

S12

S12 DYNAMIC MICROPHONE

Congratulations on purchasing the Samson S12 Hyper-Cardioid Neodymium Microphone! This professional quality dynamic mic is specially designed for use in live performance and public address environments where unwanted ambient sound is occurring from many different directions. Its hyper-cardioid pattern ensures maximum rejection of these signals (thus minimizing feedback problems) while delivering a strong, crisp signal from the audio source directly in front of the mic capsule. The S12 is particularly well-suited for use with Samson wireless systems.

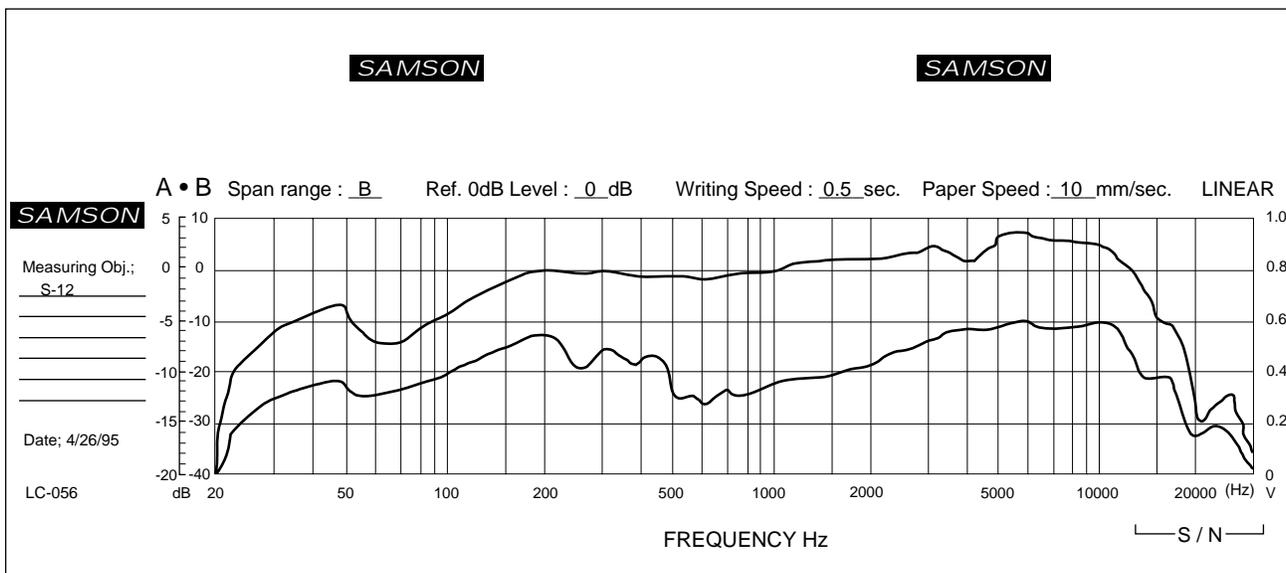
In this manual, you'll find a more detailed description of the features of your S12 microphone, as well as instructions for using your S12, and full specifications. You'll also find a warranty card enclosed—don't forget to fill it out and mail it in! This will enable you to receive online technical support and will allow us to send you updated information about other Samson products in the future.

SPECIAL NOTE: Should your S12 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 S12 in its original carton and packing materials.

Features

The Samson S12 utilizes state-of-the-art microphone technology. Here are some of its main features:

- Rugged dynamic capsule enables the S12 to be used with high sound pressure level signals (such as drums and amplified instruments) and ensures reliable performance in even the most demanding environments.
- High energy rare earth Neodymium magnet provides 6 dB of noiseless gain.
- Hyper-cardioid pattern minimizes feedback problems and effectively rejects signals not originating directly in front of the mic capsule.
- Full range frequency response allows natural reproduction of all audio sources.
- Low impedance output enables the S12 to send strong, full bandwidth signal over long cable runs.
- Lightweight and compact, the S12 can be mounted on any standard microphone stand (using the included mic clip) or can be easily handheld for long periods without inducing fatigue.



Using Your S12

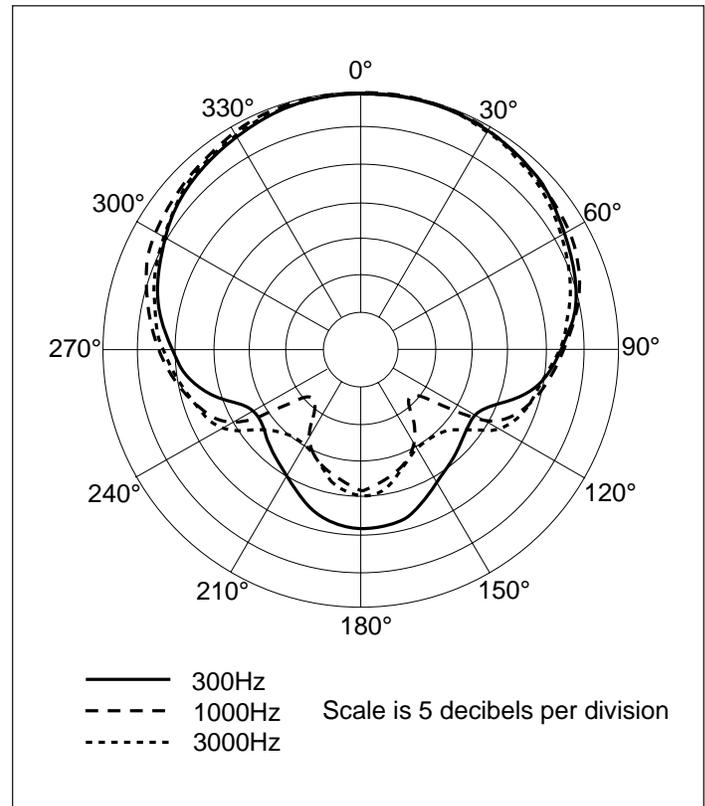
The S12 can be connected to any standard mixer, mixer/amplifier, or mic preamp using a standard low impedance microphone cable. Connect the female XLR end directly to the S12 and the other end (normally a male XLR end, although some mixers use 1/4" connectors) to the mixer, mixer/amplifier, or mic preamp.

The S12 can be mounted to any standard microphone stand (using the included mic clip) or can be handheld. 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. On the other hand, the proximity effect can make some instruments too boomy when the mic is too close—for example, when miking an acoustic guitar, you may want to move the S12 back six inches or more from the front of the guitar body. The key is experimentation, along with awareness of the general principle that, the closer the S12 is to a signal source, the greater the bass response.

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 *hyper-cardioid* pattern utilized by the S12; this yields maximum rejection of signal coming from any direction other than directly in front of the mic. For this reason, the S12 excels in environments where there is a good deal of unwanted ambient sound—it reproduces those signals originating directly in front of the mic capsule itself while rejecting those that originate from behind.

Specifications

Type	Dynamic	Output Impedance (@ 1 kHz)	600 ohm (Lo Z) ±30%
Polar Pattern	Hyper-cardioid	Connector	3-pin XLR male
Frequency Response	60 Hz - 18 kHz	Dimensions	
Sensitivity (0 dB = 1 V / 94 dB SPL @ 1 kHz)	-70 dB ± 3 dB	Head length	2 in. / 51.5 mm
		Main unit length	4.75 in. / 120.5 mm
		Total length	6.75 in. / 172 mm
Max. Input Level (1 kHz, less than 0.5% noise ratio)	130 dB SPL	Weight	8.7 oz. / 250 g



S12 Polar Pattern

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 hyper-cardioid pattern utilized by the S12 is so good at rejecting signal not coming from directly in front of the mic, you'll find that use of the S12 greatly minimizes feedback problems when used in live performance.

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