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Listening Impressions

*Response Audio Reference SE502 utilizing the
VH Audio V-Cap Reference Grade Teflon Capacitors*

Listening Evaluations at 200 hours

Before we begin, I would like to state that I am by no means a professional reviewer or writer. What you will find below are my personal findings described to the best of my abilities in my own words.

Sometime back in March 2004, I was contacted by Chris VenHaus (**owner of VH Audio**) regarding a new Teflon audio capacitor he was introducing to the audio industry. My first impression was "Just what we need, ANOTHER capacitor to add to the already overwhelming choices out there!". Boy was I wrong!

After speaking with Chris over the course of a few weeks, I agreed to evaluate these new caps in one of my highly modified personal reference tube amplifiers, the Jolida 502.

The **Signature Jolida 502** integrated tube amplifier has been a personal reference/test piece for many years. I am very familiar with it's sonic signatures in both stock and modified form. I use this amp for evaluating new upgrades to our exclusive modification line, new cables, speakers, sources and all other new products that come along. I custom built this amplifier from the ground up to fit my personal needs and preferences. (further information about this amp located at the bottom of this page). There was no doubt this piece would be used to evaluate these new capacitors.

During our many conversations, Chris mentioned he owned a pair of [Antique Sound Labs Hurricane 200 DT amplifiers](#). For those not familiar with these units, they are tube mono blocs that use eight KT88's, and three 6SN7's per channel producing 200 watts of dynamic Pentode power. With a flick of the switch they may be converted to triode operation, producing about 120 watts a side.

To my surprise, Chris asked if I would be interested in performing some custom modifications to his amps based around his Teflon V-Cap capacitors, as well as many other top-shelf passive components. Yeah, like I was going to turn down this opportunity? I don't think so!

Over several weeks, Chris and I chose exactly what components were to use in the modification of these amplifiers. We decided on only the best passive components such as Riken Ohm carbon resistors for the grid locations, Dale/Vishay Metal film resistors for the signal path circuitry, WBT binding posts and RCA

connectors, his very own Pulsar wire for the internal signal wiring, Bybee Quantum Purifiers for the B+, and so on. After communicating back and forth and finalizing the modifications, the amps were packed-up and sent to me.

I will not get involved with the evaluation of the Hurricanes themselves on this page, but you can visit the EXtreme Hurricanes page for my overall impressions of those units.

About a week after our initial conversation about **me** evaluating the V-Caps, UPS dropped off the package from VH Audio. I opened it up and low and behold, they were here!

These caps are quite heavy, but does their heft translate to sonic bliss or just dead weight? Size is similar to that of an oil capacitor. The leads are heavy gauge, solid core, deep cryogenically-treated bare copper that utilizes a Teflon dielectric. Based on visual inspection, quality and attention to detail is obvious when looking at this product.

Since I was already quite familiar with the time it takes Teflon caps to break-in, and wanted to get these cooking right away, I installed the V-Caps that same morning in the coupling and signal ground locations in my personal **Signature Jolida 502B**. Installing these caps is NOT for the DIY newbie. With these leads, you must be careful not to manipulate them too close to the body or you risk the possibility of damaging the internal connection where the inner foil is connected to the leads.

Installation into the Jolida amplifier wasn't too tough, but care was taken to make sure the leads were folded over on the underside of the circuit board so they won't loosen over time. After a secure installation, these capacitors will NOT move- not in a hundred years. There is also a sonic advantage to having such rugged leads in that they will help control vibration from entering into the capacitors themselves preventing microphonic vibration which could enter the signal path. They do take a bit more care and attention during installation but well worth the extra effort.

Before revealing my listening impressions, I'd like to state that I have since installed the V-Caps in several customer's tube components by many different manufacturers. My evaluation is based on the V-Caps used primarily in my personal Jolida 502 as this is a product I am extremely familiar with, and am very tuned to even the slightest changes in its sonic signature. Below, you will find a list of additional components that have been modified and evaluated with the V-caps.

The stock **Jolida 502** integrated amplifier itself delivers a captivating 60 watts of Ultralinear power per channel. For the initial setup of the new Reference 502, my **RAM Signature CD25** was providing the signal for the first half hour, just to make sure everything was operating properly. I listened very closely during this initial period and took notes to give me a reference point to start from.

During this initial listening session, it was obvious these were "fresh" capacitors, but I wanted to get an initial handle on what these sounded like as babies. The upper end was a bit on the grainy side, the midrange focus was not what I was accustomed to, and the bass had lost its control and authority. The soundstage had contracted to a point where it became almost two-dimensional vs. the unit before the mod. At this point, I installed the **Jolida tuner**, figuring I would put some hours on the setup before returning. I sat down and listened periodically at the end of each day. The initial graininess was gone after about 10 hours but there was still more room for improvement. At this point, I decided to listen briefly at the end of each day to see if I could find a turning point.

At 50 hours, I sat down for a good critical listening session. Things had improved greatly compared to the first day. The upper end had smoothed out, the midrange was starting to come around and the bass frequencies were not as "loose". I could now sit and listen without fatigue but still was expecting a higher level of performance. I feel this is the mark when things truly started changing for the better. Not quite magic yet but heading in the right direction. It was at this time that I decided to put together the system that would be used for the remainder of the evaluation. See **Critical Listening** below. I also continued to listen at each day's end throughout the rest of the evaluation.

Skipping ahead to the 100 hour mark revealed yet another critical stage of improvements. I noticed even more dynamic control from the lower midrange on down. The midrange focus was much better and still improving, and the upper end was really starting to shine.

A couple of weeks later (yes, I have so many systems in need of burn in, it takes me a while to rack up the hours), I was just under the 200 hour mark. It is at this point when the **TRUE MAGIC** starts to happen. I decided to keep the **Usher CP-7388** speakers in place for a few hours, which actually turned into the entire evaluation, as these speakers are capable of producing very tight, controlled bass, a realistic midrange and smooth, extended highs. The reference source component was back to my RAM Signature CD25 connected

via the [Clarity Labs Foxfire](#) silver hybrid interconnect which was also used from the preamp to the 502.

At 200 hours, the "V-Capped" 502 Reference had a very refined, smooth, and Hypnotic midrange quality with just the right amount of richness that is much more apparent than at previous burn-in stages. The fine nuances, emotional impact and realism is uncanny.

For evaluation of the midrange, I threw-in Craig Chaquico's "Panaroma" (best of). For those of you who are not familiar with Craig Chaquico, he was originally from [Starship](#) and his solo pieces contain some of the absolute best instrumentals I have yet to hear.

With this recording, this is what a guitar is truly supposed to sound like. I first listened to this recording through a stock Jolida 502B before going to the Reference (**V-Cap**) setup to maintain a consistent comparison point. All other components in the system remained the same, right down to the cabling and even the power cords. The plucking of the guitar strings, the separation of notes and organic textures were much more prevalent in the Reference system utilizing the V-Cap capacitors. With the multi layer soundstage and pinpoint center imaging, I honestly had the sensation of being of the guitar being right there in my listening room. These were not subtle differences but a dramatic change for the better.

Further recordings such as those by Eva Cassidy, Jennifer Warnes, Jewel and other female vocalist continued to provide a true to life presentation. While I believe some put too much emphasis in the female vocal area, I still feel being able to capture the true essence of the female vocal range without it becoming aggressive, shrill or down right ear piercing is an important aspect in evaluating a system's or component's sound. Eva Cassidy's rendition of "Fields of Gold" sent chills up my spine in a way it never has before. While this track can come across as ear bleeding on other systems, the Reference 502 portrayed a very lifelike and natural performance even at extreme volume levels. Not once did the desire to turn it down come into mind.

On to the lower end:

First-up was Alan Parsons Project, "Tales of Mystery and Imagination by Edgar Allen Poe". In the beginning of the track titled "The Raven", there are some serious low frequency notes that will put your complete system through it's paces. I was very familiar with this track when played through the 502 in it's [Signature version](#), and the Signature 502 is no slouch, by any means. What I heard when this track started literally blew me away! The bass notes were no deeper than they were before, but they were most definitely fuller with more weight and impact. I am not a fanatic for deep bass but I demand to have it tight and articulate.

Next, was the Sheffield Labs Drum & Track Disc. For those who are not familiar with this CD, you owe it to yourself to get a copy if you want to know the true capability of your system.

With the Reference 502, the lower end from the midbass down is fast, tight and authoritative, exhibiting rib-bending dynamic attack when called upon. I thought for sure I would see a high distortion rate completely destroying the overall presentation, but I was dead wrong. Within this recording, there are many complex passages, and I was eager to see if these caps would fall flat on their face. Not at all. To my surprise, even the most complex and demanding passages were handled with finesse and ease. I would say the lower midbass was on par with some of the high-current solid state amps that sell for **at least** twice the price of the Reference 502.

Let's move on to the upper end.

To get a good sense of what was going on here, I stuck with most of the recordings mentioned above. What I heard in the upper frequencies was an abundance of air and detail with no harshness whatsoever. What I found to be shrill musical passages in other systems was now exhilarating in the Reference 502's. The extreme upper frequencies show wide sense of air that appeared to hover all about the room.

Overall:

I am EXTREMELY familiar with my modified Jolida products. The 502 is a piece I know like my own children. I know how it acts, when it will misbehave and how much it likes treats. With this 502, the VH Audio V-Caps **are** that special occasion treat. The overall presentation had much more focus, realism and finesse with a soundstage you could walk into. The inner detail retrieval of the midrange and upper end was far above my expectations. The midrange had a hypnotic quality that until now, could only be found in the most highly-priced exotic tube systems I've ever heard. The micro and macro dynamics excelled above even our Signature units, which are already recognized to be an unbelievable value in the tube audio industry. The bass response quality by this unit exceeded most 60-100 watt tube amps I have come across. The 502 references didn't have quite the dynamic authority and slam of the [EXtreme \(V-Capped\) ASL Hurricanes](#) that recently departed from my system, but at 1/4 the power and 1/5 the price, the Reference SE502 has

absolutely nothing to be ashamed of and I can comfortably attribute this to the performance of the V-Cap capacitor.

I will continue to evaluate this amplifier and the V-Caps as they rack up more hours. It is apparent that the presentation continues to improve with further listening and I am anxious to see how far this continues. With only 200 hours on this current set-up, I will continue to post my findings throughout the next several hundred hours. Am I at 100% potential yet? Time will tell. If any of the other V-Cap users out there have reached a higher plateau, please let us know.

Summary:

The VH Audio V-Cap capacitor provided the absolute best sonic improvement of **ANY** single upgrade I have installed in **any** of my exclusive products or modifications. In conjunction with the additional upgrades now performed in our latest Signature Series, Reference and EXtreme Series products, the V-Cap capacitors are the icing on the 7-tier wedding cake. Whether you are looking to buy a product that utilizes the V-Caps or purchase these caps for your own DIY project, I am confident you will agree these are the absolute "cat's ass" once you experience them in your own surroundings.

7-6-04 Update Triode listening

While the above findings were all based on the Reference 502 running in Ultra Linear (UL) operation, I have since decided I was going to spend some time with this amp in triode operation which I have been doing for approximately the past 20 hours of listening. In triode mode, the 502 produces about 35-40 watts per channel. Please keep in mind that this is NOT single ended triode as the 502 is still using twin output tubes per channel. Basically, you would look at it as push-pull triode.

Converting this amp over to triode brought forth a fuller, warmer, more robust presentation and also brought the soundstage and artist a bit further into the room. The upper end seems to have a bit more airiness and shine to it while the upper most frequencies have lost a bit of inner detail retrieval.

The midrange was just right and with the proper speaker selection, depending on your amp's power and capabilities, a triode amplifier has just the right amount of midrange ecstasy. For half of my triode listening, I installed my pair of Ultimate Usher X-718s which were upgraded with the utmost inner detail and upper end extension in mind. With this combination, vocals sounded so real that I felt I should have paid admission into the room or at least offer the artist a glass of wine. I found certain nuances that are hard to detect on lesser systems were much more apparent and pronounced with the Jolida. These fine details were also there in UL but portrayed just a little differently. With a bit more sweetness.

The bass was still very tight and fast but had a tendency of becoming a little loose and less defined while playing tracks that contained a large amount of complex, heavy bass passages. Seeing as how much of this can be attributed to the Ultimate Usher X-718's 87 dB sensitivity, this is why proper speaker selection critical when choosing a triode amplifier. When I installed a pair of Audio Note AZ-TWO speakers rated at 93 dB (still on the lower side considering all the options out there), the dynamic control was very impressive with no signs of falling apart. Overall though, the 502 did have more dynamic control while in UL operation but with less, *slightly less*, emotional impact.

It is my findings that triode mode in general is better suited for smaller scale music. For Jazz and instrumental recordings that do not concentrate so heavily on the lower extremes, a triode amplifier may be just the ticket for you. I found Craig Chaquico and Alan Parson's recordings to have much more meaning when played back in triode.

My personal preferences? As I audition more and more modified tube amplifiers, it is becoming more difficult to pick. Most of you who know me and have spoken with me in the past have heard me say I prefer lower powered amplifiers. While I still enjoy and appreciate these pieces, I can honestly say that within them, I do now miss the rib bending dynamic impact that can only be found in the higher powered units. I am starting to favor the inner detail, upper end extension and refinement that seems to only come with high wattage, Ultra Linear or Pentode units. For those who are looking for the upper end of the scale in tube power, be sure to check out the following EXtreme modified units.

[ASL Hurricane 200DT](#) - 200 watt mono blocs using 8 KT88s per side (pentode and triode)

[ASL Monsoon 100DT](#) - 100 watt mono blocs using 4x KT88s per side (no triode)

[Jolida JD1000A](#) - 100 watt integrated using 4x EL34 per side

[Jolida JD3000A](#) - 200 watt mono blocs using 2x 211 per side (EXtreme mods coming soon)

[Jolida Envoy](#) - 200 watt monos also using 2x 211 per side (EXtreme mods coming soon)

DISCLAIMER: The output transformers of the Jolida 502 are not designed for running in triode operation

and anybody doing so will be operating their amp out of it's intended capabilities and operating at their own risk.

About the amp:

Custom modified Jolida JD502B with the following modifications performed:

Other than the custom automotive metallic Blue paint job and TKD volume control, this amplifier is now the same as our Reference 302/502 units that are available to you for your listening enjoyment.

.22uF VH Audio V-Cap Teflon capacitors installed in the coupling locations.

.47uF VH Audio V-Cap Teflon capacitors installed in the signal ground locations.

Dale/Vishay 1 watt, 1% Metal Film resistors utilized throughout the signal path circuitry

Dale/Vishay 3 watt WW resistors used in the bias stage.

Mills non-inductive resistors used for the power tube emitter cushion resistors.

Higher capacitance/low ESR Panasonic electrolytic capacitors used throughout all three stages of the power supply for more filtering capability provided greater headroom and dynamic control.

AuriCap high voltage capacitors used in a cascade formation to bypass the power supply filter caps.

Harris "Ultra Fast - Soft Recovery" diodes used in the rectifying stage of the power supply.

TKD 50k volume control with a single input bypassing the source selector.

Custom input bypass switch installed to eliminate the volume control from the circuit allowing the 502 to be used as a power amp.

Heavy damping material applied to the chassis and bottom cover plated to help further control microphonic vibration. Bottom cover plate is 100% isolated from the chassis itself.

All internal wiring is Cryo treat 22 awg copper.

Critical Listening:

Final, critical listening was conducted with the Jolida in bypass mode being feed by the Signature Ming-Da MC7-Signature tube rectified vacuum tube preamp housing Svetlana 12AX7 and JAN Philips 12AU7 signal tubes. The reference source component was my own RAM Signature CD25 using cryo treated Tung-Sol 5687 tubes. Speakers were the Usher CP-7388's. Cabling was a combination of [Clarity Labs](#) interconnects, VH Audio Flavor 4 power cord for the amp and preamp and our new JAM'n Audio PRO 14S for the source

June 2005 update

For well over a year now I have been using the VH Audio V-Cap capacitors, both the Teflon and OIMP units, in various components for myself as well as my customers. Over the past several months, I have been doing some critical listening to my personal Reference Jolida JD801A which now has nearly 600-700 hours of use. What I have found is a remarkable improvement in comparison to the 150-200 hour mark.

Before we begin, I must make some amendments to the system now in use as it has changed since the initial evaluation. For the source, I am using our "Custom Jolida Level 2 JD100 tube CD player (with approximately 400 hours), a Kavent CD-931 solid state CD player as well as a vintage analog tuner. The preamps used in rotation in this system are the ModWright SWL 9.0 linestage and our prototype Musica Bella TLS-10 tube rectified preamp. On the muscle end, I am still using the same Reference 502 but now have included my personal *highly* modified and customized Reference Jolida JD801 converted into a straight power amp with all controls removed. I recently had a customer come in and audition my personal V-Cap modified Usher CP-7388 loudspeakers used in the above evaluation so needless to say, I no longer have these speakers. They left that day. The speakers now being used are a pair of Daedalus DA-1 which present an extraordinary presentation bringing out the absolute best the rest of these components have to offer. A

highly recommended speaker in my book.

I am going to start at the bottom and work my way up. As I mentioned above..... *"The bass notes were no deeper than they were before, but they were most definitely fuller with more weight and impact. I am not a fanatic for deep bass but I demand it to be tight and articulate."* Now with several hundred hours on the amps, I found there to be even more refinement and dynamic impact as compared to when this amp was in its infancy. The lower region has tightened up considerably and the midbass will send shockwaves through your chest.

TO BE CONTINUED

Exclusive Response Audio Components now utilizing V-Cap capacitors

Custom modified Reference 502B - "Big Blue" (personal unit)

Reference Jolida RA801A

Ming-Da Reference MC3-Reference preamp

Musica Bella RAM-40M-REF mono blocs

Reference Jolida SE202A/B

Reference Jolida SE302A/B

Reference Jolida SE502A/B

Usher Ultimate loudspeakers

EXtreme Hurricane 200 DT mono blocs

EXtreme ASL Monsoon mono blocs

The units mentioned above have already been upgraded with V-Cap capacitors and are resting comfortably in their new owners homes providing them with absolute musical bliss. You could be next!!



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