"... BREATHTAKING

... excellent fidelity ... startling dynamic range natural, effortless sound ..."

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"... exceptionally high quality ... Very few speaker systems I've heard approach this level of accomplishment or consistency at such an affordable price."

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by Anthony DiMarco

Studio 20

There's a hi-fi shop in Boston across the street from the famed Massachusetts Institute of Technology. The store is no bigger than many living rooms. The owner has been selling audio for more than 30 years — 24 of them from this storefront. Where many hi-fi shops would offer several different brands of loudspeakers, he is satisfied offering one: Paradigm. Many may consider this lack of diversification risky. For the owner of this small but highly successful shop, it's simply a matter of sticking with a brand that offers the best value for the money.

Only the best products garner such loyalty. Products of lesser caliber have a tendency to fall by the wayside or prove lethal to business. For more than 20 years, Paradigm has offered high-quality products that have defined their market segment. A visit to their Mississauga headquarters in Ontario makes it easy to see why. Research and development are at the center of Paradigm's philosophy. They pay little attention to fads, gimmicks, or assertions that are not backed up by scientific fact; their on-site anechoic chamber stands as a symbol of Paradigm's commitment to science and empirical research.

The Reference Studio 20-based surround system is a fine example of Paradigm's attention to detail and painstaking approach to speaker design.

IT'S ALL IN THE DETAILS

Paradigm's Studio 20 stand-mounted, two-way bookshelf model, Studio ADP 470 surround, and Studio CC-470 center are all solidly built speakers that exhibit first-rate fit'n'finish. A few seconds' close inspection reveal binding posts and perfectly applied, very-real-looking vinyl veneers that would inspire the envy of many products costing four times as much. The five-way posts come very close to what you'd expect from WBT. Also impressive is how Paradigm's obsession with sound quality follows through to accessory integration.

"One of the most striking aspects — was its coherence … perfectly defined bass, midrange, and high frequencies amid the chaos of action films … delicate and revealing during more thought-provoking stories … frighteningly real."

An example is the company's Premier line of speaker stands. The Studio 20 stand has eight holes on its top plate: four accept small spikes that match up with the loudspeaker base, while the other four accept machine screws, which, when installed, couple the Studio 20 to the spikes. This decouples the speaker from the stand and removes any resonance that would color the sound.

"… voices — were quite seductive … allowed well-produced soundtracks to come through with excellent fidelity and startling dynamic range … filled my room with clean, pristinely lucid sound."

The robust Reference Studio 20 bookshelf speaker is a two-way design featuring a 1″ satin-anodized pure-aluminum dome tweeter and a 7″ mica-loaded polymer-cone midrange driver. The matching Studio CC-470 center-channel speaker comes equipped with attractive outriggers with rubber-tipped feet. The adjustable feet allow the user to line up the CC-470's drivers with the listening position. The woofer-tweeter-woofer design allegedly produces very wide and even dispersion without the lobing effects of similar designs. The CC-470 demonstrates the same high-quality construction as the Studio 20.

CC-470

"The outrageous mass of sound effects sounded neither veiled nor compressed … a unique sonic signature … Voices never got lost in the mix … never sounded splashy or grainy … treading an impressive line between intoxicating sparkle and hands-off transparency."

Paradigm describes their Studio ADP-470 surround speaker as having a "reverberant sound field design." The majority of surrounds discretely use bipole or dipole configurations. Paradigm implements both designs in the same surround, using the same tweeter and midbass drivers found in the Studio 20. The ADP-470 is bipolar below 150 Hz, which keeps those frequencies in phase with one another. Above 150 Hz, the ADP-470 is in out-of-phase dipole mode. According to Paradigm's marketing manager, Mark Aling, "this change is done in the crossover and eliminates the choice between having a full-range bipolar design that is easy to localize, or a dipole that is difficult to localize but doesn't play very low."

"Bass from the Seismic 12 was breathtaking … I looked over at the little cube, amazed at the quality and quantity of the bass … Subterranean frequencies — sounded tight and clean … bass energy seemed to emerge from below the floor to shake the house … never sounded strained or lacking in power."

A clever metal bracket can be used to hang the wedge-shaped ADP-470 on a wall. Rubber stick-on feet are installed on the lower edges of the speaker so that the final installation is secure and free of any wall-induced buzz. My samples came in black ebony. Most of the enclosure is fitted with black knit cloth that forms a perfect seam with the removable grilles and gives the CC-470 a classy, high-quality appearance.

The Seismic 12 subwoofer is heavy (67 pounds) for its small size. Its piano-lacquered top plate contributes to an upscale appearance that doesn't call undue attention to this 14″ cube. The 12's overall construction is excellent and conveys more a feeling of rock than of wood. Controls for crossover, gain, phase, and 60 Hz contour, along with both single-ended RCA and balanced XLR connections, give the user plenty of setup flexibility. And as in Paradigm's Anthem line of amplifiers, a comprehensive set of turn-on options allows the Seismic 12 to awaken via 12V trigger or by sensing a signal on its inputs.

"… ADP-470 surrounds produce diffuse but meaty fill … the most accomplished surround speakers I have listened to … exhilarating depth and pinpoint placement … a level of realism and creepy you-are-there presence that gave me goosebumps."

The Seismic 12's twin passive radiators and judicious amount of equalization enable it to reach down to 17Hz (-3dB) in the average room. Although its passive radiators may look like 10″ drivers, their role is the same as traditional tuned ports. Each radiator is weighted so as to resonate at a specific frequency. Paradigm states that a 17 Hz tuned pipe would be much too long for a box of this size.

SETUP

I positioned the Studio 20s at the same locations where my reference speakers

usually sit: 6′ apart and 3′ from the front wall. Because of room restrictions, the right speaker sat within 15″ of the sidewall, while the left speaker was some 5′ away from the left wall. Both speakers were toed-in about 10 degrees to mitigate any secondary wall reflections.

I placed the CC-470 center atop my widescreen monitor, and the ADP-470 surrounds on the wall to each side of my listening position and about 3′ above my head. The center, or null point, of the cabinet was in line with my head.

The Seismic 12's small size allowed me to place it under an end table. I bypassed the 12's internal crossover by setting it to Maximum, and used my Outlaw ICBM to blend the surrounds, center, and fronts. The crossover frequency of all channels was set to 80 Hz. The 12's 60 Hz contour control can deliver up to 6 dB of added "impact" to film soundtracks. In my room, movies and music sounded best with the contour set to "0."

"The same level of realism was obvious in the vocals … sounded fantastic … rich, sweeping and rock stable … The same vibrant surround image I noted on film soundtracks continued through every multichannel disc I spun … natural, effortless sound quality …"

SOUND

The Paradigms preferred neutral to slightly forward amplification. The laid-back sound of Conrad-Johnson's MF5600 power amplifier created a full and powerful presentation. However, the high-frequency bite of explosions, cymbals, and ambience was on the dull side; action films such as *Matrix Revolutions* didn't have enough visceral impact. Voices were, however, quite seductive. The dialogue in American Beauty pulled me right into the disturbing but engrossing story.

Replacing the C-J with the neutral, ever-so-slightly forward Audio Research 150M.5 power amp changed things dramatically. The neutral character of the Paradigms allowed well-produced film soundtracks and music to come through with excellent fidelity and startling dynamic range.

"… diffuse yet controlled interpretation … high-frequency extensions are excellent … impressive detail … warm and punchy … compulsive toe-tapping rhythm and pace."

Chapters 19 - 21 of *Matrix Revolutions* filled my room with clean, pristinely lucid sound. "The Battle for Zion," juxtaposed with Niobe's ballsy handling of the Hammer, never missed a beat. The outrageous mass of sound effects and artillery fire sounded neither veiled nor compressed. Everything from the menacing metallic squirm of squiddies to the millions of spent bullet shells provided a unique sonic signature. Voices never got lost within the mix. The Paradigms had a very delicate and detailed treble. The Paradigms' Satin-coated Pure Aluminum (S-PAL) dome tweeters never sounded splashy or grainy, treading an impressive line between intoxicating sparkle and hands-off transparency.

Bass from the Seismic 12 was breathtaking. Several times I looked over at the little cube, amazed at the quality and quantity of bass emerging from it. Subterranean frequencies in the "Ice Field," in chapter 16 of *Titan A.E.*, sounded tight and clean. There was no overhang, and no apparent midbass bloat: bass energy seemed to emerge from below the floor to shake the house. The Seismic 12 never sounded strained or lacking in power.

One of the most striking aspects of the Paradigm system's performance was its coherence. The Studio 20, Studio CC-470 center, Studio ADP-470 surround, and the Seismic 12 kept their composure while producing perfectly defined bass, midrange, and high frequencies amid the chaos of action films, and were delicate and revealing during more thought-provoking stories, such as *Rabbit-Proof Fence*. Insects, the breeze, water, and the crackling undergrowth of Australia's Outback sounded frighteningly real. And Peter Gabriel's bass-heavy score didn't fall prey to the annoying room resonance that plagues other, lesser subs.

The Studio ADP-470 surrounds produced diffuse but meaty fill. These are the most accomplished surround speakers I have listened to. The exciting concluding chapter of *Tears of the Sun* has a surplus of gunfire and aircraft flyovers. The ADP-470s reproduced each effect within the surround image, and against the backdrop of incidental jungle sounds, with exhilarating depth and pinpoint placement. The surrounds delivered a level of realism and creepy you-are-there presence that gave me goose bumps.

"An involving surround-sound experience … seamless and convincing … naturally enveloping … the CC-470 was a model of clarity and integration."

The same level of realism was obvious in the vocals and dense melody of Seal's newest album, *Seal IV* [Warner Bros. 47947]. This extremely well-produced DVD-Audio recording sounded fantastic through the Paradigms. On "Love's Divine" and "Touch," Seal's soulful voice was rich, sweeping, and rock-stable. The same vibrant surround image I noted on film soundtracks continued through every multichannel disc I spun. The surprisingly effective and beautifully produced *Music from and Inspired by the Film Monster* [DTS Entertainment 1112] kept me riveted to my couch throughout its 115 minutes. Through the Paradigms, musician BT's melodic surround mix broke down the walls of my room and delivered me back into the

ADP-470

psychotic but compassionate world of Aileen Wuornos.

Nor did the Studio 20 leave me wanting with two-channel music. The same natural, effortless sound quality was evident on Eiji Oue and the Minnesota Orchestra's dynamic recording of Copland's *Appalachian Spring,* from Showcase [Reference Recordings RR-907CD]. When the music called for the Paradigms to react, they did so, without compressing dynamics or smearing detail.

COMPARISON

I've enjoyed the superb clarity, speed, and dynamic prowess of my own 5.1-channel surround system ($5,500) for some time. When it comes to tight, low-distortion bass and transparent articulate vocals, they are a class act.

In some cases, the Paradigms eclipsed my larger speakers. Where the latter can sound sterile and a tad dry, the Paradigms offered a warmer, subjectively sweeter sound. Their midrange leans toward a more pinpoint presentation of voices, while the Paradigms offered a more diffuse yet controlled interpretation. Both systems' high-frequency extensions are excellent. The other speakers are smooth if brighter; the Paradigms offered impressive detail while being, overall, slightly laid-back.

The two systems' bass performances were quite different. Although my reference speakers are larger, Paradigm's Seismic 12 sub evened the odds. The Paradigms were more warm and punchy, the others more lean and detailed. Both possessed compulsive toe-tapping rhythm and pace.

An involving surround-sound experience requires speakers to be well integrated. I found the Paradigms created a more seamless and convincing surround image. Although my more traditional direct-radiating speakers offer wide dispersion and good fill, they can't touch the more naturally enveloping quality of the Studio ADP-470 surrounds. The Studio CC-470 and my reference center speaker are in different classes. Where the other competently handles vocals with good intelligibility, the CC-470 was a model of clarity and integration. My reference center channel does not "disappear" as well as the CC-470, and lacks a little bit of clarity off the center axis. This is a common issue with other midrange-tweeter-midrange designs.

SEISMIC™ 12

"… exhibiting all the necessary character traits not only of very accomplished music reproducers, but also the articulation and excitement of an exceptionally high-quality multichannel, home-theater system."

If you enjoy bracingly dynamic music with a little more bite to cymbals and horns, then my reference speakers are hard to fault. While their dynamics are hardly soft, the Paradigms' slight restraint keeps them from "hitting the ceiling" the way the others do.

My reference speakers look better than the Paradigms. While the Paradigms' vinyl cladding is the best I've yet to see, it lacks the others' buttery-smooth, deeply lustrous finish. Real-wood cherry finishes and classy metal grilles on my reference speakers give them a very upscale appearance.

CONCLUSION

The Paradigms are a no-brainer bargain. The Seismic 12 subwoofer and Studio ADP-470 surrounds are especially impressive, exhibiting all the necessary character traits not only of very accomplished music reproducers, but also the articulation and excitement of an exceptionally high-quality multichannel, home-theater system. Very few speaker systems I've heard approach this level of accomplishment or consistency at such an affordable price. With well-engineered products such as this, diversification is overrated.