

GENERAL

The Beta 58 is a premium quality, supercardioid, dynamic vocal microphone. A superefficient magnetic circuit design utilizing a neodymium magnet provides maximum output voltage for improved signal-to-noise ratio in stage monitor and sound reinforcement applications. Unlike many other supercardioid microphones, the Beta 58 retains a true supercardioid pattern throughout its frequency range. This insures minimum tone coloration when the performer moves off axis, and produces maximum isolation from other vocalists or instruments.

The smooth Beta 58 frequency response is optimized for live-performance applications. A low-frequency roll-off controls proximity bass-boost to prevent "boomy" sound when the microphone is used very close to the source. The characteristic Shure presence rise brightens the upper midrange for added intelligibility. And the uniform supercardioid pattern greatly improves gain before feedback—far better than non-uniform "hypercardioid" microphones for typical live situations.

Several new Beta 58 features combine to reduce unwanted noises. The built-in humbucking coil reduces hum pickup in strong electromagnetic hum fields. Moreover, a new electro-pneumatic shock mount effectively minimizes mechanically transmitted stand and handling noise. And an integral ball-type grille is an extremely effective pop filter for closeup vocals, or when the microphone is used outdoors on windy days. This rugged grille is formed from extra-strong and dent-resistant steel mesh for extended life and durability. The grille is available either with a matte chrome-plated finish (in Model Beta 58M) or bright chrome-plated steel grille (in Model Beta 58C).

High output, low electromagnetic hum pickup, negligible handling noise, and the extremely uniform supercardioid pickup pattern over a wide frequency range work together in synergy to bring performance of the Beta 58 to an unprecedented new level.

Microphone features:

- Optimized frequency response controls proximity effect and adds extra clarity to speech or vocals
- High efficiency magnetic circuit using neodymium-iron-boron magnet increases output, maximizes signal-to-noise ratio with any amplifier
- True supercardioid pattern remains uniform and symmetrical throughout the vocal range to reduce feedback, off-axis coloration, and unwanted background noise
- Effective ball-type filter of extremely rugged construction reduces pop (explosive breath sounds) when used close to the mouth and wind noise when used outdoors

MODEL BETA 58 SUPERCARDIOID DYNAMIC MICROPHONE



- Humbucking coil permits use even in strong hum fields due to lighting and power equipment
- Advanced electro-pneumatic shock mount design effectively minimizes transmission of handling or stand noise
- Extremely strong and durable; carefully balanced for handheld use
- Excellent performance for demanding live vocal applications
- Legendary Shure reliability for years of trouble-free performance

VARIATIONS

Beta 58C: With bright chrome-plated steel grille

Beta 58M: With matte chrome-plated steel grille

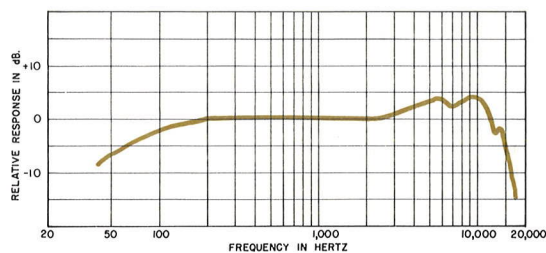
SPECIFICATIONS

Type

Dynamic

Frequency Response

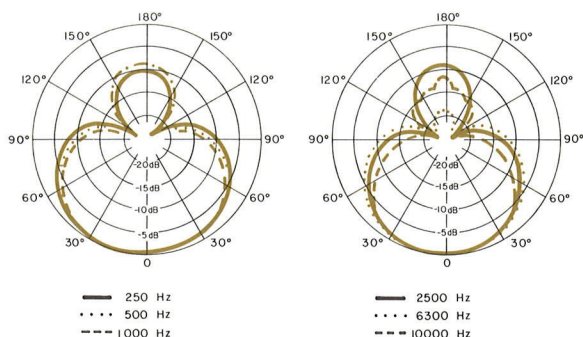
50 to 16,000 Hz (see Figure 1)



TYPICAL FREQUENCY RESPONSE
FIGURE 1

Polar Pattern

Supercardioid, rotationally symmetrical about microphone axis, uniform with frequency (see Figure 2)



TYPICAL POLAR PATTERNS
FIGURE 2

Impedance

Microphone rating impedance is 150 ohms (290 ohms actual) for connection to microphone inputs rated at 75 to 300 ohms

Output Level (at 1,000 Hz)

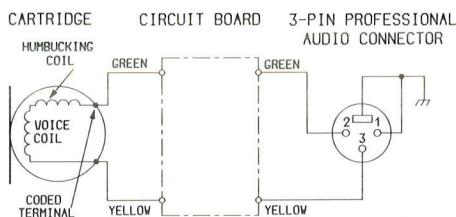
Open Circuit Voltage -71.0 dB*
(0.28 mv)
Power Level -51.5 dB**
*0 dB = 1 volt/microbar
**0 dB = 1 milliwatt/10 microbar

Hum Pickup (typical)

13 dB equivalent SPL per millioersted

Phasing

Positive pressure on diaphragm produces positive voltage on pin 2 with respect to pin 3 (see Figure 3)



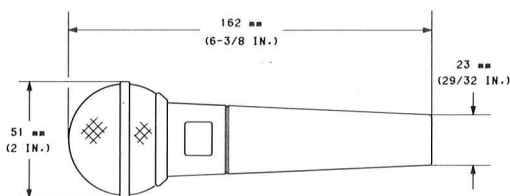
INTERNAL CONNECTIONS
FIGURE 3

Case

Silver blue enamel painted die casting and bright chrome-plated steel mesh grille (Beta 58C)
Matte chrome-plated steel mesh grille (Beta 58M)

Dimensions

See Figure 4



OVERALL DIMENSIONS
FIGURE 4

Swivel Adapter

Slip in positive-action, adjustable from 0 to 90°, with standard 5/8"-27 thread

Net Weight

265 grams (9.3 oz)

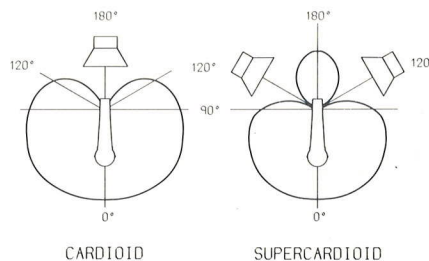
PROXIMITY EFFECT

When unidirectional microphones are used close to the sound source, there is an increase in low-frequency (bass) output. The increase, called proximity effect, is typically from 6 to 10 dB at 100 Hz when the microphone is at a distance of about 6 mm (1/4 in.) from the source compared to a microphone at 0.6 m (24 in.) from the source. This emphasis can increase "warmth" and give a fuller quality to the voice. It can also be used by instrumentalists to provide a flat or boosted bass output without tone controls, merely by changing the distance between source and microphone.

Without some low-frequency attenuation, a directional microphone would sound quite "boomy" when used in a typical closeup position. The Shure Beta 58 is designed with an optimum rolloff of bass response that provides control at low frequencies yet still allows proximity effect to be used advantageously when desired. Careful listening in practice sessions will allow each performer to determine the most advantageous working distance and use of proximity effect for each individual application.

STAGE MONITOR SPEAKERS AND THE SUPERCARDIOID MICROPHONE

Maximum unwanted-sound rejection for a true supercardioid microphone occurs at approximately 120° off-axis from the front of the microphone. This differs from the 180° maximum rejection for the more common cardioid microphone. Thus, for maximum feedback rejection when using a supercardioid microphone, the best location for the stage monitor is at about a 60° angle to the rear of the microphone rather than directly behind it. (See Figure 5.) Always check out the stage setup before a performance to ensure that placement of microphone and monitors is optimum for the particular polar pattern of the microphone.



PREFERRED STAGE MONITOR LOCATIONS FOR
CARDIOID AND SUPERCARDIOID MICROPHONES
FIGURE 5

FURNISHED ACCESSORIES

Swivel Adapter A25B
Protective Bag 26A15

OPTIONAL ACCESSORIES

Windscreen A58WS
Desk Stand S37A, S39A
Isolation Mount A55M, A55HM
Dual Mount A26M
Cable (7.6 m (25 ft)) C25F

REPLACEMENT PARTS

Cartridge (Beta 58C) R156
(Beta 58M) R148
Screen and Grille Assembly (Beta 58C) RK264G
(Beta 58M) RK265G
Plug Assembly 90A1984