

Equator Audio Research Q12 Powered Monitors

The Q12's coaxial design, onboard active crossover, and high-quality internal amps make for an impressive and highly recommended professional studio monitor.

Coaxial monitors have always had a loyal following. Mounting the high- and low-frequency drivers in a concentric design can make radiation of the separate sources more coherent and, theoretically, produce a more linear, accurate sound reproduction.

Longtime pro audio speaker expert, Ted Keffalo, who has worked with Alesis and founded the powered monitor company, Event, back in the 1990s, recently put together a new team of engineers who not only developed a new coaxial design, but also utilized 21st-century DSP technology to enable fine-tuning of the speaker to just about any room. The company, Equator Audio Research, offers models with woofer sizes ranging from 8-to 15-inch as well as a massive 18-inch subwoofer. Tested here is the 12-inch version, the Q12, priced at \$2,500 each.

Features

The Q12 contains a 12-inch bass driver (mounted in a bass reflex design cabinet with dual front-mounted ports) and a concentric-mounted, 1.5-inch, titanium-dome, rear-firing compression driver. The DSP-controlled crossover frequency is set at 1.4 kHz. Frequency response is listed at 30 Hz to 22 kHz (-6 dB at 30 Hz). The internal amplifiers deliver 500 continuous watts to the bass driver and 200 continuous watts to the compression driver. Sensitivity is listed at 92 dB at 1 watt/1-meter.

Each Equator speaker comes with an internal CPU that performs multiple functions, including speaker crossover slope and transducer output matching. As a bonus, the internal DSP can be controlled by computer software, enabling numerous adjustment options, including multiple speaker setup and room correction for acoustic mode anomalies for each speaker up to an 8.2 configuration. (For a more in-depth look at the Room Analysis Software, visit the website: <http://www.equatoraudio.com/software>.)

The speaker has plenty of connection options. The rear panel includes balanced (XLR) and unbalanced (1/4-inch) for analog sources, and digital connection via a computer USB cable. Rear-mounted dip switches enable various operation configurations



for multi-speaker modes. Speakers can be digitally daisy-chained from the primary USB-linked speaker via Cat-5 connection to get the number of desired channels.

The optional Room Analysis Software kit features a measurement mic and secondary wave compensation software, which allows you to actually measure the room acoustics. It does complex analysis and adjustments, including compensation for reflectivity and standing waves. The system enables manual or automatic adjustments, based on what the room measurements show in the mix/monitor position. Pretty slick.

The well-braced Baltic Birch cabinet and high-density fiberboard baffle measures 17 inches wide, 17 inches tall and 17 inches from front to back. The rigid cabinet, drivers, onboard electronics, and internal amp all contribute to a hefty 65 pounds, which makes the built-in side handles very convenient. The drivers are magnetically shielded for CRT and LCD protection.

Setup

I set up the Q12s in my studio on Apollo speaker stands, arranging them in a slightly towed-in configuration in the open part of my listening area. I first listened to them with no DSP

Fast Facts

Applications

Professional Recording, Mixing, Mastering, Audio Post Production, and Broadcast Environments

Key Features

Coaxial design; shielded 17-x 17-x 17-inch Baltic Birch/high-density fiberboard enclosure; 12-inch bass driver; concentric mounted, 1.3-inch, titanium-dome, rear-firing compression driver; internal CPU with multifunction DSP processes; balanced (XLR) and unbalanced (1/4-inch) analog input; digital connection via a computer USB; optional measurement mic/secondary wave compensation software.

Price

\$2,500 each

Contact

Equator Audio Research | 888-772-0087 |

Product Points



- > Coaxial design
- > Accurate, clean sound
- > Ideal vocal reproduction
- > Room adjustment software



- > A bit bulky for a 12-inch box

Score \$5000 can buy you a pair of highly accurate pair of professional powered studio monitors that can be tailored to almost any mix room.

adjustments, leaving the speakers in the “bypassed” position. This open-floor-on-stands area normally results in clean speaker playback and does not need external EQ to play “flat.” When I moved the speakers next to the mixer, which is closer to the backwall, the new position audibly enhanced mid-bass; thus, I utilized the Room Analysis Software to adjust the system based on my room response. The software easily tamed the bass bump.

For monitoring, I used all high-resolution sources, audio via 24-bit/96 kHz, 24-bit/192 kHz PCM as well as DSD. The sources included an Esoteric DV-50 DVD-A/SACD player, TASCAM DVRA-1000 master recorder, and an Apple MacBook Pro connected to a Benchmark DAC1 pre or Mytek 24/96 converters. The control preamps included a Legacy/Coda balanced stereo monitor preamp and the Oram (Trident) 8T 16-channel mixing console.

In Use

I played a number of my acoustic guitar and jazz mixes through the Q12 and was very impressed. I am normally a passive speaker/power amp guy, but I felt that the Equators are impressively clean and accurate, especially in the crossover region. Finger picking on the Martin OO-28 recordings was clean and clear and the compression driver relayed amazing detail.

The 24/96 recording of my Gibson L5 — recorded with a True P2 stereo mic pre, two Audix SCX-25s and Benchmark ADC1 into the TASCAM DVRA-1000 — was spot on in its accuracy with the Q12s. The warm character of the Gibson L5CES jazz guitar, through an original 1965 Fender Deluxe Reverb, came through perfectly.

On big-band DSD and PCM recordings, the bass was extended, but tight and clean. Drums, cymbals, and piano music all revealed quite good transient response without harshness or treble “peaky-ness”; the smooth crossover and the overall clean reproduction make this a speaker you can mix on all day.

The Equator Q12 especially excels in vocal reproduction; voices are incredibly natural without exaggerated sibilance (female voice) or overly pronounced bass (male voice). The Equators should be a top choice for vocals/dialogue mixing for cinema and TV sound where the voice is of paramount importance.

By the way, the Q12’s internal amplifier has plenty of power to play loudly without getting muddy. Couple its good power with the clean, well-phased alignment of the coaxial design and precise implementation of the crossover: you get clarity at high levels that is often lacking in other powered monitors.

The Q12’s overall bass response was quite good; I like 12-inch drivers for bass since they can go pretty low in the right box, but are still quick and dynamic. For music, the Q12 has plenty of oomph; its front ports help bass extension without the mid-bass loading you sometimes get with rear ports, especially near a wall.

I really have no major negatives to mention with the Equator Q12. The only feature I would add would be RCA unbalanced connection for extra connection options. The speakers are rather large for 12-inch monitors; make sure you have sturdy stands with a wide enough mounting plate.

Summary

Out of the box, the Equator Audio Research Q12 is an impressive professional powered monitor. The available DSP control software and measurement system are just gravy. Its coaxial design, on-board active crossover, and quality internal amps yield an accurate, uncolored speaker that is easy on the ears. It’s a great deal for all sorts of pro monitoring tasks: mixing, mastering, and multichannel cinema/broadcast included. It is not cheap, but considering its features and capabilities, I highly recommend the Equator Q12.