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Church Production

Magazine

CHARISMATIC OUTREACH

Atlanta-based Free Chapel unveils major video system upgrade, including well-researched investment in LED screens for main and satellite campus

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CPM FIRST LOOK

EARTHWORKS FLEXWAND FW730 MICROPHONE SYSTEM

WITH A MIC-TO-CHOIR
DISTANCE OF SIX FEET,
AN 80-VOICE CHOIR
CAN BE FULLY COVERED
WITH THREE FLEXWAND
MICROPHONES, VS.
AT LEAST SIX TYPICAL
CARDIOID MICS.

REVIEWER / GARY PARKS

The Earthworks FlexWand High-Definition Microphone system is a mic to look up to—literally. With the flexibility to unobtrusively reinforce a choir from overhead or to bend over and capture an acoustic guitar, the FlexWand integrates a pristine directional microphone element with a thin yet stable stand that includes two gooseneck sections. The microphone has a positioning range between 6.5 feet to 1.5 feet above floor level, so it can be used for a variety of applications.

Earthworks is known for the quality and accuracy of its microphones, from the M30 omni and SR30 cardioid audio measurement mics to the amazing SR40V vocal mic used in professional touring. [See full review at: www.churchproduction.com/Earthworks_SR40V.] The condenser element used in the FlexWand boasts a frequency response of 30 Hz to 30 kHz (+/-2 dB) at a distance of one foot and very low noise floor of 22 dB SPL, with a maximum acoustic input of 145 dB and a sensitivity of -40 dBV. As a result, it is designed to capture the nuances of the performance without coloration.

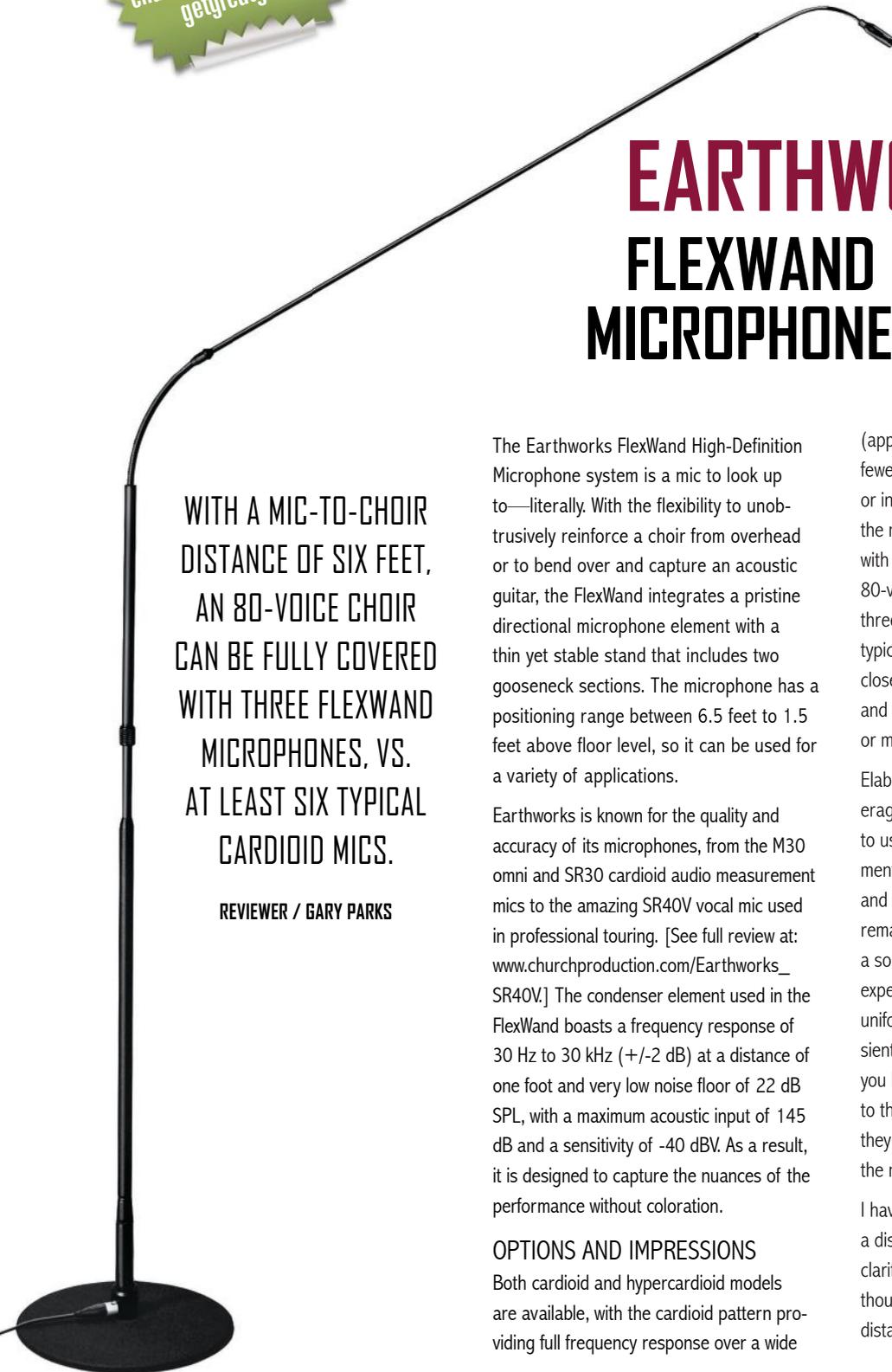
OPTIONS AND IMPRESSIONS

Both cardioid and hypercardioid models are available, with the cardioid pattern providing full frequency response over a wide

(approximately 120-degree) angle so that fewer mics are necessary to cover a choir or instrumental ensemble. As illustrated in the manual that accompanies the FlexWand, with a mic-to-choir distance of six feet, an 80-voice choir can be fully covered with three FlexWand microphones, vs. at least six typical cardioid mics. Move the mics even closer for additional gain before feedback, and those three mics could well replace 10 or more conventional ones.

Elaborating on the consistency of the coverage pattern, I have had the opportunity to use Earthworks mics in sound reinforcement applications for spoken word, vocals, and instruments. The off-axis response is remarkably consistent with what comes from a source directly in front of the mic. In my experience, this characteristic extends to the uniformity of the frequency response, transient response, and level—meaning that if you have vocalists or speakers in front and to the sides yet within the coverage pattern, they will sound like they are right in front of the mic.

I have found that this quality extends at a distance from the mic itself, so that the clarity and warmth of the voice remain, although at a diminished level because of that distance. The consistency of the mic's polar



COMPANY	EARTHWORKS AUDIO
PRODUCT	FlexWand High-Definition Microphone System
PHONE	(603) 654-2433
URL	www.earthworksaudio.com
LIST PRICE	\$1,799

pattern, both in the active areas and in the nulls toward and at the rear, allow the gain to be raised as needed to capture the audio source without feedback, and with additional headroom. As with their vocal and instrument mics, the FlexWand has this consistency.

In its manual, Earthworks points out another effect called “spotlighting” that can come with using microphones that maintain polar control of some frequencies but not others within their directional pattern. What can happen is that a particular singer (or section of singers) in a choir can have their voices stick out because they are standing in a zone where a specific frequency range that the mic is not consistently controlling is emphasized. The best way to alleviate this effect is using mics with better off-axis control—such as the FlexWand.

STRUCTURE AND USES

The structure of the FlexWand is creative, so that it can be deployed in a variety of ways. Starting at the bottom, a slim, rigid ¾-inch stand is threaded at the lower end to fit into either a cast-iron or tripod base to hold it in place. Right above the threaded area is the mic’s XLR connector, so that no cables are twisting up the stand as a visual distraction.

At the midway point, a bit over three feet from the floor, a sliding sleeve with a “clutch” to hold it at the desired location can be moved to either expose or cover a flexible gooseneck. This gooseneck allows the mic to be tilted off vertical, enabling the mic element at the top to point toward an audio source that is positioned lower, such as a group of people standing

or sitting, a section of an orchestra, a solo musician, or as overheads on a drum kit.

Alternately, the sleeve can be pushed up entirely, forming a rigid stand with a mic element on a second gooseneck positioned nearly seven feet in the air. This second gooseneck is thinner, and allows the mic element to be aimed precisely at the audio source. When the FlexWand is in its vertical position, with the upper boom pointing forward, it is ideal for reinforcing several rows of the choir.

Compared to some other solutions, the FlexWand FW730 microphones are a greater investment. However, the results should be decidedly better in both audio quality and consistency of performance, and you will be using fewer microphones to cover larger choirs. The FlexWand may be purchased singly or in matched pairs, with a list price of \$1,799 per microphone.

GARY PARKS has served as marketing manager and wireless product manager for Clear-Com Intercom Systems. He has also worked with loudspeaker and wireless product management at Electro-Voice, done technical writing at Meyer Sound, and conducted RF planning software sales with EDX Wireless. He is a freelance writer and can be reached at garycparks1@gmail.com. 

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churchproduction.com/getgreatgear

1. Register to win an **Earthworks FlexWand FW730 Microphone System**. No purchase necessary. Must be 18 years old to enter. Void where prohibited. Open to U.S. residents only. Register online at:

www.churchproduction.com/getgreatgear