

# SHURE®

LEGENDARY  
PERFORMANCE™

Wired Microphones  
BETA 98AMP

## 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**



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27A14268 (Rev. 1)  
Printed in U.S.A.





## 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.

## Variations

- **Beta 98AMP/C:** Beta 98AMP microphone furnished with the A75M Universal Microphone Mount.
- **Beta 98AMP/C-3PK:** includes three Beta 98AMP microphones and three A75M Universal Microphone Mounts.

## 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.

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

**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.

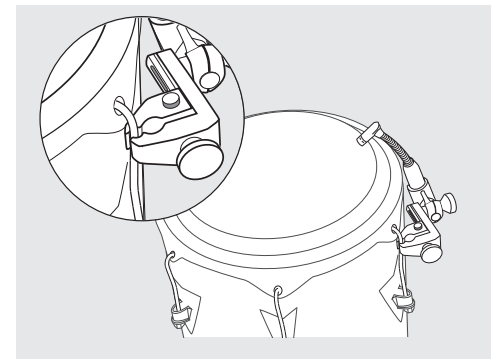
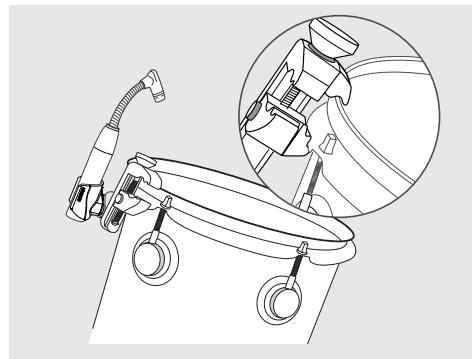
### Positioning the Microphone

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.



BETA 98AMP MOUNTED WITH A75M

## 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  $\Omega$ . 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

<b>Cartridge Type</b>	Electret Condenser
<b>Polar Pattern</b>	Cardioid
<b>Frequency Response</b>	20 to 20,000 Hz
<b>Output Impedance</b>	150 $\Omega$
<b>Sensitivity</b> open circuit voltage, @ 1 kHz, typical	-50.5 dBV/Pa <sup>[1]</sup> (2.5 mV)
<b>Maximum SPL</b> 1 kHz at 1% THD <sup>[2]</sup>	2500 $\Omega$ load: 157.5 dB SPL 1000 $\Omega$ load: 153.0 dB SPL
<b>Signal-to-Noise Ratio</b> <sup>[3]</sup>	63 dB
<b>Dynamic Range</b> @ 1 kHz	2500 $\Omega$ load: 126.5 dB 1000 $\Omega$ load: 122.0 dB
<b>Clipping Level</b> @ 1 kHz, 1% THD	2500 $\Omega$ load: 12.5 dBV 1000 $\Omega$ load: 7.5 dBV
<b>Self Noise</b> equivalent SPL, A-weighted, typical	31.0 dB SPL-A
<b>Common Mode Rejection</b> 10 to 100,000 kHz	$\geq$ 60 dB
<b>Polarity</b>	Positive pressure on diaphragm produces positive voltage on pin 2 with respect to pin 3
<b>Power Requirements</b>	11-52 V DC <sup>[4]</sup> phantom power (IEC-61938), 5.5 mA
<b>Net Weight</b>	130 g (4.6 oz.)

<sup>[1]</sup> 1 Pa=94 dB SPL

<sup>[2]</sup> THD of microphone preamplifier when applied input signal level is equivalent to cartridge output at specified SPL

<sup>[3]</sup> S/N ratio is the difference between 94 dB SPL and equivalent SPL of self noise, A-weighted

<sup>[4]</sup> 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
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## CERTIFICATION

Eligible to bear CE Marking. Conforms to European EMC Directive 2004/108/EC. Meets Harmonized Standards EN55103-1:1996 and EN55103-2:1996, for residential (E1) and light industrial (E2) environments.

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

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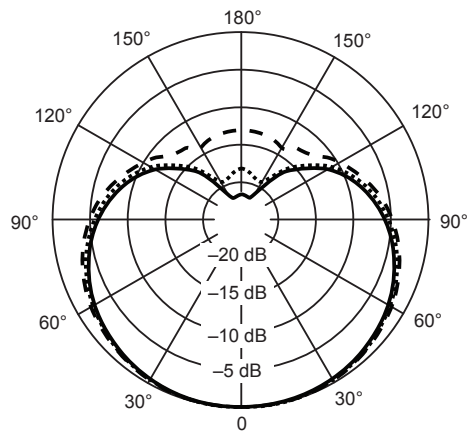
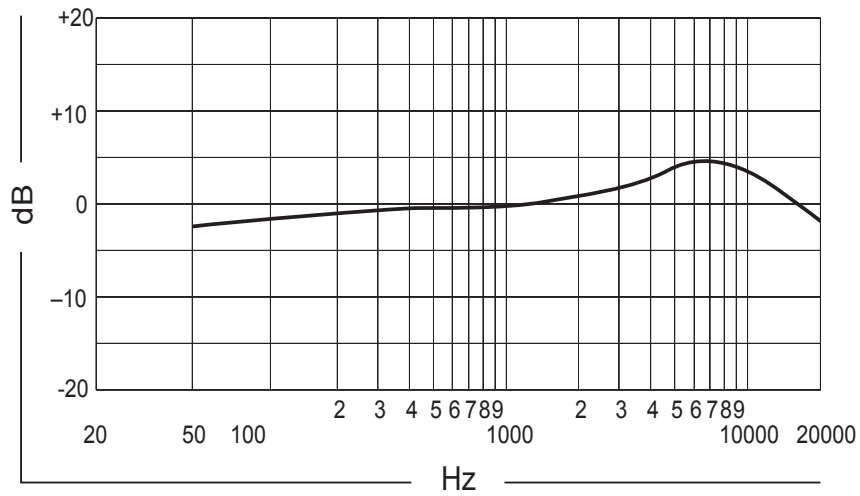
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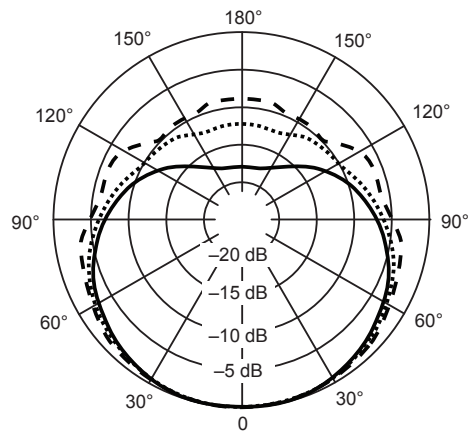
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**Note:** Information in this guide is subject to change without notice. For the additional information about this product, please visit [www.shure.com](http://www.shure.com).

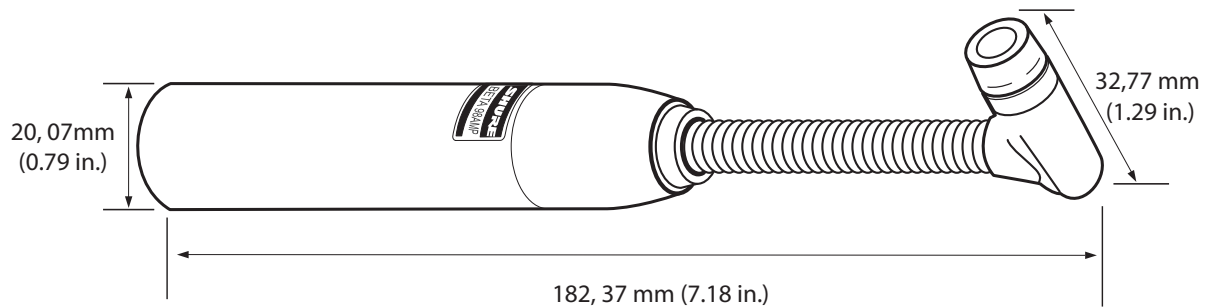
### Beta 98AMP



- - - - - 250 Hz  
 ..... 500 Hz  
 ———— 1000 Hz



———— 2500 Hz  
 ..... 6300 Hz  
 - - - - - 10000 Hz



## Notes

## Notes

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