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Hsu HRSW12V Subwoofer plus Apogee Caliper Signature Speakers

Review by Franco & Gordana Vitaliano

Wherein they put the subwoofer naysayers on the first bus out of Beantown.

"My subwoofer is faster than your subwoofer!"

"Is not!"

"Is too!"

"Pardon me, but I can clearly hear a seam between your planar speakers and your piston woofer."

"Huh? Who asked you into this discussion?"

"Sorry, but you are just wrong. ('Where did this guy come from? Is he your friend?') Subwoofers are too plodding slow. Crossovers are always messed up, and muddy everything. Maybe the adolescents in your house can use the sub when they watch Jurassic Park. Now, pardon me, while I go listen to my out of production (and don't you wish you had a pair?) Divas."

And so it goes..

If Gordana and Franco had a dollar every time this tired scenario has been played out in the audio press, in audio newsgroups, in audio society meetings, or between audiophile friends, they could buy every Casino Royale LP in existence.

Being reasonably happy owners (true audiophiles never admit complete happiness with any component) of a pair of Apogee Caliper Signature ribbon planar speakers, we have long wondered if a piston subwoofer might help out their anemic low bass. Below 50Hz, forget about it.

As we discussed in last issue's review, the Calipers have no deep bass 'grunt' at all - just a big panel flapping groan if you push them hard enough.

We had long been aware of Poh Ser Hsu's California company, Hsu Research, (800 554-0150) and its subwoofer products. Hsu's HRSW12V, a 12" downward firing sub, had been well reviewed in a number of places, and we had also heard his new 10" product at a Boston Audio Society meeting. So, we picked up the phone and asked Hsu for a review unit. For \$850, sold factory direct with 30 day money back guarantee, the HRSW12V puts paid to all the audiophile woofer whinings.

The HRSW12V unit and its 5 year limited warranty (one year on the electronics) comes in two pieces: A) a 56 pound, black fabric covered cylinder, 23"diameterx22"H, with a Zolatone granite top; and B) a 13 pound, 9.75"widex7.4"highx6.5"deep 150W amplifier cum electronics box. The line input impedance is 100K ohms; 1K ohm at speaker level in.

The Hsu unit is designed to delay the arrival of sound to your ears by one wavelength, and the round speaker is meant to be located near the listener. Some think the sub has all the aesthetics of beer barrel, while others like it. We are in the latter camp. It looks good.

But the dark gray sprayed chunk of electronics is another story. The electronics box goes on, or adjacent to, the main equipment rack; or better, yet, dropped into a hole and covered over. This way, you can instead concentrate on the lovely sounds coming from your revitalized system.

The Hsu sub electronics come standard with a plug-in filter module that provides a 91 Hz Linkwitz-Riley crossover and 24dB/octave slope, a high pass filter in/out switch, a 0 or 180 degree phase switch, a soft sub amplifier clipping switch, subwoofer level, and five way gold plated binding speaker cable posts (ditto on the sub itself). There is no on/off switch.

The crossover modules can be user-changed, and other filters are available for just \$15. We also ordered a 51Hz filter (more about that later). 28, 34, 43, 62, 75, 109, 131, and 155 Hz filters are also available.

We connected the Hsu electronics unit between our Cary SLP-90L line-level tube preamp, and the Rotel 990BX, 200W/channel amp. Overall, sub set up was simple. To turn on the electronics box, just plug it in (Hsu says never unplug the electronics box without first turning off the main system amp; otherwise, you might cause a very expensive thump).

The sub speaker was placed in a corner, next to our listening seat sofa, about 18" equidistant from all sides.

When we first plugged in the Hsu, there was, in the first couple of hours, a noticeable break-in period, accompanied by a little chuffing sound. But that quickly went away, and - oopa! - bass like we never before experienced with the Calipers suddenly flooded into the room.

Very soon, we discovered that the sub sounded best out of phase with the Calipers, i.e., at 180 degrees, and the high pass filter and soft clipping both engaged. Optimal subwoofer level positions varied, depending upon source material, between 11 and 1 o'clock.

With the high pass filter on and the sub connected, the Apogees were transformed. No longer dragooned into low level scut work, the Calipers displayed a whole new persona. Freed from the noisome bass depths, a clarity and detail suddenly issued forth that was nothing less than astonishing.

We were glad we had put in the Black Diamond Racing Pyramid isolation Cones - see review from last issue - prior to installing the Hsu. The remarkable Cones revealed so much new detail that it might have been easy to underestimate the Hsu contribution.

This low cost isolation tweak, plus the relatively inexpensive HRSW12V, catapulted our system into a level of sonic refinement that was, quite frankly, unexpected.

To be consistent about the Apogee transformation, lets briefly run down the list of reference recordings we mentioned in last issue's Caliper Signature review:

We had said, "Arvo Part's 'Te Deum', (BMG 78118-2003-2) which uses a 'prepared' piano for sonic shock effect, just doesn't have the shuddering impact that it should." No more. If that

'prepared' pianist had been unprepared, the Hsu would have rattled him/her. This piece now had a gravitas that heretofore was completely absent. And with the Calipers freed of deep woofing duties, the vocalists took on a new, shimmering light.

In fact, all our vocalist recordings benefitted tremendously from the Hsu. Everything was just so much clearer, and easier to listen to. This new attribute is all the more remarkable because one of the greatest strengths of Calipers is their ability to do voices very well.

"Large orchestral pieces, thanks to the holographic qualities of the speakers, are well treated. Although the lower notes may get slighted, the sense of orchestral attack and driving crescendos come right on through. The IVth movement finale of Respighi's 'Pini di Roma' (on BMG/DG D135381) positively soars." This movement not only still soars, it now sends shivers up and down the apartment walls (we have since gotten to know our neighbors much better.)

"Brass also fares well. Mile Davis' quixotic horn playing in the Miles & Quincy Live at Montreux concert (Warner Bros. D135011) stays intact. The drummer, thanks to the deep Apogee 3D soundstage, plays his kit in the next door apartment." Thanks to the Hsu, our suffering neighbor has now also gotten much better at keeping good bass player rhythm (fair trade, we say). Bass instruments in jazz works have taken on new musical meaning. The driving pulse so absent before is now forcefully present.

And then there was our infamous experience with 'Thunder Entered Her' (Virgin Classics, D106203). "The 'Angelis' opening of Tavener's choral work is dramatized by an organ playing in a sustained lower register. The Apogees sought to take wing with the angels every time we played this section. The flapping of the bass panels was so bad, we gave up trying to play the CD."

Well kids, the Hsu makes the beating of the angel's wings powerful enough to move pictures around on the wall. The Apogees must feel heartfelt thanks towards the Hsu sub for healing them of their previous bass-panel affliction.

But, for all that glowing praise, an intermittent problem had raised its ugly, two horned head. Remember this passage from our Caliper review? "Talking Timbuktu' (BMG/Hannibal D103178), with Ali Farka Toure and Ry Cooder on guitars. This CD is an amazing blending of Afromusic (Mali, in particular) and jazz." This piece of music best typified the nature of this subterranean bete noire.

On some recordings, like Timbuktu, when there is a lot of bass drum 'air' moving around - in this instance, a kind of whump, whump, whump -- the Hsu's position relative to the listener becomes very noticeable. It was clear that the bass notes were coming from the rear, and not the front.

This is bad. So, out come the 91Hz filters (mind those fragile pins!), and in went the \$15, 51Hz modules.

How many religious transformations is a reviewer allowed in a single article? Putting in the 51Hz filters finally nailed everything down. The Hsu forever disappeared. All deep bass notes were now clearly anchored up front. Seamless pistons hammered away at invisible planars in wonderful sonic synergism.

And with the Calipers willingly carrying the ball down to Hsu's 51 cycle yardline, pieces like

'Thundered Entered Her' literally shook the high rise building we live in. Our sofa became a magic fingers bed (use your imagination). If you are unfortunate enough to be alone, you can still get a quick massage by putting on some deep organ playing.

Some recordings really became fun now. Mobile Fidelity just released a new CD, The Fantasy Film World of Bernard Herrmann (#UDCD 656, a full review next issue). On this disc, among other film scores, was Herrmann's "Journey to the Center (sic) of the Earth." Apart from being wonderful, fantastical music, this movie score has deep bass galore. "The Giant Chameleon and the Fight" track will have your bowels shaking, and your mind wondering where all that low bass energy is coming from.

(A great party game is to have an unsuspecting guest sit on the sofa, a few feet away from the Hsu, and ask him or her to locate the source of our system's deep bass. This person is always shocked to find out its coming from the rear, and not the front. In fact, it's usually not until they put their hands on the sub and actually feel the vibration do they finally believe us.)

Another great shake-em-up recording is "Music From the Galaxies." (K.E.M.Disc, #1007). There is a track on this CD from the 1964 Sci-Fi movie, "First Men in the Moon" that is a must have when looking to destroy you friendly neighbor's audio gear. A "huge concert organ" is repeatedly used for shock effect by this piece's composer, Laurie Johnson.

Coincidentally enough, in this work, Johnson "pays homage to his colleague and mentor Bernard Herrmann through his use of a vast and colorful orchestral palette, heavy on percussion, with no upper strings." We plan to use this piece, along with the Hsu, when we throw our big lease breaking party.

In fact, we seemed to have reached a kind of MAD (Mutual Assured Destruction) audiophile impasse. We now have a powerful, great sounding (and inexpensive to put together) audio system that can't be used at its full potential.

Between the low diving, hard charging Hsu sub (a 12/95 Video magazine review by Tom Nounsaine of eleven vendor's subs found that the HRSW12V easily went down to 19 Hz at its half power point, and could crank out 110 dB SPL), and the newly bass-emancipated Calipers, we could end up with our belongings thrown out onto the street by an angry mob of shell-shocked tenants.

What's the old saying? More tears are shed over answered prayers?