

## *AV Receivers, Jack of all Trades, Master of?*

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**A**t the heart of any good home entertainment system is the amplification. A/V Receivers, with their combination of multiple amplifiers and processing, are the most popular way to experience the thrilling entertainment you get when you combine an outstanding picture, with enveloping surround sound. One component does almost everything.

### **AV receiver, Audio Device, Video Device, or Merely, Jack of all trades, Master of?**

If you are in the market, for an AV Surround Receiver and do not know which one to choose, read on, some helpful information will follow.

Have you asked yourself the follow questions? How much power is enough? How is power output measured? Is focused Music listening important? Does Video up scaling affect Audio performance? Does Video up switching affect Audio performance?

With the article we attempt to cut through the confusion of marketing hype, and plainly explain the relevance the Audio, Video receiver has, to both **Audio** and **Video** performance.

While reading this article remember, we see with our eyes and hear with our ears.

**Audio Device.** As many multi channel



AV receivers have a multitude of functions and features focused on Video, including up switching and up scaling video, to give apparently "better" picture, for display devices, we have to decide if the video aspect of the receiver is important, or is the main job for the receiver Audio performance.

Once we have decided the task this device is to perform, we now have to look at how we get the best results for the least cost.

### **Where do we start?**

Most will say the most important thing for amplifiers is Watts per channel, and in part, I would have to agree, but how do we know how many watts is enough? How is the Watts Measured? How many channels driven? Which type of amplification drive is best choice?

**Variations include everything from Class A/B through to Class D. The difference between the types of amplifier drive is a whole other article.**

**More often than not, multi channel Receivers output is measured one channel driven, what we need is all channels driven.**

Considering the power capacitance of amplifiers help with the power delivery, once the cap has discharged, it needs to be recharged; this takes time and power away from the output stage. Dependant on how much power is required the quicker the recharge the better the audio performance.

The quick easy way for the novice to determine if the output of an amplifier is measured as 1 channel or all channels driven, look on the back panel of the receiver, for the power consumption requirements of the unit, this will give you a clear Watts required, in this case, generally the higher the number the better the performance. This also relates to the number of channels the amplifier is driving 5.1, 6.1, and 7.1. An amplifier can rarely have too much power!

**Beware not to confuse output with CONSUMPTION.** Power requirements (consumption) of the amplifier will give an indication of its performance capabilities, not the output, as the specification sheets and marketing would have you believe. As a general guide, use it for all Amplifier devices, from MONO power amps to Stereo integrated receivers including multi channel units.

Now that we know the power consumption of the Amplifier we also

need to look at the video circuitry on board, video switching takes less power than video scaling, if audio performance is the focus, video switching is user friendly, with least audio compromise, creating a hub for all components to pass through.

**Video Device**



Consider the following: As Video signal information "should" only be

scaled once; passing the video signal through more than one scaling device is redundant to the picture.

Video display Devices (LCD, PLASMA Screens Projectors) and Source devices (DVD, DSTB, Game System, Blu-ray) all have on board video processors of varying qualities. If the source device video output is 1080p, all video processors down stream from the source will pass the signal through as if the additional video processor is not even there, including the video processor of the screen. This especially true if the signal path is HDMI, from source to screen, the screen will behave as a Monitor.

In general, the video processor of most Quality Display and Source devices will out perform the video processors of most budget AV receivers. Placing an A/V receiver mid stream of the



signal path makes the system somewhat easier to use multiple devices, as the A/V receiver will switch between the devices as required. Although it may seem desirable to connect in this manner, remember, the main job of the A/V Receiver is Audio

Processing, as it is required to drive your Loudspeakers, comfortably filling your room with sound.

Purist connectivity of multiple source devices prefers direct connection, e.g. Source device Direct to Display device, signal path now relies purely on the video processing abilities of the Source or the Display.

Superior video processing performance can only be achieved when a high quality dedicated video processor is incorporated into signal path.

To get the best performance for all video devices, calibrate the individual inputs. This somewhat complicated process will improve the performance of all video sources in the system.

Remember, performance is not necessarily the bigger the better, nor is it related to dollars spent, "it is not how much one spends on home entertainment equipment; it is where one spends their money."

To conclude ensure the most flexible and upgradeable, high performance system, separate your components. Master one device for one Master Job, it may cost more in the short term, but once you have experienced a Master performer, you will wonder why it took so long to make the upgrade. Remember; always consult your Specialist before parting with your money.

For more information on this subject, make an appointment with Audio Trends on (03) 9874 8233.

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## **AudioTrends Showroom**

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