

Summer 2008



Capacitor Musings Part 1

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Difficulty Level



More than six months in the making, I somehow ended up with enough capacitors and impressions to write something about it for those who might care. Initially, I set out to satisfy my curiosity regarding various caps with first-hand experience, and as such, these impressions are not meant to be the Bible or written in stone. Personal tastes, system synergy, and cycle of the Moon all apply. Don't be angry and e-mailing if my impressions don't quite match yours because well, that's why these things are very subjective.

What you see is my DIY capacitor burn-in setup w/ resistor and *some* of my caps. Various capacitors have spent weeks and weeks in the burner and gear before evaluation.

In the photo we have VH Audio Teflons (black), Auricaps (yellow), VSE oil caps (silver), ClarityCap SA (red), Almarro polyester (grey), Jupiter beewax caps (orange), Multicap PPMFX (white), Multicap RTX polystyrene (white), Vitamin Q oil caps (small silver tube), NOS TRW polystyrene caps (small silver), Multicap PPFX (not pictured), Hovlands (not pictured) and some large PS caps.



Mostly I am comparing these in coupling capacitor duty in a couple of amps, Almarro A205a MkII and Bottlehead Paramour I with C4S upgrade. Both amps are used to drive my headphones and speakers, mainly Headphile modded Sennheiser HE60 electrostatics (via SRD7 MkII), AKG K1000, HE Audio EH1.2B electrostatic headphones, and my custom speakers (Aurum Cantus G3 ribbon tweeter, Focal 7K2 midrange, actively bi-amplified).



Almarro A205a MkII with Stax SRD7 MkII transformer and Headphile-modded Sennheiser HE60 "Baby Orpheus" electrostatic headphones.



Paramour 2A3 SET with C4S



And the HE Audio EH1.2b electrostatic headphones.

If you have cap experience to share, feel free to post them here.

To start off with some comments. Don't believe everything you read in those "capacitor reviews" you see in mags, and capacitors, no matter how expensive and praised, will not "transform" turds into swan, not even the VCap Teflons because caps will not *improve* anything. All they can do is minimize the self-harm done by them :)



V Cap Teflon

These are worth the price, but if you read some people's descriptions, you would think the angels from heaven would descend and give you an eargasm. Not so. These will not transform your system or turn water into wine. They do have the least identifiable character and have the best control of various sound ranges. There is absolutely no overshoot or ringing when trumpets hit or when soprano kicks into high gear. Not lumpy, bloated, overly-bloomy in any of the frequency ranges, and they do seem to let most of the details and information through unharmed and well-separated.

If I had to compare them in headphone terms, it would be like AKG K701 in general gestalt but with improved transparency and dead-neutral bass quantity/quality.

I *do* however detect a bit of what I call "Teflon sound." It's very hard to actually describe, but those very familiar with how Teflon-dielectric interconnects and other Teflon caps like Relcap TFT sound will have an idea. Textures of notes are just a wee bit more "polished"

and refined than live instruments, a bit more more "slippery" than should IMO. This is very subtle and a minor quibble, really, and if I had to use many caps in a cost-no-object component that has to have great transparency, VCap Teflons would be my choice.

Further Thoughts

These really are great caps, and the defining feature that keeps popping in my brain is "transparency." The more caps I compare, the less descriptive adjectives are necessary for the VCaps while most other caps need various adjectives to describe their character. I sometimes wish these had more of that indescribable "magic" of the high-end Mundorfs, but this really comes down to personal preferences.



Jupiter Beewax Cap

The feel and appearance of this thing just does not inspire confidence. It feels like a piece of candle wrapped in paper, and these are known to have problems in warmer temperature environments. Do NOT install them near hot resistors, tubes, etc.

Sound-wise, I was expecting a mess of muddy blob based on appearance, but the sound is surprisingly transparent and clear, not as much as VCap Teflons, but very good in absolute terms. There is *just* a bit more richness, tone, and girth to notes and voices, which are probably colorations, but Jupiter cap doesn't come across as overdone. What they trade away in absolute resolution, speed compared to VCaps, they battle back with more pleasing density, tone, and that indescribable musicality. Less separation of notes and a bit less anvil-taught in bass compared to VCaps, but there is plenty of treble and bass quantity.

I like them! I probably wouldn't use too many in a component, but a couple of them in a otherwise-squeaky-clean component can do wonders for just musical enjoyment. I would say these are most akin to something like Grado RS-1, except with a bit more treble extension and less peakiness in the lower-treble/upper-mids...



Siemens MKV

Polypropylene and metalized aluminum in oil

I bought these from VSE (Vacuum State Audio) when they were still selling them. They were said to be some secret industrial caps they found to sound better than others.

When I first installed them after burning them in for days, I *really* hated them. The highs seemed severely shut-in, bass bloated, and midrange seemed veiled and thick. But after playing the amp with music for some days, these effects seemed to diminish day by day, and eventually I found the balance to be quite pleasing. Further burn-in has happened, but I'm sure people's ears/brain need some time to adjust to PIO signature.

Once fully operational, these had incredible warmth, tonality combined with breath-of-life type of sparkle to midrange/vocals. These are not high-treble sparkles, but each syllable of vocals seemed more lit, dramatic, and enjoyable. Treble was never obviously "airy" or minutely detailed, but once settled in, the highs seemed to align and balance with mids. Same thing with bass. There's more bass than perhaps neutral, and there is some slowness to bass, but it's still pretty firm and hard-hitting with that roundness of tone.

Ultimately, I prefer the better non-oil caps for a bit more neutrality, but these have got me curious about Audio Note silver-in-oils or Mundorf silver-in-oils. I will never pay the ridiculous price for AN, but I *may* try the Mundorf silver-in-oils at some point.



Auricaps

These are good. Too bad the prices took a bad hike for the end user over the years. They have nice detail, speed, musicality, and their sound gives an extra bloom to the sound, which will make them fit well into somewhat cooler-sounding components, especially SS. Not as resolving as Teflons and not as rich/dense as Oilers or Jupiters but a good Jack-of-all...

These worked surprisingly well for me when used as "bypass cap" for a larger (and cheaper) cap, imparting some of the nice detail and bloom to the combo.



Claritycap SA

One of the reviews available tout this cap highly, and it *is* a good cap at the very low prices they command. It wouldn't hurt to try some as E-speakers.com ships them free within the United States. I found it kind of bland, kind of nondescript, and not great at any one thing. But there's also no glaring flaws or aberrances that can be distracting, either.

My main issue was the lack of resolution in the midrange. I couldn't hear and feel the sumptuous detail and texture that I know to be in the recordings. Some people say these still are a big jump up from Solens, and I would agree if you're talking about less grain and "strain" in the upper-midrange.

However, I can bypass the cheap Solen with a small nice cap like Auricap or Polystyrenes, which gets rid of a lot of the glare/strain while offering better detail resolution than unbypassed Claritycap SA. When I tried bypassing the Claritycap, I *did not* get much better resolution, and I still preferred Solen+bypass.

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