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**“ROOM CORRECTION MAKES THE
BEST A/V PROCESSOR AVAILABLE
EVEN BETTER.”**

Reviewed by Daniel Kumin

Anthem's Statement D2 sits atop the Canadian maker's range of A/V processors, a family known to tech-savvy home theater buffs for its build quality, performance, and customizability. As the flagship, the D2 has many upgrades over its somewhat more wallet-friendly AVM 30/40/50 siblings, most notably in audio and video DSP power. Dual 150-MIPS Freescale DSP engines deliver an array of surround decoding and processing modes, and they work with the unit's 24-bit/192-kHz upsampling to maximize audio resolution at all channels.

A Gennum VXP digital-video processor, one of the current hot-rods of the DSP world, powers the D2's broadcast-quality video. The Gennum VXP handles configurable deinterlacing and upscaling (up to the 1080p/60 format), and offers sophisticated 10-bit

image processing for both film- and video-based material. The D2 also allows for extensive video tweaking by input, including picture controls, aspect-ratio options, pixel cropping, and a good deal more, much of it quite technical (but potentially very valuable).

There's a whole magazine's worth of other nifty stuff in the D2, like pro-style balanced-analog outputs for all audio channels and extensive multi-room A/V goodness, most of which will have to content itself with a mere mention in the "Key Features" table.

SETUP

I connected the Anthem to my everyday 5-channel power amp and to my DVD/CD/SACD, Blu-ray Disc, and HD-cable sources, all via HDMI. The D2 has more setup options than a box of Legos, what with universally assignable video and digital-audio inputs, as

well as a Source Setup function that lets you customize each input position with surround-mode and video-scaling options, among many others. But the biggest setup news here is Anthem Room Correction, via the ARC-1 kit included with each D2 (available as a retrofit for earlier Statement processors). It includes Windows software and a USB measurement mike—and even a small mike stand!

To use Anthem Room Correction, you link your PC and the D2 (via an RS-232 serial-port connection), plug the mike into the computer, and run the software. A series of tones sweeps each speaker, followed by pauses for data storage and analysis. Beginning with the mike at the primary listening position, you have to run a minimum of 5 mike positions and can go as high as 11 (like *Spinal Tap!*). After the first measurement, the precise

positions of the others don't matter much, as it's the differential data that fuels the mathematical room analysis.

“... sound quality in all its modes — stereo, Dolby, DTS, and Anthem's own Anthem-Logic — is Grade A high end, soup to nuts ... this is as good as it gets ... a very capable video processor ... insanely flexible A/V control center.”

The ARC system—which Anthem tells us is rooted in the Athena Project acoustical research initiative (sponsored by the Canadian government among several manufacturers some years back)—appears to work very much like the Audyssey technology licensed in many higher-end A/V receivers. The results with my speakers and room setup were similar as well, negating mild bumps at around 50, 200, and 500 Hz and smoothing a bit of peaky response through the 2- to 8-kHz octaves. The ARC-1 software displays nifty graphs on your PC that overlay measured, target, and corrected responses, and it lets you control many auto-setup options as well as the bandwidth of the correction to be applied.

The sonic results were obvious though subtle; errors in my room's setup are very mild, as they should be in an installation evolved over a decade's worth of close listening. With a less accurate room, I'd expect the Anthem's corrections to be more dramatic.

“ARC's impact was impressively consistent over a wide range of listening positions ... ARC is a keeper ... I believe I'd leave it turned on all the time.”

ARC also performs basic channel-level, delay, and crossover setup, which can then be fine-tuned via conventional onscreen menus—including what must be the most detailed and flexible electronic crossover options available in any surround sound processor.

“Voices were distinctly better defined ... a bit less warm (this was especially evident on male vocals) ... high mids and low treble sounded smoother ... less overtly bright ... more open, airy, and detailed.”

MUSIC & MOVIE PERFORMANCE

Anthem's lineup of similar AVM processors has been covered in these pages before, most recently with a report on the still-current (though updated) AVM 50 (the review is available on the anthem website at www.anthemAV.com). So I'll simply state that the D2's sound quality in all its modes—stereo, Dolby, DTS, and Anthem's own Anthem Logic surround-from-2-channel—is Grade A high-end, soup to nuts. This is as good as it gets, from a preamplifier that also doubles as a very capable video processor and an insanely flexible A/V control center.

“... images were simply the best I've seen them on my TV ... no trace of banding, or 'false contouring' ... jump-up-and-cheer consistency in noise reduction, deep-shadow detail, and color accuracy ... hall sound and stage detail — were stunning ...”

On the whole, the ARC-1 room-correction system worked very well. It can be engaged individually by input, so that, for instance, it turns on automatically when you're listening to a DVD or CD but not to an LP. As mentioned, the effects in my room were subtle but clear. Voices were distinctly better defined and a bit less warm (this was especially evident on male vocals), and both the high mids and low treble sounded smoother, making elements like dense orchestral strings both less overtly bright and more open, airy, and detailed. The impact seemed impressively consistent over a wide range of listening positions in my setup about 10 feet from the plane of the

front speakers. All in all, ARC is a keeper; in my long-term setup, I believe I'd leave it turned on all the time.

On the video side, the D2 can upscale any incoming NTSC (or PAL) format from 480i right up to 1080i and 1080p/24 or 1080p/60, with results that were very impressive. For example, I viewed the first 20 minutes or so of *Master and Commander*—a torture test for fine picture and shadow detail and for subtle color gradations—from my Oppo DV-980H upscaling DVD player, one of the few sources capable of serving up 480i over HDMI. (This required the D2 to do all the heavy lifting for video.) The images were simply the best I've seen them on my TV, with no trace of the banding, or “false contouring,” effects that these foggy scenes induce from every lesser processor I've tried. They also displayed jump-up-and-cheer consistency in noise reduction, deep-shadow detail, and color accuracy.

“... powerfully flexible ... programmability allows a tech-savvy (and patient) owner or custom-installer to set up a given system for just-press-and-play usability, with no sacrifice in its potential performance.”

Despite all this praise, I have to point out that the Anthem is an HDMI 1.1 design, which means that it can't pass Deep Color (not exactly an issue with current video software) or be upgraded to decode Dolby TrueHD or DTS-HD Master Audio bitstreams. That said, it does upsample to 192/24 all incoming PCM digital audio, such as the 5.1-channel tracks that arrived via HDMI from the above mentioned Oppo. On a great recording like Paavo Järvi and the Cincinnati Symphony Orchestra's Telarc SACD featuring Stravinsky's “Petrouchka” and the “Firebird Suite”, the hall sound and stage detail on “Scherzo à la Russe” were stunning—indistinguishable from the player-decoded DSD coming out of the Oppo's multi-channel analog audio outputs.

ERGONOMICS

The Anthem's powerfully flexible design also makes it difficult to configure. Yet its programmability allows a tech-savvy (and patient) owner or custom installer to set up a



given system for just-press-and-play usability, with no sacrifice in its potential performance. Many buyers of a processor at this price will likely be using a fancy touchscreen remote or similar custom controller. Nevertheless, the Anthem's multi-component, hard-button remote, while distinctly old-fashioned, does the job quite adequately. And in a nice touch, the D2 comes with two such remotes, for main and remote rooms (or more likely in my case, to keep as a spare in case I lose the first).

BOTTOM LINE

It's true that for the cost of the Statement D2 and a suitable amplifier, you could buy a flagship-model A/V receiver, appropriate speakers, and a 50-inch flat-panel TV and Blu-ray player—with something left over to start that Blu-ray Disc collection. But leaving money aside (and don't we all just wish we could?), the D2 is one of the all-around best A/V products I've evaluated across more years of doing this than I care to admit to. The day when Anthem's representatives show up to retrieve it will be a very sad one here at S&V's subpolar satellite lab. And they'd better be carrying sidearms when they do.

TEST BENCH

Given the past performance of Anthem's components, I wasn't surprised that the Statement D2 processor equaled or bettered every other such component I've tested. Noise performance was virtually perfect in almost every one of our real-world dithered tests. For example, the D2's signal-to-noise ratio with 96/24 dither was fully 10 dB superior to its 44.116 performance, which was already superb. And its noise modulation was, if anything, better.

“... equaled or bettered every other such component I've tested ... noise performance was virtually perfect ... noise modulation was, if anything, better ... frequency response and distortion tests were every bit as impressive ... a truly benchmark bench test.”

Frequency response and distortion tests were every bit as impressive. My only criticism: With analog inputs, I measured a low-pass

response of about 22.5 dB per octave below the established crossover frequency, rather than the specified 24-dB/octave which slope I did see with digital input signals). But that's barely worth mentioning, and likely was as due to measurement leeway as to anything else. A truly benchmark bench test.

SNAPSHOT

Room correction makes the best A/V processor available even better

PLUS

- Impressive video processing
- Reference-level audio quality
- Valuable auto room-correction/setup capabilities
- Highly flexible multi-room A/V options
- Simple but useful remote, times two

MINUS

- No HDMI 1.3

KEY FEATURES

- 7.1-channel audio; multi-channel balanced-audio outputs
- THX Ultra2 certified
- Gennum VXP-based video processing
- Four HDMI v1.1 inputs
- Transcodes all video to HDMI, and scales output up to 1080p
- Upconverts all audio channels to 24-bit/192-kHz PCM
- Includes Anthem Logic surround for 2-channel sources and extensive mono modes for classic cinema/audio recordings
- AM/FM tuner with 6 AM, 18 FM presets
- (2) IR emitter outputs; (3) 12-volt triggers; built-in powered IR receiver; RS-232 serial port
- 19 1/4 x 6 x 15 1/4 in; 27 lb