

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.

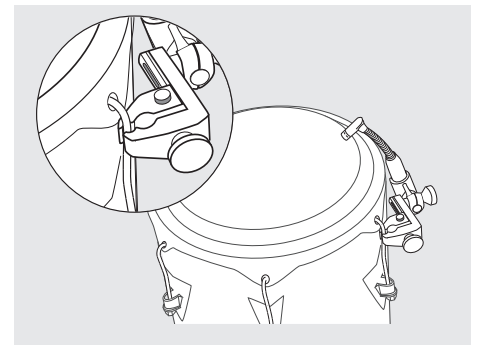
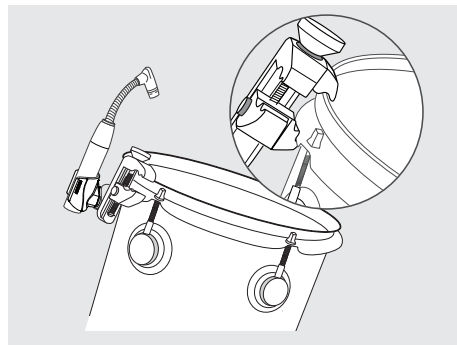
Positioning the Microphone

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 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

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

^[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
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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

D-74078 Heilbronn, Germany

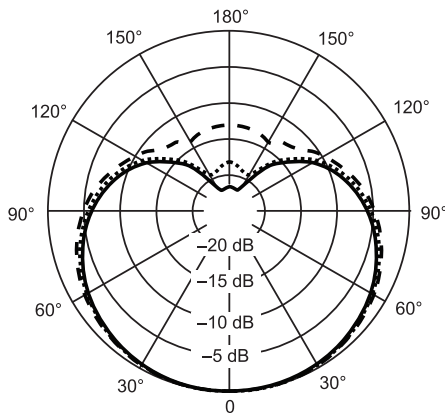
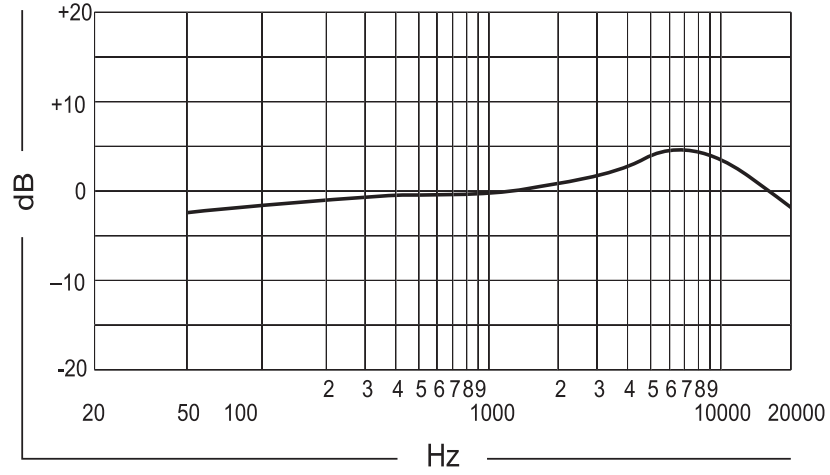
Phone: +49 7131 72 14 0

Fax: +49 7131 72 14 14

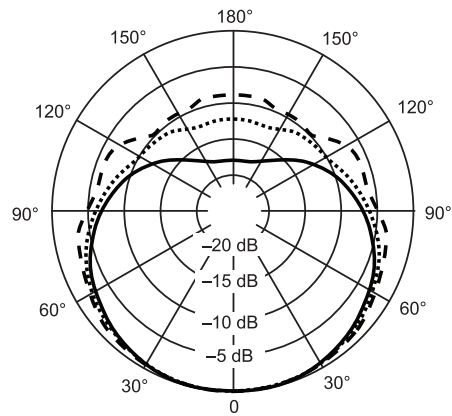
Email: EMEAsupport@shure.de

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

Beta 98AMP



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



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

