

ABOUT HIGH DEFINITION MICROPHONES™

Capture the Full Spectrum of Sound

What is a High Definition Microphone™? It is a microphone that will pick up sounds with far greater accuracy and fidelity than conventional microphones. The difference you hear is like the difference you see when comparing a standard television picture to a high definition television picture. It is that dramatic!

Today's recording systems and recording media are getting better and better with higher sample rates and increased bit rates that provide extended frequency response, lower noise and greater dynamic range. The question is, are microphones capable of picking up sounds with increased bandwidth, lower distortion and with far greater detail? Most microphones available today only have high frequency responses reaching between 15kHz to 20kHz and are also not fully capable of supplying the increased detail and dynamic range.

In contrast, David Blackmer, the inventor and engineering genius of the Earthworks and dbx core technologies foresaw our time. He realized that dramatic improvements in microphone design technologies were needed to replace some of the existing outdated ones. So, he invented a number of new technologies to dramatically increase the audible quality of microphones. Earthworks™ High Definition Microphones™ are not made like any other microphone on the market because they employ Blackmer's new advanced microphone technologies. The audible results are startling! Let's look at some requirements needed to create advanced, higher quality microphones:

REQUIREMENTS OF A HIGH DEFINITION MICROPHONE™:

• Better Impulse Response

This is the ability of a microphone to accurately pick up signals with fast transients and rise times such as percussion, brass, guitar and piano. The impulse response is the single best measure of the overall sonic accuracy and fidelity of a microphone.

• Shorter Diaphragm Settling Time

A shorter diaphragm settling time will increase a microphone's ability to pick up subtle low-level sounds and transients. If the diaphragm is still vibrating from the sounds it picked up previously it will tend to mask or color many or all of the subtle sounds that follow.

• Extended Frequency Response

A number of studies have shown that acoustic sounds and overtones of musical instruments extend to beyond 100kHz. Studies also indicate that sounds beyond 20kHz greatly influence the overall quality of the sound we perceive.

• Minimum Signal Path

Minimum electronics provide a more pure and unaltered signal. Features such as switchable patterns, pads and hi/low pass filters tend to degrade the sonic qualities of a microphone.

• High SPL Handling at Low Distortion

Many microphones will create severe distortion above 120dB SPL. Higher quality microphones must have very low distortion up to and beyond 140dB SPL. This provides far cleaner signals when picking up high level transients from close miked or amplified instruments.

• Cable Length

Once a microphone has provided a pure signal with extended frequency response, it must get to the other end of a long cable without losses. High current, Class A amplifiers allow driving long cables at very high frequencies without signal loss or slewing.

• Improved Polar Patterns

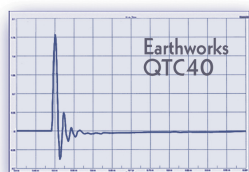
Polar response of most conventional microphones is poor over their operating frequency range. This causes beaming or spotlighting in addition to deteriorating frequency response with phasing problems on the edges of the pattern, resulting in phase cancellations and/or coloration in close multi-miking and contributing to acoustic feedback. Improved polar response dramatically reduces these problems.

All Earthworks microphones with extended frequency responses to 25kHz and beyond meet the above listed criteria of a High Definition Microphone™. Even our 20kHz models meet all this criteria with a frequency response out to 20kHz. Those who have heard Earthworks microphones are astounded with what they hear. When using an Earthworks microphone, typical comments are: "I hear details that I don't hear with other mics!", "This is the best guitar sound, ever!", "This drum sound blows me away.", "Unbelievable detail!", "This is the best piano sound that ever came out of this studio!", "You'll have to pry these mics from my cold, dead hands!" and many more.

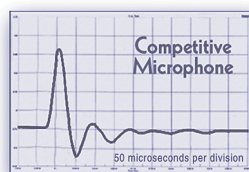
Don't take our word for it, hear it for yourself! Go to www.EarthworksAudio.com and request the free High Definition Microphone™ Demo CD." There are amazing, audible improvements as the frequency response of a microphone extends. Just listen for yourself and you too will be astounded!



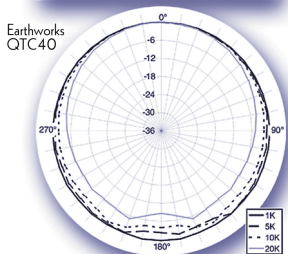
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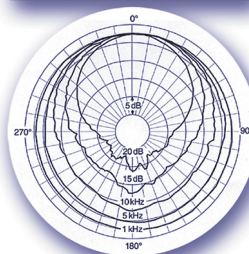
Impulse Response Graph



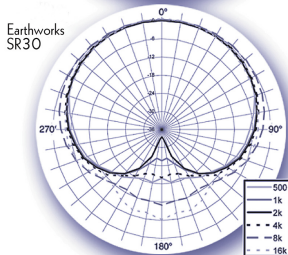
Three times the price of QTC40



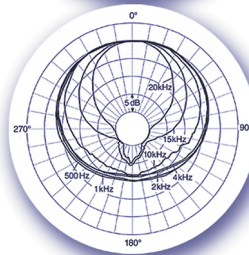
Omni Polar Pattern



Competitive Microphone one and a half times the price of QTC40



Cardioid Polar Pattern



Competitive Microphone nearly twice the price of SR30

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