

Introduction

With DAC's still arriving on the market at an impressive rate, ways of differentiating your offering from everybody else's start to matter. The actual number of chips that a DAC can be constructed around is relatively limited (at least at remotely terrestrial pricing) so the differences in implementation of these chips and the supporting hardware is critical to show your product isn't simply a 'me too' offering.

The catch with setting out to do something different is that if you haven't made custom implementation of digital hardware your business up to now, you run the risk of making a product that sounds like a bag of spanners and no matter how compelling your marketing. For this reason, many companies have taken the sensible step of letting firms with the necessary experience in this area assist in getting the hardware and software right while other companies have make use of well-known individuals with similar experience of digital. Often, letting the public know that you have developed a product this way can be beneficial to sales too.

As an AV brand, Parasound needs little introduction, the Californian company has a strong pedigree in producing capable and cost effective AV processors and power amps that never made any secret of their pro audio and custom install abilities thanks to visible rack ears and bombproof construction. The company was less visible in the two channel field but has produced some technically interesting products and recently has been back in this category with a vengeance. The £500 Zdac is Parasound's move into the ultra-competitive sub £1,000 DAC category and they have teamed up with Danish company Holm to develop a proprietary decoding stage that the company claims "...sounds more natural and less "digital" than DACs selling for far more because of its innovative design and high quality parts." Can the Zdac make good on these bold claims and stand out in a crowded category?

Design

On paper the Zdac is a mixture of conventional- almost reassuring- touches and some other design decisions that are less common. The Parasound is a three input design boasting a single example of a coaxial, optical and USB connection- sort of a de-facto 'holy trinity' of inputs that we've come to expect DAC's to have as a bare minimum. The optical and coaxial connections are 192kHz capable (and support multiples of 44.1kHz and 48kHz while they do so) but the USB connection tops out at 96kHz and while asynchronous is not capable of ASIO playback. Equally, this does mean that the connection is driverless and doesn't require any additional software to run. How important this is to you is largely going to depend on how you listen to music. If you are a full blown computer audio user, it might be a non-starter but for reasons, I'll come on to, I don't think this is how Parasound sees the Zdac being used.

The decoding section of the Parasound is slightly different from much of the competition. Developed in co-operation with Danish electronics manufacturer Holm Acoustics- who while relatively small are very active in both digital to analogue conversion and DSP implementation. Holm systems operate exclusively in the digital domain at a source level and make use of active crossover speaker systems with ICEPower amplification. Holm's initial work with Parasound resulted in the CD1 CD player that is a very serious product indeed but rather pricey at £4,700. The Zdac makes use of some of this functionality in miniature including an Analogue Devices AD1895 sample rate convertor and AD1853 DAC chip. Analogue devices are perhaps less well known than some of the key competition- not least because audio is only a tiny part of their business but they have been used in some extremely high end devices over the years



How Parasound makes use of this decoding hardware is rather different to the competition. Any digital signal that the Zdac receives is relocked to 105.46875 kHz which is the clock frequency divided by 256. This is then oversampled four times to produce a sampling rate of 24/422kHz- a figure I have never personally seen used in a digital to analogue convertor before and a quick look around the internet only brings up results that pertain to the Zdac. Parasound claims that this very high sampling rate helps the Zdac sound more natural by producing the optimal signal for the analogue section of the Zdac but arguments about whether more or less processing makes for a more natural sound have been going on since the arrival of CD and show no signs of dying down so we shall have to see.

Having decided to treat the incoming signal slightly differently to the competition, the Zdac is also different in terms of design and layout. The Zdac is equipped with XLR connections which although seen on some of the competition at the price point is by no means a standard fit. The interesting decision is that the Parasound does not make use of an external wall wart power supply and the rear panel features an IEC socket rather than a circular mains connector. This again isn't unheard of- Micromega's My-DAC also connects to the mains directly but while Micromega does this by being extremely simple and requiring a very minimal power supply arrangement, the Parasound is sufficiently hefty internally to need a much more substantial power supply. Around the front, the Zdac has a volume control but the rear outputs are strictly line level only and this pertains only to the headphone socket on the front panel- which is in turn only a 3.5mm connection rather than the quarter inch type more commonly found on these devices.



Aesthetically, the Parasound manages to look like a Parasound but at the same time convey a slightly more refined aesthetic than the full size gear can. The all metal chassis is built to a very high standard and everything feels extremely substantial even for a fairly small device. The only power indicator is the input light and there are no additional sampling rate indicators which means that although the Zdac is unlikely to appeal to the neurotic, it does look very clean and minimalist. The Zdac is available in silver and black and one curiosity is that the black unit is fitted for rack mounting while the silver is not. Quite how useful the rack mounts are in a device which- along with the rest of the Z range- is a different size and shape to everything else is unclear but I guess this is why blanking plates exist.

Unusual sampling rates aside, it isn't immediately easy to get excited about the spec of the Parasound. Other DAC's at the price can offer more inputs, more sophisticated USB implementation and also function as preamps if required. Against this, the Parasound does look and feel substantial and the digital pedigree of Holm is impressive. The Zdac is going to have to do some convincing sonically but there is at least the chance the quality is there.

Setup

The Parasound was used mainly with a Cambridge Audio 851A integrated amplifier and was connected via the XLR connections. Speakers used included the Neat Momentum 4i, Audio Note AN-K and Dali Mentor Menuet. The optical and coaxial connections were tested with a Naim ND5XS streamer that can generate the required sampling rates up to 192kHz. The USB input was tested with my standard Lenovo T530 ThinkPad running Foobar and Spotify. Music used was generally lossless and high res FLAC but some listening was done via Spotify and the BBC iPlayer radio system.

Sound Quality

While there is nothing intrinsically exciting about the features of the Zdac, it didn't take too long listening to realise that the Parasound has quite a bit going for it and this is one of those slightly awkward moments where I can't point to anything in the spec- curious upsampling frequency aside- that might be clearly responsible for it. What I can say is that Parasound has achieved their goal of making the Zdac a very 'undigital' product. This is a one of the most refined, controlled and above all, easy to listen to DAC's I have spent time with in quite a while

Across every genre of music that I threw at it, the Parasound was unfazed by poor or forward recordings and managed to return the same refined and compelling performance almost exclusive of the quality of it when it went in. The Zdac sounds big and has an impressive amount of low end heft to it but it never sounds artificial. Very large scale pieces of music can take on a slightly larger than life quality to them but it never really impedes enjoyment of the performance. Voices are full of texture and detail and always well placed in the context of their supporting instruments. The instruments themselves are pretty good too. Listened back to back with rather less forgiving and very matter of fact Cambridge Stream Magic 6, the Parasound is slightly warm and bloomy with piano and brass in particular but this is never hugely apparent when you are simply listening to it on its own without constant A/B switching.

This very consistent performance is the Parasound's greatest asset. If you like what the Zdac does, you will be pleased to find that it seems able to do it almost regardless of the material used and the recording quality available. Put a signal in and luxuriate in the controlled and enjoyable wave of music that results. The Parasound is extremely easy to listen to for long periods of time and while it might be easy to envisage that you might be looking for more excitement and attack, it is hard to balance this additional excitement with the impressively forgiving nature that the Parasound has. More exciting DAC's might be happy enough with something well recorded but when you want to listen to North American Scum by LCD Soundsystem at the sort of volume it should be listened to- as loud as you can before your neighbours stove your head in with a shovel- the Zdac keeps this ragged recording sounding as it should while the more insightful DAC will tear it to pieces.



The flipside of this civilised behaviour is that with the rarefied world of high res, the Parasound doesn't always step up in the same way that some other designs at the price can. Material never sounds bad- as before it takes on the same qualities that the Zdac imparts to standard res material- but there is a sense that some of the lovingly mastered presence and realism that some high res albums can possess isn't present here. Quite how important this is will depend on how much material from this vanishingly small segment you own. The USB input of the Zdac is absolutely bombproof and a useful convenience feature but the lack of ASIO playback might be a problem if your computer is dumping nastiness into the signal from other places as the Zdac is going to be dependent on WASAPI for audio.



These positives and negatives do point to a specific role for the Zdac that plays to its strengths and offers considerable potential. If you have a blu ray player that can be used as a UPnP streamer, the Zdac is the perfect boost to performance instead of buying a dedicated streamer. The optical and coaxial inputs are 192kHz capable and the Parasound's ability to sound very good almost completely independent of the system it is used in means that the performance is likely to be extremely consistent. Some quick tests with a Cambridge Audio 752BD (which is a bit pricey to be the sort of player I was thinking of but served as a useful test bench) demonstrated that the Zdac was completely happy with it as a source and the same full bodied, enjoyable and capable sound was apparent.

Conclusion

7

The Good

- Refined, musical and engrossing sound
- Excellent build quality
- Compact dimensions

The Bad

- USB not 192kHz capable
- Limited inputs
- No sampling rate indicator

I own this

I want this

I had this

Parasound Zdac Digital to Analogue converter Review

The Parasound wades into battle at the price point with a spec sheet that is unlikely to grip anyone that buys from figures alone. It is a clever enough product but nothing about the inputs or facilities suggests that this is going to be something to swim rivers and climb mountains for. After some time spent with the Zdac though, I'm genuinely enthused by it. The Parasound takes music- all music- and consistently and calmly makes it genuinely engrossing and entertaining to listen to. If the USB connection is your main point of contact the non ASIO design and 96kHz top out might not be for you but if you are looking for a way to boost the performance of a blu ray player or streamer with an optical or coaxial out- and are happy to use the USB as a well sorted convenience feature- the Parasound does a fine job of making music enjoyable. For anybody looking for long term satisfaction over short term excitement, you need to hunt the Zdac down.

The Rundown

Build Quality

9

Connectivity

7

Ease of Use

8

Features

7

Audio Performance

8

Value for Money

7

Verdict

7