

From: DC, Portland, Oregon
Subject: Teresonic Integrum
Date: Sat, 20 May 2006

Team Teresonic,

This has been a very interesting and enlightening experience. I thought I had a system that couldn't get much better as I have spent about 30 years trying out different components from the high end--high power bi-amp systems to where I am today. I settled on single source speakers about five years ago as the only solution to my objection of phase distortion in multi-driver systems. They have their faults, but it is the lesser problem to my ear. At the recommendation of several Lowther gurus, I use the PM2A coupled with the Medallion II.

My current system consists of the Medallions, a Sony 999 SACD player, a pair of 2A3 parafeed monoblock amplifiers, a RPM II tonearm on a independent power drive coupled to the Immedia turntable, and a Jim Hagerman Tumpet phono stage with the Trumpet MC transformer. All records are cleaned on the VPI 16.5 record cleaner prior to being placed on the platter. The signal is then fed through my own custom designed pre-amp with a passive mode option. A Miller & Kriesel 5000 sub-woofer can be switched in or out and is input isolated from the rest of the signal path. For cartridges I use the Shure V15xMR [which is the finest MM cartridge ever made IMHO] and the Koetsu Urushi. All my testing was done with the Shure cartridge as my Urushi is in Japan for repair.

So I took the vinyl out of the equation and put on some SACD recordings. I just sat and listened for a while, trying first the Integrum, then the Medallion II--listening to complete tracks before switching. A couple things were immediately apparent. First the bass and low mid range were there in the Integrum, but they were much, much tighter--and there was a bloom missing. The high end was much more articulate, but not screechy. I was listening in mono mode to be able to switch back and forth easily. Even in mono mode there was a stage presence to the Integrum that I have never heard before in a mono playback.

As I listened I tried to compare what I hear in the concert hall--and it was clear that the Integrum are very faithful to the live un-amplified classical concerts. Concert halls these days amplify the orchestra a little to even out the hall dynamics, and it greatly colors the sound in my opinion. Pure classical instrumentals do not have a bass or low mid-range bloom to the sound--it is there as an integral part of the music, not a specific presence as is so common in today's recorded music. **I've had hundreds of hours performing as a classical violinist in small concert halls--and I think I know where of I speak. It is rare to hear a violin sound exactly like a violin should, but having played in the orchestra behind performers like Issac Stern and Pinchas Zukerman I know what their violins sound like in real life. The Integrum gave the most realistic reproduction I have heard from any speaker. There is a graininess, almost a growl or edge that is there in a live violin (of a good performer!). It requires a very quick system to produce it because the sound is most noticeable in the first few mill-seconds of a down bow attack. The character of the sound varies depending on the instrument. I could pick out that character in the Issac Stern recordings--first time ever.**

Then I moved over to some SACD jazz recordings and I was amazed. In jazz the bass is often a presence and I expected it to be a little weak. The necessary punch was there in the Integrum as well. Even down in the sub-40 Hz range there was clearly a good flat response, and the tightness of the bass was absolutely phenomenal. It is hard to get a

massively damped high power speaker system to produce this--they can be tight and go very low, but there is usually a phase coloration there as well. I ended up turning my subwoofer to just sub-50 Hz, and then turned the volume down, and down, and down, and finally off. It added the sub 30Hz range, but colored the sound too much in comparison with the Integrum. I preferred the loss of the very low bass to the coloration provided by the long throw woofer.

It was time to go back to the vinyl and find out what was missing. I suspected that it might be the stock Sovtek (new production) tubes that the Trumpet came with. The Integrum revealed the slightest nuances and mixing faults in CD's so I knew it would show up any weakness in the tube stages as well. Jim Hagerman's Trumpet is a Class A Sterophile rated phono stage preamp. It uses a balanced design that requires two quartets of closely matched tubes, four 12AX7 and four 12AU7, to work properly. The 12AX7's run the RIAA stage and provide most of the gain, so they are the most important. I am fortunate enough to have several hundred 12AX7's and 12AU7's culled from yard and estate sales. I use the Hagerman VacuTrace coupled with Tektronix TPS 2024 scope to match them. I started with a set of perfectly matched GE 5751's and the difference was immediate and palpable. The high frequency objection immediately and completely disappeared. All of a sudden I just wanted to sit and listen. Then I tried out the RCA grey plate—it was even better and more detailed on the top end, but had a small amount of high frequency noise. The RCA black plate took care of the noise, but I could do better. I worked my way through Sylvania (good), Tungsol black and grey plate (fantastic), Siemens (quietest of all tubes, but a little squashed in dynamics). When I got to the Mullard ECC83 quartet I quit. The sound was so beautiful and natural I wasn't even willing to try out the Amperex Orange and Bugle Boy. I matched them with a quad of Mullard ECC82's which the improved sound ever so slightly in the midrange openness--and sat down to listen.

I was dog tired having just returned from an overseas trip and was about two days short of sleep, but I couldn't stop. I spent about 5 hours listening to Opera, Violin solo, Symphony, Piano solo--often falling asleep for a minute or so here and there. The sound was simply amazing. The real test of a system is if you stop listening to the openness of the midrange, the detail of the high end, etc., etc., and just find yourself drawn into the beauty of the music. That is what the Integrum did for me--they made listening to music just a pure joy.

What are the downsides of the Integrum? First it absolutely reveals every detail be it bad or good. Poorly mixed recordings are very hard to bear. The quality of the signal path is also very important. The weakness of the Sovtek tubes was apparent with the Integrum, but I didn't find them objectionable when using my Medallion II speakers. I had intended to roll tubes some day, but it wasn't a real priority until I plugged in the Integrum. The same was true for my 2A3 tubes--I went through GE's, KenRads, Heinz & Kaufman, Rogers, M-R, and Philco, before finally settling on a RCA RadioTron pair as the most natural sounding and able to keep up with the speed of the Integrum. [Note: the difference with the NOS 2A3 tubes was more a matter of taste than objection as with the Sovtek small signal tubes.] My final objection may not be the Integrum at all. I noticed that there is a very small range of notes--right around D5 to F#5--where there seems to be bit of boost. This might be the resonance of my room or related to the Helmholtz resonator, I'm not sure.

My final comment is that this is a system to listen to directly--as a background system it doesn't work. I just get sucked into sitting down and listening critically--and then there goes that job I was working on. They give the sense of being right in the center of the third or fourth row back from the concert stage. The Medallions on the other hand do make a great background system, probably due to the midrange warmth and boost and general lushness. The Integrum is not lush, it is accurate.

DC
Portland, Oregon