

**Architectural & Engineering Specifications**  
**30kHz Cardioid & Hypercardioid**

The microphone shall be a back-electret condenser type with a wide-range uniform frequency response of 30Hz to 30 kHz,  $\pm 2$  dB @ 1 ft. (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 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 FW730 and a hypercardioid of revolution for FW730/HC. The microphone shall accept sound pressure levels up to 145dB producing no more than 3% THD and shall have strong RFI rejection. Dimensions of the stand/microphone head shall be 7" 2" (2.13m) high with a shock-isolating 12" (30.5cm) diameter metal base or tripod base. The maximum microphone head diameter shall be .540" (14mm) without the windscreen, and .9" (23mm) including the supplied optional windscreen. The microphone shall be terminated with a professional 3-pin male XLR connector with gold plated contacts and shall have no cables visible above the base-mounted XLR connector. The microphone system shall require 48V phantom power. The microphone system shall be made of various metals with a black finish and a dark grey cast iron base or black tripod base. The flexible microphone system shall be capable of positioning the microphone head from 1.5 ft. (.46m) to 7 ft. (2.13m) above floor level. The total weight of the microphone system with metal base shall be 14.6 lbs. (6.6kg) or with tripod base 3.6 lbs. (1.6kg) The Earthworks FW430, FW430TPB, FW430/HC or FW430/HC-TPB is specified.

- A Totally Unique Combination of Microphone, Microphone Boom and Stand in a Single Unit
- Low Profile with No Visible Wires Above Floor Level
- Seven Foot Version Allows Microphone to be Positioned from 1.5 feet to 7 feet high
- High Definition Microphone™
- Hear Details that Other Microphones Miss
- More Gain Before Feedback
- Exceptional Rejection of Sounds From the Rear
- Highly Versatile & Easy to Position from 1.5 to 7 feet high
- 30Hz to 30kHz Frequency Response
- 145dB SPL Max Acoustic Input
- Near Perfect Polar Pattern Provides Uniform Frequency Response at 0°, 45° & 90°
- Available in Cardioid & Hypercardioid

**FW730** 30kHz Cardioid (metal base)

**FW730TPB** 30kHz Cardioid (tripod base)

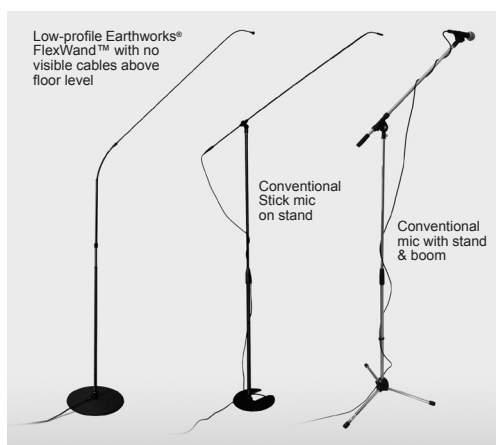
**FW730/HC** 30kHz Hypercardioid (metal base)

**FW730/HC-TPB** 30kHz Hypercardioid (tripod base)

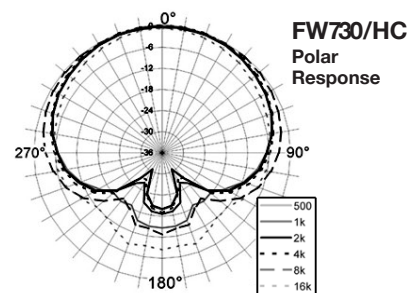
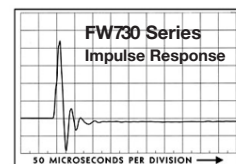
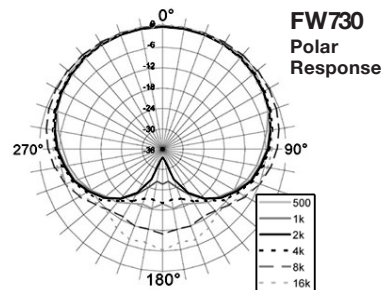
**FlexWand™ High Definition Microphones™**

The FlexWand™ is a totally new concept in microphones. It is a combination of a High Definition Microphone and a low profile microphone stand and boom as a single unit. The FlexWand comes in two sizes; the FW730, 7 ft. model and the FW430, 4 ft. model. The FW430 allows the microphone head to be positioned as high as 4.7 feet and as low as 10 inches from the floor or anywhere in between. Both models are available with either a metal cast iron base or a tripod base. Best of all there are no visible wires or cables above floor level. Visually it is low profile, smooth, sleek and clean. The FlexWand™ is the ideal solution for applications where the utmost in sound quality and a low profile is required.

Using the FW730, you don't have to find a mic, attach



— Patent Pending —



the mic clip to the stand and then dress the cable around the stand. Just pick up the FlexWand, position it and plug the mic cable into the base. You are done! Best of all it is neat and clean visually with no unsightly microphone cable wrapped around the stand and boom. And, it sounds spectacular!

**Stand & Wand**

The FlexWand™ has a large flex section near the center of the stand that couples the stand and the wand. There is also a mini-gooseneck between the end of the wand and the microphone head. The lower section of the stand is 3/4" in diameter and the 24 inch wand is 5/16" in diameter with a 4.5" mini-gooseneck connected at the end which connects to the High Definition Microphone head. The combination of a mid-flex section and the mini-flex on the wand provide an infinite combination of placement options between 1.5 feet and 7 feet. Please refer to the application photos on the rear of this data sheet.

**Specifications**

- Frequency Response:** 30Hz to 30kHz  $\pm 2$ dB @ 1 foot (30cm)
- Polar Pattern:** Cardioid or Hypercardioid
- Sensitivity:** 10mV/Pa (-40dBV/Pa)
- Power requirements:** 48V Phantom, 10mA
- Max Acoustic Input:** 145dB SPL
- Output Connector:** Male XLR-3 (pin 2+)
- Min Output Load:** 600 ohms between pins 2 & 3
- Noise:** 22dB SPL equivalent (A weighted)
- Positioning Range:** From 1.5 ft. to 7 ft. above floor level
- Dimensions:** Stand 7' 2" long (2.18m), Base 12" (30.5cm) in diameter, 1.1" (2.7cm) high
- Color:** Stand, flex & wand - black, base - dark gray
- Unit Weights:** Stand 2 lbs. (.9 kg), Metal Base 12.6 lbs. (5.7kg), Tripod Base 1.6 lbs. (0.73kg)

Turn over page for additional information →

## A Revolutionary New Concept

(a microphone, stand and boom as a single unit)

The highly versatile High Definition FlexWand™ System is the ideal solution for a wide variety of miking applications. The illustrations on this page show only a few of the many applications for the FlexWand™ System. Notice how the lower profile of the FlexWand™ provides a much cleaner and neater appearance with no visible cables above floor level. This is in addition to the dramatic increase in sound quality, gain before feedback and tremendous rejection of sounds at the rear of the microphone.

### Near Perfect Polar Response

The FlexWand™ has near perfect polar response that will not beam or spotlight and will provide more gain before feedback. The frequency response of the cardioid and hypercardioid models at 90 degrees off-axis is within 3dB of the on-axis response at any frequency (within the specified frequency response of the microphone). The FlexWand™ will allow three singers to be placed around it and all three will enjoy the same pristine sound quality. This is virtually impossible with competitive microphones. The exceptional polar response of the FlexWand™ will allow the use of fewer microphones with placement closer to the source, thereby obtaining even more gain before feedback. In addition, the rejection of sounds from the rear of the microphone is exceptional. This is ideal when attempting to keep sounds from an orchestra or band out of vocal, choir or soloist 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 and beyond 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. 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, 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 as well as analog or digital sound systems that are limited to a 15kHz or 20kHz bandwidth. You will hear a remarkable improvement in sound quality on nearly all audio

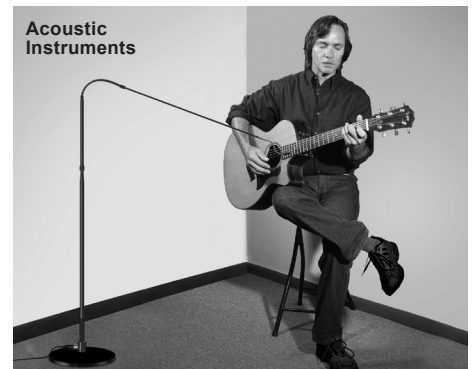


Large choir

Find the FlexWands in the above photograph. How many FlexWands do you see?



Small Choir or Vocal Ensemble



Acoustic Instruments



Drum Overheads

systems when using Earthworks High Definition Microphones™.

### Extended Frequency Response

The FlexWand™ incorporates a High Definition Microphone™ with a 30kHz high frequency response that enables it to pick up high frequency overtones that conventional microphones miss. In addition, it's extremely fast impulse response allows it to pick up transients far more accurately. The 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 see when comparing conventional video to a high-definition video. It is most impressive; you must hear it for yourself.

If you are interested in a demonstration of the FlexWand at your facility, please contact the Earthworks sales dept. using the contact information at the bottom of this page. We also invite you to visit the Earthworks website for additional information on the FlexWand and other high quality Earthworks audio products at [earthworksaudio.com](http://earthworksaudio.com)

**Earthworks®**  
HIGH DEFINITION MICROPHONES™

Expertly Hand Made in the U.S.A.

- Patent Pending -

