



*The AVM 30 (shown) incorporates design improvements for even better performance

“... the AVM 20
is a knockout.”



BY JEFF FRITZ

The old saying "value is relative" applies as much in the audio/video world as it does anywhere else. Value is not, however, as simple to define as in some other fields of interest. Determining whether something is a good value or not requires one to study not only comparable products, but also those outside the realm of like-kind componentry. In that context, you stand some chance of figuring out if the product in question is a good deal, or a good deal overpriced.

For example, my two-channel preamplifier retails for \$50 more than the Anthem AVM 20 by Sonic Frontiers. And the Anthem does way more, and offers a substantial increase in actual hardware. My pre-amp, though, is a fraction of the

price of some of the excellent preamplifiers that Marc Mickelson has reviewed for *SoundStage!*. So, although priced above the Anthem, my pre-amp is an excellent value in light of its performance, relative to the more expensive preamplifiers it competes against.

At the other end of the scale, you can buy a multichannel receiver with pre-amplifier-output capability for \$500 to \$600—and that even has the amplifiers built in! In that light, maybe the Anthem isn't such a great value.

Geez, how do you sort it out? The question boils down to this: Is the Anthem AVM 20 more like my pre-amp and other

more expensive preamplifiers of the world or is it just another product from another manufacturer?

BIG UNIT

The Anthem is impressive from the moment you lift it out of its packaging. The brushed-aluminum faceplate is thick. The casework is heavy-gauge steel. Suffice it to say that most receivers simply can't compete. Score one for value. Heft rules! The AVM 20 is heavy and solid, the way a piece of high-end gear should be. The finish quality is excellent, reflecting attention to detail in the manufacturing process. The connectors are robust and—what's this?

Balanced inputs and outputs? *Cool*. Form must follow function though, so let's look inside.

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The THX Ultra-certified Anthem AVM 20 boasts an impressive collection of high-quality parts that reads like the guest list at a Democratic fundraiser: All the names are there. The processor employs Motorola's 56366 DSP chip. Its Digital DNA technology is said to be able to handle 120-million instructions per second. According to Anthem, that makes it the most powerful engine in home-theater processing currently available. The DACs used are the AKM AK4382s, which are impressively rated at 24 bit/192 kHz. These high-resolution DACs likely provide a performance upgrade over the older DACs used in a number of highly touted CD and DVD players.

The AVM 20 utilizes the Crystal CS3310 analog attenuator for all volume controls. This baby is in some of the finest preamplifiers currently on the market, some of which cost upwards of \$15,000! It certainly won't be found in any sub-\$1000 receiver that I'm aware of. There are also Burr-Brown operational amplifiers; two transformers, including one large toroidal type; 80,000 microfarads of filter capacitance (as much as in many amplifiers); and a four-layer motherboard. If parts quality and quantity is any indication of value, the Anthem AVM 20 is impressive as all get out—no matter what you're comparing it to.

The AVM 20 is also software and hardware upgradeable. An update is scheduled soon, which will include Motorola's newest chip—one that incorporates Dolby Pro Logic II, DTS 24/96, DTS Neo:6, DTS-ES Discrete 6.1, THX Ultra2, Dolby Headphone and, possibly, a surprise or two. The cost for this upgrade is \$300, whether a current owner upgrades their unit (through their dealer), or a new buyer waits for the factory to include these changes in production. So, *no penalty* for early adopters. As for the software upgrade path, there is already a new version of the software that fixes minor bugs (Anthem *and* Motorola issues) available for download on the Anthem website. The new software also allows the user to turn off THX's Re-EQ function without disabling THX altogether (for movies with already-equalized soundtracks). Wouldn't want to double filter, now would we? Without this feature, having THX engaged

FEATURES OF THE AVM 20

- Dolby Digital, DTS, THX Surround EX
- THX Ultra certified
- FM/AM tuner
- Six-channel analog input
- Six-channel bass management
- Six-channel time adjustment
- Analog-direct mode (all inputs)
- Adjustable low-pass/high-pass crossover (from 40 Hz to 160 Hz in 10 Hz increments)
- Three-zone operation and record path
- 192 kHz/24-bit DACs
- On-screen menu (works with both composite and S-video outputs in both Main and Zone 2)
- Selectable menu-background color
- Center-channel equalization
- Surround modes (10)
- Composite video inputs (7)
- Composite video outputs (5)
- S-video inputs (7)
- S-video outputs (5)
- Component video inputs (2) (assignable)
- High-definition, broadcast-quality (1080p compliant) component video switching
- Headphone jack
- IEEE 1394/PHAST Interface provision
- Sleep timer
- IR emitters (2)
- Trigger outputs (2-50 mA, 1-200 mA)
- XLR audio inputs (1)
- XLR audio outputs (10)
- RCA audio inputs (7)
- Coaxial digital inputs (7)
- Toslink digital inputs (3)
- Learning remote

would make for a dull experience when listening to a pre-equalized soundtrack. The ability to turn off Re-EQ while still allowing Timbre Matching and Adaptive Decorrelation is a boon.

WHAT ALL THIS STUFF DOES

Parts quality *can* make all the difference between good and great gear, according to many manufacturers, but only if the initial design supports the performance to begin with. The Anthem AVM 20's design features make it apparent that Sonic Frontiers built it to sound great by any measure.



AVM 30 REAR PANEL

“... clean, spacious and seamless. ... good delineation of detail, a seamless pan from rear to front, and plenty of visceral force. ... excellent ambience throughout the room ... wall-flexing bass power ... the AVM 20 was a joy to use.”

Its tone controls (bass and treble) can be bypassed, completely removing them from the signal path. The AVM 20 utilizes an analog-direct mode that permits the user to bypass the internal processing and its inherent A-to-D/DSP/D-to-A conversion. This option can be chosen for any input you wish, since it is configurable in the set-up menu. These features maximize sound quality when the user wants the most direct approach. This is purist behavior, folks. These design choices have very little *wow* factor, but they tell you a lot about where the Anthem line is coming from.

The Anthem's rear panel (see photo pg. 2) is packed with single-ended RCA and, surprisingly, balanced XLR connectors. It has XLR inputs for both analog and digital (AES/EBU) connections, as well as outputs for all channels. I consider this an important feature for higher-priced home theaters that may employ monoblock amplifiers located close to each speaker. I'd feel much better using balanced cables to minimize noise for runs of cable as long as those you're likely to encounter in some larger rooms.

The AVM 20 includes a six-channel analog input primarily for multichannel music on SACD or DVD-A, and then, on top of that, adds XLR outputs. But then they went one step further and included bass management for the high-resolution multichannel audio formats. There are a limited number of players that offer any such on-board facility, and a couple of after-market devices that address this much-needed functionality, but there's not much available in the processor world—until now, that is. In the AVM 20, you simply choose the “Analog DSP” mode for the six-channel inputs. This routes the DVD-A or SACD signals through the Anthem's A-to-D/D-to-A section, thereby allowing you to use the bass-management function in the Anthem with the *analog inputs*.

Some purists may scoff at converting high-resolution audio signals to digital and then back to analog again. Maybe they have full-range speakers all around and don't need to. Fine, they don't *have* to use the bass management functions in the

AVM 20. Anthem gives you choices, which is the important point to remember. And if I had to choose between limited functionality versus proper programming for my speaker system, I'd choose proper set up in a heartbeat. The AVM 20 can accommodate many different system configurations, which points to forward thinking on the part of the folks at Anthem.

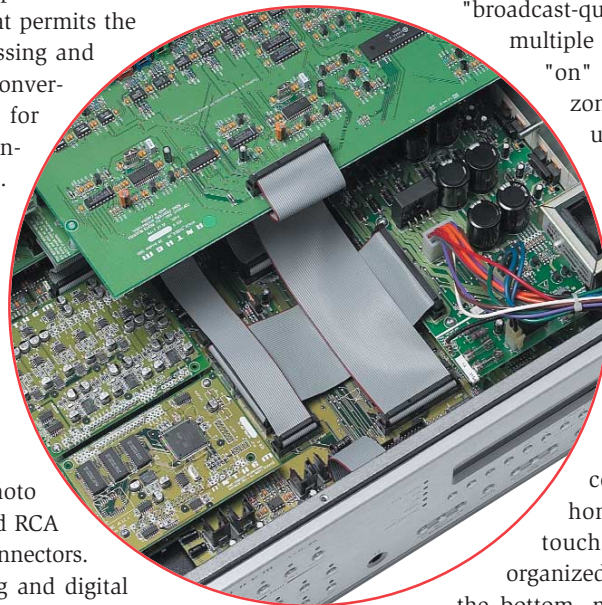
Speaking of adaptability, the AVM 20 will, of course, let you program the *normal* things like speaker-level calibration, delay times, and bass peak levels (so you don't overdrive your subwoofer), but it actually offers much more. It has “broadcast-quality video switching” to manage multiple video sources. It can also set the “on” default volume for each of three zones. I thought this was especially useful when coupled with the ability to program the maximum volumes—it isn't too loud when you power-on, nor can the maximum volume exceed safe levels in case someone gets happy with the volume control. Smart thinking—the AVM 20 can even save users from themselves!

The AVM 20's learning remote control is fairly straightforward, as home-theater remotes go. It is not a touch-screen unit, but it is fairly well organized, with source selection grouped at the bottom, menu commands near the middle, and four small buttons located around the central toggle for on-the-fly level adjustments of the surrounds, LFE, front, and center speakers.

THE MANY FACES OF THE AVM 20

The Anthem AVM 20 is so versatile one hardly knows where to begin an evaluation. Since most home theaters use the digital output of a DVD player to feed the processor, this was where I decided to start. I tested both the Dolby Digital and DTS versions of the *Pearl Harbor* soundtrack. The sound, using either one, was clean, spacious, and seamless. The multiple flyovers in the attack scene were presented with good delineation of detail, a seamless pan from rear to front, and plenty of visceral force. It was hard to fault the sound quality with this disc in the player.

Star Wars Episode 1: The Phantom Menace was similarly hard to fault. Chapter 36, “Wipe Them Out,” created excellent ambience throughout the room and wall-flexing bass power from the LFE track. It sounded right, from the beginning to the end. I could only conclude that the internal processing for both Dolby Digital and DTS soundtracks was handled perfectly. From both sonic and user-interface standpoints, the AVM 20 was a joy to use.



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Moving on to the six analog inputs, I tried a variety of DVD-A discs. Aaron Neville’s *Devotion* has become one of my favorites and, through the Anthem AVM 20, it sounded even better than I remembered. Listening to “Let it Be” through the AVM 20 was a frighteningly real experience. Vocals were clear, full-bodied, and had the breathy texture you typically only hear in person.

I used the bass-management function to identify the rear speakers as small, thereby routing the low bass into the subwoofer. Listening to the detail still present in the rear speakers, it was difficult to determine whether the Anthem was inhibiting performance due to its A-to-D/D-to-A converters being in the loop. Now don’t get me wrong, it *did* sound better with the rear speakers run full range, but this had everything to do with the fact that full-range speakers all around simply sound better, rather than any inherent flaw in the AVM 20.

It would have been helpful to hear a *really* small subwoofer/satellite system where the main speakers *needed* to be crossed over. Full-range surrounds were briefly used, thereby illustrating the AVM 20’s ability to insert its crossover while maintaining fidelity. I think it’s a safe bet to assume that if your speakers are unable to handle low bass, your system will sound better with this function enabled.

Telarc’s DVD-A, *Celebrating the Music of Weather Report*, sounded clean and dynamic, with excellent brass-instrument detail and enough bite to sound strikingly real. Now I know this is a combination of excellent recording quality and the high-resolution DVD-A format, but all would be for nothing without this fidelity being passed on to the listener. The analog pass-through on the AVM 20 is *very* neutral sounding. Low-level details, such as the sounds of nature on American Gramophone’s *Ambience* DVD-A, remained intact. The rustling wind and bird chirps created a virtual outdoor space around me—I was simply *there*.

Anthem also includes its Cinema Logic™ surround mode, which is used primarily for two-channel music. If you enjoy surround sound, you still have the usual choices such as Theater, Stadium, Club, Church, and All-Channel Stereo. Cinema Logic™, though, operates a bit differently. Whereas many surround modes collapse the sound of the front soundstage into the center-channel speaker, Cinema Logic™ allows for a large portion of the mix to be routed to the front stereo pair of speakers. The center-channel speaker can be thought of as an anchor for the center of the stage, as opposed to carrying all of the weight on its own.

Playing Hans Zimmer’s *Gladiator* soundtrack [DECCA 289 467 094-2] in Cinema Logic™, I was able to retain the expansive front stage, which was not unlike listening in stereo. The center-channel information did not stand out, and the surrounds offered an appropriate level of ambience. It certainly added to my enjoyment of the work, which is something I can’t say about most surround modes.

“... clean and dynamic ... excellent brass-instrument detail ... VERY neutral ... Low-level details – remained intact. ... The rustling wind and bird chirps created a virtual outdoor space around me – I was simply THERE.”

With good old-fashioned two-channel audio, like Andrea Bocelli’s “Ave Maria” from *Sacred Arias* [Phillips 289 462 600-2], the Anthem sounded damn close to my reference system. It was within spitting distance of being as quiet and dynamic, while keeping images locked in on an accurate soundstage. This is high praise indeed. Bocelli’s vocals soared and brought on a wave of emotion that instantly told me that the music was making it through unharmed.

COMPARISON

In light of the recent film *Ali*, we’re having our own “Rumble in the Jungle” right here at *Home Theater & Sound*. This time though, we have two heavyweight home-theater champions contending for the title.

In one corner, we have the reigning 2001 Product of the Year, the B&K AVR307. Not only did the B&K win an award from us this past year, but it has also garnered critical acclaim from users throughout the home-theater community. I found it to be simply fantastic, as you can read in my *Home Theater & Sound* review. In the other corner, we have the Anthem AVM 20. Get ready for a rumble!

The B&K AVR307 has strengths in its user interface—features such as a built-in notch filter and adjustable crossover—and a sound that is extremely adept at low-level detail and neutrality. It also has seven channels of fine-sounding amplification built in. The Anthem AVM 20 counters with an equally excellent user interface, tons of processing features such as the built-in bass management for the analog inputs, balanced connections, and unarguably pristine sound quality. In fact, the AVM 20 sounds even better than the B&K through its analog inputs *and* its own internal DACs. The difference is subtle, mind you, but there is a smoothness to the sound that preserves detail yet gives soundtracks more texture. The B&K just doesn’t offer as much information, whereas the Anthem gives us the whole picture.

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The B&K is still my favorite receiver, and by a large margin. I consider it a good value based on its sound and the fact that it is a stand-alone component *with* internal amplification. For an all-in-one unit, it is fantastic. As a processor though, the B&K simply can't keep pace with the Anthem AVM 20. Pair the AVM 20 with Anthem's own PVA 7 seven-channel amplifier (full review forthcoming), and you have a championship team.

“It's a terrific piece, without qualification. Given everything it does right, everything it offers, and its more-than-reasonable price, the AVM 20 is a knockout. ... Pair the AVM 20 with Anthem's own PVA 7 seven-channel amplifier, and you have a championship team.”

CONCLUSION

You have to know where a product resides in comparison to its competitors in order to attach a relative value to it. First though, you must know its competitors. Simply put, the Anthem AVM 20 is closer in quality to the cost-no-object high-end purist components than to the mass-market receivers that populate home-theater central. It *feels, sounds, and performs* like any number of really great, typically expensive, products I've had through the Fritz household over the years. It is separated by a wide gulf from the budget components seen at the local mass-market stores. There's nothing wrong with those products, mind you, but the AVM 20 deserves to be placed among the best available. It's that good.

Anyone looking for a preamp/processor in the \$5000-and-up realm simply *must* consider the Anthem AVM 20. For much less than \$5,000 it offers more than even this jaded reviewer could have imagined before he experienced it for himself. It's a terrific piece, without qualification. Given everything it does right, everything it offers, and its more-than-reasonable price, the AVM 20 is a knockout.