

CS Series Microphone

Neodymium Dynamic Capsule Select Microphone
with CS1 Vocal and CS2 Instrument Capsules



SAMSON®

Introduction

The Samson CS Series Microphone is a professional handheld microphone featuring two interchangeable neodymium dynamic microphone capsules for vocal and instrument applications. Perfect for both live and studio situations, the CS Series Microphone's revolutionary interchangeable "Capsule Select" design allows you to quickly substitute the capsule for your purpose. The CS Series microphone is like having two microphones in one, and its versatility will make it one of the most valuable microphones in your collection.

The **CS1** vocal capsule is designed to have minimal proximity effect, delivering excellent clarity with a balanced frequency response, on and off axis, for enhanced detail and a superior vocal performance. The **CS2** instrument capsule is contoured to be positioned as close to the sound source as possible. It is designed to withstand high signal pressure levels (SPL), and its tight super cardioid pickup pattern allows you to mic loud instruments. The special capsule mounting system and robust construction of the microphone minimizes handling noise, and provides additional protection to the capsules.

Should your microphone ever require servicing, a Return Authorization (RA) number must be obtained before shipping your unit to Samson. Without this number, the unit will not be accepted. Please call Samson at 1-800-3SAMSON (1-800-372-6766) for an RA number prior to shipping your unit. Please retain the original packing materials and, if possible, return the unit in its original carton. If your CS Series microphone was purchased outside of the United States, contact your local distributor for warranty details and service information. Also, be sure to check out our website (www.samsontech.com) for information about our full product line.



CS Series · Capsule Select Microphone

Features

The Samson CS Series utilizes state-of-the-art microphone technology and is engineered to the finest detail. Here are some of its main features:

- Neodymium dynamic handheld microphone with CS1 vocal and CS2 instrument selectable capsules
- **CS1** microphone capsule tailored for vocal performance with minimal proximity effect and balanced frequency response for on and off axis performance
- **CS2** microphone capsule specially designed for close-miking instruments with high SPLs
- Ultra sensitive, neodymium element picks up the nuances of any performance
- Tight, super cardioid polar pattern for maximum gain before feedback
- Extended range frequency response for optimum reproduction and exceptionally clear, crisp sound
- Rugged, zinc alloy die-cast case ensures reliable performance and greatly reduced handling noise
- Gold-plated XLR Connector
- Microphone clip and zippered carry case are included



Changing the Capsule

1. Turn down the level control of the device the CS Series Microphone is connected and disconnect the XLR cable from the microphone.
2. Unscrew the installed capsule, removing the entire grill and element from the base.
3. Screw in the desired CS capsule, making sure the threads are aligned before tightening.
4. Ensure the capsule is completely secured to the base before using, as any vibration may loosen the capsule, add handling noise, and result in signal loss.
5. Reconnect the XLR cable and slowly raise the volume of the microphone until the desired level is reached.

Caring for your CS Microphone

Your CS Series Microphone's rugged design and gold-plated connectors are made to withstand years of extreme usage, but to ensure your microphone and capsule will not become damaged, always store the microphone and additional capsule in the provided protective case.

To clean your microphone, wipe it down with a damp cloth or remove the grill and rinse with plain water. If needed, use a mild cleaner (such as dishwashing liquid soap) to remove any odors or stains. Never use abrasive cleaners as they may damage the microphone's finish. Should the XLR, or gold capsule ring connectors ever become oxidized, use a deoxidizing solution. Make sure the connectors are completely dry before affixing the capsule or connecting an XLR cable.



CS Series · Capsule Select Microphone

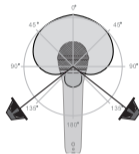
Operating Notes

Polar Pattern

Every microphone has a characteristic polar pattern that determines the microphone's sensitivity to signals coming from 360° around the microphone. The CS1 and CS2 capsules are unidirectional supercardioid, meaning that they predominantly pick up and reproduce sound originating directly in front of the microphone, with a coverage angle of approximately 115°, and rejects off-axis ambient sounds.

Feedback Rejection

When using a microphone in a live situation, you may encounter feedback issues. Feedback is the characteristic howling sound that occurs when a mic is placed too close to a loudspeaker, and the signal from the loudspeaker is fed into the mic, then into the loudspeaker, etc., until an oscillating tone is generated. When using floor monitors with the CS Series microphone, the monitors should be placed about 55° off of the rear axis. This same consideration should be made when using the CS Series microphones on drum kits or guitar amplifiers; the microphone should be positioned to avoid picking up sounds from the rear of the microphone.



Proximity Effect

Proximity effect is an audio phenomenon that is inherent to uni-directional microphone designs. As the microphone is brought close to the sound source (approximately ¼") there is boost to the bass frequencies below 100Hz. As you become aware of this boost in frequencies, you can use it to your advantage to enhance vocals, and increase the warmth of instruments.

Guidelines for Microphone Use

- Aim the microphone at the desired source. Keep unwanted sound sources at ~126° angle from the front of the microphone.
- Place the microphone as close to the sound source as possible.
- Use the proximity effect to your advantage: the closer the mic is to the sound source, the more emphasized the bass response will be.
- Use a windscreen to suppress unwanted wind noise.
- Never cup your hand over the microphone grill, as this will affect the response of the microphone, and can induce feedback.

Microphone Placement

Application	Remarks
Vocals (CS1)	<2 inches from lips for a full sound with increased low frequency output 2–4 inches from lips for a balanced natural sound
Electric Guitar Amplifier (CS2)	≤1 inch from the grill for a punchy sound with increased isolation 1–4 inches from the grill for a balanced sound Positioning the microphone towards the center of the speaker cone produces a brighter tone. Positioning the microphone towards the edge of the speaker cone produces a mellower tone, and minimizes hiss from the amplifier.
Acoustic Guitar (CS2)	1–3 inches from the sound hole for increased isolation with increased low frequency output 3–8 inches from the sound hole for natural sound with minimal leakage 3–8 inches from the bridge to reduce pick noise
Snare Drums (CS2)	1–2 inches from the top of the drum head for a punchy sound 1–2 inches from the bottom of the snare for a snappy sound When using multiple microphones, be mindful of frequency and phase cancellation
Tom-Tom Drums (CS2)	1–2 inches from the top of the drum head aimed towards the top of the head
Brass and Woodwinds (CS2)	1–2 feet from bell, off-axis for a balanced tone ≤1 foot for increased isolation in live situations, and a brighter tone

CS Series · Capsule Select Microphone

Specifications

CS1 Neodymium Vocal Capsule

Frequency Response	60Hz~18kHz
Sensitivity	-55±2dBV/Pa
Rated Impedance	250 ohm
Polar Pattern	Super Cardioid
Max SPL	150dB
Net Weight	246g
Size	Ø 54×180mm

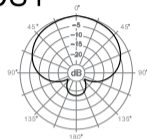
CS2 Neodymium Instrument Capsule

Frequency Response	50Hz~18kHz
Sensitivity	-56±2dBV/Pa
Rated Impedance	250 ohm
Polar Pattern	Super Cardioid
Max SPL	150dB
Net Weight	246g
Size	Ø 47×170mm

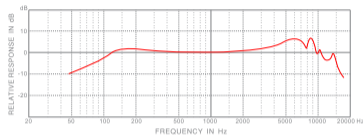
Accessories

Mic Clip, Zippered Case

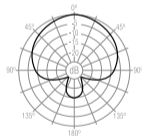
CS1



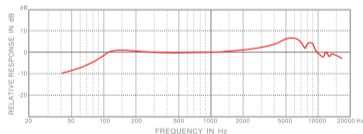
1000 Hz —



CS2



1000 Hz —



A black and white photograph of a band performing on stage. The scene is dimly lit, with the musicians appearing as dark silhouettes against a lighter background. On the left, a drummer is partially visible behind a drum kit. In the center, a singer stands with a microphone on a stand in front of him. On the right, a bassist is seen in profile, holding a bass guitar. The overall mood is professional and artistic.

Samson Technologies Corp.
45 Gilpin Avenue
Hauppauge, New York 11788-8816
Phone: 1-800-3-SAMSON (1-800-372-6766)
Fax: 631-784-2201
samsontech.com