

### MODEL BETA 52®A



### SUPERCARDIOID DYNAMIC INSTRUMENT MICROPHONE

#### GENERAL

The Shure BETA 52®A is a high output dynamic microphone with a tailored frequency response designed specifically for kick drums and other bass instruments. It provides superb attack and “punch,” and delivers studio quality sound even at extremely high sound pressure levels.

The BETA 52A features a modified supercardioid pattern throughout its frequency range to insure high gain before feedback and excellent rejection of unwanted sound. A built-in dynamic locking stand adapter with an integral XLR connector simplifies installation, particularly if the microphone is to be placed inside a kick drum. The stand adapter keeps the microphone position fixed and resists slipping, even when subjected to sharp blows and strong vibrations. A hardened steel mesh grille protects the BETA 52A from the abuse and wear associated with touring.

#### FEATURES

- Frequency response shaped specifically for kick drums and bass instruments
- Built-in dynamic locking stand adapter with integral XLR connector simplifies setup, especially inside a kick drum
- Studio quality performance, even at extremely high sound pressure levels
- Supercardioid pattern for high gain before feedback and superior rejection of unwanted noise
- Hardened steel mesh grille that resists wear and abuse
- Advanced pneumatic shock mount system that minimizes transmission of mechanical noise and vibration
- Neodymium magnet for high signal-to-noise ratio output
- Low sensitivity to varying load impedance
- Legendary Shure quality and reliability

### APPLICATIONS AND PLACEMENT

The most common BETA 52A applications and placement techniques 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  |
|-------------------------|---|---|
| Kick Drum               | 5 to 7.5 cm (2 to 3 in.) away from beater head, slightly off-center from beater.                  | Sharp attack; maximum bass sound, highest sound pressure level.                               |
|                         | 20 to 30 cm (8 to 12 in.) from beater head, on-axis with beater.                                  | Medium attack; balanced sound.  |
|                         | 20 to 30 cm (8 to 12 in.) from beater head, 15 to 20 cm (6 to 8 in.) from edge of head.           | Medium attack; thin, reduced bass sound.  |
|                         | 5 to 7.5 cm (2 to 3 in.) away from outside head, on-axis with beater (double head kickdrum only). | Softer attack; balanced, resonant sound.  |
|                         |   | NOTE: To “tighten” the beat, place a pillow or blanket on bottom of drum against beater head. |
| Electric Bass Amplifier | 2.5 cm (1 in.) from speaker, on-axis with center of speaker cone.                                 | Sharp attack; emphasized bass.  |
|                         | 2.5 cm (1 in.) from speaker, at edge of speaker cone.   | Sharp attack; higher frequency sound.   |
|                         | 10 to 15 cm (4 to 6 in.) from speaker, on-axis with center of speaker cone.                       | Sharp attack; full, balanced sound.   |
|                         | 60 to 90 cm (2 to 3 ft.) from speaker, on-axis with center of speaker cone.                       | Soft attack; mellow, higher frequency sound.  |

### MOUNTING THE BETA 52A ON A MICROPHONE STAND

The built-in stand adapter features a **dynamic locking system** that permits adjustments to the microphone’s position, but resists slipping when struck or bumped. To mount the BETA 52A on a stand and adjust its position, proceed as follows:

1. Screw the integral stand adapter onto the end of a microphone stand (see Figure 3). Adjust the stand height and position as necessary.
2. Pivot the BETA 52A until it is in the desired position relative to the drum head or loudspeaker.
3. Lock the BETA 52A in place by rotating the adjustment knob on the stand adapter clockwise until it is tight. Do NOT overtighten the knob with tools.
4. If necessary, make minor adjustments to the microphone position without loosening the adjustment knob.
5. Connect an audio cable to the integral XLR connector.

**SPECIFICATIONS**

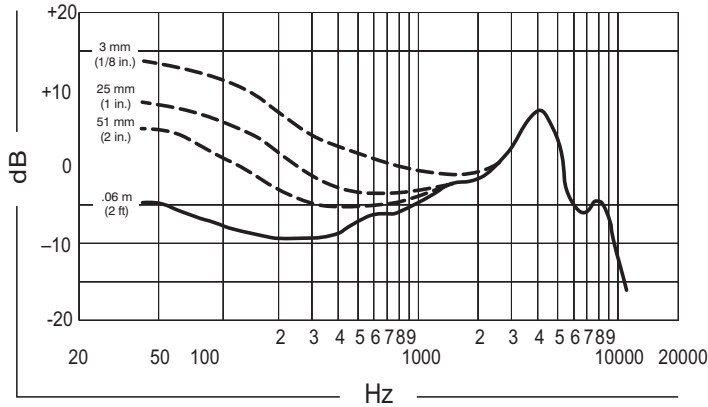
**Type**

Dynamic (moving coil)

**Frequency Response**

20 to 10,000 Hz

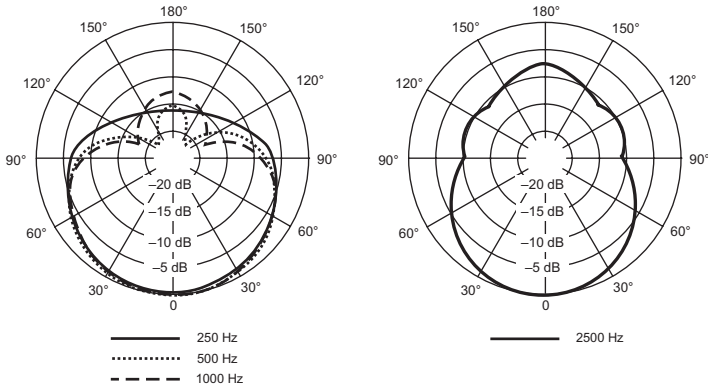
NOTE: The curve below shows on-axis response at a distance of 2 feet from a uniform sound source. Your response may vary, depending on microphone position



**FIGURE 1**

**Polar Pattern**

Supercardioid, rotationally symmetrical about microphone axis



**FIGURE 2**

**Output Level (at 1,000 Hz)**

Open Circuit Voltage: -64 dBV/Pa\* (0.6 mV)

\*1 Pa = 94 dB SPL

**Impedance**

Rated impedance is 150 Ω (45 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

**Maximum SPL**

174 dB at 1000 Hz (calculated)

**Connector**

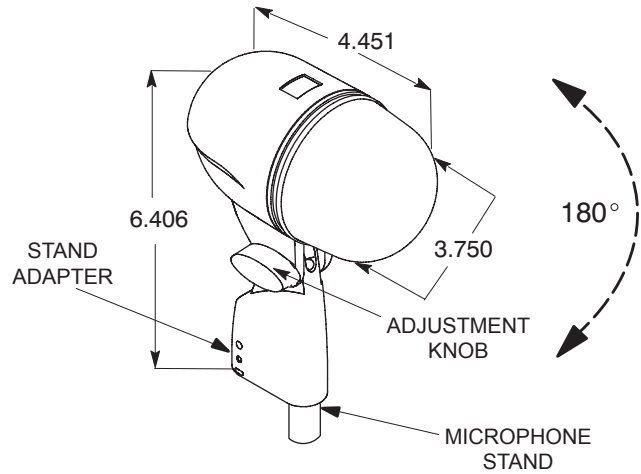
Three-pin professional audio connector (male XLR type)

**Case**

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

**Adjustable, Locking Stand Adapter**

Integral, dynamic locking, adjustable through 180°, with standard 5/8"-27 thread



**FIGURE 3**

**Net Weight**

605 grams (21.6 oz)

**CERTIFICATION**

Eligible to bear CE Marking. Conforms to European EMC Directive 89/336/EEC. Meets applicable tests and performance criteria in European Standard EN55103 (1996) parts 1 and 2, for residential (E1) and light industrial (E2) environments.

**FURNISHED ACCESSORIES**

- Storage Bag . . . . .26A25
- 5/8" to 3/8" (Euro) Thread Adapter . . . . .95A2050

**OPTIONAL ACCESSORIES**

- 7.6 m (25 ft) Cable . . . . .C25E, C25F

**REPLACEMENT PARTS**

- Cartridge . . . . .R175
- Screen and Grille Assembly . . . . .RK321
- Plug (connector) Assembly . . . . .90F1984

NOTE: Use care when removing the cartridge holder from the base to prevent breakage of the lead wires.

For additional Service or parts information, please contact Shure's Service department at 1-800-516-2525. Outside the United States, please contact your authorized Shure Service Center.