

# Earthworks™ Periscope™ Series

## P30/C & P30/HC Periscope High Definition Microphones™

- High Definition Microphone™
- Hear Detail that Other Microphones Miss
- 20Hz to 30kHz Frequency Response
- 139dB SPL Max Acoustic Input
- Flexible 5" Neck with Small Microphone Head
- Small Size is Easier to Get Into Difficult Places
- Position Microphone Without Moving Stand
- Uniform Frequency Response at 0°, 45° & 90°
- Low Handling Noise
- Available in Black or White
- Available in Cardioid or Hypercardioid

**P30/C** 30kHz Cardioid

**P30/HC** 30kHz Hypercardioid

### Periscope™ High Definition Microphones™

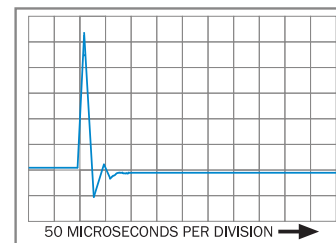
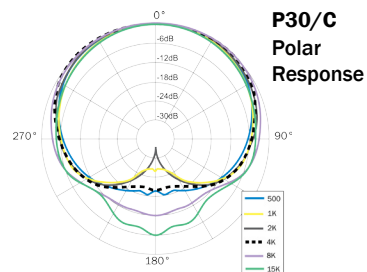
The Earthworks Periscope Series are uniquely designed with a small cardioid head and flexible neck that will allow you to get into difficult places such as under the strings of a string bass. The Periscope design also offers more flexibility and ease of use for standard microphone applications. Imagine repositioning your microphone without having to move the stand or mic boom. The Periscope's body can be pointed straight up and its microphone head can be pointed nearly straight down in any direction. It is the ultimate in sound quality and flexibility.

### High Definition Microphones™

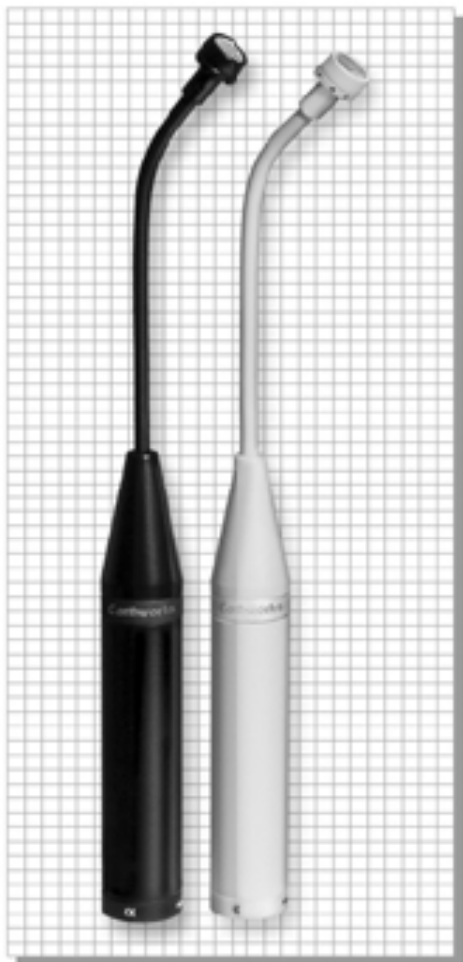
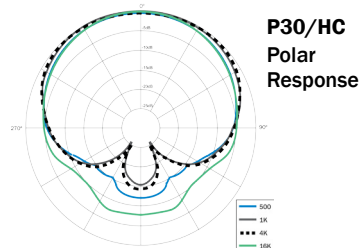
During the last decade digital recording systems offering high sampling rates became widely available. The 96 and 192 kHz systems offer frequency responses beyond 40kHz, as does the 1-bit SACD format. However, few conventional professional microphones offer frequency responses extending even to 20kHz. 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 such 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, and recording of voice and musical instruments. You will hear exceptional sound quality that is extremely accurate, detailed, open and crystal clear even on 16 bit, 44.1kHz recording systems. Equally astounding is the audible improvement on analog or digital equipment that is limited to a 20kHz bandwidth. You can hear a remarkable improvement on these systems.

### Polar Patterns

David Blackmer also invented a totally new approach to microphone design, resulting in near-perfect polar patterns. When you look at a polar pattern of an Earthworks microphone, the mid frequencies, high frequencies and low frequencies all look very close to a "textbook" 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 the on-axis response. Such uniform polar re-



50 MICROSECONDS PER DIVISION →



### Architectural & Engineering Specifications

#### 30kHz Cardioid & Hypercardioid

The microphone shall be a back-electret condenser type with a wide-range uniform frequency response of 30 Hz to 30 kHz,  $\pm 2$  dB @ 30cm. The microphone shall have an output level of 20 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 of revolution for P30/C and a hypercardioid of revolution for P30/HC. The microphone shall accept sound pressure levels up to 139 dB producing no more than 3% THD. Dimensions shall be 10 in (250mm) long by .860 in (22mm) diameter. The maximum head diameter shall be .540 in (14mm) without the windscreen, and .9 in (23mm) with the windscreen. The microphone shall be terminated with a professional gold-plated 3 pin XLR connector. The microphone shall require 48V phantom power. The microphone shall be made of metal with black or white finish. The Earthworks P30/C

sponse 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 microphone technology also provides more rejection of unwanted sounds from the rear of the microphone and more gain before feedback in live sound applications.

### The Periscope™ Series

The Periscope™ High Definition Microphones™ have a 30kHz high frequency response that enables them to pick up high frequency overtones that conventional microphones miss. In addition, they have an extremely fast impulse response that allows them to pick up transients far more accurately. Their exceptionally short diaphragm settling time will enable you to hear subtle details that conventional microphones mask. The audible difference between an Earthworks High Definition Microphone and conventional microphones is as dramatic as the difference you will see between conventional video and high-definition video. For more information, please visit our website at earthworksaudio.com.

### Specifications

**Frequency Response:** 20Hz to 30kHz  $\pm 2$ dB @ 30cm  
**Polar Pattern:** Cardioid or Hypercardioid  
**Sensitivity:** 20mV/Pa (-34dBV/Pa)  
**Power requirements:** 24-48V Phantom, 10mA  
**Max Acoustic Input:** 139dB SPL  
**Output:** XLR-3 (pin 2+)  
**Output Impedance:** 65 $\Omega$ , balanced (between pins 2 & 3)  
**Min Output Load:** 600 ohms between pins 2 & 3  
**Noise:** 16dB SPL equivalent (A weighted)  
**Dimensions L x D:** 10 x .860 in. (250 x 22mm)  
**Weight:** 0.22 lb. (100g)

