



SM58

Vocal Microphone

User guide for the Shure SM58, our legendary dynamic cardioid microphone. Find the frequency response, specifications, placement tips, and more.

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Table of Contents

SM58 Vocal Microphone	3	SM58 Specifications	4
General Description	3	Accessories	6
Features	3	Furnished Accessories	6
Placement	3	Optional Accessories	6
General Rules for Use	3	Replacement Parts	7
Applications And Placement	4	Additional Resources	7
Avoiding Pickup of Unwanted Sound Sources	4	Certifications	7
Proximity Effect	4		

SM58

Vocal Microphone

General Description

The Shure SM58[®] is a unidirectional (cardioid) dynamic vocal microphone for professional vocal use in sound reinforcement and studio recording. A highly effective, built-in, spherical filter minimizes wind and breath “pop” noise. A cardioid pickup pattern isolates the main sound source while minimizing unwanted background noise. The SM58 has a tailored vocal response for a sound which is a world standard. Rugged construction, a proven shockmount system, and a steel-mesh grille ensure that even with rough handling, the SM58 will perform consistently. Outdoors or indoors, singing or speech, the SM58 is the overwhelming choice of professionals worldwide.

Features

- Performance tested, industry standard
- Uniform cardioid pick-up pattern for maximum gain before feedback and excellent rejection of off-axis sound
- Tailored frequency response specifically shaped for vocals, with brightened midrange and bass roll off to control proximity effect
- Advanced pneumatic shock mount system that minimizes transmission of mechanical noise and vibration
- Steel-mesh grille and enamel-coated metal construction resist wear and abuse
- Effective built in pop-filter reduces undesirable wind and breathe noise
- Furnished with zippered storage bag and break-resistant stand adapter
- On/Off switch (SM58S and SM58SE only)
- Extremely durable under the heaviest use
- Shure quality, ruggedness and reliability

Placement

General Rules for Use

- Aim the microphone toward the desired sound source (such as the talker, singer, or instrument) and away from unwanted sources.
- Place the microphone as close as practical to the desired sound source.
- Work close to the microphone for extra bass response.
- Use only one microphone to pick up a single sound source.
- Use the fewest number of microphones as practical.
- Keep the distance between microphones at least three times the distance from each microphone to its source.
- Place microphones as far as possible from reflective surfaces.
- Add a windscreen when using the microphone outdoors.
- Avoid excessive handling to minimize pickup of mechanical noise and vibration.
- Do not cover any part of the microphone grille with your hand, as this will adversely affect microphone performance.

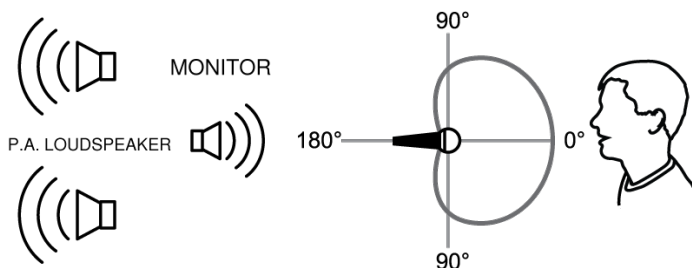
Applications And Placement

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
Vocals	Lips less than 15 cm (6 in.) away or touching the wind-screen, on axis to microphone.	Robust sound, emphasized bass, maximum isolation from other sources.
	15 to 60 cm (6 in. to 2 ft.) away from mouth, just above nose height.	Natural sound, reduced bass.
	20 to 60 cm (8 in. to 2 ft.) away from mouth, slightly off to one side.	Natural sound, reduced bass and minimal “s” sounds.
	90 cm to 1.8 m (3 to 6 ft.) away.	Thinner, distant sound; noticeable levels of ambient noise.

Avoiding Pickup of Unwanted Sound Sources

Place the microphone so that unwanted sound sources, such as monitors and loudspeakers, are directly behind it. To minimize feedback and ensure optimum rejection of unwanted sound, always test microphone placement before a performance.



Recommended Loudspeaker Locations for Cardioid 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.

SM58 Specifications

Type

Dynamic (moving coil)

Frequency Response

50 to 15,000 Hz

Polar Pattern

Cardioid

Output Impedance

300 Ω

Sensitivity

at 1 kHz, open circuit voltage

-56.0 dBV/Pa [1] (1.6 mV)

Polarity

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

Weight

0.33 kg (0.72 lb)

Switch

SM58S, SM58SE

On/Off Switch

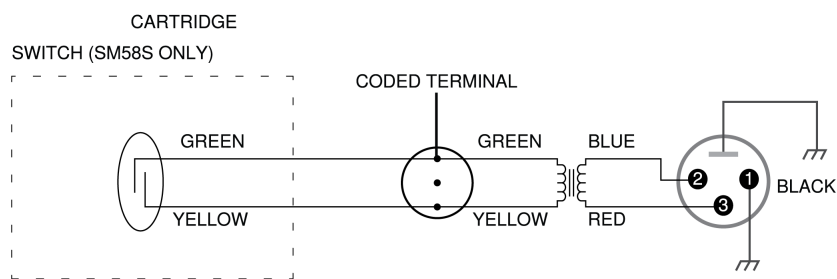
Connector

Three-pin professional audio (XLR), male

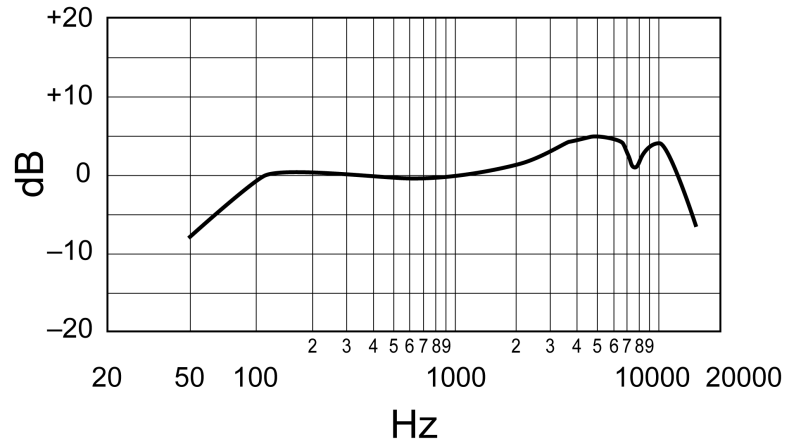
Housing

Enamel-painted die cast metal with spherical steel mesh grille.

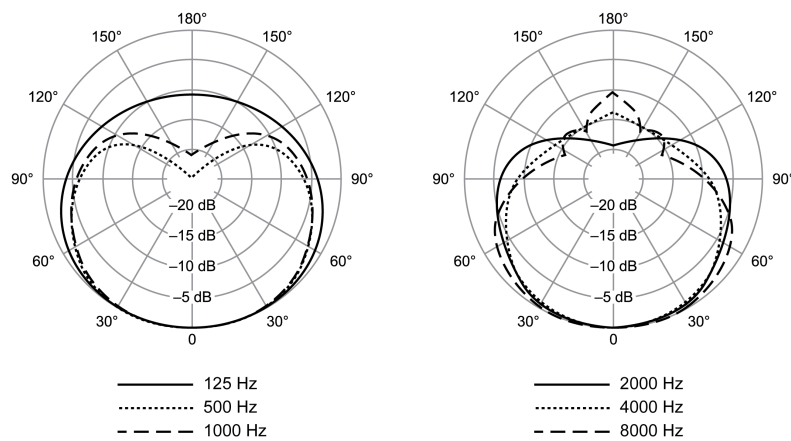
1 dBV/Pa= 94 dB SPL



SM58 Wiring Diagram



Typical SM58 Frequency Response



Typical SM58 Polar Pattern

Accessories

Furnished Accessories

Microphone Clip for SM58, SM57, SM87A, BETA87A, BETA87C, PGA57, PGA58, PGA48, PGA81	A25D
Carrying/Storage Bag	95A2313

Optional Accessories

Foam Windscreen for all larger Shure "ball-type" Microphones available in black, blue, gray, green, red and yellow	A58WS
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Desk Stand	S37A
Shock Stopper® Isolation Mount	A55M
Shock Stopper Isolation Mount	A55HM
Over/Under Dual Mount for two microphones: SM57, BETA57A or 545 Series microphones	A26M
25 foot (7.5m) Triple-Flex® Microphone XLR Cable with Switchcraft connectors	C25E
25 foot (7.5m) Triple-Flex Microphone XLR Cable with chrome connectors	C25F

Replacement Parts

Grille for Wired and Wireless SM58	RK143G
Cartridge for SM58	R59

Additional Resources

- [Shure Knowledge Base FAQs](#)
- [Training from the Shure Audio Institute](#)
- [Microphone Techniques for Recording](#)
- [Houses of Worship Systems Guide](#)
- [Shure Performance & Production YouTube channel](#)
- [Shure Creators YouTube channel](#)

Download Shure Software

- [Software and firmware archive](#)

Certifications

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

The CE Declaration of Conformity can be obtained from: www.shure.com/europe/compliance

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