

Q₂MIC Q₃MIC

VOCAL / INSTRUMENT

AND INSTRUMENT



Q2 VOCAL / INSTRUMENT MIC

OWNERS MANUAL



Q3 INSTRUMENT MIC

SAMSON®

Table of Contents

Introduction	3
Q2 / Q3 Features	4
Using Your Q2 / Q3 Microphone	5
Other Samson Microphones	8
Specifications	9

Produced by *On The Right Wavelength* for Samson Technologies Corp.

Copyright 1997, Samson Technologies Corp.

Printed June, 1997

Samson Technologies Corp.
575 Underhill Blvd.
P.O. Box 9031
Syosset, NY 11791-9031
Phone: 1-800-3-SAMSON (1-800-372-6766)
Fax: 516-364-3888

Introduction

Congratulations on purchasing the Samson Q2 or Q3 Microphone! These radically new professional dynamic mics are specially designed for use in live performance. The compact Q2 is equally effective as a vocal or instrument mic, while the Q3 is optimized for drum miking applications. Both models are manufactured with extreme care and the highest quality components, delivering an exceptionally clear, articulate sound. Their transformless design provides extended low frequency response while minimizing low frequency distortion. Both also include a distinctive multi-stage windscreen and filter for effectively reducing pops, sibilance and on-stage noise, and a unique humbucking voice coil to eliminate outside interference. The cardioid pattern utilized by the Q2 and the hypercardioid pattern utilized by the Q3 provides important feedback rejection while delivering a strong, crisp signal from the audio source directly in front of the mic capsule. The Q2 and Q3 microphones are 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 Q2 / Q3 microphone, as well as instructions for its use (including wiring diagrams) 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 Q2 or Q3 microphone 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 microphone in its original carton and packing materials.

Q2 / Q3 Features

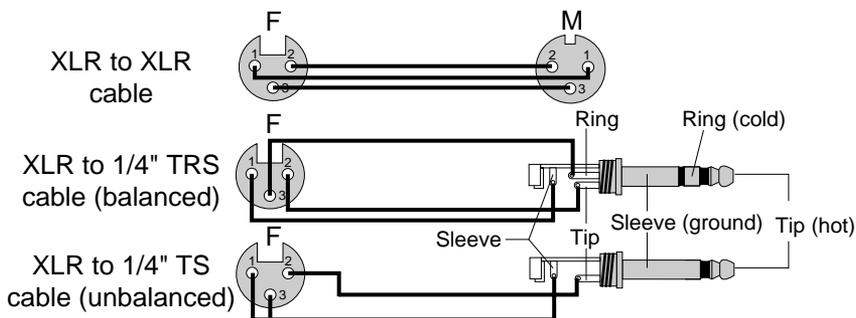
The Samson Q2 and Q3 microphones utilize state-of-the-art microphone technology and are engineered to the finest detail.

Here are some of their main features:

- High energy rare earth Neodymium element delivers high output and exceptional sound quality.
- Transformerless design enables extended low frequencies and reduces low frequency distortion.
- Tight polar patterns minimize feedback problems and effectively reject signals not originating directly in front of the mic capsule.
- Full range frequency response for optimum reproduction of vocals and instruments with an 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 frequencies.
- Unique triple-plated multi-stage windscreen enables “up-close” usage and greatly reduces pops, sibilance and onstage noise.
- Special shock-mounting allows multi-axis movement of the mic element in order to greatly reduce handling noise.
- Rugged zinc-casting, silicon anti-dent ring and gold-plated XLR connector ensures reliable performance in even the most demanding environments.
- Switchable 10 dB pad enables use with high sound pressure level (SPL) signal sources such as drums or amplified instruments.
- Switchable 12 dB / octave high pass filter (HPF) tuned to 80 Hz for eliminating rumble.
- Lightweight and compact, the Q2 can be mounted on any standard microphone stand (using the included mic clip) or can be easily handheld for long periods without inducing fatigue. Equally compact, the Q3 mounts directly on a mic stand (no clip required) and rotates mechanically 90° for optimum placement—particularly handy when miking large drum kits on small stages!
- Included foam-lined carrying case and Euro metric mic stand adapter.

Using Your Q2 / Q3 Microphone

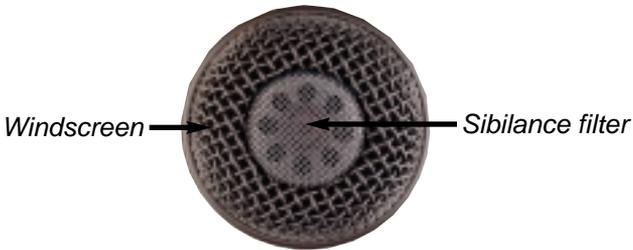
The Q2 / Q3 can be connected to any audio system using a standard microphone cable. As shown in the wiring diagrams below, connect the female XLR end directly to the Q2 or Q3's gold-plated connector and the other end (normally a male XLR, although some mixers use 1/4" connectors) to your mixer, mixer/amplifier, or mic preamp.



The Q2 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. The Q3 provides its own mounting that can be rotated through 90° for easy placement in tight spaces such as around drum kits. When connecting either model to a European (metric) microphone stand, use the provided "Euro" adapter.

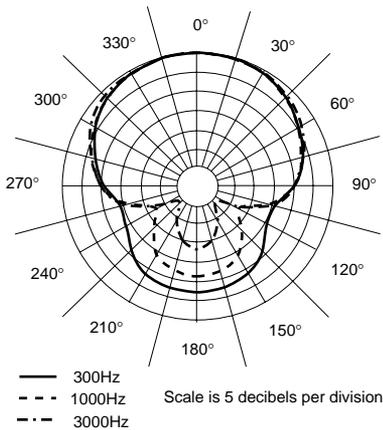
When positioning any microphone, be aware of a phenomenon called the *proximity effect* which causes a noticeable increase in low frequencies (bass response) when a microphone is close to the audio source. This can have positive impact—for example, it will cause your voice to sound much fuller when you sing close to the mic than when you sing at a distance. Both the Q2 and the Q3 are specially designed to be used up close, since they provide a windscreen with built-in sibilance filter (as shown in the illustration on the following page) 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 a microphone is to a signal source, the greater the bass response.

Using Your Q2 / Q3 Microphone

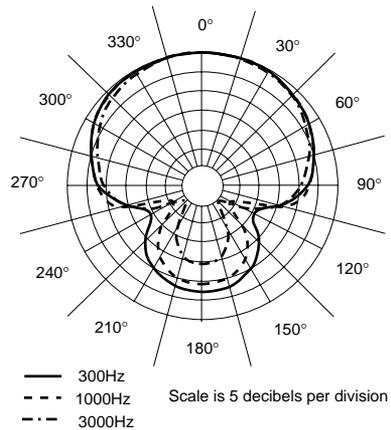


Every microphone has a characteristic *polar pattern* that determines how well it accepts or rejects signal coming from various areas around the microphone. For example, *omnidirectional* mics accept all signals regardless of wherever those signals originate (in front of the mic, behind it, to the side, etc.). In contrast, directional *cardioid* mics such as the Q2 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 Q3; this yields maximum rejection of signal coming from any direction other than directly in front of the mic.

The illustrations below show the polar patterns for the Q2 and Q3.



Q2 Polar Pattern



Q3 Polar Pattern

Using Your Q2 / Q3 Microphone

As you can see from these illustrations, both the Q2 and Q3 excel in environments where there is significant unwanted ambient sound since they deliver 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 polar patterns utilized by the Q2 / Q3 are so good at rejecting signal not coming from directly in front of the mic, you'll find that their use greatly minimizes feedback problems.

As shown in the illustrations below, the Q2 and Q3 mics also provide switches that allow you to engage a 10 dB pad or a high pass filter (HPF). For normal use, leave both switches in their "off" position. Place the 10 dB pad switch in its "on" position when miking a signal (such as drums or instrument amplifiers) that has a high sound pressure level (SPL) or whenever you hear overload distortion at your mixer or mic preamp input. Place the HPF switch in its "on" position to filter out low frequency rumble (such as might be caused by onstage floor noise). The Q2 / Q3 HPF is tuned to 80 Hz, with a rolloff of 12 dB per octave.



Other Samson Microphones

Samson Technologies is the manufacturer of a broad range of microphones, each optimized for a different application, but with each sharing the same fine quality of your Q2 or Q3.

Q MIC

The Q MIC is a neodymium hypercardioid mic designed for high-end vocal applications where there is significant background or environmental noise. It shares many of the same features as the Q2, but utilizes a midrange “presence” peak at 2 kHz for optimum reproduction of vocals. Other features include special shock-mounting that allows 360° X-Y axis movement of the mic element in order to greatly reduce handling noise and a neoprene transformer cover in order to minimize microphonic self-noise.

QV / QE

These are two professional lavalier (clip-on) microphones specially designed for performing musicians and dancers, sportscasters and aerobics instructors. The QE model is waterproof and is optimized for aerobics use and high-humidity environments. Both are lightweight and utilize a low visibility design for unobtrusive use, with high quality electret condenser elements for high output and exceptional sound quality. The QV model has a hypercardioid polar pattern and virtually flat frequency response to 10 kHz, while the QE utilizes a bi-directional noise cancellation circuit and a midrange “presence” peak for optimum reproduction of speech.

S12 / S11

These are two affordable yet high quality dynamic microphones for the musician on a budget. Both are lightweight and compact, yet have rugged capsules that enable them to be used with high sound pressure level signals (such as drums and amplified instruments) with reliable performance in even the most demanding environments. The S11 model utilizes a standard cardioid polar pattern while the S12 utilizes a hypercardioid polar pattern for maximum feedback rejection and includes a rare earth neodymium magnet that provides 6 dB of noiseless gain.

Specifications

Type	Dynamic
Polar Pattern	
Q2	Cardioid
Q3	Hyper-cardioid
Frequency Response	50 Hz - 15 kHz
Sensitivity	-71 dB \pm 3 dB (0 dB = 1V/0.1pa @ 1 kHz)
Impedance	600 ohm (@ 1 kHz)
HP Range	-12 dB / octave (HP switch ON)
Att Range	-10 dB / average (ATT switch ON)
Connector	3-pin gold-plated balanced XLR male
Dimensions	
Q2 (length)	6 in. / 152 mm
Q3 (length, head)	4 in. / 102 mm
Q3 (length, mounting)	3 in. / 76 mm
Weight	
Q2	10.5 oz. / 300 g
Q3	15.1 oz. / 431 g