

Rage Against the Machine

By Mark Fleischmann

RATING

Dynaudio Xeo 6 Loudspeaker

Performance ★★★★★

Build Quality ★★★★★

Value ★★★★★

Xeo Hub, Link, Extender, Connect

The transmitter is the 6-inch-wide Xeo Hub (purchased separately for \$300). One is required for every system, and a single Xeo Hub can handle up to three pairs of

Dynaudio Xeo 6 Loudspeaker

PRICE \$4,000 as reviewed

IN THE HISTORY OF CIVIL UNREST, there has never been anything quite like the audio rebellion. People are using half-inch-thick A/V receiver manuals as tinder and then throwing their receivers onto the flames. Doghouse-sized stereo amps and preamps are being spray-painted in the dead of night with slogans like "Where's the wireless?" Wrist-thick speaker cables lay coiled on curbs, next to garbage cans, where passing dogs do what comes naturally. Just the other day, I turned on the TV and saw a guy in a Dynaudio T-shirt giving a speech to an angry mob. "Burn your cables!" he shouted. "Sell your amp! Ditch everything that currently clogs up your system!"

Rebel Yell

Kidding aside, those quotes are straight from Dynaudio literature (I added the exclamation points). The Xeo speakers rebel against the conventional architecture of audio systems: They are active, meaning self-powered, so kiss your amps goodbye. They all but eliminate analog signal paths by handling preamp and crossover functions in the digital domain and employing switching amplifiers. Triple zone selection is built in. And they are wireless, receiving signals from a Xeo Hub. All signal sources are wired into the Hub. The only wired connections to the speakers are their power cables.

There are two new second-generation Xeo models, the floorstanding Xeo 6 and stand-mount

AT A GLANCE

+ Plus

- Built-in triamplification
- Wireless link to sources
- Musically versatile sound

- Minus

- 16-bit transmission ceiling

Xeo 4. They are for two-channel use only; there is no matching center. If you want to try a 2.0 system for your home theater, you're free to connect a disc player and other sources to the Hub in stereo downmix mode.

The Xeo 6 mini-tower, reviewed here, mates one of Dynaudio's famous textile-dome tweeters with a pair of 5.5-inch magnesium silicate polymer-cone bass drivers in a 33-inch-tall rear-ported enclosure. The slim cabinet, in white or black satin lacquer, has a magnetically attached grille and outrigger feet that allow the speaker to be leveled on spikes or dampers.

Each speaker gets 150 watts of internal amplification, with 50 watts going to each of the three drivers. The amplifier technology is licensed from Texas Instruments, having been first utilized by TacT Audio and originally developed by Denmark's Toccata Technology, a company TI acquired in 2000. They are not Class D, Dynaudio says, but TDAA, which stands for True Digital Audio Amplifier. Dynaudio's Michael Manousselis explains:

"The TDAA design consists of a PCM-PWM modulator device and a PWM power output device. This system accepts a serial PCM digital audio stream and converts it to a PWM audio stream, providing a large-signal PWM output. This digital PWM signal is then demodulated, providing power output to drive the loudspeakers. Thus, no DAC is needed in a Xeo system, and one of the reasons for the sound quality is that there is no conversion loss. Also, our engineers are able to program the DSPs to optimize each amp for the drivers."

A little receiver module sits atop each speaker. It is nonremovable and includes power, volume plus, and volume minus buttons. A small display has a pinpoint LED that glows blue for active signal reception, flashes red for signal hunting, and glows red for off. Below that is a line of white LEDs that light up for signal hunting and volume setting.

On the back of the speaker is a power jack—and no other jacks!—plus a trio of three-way switches. One sets Left, Right, or Mono operation. Another selects zones Red, Green, or Blue. The third switch is a boundary compensator that shapes bass according to speaker placement. The Natural setting maximizes bass response; Wall and Corner adjust for progressively more room reinforcement.



The Xeo 6 appeals to a listener who wants a simplified music system.

THE VERDICT

The Dynaudio Xeo 6 active wireless speakers are a great-sounding way to unclutter a two-channel music system.

speakers, so you can add extra pairs of the Xeo 6 (\$3,700/pair) or the compact Xeo 4 (\$2,100/pair) to work in second or third zones with independent source and volume control for each. The Hub's front is bare except for a pinpoint LED that glows blue when the transmitter is active and red otherwise. On the back are two analog inputs (one RCA, one mini-jack), two digital inputs (one coaxial, one optical), a

USB input, and an Ethernet input, the latter for updates only. Auto Play finds the active source. The Hub does not natively support Bluetooth or AirPlay (though a Bluetooth solution is on the way).

The transmitter has a toggle switch for three frequency IDs. Position A corresponds to the 2.4-gigahertz band. If there's a lot of Wi-Fi traffic in your household, B or C shifts the frequency up to 5.2 or 5.8 GHz. Transmission from Hub to speakers has a bit depth of 16 and a sampling rate of 48 kilohertz, slightly above CD quality but below the 24 bits and higher sampling rates of high-resolution audio. While the Hub can handle 96/24 sources, they are converted to 48/16 for transmission. However, that's lossless 48/16 PCM, using the KleeNet platform, with no lossy compression or discarding of data. Efforts have been made to reduce jitter. Transmission distance is claimed to be about 65 feet. The Hub's remote control has buttons for power on/off, volume up/down, mute, input, and zone selection.

In addition to the Xeo Hub transmitter, Dynaudio offers other options. The Xeo Extender (\$180) handles difficult transmission conditions, such as long corridors, partition walls, or line-of-sight distances of up to 164 feet. The Xeo Link (\$180) is a separate receiver box with analog RCA, digital coaxial, and digital optical outputs. It can be used to feed a powered sub, headphone amp, or even another audio system, which might include an older generation of Xeo. The Link can run in the same zone with the Xeo speakers, taking over their volume control and input selection, or in a separate zone, independent of the speakers. This effectively makes the system multisource as well as multiroom. The forthcoming Dynaudio Connect hub is said to add Bluetooth as well as Wi-Fi-enabled app control of the Focus XD and second-generation Xeo systems.

Setup was easy. I placed the Xeo speakers in my room's best two-channel position with their baffles 3.5 feet from the wall, which

DYNAUDIO XEO 6 SPEAKER SYSTEM

PRICE: \$4,000 (Xeo 6, \$3,700/pr; Xeo Hub, \$300 ea)
Dynaudio • (847) 730-3280 • dynaudio.com/us

was lined with LP shelves, and 4.5 feet from the corners. This afforded little wall or corner reinforcement, so I chose the Natural EQ setting. I toggled to Left for the left speaker and to Right for the right speaker. The Zone setting was Red, though I didn't use more than one zone.

The Xeo Hub went onto my rack, where it received digital coaxial input from an Oppo BDP-83SE universal disc player and analog input from a Denon PRA-S10 preamp, the latter serving a Micro Seiki BL-21 turntable with Shure V15MxVR/N97XE cartridge. The first Hub I tried worked except for its USB input; the second sample worked fine. There was no AVR-type auto setup to run, no DAC-type software installation. All three transmission frequencies worked flawlessly in my RFI-rich urban New York City apartment environment, with Hub and speakers in the same room.

A Lot of CDs and a Little Vinyl

Dynaudio's signature sound isn't impaired by the lossless wireless transmission. It's a big, smooth, feel-good approach that flatters any kind of music or recording. This particular version is especially dynamic, perhaps thanks to the internal amplification. The silky, slightly reserved top end is typical of Dynaudio textile tweeters. The tower's dual woofers offer taut bass that reaches down through musically relevant frequencies with ease. I hesitate to say the bass response is even, because our Test Bench measurements can make a better assessment of that, but I didn't sense

SPEAKER SYSTEM



any missing pieces. [Ed. Note: I'd say remarkably even in the bass; see page 44.—RS]

With the 16-bit transmission system, playing CDs made a lot of sense, and I raided my tall Boltz shelves day after day. The Xeo 6 seemed especially adept with recordings that underwhelm through my less forgiving Paradigm/Pioneer and Era/Peachtree systems. For instance, Jan Akkerman's *Minor Details*, an album pieced together from MIDI files e-mailed among his band members' various home studios, usually sounds canned—yet the Dynaudio tweeters smoothed over the mechanical-sounding backing tracks and lofted the guitar over them like a virtuoso. Similarly, with King Crimson's *Live at the Orpheum*, a schematic account of the current incarnation's powerful three-drummer lineup, the Dynaudios seemed to find more tone



● The Xeo 6 is available in a white or black finish.



● The Xeo Hub transmits signal sources wirelessly up to 65 feet.





See soundandvisionmag.com for full lab results and technical definitions

● The Xeo Extender extends the Xeo Hub's reception range.



color and cohesion than my usual equipment does.

The beautifully recorded *Thompson Family* CD never sounded better. The voices of siblings Kami and Teddy poured out of the speakers like melted butter, while the emotionally charged voice of their mother, Linda, and the cantankerous baritone of their father, Richard, imaged solidly with their own unique timbres. Carlos Kleiber's reference-standard Deutsche Grammophon recording of Beethoven's *Symphony No. 7* with the Vienna Philharmonic gave the Dynaudios straight As for fine-tuning of the famous string sound and overall lushness.

Vinyl was a trip in itself. On the title track of the Clash's *London Calling*, the dual woofers swung authoritatively (notwithstanding the line "we ain't got no swing") and brought out the doomy bass line and meaty drum sound. The speakers also met the more subtle dynamic demands of a

best-case piano recording, Karl Engel's *Schumann Edition: Das Klavierwerk IV*, a Telefunken box set. Every pitch was clear, the left hand had appropriate (but not overstated) weight, the top end was sweet and open, and the midrange coherence enabled the pianist to practically sing Schumann's elegant melodies.

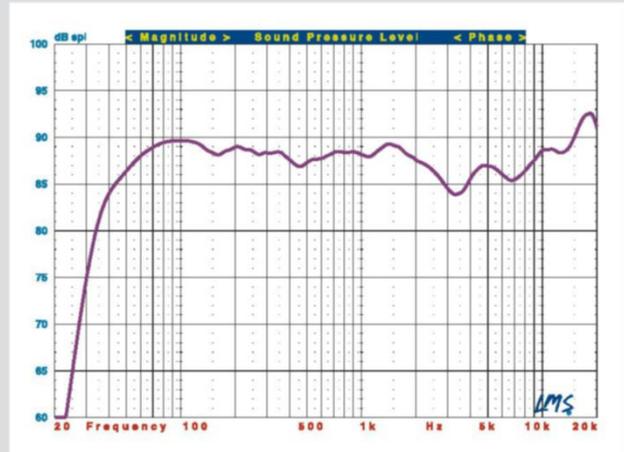
Movie Cameo

For a brief movie demo, I relocated the Xeo speakers from the short-wall position I use for two-channel music to the long-wall position I use for my surround system, and I fed them with a PCM stereo downmix from the Oppo's coaxial output. This speaker position afforded more wall reinforcement, as I found minutes into the Tom Cruise sci-fi vehicle *Edge of Tomorrow* (Blu-ray, DTS-HD Master Audio). As helicopters swarmed London, bass congestion became apparent. So I switched the boundary compensator from Natural



● The Xeo Link receives wireless signals from the Xeo Hub and also outputs analog and digital signals.

Test Bench
Dynaudio Xeo 6 Loudspeaker



Xeo 6 (purple) +0.84/-4.59 dB, 200 Hz to 10 kHz; -3 dB @ 42 Hz, -6 dB @ 36 Hz.—MJP

SPECS **Xeo 6:** 5.5 in magnesium silicate polymer-cone woofer (2), 1 in textile-dome tweeter; 6.75 x 33 x 10.5 in (WxHxD); 32.3 lb

to Wall and was pleased to hear how adroitly the bass response adapted to different room acoustics. Dialogue was quite clear, and with 50 watts going to each driver, the bombastic movie's relentlessly repetitive time-warp battle scenes came through with magnificent dynamism. When I paused the movie, the system would power down after a minute or so, but unpausing the disc player instantly powered it back up.

I started this review by whimsically suggesting that folks might buy a Xeo system and throw their AVRs onto a bonfire. Let me get serious long enough to note that systems based on active wireless speakers or AVRs (or soundbars or stereo preamps, for that matter) are aimed at separate audiences. Wear whichever T-shirt fits you best. A Dynaudio Xeo system won't replace all the functionality of an AVR or achieve

the near-zero-footprint status of a soundbar. But the Xeo 6 undeniably appeals to a listener who wants a simplified music system and has floor space for a modestly sized pair of loudspeakers. It is easy to set up and use. Its ingenious architecture affords flexibility in speaker placement and multizone use. And though pricey, it does cover the cost of speakers, six channels of amplification, and—via the Hub—what amounts to a wireless preamp. While those with growing hi-res audio libraries should note the 16-bit limit of the transmission system, that doesn't prevent the Xeo 6 from loving all kinds of music. I

certainly loved having it around. ♦

Audio editor Mark Fleischmann is also the author of the annually updated book *Practical Home Theater* (quietriverpress.com).



● The Xeo remote control handles speaker volume and source selection.