

# Hypercardioid <u>Neodymium</u> <u>Microphone</u>

#### FEATURES:

- Lightweight Aluminum Humbucking Voice Coil
- High Output Neodymium Element
- Silicone "Anti-dent" Ring Protects Windscreen
- Mic Element Enclosed in Multi-axis Shock-mount.
- Gold-plated XLR connector
- Multi-stage Windscreen and Noise Filter
- Carrying Case and Mic-Clip Included

#### APPLICATIONS:

- High Performance Live Vocal Reproduction
- Instrument Miking
- Project Studio
- Public Address

# SAMSON

Produced by On The Right Wavelength for Samson Technologies Corp.

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Printed March, 1996

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#### Introduction

Congratulations on purchasing the Samson Q MIC Hypercardioid Neodymium Microphone! This radically new professional dynamic mic is specially designed for use as a vocal mic in live performance. Manufactured with extreme care and the highest quality components, the Q MIC's distinctive multi-stage windscreen and filter reduces pops, sibilance and on-stage noise, and a midrange presence peak ensures an exceptionally clear, articulate sound. The Q MIC also features a unique humbucking voice coil to eliminate magnetic field interference and a multi-axis shock-mounted mic element that greatly reduces handling noise. The hypercardioid pattern utilized by the Q MIC ensures maximum feedback rejection while delivering a strong, crisp signal from the audio source directly in front of the mic capsule. The Q MIC is also particularly well-suited for use with Samson wireless systems.

In this manual, you'll find a more detailed description of the features of your Q MIC microphone, as well as instructions for using your Q MIC (including wiring diagrams), a cross-section diagram, and complete specifications. You'll also find a warranty card enclosed—don't forget to fill it out and mail it in! This will enable you to receive online technical support and will allow us to send you updated information about other Samson products in the future.

SPECIAL NOTE: Should your Q MIC ever require servicing, a *Return Authorization* number (RA) is necessary. Without this number, the microphone will not be accepted. Please call Samson at (516) 364-2244 for a Return Authorization number prior to shipping your microphone. Please retain the original packing material and, if possible, return the Q MIC in its original carton and packing materials.

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#### **Q MIC Features**

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

- High energy rare earth Neodymium element delivers high output and exceptional sound quality.
- Tight hypercardioid polar pattern minimizes feedback problems and effectively rejects signals not originating directly in front of the mic capsule.
- Full range frequency response with a midrange "presence" peak at 2 kHz for optimum reproduction of vocals and exceptionally clear, crisp sound.
- Vertical porting that works to remove standing wave distortion.
- Extremely lightweight aluminum humbucking voice coil eliminates magnetic field interference and provides true hum rejection right at the source while delivering extended high frequency response.
- Unique triple-plated multi-stage windscreen enables "up-close" usage of the Q MIC and greatly reduces pops, sibilance and onstage noise.
- Special shock-mounting allows 360° X-Y axis movement of the mic element in order to greatly reduce handling noise.
- Neoprene transformer cover reduces microphonics.
- Rugged zinc-casting, silicon anti-dent ring and gold-plated XLR connector ensures reliable performance in even the most demanding environments.
- Lightweight and compact, the Q MIC can be mounted on any standard microphone stand (using the included mic clip) or can be easily handheld for long periods without inducing fatigue.
- Included foam-lined carrying case for convenience when transporting the Q MIC from gig to gig.

## Using Your Q MIC

The Q MIC can be connected to any standard mixer, mixer/amplifier, or mic preamp using a standard microphone cable. As shown in the wiring diagrams below, connect the female XLR end directly to the Q MIC's gold-plated connector and the other end (normally a male XLR end, although some mixers use 1/4" connectors) to the mixer, mixer/amplifier, or mic preamp.



The Q MIC can be mounted to any standard microphone stand (using the included mic clip) or can be handheld; due to its unique multi-axis mic element shock mounting, it generates significantly less handling noise than most other microphones. If handheld, take care not to cover the head grille with your hand. Be aware of a phenomenon called the *proximity effect* which causes a noticeable increase in low frequencies (bass response) when a microphone is close to the audio source. This can have positive impact—for example, it will cause your voice to sound much fuller when you sing close to the mic than when you sing at a distance. The Q MIC is specially designed to be used up close, since it provides a windscreen with built-in sibilance filter (as shown in the illustration below) for removal of pops, sibilance and onstage noise. The key to developing the best mic technique is experimentation, along with awareness of the general principle that, the closer your Q MIC is to a signal source, the greater the bass response.

Q MIC windscreen Q MIC sibilance filter

## **Using Your Q MIC**



Q MIC Polar Pattern

Every microphone has a characteristic *polar pattern* that determines how well it accepts or rejects signal coming from various areas around the microphone. For example, *omnidirectional* mics accept all signals regardless of wherever those signals originate (in front of the mic, behind it, to the side, etc.). In contrast, directional *cardioid* mics are specifically designed to accept mostly signal coming from directly in front, and to reject signal coming from behind or from the side. The most extreme variation of cardioid is the *hypercardioid* pattern utilized by the Q MIC (as shown in the illustration above); this yields maximum rejection of signal coming from any direction other than directly in front of the mic. For this reason, the Q MIC excels in environments where there is a good deal of unwanted ambient sound—it delivers those signals originating directly in front of the mic capsule itself while rejecting those that originate from behind.

The polar pattern also determines how prone a particular mic is to inducing *feedback*. Feedback is that characteristic nasty howling sound that occurs when a mic is placed too close to a loudspeaker—the signal from the loudspeaker is fed into the mic, then into the loudspeaker, then into the mic, over and over again until an oscillating tone is generated. Because the hypercardioid pattern utilized by the Q MIC is so good at rejecting signal not coming from directly in front of the mic, you'll find that use of the Q MIC greatly minimizes feedback problems.

#### **Q MIC Cross-Section Diagram**



## **Specifications**

Туре	Dynamic
Polar Pattern	Hyper-cardioid
Frequency Response	20 Hz - 18.5 kHz
Sensitivity	-47 dBV @ 94 dB SPL
Max.SPL	137 dB
Impedance	150 ohm
Connector	3-pin gold-plated balanced XLR male
Dimensions Head length Main unit length Total length	2.25 in. / 57 mm 4.5 in. / 114.2 mm 6.75 in. / 172 mm
Weight	8.7 oz. / 250 g



Q MIC Frequency Chart