

SR40 & SR40/HC

40kHz Cardioid & Hypercardioid High Definition Microphones™



Architectural & Engineering Specifications

40kHz Cardioid or Hypercardioid

The microphone shall be a back-electret condenser type with a wide-range uniform frequency response of 30 Hz to 40 kHz, ± 2 dB @ 30cm. The microphone shall have an output level of 10 mV/Pa. The microphone shall be of a single capsule, single membrane design. The microphone shall have an impulse response with the rise time no longer than 25 microseconds, and total settling time, including the rise time, no longer than 120 microseconds. The microphone shall have polar characteristics uniform in all planes to form a cardioid or hypercardioid of revolution. The microphone shall accept sound pressure levels up to 145 dB producing no more than 3% THD. Dimensions shall be 9.84 in. (250mm) long by .860 in. (22mm) in diameter. The maximum head diameter shall be .484 in. (12.3mm) without the windscreen, and 1.95 in. (49.6mm) with the windscreen. The microphone shall be terminated with a male XLR-3 connector. The microphone shall require 48V phantom power at 10mA. The microphone shall be made of metal with a black finish. The Earthworks SR40 or SR40/HC is specified.

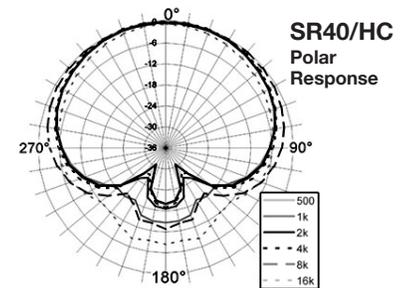
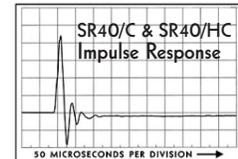
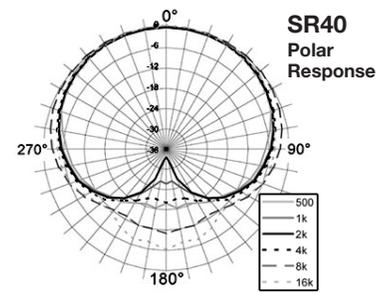
- High Definition Microphone™
- 30Hz to 40kHz Frequency Response
- Hear Detail That Other Microphones Miss
- Uniform Frequency Response at 0°, 45° & 90°
- 145dB SPL Max Acoustic Input
- More Gain Before Feedback
- Exceptional Rejection of Sounds From the Rear of the Microphone

A Technological Achievement

Earthworks' advanced microphone technologies have made it possible to create a cardioid and hypercardioid microphone with a 40kHz high frequency response. This provides these microphones with exceptional high frequency response that will capture minute details previously not possible with conventional cardioid family microphones. The SR40 also has exceptional impulse response which allows it to capture fast transients quickly and accurately. Its short diaphragm settling time will allow you to hear subtle details that conventional microphones miss. The Earthworks QTC40 is our most popular 40kHz omni model and the SR40 models provides a cardioid counterparts that are equally as exceptional. With one listen, you will understand why we are so excited about this exceptional new 40kHz cardioid series microphones.

About High Definition Microphones™

During the last decade it has become commonplace for sound recording and broadcast equipment to accommodate extended frequency responses up to 100kHz. With few exceptions, even the very best of conventional professional microphones do not offer frequency responses above 20kHz. However, making a High Definition Microphone involves far more than extending the frequency response. Impulse response, diaphragm settling time and pristine electronics are also key elements. Earthworks' founder David Blackmer foresaw the need for higher quality microphones, and Earthworks has been offering High Definition microphones, with extended frequency response beyond 40kHz, since 1996. Earthworks High Definition Microphones™ have an extremely clean, natural on-axis pickup, and smooth, uncolored off-axis response with high front-to-back rejection that makes them superb for a wide range of applications including sound reinforcement, broadcast, in addition to recording voice and musical instruments. You will hear exceptional sound quality that is extremely accurate, detailed, open and crystal clear even on analog or digital sound systems that are limited to a 15kHz or 20kHz bandwidth. You will notice a remarkable



improvement in sound quality on nearly all audio systems when using Earthworks High Definition Microphones™.

Polar Patterns

David Blackmer also invented a totally new polar technology that provides microphones with near-perfect polar response. When you look at a polar pattern of an Earthworks microphone, the mid frequencies, high frequencies and low frequencies all look very much like a "textbook perfect" polar pattern. In practice this means the polar response of an Earthworks microphone is extremely uniform over its operating frequency range; the frequency response at 90 degrees off-axis is very close to its on-axis response. Such uniform polar response results in less phase problems on the sides of the microphone and there are fewer phase cancellations when using multiple mics placed close together. This new polar technology also provides more rejection of unwanted sounds from the rear of the microphone providing more gain before feedback in live sound applications.

Specifications

Frequency Response:	30Hz to 40kHz ± 2 dB @ 30cm
Polar Pattern:	Cardioid
Sensitivity:	10mV/Pa (-40dBV/Pa)
Power requirements:	48V Phantom, 10mA
Max Acoustic Input:	145dB SPL
Output:	Male XLR-3 (PIN 2+)
Output Impedance:	100 Ω , balanced (50 Ω ea. pin 2 & 3)
Min Output Load:	600 ohms between pins 2 & 3
Noise:	22dB SPL equivalent (A weighted)
Dimensions L x D:	9.84 x 0.860 in. (250 x 22 mm)
Weight:	0.5 lbs. (225g)

