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Consonance Cyber 20 by Opera Audio

Frank P Cheng (gundam91), 7-26,2004, 01:42 AM

I know that many people have been inquiring about this amp from China. I had read the review on Positive Feedback and had inquired about it on the amplifier discussion board on several occasions, but no one seemed to have heard it firsthand. When I found out that my friend could get me one for a good deal in China, I decided to take the plunge.

Before I go any further, I just want to state in advance that every review is subjective. My observations of the amp are based on my personal experience, my prejudice and preference. With that said, I think it is important to describe about my background. I listen to a variety of music from Jazz to Classical to 80's alternative to Chinese. But these days, I listen primarily to Hard Bop and Free Jazz from the 50s and 60s. To this point my primary interest has been on speaker-based systems (since 1992). When I started out this hobby, dynamics and details were two of my top priorities. Through the years, the focus has shifted towards tonal accuracy, good soundstage, and a warmer, lush, and laid-back sound. This transition is apparently in the evolution of my system with the addition of tube based equipment (preamp, phono stage, and DAC) + vinyl front end.

I had been thinking about adding a pair of headphone to my system for a while as I enjoy late night listening sessions, but my wife does not. With a baby on the way, I thought this would be a good time to finalize that plan. I had settled on a pair of Sennheiser HD600s basically based on the good reviews on all the different magazines and the price. I had listened to the HD600 before at Stereophile Shows mainly at software vendor booths for auditioning CDs. The only two criteria I had for the amp was that it must be tube based as I believe the combo of solid state amp and Senn HD600 would sound too bright, based on the listening experiences I had at Stereophile Shows, and the price range should be under or around US\$1,000. Originally I had considered the ASL MG Head DT and the Music Fidelity X-Can V3. Both had received pretty good reviews from the like of Stereophile/The Absolute Sound. I then thought about the Earmax, which I had heard at the Stereophile Show in SF several years ago. At last year's Stereophile Show in SF, I searched high and low, hoping to hear some good headphone setups the software vendors usually set up for show-goers to listen to CDs. Unfortunately, there was only Shure pushing their new earphones and a software vendor with several pairs of Stax's. When I ventured onto the Head-Fi website several months ago, I got a really good education on how many good amps are out there. After "studying" tons of information, I had come up with a short list of amps that I would want to audition - Audio Valve RKV MkII, Singlepower MPX3 and PPX3, the Earmax Pro, the Rudistor RP5, and also a max-out PPA (I know, it's a solid state amp) since so many people had sung praises about it. During the last mini-meet in San Jose, I brought my digital front end to the meet and had the opportunity to borrow several amps to try on my system. I thought the Emmeline had an overemphasis in the midbass region that made it sounded somewhat artificial. The PPA had good dynamics, extension at both ends with tight, controlled bass. But it sounded bright, and has a very typical Solid State (SS) sound. The three amps that impressed me were the RKV, the prototype SDS Labs/PPA hybrid amp by Head-Fi members amb & morsel, and the Singlepower MPX3. I fell in love with RKV's lush midrange. Female vocal on RKV had me dropping my jaw to the floor. The Singlepower MPX3 had a balanced presentation with speed and good control of the bass for a tube amp, and it was magical with reproducing solo pianos. The SDS Labs prototype also had a very balanced presentation, and good bass "slam". Both are a tad on the warmer side of neutral. I would say the MPX3 edges the SDS Labs prototype slightly in the midrange area. Around that time, a friend who knew I was looking for a headphone amp e-mailed me the review of the Cyber 20 on the positive feedback website. The article peaked my curiosity as the reviewer replaced his long-time reference, the Earmax, with the review unit at the end of the audition.

<http://img60.exs.cx/img60/837/Cyber20B.jpg>

The unit was packed in double boxes. When I opened the box, I was surprised to find a pair of white cotton gloves and a manual written in simplified Chinese. I browsed through the manual quickly just to make sure I don't end up doing something I would regret, and because I can't really read simplified Chinese characters. Then I donned the white gloves and took out the Cyber 20 and its outboard power supply. The unit itself is not light, the power supply even heavier. I was surprised to find that the tubes were already plugged in place while in the box, and they didn't break off during the trip.

The unit is well built, solid ?" thick anodized aluminum front plate with a very heavy volume knob and a high/low impedance switch. The back consists of a pair of gold plated RCA jacks and connector for the power supply. The only complaints I have are: 1/ both the amp and the outboard power supply sit on three pucks, two up front and one in the back. When I tried to swap out the tubes, the amp would tilt over easily. 2/ The chassis is of a light creamy gray color. It

made the amp look somewhat cheap. I wish it were painted black. But from the front, all you will see is silver front plate.

The amp came with a pair of the Russian 6n14n (6pi14pi) tubes and one Electro Harmonix 12AU7. I immediately tested the tubes in my TV-7DU tube tester. The pair of Russian 6n14n tubes was not matched. Prior to listening, I installed Pearl Tube Coolers on all three tubes. (Latest version with Carbon Fiber Sleeves)

My first impressions were that the amp sounded pretty good, good detail, good wide soundstage, and good dynamics. It sounded somewhat bright and thin. My immediate thought was that this sounded like a solid state amp. The amp has a switch for high- and low-impedance. I tried both settings with my HD600 and a pair of Grado SR-60. Surprisingly, I did not agree with Positive Feedback that low-impedance setting sound better. For the remaining review, I just left it at high-impedance setting. The background was dead silent, even when I turned the volume knob all the way up, pitch black, not a hint of any hum. The volume does drop when you plug two headphones into the amp. I let the amp burned in for over 10 hours using XLO/Reference Recordings Burn-in CD. It still sounded bright to my ear. After doing some research on Head-Fi.org, I suspect the cause to be the Russian tubes. I immediately swapped out the tubes with a set of the Russian 6n14n-EB and an RCA 12AU7 cleartop. I let the amp burned in for another 10 hours or so. It helped reduced some of the brightness, but not by much. I later swapped the Zu Mobius cable with the Cardas cable, and that made a big difference. I think the Zu Mobius was too revealing and did not work well with this combination. I also tried the Clou Red Japis. It sounded congested as the soundstage was "squeezed in". Overall, the Cardas cable seemed to have the best synergy (with my system).

A pair of GE 7189As (gray oval plate) which I had purchased on eBay arrived few days after the amp did. They passed the test on my TV-7DU tube tester as a matched pair. So, I immediately plugged them into the amp, with some high-temperature resistant silicone o-rings. I let the tubes warm up for about 20 minutes before listening. Oh, my lord! What a difference. The smoothness was still there, but the brightness was gone. The midrange magic associated with NOS tubes was definitely there. The dynamic range was not as good as with the Russian tubes. The bass is typical of tube amps, on a sluggish side. But the overall tonal balance and presence gave a sense of realism, and the amp sounded more musical.

I had spent a good amount of time with the SinglePower MPX3 and the Audio Valve RKV MkII at the San Jose meet. In my system, Cyber 20's sound signature is somewhere between these two fine amps. It's speed and extension on both ends doesn't quite approach that of the MPX3, but sounded slightly warmer in the midrange than the MPX3. But female vocals did not sound quite as seductive as the RKV MkII. With NOS tubes, I would say this SET amp exhibits all the virtues typically associated with tube amps. These assessments are based on what I remembered from the meet, so another round of side by side comparison would be required to verify these assessments.

Associate Equipment:

Sonic Frontier SFT1 (transport)
 Mark Levinson #36 (DAC)
 Seismic Sink CD Sink (for SFT1)
 Audio Selection Cones (for ML#36)
 1 ?" thick wood block (under the Cyber 20)
 Powercords: MIT Z-Cord II, switched to PS Audio Statement(Cyber 20); John Rische DIY PCs for SFT1 & ML#36
 PowerVar 1200 AC Conditioner
 Standesign Rack.
 MIT MI-330HE Interconnect
 MIT MI-330 Reference Digital Interface Cable
 Sennheiser HD600 + Cardas/Zu Mobius replacement cables

This system was part of my second system which was in the room that we had converted into the baby's room. I packed away the preamp (ARC LS-1), the amp (Pass Lab Aleph Os), and the speakers (Unity Audio Signature 1s). The original system sounded very different than my main reference system, in that this system is more musical (in relative terms), it had the warmth usually associated with the tube equipment, and is more laid back, and spacious. I would attribute this characteristic to the amp (Pass Lab Aleph Os) and the speakers (Unity Audio Signature 1). I enjoy listening to female jazz vocals on this system.

My reference system consists of the following component:

Analog Front: Michell Orbe SE + SME V + Shelter 901 + Cardas Golden Reference cable
 Digital Front: Mark Levinson #37 (transport) + Genesis Digital Lens + Sonic Frontier SFD2 MkII
 Amplification: ARC PH3 SE (phono) + ARC LS2B MkII + Mark Levinson #333.
 Speakers: Thiel 3.6
 Cables: Illuminati D-60 digital/Kimber KCAG (analog)/MIT MI-330 Proline balanced/Transparent Ultra
 PS Audio PP300; Ultimate Outlet 20A; Audio Prism ACFX; Electra Glide Reference II PCs on digital fronts; John Rische DIY PCs on phonostage; two separate dedicated 20A AC line.

Test CDs:

Jane Monheit - In the Sun Tsai Chin - Chance Encounter (this CD, piano solo + vocal, was the rave in Asian Hi-End circle for the past few years. The music was great, and the recording was excellent. It was a standard demo CD at every hi-fi store and every Hi-Fi show, JVC XRCD2 reissue). Sonny Rollins - Saxophone Colossus (JVC XRCD2 reissue)
 Yo-Yo Ma - Solo

Originally written on July 6, 2004; Revised on and off during the next 4 months.

Update 1: July 23,2004

I have had the Cyber 20 in my system for about 3 weeks now. My son was born a few days after the amp arrived. Contrary to what I thought it would be, I hadn't turned on my headphone amp at all during that time, but my main system has been on almost 24/7. He's still got the day/night mixed up. So he's usually wide awake between 1am and 3am. I played a lot of classical music for him, and he seems to like piano sonatas the best. They really keep him calm at those hours.

I have assembled quite a bit of 6BQ5 tubes in the past 3 weeks including some current productions: Electro Harmonix, JJ/Tesla, Ei (Yugoslavia), and some NOS: GE, Sylvania, RCA, Raytheon, Mullard. I have not had a chance to try them all yet as I've only had the opportunity to turn on the headphone amp twice in the past three weeks. I liked the sound of the GE 7189A (USA). I had just fired up the amp the other night with a pair of Sovtek EL84Ms which I borrowed from a friend. I would assume that these had been burned in previously. I allowed the amp to warm up playing a CD for about 45 minutes before listening to them. To my surprise, these tubes sounded darn good, unlike the Sovtek 6DJ8/6922 tubes which had received bad reputation for sounding bright and lean. I had paired the Sovteks with an RCA 12AU7A cleartop. The word luscious comes to mind in the midrange. The amp did not sound so analytical as it had before with those Reflektor 6n14n tubes. I was impressed with the excellent overall tonal balance as well. The bass is a tad more sluggish, (softer?) when compare to the 6n14n tubes, but it sounded great with that acoustic jazz bass, really brings out the luscious wood sound.

I think this amp is a good contender in its list price range (US\$699). It's a hell of an amp at US\$350. I am hoping to have a chance to bring this amp to one of the local meets so I can compare it with some other amps. The amp responds significantly to tube rolling. Depending on what your taste in music is, I think you can find a set of right tubes to tweak the sound to your liking. If you get one and you listen mostly to classical music, jazz, or acoustical music, take out those Reflektor tubes and replace them with either the Sovtek EL84M which can be had for about \$20/matched pair or some NOS tubes. I think it's a must. If you listen mostly to Rock, I think those Reflektor tubes would do just fine, but you might find ear fatigue an issue after listening for a period of time.

Update 2: mid September

I went crazy the past few weeks and started to purchase 6BQ5/EL84 tubes from online vendors and eBay. At last count, I think I have over 60 NOS tubes from Amperex, Mullard, Sylvania, GE, RCA, and Reflektor. Yeah, I think that calls for a few sessions with the Audio Asylum resident psychiatrist to control my spending impulses. I had cycled through a pair of Amperex EL84s and currently a pair of Amperex Bugle Boys 7189 with "D" getter from 1949. I had also switched the input tube to one Amperex 12AU7 with orange globe logo. On all three tubes, I used the Bluenote Midas tube dampers. After 20 minutes of warm up, oh yeah, baby! It sounds sweet! The bass on "All or Nothing at All" sounds deep and full. As mentioned before, bass is somewhat sluggish and bloated, typical of tube amps. But her voice sounds just SWEET, and somewhat "emphasized". One thing I enjoy about tube amp is that you can tweak the sound just by plugging in tubes from different manufacturer. I've also found that different tube dampers also change the sound in different ways. I had replaced the Pearl tube coolers you see in the pictures with some Midas tube dampers. These tightens the bass, but also made the midrange sounded somewhat lean. At the end, the best solution I found was to use the Midas tube damper on the 12AU7 signal tube, and silicone O-rings on the EL84 driver tubes.

I gave it another listen with the two impedance settings. For the Senn HD600, the switch seems to affect the overall balance of the sound. When switched the high impedance, there seems to be a lot more bass, to a point I think it is slightly too much for my liking. When switched to the low impedance setting, the volume goes down by a few dB. When I turned the volume up to try to match the previous volume, I noticed that it sounds leaner in the bass. The midrange is not as bloomy. I would describe it as more tonally accurate/balanced. And it gives the impression that the bass is tighter in comparison to high impedance setting. Which setting is better? I guess that depends on what music you listen to and what your mood is like at that moment.

Update 3: 11-13-04

I got to compare the amp with a Headroom Max today. The result was the classic tube vs. solid state battle of the titans. Eweitzman, who brought over the Headroom Max, and I both agreed that the Max is probably more tonally accurate, balanced, has more control in the bass region, and better dynamics. The Cyber 20, on the other hand has a warmer midrange, and sounds more "natural", and has a more expansive soundstage. I got a good sense of the soundstage with the Cyber 20, but the placement of each instrument was not as well articulated as that of the Headroom Max. The Cyber 20 cost 1/5 of that of Headroom Max, but I would put it in the same league in terms of performance, albeit the fact that they are two very different animals. I've seen so many posts on Head-Fi.org asking which amp is the best at certain price point, or which mates the best with which headphone. At this stage of the game, it's not which is better, but which one you prefer, i.e. Porsche vs. Ferrari, BMW vs. Mercedes Benz. The difference was best demonstrated in the Holly Cole CD where she was doing a piano solo. Her voice sounded "weightier" with the Cyber 20. With the Max, her voice sounded colder and leaner, and I could hear some sibilance through the Max. The piano, on the other hand, sounded more accurate with the Max. At the end of the comparison, I still prefer the sound of the Cyber 20. It was less fatiguing, and has a pleasant relaxing sound, which mate well with my digital front end and the type of music I listen to

predominately - Jazz. We listened to a few tracks of rock/pop, and it was clear that the Max wins in the dynamics department.

Prior to this comparison, I had switched the powercord on the Cyber 20 to PS Audio Statement PC, switched the Amperex 7189 tubes to a pair of Mullard EL84s. The powercord swap gives the system a tighter bass. But I think changing from the Amperex to the Mullards added the bloom to the midrange, and the loss of some dynamics. So far, I think the Amperex fares the best in this amp, although I still have some GEs, RCAs, Sylvania's, Electro Harmonixes, and E.I.s to try out.

Below are his comments about the showdown:

"After getting through some very minor differences in tonality, noise, sibilance, etc, the most striking result was that the Consonance was totally different from the other three [referring to Headroom Max, stock HP-100A, and modified HP-100A]. It clearly had some distortion in it compared to the others, but it managed to open up the soundstage to about 3 times the size/depth of the others. Where the others were flat/wide but had no real soundstage, the Consonance pushed things up, down, back, forward. It was literally like the difference between vinyl and digital: open and spacious on one hand, flat but with more precise definition on the other.

I read this last night from a long marketing paper by Floyd Toole of Harmon:

If a room's reflections are "energetic", the sound is perceived as open and spacious with a good sense of depth, but specific images are rather vague. In other words, like real concerts.

This is precisely what I've been struggling to describe, what I hear when comparing CD to LP. I've had trouble nailing down the fact that on LP, the images are vague. Sure, you can tell where in the soundstage a voice or instrument is, and it may even have some bubble of spaciousness around it, but normally not as well defined as on CD.

The one time the Consonance's presentation fell on its face occurred when playing a wall-of-sound rock recording (Pet Shop Boys). It was confused sounding and muted compared to the others.

I've theorized that the spaciousness of LP was due to random phase changes caused by vibrations bouncing around in the mechanical system of the record player. Hearing this tube amp produce the same type of sound field, I'm wondering if it's a type of added signal delay that is perceived, psychoacoustically, as a reverberant field, tricking our minds into "hearing" a performance space which is not there. Then again, the amp could have some very cool delay-crossfeed "spatializer" circuitry in it.

Back to the amps: I can certainly appreciate the allure of the Consonance, but I prefer what I believe to be the accuracy of the other amps. The HeadRoom is superior in terms of clarity, uncolored sound, and noise level, and it had a weightiness to the bass that none of the others matched."

Final thoughts:

The Cyber 20 is a good product, I have compared it to several products in the \$1000+ range, and I can honestly say that it is a competent amp capable of challenging amps costing few times more and still stand its ground. It is not perfect in any sense. But I think it really comes down to personal preferences and system synergy. With some good NOS tubes, this amp can really sing. I think I have found the perfect amp that matches really well with my digital front end. Eweitzman commented that it has an "LP-like" sound, not fatiguing, produces a great sense of space, and sounds very musical. At the end of a stressful day, when I listen to some of my favorite CDs, and relax on my lounge chair, this system simply transports me to another dimension. And that is what it is all about. And those Russian tubes, I think I will keep them close to the amp for those times when I feel like "jamming" with some good rock/pop.

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