



# The Cambridge Graduate

The new AV receiver from Cambridge Audio is filled with surprises that more than meet your audio requirements. And believe us, it will leave you stunned with its performance.

**W**hat does one expect when one buys an AV receiver? The answers could be varied — believe me there is a product for each of the chosen options! But there is one answer that still bowls me as a professional installer — I want a single system for movies and music and it should perform equally well at both fronts. To be true to the client, I ask them to put up two systems in one room or have an AV receiver with bypass mode and a separate preamp for the music

rig. But all this eventually leads to buying a lot of hardware and hunting for specific hi-fi equipment to eventually fit them into a proper budget — a rather painful exercise!

But on and off, the cult audio brands come up with an AV product that gives a ray of hope that perhaps one box can solve it all. I have come across AV receivers that are flawed in the user interface, or lacking setup flexibility, or with designed extremely bad remotes. From a world where just volume level controls, mute switch and input selections were enough for

all these years, learning to juggle with tonnes of interconnected functions is truly a different ball game. It needs a different gene!

Finally, Cambridge Audio seems to have come up with an answer. While the classic AV companies are focusing on core sound quality, the classic audio companies seem to be catching up with the AV domain. This convergence has brought a lot of these players so close in competition that a reviewer needs to have a keen eye as to what the product stands for.



and rigidity to the otherwise heavy component. While you lift the receiver, you feel like you are lifting a chunky monolith ingot and not some disintegrated component held together simply by a few screws. The hood is made of heavy gauge and the faceplate is carved out of very thick aluminium sheet. The perforations on the hood are very neatly cut.

## TECHNOLOGY

While looking at the rear-panel, I realised that the centrestage was occupied by a fan. Opening the hood carefully, I saw the main girth of the receiver occupied by a speciality funnel that systematically craws air from output transistors into the fan and out. This super-silent ventilation system is trademarked by Cambridge Audio as X-Tract.

Each channel is capable of supplying 100W RMS at 8 ohms while all the seven channels are driven simultaneously. This too is a bold claim, as most of the manufacturers give tongue-in-cheek specifications and talk about each channel driven and not all of them simultaneously. Separately, if you're using the AV receiver in the stereo mode then you can derive 120 watts for each channel. There is also an option of using the rear surround channels in bi-amplifying mode with the front ones for better tonality — however this is possible only in the case when these channels are unused and vacant.

There are separate DACs for the front channel — this reminded me of the earlier days of the home-theatre era, where the classic audio manufacturers could not compromise on the quality and so could not squeeze-in a lot in a box at competitive pricing. Then they came out with all kinds of intelligent solutions like, having better DACs, better transistors, higher quality tracks for multichannel volume controls, better capacitors etc all for the fronts as compared to the rest of the channels. These were good compromises and should have been set as general norms for the industry, but unfortunately the mass production went into some other direction and boasting about same treatment to all the channels became the buzzword without realising that all of them were compromised.

The Azur 650R has a complete video up-conversion feature that takes any source signal and gives

out an up-converted signal from its HDMI output. Unlike the other AV receivers, even here the Azur 650R scores: it up-converts to a (selectable) desired resolution and not just 1080p. Most of the AV receivers will simply up-convert to the max (1080p) and the TV set will again down-convert to 1080i or 720p — if it is not capable of playing the 1080p signal. This results in multiple useless conversions that will ultimately have its signature on the final picture quality.

Then there are lot of options for networking Cambridge Audio and other products through the AV receiver. Simple things like IR repeaters can make life easy if the installation is a little odd and the source equipment are not in the direct line of sight. Otherwise, you will have to buy an extensive kit for this, but if you know the trick of the trade then things can be easier and cheaper for you. The calibration mic provided with the AV receiver is part of 'CAMCAS' (Cambridge Audio Mic Controlled Auto Setup) and calibration almost accurately. However, I expected a slightly more sophisticated (at least three-point calibration with auto equalisation) system catering to different spots.

One thing that I missed (and probably deliberately omitted by this classic company for its roots into purist audio legacy) was the inclusion of the equalisation. While this may not be useful in an ideal setup, rather in home-theatre setups where the position and type of speakers are guided by many factors and not just quality, a synergy to make them sound similar (at least in the frequency domain) is a useful feature and improves the performance noticeably. Agreed that the use of equalisation may smear the time domain and have other detrimental effects on the sound, but the overall gain is positive and I think the choice should have been left to the user to use it or bypass it.

Finally, the user's manual of Azur 650R is one of the friendliest one and shows the passion of the company and goes much beyond simply explaining the functions. For example, this is the first time that DTS-HD speaker re-position has been explained in such depth to an end-user.

## REMOTE CONTROL

Cambridge Audio's typical remote design with thick aluminium panel and round rubber buttons neatly

## \* WHAT IS...

### TORROIDAL TRANSFORMER USED IN 650R

Primary and secondary coils wound around a piece of magnet in the shape of a donut, the toroidal power supplies work expensive and are difficult to design.

Remarkably unconventional is the use of toroidal transformer in something like an AV receiver — where the manufacturers generally skimp on the quality for quantity. The cheaper laminate type transformers have good efficiency but at the cost of quality. Low flux torroids are generally used in high quality stereo components and are seldom heard in the world of home-theatre.

There are audiophiles and component designers who pay quintessential attention to the design of power supply of a component — to the extent that there have been quotes of the legendary designers saying that we do not hear sources, amplifiers and speakers, but their power supplies!

## SPECIFICATIONS

**POWER OUTPUT** 2 x 120W RMS Per Channel,

8 Ω (Two Channels Driven); 7 x 100W RMS Per Channel, 8 Ω (All 7 Channels Driven)

**TOTAL HARMONIC DISTORTION (THD)**

<0.006% @1kHz

**FREQUENCY RESPONSE** 10Hz–20kHz (-1dB)

**SIGNAL TO NOISE RATIO (SNR)** >90dB 'A'

**Weight**

**DAMPING FACTOR** NA

**DIMENSIONS (H x W x D)** 26.7" x 16.9" x 16.5"

**WEIGHT** 15kg

**CONTACT** [www.fxentertainment.in](http://www.fxentertainment.in)

## OUT OF THE BOX

Cambridge Audio, a classic budget hi-fi manufacturer exactly knows what it stands for — the sound quality. While there are loads of brands who are busy getting a positive tick-mark on the feature-list, Cambridge is busy squeezing more build quality and elegant looks in their Azur 650R. Not obscenely tall, but pretty deep in size, this box is deceivingly heavy.

Unlike the other components, the Azur 650R has the upper hood wrapped around the chassis till bottom, this gives fantastic stability



peeping out of the cut-outs gives this remote a very clean look. It is slim, heavy, chunky but easy to hold and operate. Frankly, you would use very little apart from source selection, volume, mute and power controls on the remote, and all these are very aptly situated on the remote.

**PERFORMANCE**

The first thing that I did after the assignment of the inputs and outputs was the auto-calibration. To my pleasant surprise, very accurate results were found in my room, which is fairly reverberant. I dropped in the Blu-ray of 'Harry Potter And The Half Blood Prince' and the sound that the movie soundtrack gave me was fast, lean, powerful and very clean. The dialogues from the centre channel were crisp and clear, but without a tint of glare or brightness. I was able to decipher even the most complex dialogues with ease and to the least of my effort — paying my attention to picture and enjoying the movie. I must say that the sound is not here to bowl you with its magnanimity or kill you with its scale, but it is very natural and smooth yet powerful. This AV receiver will greet most of the loudspeakers

with good ease and tonality.

I had connected three sources to the AV receiver. A CD player, CD writer and matching 650BD Blu-ray player. One of the true tests of a good hi-fi is that it should be able to resolve the differences rather than make all the connected devices sound the same. On this pretext, the Azur 650R passed with good marks. It resolved the overall rounded sound with tunefulness, smoothness and warmth of my Marantz CD player, on the other hand my Teac CD writer showed fantastic resolution and a tad forwardness but speed in the bass and lightness in the overall tonality — as expected. The 650BD on the other hand sounded similar to the Teac CD writer with good imaging.

On pure audio mode, the difference was stark and the resolution was way above the rest of the modes. So if you're going for the Azur 650R, then you must try and have full range front speakers so that the magic of this pure and direct sound can be enjoyed with full grace. To be really frank, on my speakers, the difference between the bi-amped configuration and simple configuration was not so evident — unless I was trying

hard. The Azur 650R and 650BD seems to be sharing same DAC kits, as whether I use the DACs that of the AVR or the BD player, the sound was very similar.

**CONCLUSION**

By all means, the Cambridge Audio Azur 650R AV receiver is a treat for the people who are looking at an excellent music system within their home-theatre systems. I have reviewed many AV receivers that sound good — but most of them sounded big and larger-than-life as a common trait. The Azur 650R has their power and dynamic range, but not their "puff-baby" imaging. So it had an amazing capability to portray a large and detailed soundscape with characters in their apt size. ●

*Mehul Mepani*



**CAMBRIDGE AUDIO**

MODEL >> AZUR 650R  
 CATEGORY >> AV RECEIVER  
 PRICE >> Rs 82,000  
 WARRANTY >> 1 YEAR

<b>AESTHETICS</b> ★★★★★	<b>WHAT SAY AV?</b> If its good for music, it will not fail for movies, but the other way round is not true. 650R is an excellent machine that can put life into stereo music, just give it full range front speakers. Give it a large and beefy subwoofer and your excitement about movies will be easily dealt with.
<b>BUILD</b> ★★★★★	
<b>AUDIO</b> ★★★★★	
<b>EASE OF USE</b> ★★★★☆	
<b>VFM</b> ★★★★★	

**AV MAX** ★★★★★  
**OVERALL SCORE**