



# ANTHEM MRX 720



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n all-new Anthem MRX AV receiver is a special occasion. Unlike many other brands, the Canadian marque doesn't change its model range all that often — but when it does, it's with good reason.

The new-generation Anthem MRX AV receivers were launched in October last year, and the MRX 720 under scrutiny here represents our first opportunity to experience the new receiver's charms.

The MRX 720 offers a raft of improvements over its talented predecessor. There are significant gains in power output and signal-to-noise ratio, as well as provision for Wi-Fi connectivity, in addition to

Ethernet. The MRX 720 also offers an 11.2 pre-output set.

There have been upgrades to the AV receiver's digital signal processing power, which now employs quad-core processing, and its digital-to-analogue conversion, which now operates at 768 kHz/32-bit. All digital audio inputs are 192 kHz/24-bit capable.

On the surround sound decoding and processing front, the most important upgrade is the addition of object-based Dolby Atmos and DTS:X capability, with Dolby TrueHD and DTS-HD Master Audio remaining the core surround sound formats.

Finally, the MRX 720 now offers DTS Play-Fi — a system already implemented by sister brand Paradigm, and which allows the receiver to stream content to compatible standalone speakers and soundbars, including Paradigm's own

Premium Wireless models.

As we've become accustomed to from Anthem, the MRX 720 mixes aesthetic form with meaningful functionality. The robust all-metal enclosure is reassuringly solid, and the front panel doesn't intimidate with a plethora of buttons and switches. The overall look is clean, contemporary and, above all, user friendly.

The fascia is dominated by a large, blue fluorescent alphanumeric display, flanked by a rotary volume controller on the right, and a cursor controller/selector on the left. Six buttons below the display offer direct access to key functions: setup, dim, mode, level, zone, and input.

A hinged cover at the bottom left of the front panel allows access to a headphone jack, MHL-compliant HDMI input and a USB jack, although the latter is used for firmware updates only, and doesn't

# Formidable!

Home theatre receivers seem to change to an upgraded model every six months or so. But the Anthem line-up remains a lot more consistent, with an all-new model a relatively rare occurrence. Released at CEDIA last year, the new MRX 720 supports all of the latest notable surround audio and UHD video standards, together with upgraded D/A converters. But the real ace up this Anthem's sleeve is a room correction system that's better than ever.



accommodate iDevices or external storage. The buttons on the left look after main power on, and Zone 2 on/off.

As we've come to expect of AVRs, the rear panel is densely populated. No less than seven HDMI inputs offer ample connections for ancillaries, accompanied by five analogue stereo input sets, and five digital inputs. The lack of component, composite and S-Video inputs means there's no support for legacy devices, but frankly, that's probably a sensible decision.

Seven colour-coded binding post sets make hooking up a surround sound speaker system a simple affair. While the MRX 720 is a seven-channel amp, it makes provision for 11.2 processing, as evidenced by its 11.2 pre-output set. It also offers second zone capability, either internally amplified by using the two back surround channels, or via a stereo out.

Network connectivity can be achieved via either the Ethernet LAN socket, or Wi-Fi – the receiver has dual antennas for this purpose. An RS232 port allows for system integration in custom installations.

Amplifier power is ample and, in my experience, conservatively rated by the Anthem folk. The three front channels and surrounds get 140 watts each, with the heights, surrounds and/or surround backs afforded 60 watts each, all into 8 ohms.

But arguably the single most important feature of the MRX 720 is the proprietary ARC-2 room correction system. Newly updated and improved for the new MRX series, ARC-2 utilises a quality USB microphone to measure the real-world response of the connected loudspeakers in the listening room, and then uses DSP to equalise response and create intricate crossover curves to optimise the sonic performance.

Thus, the MRX 720 comes with a complete ARC-2 kit, including microphone and microphone stand. The ARC-2 software runs off the Windows OS only (Windows 7 or later) and requires that the laptop/PC running the software and the MRX receiver are linked to the same network.

The ARC measuring procedure is simple enough, but it's worth taking a little time to do it properly, including working out which measuring points will be used. The ARC procedure requires at least five measurement positions, but can accommodate up to 10. These are critical to the eventual accuracy of the results.

Measurement starts with the actual listening position, and then proceeds symmetrically forward to the left and right of the centre line for the next two measurements, followed by symmetrical left and right positions behind the listening





position. Measuring positions need to be at least 70 cm apart.

I found it best to actually measure out and mark the proposed measuring positions, as well as their measuring sequence, which made the process quick and easy.

Before running ARC-2, I did a manual set-up, using the AVR's test tones to set levels, and defining distances and crossover points by ear. The results were good, given that I know the *AV Magazine* listening studio intimately.

But compared to the results achieved once the first set of ARC-defined results had been stored, it was a case of chalk and cheese. The ARC correction system really wrings out every last bit of sonic potential from the system, and creates a level of performance that is, quite simply, astonishing.

I remember saying the same when I reviewed the MRX 710 two or so years ago, but if anything the experience with the new MRX 720 and the latest ARC-2 software was even more compelling.

Installed in our listening room, the MRX 720 was hooked up to our regular Atlantic Technology 7.1 surround speaker system, with our Optoma HD-80 on projector duty. Source signal was provided by our regular Oppo BDP-95EU universal deck via HDMI.

I started off a Blu-ray release of the *Crossroads Guitar Festival 2013*, which may fall short a little in terms of camera work, but sounds fantastic, thanks to an

atmospheric and immersive soundtrack in DTS-HD Master Audio.

The Anthem certainly made the most of recording's potential, effortlessly recreating a sound that managed to express the ambience and atmosphere of Carnegie Hall, while also conveying the excitement and the electricity of the performances.

## The Anthem had the ability to colour in the music in a way that few dedicated AV receivers can when it comes to music material

John Mayer's 'Queen Of California' is one of the many highlights on this set, elevated by the slick guitar work of his touring band's supporting guitarist Zane Carney, and of course the mastery of the man himself towards the end of the song.

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receivers can when it comes to music material – and I'm not talking tonal warmth or richness, either. Rather, the MRX 720 grasped the intent and momentum of the music, while allowing vocals and instruments to shine with an integrity that made the performance both approachable and engaging.

All too often, music-orientated surround soundtracks end up sounding artificial or over-emphasised, with too much focus on an overall dimensionality, and a disconnect between the on-stage action and the steering of the sonic imagery.

Not so here – the sound and image were in perfect, believable harmony, with the sound very much front-biased (as it should be, if you were sitting in the audience, or bopping in the aisles) and just enough throughput on the surround and surround back channels to create a sense of the concert hall's space and dimension.

The result was a completely enthralling viewing and listening experience. I've watched and listened to this Blu-ray disc scores of times, but found myself rooted to my seat, hardly remembering to take notes. The sound was open and accessible, allowing more of the finer details to be brought to the fore, yet never losing sight of the music's real intent.

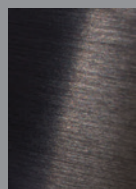
Earl Klugh's masterful acoustic guitar on 'This Time', accompanied by bassist Al Turner, was a good case in point: the guitar sounded lively and eloquent, underpinned by a bass that had real urge and power, but wasn't allowed to become dominant.

Swapping to stereo mode (which effectively rendered the soundtrack in 2.1), the Anthem displayed its penchant for staging, imaging and accuracy even more acutely. It created a sonic picture that was dimensional enough to create an almost surround sound impression, even with just two channels playing. It also proves that music lovers will find the Anthem's stereo capabilities more than satisfying.

I watched a fair number of movies during the Anthem's tenure at *AV Magazine*, and was struck by the clarity of the dialogue, the precision of the channel steering, and the cohesiveness and engaging quality of the surround sound delivery.

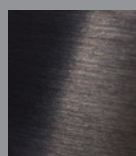
Thanks to the ARC-2 software, channel integration was superb, creating an immersive listening experience and seamless integration of the channels.

### Associated Equipment



*Optoma HD-80 DLP projector*  
*Oppo BDP-95EU universal deck*  
*Multichoice HD decoder*  
*Marantz SR-6003 AV receiver*  
*NAD T777 AV receiver*  
*Atlantic Technology surround sound speaker system*

### Software



*Inception (Blu-ray)*  
*Toy Story 2 (Blu-ray)*  
*The Hobbit Trilogy (Blu-ray)*  
*Star Wars – Revenge Of The Sith (Blu-ray)*  
*Various – Crossroads Guitar Festival 2013 (Blu-ray)*



Effects were tracked effortlessly across, around and behind the visual action, and the Anthem was able to create a powerful impression of depth and height.

*Toy Story 2* remains one of my perennial favourites, despite its soundtrack being limited to Dolby Digital, but as such it served as a good demonstration of the MRX 720's backward compatibility with older soundtracks, and its ability to make the most of these less sophisticated formats.

The Anthem receiver rendered the directional effects and low-frequency notes on the soundtrack with precision and believability, adding tremendously to the viewing experience, and highlight just how important good sound is to the overall movie enjoyment.

From the ominous, wall-shaking roll of the jack-knifed truck's tubular cargo across the tarmac during the street-crossing scene to the subtle sounds of Woody being cleaned by the doll repairman, watching this movie was made all the more captivating by the Anthem's generous yet accurate sonic delivery.

The same ability to create huge, all-embracing sonic vistas while also paying close attention to fine detail, and clearly projecting dialogue above it all, was impressively demonstrated on the Marvel Avengers flick, *Age Of Ultron*.

The sound closely followed the action, drawing the audience into the centre of the action, and making for compelling viewing. The CGI may be overdone, but the battle between The Hulk and Iron Man on the streets and through the high-rise buildings of downtown Johannesburg are underpinned by truly fantastic sound.

Explosions felt as much as sounded real, dimensional steering was pin-point accurate and tonal breadth was full and intense. And yet, dialogue remained clear and perfectly projected throughout.

Video quality was excellent, although our studio lacks the facility to view 4K material. Our Optoma HD-80 isn't exactly cutting edge, but it renders FHD material with a crispness and a penchant for real colour that quickly reveals any shortcomings on the source front. The combination of our Oppo and the Anthem never put a foot wrong, with vivid colours, keen focusing and no artefacts during action sequences.



When I reviewed the Anthem MRX 710 back in 2014, it was one of the best AVRs I'd ever encountered. The MRX 720 raises the bar on every level, adding vital surround features such as Atmos and DTS:X, including the streaming ability of DTS Play-Fi, and further improving aspects such as power

output and digital sound processing.

Add to that the even more accurate ARC-2 room correction system, and you have a formidable AV receiver that should please even the most discerning home theatre fan.

Deon Schoeman

## VITAL STATS

Channels .....	7.2
Power output.....	140 watts per channel CLASS AB amplification into 8 ohms (front, centre and surrounds) 60 watts per channel Class D amplification into 8 ohms (heights, surrounds and/or surround backs)
Surround sound formats .....	Dolby TrueHD, Dolby Atmos, DTS-HD Master Audio, DTS:X
DSP chips .....	Quad-core
Audio DAC.....	AKM 768 kHz/32-bit differential output
THD.....	0,017%
Frequency response .....	10 Hz - 31 kHz (+0, -0,25 dB)
Signal-to-noise ratio .....	110 dB
HDMI inputs/outputs .....	8/2
Analogue audio inputs.....	5x stereo RCA
Analogue audio outputs.....	11.2 pre-out, stereo line-out, stereo Zone 2 out
Digital inputs/outputs .....	2x coaxial RCA, 3x Toslink optical / 1x Toslink optical
Connectivity.....	Ethernet, 802.11 Wi-Fi,
Dimensions (HxWxD).....	165 x 439 x 375 mm
Weight .....	14 kg

PRICE.....R59 995

### Verdict

Builds on Anthem's reputation for first-class AVRs with a superb mix of power, meaningful features and sonic engagement. The not-so-secret weapon here is the ARC-2 room correction system, which optimises performance to make the most of the AVR's talents.

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OUR RATING: 88 / 100

