

Home Theater



[Anthem MRX 700 A/V Receiver](#)

By: [Fred Manteghian](#) • Posted: Feb 23, 2011



Price: \$2,000

At A Glance: Light on bells and whistles, heavy on [high-end](#) sound • Anthem Room Correction worth the additional effort • High value from a true high-end brand

Anthem Lite and Right

When I hear “Anthem,” I also usually hear “ka-ching!” Anthem’s Statement D2v surround processor sells for a cool \$8,500, which is enough cash to keep a Colorado hippie blazing in medical marijuana for years. The MRX 700 is the company’s welcome foray into the world of down-to-earth-priced AVRs, punctuated by the inclusion of the same Anthem Room Correction (ARC) system the company uses in its costlier separates. Anthem’s proprietary room correction alone might be enough to swing some consumers’ decision. Those who’ve used ARC with Anthem’s separates (including some people employed by this fine publication) hold it in high regard. An AVR at the MRX 700’s \$2,000 price point is going to be up against a lot of stiff competition. Will Anthem pull it off, or is its first attempt at a killer AVR for the masses about to go up in smoke?

That’s Heavy, Man!

The MRX 700 has a unique, attractive look that takes [design](#) cues from Anthem’s AVM 50v and Statement D2v. You’ll recognize the small silver buttons that stretch across its obsidian black faceplate. The weighty transformer that powers the seven channels is clearly visible through the grated top plate, and it helps the MRX 700 tip the scales at over 35 pounds. In a breath of fresh honesty, the specs indicate that Anthem achieves the amplifier section’s 120-watt rating with only two channels driven into 8 ohms. The rating drops to 90 watts when five channels are in play.

There are four HDMI 1.4a inputs (3D capable, future firmware update required), so you're covered for the typical installation of a high-def cable or satellite box, Blu-ray player, and gaming system (or two). The single HDMI output is probably appropriate at this price point, but there are less expensive AVRs that can feed both a flat panel and a projector without making you switch cables. Legacy components will make do with the Anthem's array of three component and three composite video inputs, seven two-channel analog audio inputs, and a total of five optical and coaxial digital inputs. S-video doesn't even get an honorable mention here, and good riddance.

Anthem provides a regular remote for the main room and a credit-card-sized remote for a second zone. While video for the second zone tops out at composite, that's sufficient for many users. The main-system remote lacks any heft, but it makes up for it with a curved battery compartment that invites your index finger to wrap around comfortably. The buttons are backlit, but only if you remember where the backlight button is in the dark. I'd prefer for any button push to engage the backlighting, battery life be damned.

The MRX 700 has built-in video processing. It cross-converts and upconverts component and composite analog video to HDMI. It also upconverts (and downconverts) incoming digital (HDMI) video to match your display. You can output video over HDMI at various resolutions or change it on the fly via the remote. The Auto and Through modes pass video signals from the MRX 700 to the connected display at the incoming source's native resolution. Through mode presumably performs no video processing. Auto seems to work the same as Through, but it overlays volume levels and other information on the screen, which suggests that at least some video processing is going on.

Anthem includes Internet radio capability. It works well enough, but it doesn't currently support stations that use Windows media streaming (WMA), which significantly reduces the number of stations you can bring in. Hopefully, Anthem will issue a firmware update to address this. Something else that I missed even more than streaming Atlanta's great alt-rock station 99X was the lack of support for Pandora or Rhapsody.

While Anthem sells a separate iPod dock, I simply plugged in my iPod via a USB cable and did most of what I wanted, including shuffling tunes, while I viewed its contents on my big screen. Playlists were absent, but that's a small sacrifice for simplicity.

Dolby Volume has two extremely useful feature sets for movies and TV programming. Without Dolby Leveling engaged, Dolby Volume makes dynamic frequency-response modifications at listening levels below reference level, where the human ear becomes less sensitive at the frequency extremes and subject to boredom. With Dolby Leveling engaged, advanced dynamic-range compression is employed to make loud passages quieter without making the frequency extremes sound muted. It also makes quiet passages louder, so you can still hear them. That's all very good on paper, especially if you live in tight quarters (which I do not).

I left Dolby Volume disengaged for most of my testing. I found that what it offered did little to outweigh its faults. For starters, Dolby Leveling tries to remove the level differences between TV shows and the commercials that pay for them. At any setting short of off (and the MRX 700 ships with it set to one



click below max), it produced audible pumping when I played any music that included a higher than normal level of hiss. Besides that, it just seemed to make everything louder, or more garish. Why hobble a thoroughbred?

The MRX 700 has seven channels of amplification. That used to mean back channels added to a standard 5.1 mix. However, Anthem has implemented Dolby Pro Logic IIz processing, so if you don't want back surround channels, you can add two height speakers in the front of the room to give yourself a new and perhaps more effective surround experience. If extended surround in any flavor isn't in the cards for you, you can use the two additional channels to feed a second zone in another room.

You can select Dolby Pro Logic IIx and DTS Neo:6, in their various guises, to supplement not just two-channel sources, but multichannel [digital](#) sources as well. A proprietary surround mode called Anthem Logic Music mixes some low-level sound into the surround channels (but not the center channel). It worked wonders with two-channel music. I found Anthem Logic Cinema less endearing. It was too aggressive in the surround channels and somewhat confused dialogue intelligibility up front.

You can apply Dolby Digital VS (Virtual Speaker) Wide or Reference modes to two-channel signals, Dolby Digital 5.1, or even high-resolution Dolby TrueHD and DTS-HD Master Audio soundtracks. The VS modes did a surprisingly effective job of creating rich, spacious sound with just two speakers while preserving dialogue intelligibility.

Anthem is first and foremost a serious audiophile-oriented [company](#), so it has kindly dispensed with all the bathroom modes that you'll find in bigger-selling brands. Gone are useless surround processing algorithms like Jazz Club and Church II. I'm just as affected as the next engineer when I see a digital signal processor chip standing on the side of the road holding up a sign that reads, "Will process sound for food," but we must be strong.

Light Up or Leave Me Alone

Marching to a different drummer, Anthem's room equalization is geared toward getting it right rather than getting it done fast. Unlike most AVRs with room equalization, you'll need more than what comes in the box. Anthem Room Correction requires the use of a Windows [computer](#), preferably a quiet laptop, with both a USB connection for the measuring microphone and a serial port for connecting to the RS-232 port on the back of the AVR. Like most modern laptops, mine lacks a serial connection, but you can get a quality USB-to-serial converter (also not included) for about \$40, and this is what I used.



Kudos to Anthem for including a high-quality microphone (you could hurt even a bass player swinging this thing around on stage). You also get a substantial short-base microphone stand that you place in each listening position to be measured. No more balancing a microphone on Freckles the cocker spaniel's head and hoping he doesn't wake up.

The MRX 700 comes with a CD that contains the ARC [software](#) and a file with the frequency-response profile for the microphone. You can upgrade to the latest version of the software from Anthem's Website at any time, but your microphone's profile is only available on the CD, so be sure you do your first install from the CD, not the Web.

Once you've installed and updated your software, connected the microphone to the computer and the computer to the AVR, things are pretty much the same as with any other room-correction system. I took measurements from five seating positions in my room, although ARC will accommodate up to ten measurement locations. As a reviewer, I like the fact that I can [save](#) configurations and restore them later if I change speakers. It comes with the job.

Sign In Please, MR. X

I thought I'd had too much Beatles, but then I saw a stupid black-and-white photo on Apple's Website, and Abbey Road was back in the CD tray. Anthem Logic Music activated the surround channels (but not the center) and added a bit of width and depth without making "Because" sound cartoonish.

The subtle effect of blending in surround channels also softened the harder edge of my early [digital](#) copy of "You Never Give Me Your Money." The spring reverb when the band croons "down" came through with an ethereal beauty that really made me appreciate the artistry of the past that we take for granted in a Pro Tools world. The room-EQ'd Anthem was definitely making sweet tunes.

On to the new Kings of Leon CD, Come Around Sundown. Sound quality was rich and justly done—no digital artifacts here. I cranked it as loud as my speakers and ears could handle, and I didn't hear the Anthem's amps complain. The MRX 700 offers a gutsy perspective that's both warm and detailed. On "Radioactive," the mix is broad and deep. The Kings have mastered a signature sound that the Anthem was only too happy to expose—stadium rock on steroids. The difference between straight Stereo and surround-channel-embellished Anthem Logic Music was once again subtle but enjoyable.

Inception is a mind-bender of a movie, with a beautiful and powerful soundtrack by veteran composer Hans Zimmer. Quite ingeniously, he slows down an instrumental version of "Non Je Ne Regrette Rien" (literally, "No, I have no regrets") to signify the perception of time from within a dream. The Anthem has a lot of dynamic subtlety, which this movie allowed it to express distinctly. The MRX 700 was terrifyingly realistic during the bridge scene at the end of the movie. Mind you, this is with Revel Ultima2 speakers (reviewed in HT's July 2009 issue), which won't suffer imposters. Anthem's audiophile breeding and its years of experience in building high-quality separates is clearly in force here. My home theater absolutely came to life.

In Inception's avalanche scene, a lesser system might just generate a lot of white noise. This might be passable, but it wouldn't produce the same effect as the Anthem did. The MRX 700 let me hear the subtle dynamic shifts in volume as the stampede of snow in the far distance became airborne and then came crashing and pounding back against the mountain to continue its destructive tear. Foley effects snapped as the Anthem demonstrated an amazing sense of attack, the type you rarely hear without electrostatic speakers. I always know when I'm at theater reference level because a good bass whack will send my Revel B15a subwoofers' grille covers flying. When the lights came back on, it was time to collect those fabric biscuits off the floor and put them back in place. With a lesser system, I might have turned the volume down, but with the Anthem, the sound quality was so pure and uncompressed, there was never a sense of fatigue. In fact, I kept leaning further and further into the sound because perfection was in the details.

Je Ne Regrette Rien

The Anthem MRX 700 is a great-sounding AVR but not one of the Swiss army knife variety. There's no parade of logos across its front panel, but what it has works extraordinarily well. It owes its excellent sound to both the highquality amplification section and proprietary room correction, which can overcome some limitations in your room and to a much lesser degree, your speakers. It comes down to your priorities. If they begin and end with first-rate sound, you should visit your Anthem dealer. You certainly won't be disappointed. Finally, [high-end](#) audio with an affordable price tag.

HT Labs Measures

Five channels driven continuously into 8-ohm loads:

0.1% distortion at 86.3 watts

1% distortion at 93.7 watts

Seven channels driven continuously into 8-ohm loads:

0.1% distortion at 43.9 watts

1% distortion at 52.6 watts

Analog frequency response in Stereo mode:

-0.65 dB at 10 Hz

-0.20 dB at 20 Hz

-0.12 dB at 20 kHz

-27.36 dB at 50 kHz

Analog frequency response with signal processing:

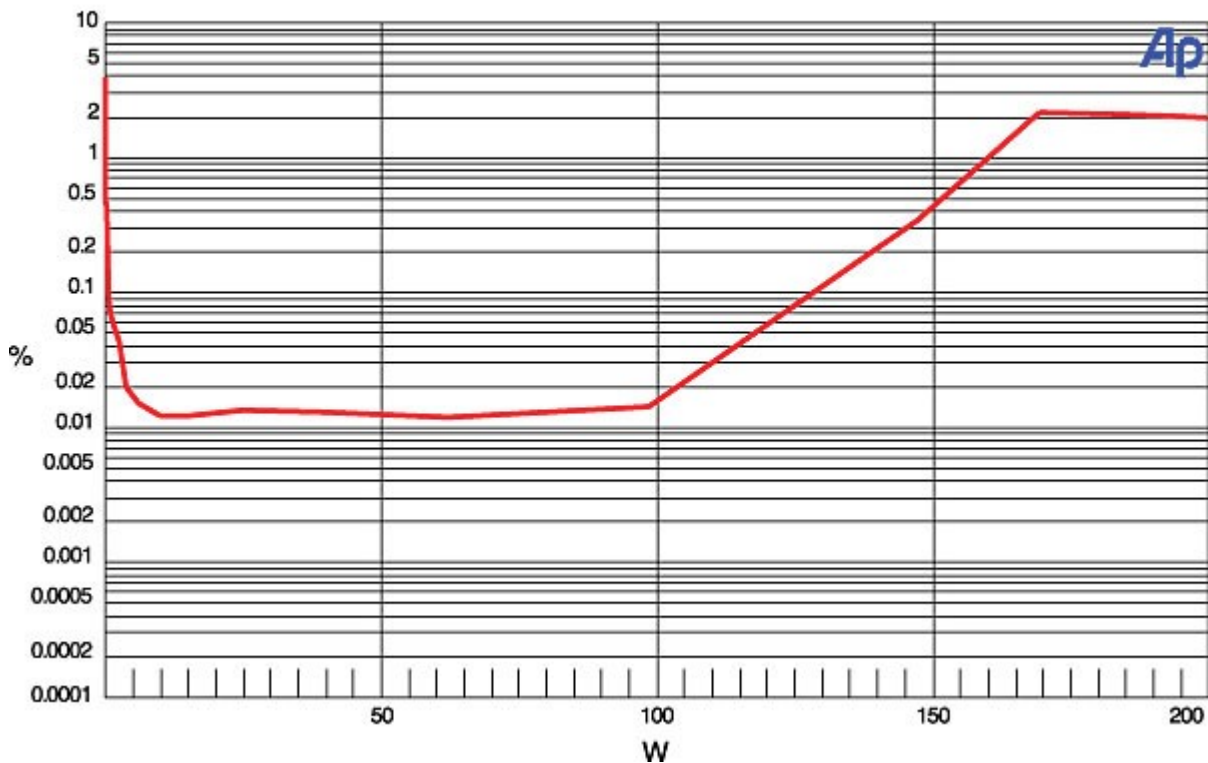
-0.65 dB at 10 Hz

-0.20 dB at 20 Hz

-0.10 dB at 20 kHz

-26.12 dB at 50 kHz

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This graph shows that the MRX 700's left channel, from CD input to speaker output with two channels driving 8-ohm loads, reaches 0.1 percent distortion at 128.6 watts and 1 percent distortion at 160.2 watts. Into 4 ohms, the amplifier reaches 0.1 percent distortion at 164.8 watts and 1 percent distortion at 221.0 watts.

There was no multichannel input to measure. THD+N from the CD input to the speaker output was less than 0.023 percent at 1 kilohertz when driving 2.83 volts into an 8-ohm load. Crosstalk at 1 kHz

driving 2.83 volts into an 8-ohm load was -73.01 decibels left to right and -72.06 dB right to left. The signal-to-noise ratio with an 8-ohm load from 10 hertz to 24 kHz with “A” weighting was -104.67 dBrA.

From the Dolby Digital input to the loudspeaker output, the left channel measures -0.07 dB at 20 Hz and -0.09 dB at 20 kHz. The center channel measures -0.07 dB at 20 Hz and -0.05 dB at 20 kHz, and the left surround channel measures -0.07 dB at 20 Hz and -0.13 dB at 20 kHz. From the Dolby Digital input to the line-level output, the LFE channel is $+0.53$ dB at 20 Hz when referenced to the level at 40 Hz and reaches the upper 3-dB down point at 67 Hz and the upper 6-dB down point at 82 Hz.—MJP

Video Test Bench

ANTHEM MRX 700	3:2 HD	2:2 HD	MA HD	3:2 SD	2:2 SD	MA SD	VIDEO CLIPPING	LUMA RESOLUTION	CHROMA RESOLUTION	SCALING
DIGITAL	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	BORDER-LINE	GOOD
ANALOG	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	BORDER-LINE	FAIL	GOOD

The Arcam passed our Digital tests cleanly, apart from some high-frequency rolloff in its chroma resolution (visible on our highest-frequency [HD](#) burst test pattern at 1080p, but unlikely to be a problem with typical program material). While its processing was also good in the Analog tests (cross-conversion with component in and HDMI out), its resolution there was marginal. It also clipped both above white and below black. On our above-white Analog test, the image coming out of the Anthem also flickered badly. This wasn't present on any of the Anthem's other Digital or Analog tests. We don't recommend that you use the Anthem in the cross-conversion mode.—TJN
