

# Tweakers' Asylum

## VH Audio OIMP capacitor used as power supply bypass cap...

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Posted by [Duster \(A\)](#) on November 10, 2005 at 11:36:03

In Reply to: [Looking to Do Simple Mod to Acurus DIA-100 MKII](#) posted by excelis on November 10, 2005 at 06:50:56:



Image: VH Audio V-Cap OIMP series (Oil Impregnated Metallized Polypropylene) film capacitor.

A very simple to install mod is one VH Audio OIMP capacitor (10uf 150 VDC) per channel used as a power supply bypass cap. While not cheap (\$139.18 per pair) this mod was utterly transformative for an Acurus DIA-100. Furthermore, the DIA-100 has an available solder terminal right next to the power supply cap's bridged resistor. It simply begs to have a power supply bypass cap soldered to it :-)

NOTE: It is \*very\* important to insulate the OIMP capacitor's body with heat shrink or such, since the OIMP has a conductive body and will fry your Acurus if the body makes contact with the AC terminals placed near the power supply caps!

BTW, What power cord are you using? The DIA-100 is very responsive to a power cord upgrade.

Here's some beta reports I filed about the OIMP (referred to as "V-Cap beta-2") as installed in an Acurus DIA-100 (original version with an IEC inlet mod):

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## Beta Test Report 1 - First Impressions

Subject: "V-Cap beta-2"

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### Introduction

This beta test is of VH Audio's 10 uf "V-Cap beta-2" film capacitor when used as a power supply bypass capacitor to shunt a 18000 uf 70 WVDC electrolytic power supply capacitor. A stereo pair of "V-Cap beta-2" were installed in a dual mono Acurus DIA-100 direct-input amplifier (passive preamplifier design, 100 watts per channel). While priced in the modest \$1,000 range, the Acurus DIA-100's stock performance is considered to be equal to many \$3,000 active preamplifier/power amplifier combos. With use of a high quality audiophile power cord and a set of high quality vibration isolation footers, it's performance is considerably higher.

AB test - Modified right channel vs. Unmodified left channel

### Overview

There was a substantial difference in the sound of the modified channel verses the unmodified channel. My observation is that the "V-Cap beta-2" is highly directional in terms of it's orientation. The cap's best performance to my ear in this application is with the short lead connected to the positive terminal and the long lead to the negative terminal. Vice-versa had a considerably less but still audible affectation.

Note: The AB test was hard to get a handle on concerning aspects of air, space, imaging, soundstage, etc. with only one channel auditioned at a time. These aspects became apparent when both caps were installed and both channels were auditioned in stereo.

Specific "V-Cap beta-2" modified right channel first impressions

A lower "perceived" output gain with substantially less treble energy in comparison to the unmodified channel which indicates a good sign of glare reduction. Yes, it appears to have a much lowered noise floor and it obviously has a more coherent presentation. The sound is more refined, much better controlled, quieter, more relaxed, with a far greater impression of signal purity and transparency. A high level of spurious energy seems to have been eliminated as there is a kind of random "ping-ponging" element within the sound of the unmodified channel not present in the modified channel.

Stereo Test - Both channels modified with "V-Cap beta-2"

Two channel first impressions:

Electronic glare is greatly reduced, like a wall of artifice has been eliminated. Very similar sonic improvements (and just as profound) as an Edison-Price Music Posts loudspeaker upgrade (unplated 5-way binding posts milled from a solid block of tellurium copper) provided for my system's presentation, as the actual timbre of images are far better reproduced due to a rather massive reduction of glare, which is in other words; a rather massive reduction of the psychoacoustic phenomena of which I'll call "false detail" due to over excited harmonic content. Harmonic information now sounds far more pure and concise, and less "hi-fi-ish".

With the "V-Cap beta-2" capacitors installed, the presentation has a more obvious blackened

background, and with such, a far better resolution of ambient information and it's decay. Micro dynamics and micro detail are now more apparent. The soundstage presentation has a much tighter focus and is more open. Spatial cues relating to their images are now more stable in relation to their perceived proper placement within the soundstage presentation, and have a more natural sense of air surrounding them. Accordingly, RL stereo information perception is far more animated - this aspect is perhaps the most notable improvement of any listening cue that the "V-Cap beta-2" has provided within my system's upgraded presentation.

Gestalt:

Sonic betterment is equivalent to what an AC power line conditioner offers. The system's presentation has a considerably more refined level of fidelity with the "V-Cap beta-2" installed. It's previous presentation gave the impression of sounding more "solid state" in comparison but, that's not to say that the system sounds more tube-like now. My opinion is that the "V-Cap beta-2" does very well at addressing the problems caused by the use of inferior electrolytic power supply capacitor(s) and a greater level of fidelity has been achieved with this particular capacitor functioning as a power supply bypass capacitor in my system.

Another report will be sent after the capacitors have some more burn-in time.

Look for: Beta Test Report 2 - Impressions After Extensive Burn-in Time

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Beta Test Report 2 - Impressions After Extensive Burn-in Time

Subject: "V-Cap beta-2"

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"V-Cap beta-2" After 200 Hours of Burn-in Time

This is the second "V-Cap beta-2" beta report and is in essence a simple addendum to the first "V-Cap beta-2" beta report. It's a follow-up report rather than a detailed report in it's own right. This is due to the fact that very little will be said about performance changes other than a few but notable improvements after a substantial burn-in period. The 10uf "V-Cap beta-2" capacitor's role as a power supply bypass capacitor connected in parallel with the main capacitor after 200 hours of burn-in time showed important development but no major improvements to those previously described in the first report (see Beta Test Report 1 - First Impressions), and no new attributes to speak of. This perhaps may be the most important observation since it would indicate that the capacitor is very stable in it's role.

It was difficult (if not impossible) to know if observations of new-found presentation issues were accurate assessments. It was not easy to say they were due to a freshly installed "new sounding" capacitor or the fault of previously veiled sonic weaknesses in the system now become more apparent due to the capacitor offering a "new revelation" of them. I did with certainty determine that, "too much of a good thing" due to an almost complete lack of euphonics held my attention during the burn-in period, since the modification's substantial alteration of the amplifier's sonic signature was, in essence, drawing attention away from the source material's immediacy and lacked a certain "appeal". I can also report that a certain level of gritty or hashy treble has been smoothed over time, a mild bloom has developed in the midrange, bass articulation has improved, and a certain level of overall reticence has been improved upon. These positive developments have eased my concern about the amplifier's modified presentation, and I believe that further

burn-in will show even greater improvement over time. I'm also under the impression that an upgrade of the amplifier's signal path capacitors is the chief solution to address the most profound elements of the new-found sonic issues, as it is common that other flaws become more apparent when a system's signal path is incrementally improved upon. Even without further modification of the amplifier, I am satisfied with the results.

In conclusion; as mentioned in the first report, I'm very impressed with the modification's results, and burn-in time has shown only an improvement of it's sonic performance.

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### Beta Test Report 3 - Further Development After Additional Burn-in Time

Subject: "V-Cap beta-2"

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I'm very pleased to report that a "breakthrough" has occurred after further burn-in time of approximately 300 hours. A certain rightness about the system's sound has developed "out of the blue".

During a device's burn-in process, it is not uncommon that a phenomena of sudden development will be noticed during a point in time where a profound "popping into place" of sound will occur. In the case of the "V-Cap beta-2" capacitor's further burn-in, one has taken place in my system, to my ear, in a very satisfactory way.

The following statements from Beta Report 2 have been updated:

"I did with certainty determine that, "too much of a good thing" due to an almost complete lack of euphonics held my attention during the burn-in period, since the modification's substantial alteration of the amplifier's sonic signature was, in essence, drawing attention away from the source material's immediacy and lacked a certain "appeal"

A pleasant euphonic glow has returned to the amplifier's sonic signature. I'm very impressed with how the sound has finally bloomed. The presentation is now more "out of the box", with a more "in the room sound". The amplifier's previous unmodified sonic character has returned sans the previous level of glare. I could not ask for better results due to the modification.

"I can also report that a certain level of gritty or hashy treble has been smoothed over time"

The grit is gone, and the treble is much sweeter with no anomalies to speak of.

"...a mild bloom has developed in the midrange, bass articulation has improved"

As mentioned, the overall sound is very open, warmer, and more inviting. The bottom end is more effortless, open, and authoritative.

"...and a certain level of overall reticence has been improved upon"

The sound is far more liquid, now. This very important factor (which was lacking during burn-in) is excellent and is a great reward.

"These positive developments have eased my concern about the amplifier's modified

presentation, and I believe that further burn-in will show even greater improvement over time.”

My assumption was correct and I'm now 100% satisfied with the modification. A total success, in my humble opinion. 5 stars!

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Excelis, I hope this is of help :-)

Cheers, Duster

see link:

- <http://www.v-cap.com/oilcapacitors.html> (Open in New Window)

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