Earthworks®
FlexWand™
HIGH DEFINITION MICROPHONE SYSTEM

A Microphone,
Boom and Stand
in a Single Unit

USER'S MANUAL

FW730
FW730/HC

High Definition
Microphone™ System

Version 1, November 25th, 2008

Patent Pending
Made in the U.S.A.

Earthworks®
HIGH DEFINITION MICROPHONES™

Congratulations on your purchase of the innovative Earthworks® High Definition Microphone™ FlexWand™ System. We know you will be thrilled with the results you achieve using the FlexWand™ System for both live performance and recording.

Items enclosed with your new Earthworks® FlexWand™ System:

FlexWand™ System Models FW730 & FW730/HC

1 – FlexWand™ stand/wand section *

1 – Microphone windscreen *

1 – Base for stand/wand section *

1 – User's Manual for FlexWand™ System

1 – High Definition Microphones™ Demo CD

(If you purchased a matched pair of FlexWands, you will receive two each of the items indicated above with an asterisk.)

THE FLEXWAND™ SYSTEM

The FlexWand™ System 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. It allows the microphone head to be positioned as high as 7 feet and as low as 1.5 feet from the floor or anywhere in between. 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.

The FlexWand™ is ideal for miking a variety of applications such as large choir, small vocal ensembles and vocal solos. Now you don't have to find a microphone, attach 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!

IDENTIFICATION OF THE FLEXWAND™ ELEMENTS

In this manual we will refer to the various elements of the FlexWand™ System. Please refer to Figure 4 on page 3 where all of the elements of the FlexWand™ System are identified. Please review this information so you are familiar with the various elements and terminology associated with the FlexWand™.

USING THE FLEXWAND™ AT MAXIMUM HEIGHT

When using the FlexWand™ for large choirs or vocal groups, you would probably want the FlexWand™ at its maximum height of 7 feet.

This is easily achieved by pointing the wand straight up and then loosen the clutch and slide the sleeve up until it seats into the "sleeve mating coupler." Make sure it is all the way up and firmly seated over the coupler (see Figure 1). This will insure that the FlexWand™ is perfectly straight up and down from all directions. Then position the microphone head to any position that you desire with the mini-flex at the end of the wand (see Figure 2).

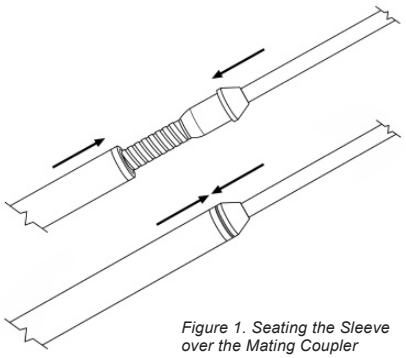
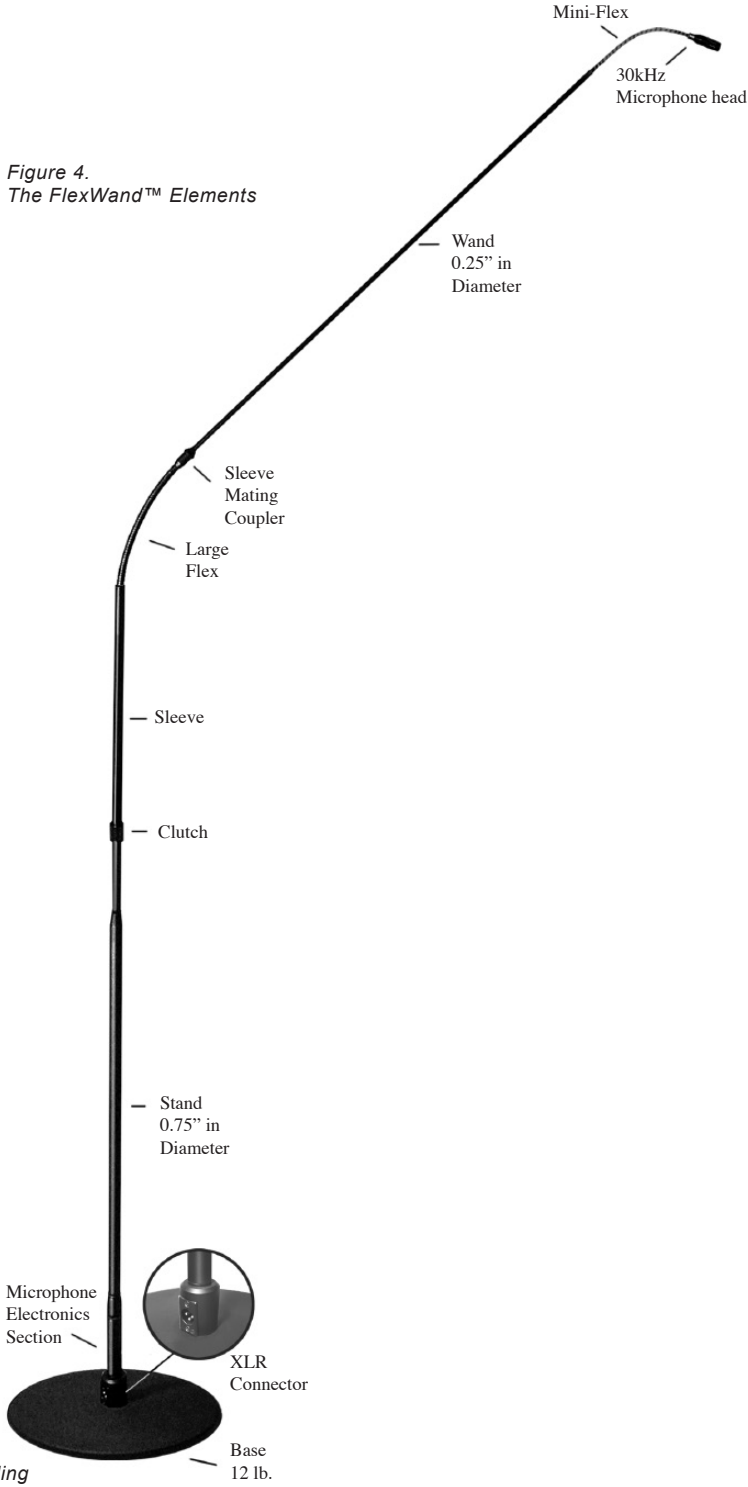


Figure 1. Seating the Sleeve over the Mating Coupler

Figure 2. Positioning the Microphone Head with the FlexWand at Maximum Height

Figure 3. Miking a Large Choir with the FlexWands at Maximum Height

Figure 4.
The FlexWand™ Elements



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USING THE FLEXWAND™ AS A BOOM

In the "boom mode" the FlexWand™ can be adjusted much easier than a conventional microphone on a boom stand. The boom mode can be used when you want the FlexWand™ microphone placed lower for such applications as small vocal groups, vocal solos or musical instruments (see Figures 5, 6, 9, 10 & 11).

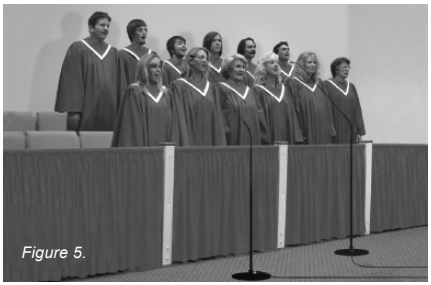


Figure 5.

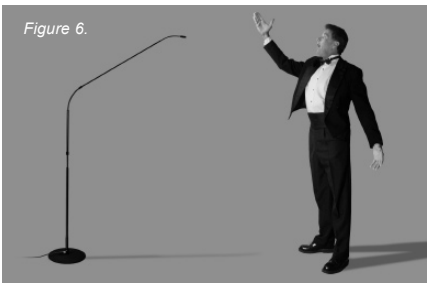


Figure 6.

When using the "boom mode," the clutch should be loosened and the sleeve should be slid down so it only covers about half of the large flex, then tighten the clutch. By doing this, the flex section will be much more rigid than if the sleeve were slid all the way down.

You might want to experience this for yourself by first loosening the clutch and sliding the sleeve all the way down (tighten the clutch) and then position the wand at a 45 degree angle (see Figure 7a). Now position the wand at several angles greater and less than 45 degrees and see how it feels (see figure 9).

Now loosen the clutch again and cover only half of the large flex then tighten the clutch (see Figure 7b). Now position the wand at several angles at greater and less than 45 degrees to see how much more rigid the large flex is (see Figure 8).

The large flex can be made even more rigid by sliding the sleeve up to cover three-fourths of the large flex (see Figure 7c). These adjustments are ideal when you want to position the wand in any position from straight up to 90 degrees. If you want to go more than 90 degrees, you will need to re-position the sleeve to uncover more of the large flex.

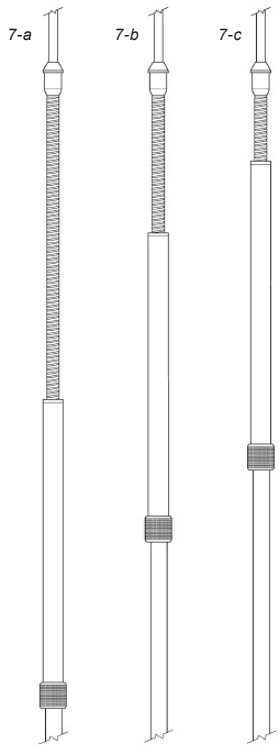


Figure 7-a. Sleeve all the way down
7-b, Sleeve half-way up
7-c Sleeve three-fourths of the way up

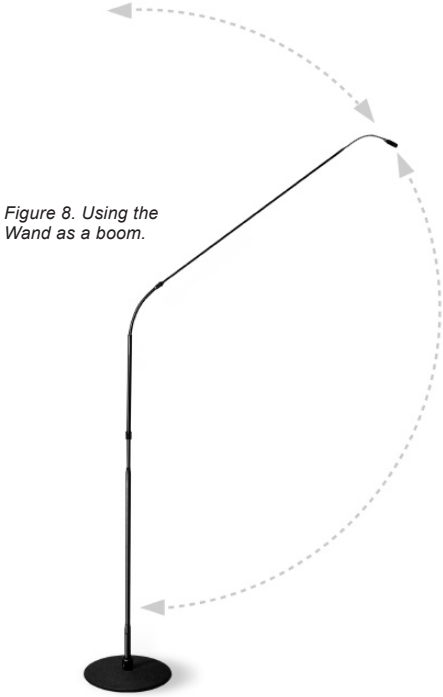


Figure 8. Using the Wand as a boom.

MIKING MUSICAL INSTRUMENTS

The FlexWand™ is a time saving tool for miking musical instruments for either recording or live sound. All you have to do is position the wand and the microphone head, plug in the microphone cable at the base and you are done. Best of all, in most cases you can re-position the microphone without moving the stand (i.e. FlexWand™ base). The great range of positioning options of the FlexWand™ allow it to be used for a wide range of applications. We will illustrate the FlexWand's use with only a few musical instruments to give you a better feel of it's applications.

ACOUSTIC GUITAR

When using a single microphone, many engineers choose to place the microphone somewhere between the guitar hole to several frets above the hole. The FlexWand™ will allow you to easily move the microphone head around to achieve the desired sound. Please refer to Figure 9.

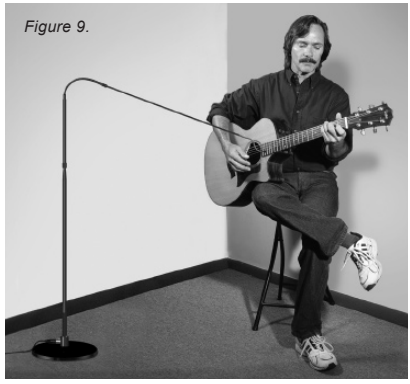


Figure 9.

DRUM OVERHEADS

The incredible sonic performance and low profile make the FlexWand™ an excellent for drum overhead microphones, not to mention the great ease of microphone placement, its low profile and no visible wires. This would be especially advantageous for live performance or video productions. Please refer to Figure 10 to use as a starting point.


Figure 10.

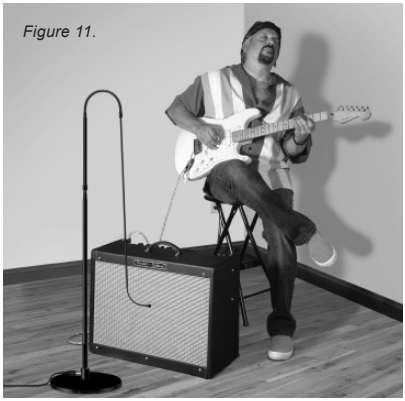


Figure 11.

AMPLIFIED INSTRUMENTS

Uncovering all of the FlexWand's large flex will allow the microphone head to be placed as low as 1-1⁄2 feet above floor level. This is ideal for miking amplified instruments such as electric guitar and electric bass. The wide frequency range of the FlexWand™ make it ideal for miking either. Please refer to Figure 11.

The highly versatile FlexWand™ High Definition Microphone System is a uniquely creative tool that will provide outstanding sonic results for virtually any recording or live sound application. Its low profile with no visible wires above floor level provides a clean sleek look that visually blends into any musical or theatrical performance. The quality construction of the FlexWand™ will provide you with years of exceptional service. If you have any questions, please contact Earthworks Customer Service Department at 603-654-6427, ext. 20.

WARRANTY

All Earthworks® products carry a two-year limited warranty (parts and labor). If you have any problems with your Earthworks products, please contact our warranty/repair department by email at: returns@earthworksaudio.com or by telephone at (603) 654-6427, ext 20.

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 low distortion high current 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 due to their near-perfect polar patterns. Cardioid models of High Definition Microphones provide high front-to-back rejection that makes them superb for a wide range of applications including sound reinforcement, broadcast in addition to 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 this remarkable improvement in sound quality on nearly all audio systems when using Earthworks High Definition Microphones™.

EXTENDED FREQUENCY RESPONSE

The FlexWand™ System 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 and high-definition video. It is most impressive and you can experience this for yourself by listening to the Free High Definition Microphone™ Demo CD which is enclosed along with your FlexWand™ System users manual.

FLEXWAND™ SPECIFICATIONS

FW730 & FW730/HC (Cardioid & Hypercardioid)

Frequency Response: 30Hz to 30kHz ±2dB @ 6 inches

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)

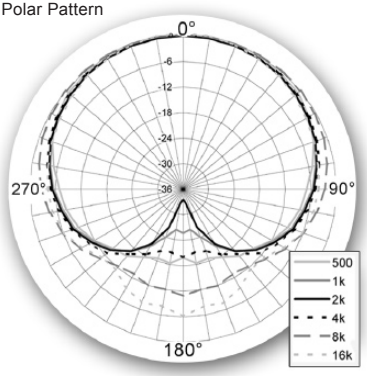
Positioning Range: From 1.5 ft to 7 ft above floor level

Dimensions: Stand 7' 2" long (2.18m), Base 12" (30.48cm) in diameter, (2.7cm) high

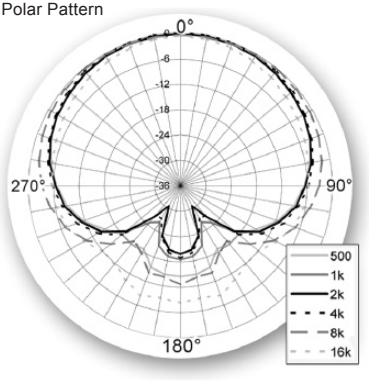
Color: Stand, flex & wand - black, base - dark gray

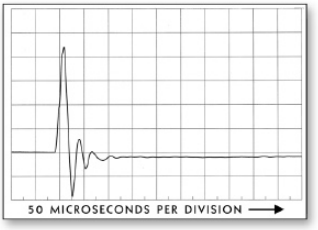
Unit Weights: Stand 2 lbs (.9 kg), Base 12.6 lbs (5.7kg)

FW730
Polar Pattern



FW730/HC
Polar Pattern





FW730, FW730/HC Impulse Chart

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Earthworks, Inc.
37 Wilton Rd.
Milford, NH 03055
603-654-6427, ext. 14
www.earthworksaudio.com
Printed in U.S.A.