

HARDWARE REVIEWS

Anthem MRX 300 AV Receiver Review

Anthem redefine 'budget' audio performance with the MRX 300

Introduction

It's a sad fact that the sales of AV receivers have been steadily falling over the last few years. Unfortunately the proliferation of downloaded music and smart devices has resulted in people trading quality for a degree of convenience. This drop in interest is ironic because as the decreasing waistband of modern TVs make their audio worse, there is an ever greater need for some form of outboard amplification. Perhaps due to the size or perceived complexity of an AV receiver, those seeking such outboard amplification are more likely to choose the simplicity of a soundbar or an all-in-one system. This is a shame because the ability of a good AV receiver to deliver today's modern lossless movie soundtracks as dynamically as their creators intended, will knock any aesthetically pleasing all-in-one solution into a cocked hat.

The manufacturers of AV receivers have tried to combat this creeping malaise by adding ever more bells and whistles to their products. From multiple sound formats to digital signal processing; from 4K video scaling to height speakers; from internet radio to iPod docks, the modern AV receiver has more features than the proverbial Swiss Army knife. So it's like a breath of fresh air to see that Anthem's MRX 300 AV receiver eschews all this gimmickry in favour of delivering what's important - quality sound. We reviewed Anthem's [MRX 700](#) AV receiver at the start of the year and were suitably impressed with that model's performance and the ability of Anthem's proprietary software to effectively tune a room. The MRX 300 is half the price of the MRX 700 and whilst it is missing some features, it retains all the important elements, including Anthem Room Correction. So let's see how the MRX 300 compares to both its big brother and the competition.

Summary

The Anthem MRX 300 has nicely understated design that is actually rather attractive and the black metal fascia is pleasingly uncluttered and easy to read. The overall construction could be a little better but we'd rather the cost went into performance than thick metal fascia's and added bulk. The provided remotes are slightly plastic but they're well laid out, get the job done and the main remote has a backlight.

As far as the inputs are concerned, they're adequate but fall short of some of the competition. There are four HDMI inputs and one HDMI output, along with the usual collection of legacy video inputs, including component and composite video inputs and outputs. There also a good selection of audio inputs, including three optical and two coaxial, as well as 8 pre-outs. Surprisingly there are no multi-channel analogue audio inputs but given the emphasis on audio performance we would be happy to see some of the legacy video connections get dropped in favour of the audio inputs, especially with almost everyone using HDMI for video these days.

The setup of the MRX 300 is very simple thanks to the combination of the Quick Setup and Anthem Room Correction (ARC) features, and the menu system is well laid out, informative and reasonably responsive. The receiver offers an incredible degree of flexible in terms of setup, allowing the user to allocate different processing depending on the signal being received or the source being used. It also includes some basic video processing that worked well and was suitably transparent when simply passing video through.

In terms of audio quality, the MRX 300 is a wonderful performer and despite only being rated at 80W per a channel, it has plenty of power for any normal room. Anthem's proprietary room correction software worked wonders, resulting in a beautifully rendered performance. The MRX 300 brought new life to even very familiar movie soundtracks, with a dynamic and precise delivery and some genuinely impressive bass. The integration of the overall sound field was excellent, whilst the rears had a lively presence that resulted in an immersive surround experience.

The MRX 300 was equally as assured with music, be it multi-channel or stereo, providing a subtle and nuanced performance. When reproducing stereo in particular, there was a transparency to the sound that retained all the detail in the original recordings, whilst delivering them with enthusiasm and genuine insight. In fact the ability to handle both music and soundtracks makes the MRX 300 one of those rare receivers that works just as well regardless of your listening preferences.

The Anthem MRX 300 redefines what a budget AV receiver is capable of and whilst it might be

Anthem MRX 300

7-channel AV Receiver



Reviewed 27th July, 2012 by Stephen Withers

Key Features

- ▶ 7x80W per channel
- ▶ 3D Ready
- ▶ Dolby Pro Logic IIz
- ▶ ARC Room Correction
- ▶ Optional iPod Dock
- ▶ Custom Install Flexibility

Pros

- ▶ Superb sound quality
- ▶ Anthem Room Correction is incredible
- ▶ Excellent video processing
- ▶ Attractive design
- ▶ Informative menus
- ▶ Flexible setup and configuration
- ▶ Price

Cons

- ▶ Build quality is good but a little plastic in places
- ▶ No SACD Direct Stream Digital over HDMI
- ▶ No multi-channel analogue inputs
- ▶ Limited feature set

lacking in certain features, if it's pure audio performance you're looking for, then look no further. In fact the only receivers offering better performance at this price range have also got Anthem written on the front. A definite Best Buy!

Scores	N/A	Very Poor	Poor	Average	Good	Excellent	Reference
Build quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Connectivity audio/video	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ease of use/GUI/settings etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Features inc DSP effects/THX post processing etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EQ	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Audio performance multi channel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Audio performance 2 channel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Video processing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Networking	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Audio dynamic range	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Value for money	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Design and Connectivity

The Anthem MRX 300 might technically be their budget receiver but you certainly wouldn't think that when you open the box. Inside, along with the receiver itself, you'll find two remote controls (one for a second zone), an AM loop antenna, a FM antenna, the power cable and an additional box. Inside this extra box is all the equipment needed to utilise Anthem's proprietary room correction software, including a calibrated microphone and clip, a USB cable, a serial extension cable, a software installation CD and a telescopic stand. All of these extra goodies are of excellent quality and it gives any new owner the feeling that they've just bought something that's a bit special.



The MRX 300 looks identical to its Anthem siblings - the MRX 500 and MRX 700 - and pretty much every other AV receiver on the market but why reinvent the wheel? The overall design is actually rather attractive, with clean lines, an uncluttered black aluminium fascia and an easy to read blue dot matrix display. This display shows the source selection, the video input resolution, the number of front and surround channels and the audio format. In terms of front panel controls there are the usual input selections, as well as a mute button, an on/off button and volume control. You'll also find buttons for main/zone 2 selection, the display brightness, setup and navigation. There's also a sliding panel, behind which you'll find a composite video input, an analogue stereo input and a 1/4" headphone socket that uses Dolby Headphone to process 5.1-channel content into a 2-channel headphone down-mix.

The main chassis is made of black metal and whilst the overall build quality is reasonable, there is a slightly budget feel to the buttons and volume control, especially when compared to the wonderfully machined feel you get from some of the competition. Having said that, all the front fascia buttons are repeated on the remote control, so you're unlikely to actually use them and we're glad Anthem are concentrating on the audio, instead of wasting their resources on thick metal fascia's and increased bulk that just adds to the price. As a result, the MRX 300's size and weight aren't as hernia inducing as some other receivers, with it measuring 16.4 x 43.9 x 39 cm (H x W x D) and clocking in at 15.2 kg. Despite the relatively low price of the MRX 300, it's clearly still aimed at the custom install market, so Anthem provide an optional kit for rack mounting.



At the rear is a reasonable selection of video connections and whilst they're certainly adequate, they fall short of some of the competition. There are four HDMI v1.4a inputs and one HDMI v1.4a output, along with the usual collection of legacy video inputs. This includes

three component video inputs and one output, as well as three composite video inputs and one output. Whilst there are some people who will bemoan the lack of a second HDMI output, for most 4 HDMI inputs and 1 HDMI output should be sufficient.



In terms of the audio connections, since this is a 7.1-channel receiver there are eight pre-outs, along with seven pairs of speaker binding posts. The MRX 300 offers you the choice of configuring channels six and seven as the rear surrounds in a normal 7.1 setup, as the stereo output to Zone 2, or as the height channels for Dolby Pro-Logic IIz. There are five S/PDIF (two co-axial, three optical) digital inputs, plus an output of each type, along with six stereo RCA inputs and their matching fixed level record outputs. There is also a connection for an optional iPod dock and there are antenna connections for both the AM and FM tuners. The custom installation market is again well catered for, with a RS232 serial port for system integration, a 12V trigger, two infra-red outputs and an infra-red input.

Surprisingly there are no multi-channel analogue audio inputs and given the emphasis on audio performance we would have preferred to see some of the legacy video connections dropped in favour of analogue audio inputs, especially with almost everyone using HDMI for video these days. For most people the lack of analogue inputs won't be an issue but the MRX 300 can't accept a native Direct Stream Digital (DSD) signal from a SACD, so if you're a fan of that format, you will need to convert to PCM in your player and send via HDMI. Sadly if you own an older SACD player without a HDMI output, the lack of multi-channel analogue inputs means the MRX 300 probably isn't ideal for you.



The primary remote control is made of black plastic and whilst it is a little flimsy, it does include all the controls found on the front fascia. It also includes a couple of additional ones such as main video output resolution and a backlight. The second remote is for zone 2 control and is a stripped down version of the main remote and includes on/off buttons for both zones, input selections, volume up and down buttons, a mute button and navigation controls. Just like the main remote, the secondary remote is quite light and plastic but it doesn't include a backlight.

Setup and Menus

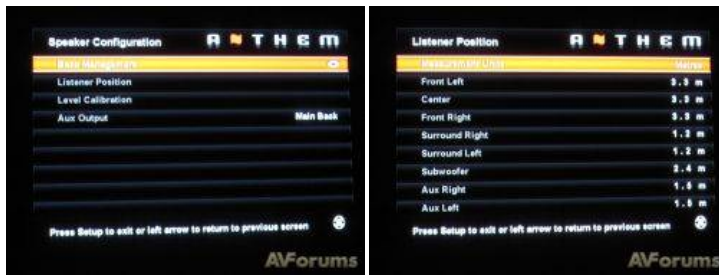
Once you have connected all your sources and speakers, you can then begin to setup the MRX 300. This process is surprisingly straightforward, thanks to the Quick Setup guide and the Anthem Room Correction (ARC) software. We will address ARC separately but will take you through the menu pages and manual selections in this section. The Quick Setup allows you to choose whether you are using HDMI/DVI to connect to your TV, the component video resolution (if applicable), whether or not you have a subwoofer and the speaker configuration (7 including height, 7 including back, 5 or 2). Once this process has been completed you can then move on to either using ARC or performing a manual setup.



The menu system is concise, responsive, well laid out and easy to navigate with the main menu page giving you eight basic options - **Video Output Configuration**, **Speaker Configuration**, **Audio/Video Setup and Presets**, **Displays/Timeout**, **Trigger Configuration**, **General Configuration**, **System Information** and the aforementioned **Quick Setup**.

The first of these options is the **Video Output Configuration** and this allows you to set up to

two different output configurations for each input. In reality you will almost always only need one but if you did have a second display attached to one of the other video outputs, this feature would allow for different settings if necessary.



The second menu page is **Speaker Configuration** and if you used the Quick Setup and ARC features, then the only option you need to adjust is the Listener Position, all the other adjustments will be made automatically. If you want to perform a manual setup then along with the delay, you can choose the speaker configuration and frequency crossover using the Bass Management sub-menu and the speaker levels using the Level Calibration sub-menu. One very useful feature is that Bass Management treats the subwoofer channel and the Low Frequency Effects (LFE) channel as two distinct entities. This means you can turn the level up for LFE effects but leave the level of the subwoofer untouched at the same time. As a result, bass redirected from the main channels can be set to reproduce music and voices naturally, whilst at the same time blowing the doors off when it comes to deep bass sound effects.



The **Audio/Video Setup and Presets** menu contains a number of useful sub-menus, the first of which is the Advanced Source Setup. This allows you to create unique settings for your various sources and you can name each of them, as well as customise the setting for a specific video output, video and audio input and the Bass Manager selection (EQ). The MRX 300 is incredibly flexible in terms of setup and the various permutations are too numerous to cover in the review. However, we really liked the fact that you could assign the HDMI input from a Blu-ray player and configure it to apply different processing, depending on the signal being received. For example, 2.0 PCM from a CD could be set to stereo, whilst a Dolby Digital 2.0 signal could be set to Pro Logic Iiz, whilst the Dolby Digital and DTS 5.1 soundtracks could be left alone. You could also assign different inputs to the same HDMI input, thus allowing you to use the same player to listen to CDs with the Music EQ selected and DVDs or Blu-rays with the Movie EQ selected. The Listening Mode Presets submenu allows you to select different modes for each source depending on the content that is being played. The Video Mode Preset sub-menu allows you to adjust certain video controls and this will be covered in more detail in the video processing section of this review. There are also controls for selecting connected audio and video recording devices, as well as HDMI Audio Output and HDMI CEC controls.



The **Displays/Timeout** menu page allows you to customise the front display and any status messages. You can adjust the Display Brightness, the Front Panel Wake-up, the Display Timeout, the Video Mute, the Status Message on/off, the Status Message Timeout and the Setup Menu Timeout. The next menu is the **Trigger Configuration** and you can use this to power another device connected to the MRX 300's trigger output. This trigger can be customised for different sources, as well as the primary and secondary zones and a delay can be set if needed.

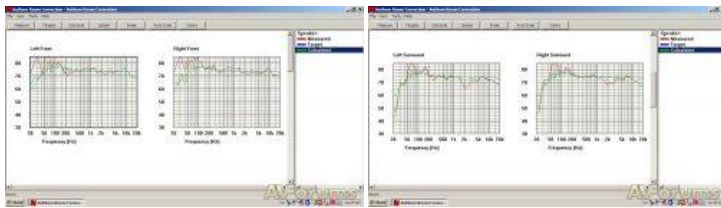


Then there is the **General Configuration** page which has a control for selecting the Power On Volume, as well as options for loading Factory Defaults and User Settings, as well as selecting the RS-232 Baud Rate. Finally, there is the **System Information** page which shows basic information like the Product Name and the Software Version.

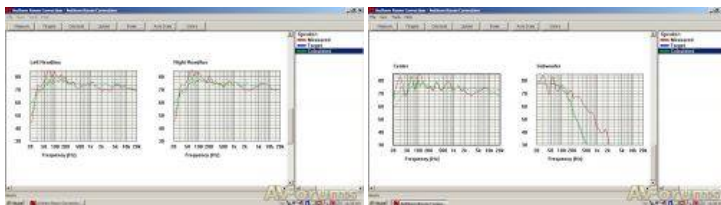
Anthem Room Correction (ARC)

Whilst you can set the MRX 300 up manually, given that it comes with a calibrated microphone and stand, as well as Anthem's powerful ARC room correction software, you would be silly not to make full use of it. What is room correction? Well there are many factors that can determine the quality of your audio system, but one of the biggest is the room itself. Your room will have an audio quality all of its own and room correction allows you to address any differences, resulting in better integration of the speakers and more even bass.

As mentioned previously, the user needs to initially select the speaker configuration and set the speaker distances, which is done in increments of 30cm, before running the software. ARC actually allows for considerably more user input than other equalisation (EQ) systems we have previously experienced with AV receivers. Not only can you select the crossover frequencies you wish to use in advance of running ARC, you can also set entirely different configurations for movie and music use. Furthermore, you can select the maximum frequency to which you wish the equalization to be applied, with the upper limit being 5kHz and the minimum 20Hz. It also means that if when listening to music you want to use a pair of floorstanders at full range without including the subwoofer, you can choose to only EQ the low end of the speakers. Very impressive.



However, don't get worried if this all starts to sound a bit daunting because you can also just set the ARC software to Auto Detect and it will do all the heavy lifting for you. All you need to do is connect the MRX 300 to the serial RS232 port on your PC and then connect the calibrated measurement mic to one of your PC's USB inputs. If you have a Mac you will need to install Bootcamp first because ARC doesn't work with Parallels and if you don't have a RS-232 connector on your PC (which most don't) you will need to use a serial-USB adapter (Anthem recommend Keyspan). The measurements and calculations are all performed in your PC and then uploaded to the receiver. This means that you can store different settings on your PC and then reload them if you decide to make any changes.



When taking the measurements, you need to mount the mic on the provided stand and then set it up at the prime listening position, which will be the sweet spot. The software will generate the test tones for each speaker and then you repeat the process for a minimum of five and a maximum of ten positions. The actual number of measurements you make will depend on how large your room is and how many listening positions you have but in our room with three seats, we performed six measurements in total. By spreading the microphone around the room, it allows the ARC software to build up a picture of the listening environment. The software produces a series of graphs that show the measured response curves, the target response curves and calculated response curves after the EQ has been applied. Once you're happy with the equalised response curves, you can then upload them to the MRX 300 and you're good to go.

Video Performance

The MRX 300 wouldn't be a modern AV receiver if it didn't include some video capabilities but we're glad to see that Anthem don't feel the need to go over the top. Let's make this perfectly clear, 4K video scaling on AV receivers is a waste of time and money because there are almost no 4K displays. Besides, even if you did have a 4K display like the [Sony VW1000](#), the chances are the scaling in the Sony would be vastly superior. Thankfully the MRX 300 sticks to what

you might actually need and includes a Genesis I onno chip set that can deinterlace 480i, 576i and 1080i signals and upscale and output at 1080p over both component and HDMI. Of course it will also pass through 1080p/24 signals from Blu-rays and it can happily pass a 3D signal as well. We tested the deinterlacing and scaling capabilities of the MRX 300 and we were pleased to see that it was capable of detecting both 3:2 and 2:2 cadences, as well scaling standard definition content without introducing unwanted artefacts or jaggies. If you decide to use the Film Mode for cadence detection, make sure you turn it off on your display otherwise there's a danger of creating more problems than you solve.



In fact the MRX 300 is as good a video processor as most modern TVs so if you want to, you can connect all your sources to the receiver, do the deinterlacing and scaling there and pass 1080p straight to your display. The MRX 300 is also as flexible in terms of video as it is in terms of audio, you can create different setups for different inputs and you can also match any audio input with any video input. Since we use a [Lumagen Radiance](#), for the majority of the review we just used passthrough and we were pleased to see that when we tested the MRX 300 in this setting, the video remained unadulterated. We are not big fans of picture controls on receivers, as these controls can ruin a carefully calibrated display. Whilst the MRX 300 has less controls in this area than some receivers, we still feel that controls such as Brightness, Contrast, Colour, MPEG Noise Suppression and Cross Colour Suppression are best left to your display. As such we had them all centred and were glad to see that the MRX 300 wasn't doing anything it shouldn't to the video chain when we checked.

Audio Performance

Looking at the spec sheet, the MRX 300 might at first appear somewhat under-powered at 7x80w, especially when compared to much of the competition. However these numbers are clearly based upon realistic measurements, rather than taking the figure just prior to the amplifier blowing up! As a result, the MRX 300 could happily drive a seven channel speaker setup with ease and deliver volumes that were loud enough and distortion free for any normal listening environment. There was also a more nimble response to the MRX 300 that resulted in a far greater refinement than you would get with some of the ham-fisted Japanese monsters. The upshot of all this was that MRX 300 could sound just as good with stereo music as it could with multi-channel movie sound tracks.

As if the MRX 300's ability to deliver exceptional amplification at this price point wasn't enough to impress, the room equalisation offered by ARC took the receiver's performance to an entirely different level. As soon as you turn on ARC, the entire soundstage became more pronounced, with far more precise imaging and a more focussed low end. This affect was applicable to both multi-channel soundtracks and recordings, as well a stereo recordings and no matter what we listened to we found it benefited from using ARC. We have noticed in previous reviews that some room equalisation features resulted in a rendition that gave the audio a processed sound. This was never the case with ARC and the resulting soundstage just felt more open and lively, especially at the lower end.



The MRX 300 can decode all the usual audio formats such as DTS-HD Master Audio and Dolby TrueHD, as well as DTS and Dolby Digital. There is also Dolby Pro Logic IIz which can be set up to use the MRX 300's two additional channels as height speakers. The MRX 300 includes Dolby Volume which is designed to even out the levels among different source components and narrow the extreme dynamic range of movie material, making it easier to reconcile loud effects with soft dialogue. There is also Dolby Virtual Speaker which is designed to produce surround-like effects from just two speakers and Dolby Headphone which does something similar with headphones. On top of all this, Anthem also includes their own proprietary stereo-to-surround modes: Anthem-Logic-Music and Anthem-Logic-Cinema. Given how well the MRX 300 performed with both stereo and multi-channel formats, we never felt any need to use these additional features. In fact we found that these features tended to be detrimental to sound quality and features like Dolby Volume should always be left off in our opinion.

We were amazed at the ability of the MRX 300 to deliver room quaking bass at times, especially when you consider that this part of the soundtrack isn't being amplified by the receiver itself. Somehow the MRX 300 seemed able to mine the lower frequencies in a way that other receivers we compared it do just couldn't. This didn't result in bass that swamped the soundtrack but rather just delivered the necessary impact when needed. It also seemed able to do this even when you're using a relatively modest subwoofer and as a result the low frequency effects (LFE) channel on film soundtracks were highly effective. It was wonderful to hear such beautifully integrated bass, which supported the overall sound without swamping the dialogue or vocals. Ultimately it was an exciting and visceral experience that made listening to any content a pleasure.



The combination of all these factors, resulted in an overall performance that was beautifully rendered and simply stunning. The MRX 300 brought new life to even the most familiar movie soundtracks, with a dynamic and precise delivery and some genuinely impressive bass. The integration of the overall sound field was excellent, whilst the rears had a lively presence that resulted in an immersive surround experience. In fact the MRX 300 appeared to make far better use of the surround channels than many other receivers and as a result the rear soundstage had a far greater presence. When watching films the precise imaging of the sound mix was evident and both effects and pans were expertly rendered.

The MRX 300 was equally as assured with music, be it multi-channel or stereo, providing a subtle and nuanced performance. When reproducing stereo in particular, there was a transparency to the sound that retained all the detail in the original recordings, whilst delivering them with enthusiasm and genuine insight. We found ourselves going through all our favourite recordings, not just for review purposes but because we were enjoying hearing the recordings again. Whether it was orchestral or rock, male or female vocals, the MRX 300 delivered it all with great aplomb. In fact the ability to handle both music and soundtracks makes the MRX 300 one of those rare receivers that works just as well regardless of your listening preferences.

Our feedback for Anthem

- Direct Stream Digital over HDMI for SACD would be useful.
- Given the limited amount of real estate, are all those legacy video inputs necessary?
- If you dropped some of the legacy video inputs, you might find room for multi-channel analogue inputs.

If you are interested in buying the Anthem MRX 300, we hope you will use our [advertisers](#).

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