



Ascend Acoustics CBM-170 Speaker

Manufacturer: Ascend Acoustics, Inc., 16921 S. Western Avenue, Building 111, Gardena, CA 90247; 310/719-9786; www.ascendacoustics.com; e-mail: custservice@ascendacoustics.com
Price: \$360/pair; \$800/pair with Hsu VTF-2 subwoofer; \$1258 for five with Hsu VTF-2 subwoofer
Source: Manufacturer loan
Reviewer: Howard Ferstler

Perhaps I should just make this a “speed-record” review and state right off the bat that the CBM-170 is a terrific speaker – terrific at the asking price and terrific even if it were to sell for twice what Ascend has chosen to sell it for, factory direct. But, hey, you probably want to read more than just a summary.

Before I get into the details about why this speaker is so great, I will point out that although the CBM-170 is an OK bass-reproducing system, considering the small size of the cabinet, it is best used as a satellite handling the range above about 80 Hz. It can actually do a decent job of going somewhat below that frequency, but a pair of them will best demonstrate their excellent abilities when working with a good subwoofer.

Indeed, the owner’s manual for the system encourages subwoofer use, and to press the issue the company has been offering their speakers in two-, three-, five- six-, and seven-system packages in combination with the Hsu Research VTF-2 subwoofer that I reviewed in issue 88. The systems can also be purchased along with the bigger, have reviewed for *The Audiophile Voice* seriously potent VTF-3 model that I

Because of these deals and the review the CBM-170 systems as if a package. And while any good however many CBM-170s you choose analysis will be those two Hsu VTF hand.

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nature of these speakers, I am going to subwoofer were part of the performance subwoofer will dovetail beautifully with to utilize, my subwoofer choices in this models, both of which I still have on

OK, now here is another summary. With the assistance of a Hsu subwoofer, I believe that any combination of Ascend satellites will stand up and knock a chip off the shoulder of just about any other combination you can think of that is not designed to fill a huge room with sound. It can do this and still come out looking pretty good after the resulting altercation. Consequently, I believe that you will want to check out these systems for serious audio use, even if your wallet is thick as a brick.

As I noted, the CBM-170 is on the smallish side, but could not be considered as a “mini” system in the true sense of the word. With the stylish grill installed, the rear-ported, bass-reflex enclosure is 12 x 9 x 10 (HWD) inches in size and contains a 6.5-inch woofer/midrange and a one-inch tweeter. Cabinet edges are rounded, to minimize diffraction effects, although the grill frame somewhat curtails the advantage.

The woofer has a non-resonant polymer frame, a rubber surround (more long-term durable than foam), a cone made of something called aerogel, and a phase plug to assist with midrange dispersion. The tweeter is a soft-dome job, with a neodymium magnet and ferrofluid cooling. Both drivers are magnetically shielded, allowing the system to be used near direct-view TV monitors. Both are made by Audax and imported from France.

The CBM-170's crossover employs air-core inductors and polyester film bypass inductors. All sections are second order, and they form fourth-order high-pass and low-pass filters when combined with the natural rolloff of the drivers. The electrical crossover frequency is 2.2 kHz, with the actual acoustic point being somewhat lower in frequency. The tweeter also has a Zobel network and the woofer has an additional second-order low-pass filter, forming a true fourth-order electrical low-pass filter that only has an effect well above the crossover point. This is pretty serious crossover work for a system in this price category.

The rated response is 74 Hz to 20 kHz (+/- 2 dB), the minus 3 dB point is said to be 69 Hz, the nominal impedance is a bit under 8 ohms (4.1-ohm minimum at 200 Hz), and the input sensitivity (2.83 volts applied) is a typically average 89 dB. The speaker can get along with amplifiers as low in output as 35 watts per channel (it would be hard to find a decent, modern amp with that little power, of course), and it can handle momentary program peaks of up to 200 watts. The connections on the rear make use of gold-plated, 5-way binding posts and there is a pair of 1/2-inch, number-20, threaded inserts on the back that will allow the system to be attached to a sturdy wall bracket. To insure that the wall bracket will probably not pull loose, the CBM-170 weighs in at a modest 13 pounds. The speaker has a limited five-year, transferable warranty.

The system would normally be positioned vertically, with the tweeter above the woofer/midrange. However, for center-channel use it can be placed on its side. The standard version has the company logo on the narrow end of the grill screen, but the version configured for center use has it on the long edge and turned so that it does not look odd with the speaker placed horizontally. Other than the grill-logo difference and the different position of the identification sticker on the back, the center version of the CBM-170 is identical to systems designated for left-right main and left-right surround use.

Horizontal positioning with a speaker of this kind eliminates some of the more obnoxious interference-effect problems you would get with all-too-common, horizontally positioned MTM center speakers. However, you would still get some lobing at certain off-axis angles. For the best center-channel performance, the user might try to orient the system vertically to see if it offers a significant improvement over horizontal placement. You would want to use the vertical-oriented version of the grill if you placed the unit that way permanently.

Normally I listen to speakers before I do any measuring. However, my first experience with these speakers involved setting up a stereo pair of them in combination with a Hsu VTF-2 in my roughly 18 x 22 x 8.5-foot main listening room and doing my usual series of moving-microphone, 20-second integration curves with my AudioControl SA-3051 RTA. For this session, I used the Onkyo TX-DS787 receiver I reviewed in issue 86 and made use of its sub-out jack and internal, 80-Hz crossover. The DVD player use with the Delos *Surround Spectacular* test disc was a discontinued Samsung unit.

Given the clean design and minimalist approach, I expected to see decent performance from the systems. However, I was pleasantly surprised to discover that they delivered some of the most attractive room curves I have ever measured in that particular room.

After placing them on 28-inch-high stands about 2.5 feet from the front wall and centered 9 feet apart (about 6.5 feet from the side walls), I got a best-curve measurement that was +/- 3 dB from 63 Hz on up to 18 kHz. Better yet, over the critical midrange between 250 Hz and 2.5 kHz the variation was only +/- 2 dB, which would be a remarkable achievement for even a considerably more expensive speaker.

In addition, while most two-way systems exhibit a dip of some sorts at the crossover point (in some cases, this dip can be substantial), the transition from woofer/mid to tweeter with the CBM-170 was considerably smoother than most. Indeed, of the two-way systems I have reviewed, only the Waveform MC satellite, Dunlavy SC-II, and Atlantic Technology 271LR satellite have surpassed the Ascend in that area – but not by much. And all of these systems cost more than the Ascend model, with the first two costing a great deal more.

Indeed, the overall response-curve uniformity of the Ascend/Hsu combination was comparable to that of the Waveform MC/MC.1 sub/sat package that I reviewed in issue 84, and even to the Dunlavy Cantatas I reviewed in issue 87. Kids, this sub/sat package is right up there playing in the big leagues when it comes to linear power input to a typical listening room.

A few days after doing the measurements I did a series of single-presentation auditions with a number of fine recordings that have recently come my way. I used a different package of ancillary gear for these listening sessions, including a Pioneer DVL-700 super-combi player (reviewed by me in issue 66), a pair of Sherbourn 1/300MB power amps, a vintage Carver C-1 preamp, and the AudioControl Phase Coupled Activator (that I reviewed in issue 68). The PCA, in addition to its bass-synthesizing abilities, incorporates a separate, Linkwitz-Riley crossover with fourth-order filters set at 90 Hz. The crossover was used to separate the sub input from that to the satellites.

Particularly impressive was a recording of *Cantiones Sacrae Quinis Vocibus*, by Peter Philips, as performed by the Tudor Consort (Naxos 8.555056). The sound was absolutely superior and the performance was utterly profound. The CBM-170 pair managed to bring out all the fine technical qualities of this presentation. Just as impressive sounding with the speakers was a recording of *An American Requiem*, by Richard Danielpour (Reference Recordings RR97CD), which is as fine an example of a massed choral group recording as I have ever heard.

A bit livelier was *Danzón*, performed by the Turtle Island String Quartet (Koch 7529). This mix of jazz and Latin musical themes, with a bit of classical thrown in, exhibited very good detail, imaging, and clarity and it helped to showcase the ability of the Ascend systems to delineate those qualities. The result was very impressive.

I also had a chance to audition a new recording of Vaughan Williams' *Symphony Number Two* (Chandos 9902), done by the London Symphony Orchestra. This was the original 1913 version, and the sound, as reproduced with the Ascend/Hsu package, was terrific, as was the performance. Anyone interested in Williams' work will want to get this release and compare it to the revised versions that came later.

Finally, I listened to Bach's *Art of the Fugue* (Dorian 90297), a work originally composed for harpsichord but played here to near perfection by the 15-member chamber ensemble Les Violons du Roy, conducted by Bernard Labadie. The result was revealing, both of Bach's music and also of the Ascend/Hsu speaker combination.

I wanted to see how the systems compared to several other stereo pairs I had on hand. So, keeping the Sherbourn amps and PCA in operation, I brought the Onkyo TX-DS787 back into play (using its aux inputs and disabling its sub-out feature), and got some extra cables, two more speaker stands, and a line-level switch box. Making use of the Onkyo's volume control and a pink-noise test signal, and using the SA-3051's RTA readout to overlay the outputs reasonably close, it was easy to adjust the two pairs of systems for similar average outputs.

The recordings used were the same before, but I also included some careful comparing with my own standby, the *Engineer's Choice II* disc (Delos 3512). The latter has a wonderful collection of excerpts that were recorded by John Eargle.

I also included the *CD-1* test disc recently produced by members of the Boston Audio Society. It includes some spectacularly well-recorded instrumental and choral passages, as well as an organ excerpt from St. Saen's *Third Symphony* that will tax even the biggest subwoofers. The \$40 compendium can be obtained directly by contacting the BAS at dbsystems@attglobal.net. The payment also gets you a one-year membership in the Society, which publishes a very informative magazine.

Note that this is a CD-R disc, meaning that while many CD players can track it with ease, most DVD players will not be able to. All I have these days is DVD players, but the Pioneer DVL-700 super-combi player had no trouble with it.

First in line was the \$600 pair of NHT SB3 systems that I reviewed in issue 90. I continued to use the Hsu subwoofer, in order to make this a comparison of the satellites only.

During this session, I felt that the Ascends were a bit more spacious sounding at times, although when that was happening the NHT systems seemed to have a bit better center focus. With the Vaughan Williams material, I felt that the SB3s were a bit hollow sounding during some passages (they have a mild bass peak in the 80-100 Hz range that the PCA's 90-Hz crossover point could not quite tame), with the CBM-170s a bit more detailed. However, at other times Ascend systems just seemed to sound a tad thinner, and they definitely seemed a tad leaner when the sound demanded a strong degree of fullness in the middle bass. Of course, some listeners might judge the SB3 units to be a tad bloated sounding, with the Ascends being the accurate systems.

In nearly all cases the violin string tones were close to identical, although cellos tended to sound closer up and stronger with the SB3s playing. For the most part, the result was a near dead heat, with each system taking turns at slightly out pointing the other. If forced to pick a winner, I would have to take the Fifth Amendment.

To help sort things out, I also compared the systems with pink noise, and with a mono input the SB3 systems again seemed to have a better sense of focus than the CBM-170s. The latter systems seemed to spread the noise out a bit more. Interestingly, with uncorrelated (stereo) pink noise things were reversed and the SB3 systems sounded more spread out and spacious. Ah, the tricks that slightly varying radiation patterns can play.

I wanted to see how the Ascend units stacked up against more formidable competition, and so I replaced the SB3 systems with a pair of NHT's new M6 systems, with both pairs again sharing the VTF-2 sub. A bit later on I reshuffled the connections and compared the Ascend/Hsu package to a pair of full-range Dunlavy Cantata systems, with the PCA crossover removed and the Onkyo's 80-Hz crossover again controlling the sub/satellite interface between the Hsu sub and CBM-170 pair.

Admittedly, this is some pretty heavy competition for such economically priced systems. For example, the M6 systems list for \$600 each (\$800 each if you include their dedicated stands) and although the Cantata has been discontinued, its near duplicate replacement, the more stylish looking SC-IIIa, lists for \$5500 per pair. However, if you are going to draw conclusions about how close to perfect a pair of speakers will be, why not put them up against some of the best.

During this face-off, I was sometimes startled by how well the Ascends held up against their much more expensive competition, at least at moderate volume levels. With the guitar tracks on the *EC II* disc the NHT systems and Cantatas were almost identical to what I got with the Ascend systems, with the M6 units being maybe a bit more open and spacious sounding. With female vocals the results were a near draw. With smaller-scale orchestral material on several of the discs, the results were even closer, with the Ascends being just about equal to the more expensive systems. With larger scale works the results were also similar, although at higher levels the bigger systems did seem to pull ahead.

With the organ tracks on the *EC-II* disc and the BAS disc, the Hsu VTF-2 was equal to the Cantatas at frequencies down to about 30 Hz, although the small sub was no match for the Cantatas down really low. However, when I substituted Hsu's newer, \$850 VTF-3 model the tables were turned and the Cantatas were the ones coming out second best, particularly down near and at 20 Hz. There is no doubt that a CBM-170/VTF-3 combination would be a winner for serious pipe-organ enthusiasts. One need only listen to the organ excerpts on the BAS disc to be very aware of that.

Now, of course I am not going to say that the Ascend CBM-170 systems are the absolute equals of those larger and

more expensive systems. Remember, these comparisons were mostly at moderate levels. If really high outputs were required in a large room (this would be the case with a home-theater situation, as well as with spirited listening to rock music) the Ascends would find themselves in trouble before those other systems. It would be this way simply by virtue of the greater number of drivers in the NHT and Dunlavy models. There is no free lunch with speakers, but you can come pretty close with the Ascends if you make use of them in small to moderate sized rooms, where their maximum limits are nowhere near approached.

About a week after this series of comparisons, I set up a five-satellite Ascend/Hsu package in my main room, driving them with a newly acquired Yamaha RX-Z1 receiver (a review of this \$2800 monster is upcoming). I ran the receiver in its basic 5.1-channel mode (it can operate all the way up to 8.1 channels), and made fitting use of the big Hsu VTF-3 subwoofer. The idea here was to check out this package's abilities with both surround-sound music and DVD movies.

The room has a front-projection TV system, so I could easily experiment with the center speaker in both vertical and horizontal orientations. I located it on a 28-inch stand out in front of my regular center-channel speaker and positioned the left and right main speakers on 28-inch stands, about 9 feet apart and 3 feet out from the front wall. I located the two surround speakers directly out to the sides, about four feet up. They were positioned so that they were facing each other across the room. All speakers were 11-12 feet from my location, with the subwoofer in the right-front corner, about 17 feet away.

The results were excellent. The matched, three front speakers in particular were a good combination when I checked out a variety of motion-picture source materials. What's more, I had no off-axis response problems with a horizontally positioned center speaker at any listening position down the entire seven-foot length of my couch.

The side-located surrounds lacked the spacious characteristics of dipole surround speakers or the ultra-wide dispersing Allison Model Four monopoles I normally use. However, they had the advantage of being identical to the mains up front, which worked in their favor with some movie program sources. (Having them all identical also facilitated doing a rapid set-up job with the RX-Z1's channel-balancing noise generator.) With music I still tend to favor a more diffuse soundfield, mainly because there will be no need for pinpoint imaging away from the soundstage, at least with the kind of music I ordinarily listen to.

Fortunately, the RX-Z1 has the ability to generate a diffuse soundfield electrically (many modes, including DPL II and Neo 6), and in combination with the Ascend units the results were excellent with all kinds of musical material. And of course it is good to remember there is nothing at all stopping you from adding three more CBM-170 models for the full 8.1-channel treatment. One advantage of speakers this low in price is the ease with which you can get a whole bunch of them.

With some DVD-A material there were problems. The RX-Z1 lacks bass management with the six-channel inputs required for DVD-A, and so the somewhat limited bass response of the satellites put the pinch to the low-bass performance at times. However, as I have noted in previous Skeptimania articles, Dolby Digital and DTS are both able to give DVD-A a serious run for the money. And since all digital surround processors are able to supply both bass management and speaker-distance corrections to those inputs, they often sound better than DVD-A.

This was the case here, and with the DD and DTS tracks on a number of fine DVD-A releases the Ascend/Hsu combination was right up there in the big leagues. One fine, DVD video (not DVD-A), surround-sound release I auditioned was *Anthems From King's* (English Choral Favorites), featuring the Choir of King's College, Cambridge (BBC Opus Arts 0835). The 5.1 tracks are DTS coded (at 754 kbps), with 2-channel PCM as the alternate, and the video picture is at a 16:9 ratio.

Overall, this disc's sound with the Ascend/Hsu combination was first class, with wonderful integration of the choral parts into the church environment. Oddly enough, there was no center feed, in spite of the 5.1 rating, but the soundstaging was still equal to what you would get with any two-channel release. There is also some impressive low organ bass on this disc, which was magnificently presented by the VTF-3.

Another DVD-A disc I tried that has superb DD and DTS tracks was Vivaldi's *The Four Seasons* (Naxos.110001), which demonstrated the very clean sound, superb soundstaging, and nice sense of hall space possible with the speakers. *The Four Seasons* presentation on this disc has become a reference-level surround-sound presentation for me.

So, what do I think of the Ascend speakers? Well, to be truthful, the Audax woofer/mid has nowhere near the massive magnet heft or cast-basket solidity of the ultra-high-quality Scanspeak jobs used in the Triad InRoom monitors I also recently auditioned. (I opened up both to take a look around.) And the Audax tweeter was somewhat of a physical lightweight, at least compared to the tweeters I have checked out in the Triad, Waveform, and Allison models I have come to appreciate.

However, it is the bottom-line performance that counts, and not magnet size, driver weight, or basket materials. And those drivers, in combination with the crossover and decently well-built enclosure, resulted in performance that easily rivaled speaker systems costing double or triple that of the CBM-170 units. In combination with either of the Hsu subwoofers, their performance was exemplary, and I will not hesitate to recommend the package to anyone who is looking for, sensibly priced speaker systems that deliver upscale speaker sound.

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