



PHASE
TECHNOLOGY

BRUTE-FORCE SOLUTION

Phase Technology's dARTS in-wall speaker system brings the full force of technology to bear on the seemingly simple task of reproducing sound.

Contributing writer Steve Guttenberg feels that tried-and-true approaches are the path to audio perfection. He insists that the best sound comes from just two speakers, built with the highest-quality parts, connected to the finest components, and positioned perfectly in a room.

I prefer a brute-force, state-of-the-art technological approach. I say, if you want a strong center image, add a center speaker. If you want an enveloping sound, add surround speakers. If you want to fix

a boomy subwoofer, put an equalizer on it.

So why don't I fire him? Because I see his point. The technological approach to sound reproduction often fails to deliver what its purveyors promise. Consider the dreadful-sounding Stadium and Concert Hall reverb modes built into audio/video receivers, and the wretched home-theater-in-a-box systems in electronics megastores. But the Phase Technology Digital Audio Reference Theater System (dARTS) is in a completely different category. I'm almost glad

"What Phase Tech's Engineers and Audyssey's scientists have achieved is startling... the dARTS system may be the best I have heard."



The DP-2000 processor/amplifier (above) powers the DCB-SURR surround speaker and the DIW1.0LRC in-wall speaker (left to right, previous page).

Steve's not here to hear it because I wouldn't want to see the crestfallen look on his face.

The dARTS system is the most advanced I have yet encountered. It uses only a single DP-2000 amplifier and a collection of ordinary-looking speakers. On closer examination, you see that the DP-2000 provides a staggering 16 channels of digital amplification. The system has so many amp channels because each speaker gets two: one for the woofers, one for the tweeter. A digital signal processor (DSP) inside the DP-2000 divides the sound into bass for the woofers and treble for the tweeters.

Then Phase Tech takes it a step further: It measures the performance of each and every dARTS speaker to discover its imperfections, and programs corrections for those imperfections into the DP-2000. Thus, each amp is custom-tailored to a particular set of speakers.

But then Phase Tech takes it another step. Even though the sound that emerges from the dARTS speakers is pretty close to theoretical perfection, the sound of your room is not. So the DP-2000 also incorporates Audyssey Labs' MultEQ processing. MultEQ finds and corrects the acoustical flaws of your room. These flaws include tonal errors caused

by your room accentuating certain frequencies relative to others and timing errors caused by room reverberation. MultEQ also makes the sound much more consistent from seat to seat. It even works on the subwoofer—the DP-2000 has jacks for subwoofer input and output that give MultEQ control of your bass signals. To calibrate the system, your installer connects a computer and a microphone to the DP-2000, and Audyssey's software does the rest.

Phase Tech recently introduced dARTS in an in-wall system, which company president Ken Hecht swears sounds indistinguishable from the freestanding version. Each of the front speakers has two woofers and a single tweeter, but no crossover circuitry. The speaker drivers con-



Digital amplification technology allows the DP-2000 processor/amplifier to provide 16 250-watt channels of amplification in a chassis no larger than a typical surround-sound processor.

nect directly to the amplifier through four-conductor in-wall speaker cable. I use three DIW1.0LRC in-walls for the front left, center, and right channels; two DCB-SURR on-wall dipole surround speakers; and two of Phase Tech's DCB 112-SUB subwoofers.

What Phase Tech's engineers and Audyssey's scientists have achieved is startling. In terms of tonal neutrality—the evenness, balance, and natural sound of bass, midrange, and treble—the dARTS system may be the best I have heard. It sounds more neutral even than my beloved Genelec HT205 powered speakers (which themselves sound more neutral than most speakers). Whether it's a deep-voiced male actor or a wispy female folk singer, I perceive no unnatural coloration. The bass is tight, the midrange distinct, and the treble clear. I think anyone who claims dARTS has perceptible tonal coloration would complain about the tonal coloration if Luciano Pavarotti were singing right in front of them.

The spatial characteristics are just as impressive—which is quite a feat because so many other in-wall speakers produce a dimensionless sound. I am amazed to hear sounds from my favorite stereo recordings wrap around me, even when I am only listening to the front left and right speakers. Atmospheric sounds—rain, street noise, crowd murmur—in DVD soundtracks seem unusually realistic.

Imperfections? Only two. The in-wall speakers are rather large and ungracefully squarish. Also, the MultEQ

software leaves one item to chance—your installer must tell it how absorptive or reverberant the room is. It is possible to make the sound too bright or too dull by choosing the wrong setting, but Audyssey Labs plans to automate this process by the end of the year.

Guys like Guttenberg may always cling to the idea that the crunchy-granola stereo approach is the path to optimal sound. While I admit that the simple approach has its charms, the dARTS system proves that using the brute force of technology is the best path to perfection. **[E]**

DESCRIPTION

Home theater audio system including amplifier/digital sound processor, in-wall and on-wall speakers, and subwoofers. Requires separate surround-sound processor

COMPONENTS

DP-2000: 16 250-watt digital amplifiers

DIW1.0LRC: two 6.5-inch woven-fiber cone woofers, 1-inch soft dome tweeter

DCB-SURR: two 5.25-inch woven-fiber cone woofers, two 1-inch soft dome tweeters

DCB 112-SUB: 12-inch poly cone woofer, two 10-inch poly cone passive radiators, 500-watt BASH amplifier

CONNECTIONS

DP-2000: 16 RCA jacks for line input, two line outputs for subwoofers, 16 pairs of five-way binding posts for speaker connection, 3.5mm input and output minijacks for remote on/off

DIW1.0LRC: four-conductor screw terminal connector

DCB-SURR: two pairs of five-way binding posts

DCB 112-SUB: stereo line input and output

DIMENSIONS

DP-2000: 5.6 x 17.2 x 16.8 inches (hwd)

DIW1.0LRC: 23.5 x 14 inches (hw), 3.8-inch installed depth

DCB-SURR: 20.2 x 10.5 x 4.7 inches (hwd)

DCB 112-SUB: 15 x 14.4 x 15.7 inches (hwd)

PRICE/CONTACT

PRICE: \$18,450

CONTACT: 888.PHASETK, phasetech.com