



BETA52A

Kick Drum Microphone

The Shure dynamic supercardioid kick drum microphone, BETA52A, user guide. Includes how to use and specifications.
Version: 3.1 (2023-I)

Table of Contents

BETA52A Kick Drum Microphone	3	Proximity Effect	4
General Description	3	Using the Stand Adapter	4
Features	3	Specifications	5
Applications	3	Accessories	6
General Rules for Kick Drum Mic Placement	3	Furnished Accessories	6
Applications and Placement	3	Replacement Parts	7
Avoiding Pickup of Unwanted Sound Sources	4	Certifications	7

BETA52A

Kick Drum Microphone

General Description

The Beta 52[®]A is a precision-engineered 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 (SPL). An integrated, locking stand adapter simplifies mounting and adjustments.

Featuring a modified supercardioid pattern, the Beta 52A exhibits remarkable gain before feedback and excellent off-axis rejection. A hardened, steel mesh grille and die-cast metal construction withstands years of abuse, making it ideal for touring sound reinforcement.

Features

- Premier live performance microphone with Shure quality, ruggedness, and reliability
- Modified supercardioid pick-up pattern for maximum gain before feedback and superior rejection of off-axis sound
- Tailored frequency response specifically shaped for kick drums and bass instruments
- Neodymium magnet for greater sensitivity and higher output
- Advanced pneumatic shock mount system that minimizes transmission of mechanical noise and vibration
- Dent-resistant, steel mesh grille and enamel coated die-cast metal construction resist wear and abuse
- Studio quality performance, even at high SPL
- Built-in stand adapter with dynamic locking system and XLR connector simplifies setup and provides greater flexibility

Applications

General Rules for Kick Drum Mic Placement

- Make sure microphone does not touch drum head or damping inside of the drum.
- Aim the microphone toward the desired sound source and away from unwanted sources.
- Place closer to beater head for more attack, further away for more resonance.
- Work close to the microphone for extra bass response.
- Avoid excessive handling to minimize pickup of mechanical noise and vibration.

Applications and Placement

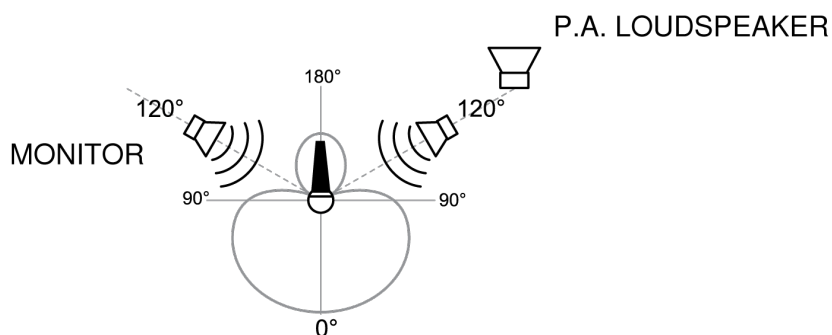
The following table lists the most common applications and placement techniques. Keep in mind that microphone technique is largely a matter of personal taste; there is no one “correct” microphone position.

Application	Suggested Microphone Placement	Tone Quality
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.

Application	Suggested Microphone Placement	Tone Quality
		NOTE: To create a tighter sound with more “punch,” place a pillow or blanket on bottom of the drum against the beater head.
Guitar & Bass Amplifiers	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.
	60 to 90 cm (2 to 3 ft.) back from speaker, on-axis with speaker cone.	Softer attack; reduced bass.

Avoiding Pickup of Unwanted Sound Sources

A supercardioid microphone has the greatest sound rejection at points 120° toward the rear of the microphone. Place the microphone so that unwanted sound sources, such as monitors and loudspeakers, are at these angles, not directly behind it. To minimize feedback and ensure optimum rejection of unwanted sound, always test microphone placement before a performance.



Recommended Loudspeaker Locations for Supercardioid Microphones

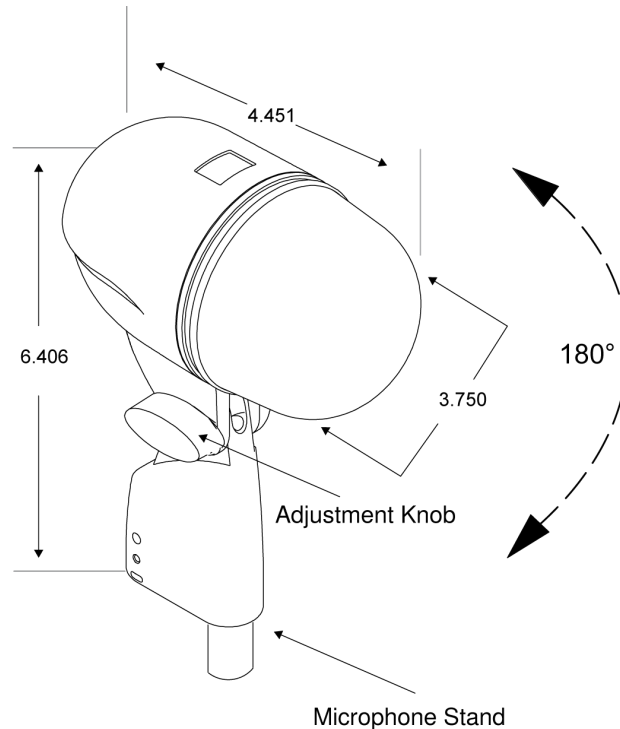
Proximity Effect

Unidirectional (cardioid) microphones progressively boost bass frequencies by 6 to 10 dB below 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 bass response gradually rolls off. This provides greater control and helps the user take advantage of proximity effect.

Using the Stand Adapter

The integrated stand adapter resists slipping when struck or bumped, yet permits adjustments without loosening the knob.

1. Thread the microphone onto the stand.
2. **Before tightening the adjustment knob**, adjust the stand height and position as necessary.
3. Tighten the adjustment knob to lock the microphone in place. Do NOT use tools or over tighten.



Specifications

Type

Dynamic (moving coil)

Frequency Response

20 to 10,000 Hz

Polar Pattern

Supercardioid

Output Impedance

45 Ω

Sensitivity

at 1kHz, open circuit voltage

-64 dBV/Pa(0.6 mV) [1]

Maximum SPL

1 kHz at 1% THD, 1 k Ω load 174 dB

Polarity

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

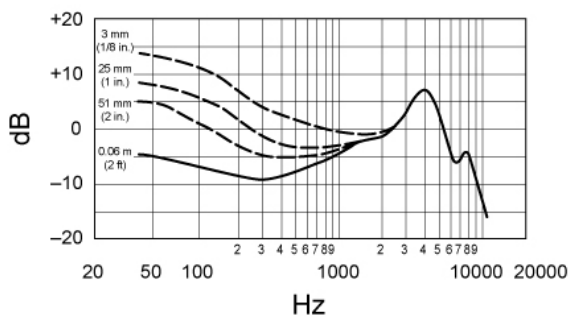
Weight

0.605 kg(1.35 lbs)

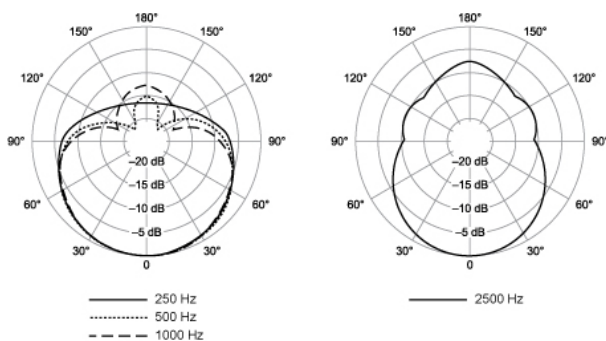
Connector

Three-pin professional audio (XLR), male, balanced

[1] 1 Pa=94 dB SPL



Typical Frequency Response



Typical Polar Patterns

Accessories

Furnished Accessories

5/8" to 3/8" (Euro) Threaded Adapter	95A2050
--------------------------------------	---------

Storage Bag	95A2324
-------------	---------

Replacement Parts

Cartridge for BETA52 and BETA52A	R175
Grille for BETA52A	RK321
Plug (Connector) Assembly	90J1984

Certifications

This product meets the Essential Requirements of all relevant European directives and is eligible for CE marking.

CE Notice

Hereby, Shure Incorporated declares that this product with CE Marking has been determined to be in compliance with European Union requirements.

The full text of the EU declaration of conformity is available at the following site: <https://www.shure.com/en-EU/support/declarations-of-conformity>.

UKCA Notice

Hereby, Shure Incorporated declares that this product with UKCA Marking has been determined to be in compliance with UK-CA requirements.

The full text of the UK declaration of conformity is available at the following site: <https://www.shure.com/en-GB/support/declarations-of-conformity>.