

Audio Basics

Fall 1999

An Irregular Newsletter of Audio Information from Audio By Van Alstine, Inc.

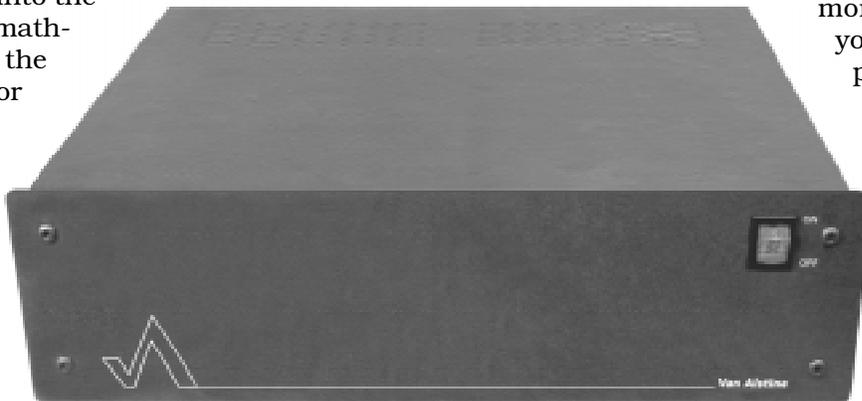
It's Finally Done!

Many of our closer friends know that Aado Perandi, our head electrical engineer, has been very busy working on the next generation AVA digital-to-analog converter—the Omega IV DAC. Some of you were even lucky enough to hear a sneak peak of the work in progress, and you invariably and enthusiastically asked us: "When will it be ready? I have got to have one!"

The wait is over.

The Omega IV DAC is the first ever audio product designed using the new circuit simulation and math capability Aado has been developing for the past 15 years. Aado, after thousands of hours of original advanced math and circuit analysis programming, has been able to translate the complete circuit from digital input to audio output into the precise music of mathematics and let the computer run for *weeks*, showing more clearly than ever before every nuance of the circuit performance.

This has allowed him to understand all significant (and not otherwise predictable) non-linearities, and then model improvements into the circuit, run it again and again and create and improve until he's convinced the circuit is as perfect as possible.



The final manifestation is the Omega IV DAC, easily the best piece of audio equipment we have ever designed, and likely the best at any price from any audio manufacturer.

It provides a source for your audio system so pure and real that it makes any system all new again and gives you music more lifelike than you ever thought possible. It simply obsoletes all other DACs, including the Omega III and Fet Valve TOPP- DACs. We will continue to offer the Omega III TOPP-DAC for customers on a budget, but if you were considering a Fet Valve DAC (or even if you weren't!) prepare to be simply astonished and enjoy music like never before.

The new Omega IV DAC is \$999. Your existing Omega III TOPP-DAC can be upgraded for \$499.

In this issue:

- The Omega IV DAC.
- The Omega III 200 CA integrated amp.
- Surround-sound recommendations.
- Biro Technology subwoofer preview.
- AVA Y2K catalog.

The Ω mega III 200 CA Integrated Amplifier

Mithat Konar, owner of Biro Technology, longtime friend, and occasional contributor to Audio Basics, has been becoming increasingly involved with Audio By Van Alstine over the last year. Among his talents is a knack for taking our existing circuit designs and discovering new applications for them. His first efforts were the Ω mega III 200 HTS and Ω mega III 200 HTM compact amplifiers, which put the workings of an Ω mega III 200 amplifier into a smaller and more cost-effective package. His latest effort is the Ω mega III 200 CA integrated amplifier. This new integrated makes entering the world of real high-fidelity more affordable than ever!

The Ω mega III 200 CA combines the functions of a preamplifier and a power amplifier in a single, compact package. It is likely the highest performance integrated amplifier in existence and certainly the best value. It makes 85 watts per channel 20 to 20 kHz into 8 ohms and comes packaged in our all metal SL chassis (12" wide, 10" deep, 3.5" high). It is designed for 4 ohm loads and up and incorporates 4 TO-3 case power MOS-FET output devices.

The Ω mega III 200 CA uses our amazingly musical Ω mega III power amplifier circuits but with increased closed-loop gain as needed for the application. To that it adds all the standard

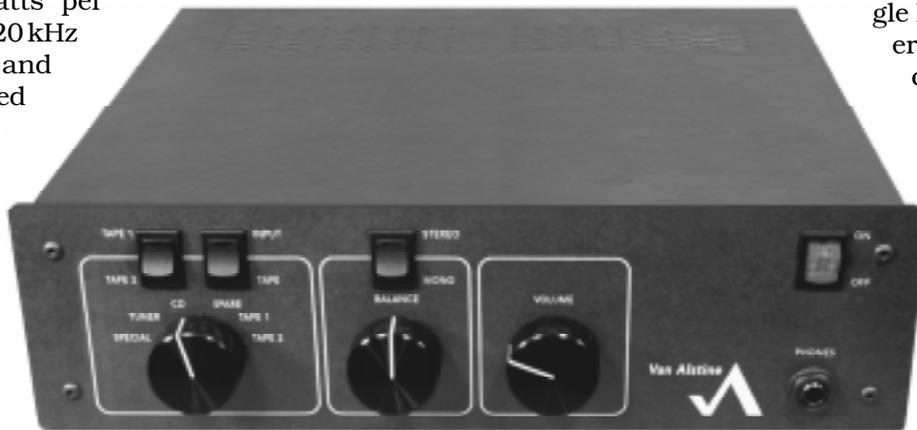
switching and control functions found in the Ω mega III SL and Fet Valve SL preamplifiers.

Unlike other integrated amplifiers, the Ω mega III 200 CA requires no dedicated preamplifier stage.

Instead it uses a single high-gain power amplifier preceded by all the switching and control functions you are ever likely to need. You needn't worry about how well the preamp section of the integrated amplifier works because it has been completely

eliminated! The result is unprecedentedly high performance and an obscenely good value.

Available factory-wired for \$999.



Is It Time Yet?

Now that the new era of surround-sound, multichannel sound, or whatever-you-want-to-call-lots-of-channels sound is upon us, you might think that the time is right to begin building a system based on these new formats and abandon your conventional stereo. Depending on your needs and expectations, this may (a) be a good idea or (b) be a very bad idea. For most people it will be the latter.

There is little doubt that the future of audio involves some kind of multichannel surround-sound setup. However, surround-sound will not succeed because of any performance advantages it has demonstrated. I've heard a number of surround-sound demos and have yet to have had an experience that was as involving as a good stereo setup. I have little doubt that surround

sound *can* and *will* be used to good advantage in the future; however, it simply is not yet the norm.

Rather, I believe surround-sound will succeed because a lot of people are dumping huge piles of energy and money to make sure it does. The marketing powers in almost all the large consumer electronics companies have decided that the best way to get you to buy new gear is to

convince you that your standard two-channel stereo is obsolete. And judging from the offerings available at the local discount equipment barn, they are not failing in this task.

So if the future of audio is multichannel, why wait to build a multichannel system? Because, quite simply, it isn't sufficiently mature. There are a number of currently and soon to be available formats for multichannel and so-called high bit-rate audio. Nobody can say with any confidence which of these will succeed or how they will evolve in the near future. That means that the lovely and expensive do-everything decoder you buy today could be as useful as the quad decoder you bought in the 70's or the beta video gear you picked up in the 80's.

With that in mind, here is my advice for building—or building onto—your audio system so that you get the maximum pleasure you can today and still be ready for multichannel surround-sound when it does mature.

Whether you are using two speakers or five (or six), you will always need amplifiers. So don't be shy about upgrading your power amps. The stereo amp you buy today will be perfectly usable in a 5.1 setup tomorrow with the addition of another stereo amp and one mono channel (or a dedicated three channel amp).

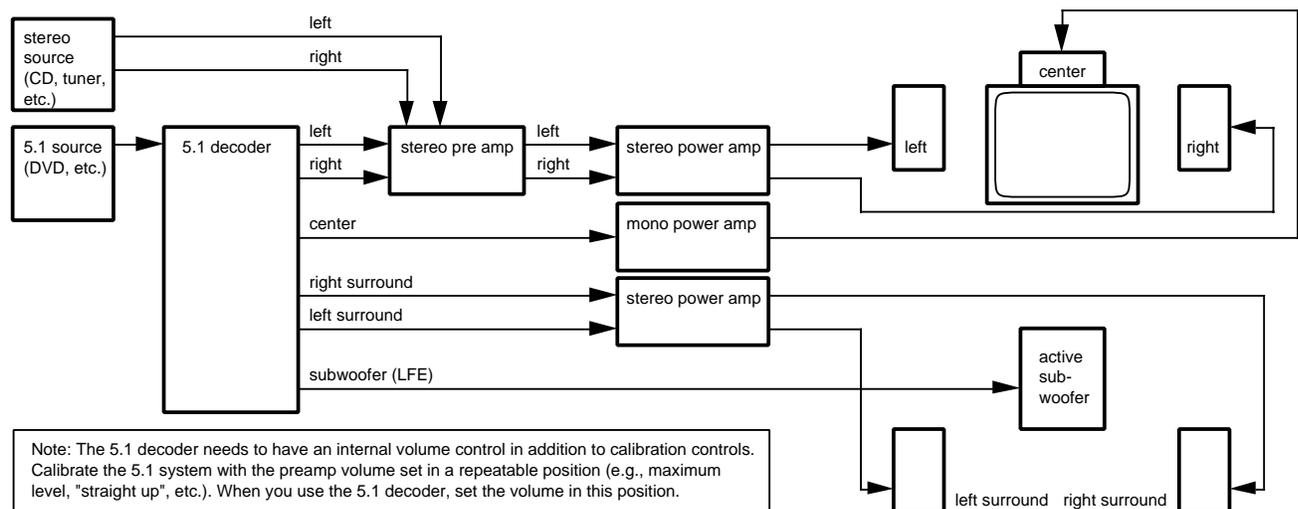
The stereo speakers you buy today will almost certainly be usable for the left and right main pair in your surround-sound home theater system whether they are magnetically shielded or not. In most applications the left and right loudspeakers in a 5.1 setup will be far enough away from the video monitor that their magnetic fields will have no effect on the monitor. That means all you'll need to add are carefully selected surround speak-

ers, possibly a carefully selected center channel speaker (many installations will do just fine with a phantom center channel!), and a well-designed subwoofer if you just have to have one or if your main speakers don't have the range.

Even your two channel preamp will still be usable when you eventually go multichannel if you get a decoder with the right feature set. (See the diagram below for an example of how to set this up.)

When it comes to sources, things get a little more difficult. Should you buy an inexpensive CD player with a digital output to use as a transport with a high-quality external DAC—or should you go for a new DVD player to take advantage of the DVD format today? Given the audio I've heard coming out of DVD players, I think no matter what, you will want a high quality external DAC for serious music listening. It may be helpful to bear in mind that the digital output of most DVD players will interface just fine with standard digital audio inputs found on typical DACs designed for CD listening when you play standard audio CDs. In other words, there's nothing keeping you from using a DVD player to drive a good DAC. However, most DVD players will not play CDs that have been blown on a PC (i.e., CD-Rs). But perhaps most importantly, the new DVD-A format (and to a lesser extent Sony's DSD format) may make a lot of the current generation of DVD players effectively obsolete—possibly as soon as late this year!

My advice is to get a good stereo DAC and use an inexpensive CD player with a digital output to drive it. (Many such players are available for less than \$150 if you shop carefully.) When DVD-A becomes better established later this year or early next, it may make sense to then drive the



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stereo DAC with a DVD-A capable player—keeping the CD player at arm's reach in case you have some audio discs that the DVD player just doesn't want to read.

But I know (some of) you. You're just too eager to wait for the format wars to settle. You want multiple channels *now* and you don't mind being stuck with something that is obsolete in a few months. For you, I recommend you find an inexpensive decoder and incorporate that into a system that is also capable of high performance stereo audio. Something like the Technics SH-AC500D is a good candidate for this.

If you set the decoder up as illustrated in the figure, you will be able to exploit the surround-sound encodings in your multichannel sources but at the same time not give up any quality at all for standard audio listening. This setup also minimizes the impact of the obsolescence of the decoder. When it becomes useless or redundant, you'll need only to replace one part.

In the future—when the time is right—really good multichannel audio products that implement mature formats will be available from Audio By Van Alstine and Biro Technology. We will do our best to tell let you know when the time is right. And until then we will do our best to make sure you enjoy music and audio for video in the sanest way possible.

Mithat Konar

For Bass Freaks

Mithat is finishing up work on a Biro Technology active subwoofer that will extend the reach of the L/1 down to 20 Hz. It will also be usable as an LFE channel subwoofer for Dolby Digital (AC-3) and other 5.1 home theater setups, and it will be integratable with any reasonably well damped second order system (i.e., a sealed box or a ported system with damping material inserted into the port).

He reports very encouraging results, and we expect to audition a production prototype very soon. If you've been considering a subwoofer, please give us a call so we can give you more details.

The AVA Y2K Catalog

The new Audio By Van Alstine Y2K Catalog will be available about the time you read this. Like previous catalogs, it includes complete product descriptions and reviews of AVA amps, preamps, DACs, phono cartridges, and Biro Technology loudspeakers. Call or e-mail if you'd like a free copy, **and then take 5% off the price of your first order from the new AVA Catalog 2000.**