

Receivers

Anthem MRX 310 5.1 A/V Receiver Review

Written by Carlo Lo Raso

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Anthem MRX 310 A/V Receiver Review

Highlights

Anthem's second generation of MRX receivers has garnered much acclaim in recent months. And while the MRX 310 is the baby of line, its video performance and sound quality is equal to that of its more powerful brothers, like the [MRX 710](#) but just for a smaller room. All MRX receivers feature the newest iteration of the highly regarded Anthem Room Correction System, along with a streamlined design and feature set that focuses on more of what you do need and less of what you don't. Avoid being put off by the fact that this is "only" a 5.1 channel receiver for what is easily 7.1 channel money these days. In the right size room, the MRX 310 more than makes a compelling case for itself as a top notch home theater front end.

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Anthem MRX 310 Audio/Video Receiver Highlights Summary

- Excellent build quality inside and out
- Second generation of the well-regarded Anthem Room Correction System
- 5.1 channels of above average amplification
- Full set of preamp out jacks for later expansion
- No streaming services to speak of

Introduction to the Anthem MRX 310 A/V Receiver Review

Putting together a new home theater setup? Looking to upgrade that old receiver you've had soldiering on valiantly in your a/v cabinet? Well, the home theater enthusiast should find themselves spoiled for choice these days. Just to get some ideas, Secrets has reviewed quite a few [receivers](#) over the years. Just a quick perusal through the major online retailers and the local brick and mortars will provide one with a plethora of options. For a reasonable budget of \$500.00 - \$700.00, it's fairly easy to find a 7.1 channel receiver with decent connectivity, some networking options and some sort of room correction program from many of the major players out there. So why, you might ask, would someone consider shelling out north of \$1100 bucks for a home theater receiver with only 5.1 channels and minimal bells and whistles? The fine folks at Anthem are betting that once you give their updated line of MRX receivers a listen, you'll understand that they've spent their time and effort on the important stuff. They make no bones about the sound quality and performance being of paramount importance. The kitchen sink approach to A/V receiver feature sets has apparently been left for everyone else.



ANTHEM MRX 310 AUDIO/VIDEO RECEIVER REVIEW SPECIFICATIONS

- o Design: 5.1 Channel A/V Receiver
- o Codecs: Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS, DTS-HD Master Audio, DTS-HD High Resolution Audio
- o Additional Listening Modes: Anthem Logic Cinema, Anthem Logic Music, Dolby Pro Logic II Movie, Dolby Pro Logic II Music, DTS Neo 6 Cinema, DTS Neo 6 Music
- o Precision: 24-Bit/192kHz A/D and D/A Converters
- o 2-Zone Operation
- o AM/FM Radio Tuner
- o Anthem Room Correction Gen 2 (ARC 1M)
- o Power Output: 2 x 80 watts RMS - Two Channels Driven @ 0.1% THD+N into 8 Ohms; 5 x 60 Watts RMS Five Channels Driven @ 0.1% THD+N into 8 Ohms
- o Amplifier type: Class A/B
- o Dimensions: 6.5" H x 17.25" W x 14.6" D
- o Weight: 27.8 Pounds
- o MSRP: \$1,199 USD
- o [Anthem](#)
- o SECRETS Tags: Anthem, MRX, Receivers, ARC. Receiver Reviews 2014, Pro Logic, Anthem Room correction, TrueHD, DTS, A/V, Audio/Video

The Anthem MRX 310, which we have here, is the baby of the MRX line. It offers 5.1 channels of amplification at 80 watts per channel which is plenty for a small to moderate sized home theater. The two other models in the line, the MRX 510 and MRX 710 both offer 7.1 channels of amplification at 100 and 120 watts per channel respectively. There are other minor differences between the models such as the ability to bi-amp the front speakers and additional front panel HDMI connectivity in the two bigger receivers. But as we'll see later on, the three models tend to share more in features than they differ. In particular, they all share the newest flavor of the well regarded Anthem Room Correction called ARC 1M. The ARC 1M system features an entirely new user interface and greater precision due to more advanced digital signal processing in the MRX receivers. The ARC 1M system interfaces with an MRX receiver using a network CAT-5 cable either by direct

connection or via a computer over a wireless network.

As a consumer, I personally measure value not solely on how much I can get for my money, but also on the quality of what my dollar gets me. Do I go for a larger amount of the run of the mill or do I get a lesser amount of the top shelf stuff? Well, let's have a look and see if Anthem's quality over quantity approach pays off for your hard earned dollar.

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Design of the Anthem MRX 310 A/V Receiver

Upon unpacking the MRX 310 my first impressions were of a tactile nature. It felt solid. The faceplate is a thick piece of brushed aluminum. The metal casing is textured and appears to be made of a thicker gauge of steel than I'm used to seeing on mainstream AVRs.



Small details these, but they create a good first impression when you unbox your new toy! The face of the MRX 310 is refreshingly uncluttered with a modest array of six primary buttons under the main display labelled: setup, display brightness, sound mode, level, zone control and input selection. To the left is a circular grouping of five buttons similar to a cursor scroll and select control on a remote. Below that, there is a small door covering the headphone jack. The main volume knob is to the right with two small buttons for Zone 2 and Main power just below it. The rear panel is equally organized and well laid out with inputs and outputs in black and white color coded groups for easy identification.



The MRX 310 receiver supports seven HDMI 1.4a inputs and two HDMI 1.4a outputs. The HDMI outputs support Audio Return Channel (ARC), which allows you to listen to audio from your television without the need for an additional cable. Eschewing legacy video connections, Anthem has reduced the number of analog video inputs on the MRX 310 and completely eliminated analog video output. The receiver supports two component video inputs and just one composite video input. The MRX 310 supports five sets of stereo analog RCA inputs and five digital audio inputs (2 coaxial and 3 optical). There is also a USB connector to assist with firmware upgrades and an Ethernet connector to be used with the ARC 1M measurement and calibration system. As a point of clarification, the hardware side of Anthem Room Correction is called the ARC 1M kit and comes with a calibrated microphone, an adjustable tripod, a USB cable and an Ethernet cable.





The software itself is called ARC 2 as it is their second generation of code. The receiver's Ethernet jack can be plugged into a network router or bridge so that ARC can discover the MRX 310 over your home network, or it can be connected directly to a laptop or other computer that is running the ARC 1M software.

Anthem also includes a complete set of 5.1 channel pre-outs should you want to use the MRX 310 with higher power amplification down the road. As this is a 5.1 channel receiver, there is no provision for bi-amping main speakers and Zone 2 is strictly through line-level outputs to external amplification. The MRX 310, along with the rest of the MRX line, has no network media player or streaming capabilities, no Airplay, no internet radio, nada. The remaining connections on the MRX 310 back panel allow for antenna connections for the standard AM/FM tuners. The MRX 310 includes an IR input and one IR output as well as an RS-232 jack that can be used to control the MRX 310 with an external control system. A 12 Volt DC Trigger is also included which allows you to turn on another device, such as an external amplifier for zone two.

The MRX 310 comes with just one basic, non-learning remote which had a battery compartment that was annoyingly difficult to open. Whenever I added or removed the batteries I had to pry the door open with a flat head screwdriver which put me in fear of breaking it. On the other side of the coin, the remote was well shaped so it felt good in hand and it was backlit which is always nice.

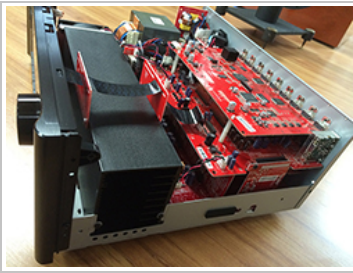


The good design and attention to detail extends to the interior of the 310 as well. All the circuit boards are neatly laid out and well-spaced and there is a minimum of wire clutter.



The second-generation MRX receivers have a more capable DSP which allows ARC 2 to have more filters and ultimately a room-correction curve that is closer to target. On the video side of things, the second-generation MRX receivers offer 4K upscaling and pass-through and they support 3D. Anthem has also incorporated Advanced Load Monitoring into the MRX receiver which constantly monitors voltage and current to ensure that the output transistors in the amplifier are kept within safe operating limits. Amplifier temperature is controlled with a 2-speed fan inside a heat sink tunnel and this allows the MRX receiver to protect itself from damage in situations where speaker impedance is low and volume is high. The cooling fan was quiet, frankly in-audible, during my testing with

the MRX 310.



The amplifiers in all the MRX receivers are more traditional Class A/B as opposed to Class D amps that are cropping up more these days. For those who like to know such things, the main DA/AD chip in the MRX 310 is the Cirrus Logic CS42528. It has eight 24bit D/A converters and two 24 bit A/D converters, all with a dynamic range of 114dB and can accept and process sampling rates of up to 192 kHz.

According to Anthem, the three receivers in the MRX line essentially differ only by number of channels, rated power and number of HDMI inputs. Beyond that, they all use the same quality of internal processing and circuitry. Good to know that no matter which one of the MRX receivers you purchase you won't be missing out on any of the sound or video quality that they promise.

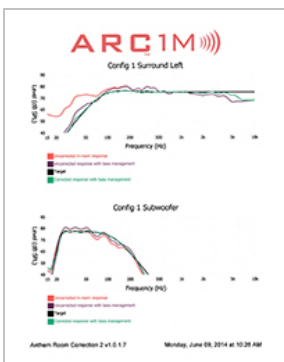
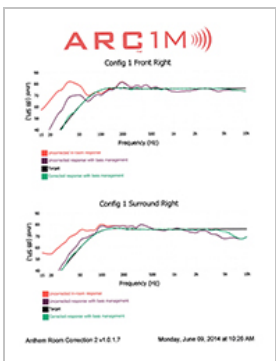
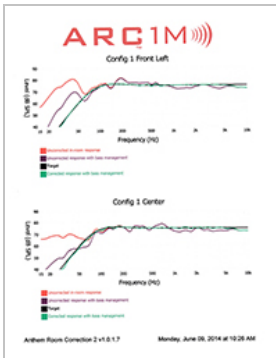
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Setup of the Anthem MRX 310 A/V Receiver

The setup of this receiver is pretty straightforward with no real surprises save that the recommended connections to the speaker binding posts should be made with either bare wire or banana plugs. The posts don't accept spade plugs, so just be aware if that is your wire jewelry of choice. The Audio Return Channel capable HDMI outputs make connections to the HDTV so much simpler. One cable and done! It wasn't so long ago that I had route multiple connections to the TV from both the cable box and the receiver to allow me to choose if I wanted surround sound with my TV or not. This is much better. In other connection news, I didn't have any need for the zone 2 outputs so they were left unused. The Ethernet cable was plugged in to our internet bridge so the MRX 310 showed up on our network and would be visible to the ARC 2 software on my laptop. I did appreciate that the receiver had at least one composite video input so that my Paleolithic laserdisc player could be connected and have its video scaled and output through HDMI. A smattering of coaxial and Toslink connections and a component video connection later and we were done. Easy Peesy!

The menu system is simple, clean and well organized. No gee-whiz graphics here, just a simple intuitive list system. As I began to go about assigning my inputs, I discovered that five inputs are setup by default at the factory but that you can add, remove and reconfigure any inputs for a maximum of 20. A nice bonus was that HDMI sources could be reused across any input. Once the inputs were set up, I entered the distance between my primary listening position and each speaker in my room. Distances are entered in the "Listener Position" menu and can be entered in feet or meters in increments of 1 foot or .3 meters respectively. This is something that you must do manually as the Anthem Room Correction system does not do this for you when calibrating as some other systems do.

Now it was time to run the ARC 2 software. A quick check of the receiver menu showed that it had the latest firmware installed. A quick check on Anthem's website showed there was a newer version of the software for the laptop than what came packaged with the kit. I downloaded and installed the newer software but I made sure I copied the microphone calibration file (each microphone has its own unique calibration file tied to its serial number) from the root of the installation CD to the install directory on my computer. If you do install from the CD, then you need to make sure that you have the latest version of the ARC-2 software by checking the Anthem support site. Fortunately, a reinstall of ARC-2 leaves the microphone calibration file in place which simplifies the process. In his write up of the bigger brother MRX 710 receiver earlier this year, Secret's Senior Editor Robert Kozel posted an extremely thorough outline of how ARC 2 is installed and how it operates during calibration, complete with screenshots. As the process he and I went through was essentially identical, save that I was using 5.1 channels and he 7.1, I am providing a [link](#) to the appropriate page in his review for the detailed steps. And, for reference, here are the screenshots of my calibration results.



ARC1M

Config 1 Speaker Levels	Config 1 Targets
Front Left: 0 dB	Fronts Crossover: 80 Hz
Center: 0 dB	Center Crossover: 80 Hz
Front Right: 0 dB	Surrounds Crossover: 80 Hz
Surround Right: 1 dB	Subwoofer Crossover: 120 Hz
Surround Left: 1 dB	Subwoofer HP: 100 Hz Order @ 23 Hz
Subwoofer: -4 dB	Min Subwoofer EQ: 18 Hz
Config 2 Speaker Levels	Config 2 Targets
Front Left: 0 dB	Fronts Crossover: 80 Hz
Center: 0 dB	Center Crossover: 80 Hz
Front Right: 0 dB	Surrounds Crossover: 80 Hz
Surround Right: 1 dB	Subwoofer Crossover: 120 Hz
Surround Left: 1 dB	Subwoofer HP: 100 Hz Order @ 23 Hz
Subwoofer: -4 dB	Min Subwoofer EQ: 18 Hz

Anthem Room Correction 2 v1.0.1.7 Monday, June 09, 2014 at 10:28 AM

The Anthem MRX 310 A/V Receiver In Use

For this review, the connected components consisted of: Pioneer KURO 50" Plasma TV, Panasonic DMP-BDT220 Blu-ray Player, Sony PS3, Nintendo Wii, Panasonic LX-900 Laserdisc Player, Motorola DCH-6200 Cable Decoder box, APC H-15 Power Conditioner and Blue Jeans Cable speaker wire and interconnects. Speakers used were the Salk Songtowers for the front left and right channels, a Zaph ZD3C center channel speaker, AV123 RS300 dipole surround speakers and a GoldenEar ForceField 5 subwoofer.

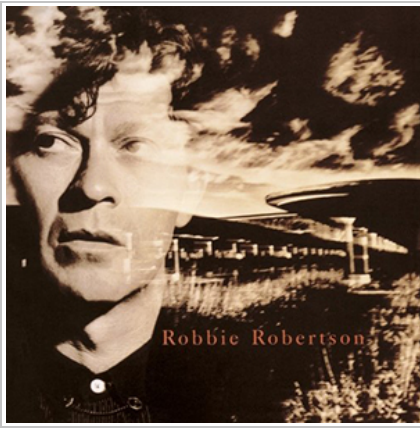
Right up front I knew that I was giving the MRX 310 a bit of an amplification challenge as the manual recommends connecting speakers of a nominally 8 ohm impedance. The Salk speakers were 4 ohm impedance and so was the Zaph center speaker. The surrounds were not so bad at 6 ohms. At 60 watts into 8 ohms with all five channels driven, how was this receiver going to keep up with these fairly demanding speakers? Just how good were its power reserves? Well, I soon found out that I needn't have been so concerned.



I began my listening with various tracks from the "Heads Up" SACD surround music sampler put together by Telarc and Sound & Vision a few years back. On the bluesy track "Don't Ever Let Nobody Drag Your Spirit Down," the MRX 310 presented a tight, cohesive soundstage that put you right there among the performers. Eric Bibb, Rory Block and Maria Muldaur all have distinct and powerful voices and as I turned the volume up, neither the receiver nor the speakers showed the slightest signs of distress. Just wonderful music with all the instrumental and vocal details rendered in their proper space.

My usual home theater setup is a 7.2 channel arrangement so moving back to a 5.1 set up for this review originally seemed like it would be a sonic step back. Although as I continued through the other tracks in the sampler, I began to notice that I really didn't feel like I was missing my back two speakers. So good was the quality of the Anthem's audio playback. I also started to realize that the ARC 2 calibration had really done a stellar job to get three disparate brands of speakers to play nice in my room. We have one row of four seats in our home theater. And with the few other HT calibration systems I've tried (all variations of Audyssey); there have been noticeable shifts in the sonic picture when I've changed seating positions in our room.

Over the years, these systems have all made improvements over having nothing at all but, naturally, things will still sound at least a little different from seat to seat. On tracks like Manhattan Transfer's "The Twelfth," Junior Wells "Why Are People Like That" and "Wenyukela" by Ladysmith Black Mambazo, these shifts are particularly noticeable to me. With the ARC 2 system though, as I moved from seat to seat, everything stayed pretty much locked where it should be with these tracks. Sonic shift was minimal at best. Each seat sounded almost as good as the sweet spot in the middle. Color me quite impressed!



Next up for a spin was “Robbie Robertson” by.....well....Robbie Robertson. Released back in 1987, Daniel Lanois’ production on this CD creates so many layers of atmosphere and textures that it lends itself well for multi-channel expansion during playback. I used the Dolby Pro Logic II Music mode, cued up the disc, and the resulting sound was nothing short of tremendous. Robbie’s voice was perfectly framed in “Fallen Angel”, anchored dead center and clear as bell. Peter Gabriel’s haunting background vocals filled the surrounds, adding to the picture but never overpowering all the different percussion instruments. Each note could be easily made out and not one sounded muddy or smeared.

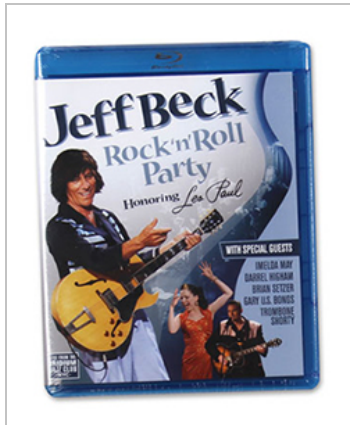
Another favorite track, “Somewhere Down That Crazy River” became a film noir sonic feast through the MRX 310. I totally felt like I was sitting in the middle of the steamy bayou one strange night. ARC 2 had done an excellent job EQ-ing the GoldenEar sub, adding some nice heft to the kick drum hits. And Robertson’s hard boiled, gritty voice was rendered impeccably well out of the center, with detail and character for miles. In fact the way the Anthem and ARC 2 handled the whole front stage of my system was probably better, from a synergy standpoint, than I think I have ever heard before.



My older son can’t seem to get enough of Star Trek: Into Darkness or Pacific Rim which, being a chip of the old block is just fine with me! Both are fun to watch and the movie’s intense soundtracks would tax the MRX 310 enough to see if it would sonically misbehave with the loads being placed on it. Listening at a plenty loud but not absurd

volume, the Anthem just did its thing, faithfully decoding the Dolby True HD and DTS Master Audio tracks cleanly and with all the power and impact you would expect. I didn't notice any compression or harshness to the sound in any scene. The music and effects were enveloping enough that, again, I was not missing the absence of my back two channels.

Subwoofer performance continued to be top notch as well. ARC 2 really has showed itself to be a standout calibration system as the sound in my theater was more balanced and coherent than I have heard it before. Could my speakers have benefitted from more power being available? Well yes, of course they could. Anthem thoughtfully provides a complete 5.1 set of Pre-Amp Out jacks that you can use to add larger amps down the road should you feel the need. Judging by the quality of amplification included in the MRX 310, one of Anthem's standalone power amps would make a fitting upgrade should your audio cravings and discretionary pocketbook prove willing and able!



A favorite concert video of mine is "Jeff Beck Rock 'n' Roll Party". Recorded live at the Iridium Jazz Club in New York, it's performed as a tribute to the late, great Les Paul. The sonics and the video quality on this Blu-ray disc are exceptional and the Anthem MRX 310 milked it for all it was worth! Through my speakers Beck's searing guitar work just shone through in all its distorted glory on "Train Kept A Rollin". Flanked by a thumping standup bass, the driving drums, Darrel Higham's "Elvis-twinged" vocals and a raucous audience, the Anthem put me right there in the Iridium. The plucks from the standup bass were rendered with authority and detail from the GoldenEar sub. ARC 2 had helped make sure that nothing sounded sloppy or muddy in the bass area.

On the fifth song in, Imelda May joined the band and her glorious vocals just rang through my theater with clarity and power on "My Baby Left Me" and "Walking In The Sand." The MRX 310 also did a great job capturing the dual vocal effects on May's singing of "Mockingbird Hill" and "Tiger Rag". Again, the front soundstage was tight and coherent throughout the presentation with minimal change in sound when heard from the other seats. I was just completely engrossed in this stunning performance.

Subjectively, from a video processing perspective, the MRX 310 performed perfectly. There were no HDMI handshake issues to speak of and all hi-definition signals seemed to be passed through cleanly. There was no additional picture noise or artifacts that I could detect and colors always appeared to be appropriately saturated. On the analog video side, the few laserdiscs I did play seemed to be scaled as best as could be hoped for to a 1080p display. Given the source, they looked as good as I had ever seen them.

Do I have any criticisms about this receiver? One thing I would've liked to see was independent integration and calibration of dual subs in the ARC software with a second Sub Out jack in the hardware. A number of new A/V receivers are dual sub capable and systems like Audyssey Multi XT32 with Sub EQ calibrate dual subs individually (versus summing them as one) to great effect.

Let's face it, if you're going to break out a laptop and run software to calibrate your HT you are not just a casual home theater enthusiast. You care about the sound and you'd be the kind of person that Anthem is targeting with the obvious quality of their products. So instead of having to break out a Y splitter cable to route two subs and measure and adjust

the gain of each sub with an SPL meter before calibration, I'd like to see a more user friendly way to do this, for a dual subwoofer setup, through the included hardware and software.

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Conclusions about the Anthem MRX 310 A/V Receiver



Anthem really impressed me with this receiver, even more so than I was initially expecting. With an excess of capable A/V receivers out there vying for your attention, it may be easy to overlook the Anthem MRX 310 because it doesn't have the latest "gee whiz" features. That would be a serious mistake. This receiver makes you reassess what's really important for the front end of your home theater. In this case, sometimes 5.1 channels can be as good as or better than 7.1 for the right size room. Quality amplification and componentry are more important than having another box that streams stuff. The Anthem Room Correction System is, in my opinion, a superior method to help get the best sound from your speakers and room. The onboard amplification is of excellent sonic quality and its capability is robust, belying the modest power and load ratings. You can add more power later if you need it as an extra bonus. These are things that matter in our little hobby and they translate into a longer term value for the up-front investment that you make. I had a great time listening to MRX 310 and it was honestly hard to send this one back when I was done. So who would pay around \$1200.00 for this 5.1 channel receiver with a hell of a nice sound quality?

If I was in the market.....I would.