

SHURE®



MODEL BETA 57A® SUPERCARDIOID DYNAMIC PERFORMANCE MICROPHONE

GENERAL

The Shure BETA 57A is a high output supercardioid dynamic microphone designed for professional sound reinforcement and project studio recording. It maintains a true supercardioid pattern throughout its frequency range. This insures high gain before feedback, maximum isolation from other sound sources, and minimum off-axis tone coloration. A completely new grille design lets you take better advantage of proximity effect. The BETA 57A is an exceptionally versatile microphone. Typical applications include drums, guitar amplifiers, brass, woodwinds and vocals.

FEATURES

- Tailored frequency response provides drums, guitars, vocals, and horns with studio quality sound
- Uniform supercardioid pattern for high gain before feedback and superior rejection of off-axis sound
- Hardened steel mesh grille that facilitates use of proximity effect and resists wear and abuse
- Neodymium magnet for high signal-to-noise ratio output
- Minimally affected by varying load impedance
- Advanced pneumatic shock mount system that minimizes transmission of mechanical noise and vibration
- Legendary Shure quality and reliability

GENERAL RULES FOR MICROPHONE USE

1. Aim the microphone toward the desired sound source and away from unwanted sources. Since supercardioid microphones such as the BETA 57A have narrow pickup patterns and can pick up sounds from the rear, this may not be obvious or intuitive. Refer to Figure 1.
2. Place a microphone as close as practical to the desired sound source (refer to the table in the facing column).
3. Work close to the microphone for extra bass response.
4. Use only one microphone to pick up one sound source.
5. Keep the distance between microphones at least three times the distance from a microphone to a sound source.
6. Use the fewest number of microphones as is practical.
7. Place mics as far as possible from reflective surfaces.

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Model BETA 57A® User Guide

8. Add a windscreen when using the microphone outdoors.
9. Avoid excessive handling to minimize pick up of mechanical noise.

APPLICATIONS AND PLACEMENT

The most common applications and placement techniques for the BETA 57A are listed in the following table. Keep in mind that microphone technique is largely a matter of personal taste—there is no one “correct” microphone position.

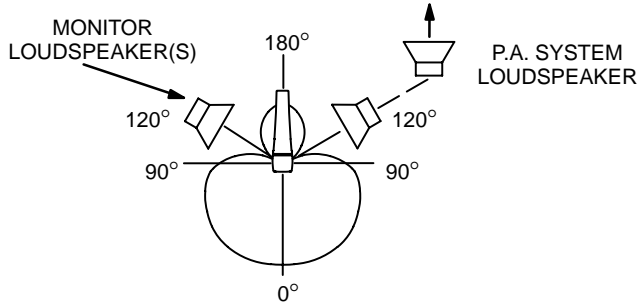
APPLICATION	SUGGESTED MICROPHONE PLACEMENT	TONE QUALITY
Tom-Toms	One BETA 57A on each tom, or between each pair of toms, 1 to 3 inches (2.5 to 7.5 cm) above drum heads. Aim each mic at top drum heads.	Medium attack, balanced sound.
	On double head toms, you can also remove bottom head and place a mic inside, pointing up toward top head.	Medium attack, balanced sound.
Snare Drum	1 to 3 inches (2.5 to 7.5 cm) above the rim of the top drum head. Aim the mic at the drum head.	Most “snap” from drumstick impact
	If desired, place a second mic just below rim of bottom head.	More “snare” sound.
Guitar & Bass Amplifiers	1 inch (2.5 cm) from speaker, on-axis with speaker cone.	Sharp attack; emphasized bass.
	1 inch (2.5 cm) from speaker, at edge of speaker cone.	Sharp attack; higher frequency sound.
	6 to 12 inches (15 to 30 cm) away from speaker and on-axis with speaker cone.	Medium attack; full, balanced sound.
	2 to 3 feet (60 to 90 cm) back from speaker, on-axis with speaker cone.	Softer attack; thin, reduced bass sound.
Vocals	1 to 6 inches (2.5 to 15 cm) from the vocalist's mouth.	Rich, warm sound.
Brass & Woodwinds	Brass: 1 to 3 feet (30 to 90 cm) away, on-axis with bell of instrument.	Bright, clear sound.
	Woodwinds: 1 to 6 inches (2.5 to 15 cm) away, on-axis with bell of instrument.	Bright, clear sound.
	Bell of the instrument 90° off-axis from the front of the mic.	Softer, mellow sound.

PROXIMITY EFFECT

Unidirectional microphones such as the BETA 57A progressively boost bass frequencies by 6 to 10 dB at 100 Hz when the microphone is at a distance of about 6 mm (1/4 in.) from the sound source. This phenomenon, known as proximity effect, can be used to create a warmer, more powerful sound. To prevent explosive low frequency sound during close-up use, the BETA 57A bass response gradually rolls off. This provides greater control and helps the user take advantage of proximity effect.

STAGE MONITOR & P.A. LOUDSPEAKER PLACEMENT

For maximum rejection of unwanted sound, place the stage monitor or P.A. system loudspeaker at a 60° angle from the rear of the Beta 57A, *not* directly behind it (see Figure 1). Always check out the stage setup before a performance to ensure that placement of microphone and monitors is optimum.



RECOMMENDED LOUDSPEAKER LOCATIONS
FIGURE 1

SPECIFICATIONS

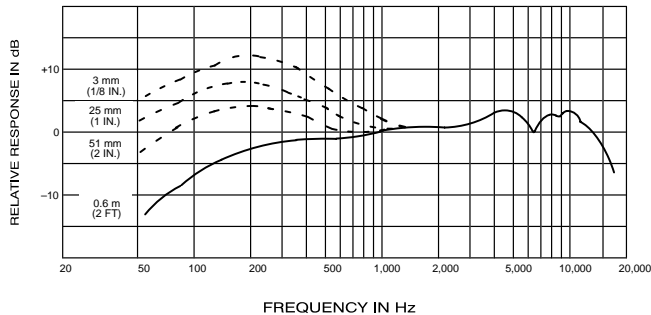
Type

Dynamic (moving coil)

Frequency Response

50 to 16,000 Hz (see Figure 2)

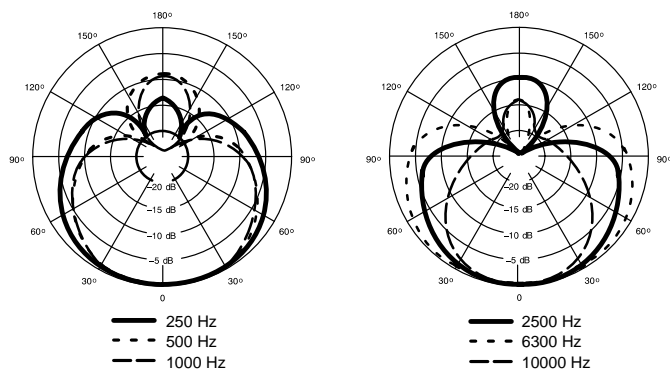
NOTE: The curve below shows on-axis response at a distance of 2 feet from a uniform sound source. Your response may vary, depending on microphone position.



TYPICAL FREQUENCY RESPONSE
FIGURE 2

Polar Pattern

Supercardioid, rotationally symmetrical about microphone axis, uniform with frequency (see Figure 3)



TYPICAL POLAR PATTERNS
FIGURE 3

Output Level (at 1,000 Hz)

Open Circuit Voltage -51 dBV/Pa* (0.28 mV)

*1 Pa = 94 dB SPL

Impedance

Rated impedance is 150 Ω (290 Ω actual) for connection to microphone inputs rated low Z

Phasing

Positive pressure on diaphragm produces positive voltage on pin 2 with respect to pin 3

Connector

Three-pin professional audio connector (male XLR type)

Case

Silver blue enamel-painted die cast metal with hardened, matte-finished steel mesh grille

Adjustable Stand Adapter

Slip-in, adjustable through 180°, with standard 5/8"-27 thread

Net Weight

272 grams (9.71 oz)

Certification

Conforms to European Union directives, eligible to bear CE marking; meets European Union EMC Immunity Requirements (EN 50 082-1, 1992)

FURNISHED ACCESSORIES

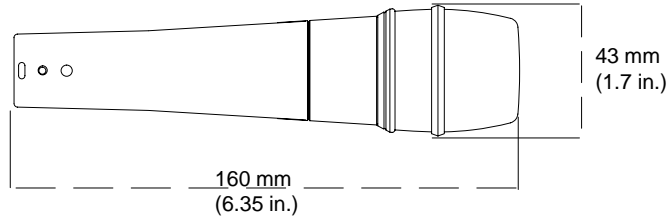
- Adjustable Stand Adapter A25D
- 5/8" to 3/8" (Euro) Thread Adapter 95A2050
- Storage Bag 26A21

OPTIONAL ACCESSORIES

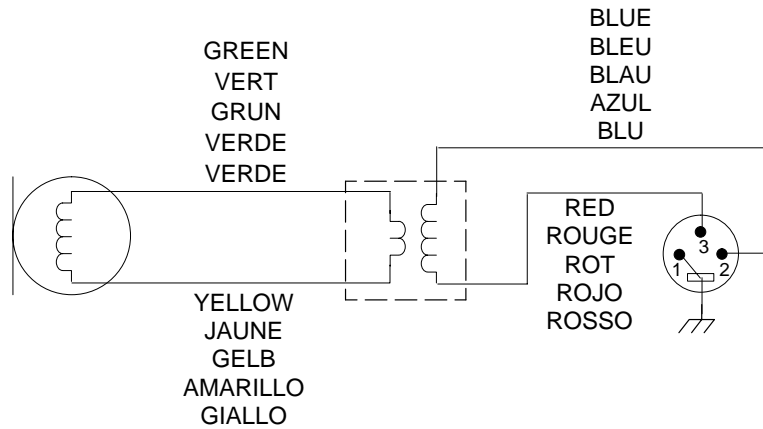
- Locking Magnetic Windscreen A57AWS
- Isolation Stand Mount A55M, A55HM
- 7.6 m (25 ft.) Cable C25E, C25F

REPLACEMENT PARTS

- Cartridge R174
- Grille Assembly RK320
- Plug (Connector) Assembly 90F1984



**OVERALL DIMENSIONS
DIMENSIONS HORS TOUT
GESAMTABMESSUNGEN
DIMENSIONES TOTALI
DIMENSIONI TOTALI**



**INTERNAL CONNECTIONS
CONNEXIONES INTERNES
INTERNE SCHALTUNGEN
CONEXIONES INTERNAS
COLLEGIAMENTI INTERNI**