

Earthworks PM40 PianoMic System

By David Morgan & Bill Evans

Accurately miking an acoustic piano and doing it consistently is one of the eternal challenges of live audio (and recording for what that's worth). Over the past year plus, FOH has covered at least a handful of approaches at prices ranging from downright cheap (the Helpenstill pickup system) to compromise (standard miking coupled with control of a MIDI piano module for John Legend) to proprietary and expensive (Tom Young's custom Scheeps array that he carries with him for every Tony Bennett gig). The problems are well known. It is not just a case of accurately reproducing the sound, although that is a challenge in itself. The job is made a lot harder by considerations like gain-before-feedback, bleed from other sound sources into the piano mic or mics and even the aesthetics of multiple mic stands surrounding that beautiful grand piano. More artists and venues have simply given up and placed a digital keyboard into a fiberglass piano shaped shell.

The Gear

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Okay, let's start with the obvious. It is Earthworks, so we expect a certain quality level, and while the pricing may be in line with industry standards for miking high quality grand pianos, it will not be cheap. The PM40 arrived in a case that could have been mistaken for one holding a high-powered rifle (which is not really a bad comparison). Upon opening the case you see a telescoping pole with a pair of mics attached on goosenecks. The pole adjusts to sit inside the piano. The mics feed a kind of junction box, which feeds the mixer. In a nice touch, the electronics box at the

piano are stored in a leather pouch that velcros to the leg of the piano, making the entire system virtually invisible.

One of the major challenges of reinforcing a piano and making it sound like a piano is the fact that the sound comes from multiple sources. Each string is a sound source, as is the sound board, and then you have reflections from the shell of the piano, which together make up the totality of the piano sound. Getting all of those sources means using some kind of omni-directional mic, which is a feedback nightmare on any stage that is even moderately loud. Earthworks has addressed the problem with mics they call "random incident" models. These show a remarkably even pickup pattern all the way around the mic, with a significant dip at 180° from the front.

Getting a real-world review on this one meant getting someone who regularly uses an acoustic piano on a big loud stage. David Morgan, who mixes the Bette Midler show in Vegas and has a nine-foot Steinway to deal with every night, was an obvious choice (and right up the street to boot!) David takes it from here.



The Gigs

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"The PM40 has taken our live piano sound, which was already pretty darn good, to new levels of accuracy and realism. Both monitor engineer Joe Dougherty, and I were immediately impressed with the outstanding audio quality and the ease of use. We started out using the factory recommended positioning, and after a few small tweaks, we soon had a truly amazing and spacious sounding piano... with the lid closed.

"The PM40 sound works equally well on the stage as in the house. The house sound is a big, balanced stereo panorama that captures the all the nuance, dynamic and sweetness of the nine-foot

Steinway grand being used with Bette Midler. Musical Director Bette Sussman was totally pleased with the immediate improvement in her monitor sound at the piano and in her ears. Just by slightly favoring the high side, Joe Dougherty was able to give the monitors exactly the right amount of articulation while still retaining the exceptional tonal realism.

"In less than two weeks of use, the PM40 has become an essential part of the show. I can't think of a product that makes miking a closed lid grand piano easier or that yields a more satisfying audio result." **FOH**

Earthworks PM40 PianoMic System

What it is: A highly specialized piano miking system

Who it's for: Acts and venues where the piano sound is important enough to warrant a separate and not-exactly-cheap system

Pros: Outstanding sound, easy to install and tweak to taste, big, balanced stereo image

Cons: It will cost ya...

How Much: \$4,495 (MSRP); \$3,595 (MAP).