



AVM 20

“... you can have your cake and eat it too ...”

audio
ideas
guide

BY AARON MARSHALL

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It occurred to me recently that in writing for this magazine over the past several years, I haven't covered much in the way of home theatre gear. In fact, besides some 32" TVs awhile back, almost no home theatre gear at all. Shocking! Shameful even, especially considering how much I love movies and that I work in the film business by day. "This will not stand!", I said dramatically, feeling more than a little bit like Alec Guinness in "The Bridge on the River Kwai," as I confronted some free time and (finally) an appropriate room in my new apartment in which to wreak home theatre havoc. I had the space, I had the time, all I needed was the gear.

As is often called for in these crises, a call was promptly dispatched to AIG HQ. I suggested to our intrepid editor that

starting small might make a lot of sense. A receiver maybe, some entry level speakers. You know, work my way up to the more expensive stuff a step at a time. A flurry of emails and phone calls later the brand new and much anticipated Anthem AVM 20 surround processor/preamp and PVA 7 amplifier were on their way.

ANTHEM AVM 20 SURROUND PREAMP

The current generation of surround sound equipment is just begging for someone to rethink audio/video product nomenclature. For instance, Anthem calls the AVM 20 a "Preamplifier-Processor-Tuner"; a mouthful to be sure. It's bang on the money as descriptions

go though, if a little long winded, as the AVM 20 will do pretty much everything a full featured A/V receiver will do (and a few things more, in most cases) except drive your speakers directly. Indeed, the input/output possibilities offered on the rear panel should be enough to satisfy any professional installer, and bring smiles to the faces of cable manufacturers everywhere.

The AVM 20 has all of the major features you'd expect to find in a state of the art surround preamp at the price, including support for DVD-Audio and SACD with full bass management control. On the movie side of things, support for the two major 7-channel surround formats, Dolby Digital EX and DTS ES, is now *de rigeur* for any surround

processor with high end aspirations, as is THX processing. The AVM 20 is Ultra THX certified and features THX Surround EX, “a process that decodes a rear channel from the left and right surround channels on Dolby Digital DVD’s encoded with Surround EX and DTS-ES Matrix DVD’s.” I find it more than a little ironic that now that we have discrete, digital surround for movies that this new iteration of 5.1 essentially uses Pro Logic style matrixing to create the new channel at centre rear. Now, just in case you might harbour the notion that this only adds up to 6.1 channels, the powers that be have decided that up to two speakers are required for this matrixed rear channel information. Why, you may well ask? Is there any great need for a centre rear channel in the average home theatre system with one speaker, let alone two? Is this a case of “feature hype”, designed to make last year’s equipment newly obsolete and sell more speakers, cable and stands? More on this below.

“... uncoloured, effortless and extremely dynamic sound ... convincing timbral bite.”

ALL SINGING, ALL DANCING

To go into any significant detail on everything inside the AVM 20 and the myriad features Anthem has built in would gobble up far more column inches than I have at my disposal, so I’m going to touch on some of the major points and leave much of the minutiae for those interested enough to follow up (all the details are available for your perusal at www.anthemAV.com). The digital heart of the AVM 20 is “the new Motorola Digital DNA 56366 DSP chip, rated at 120 million instructions per second” and “built into our very own state-of-the-art, modular 2 pcb DSP implementation.” Similarly serious AKM D/A converters capable of 24/192 operation and A/D converters (for digitizing incoming analog sources, if desired) at 24/88 are other key components of the digital chain. There are an improbable number of circuit boards stacked inside the very busy interior of the AVM 20, all independent and isolated. Two of these circuit boards are dedicated to the prodigious “broadcast quality”, high definition video switching capabilities. Allowing switching of signals up to 1080p resolution, “without degradation” the unit features seven S-video inputs, seven composite inputs, and two sets of component inputs. Video outputs include one set of component and five each of S-video and composite.

Audio input/output flexibility is similarly thorough. I’m not sure if superstition is at work, but seven is once again the operative number, the AVM 20 boasting seven S/PDIF digital inputs, seven single ended analog inputs, three Toslink digital ins, an AES/EBU digital input, and a single pair of balanced analog inputs. There is also a set of six channel RCA inputs designed specifically for DVD-A or SACD duty. On the output side are two S/PDIF digital, four single-ended stereo pairs and matching sets of 7.1-channel surround outputs, one balanced and one single ended. These surround outputs also feature extra jacks for an additional sub and centre channel, should you feel a single sub or centre channel inadequate.

“If you’re looking for a home theatre front end with all the bells and whistles, and audiophile credentials to boot, including excellent stereo performance, you can have your cake and eat it too with the AVM 20 and PVA 7.”

Now, just in case some of this seems redundant to you, it’s important to keep in mind that the AVM 20 is designed around four “paths”. In other words, it can do “four things, simultaneously, in separate areas throughout your home. The main path provides video and multichannel audio for music and home theatre. The Zone 2 and Zone 3 paths provide separately selected video and 2-channel audio output with volume, tone and balance controls that operate fully independently. Finally, the Record path provides video, 2-channel analog audio and digital audio record outputs selectable by source.” In other words, it can control systems in four different rooms and, due to redundant surround outputs, can even run two fully separate multi-channel systems. This kind of multi-zone operation wouldn’t really fly without the three relay trigger inputs, RS-232 port, three infrared receivers, two infrared emitters and an optional IEEE1394 (Firewire)/Phast interface at your disposal on the rear panel. Dizzy yet? I better not forget the headphone jack, which can be configured to mute the speakers when in use, or not. Anyone who can use every input and output on the back of the AVM 20 clearly deserves some kind of special award.



AVM 20 REAR PANEL

“Even though the AVM 20 is equipped to handle just about anything a professional custom installer could throw at it, the average home theatre buff won’t need a course to run it. The options are extensive, but menus are clear and intuitive ...”

NO COURSE REQUIRED

Even though the AVM 20 is equipped to handle just about anything a professional custom installer could throw at it, the average home theatre buff won’t need a course to run it. The options are extensive, but menus are clear and intuitive, whether seen on the dot matrix display on the front panel or through your video display. The front panel display is especially effective, efficiently communicating the current source, the source routing (i.e. Processing of sources can be selected as direct Digital, Analog-DSP, where digital processing is applied to analog sources, or Analog Direct), the type of surround processing and the volume. The remote is also thoughtfully and ergonomically designed, with easy to find buttons, sized and shaped by priority, that glow blue when pressed.

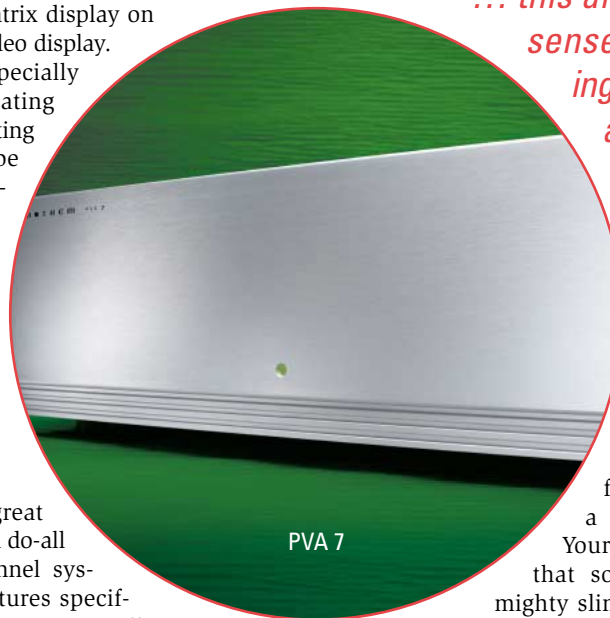
Clearly Anthem has gone to great lengths to position the AVM 20 as a do-all preamp for audiophile multichannel systems. There are a number of features specifically aimed at satisfying purist types as well. In addition to the aforementioned high quality DACs and balanced ins and outs is an analog direct mode which bypasses any EQ settings and the digital chain entirely, allowing the Anthem to be used as a pure analog preamp in this mode. The configuration options also bear this out, allowing extensive system control and fine tuning. Each speaker, for instance, can be set up differently, the AVM 20 taking into account size, location, dipole or monopole, crossover point, listener distance, high frequency cutoff for the subwoofer(s) and more. Another feature that will please many folks trying to combine high end audio and serious home theatre into one system will be the ability to engage the subwoofer even with the main speakers set to large, activating an otherwise silent sub on stereo source material. Each input can also be configured in a number of different ways, allowing custom EQ settings, volume and routing option to be “remembered” for every source.

Surround modes are well thought out and simple, with the typical, but more restrained than usual Hall and Stadium type DSP modes included as well. I stayed away from such gimmicky sorts of surround modes, as I usually do, but Anthem’s excellent sounding implementation of All Channel Stereo was often used for background music while I worked at my desk,

and the similarly good CinemaLogic mode worked very well with stereo sources such as TV programs. Indeed, I was pleasantly surprised at how good the sound from off-air TV was through the Anthem, the few shows I watch (I confess to being a hopeless *Simpsons* addict) sounding as good as I’ve heard from broadcast TV. I didn’t spend a lot of time listening to the Anthem’s tuner, aside from the occasional morning session with *KCRW*, but it sounded quite good and had no trouble bringing in the major LA area stations clean and strong with an ordinary whip style FM antenna. More on sound with movies and music below.

ANTHEM PVA 7 AMPLIFIER

“... this amp makes an awful lot of sense ... Your chances of finding a stereo amp that sounds as good for the price are mighty slim, I’d suggest.”



It only makes sense that Anthem would build a power amp meant to be paired with the AVM 20—the PVA 7, one of only a handful of seven channel power amps on the market. In terms of simplicity and value this amp makes an awful lot of sense, eliminating the need for multiple amps and clogging in at a comparatively reasonable price. Your chances of finding a stereo amp that sounds as good for the price are mighty slim, I’d suggest.

“The Anthem’s impressive 122 dB rating suggests significant low level prowess, with inky black sonic backgrounds, something that was borne out in listening tests.”

Much of the value inherent in cramming seven channels into one box comes from the fact that all those channels can share the same power supply, in this case consisting of a custom built 800 VA toroidal power transformer and “advanced power supply regulation with high quality, low ESL, low ESR filter capacitors”. In total there are 100,000 microfarads of storage capacity on tap, more than enough to ride comfortably through the most demanding action movie transients. With all channels driven, the PVA 7 makes 105 watts per channel into 8 ohms and 140 into 4. Perhaps the most impressive number on the spec sheet, however, falls under the heading of signal-to-noise ratio. The Anthem’s impressive 122 dB rating suggests significant low level prowess, with inky black sonic backgrounds, something that was borne out in listening tests.

Amps don't get much easier to use than the PVA 7. Around back are 7 single ended inputs and seven sets of beefy binding posts, all of high quality and all well spaced. Particularly handy, especially in the multiroom or custom install context, are the trigger inputs and turn on modes. The PVA 7 can be turned on the old fashioned way, with the switch on the front, or via an upstream trigger signal (from the AVM 20, for instance), or automatically when it senses a signal on any of its inputs. In this mode, after twenty minutes of silence, the amp will click a relay and drop back into standby mode until you're ready for more.

"The Anthem PVA 7 certainly seemed to have no trouble keeping up with the demands of the 7 satellites ... impressively seamless ... even at very high levels the top end never became brittle or harsh ... scenes in the film were also deftly reproduced with little details popping out all around me from very black sonic backgrounds."

MOVIES AND MUSIC

The words "effortless" and "dynamic" came to mind repeatedly when I put the Anthem gear to its first serious test in the home theatre room. This test consisted of the recent Tim Burton remake of *Planet of the Apes* combined with the happy coincidence of my upstairs neighbours moving out the week before (and no, I did not drive them away, they left of their own accord without ever complaining about loud music or movies). I wired up the speakers in seven channel mode via the supplied runs of speaker cable, placing the two rear channel speakers fairly close together behind my listening chair and the surrounds in their traditional positions off to the sides.

ORNERY APES AND ANGRY ROMANS

Although *Planet of the Apes* epitomises the current Hollywood trend of blockbusters – long on production values and short on script, its excellent soundtrack and score told me just about everything I needed to know about the Anthem system. Plus, it's one of the few DVDs which allowed me to put Dolby Digital EX and the full seven channels of surround at my disposal, through their paces. With no compunction to restrain myself in the interests of maintaining cordial neighbourly relations, I had a fantastic time playing this film as loud as I bloody well wanted. This turned out to be pretty damn loud. I'm not normally a degenerate leadfoot when it comes to my playback levels, but the sound in this case was so clean, so dynamic, so effortless and percussive, that I just kept turning it up and up. Listener fatigue, which tends to rise exponentially with volume, was never much of an issue, something which speaks volumes about the equipment involved.

The Anthem PVA 7 certainly seemed to have no trouble keeping up with the demands of the 7 satellites either, never succumbing to dynamic compression and creating an impressively seamless

surround field occasionally augmented by sound from direct rear. I was also impressed by the fact that even at very high levels the top end never became brittle or harsh, as it so often does in commercial cinemas (on some DVDs, with particularly bright top end, you can apply the AVM 20's THX cinema mode which uses a process called "cinema re-equalization" to help tame the highs in the front channels considerably). The seemingly few quiet scenes in the film were also deftly reproduced with little details popping out all around me from very black sonic backgrounds. Dialogue from the centre channel didn't appear to have any significant shortcomings, sounding as clean and natural as everything else.

"When I started listening to CDs through the System I wasn't surprised by what I heard. Excellent internal DACS ... smooth, clean, and dynamic sound with taut, authoritative bass were the order of the day. ... Soundstaging and imaging were again standout areas of performance ... "

Next up was the DTS-ES DVD of last year's Oscar juggernaut, *Gladiator*. Like *Planet of the Apes*, *Gladiator* is one of the few discs available with the new rear channel information (denoted by the ES suffix). While a little less bombastic than *Apes*, it was just as gripping sonically, and a decent movie to boot. The Anthem system did an excellent job of delineating all the competing sound effects, not to mention score, reinforcing my impression of uncoloured, effortless and extremely dynamic sound. *Gladiator's* score sounded particularly good on this system, the strings sounding sweet, delicate and open, the brass possessed of convincing timbral bite. Again, rear channel information was noticeable, particularly in the combat sequences, but generally subtle and not substantially different from the signal coming out of the surrounds. In my modestly sized room (15' X 13') I didn't really feel much need for sound from rear, but in big rooms, where getting a convincing spread of sound across the back wall might be more difficult, it will likely make a lot more sense. As with *Apes*, the sound was so involving and exciting that I was drawn into the film much more than I might otherwise have been, especially in the case of the former film whose soundtrack and aesthetic are just about its only redeeming features.

When I started listening to CDs through the Anthem system I wasn't surprised by what I heard. It was quickly confirmed that the AVM 20 has excellent internal DACs, the system sounding substantially better via the digital output of my DVD player than through its own analog outputs in CD Direct mode. Again, smooth, clean, and dynamic sound with taut, authoritative bass were the order of the day. While it couldn't quite muster the level of detail or resolution of my two channel system, the Anthem gear definitely made music when operating in stereo mode. Soundstaging and imaging were again the standout areas of performance, traits readily revealed by extremely involving sound on well recorded electronic music like Radiohead's *Amnesiac* and Air's *10,000 Hz Legend*.

“... the sound was so involving and exciting that I was drawn into the film much more than I might otherwise have been ...”

I salivate to think, however, what the Anthem gear would sound like mated with a speaker system more commensurate with its loftier price. If you're looking for a home theatre front end with all the bells and whistles, and audiophile credentials to boot, including excellent stereo performance, you can have your cake and eat it too with the AVM 20 and PVA 7.