pin 3</td>
</tr>
<tr>
<td>Power Requirements</td>
<td>11–52 V DC(^4) phantom power (IEC-61938), 5.5 mA</td>
</tr>
<tr>
<td>Net Weight</td>
<td>130 g (4.6 oz.)</td>
</tr>
</tbody>
</table>

\(^1\) 1 Pa=94 dB SPL
\(^2\) THD of microphone preamplifier when applied input signal level is equivalent to cartridge output at specified SPL
\(^3\) S/N ratio is the difference between 94 dB SPL and equivalent SPL of self noise, A-weighted
\(^4\) All specifications measured with a 48 Vdc phantom power supply. The microphone operates at lower voltages, but with slightly decreased headroom and sensitivity.

Accessories and Parts

Furnished Accessories

- Universal Microphone Mount A75M
- A75M Small Mic Clip A75-57F
- Zippered Carrying Bag 95A2314
- Snap-fit Windscreen 95A2064

Optional Accessories

- Snap-Fit Windscreen (4 per package) RK183WS
- Metal Locking Windscreen A412MWS
- Mic Clip A57F
- 7.6 m (25 ft.) Cable C25E
- A75M Large Mic Clip A75-25D
- A75M Universal Microphone Adapter A75-UMA
- Shock Stopper™ Isolation Mount A53M

Replacement Parts

- Cardioid Cartridge RPM98A/C

CERTIFICATION


The Declaration of Conformity can be obtained from:

Authorized European representative:
Shure Europe GmbH
Headquarters Europe, Middle East & Africa
Department: EMEA Approval
Wannenacker Str. 28
D-74078 Heilbronn, Germany
Phone: +49 7131 72 14 0
Fax: +49 7131 72 14 14
Email: EMEAsupport@shure.de

Note: Information in this guide is subject to change without notice. For the additional information about this product, please visit www.shure.com.