"BRAVO! These speakers offer so much value it's *scary*."

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SOUND & IMAGE Magazine

Tom Nousaine

The New Titan
(Improved over version reviewed for even better sound.)

"When they were done, I unveiled the speakers … and watched their jaws drop. Both were flabbergasted … 'Siskel' thought he'd been comparing models costing $1,000 a pair; 'Ebert' said he'd had no idea that so little cash could buy such terrific sound."

PARADIGM TITAN

Finishes: Black Ash or Oak Vinyl ($209/pr.)
Dimensions (h/w/d): 12.5 x 7.75 x 9.5 inches
Weight (each): 12.5 lbs
Enclosure: Ported
Drivers: 6.5-inch polypropylene woofer, 0.75-inch ferro-fluid cooled polyamide soft-dome tweeter
Connectors: Spring clips
Power Range: 15 to 100 watts rms
Shielded: No (Shielded available)

The Titan, a Canadian entry, looks like your average mini bookshelf speaker. "Average" doesn't belong in any sentence describing its sound, though. Sonically, the Titans' balance was nearly perfect, and detail was excellent. Their bass was great, too, though they did get a little boomy and boxy at very loud listening levels and in some placement configurations. Power handling in the face of overload was superlative. Measurements revealed that the Titan's frequency response dropped down to the benchmark for this group (60 Hz), and its output at 100 Hz was on a par with the higher frequencies—unlike most of its competition, whose overall bass output was usually several decibels below the rest of the spectrum. On-axis, this flatness extended out to 10,000 Hz, after which response increased considerably. Off-axis response was outrageously flat—within ±2.5 dB between 200 and 16,000 Hz! The Titan would be absolutely fantastic in any role: main, surround, and/or dual-channel center. Bravo.

Technology can be a wonderful thing. I'm not talking about the down-and-dirty technodes, like injection-molding techniques and the glories of military-spec capacitors. I'm talking about how technology can make our lives better. Consider that only 5 or 10 years ago, you were in serious trouble if you had to buy a small pair of speakers. Only a few of the hundreds available delivered sound that could be honestly characterized as hi-fi, and they were often exorbitantly expensive.

We suspected that that just wasn't the case today. So we designed a full-bore comparison, assembling a cast of 20 name-brand speakers with suggested retail prices of $250 or less and pitting them against one another, *mano a mano*, in a fight to the finish. While we noted special applications along the way, our goal was likely your goal: to find which ones sounded the best. Our findings for each speaker follow: procedures, comments (including definitions for terms used in the reviews), and our bottom-line conclusions.

"The Titan would be absolutely fantastic in any role: main, surround, and/or dual-channel center."

ADVENT INDOOR/OUTDOOR MINI-ADVENT II

Finishes: Black or white polystyrene, hardwood/vinyl indoor version ($179/pr.)
Dimensions (h/w/d): 11 x 6.5 x 5.12 inches
Weight (each): 5 lbs
Enclosure: Ported
Drivers: 5.25-inch polypropylene woofer, 0.5-inch Ferrofluid-cooled hard-dome tweeter
Connectors: Spring clips
Power Range: 10 to 40 watts rms
Shielded: No

Advent's Mini-Advent 11 is tiny and shiny; they say you can leave them outside as long as they don't get "frequent, excessive exposure to water." The Mini-Advents sounded very balanced above 100 Hz or so; the midrange was a touch rough though and the mild bass output made it stand out. The sound got hazy when I played them very loudly, but they didn't buzz or rattle. Measurements showed that frequency response started to roll off at 150 Hz, but stayed on the map down to 80 Hz; highs were strong beyond 20,000 Hz, and off-axis response was actually smoother than on-axis response. The Mini-Advent 11s are a good candidate for surround duty and a fair choice as mains, especially considering their price. The polystyrene version gives you plenty of options, of course. Poolside? In a dorm or family room? Absolutely.

ALTEC LANSING MODEL 85

Finishes: Black or dark-oak vinyl ($200/pr.)
Dimensions (h/w/d): 17 x 9.5 x 8.5 inches
Weight(each): 15 lbs
Enclosure: Sealed
Drivers: 6.5-inch carbon-filled-polypropylene woofer, 0.79-inch polyester-dome tweeter
Connectors: Spring clips
Power Range: 10 to 150 watts rms
Shielded: No

The Model 85 is a sharp-looking speaker. Subjectively, the 85s sounded a trifle hot but pleasantly open; at the same time, the bass was tight and strong. Clarity and detail were very good. The hotness quickly turned to shrillness when I drove them into overload, but they never truly turned into ear-burners, and there were no squeals or other assorted noises even when my amp's clipping indicators were glowing. Low frequencies extended to about 50 Hz; this turned out to be a bit lower than virtually all of the competition. Treble response was good 6 to 8 dB above the midband output on-axis, falling to 3 dB above the midband off-axis. The 85s tied for second-best sensitivity in this group. They would make good mains, and their strong off-axis response means they'd do very well as surrounds.

AR M.5

Finish: Black-ash vinyl ($200/pr.)
Dimensions (h/w/d): 8.56 x 6.25 x 7.25 inches
Weight (each): 7 lbs
Enclosure: Ported
Drivers: 5.5-inch polycone woofer, 0.5-inch liquid-cooled polydome tweeter
Connectors: Spring clips
Power Range: 10 to 60 watts rms
Shielded: No

The ultramodern M.5 is part of AR's Holographic Imaging series. The woofer is angled up at about 20 degrees; the goal was to reflect mid frequencies off the ceiling, with the lows radiating more or less in all directions. The tweeter fires straight ahead, and the pair are offset in a "mirror-image" alignment. Subjectively, the M.5s had a large, open feel, with a very nice balance—when I was sitting directly between them. Overall detail was only average, though, and voices weren't particularly focused. The system strained at louder levels and even made a few odd noises when driven past their limit. Measurements indicated that on-axis response was 3 dB down at 80 Hz, the overall response pattern tipped upward at height frequencies, and there was a deep notch at 8,000 Hz as well as some midband roughness; off-axis response (measured to the inside of the stereo pair) was much smoother and extended beyond 16,000 Hz. The M.5s are designed to be used as a stereo pair, so they'd make good mains, dual centers (when shielding isn't an issue), or surrounds.

B&W MODEL 2001

Finish: Black-ash vinyl ($199/pr.)
Dimensions (h/w/d): 11.2 x 7.1 x 7.9 inches
Weight (each): 6.6 lbs
Enclosure: Ported
Drivers: 5-inch acrylic-damped fiber woofer, 1.2-inch liquid-cooled hard-dome tweeter
Connectors: Dual binding posts
Power Range: 20 to 80 watts rms
Shielded: Yes

A British import, the 2001 might have been styled by the guys who worked on *Terminator 2: Judgment Day*. Subjectively, the speakers come at you with a *huge* amount of detail and an articulate, natural balance. The bass was truly incredible considering the size of the woofer. Dynamics were limited, however. Still, this is a terrific speaker: sweet, natural, and seductive. Its on-axis response was extremely smooth, though it rose steadily as frequency increased; lows sloped toward 60 Hz and highs extended beyond audibility. Off-axis, the 2001 retained its smooth, cool demeanor, but it became very directional, with response falling off rapidly above about 8,000 Hz while it has binding posts, they're not spaced to accept banana plugs (those on the Cambridge SoundWorks, KEF, and NHT are). The 2001s will do best as mains; their high directionality improves imaging, but it limits their suitability for center or surround duty. An excellent showing.

BOSTON ACOUSTICS HD5

Finishes: Black-ash or woodgrain vinyl. ($150/pr.)
Dimensions (h/w/d): 9.75 x 6.25 x 7.25 inches
Weight (each): 6.5 lbs
Enclosure: Sealed
Drivers: 5.25-inch co-polymer woofer, 0.75-inch soft-dome tweeter
Connectors: Spring clips.
Power Range: 5 to 50 watts rms
Shielded: No (HD5V is shielded)

Boston's tradition of delivering great sound at reasonable prices is carried on in the HD5. Sonically, the HD5s had a pleasant, easygoing sound. Their overall balance was excellent, with good—but slightly muted—detail. While not down-right powerful, the bass was adequate, especially for the price. Dynamics were limited, and the woofer popped just at the amplifier's clipping point. Measurements showed that the HD5 had a wide radiation pattern: On-axis response was flatter and smoother to 12,000 Hz, though there was a mild notch at 3,000 Hz. The wide radiation pattern means that the HD5s would do a great job as mains or surrounds and that their shielded but otherwise identical sibling, the slightly pricer HD5V, would make a nice center speaker. An excellent value.

CAMBRIDGE SOUNDWORK MODEL SIX

Finishes: Black-ash, oak or teak vinyl ($238/pr.)
Dimensions (h/w/d): 18.25 x 11.25 x 7.37 inches
Weight (each): 17 lbs
Enclosure: Sealed
Drivers: 8-inch woofer, 1.75-inch cone tweeter with 0.5-inch dome
Connectors: Dual binding posts spaced at 0.75 inch
Power Range: 10 to 250 watts rms
Shielded: No

The Model Six has the largest woofer in this group; the cabinet also has the largest footprint, though it's only slightly larger than the Altec Lansing. Subjectively, the Model Sixes had good balance, but voices were a touch nasally at times. The low end was nice, though, and detail was above average. Dynamics were solid, and though the Model Sixes wouldn't play especially loudly, they didn't complain much when I pushed them. Measurements indicated that the bass extended down to 60 Hz, on par with the best of this group. Highs were extended and very smooth – a bit of a surprise considering the relatively large tweeter. Overall, the Model Six proved to be very directional, rolling off at 12 dB per octave above 8,000 Hz. Along with the Altec and JBL, it tied for second in sensitivity. The high directivity means the Model Sixes will make very good mains, and that's exactly what Cambridge SoundWorks recommends.

CELESTION MODEL 1

Finish: Black-ash vinyl ($199/pr.)
Dimensions (h/w/d): 10.8 x 6.3 x 8.5 inches
Weight (each): 6.6 lbs
Enclosure: Potted
Drivers: 4-inch felted-fiber woofer, 1-inch titanium-dome tweeter.
Connectors: Spring clips
Power Range: 10 to 50 watts rms
Shielded: No

The Model 1 is a sleek and sexy import from England. Sonically, the Model 1 is a damn good speaker. Spectral balance was *outstanding*, clean and natural all the way. Clarity and detail were also excellent, though there were wisps of fog on some sustained notes. Bass sounded clean, but a trifle subdued. The Model 1 got brash at overload time, but it didn't make any unusual noises. Measured response excited my test gear, as it was extremely flat and smooth. Highs extended very nicely both on- and off-axis output above 1,000 Hz ran from 3 to 6 dB below the on-axis line. Surprisingly (given the 1's relatively small woofer), bass went right on down to 60 Hz. Sensitivity, on the other hand, was low (read: poor) enough to merit mention. Flat response and wide radiation mean the Model 1s should do a great job as dual centers (when shielding isn't required), mains, or surround. Another excellent showing.

DESIGN ACOUSTICS PSCV

Finish: Black vinyl ($120/each)
Dimensions (h/w/d): 10.25 x 7 x 6 inches
Weight (each): 7 lbs
Enclosure: Ported
Drivers: 5.25-inch treated-paper woofer, 0.75-inch Ferrofluid-cooled soft-dome tweeter
Connectors: Spring clips
Power Range: 10 to 75 watts rms
Shielded: Yes

It may look plain, but the PSCV had a nice balance and produced an average degree of detail; overall, though, there were more highs and fewer lows than I would've liked, so female vocals and some instruments sound shrill at loud volumes. Like most of the speakers in this group, the PSCVs got progressively fuzzier as they approached overload, but they managed the situation without undue audible distress. Measurements tell a typical story for this group: on-axis frequency response slanted downward from about 200 Hz, with usable output down to about 60 Hz. There was some turbulence between 200 and 1,600 Hz, though, as well as a broad trough between 1,600 and 4,000 Hz and a strong rise culminating in a 10-dB peak at 12,000 Hz. Things were smoother off-axis, with the highs running a maximum of 5 dB above the midband, and the PSCV's output extended strongly to 16,000 Hz. This extension means that they would make good surrounds and decent mains; since they're available singly and are shielded, one PSCV would make a good all-around center.

INFINITY RS225

Finishes: Black-ash or oak vinyl ($249/pr.)
Dimensions (h/w/d): 14.25 x 8.87 x 7.81 inches
Weight (each): 11.5 lbs
Enclosure: Sealed
Drivers: 6.5-inch Injection-Molded Graphite woofer, 0.5-inch Ferrofluid-cooled polycarbonate tweeter
Connectors: Spring clips
Power Range: 10 to 75 watts rms
Shielded: No

The RS225 is *built:* The oak-vinyl finish on my sample was really clean, and the speaker's overall appearance reflects well on Infinity's attention to detail. Subjectively, the RS225s had a natural but slightly subdued sound. Voices and most instrument sounded clean, though they also seemed a touch constrained. Bass output was

strong, especially in this company, but it lacked a little control. Unseemly noises resulted when I drove the RS225s into overload. Measurements showed that the RS225 extended solidly down to 60 Hz. Overall response was fairly smooth, though there was a wide patch of rough ground between 1,000 and 5,000 Hz both on- and off-axis; the off-axis line was generally smoother than its on-axis counterpart. Tweeter level was approximately 6 dB higher than the midband output on-axis, but only about 3 dB up off-axis. The RS225s would make good dual centers (when shielding isn't required), mains, or surrounds.

JAMO SAT300

Finishes: Black or white lacquer ($249/pr.)
Dimensions (h/w/d): 8 x 6 x 3 inches
Weight (each): 3 lbs
Enclosure: Potted
Drivers: 4-inch woofer, 0.75-inch tweeter,
Connectors: Dula binding posts
Power Range: 20 to 80 watts rms
Shielded: No

The sleek lacquer Sat300 is much smaller than the competition, and Jamo packages the pair with small speaker stands and brackets for wall mounting; the drivers are protected by a clever—and stylish—magnetic grille. Sonically, the Sat300s didn't reproduce low bass, but the rest of the spectrum sounded good: The overall texture was natural and detail was at least average, though some hollowness was evident when the going got loud. The tiny woofer buzzed, squeaked, and rattled when overdriven. Measurements indicated that bass response fell by 6 dB per octave starting at about 160 Hz; this is pretty high. On-axis response climbed above 200 Hz. Off-axis response was similar, though it was only about 9 dB up above 1,000 Hz. The response anomalies and lack of bass mean the Sat300 is best suited for less-critical listening environments, such as the office or kitchen, and the supplied brackets should come in very handy there.

JBL J2050

Finish: Oak vinyl ($198/pr.)
Dimensions (h/w/d): 12.4 x 8 x 6.5 inches
Weight (each): 8 lbs
Enclosure: Potted
Drivers: 5.25-inch high-polymer-laminate woofer, 0.55-inch titanium-dome tweeter
Connectors: Spring clips,
Power Range: 10 to 80 watts rms
Shielded: No

If looks are key, know that the J2050 was the hottest-looking speaker in the group—whoever applied that oak vinyl had one hell of a work ethic. And that shape … this is the Cindy Crawford of mini speakers. Subjectively, the J2050s produced a good amount of detail and lots of articulation. But there were traces of raspiness, hollowness, and coloration with breath tones, vocals, and solo sax, respectively. Things got shrill when I pushed them over the line. Measurements indicated that the J2050 had some bass down at 80 Hz, but its rolloff began at a relatively high 160 Hz. There was some roughness through the midband, and the tweeter had a large peak just below 16,000 Hz (on-axis); off-axis, the speaker was fairly flat. The J2050 tied the Altec and Cambridge for second in the sensitivity category. The wide radiation pattern makes the J2050s a natural for a main, projection-screen dual-center, or surround role.

KEF K-120

Finish: Black-ash vinyl ($200/pr.)
Dimensions (h/w/d): 13.31 x 8.13 x9.69 inches
Weight (each): 12.2 lbs
Enclosure: Sealed
Drivers: 6.5-inch poly woofer, 1-inch liquid-cooled soft-dome tweeter
Connectors: Dual binding posts spaced at 0.75 inch
Power Range: 10 to 80 watts rms
Shielded: No

Another flashy Brit, the K-120 has a nice shape and a careful finish. Sonically, the K-120s were slightly laid back and very, very natural; subtle breath tones were accentuated, but ever so slight, and female vocals are great, though just a touch husky. Detail was *excellent*, and I could easily "hear through" the layers on complex studio recordings. Bass was solid but well-behaved. At high volume levels, the K-120s suffered mild congestion, but the system remain composed in the face of heavy overload. Measurements revealed very flat midrange response, with extended and only mildly elevated treble on-axis, the steep off-axis rolloff above 6,000 Hz means that the K-120 is very directional. Bass extended easily to 60 Hz. The directivity pattern disqualifies the K-120s for center and surround duty; that leaves the role of mains, and for this job they would simply first-rate.

NHT SUPER ZERO

Finishes: Black high-gloss laminate or oak vinyl ($115/each)
Dimensions (h/w/d): 9 x 5.5 x 5 inches
Weight (each): 5.5 lbs
Enclosure: Sealed
Drivers: 4.5-inch treated-paper woofer, 1-inch liquid-cooled soft-dome tweeter
Connectors: Dual binding posts spaced at 0.75 inch
Power Range: 15 to 100 watts rms
Shielded: Yes

While small, there's something about the Super Zero's appearance that downright *orders* you to take it seriously. It equals the JBL in overall construction quality, though it clearly isn't as stylish. Subjectively, the Super Zeros sounded bright and shiny, with clean but relatively thin bass. When played loudly, the overall sound grew parched and a touch spacey; female vocals turned slightly nasally and horns got grump There was plenty of distortion at overload time, but the Super Zeros controlled themselves pretty well. My test gear found that frequency response extended down to 60 Hz. Midband response was pretty smooth, though there were some bumps at about 2,000 Hz. Above that point, the tweeter did an excellent job—flat in the lower range and with only a small peak at 12,00 Hz. Off-axis, the Super Zero rolled off above 6,000 Hz, so it's very directional—which means it would make a good main.

PHASE TECHNOLOGY MODEL 335ES

Finishes: Black-ash or dark-oak vinyl ($240/pr.)
Dimensions (h/w/d): 13.25 x 8.25 x 8.5 inches
Weight (each): 12 lbs
Enclosure: Potted
Drivers: 6-inch woofer, 1-inch soft-dome tweeter
Connectors: Spring clips
Power Range: 5 to 60 watts rms
Shielded: No (Model 335AV, shielded)

Commercially, the Model 335ES won't stand out in a crowd. Subjectively, though, the pair delivered a helluva performance. The 335ESs were very natural and smooth, though their image was a bit small and constrained. While breath sounds were a tad muted, their overall definition and detail were extremely good. And they held together well at overload, matching the Paradigm in that regard. By the numbers, the 335ES's on-axis frequency response went just as low and was even flatter than the Paradigm's, with a tighter bass characteristic; a little midband roughness was in evidence, though. Off-axis, the midband smoothed out nicely, though response rolled off above 6,000 Hz, making the 335ES more directional. Due to their directivity, the 335ESs wouldn't make the best surrounds, but they'd make *killer* mains, and the more expensive shielded version would earn a lot of applause from center stage.

PINNACLE AC500

Finishes: Black or cherry vinyl ($199/pr.)
Dimensions (h/w/d): 11.37 x 6.87 x 8.31 inches
Weight (each): 9.5 lbs
Enclosure: Potted
Drivers: 5.5-inch treated-paper woofer, 0.5-inch liquid-cooled hard-dome tweeter
Connectors: Spring clips
Power Range: 10 m to 70 watts rms
Shielded: Yes

The AC500's black finish is standard, but its cherry finish is very attractive. Subjectively, the AC500s sounded relatively rough, with some midrange fog. High-frequency sounds were mostly clear, but they, too, roughened with many recordings. Breath sounds were natural, but saxophones sounded sharp. The AC500s' bass was their strong point, with good impact, though they grew a little boxy at very high levels. Measurements showed that the AC500 had good on-axis response, going down to 60 Hz. There were two broad bumps at 800 and 3,000 Hz, but things extended well from there beyond 10,000 Hz, albeit at elevated levels. Off-axis response virtually mirrored on-axis response, but it ran about 1 to 3 dB lower above 800 Hz. The AC500s had the highest sensitivity in the group. Along with their shielding, the wide dispersion means that the AC500s would do a good job as minis surrounds, or dual centers.

POLK M3

Finishes: Black or white molded polymer ($239/pr.)
Dimensions (h/w/d): 11.25 x 6.5 x 8.25 inches
Weight (each): 7 lbs
Enclosure: Potted
Drivers: 5.25-inch trilaminate-cone woofer, 0.5-inch liquid-cooled tweeter
Connectors: Spring clips
Power Range: 20 to 100 watts rms
Shielded: No

And now for something completely different: The M3's unique cabinet can be mounted on a shelf, or on any wall or ceiling thanks to its ingenious brackets (supplied). This is the most fiendishly clever mounting design I've ever seen. The M3s sound as good as they look. Sonically, they had an urgent, aggressive quality that's somehow distant and forward a the same time. Clarity was very good, and spectral balance was excellent. While bass was on the light side, the M3s were dynamically clean, growing brash only at the loudest overload levels. Measurements revealed some response down to 60 Hz, and the overall curve rose gently as frequency increased. On-axis, the M3 was without major disruptions throughout the entire range; the same shape and character were largely in evidence off-axis, both horizontally and vertically. This is no mean feat. A t*our de force* in flexibility, the M3s would make good mains, good center channels for projection-TV use, and very good surrounds.

PSB ALPHA

Finish: Black vinyl ($199/pr.)
Dimensions (h/w/d): 16/62 x7.75 x 9.5 inches
Weight (each): 9.5 lbs
Enclosure: Potted
Drivers: 6.5-inch polypropylene woofer, 0.5-inch Ferrofluid-cooled soft-dome tweeter
Connectors: Spring clips
Power Range: 10 to 80 watts rms
Shielded: No

The Alpha, another Canadian entry, will not be selected as the Best-Dressed Speaker of the Year. Sonically, however, the Alphas are a knockout. Spectral balance was *outstanding*. Clarity was very good, but just a bit detail-shy at the lowest listening levels. Dynamics and power handling were clear-the-room excellent. And the bass was surprisingly macho. The Alphas got boomy and boisterous at overload time, but they didn't break up. Measurements showed very flat on-axis response, with extension to the 60-Hz benchmark; a hump ran from 80 to 100 Hz. There was a general rise up to the higher frequencies, with only a small disturbance at 800 Hz. Off-axis, that hump turns into a pimple, and the Alphas were mostly flat to over 12,000 Hz. PSB recommends placing the Alpha close to a room surface, I complied; bass level increased by about 3 dB between 60 and 100 Hz, but a potentially objectionable 90-Hz peak appeared. In any case, the Alphas would be *superb* anywhere except close to a tube TV set.

TANDY OPTIMUS PRO-77

Finishes: Black or white die-cast aluminum ($80 each)
Dimensions (h/w/d): 8.62 x 5.5 x 4.56 inches
Weight (each): 5.5 lbs
Enclosure: Potted
Drivers: 5-inch woofer, 1-inch dome tweeter
Connectors: Spring clips
Power Range: Up to 70 watts rms
Shielded: No

The Pro-77 is small and tough; thanks to its cabinet, it would probably survive the next Ice Age. Subjectively, the Pro-77s had more bass than I expected, but otherwise they weren't up to speed with the rest of

this group. Vocals were often hooded, with a lingering echoey quality, and there were other plainly audible colorations throughout the spectrum. The Pro-77 protested loudly when driven into overload. On-axis frequency response was 3 dB down at 80 Hz. The overall spectrum tilted upward, with a fairly smooth but broadly arched shape centered at 2,000 Hz. Off-axis measurements yielded a similar shape, though it was smoother, and treble ran strong to 12,000 Hz. The tough competition really disqualifies the Pro-77 from active duty in a high-performance system – unless you fine yourself faced with a situation that *demands* a sturdy cabinet. A good choice, in any case, for the kitchen, family room, or dorm.

WHARFEDALE DIAMOND III

Finish: Black-ash vinyl ($200/pr.)
Dimensions (h/w/d): 9.45 x 7.3 x 8 inches
Weight (each): 8 lb
Enclosure: Potted
Drivers: 4.33-inch polypropylene woofer, 0.75-inch soft-dome tweeter
Connectors: Spring clips
Power Range: 20 to 100 watts rms
Shielded: No

The Diamond 111, another Brit entry, is one of the smallest speakers in this group. Sonically, the 111s had a decent balance, though they sounded pretty thin overall. Subtle details were plainly audible, but they were overemphasized and sometimes just shy of scratchy, especially on initial attacks and decaying notes. While clean and jaunty, the bass was too light to be satisfying. The 111s grew progressively more colored and boxy as volume increased, and they didn't handle overload situations very well. Measurements indicated a very flat curve, with fairly solid bass down to 80 Hz—after an initial drop at 400 Hz. Mid- and high-range response was smooth, with only minor ripples on-axis; off-axis response was extremely smooth, and it extended all the way out to 16,000 Hz. Sensitivity was significantly below average. A good subwoofer pairing will help make up for the Diamond's shortcomings; if so, its wide, flat response makes it a good candidate for your main or surround channels, or for center channel use with a projection TV.

PROCEDURES

Sensitivity and frequency-response measurements were taken in my listening room (not in an anechoic chamber), with a test microphone placed on a stand in the middle of the room. This mic stood 0.5 meters from the speaker being tested, first directly on-axis of its front panel and then 45-degrees off-axis of it. This technique was used to determine how low these small speakers would go in a real room. Artifacts of the technique include a notch just below 200 Hz and a bump just below 100 Hz. The notch will appear only if you put these speakers on 18-inch-high stands, but the bump should appear in virtually all medium-size living rooms. And don't be concerned with small differences in sensitivity—conventional wisdom states that only differences of 3 or more decibels are significant. All other information, including power range, was supplied by the manufacturers.

Listening tests were conducted using a standard program of music CDs, with high-quality speakers costing twice as much as the most expensive pair in the group being used as a reference point. I listened for spectral balance, a speaker's ability to reproduce the frequency spectrum in a natural way; detail, definition, and clarity; dynamics and distortion; and imaging. (Room acoustics have a big effect on imaging; I've found that most speakers image well in my room.) I also evaluated power handling by turning up the gain on the reference amplifier until either the speaker protested or the clipping indicators flashed.

THE BOTTOM LINE

Speaker technology has advanced to the point where small, affordable models *should* deliver truly excellent sound. Getting big sound out of small speaker boxes is especially important during the home-theater boom. A home theater asks us to lodge at least four, and preferably six, speakers under our roofs. The standard one up includes two "main" speakers (the left/right pair that plays music in a basic stereo setup), a center-channel speaker, and two rear "surround" speakers. Some high-end home theaters, particularly those built around a projection TV, employ two center speakers—an issue here since the vast majority of inexpensive speakers (excepting most dedicated center-channel speakers) are sold only in pairs. And most bona-fide home theaters also have one or two subwoofers, which produce low bass that's beyond the capabilities of the mains. In any case, if most of those speakers can be small, so much the better. And if they're inexpensive, the entire prospect of building a home theater is that much easier.

Note that a center speaker, which is generally placed on top of a TV set, should be "shielded" or it will interfere with the TVs electronics and distort its picture. This isn't a requirement with front-projection TVs, since their electronics aren't anywhere near the screen, and it might not matter with a rear-projection set either. When in doubt, simply rest an unshielded speaker on top of the set and see what happens. The main speakers need to be shielded only if you plan to place them right next to the set.

Whether you're looking for speakers to serve in a home theater or simply need a pair for listening to music, the requirements really are the same: The speakers must sound accurate and natural. A voice should sound like a voice, whether you're enjoying David Letterman's "new" show, a CD of Eric Clapton's *Unplugged*, or Michelle Pfeiffer in *Batman Returns*; a cannon should sound like a cannon, whether it's punctuating Tchaikovsky's "1812 Overture," John Wayne's *The Alamo*, or an episode of *F. Troop*.

To find out whether theses speakers truly were capable of serving our home-entertainment needs, I spent many hours listening to each pair individually and conducted head-to-head comparisons. Finally, I selected six finalists that stood at least a full head—if not head and shoulders—above the rest. Arranged alphabetically, the finalist were the B & W Model 2001, Celestions' Model 1, the KEF K-120, Paradigm's Titan, the Phase Technology Model 335ES, and PSB's Alpha. Then I asked two audiophile friends, whom I'll call Siskel and Ebert, to participate in a top-level shootout. The finalist were arranged in symmetrical pairs on two small tables, wired to a

rotary selector, and concealed by a piece of acoustically transparent cloth. Siskel and Ebert listened at leisure, making notes regarding performance in the four subjective categories on independent scorecards, as I followed their commands to switch from one pair to the other.

When they were done, I unveiled the speakers … and watched their jaws *drop*. Both were flabbergasted to learn that the priciest speaker in the group cost $249 a pair. Siskel thought he'd been comparing models costing $1,000 a pair; Ebert said he'd had no idea that so little cash could buy such terrific sound.

I couldn't agree more. Virtually all of these speakers offer so much value, it's *scary*. From now on, you shouldn't be surprised when a company comes up with a great-sounding speaker at a reasonable price —and there is no good reason to buy a bad-sounding speaker at *any* price.

For the record, Siskel ranked my six finalists in this order (from most favorite to least favorite): Paradigm, PSB, B&W, Celestion, KEF, and Phase Technology. Ebert saw it this way (ditto): Paradigm, PSB, KEF, B&W, Phase Technology, and Celestion.

Their disagreement underscores one very important point about this entire test: Subjective evaluations and rankings are exactly that—subjective. Measurements are objective, of course, but they don't tell you the whole story. That's why we listen—and tell you what we heard. You may hear things differently, though, so I urge you to audition each of the six finalists (and any of the others that strike your fancy) and pick your own winner. This test really servers as a guide, to help you narrow down your options and give you the impressions and advice of a seasoned expert. But only you can decide which speaker sounds best to you. That said, you can peruse my scorecard in the RATINGS box; recall that I based my scores on audiophile standard. For the record, we've used color coding to break the group down into general performance tiers.

When making decisions, remember that a speaker should have a wide radiation pattern if you want to use it for center or surround duty in a home theater. If you use one of these speakers to reproduce a center channel supplied by a Dolby Pro Logic processor, and your main speakers are larger, set the processor in NARROW center-channel mode, since that will direct more bass to the larger, more bass-capable mains.

While many of these speakers would make terrific mains in a home theater, you should definitely pair the set of your choice with a subwoofer if you want to take your system to the next level. While the best of this group had response reaching down to 60 Hz, they all really need help below about 100 Hz if you want to get *all* of the impact you'd expect out of a top-notch home theater. If your budget prevents you from getting a sub-woofer right away, you can always rely on the mains for now and add the sub later. The best speakers in this group are good, you won't mind the wait.

RATINGS

	BALANCE	DETAIL	DYNAMICS	IMAGING	SENS[1]
Paradigm Titan $209/pr	A-	A-	B+	C+	87
KEF K-120 $200/pr	B+	B+	B+	B	87
Phase Technology Model 335ES $240/pr	B+	B+	B+	C+	86
PSB Alpha $199/pr	B+	B	A-	C+	88
B&W Model 2001 $199/pr	B+	A-	C	B	87
Celestion Model 1 $199/pr	B	B+	B	B	84
Boston Acoustics HD5 $150/pr	B	B	B	C+	87
Altec Lansing Model 85 $200/pr	B-	B	B	C+	89
Infinity RS225 $249/pr	B+	C+	B	C+	86
Polk M3 $239/pr	B-	B	B	C+	86
Cambridge Soundworks Model Six $238/pr	C	B-	B+	C+	89
JBL J2050 $198/pr	B	B	C	C+	89
Advent Mini-Advent II $179/pr	B	B-	C	C+	88
NHT Super Zero $115/each	B-	B	C	C+	88
AR M.5 $200/pr	B-	C+	C+	C+	87
Design Acoustics PSCV $120/each	C+	C	C	C+	88
Pinnacle AC500 $199/pr	C	C+	C	C+	90
Wharfedale Diamond III $200/pr	C	C	C	C+	83
Jamo Sat300 $249/pr	C+	C-	D	C	88
Tandy Optimus Pro-77 $80/each	C	C-	D	C	86

1. Measured sensitivity, in dB SPL