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iFi xDSD DAC and Headphone Amp Review

16-20 minutes

Meet the portable DAC that does pretty much everything- and most of it incredibly well

by [Ed Selley](#) Sep 28, 2018 at 7:31 AM

• What is the xDSD?

The iFi Audio xDSD is a portable DAC and headphone amplifier that builds on what iFi has been doing for some years by condensing various technical innovations and design features into a single product. You don't need to be a genius in the field of competitive retail to realise that at £400, the xDSD is aimed squarely at the [Chord Electronics Mojo](#). The smallest Chord DAC has been awarded many accolades here and elsewhere and has translated that into becoming the 'big fish' in the category.

As we shall cover, the xDSD manages to do a great deal within its commendably dinky form factor. The xDSD has seemingly been carefully designed to do more, decode more, run longer and look smarter than the competition and as if to emphasise the point arrives for review as the new recipient of an EISA award which comes as a result of getting a great many different Hi-Fi journalists to agree that your product is great (which is quite an undertaking as

anyone who has tried to get Hi-Fi journalists to agree on anything will attest). The momentum seems to there, can the iFi deliver?

Specification and Design



The xDSD is a combined DAC and headphone amplifier of a type that has become extremely popular over the last few years. The output can be used at a line level and the signal sent to a conventional system but iFi has taken the (entirely correct) view that it is more likely to be of use to headphones or earphones as a self-contained partner with a laptop or tablet or phone.

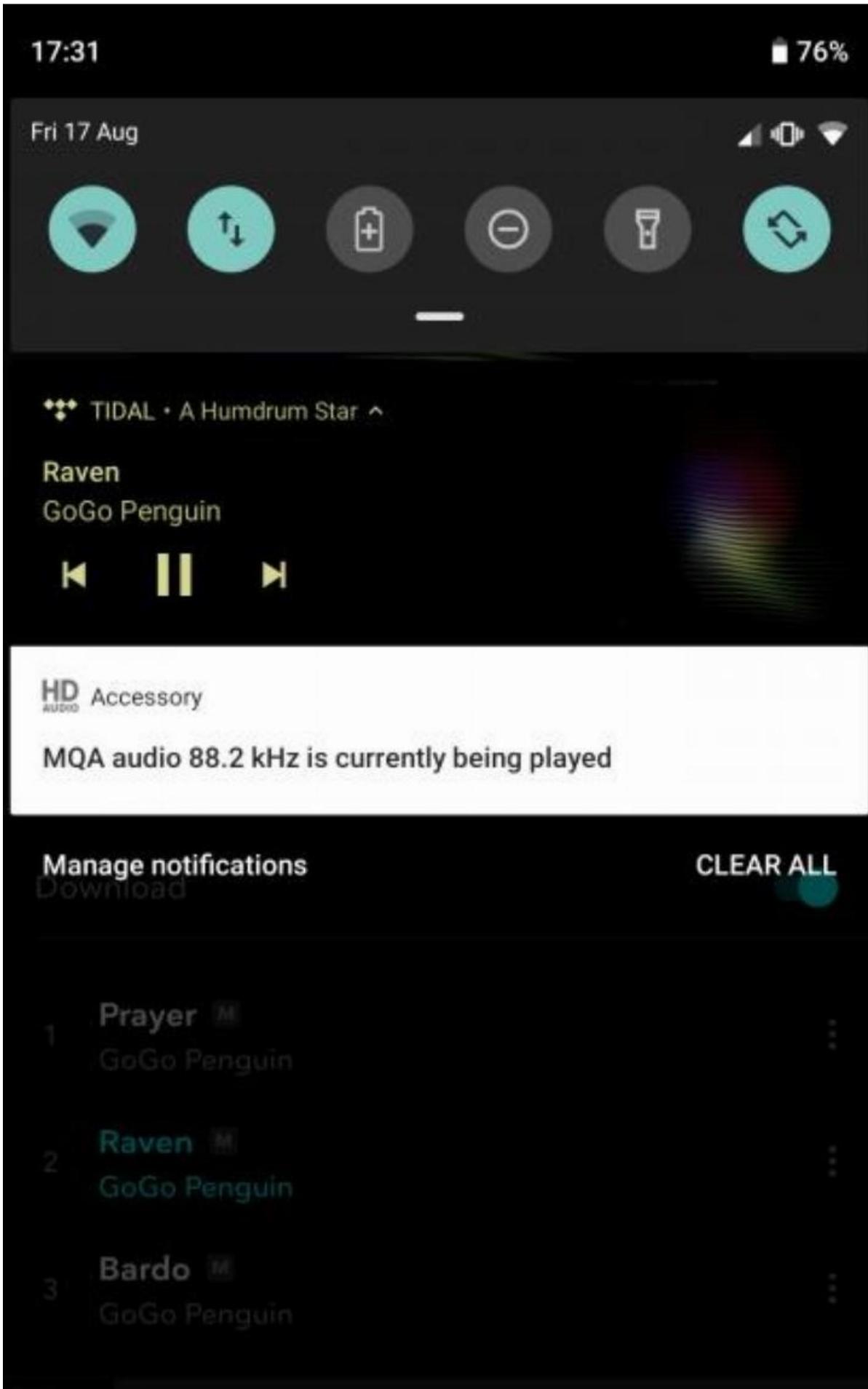
The decoding hardware that iFi has applied to the xDSD is considerable and slightly different to the bulk of rivals on the market. Instead of the almost omnipresent ESS Sabre, the xDSD uses a Burr-Brown DSD1793 DAC chip. This is a less common selection for decoding but it is one that iFi has some experience with, in other products the company has released. In terms of formats and sample rates, it doesn't place the iFi at any

disadvantage either. The xDSD can handle PCM at sample rates up to 768kHz and DSD512- that is to say, well into the realms of borderline vapourware. As well as a USB input, this is also accessible via a 3.5mm socket that works as either a coax or optical input.



More intriguingly, one addition to the spec that might grab your attention is that as well as PCM and DSD, the iFi can also handle MQA natively as well. The merits of MQA pretty much live or die on whether you use Tidal or not but if you do (and your supporting mobile hardware can extract MQA masters which itself is far from a given), it puts the iFi into a very small subsection of products. The long and the short of it is that combined with the more conventional formats, this is the equivalent of a 'universal translator.' Impressively, iFi isn't done there either. As well as wired connections, the xDSD is equipped with Bluetooth. It is fully Apt-X capable and this puts it into a slightly different category again to many of its rivals. Most of the other compact DACs of this nature (with the honourable exception of the [Audiolab M-DAC Mini](#) which,

as we noted at the time, isn't necessarily that mini) don't have Bluetooth and while the Chord Mojo can be made to operate with Bluetooth, you need to add a Poly to do so and this bumps the price up considerably. As I have found having a DAC swinging around at the bottom of my phone to generally be an annoyance (although iFi has done their bit to reduce this as an issue as we shall see), having this as an option for busy spaces makes a considerable difference to how you might go about using it.



These features are mated to a considerable selection of technology too. iFi is effectively the 'compact' division of a company called 'Abbingdon Music Research' (why it has two 'b's has never been completely explained). AMR is an organisation completely unconcerned what anyone else is up to and they have come up with some interesting technical solutions to some concepts over the years. The xDSD borrows one of these in the form of the 'GMT Clock' that controls timing of the digital signals. Whereas this has previously been used with specific reference to Bluetooth, here it's used to slave everything together for improved synchronisation and timing.

There are some interesting user adjustable options too. You can adjust both the 'X-Bass+' and '3D+' settings via a button on the front panel to augment the bass to suit in the case of the former and - more intriguingly - try and recover lost soundstage in the latter. This adjustability is then matched with a custom headphone stage that also borrows parts and ideas from the wider AMR organisation. The result of this is a product that feels a little bit different to its rivals. More than anything else, the xDSD comes across as a product that has been equipped with everything that iFi has in its inventory to be the best.



This extends to the styling. Previous offerings from iFi have often stretched the idea of 'portable' to the point where I think it might be fair to point out that fitting a battery to something does not automatically make it a prime candidate to walk out the door with. The xDSD does a fine job of correcting this. The chassis is compact and thoughtfully shaped with a view to working in the same space as a phone and the styling is also rather pleasant. The smoked chrome finish with the rippled casework helps you to feel that you've bought something that instils a little pride of ownership. Like so many products we've seen of late, it's a herculean fingerprint magnet but iFi does at least supply a nice bag to keep it looking smart.

Beyond the mild impracticality of the finish, there are some aspects of the xDSD that are genuinely clever. The first is that with a view to using it with an OTG cable or Camera Kit adapter, it is fitted with a male USB A connector. This means that the iFi will connect directly to the end of these and avoid the need for a second run of cable. It does mean that an adapter will be needed to connect it to a 'normal' USB cable but iFi is bright enough to ensure that there is

one in the box. The other decision feeds on from this. As the iFi has clearly been designed as a mobile device, it is fitted with a separate USB charging socket on a micro A connection. This means that the xDSD won't attempt to draw power from your mobile device either. Neither should it need to. The internal battery is rated for around 8 hours of playback and charges in about four hours from a 2A charger.



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How was the xDSD tested?

The iFi has been used connected to a Lenovo T560 ThinkPad as a conventional USB DAC. It has then been used with an Essential PH-1 smartphone that allowed for testing MQA in a relatively straightforward way. Additional phone testing has been undertaken with a Sony Xperia XA2 and a Samsung J3. It has been tested with Sennheiser IE800S, AKG N5005 and Audiolab M-EAR2D earphones and the [Audio Technica ATH-A2000Z](#) headphones. Material used has included [Deezer Hifi](#), [Tidal](#), [Qobuz Sublime+](#) as well as lossless and high res FLAC and AIFF played from a Melco N1A via Bubble UPnP.

Sound Quality



An unremarked area of audio testing is that it helps to have some different permutations of equipment on hand to ensure that an unusual response to a requested action isn't specific to the combination you happen to be using at the time. The xDSD has reminded me of this in no uncertain terms. Put simply, it really didn't get on with the Essential PH-1 out of the box. Getting audio other than MQA out of the PH-1 into the xDSD via OTG or Bluetooth proved to be impossible. Given that the PH-1 is almost completely stock Android, I have no idea why this is the case but, to their

credit, a new version of software appeared during testing (5.30c) which corrected this.

On the assumption that you have a phone that does work with the xDSD (and both the Sony and Samsung have been perfect with both software versions), there is a huge amount to like about how the iFi goes about making music. It manages to have a degree of character to its presentation that doesn't get in the way of the basic accuracy of the performance. There is, in fact, a sly dig at measurement junkies lurking on the back of the xDSD in that there are two filter settings marked 'measure' and 'listen', the first presumably turning in some optimal graphs and the second being something that iFi feels sounds better.

With this firmly in the listen position, the iFi delivers the blissed darkness of Underworld's *Beautiful Burnout* with confidence and authority. Used with the very capable Audiolab M-EAR 2D earphone, I have not found much (or indeed any) need for the 'X-Bass+' option. The bass on offer is rich, well controlled and usefully agile. As you might expect, this is a boon when listening to dance music but it has benefits beyond this too. The opening bass riff of Ray LaMontagne's *Repo Man* is delivered with the immediacy and sense of swagger required to sound real. Turning X-Bass+ on does boost the amount of low end on offer but at the expense of some of the funkiness.

The 3D+ control on the other hand, is something that is worth experimenting with. The 24/48 download of Peter Gabriel and Yossou N'Dor performing *In Your Eyes* benefits from the boost in the sense of the venue and the crowd that turning it on gives you. You might feel that this is not listening as the artist intended and that is fair enough - you can of course turn it off. Considering how

the presentation of a lot of material changes through earphones in particular, I think it is very welcome.



The Bluetooth implementation is also excellent and, in the course of using the xDSD on an overnight trip to London, it has been how I prefer to use it on the move. Being able to separate your phone from your listening equipment is both underrated and extremely useful and the difference in performance when listening to lossless files this way (on a tube in particular) over a wired OTG connection is negligible. When in playback, noise levels stay low to the point of nonexistence but there are some odd noises from the pair when they are at idle with no audio playing. The only other minor gripe is that that iFi can be an elusive object to pair with, often requiring a refresh or two before it appears.

These periodic noises do make themselves felt listening via computer over USB. It is hard to identify exactly what is causing

them but given that the test laptop has been agreeably silent with other USB DACs, it would point to the iFi being the more likely candidate. Little details like this, the choice of connector optimised for portable use and a very slight lack of “what you hear is what you get” which the Mojo delivers into the Audio Technica ATH-A2000Z in particular - I find myself fractionally preferring the Chord for use in this context.

This is of course unless, you switch to Tidal and start listening to Masters. Via both the Essential PH-1 (which worked from the outset on the original software) and via the laptop, the xDSD is like the Meridian Explorer in that native MQA decoding genuinely seems to bring something extra to the performance of these files. Returning to my current favourite in the form of GoGo Penguin's *The Raven*, the iFi is simply outstandingly good. There is an element of mild frustration with the whole business of MQA that it still isn't provably clear *what* is happening to achieve this but I find it harder to argue with the results.



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Conclusion

SCORE

Pros

- Brilliant specification for use on the move
- Lively yet forgiving sound
- Handsome looks

Cons

- Slightly less capable in fixed use
- First class fingerprint trap

- Possible compatibility issues with some devices

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It doesn't take too long in the company of the xDSD to realise that this is a very considered attempt by iFi to 'out Mojo the Mojo.' The nature of the specification, the features and design has clearly been assembled to be the best portable DAC you can get your hands on for £400. If you aren't using this portability, and you aren't a Tidal user, the Mojo still holds its own. There's still something about the way it performs that the iFi can't always equal.

This is, however, the best portable DAC you can buy. The iFi combines a truly excellent feature set with a sensible form factor, good looks and good build with enough considered design aspects and - most importantly - enough sonic fireworks to be the best means of boosting the sound of your phone that I have yet tested. The clever bit is the application of Bluetooth. If you simply need convenience on a Monday morning, the iFi delivers. If you want to push the limits of mobile audio it can do that too and it can sound great at the same time. For these very compelling reasons, the iFi comes Highly Recommended.



Suggested retail price when reviewed: £399.00

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