

# iFi Nano series

*Small, Smaller, Smallest*



# iFi Nano

*I couldn't hide my enthusiasm when I listened to the iFi Micro series for an earlier review. These small but very beautifully built cabinets appeared to have a quality of sound that highly surpassed their price range. Both the digital and analog 'solutions' offered by this British brand could be called sensational. That's why I started this review of the brand new Nano series with expectation and curiosity. These devices are a size smaller than the ones in the Micro-series, as the name already suggests. At least in footprint, but would it also apply to their performance?*

*These new series consist of two devices, for the time being. Also two new accessories were launched, which I will also discuss in this review. On one hand because they fit in logically and on the other hand because I've become so enthusiastic about this brand that I don't want to leave anything unmentioned. I will discuss them each separately, and where possible I'll indicate what they do in combination with each other.*





# iFi Nano iCan (€169)

I praised the 'big' iCan from iFi partly because of the high output of no less than 400mW, that made it possible to control even the hungriest of headphones effortlessly. The iFi nano iCan's output is 'just' 150mW, well below the 400mW. But to put this number in perspective, iFi also mentions the power outputs of an Apple Macbook Air (43mW) and an Apple iPod Touch (15mW) on the packaging. The 'gain' (amplification factor) of the Nano iCan can be set in two steps: +6dB or +18dB. I assume that 150mW will be reached at maximum gain. Because the Nano iCan has been developed with mobile use in mind, the comparison with the power output of a MacBook Air not very strange. That very thin and featherlight laptop is of course the favourite knee warmer of many first class traveller or Frequent-Flyer-Miles top earner. To allow music loving travellers to enjoy their music for as long as possible, iFi has equipped the Nano iCan with a built in Lithium-Polymer battery of 1400mAh, that gives 70 hours of joy at average use. During charging a small built-in LED lights up blue, in use the LED is green and when the battery needs to be charged the LED is red.



Despite the mobile purport I also tried the Nano iCan at home with my AKG K-701. That's not the hardest headphone to drive but it really benefits from a good headphone amplifier, and the Nano iCan really stood up to its task. But still, when I found myself in need of a headphone amplifier strictly for home use, I would choose the iFi Micro iCan I reviewed earlier. For this part of the review I mostly listened to music while 'on the road'. A long trip by train to Amsterdam and back was a good opportunity to dig up my iPod Classic. A small disadvantage is that your headphone needs a 6.3 mm plug to fit the Nano iCan. A remarkable choice for a portable device, for most portable headphones have a 3.5mm plug-in. I suspect the reason for this is the better mechanic durability of a 6,3mm connector, and iFi includes a decent





adapter plug with the Nano iCan. Furthermore there is a reasonable (but not more than 'reasonable') interlink with the Nano iCan to connect it to the tape-output of an amplifier.

So, how does it work; your iPod and Nano iCan in your pocket at the same time? Well, it's actually very easy, although it becomes quite a heavy little bundle. In the box of the Nano iCan, besides the adapter and a short 'mini-jack to mini-jack' cable, you also find a firm rectangular slice of silicon-like rubber and two elastic straps, with which you can easily secure your iFi to your iPod (or other sound carriers) very firmly and without scratching. For the journey, I took my 'Ultimate Ears Triple-Fi 10 in-ear' and 'PSB M4U2 over-

ear' headphones with me. I love the sound of the Ultimate Ears, but because I wear glasses I never got used to this headphone's cables passing over my ears. So I quickly decided to bag it and use the PSB instead. Observant readers probably know that the PSB is an active noise canceling headphone with a built in booster, but I switched those extra settings off to give the iFi Nano an honest chance.

### **Listening, at last...**

Even though I had made up my mind not elaborate too much on the technical side of things, I find that I just wrote three long paragraphs without telling you anything about how the Nano iCan performed... Forgive me, but there is just too much interesting stuff to talk about it. Anyways, impatient readers who skipped to this paragraph after just two lines of tech-talk should read the simple but comprehensive manual or check iFi's excellent website, it's really not that hard after all. So, what about the Sound? Well, compared to the standard output of the iPod, the iFi Nano has more natural drive and maintains a certain ease, just as if you were driving a big car on the highway at a speed of 75 Mph; you take it easy but you know there is so much more power when you need it. Dynamics are bigger and the music becomes more alive. The delightful dreamy electro pop by Lulu Rouge is full of dub influences and it contains some very deep bass that sounds a lot more convincing through the Nano iCan than with the iPod alone. Actually, this applies to all sorts of music. The XBass switch only has one position and it does exactly the same as the XBass switch on it's big brother (the Micro iCan): with 'poorly' recorded music and mediocre in-ear headphones it gives a pleasant improvement. But with a pair of headphones that has a good





bass response by itself, the added bass can become a bit too much. To some extent, this also applies to the 3D switch. With some music it gives a significant broadening of the image and it takes away the feeling that you're listening to a pair of headphones. But with well-recorded classical music it quickly becomes an audible gimmick that can be rather annoying at times. The good thing is that you can switch those two options off, which is great. The small volume controller operates smoothly and it's pleasant mechanical resistance provides a solid 'feel'. By turning it all the way back to zero this knob acts like a click-off switch. Which is quite a handy feature if you want to extend battery-life. I haven't actually tested the specified playing time of 70 hours, but I know from practice that manufacturers tend to specify battery life on the safe side, so I just assumed you'll have no problem reaching it. The Lithium battery (that has been mounted on the PCB so it will have to be replaced by iFi when the time comes) is not bothered by the so-called memory effect, and it has a high durability for many charging cycles.



iFi NANO

# iFi Nano iDSD (€189)

DSD has been a 'hot' file format for a while. And even though I'm still not convinced that, in the long run, it will lead to a wide acceptance in the market, but it's the best sounding HiRes format I know. Provided that it is applied correctly and the recordings are impeccable of course. An increasing number of manufacturers make da-converters with the possibility to play DSD over PCM (DoP), but most of those devices are quite expensive. If their manufacturers are trying to emphasize the quality and exclusiveness of the file format by boosting the price of their hardware, I think they're doing it the wrong way. At least... if they're aiming for a wider target-group, like they all say they are. Fortunately the people at iFi handle things differently and they gave the Nano iDSD a price tag of less than 200 euros. For that money, it cannot only manage all DSD formats (DSD1, DD2 and DXD), but also PCM signals with a resolution up to 32bit/384kHz. And let me tell you this: even if you are planning to use the iFi Nano iDSD strictly for non-DSD files, it's still a great audiophile 'best-kept-secret' at a bargain price. On the practical side, the iDSD is basically made for portable use and like the Nano iCan it comes with a built in battery (charging through the USB input) and matching fixation-accessories. The only thing is that converting from digital to analog re-

quires so much computing that the battery in the iDSD will only last for 10 hours. To decide whether that's bad or not is up to you. I don't think that many people will use their iDSD to play DSD files from their iPhone, but if that's what you want you need the 'Onkyo HF Player', which you can buy as an in-app upgrade from the [App Store](#) at €7.99, after you download the free version.



Still, I think the iDSD only reaches its full potential in an advanced computer audio setup. For that, it has a pair of good RCA outputs, right next to the rotary knob that doubles as a volume and on/off-button. There's also a coaxial



digital output next to the USB input in case you want to link the iDSD to an AV-receiver or an external DAC. That is something of an iFi-speciality anyway: combining handy and logical functions. A small but solid switch enables the user to use a 'light version' of the zero-jitter® filter, that was developed by iFi's parent company AMR, and a seven color(!) LED informs you about the resolution of the file that's playing or the condition of the battery. I used my MacBook Pro as source to connect the iFi Nano iDSD in my big set. For DSD files I alternately used the software players from JRiver (MC19) and Audirvana+, that should both be able to handle native DoP, but in my case JRiver only worked with ISO files and Audirvana+ could also deal with separate .dsf files. Probably a setting I overlooked, I don't play DSD files every day so it was a bit puzzling at times.



Once properly set up, the musical performance of the minuscule iDSD borders on the unbelievable. Bach's Cantates volume 43, by the Bach Collegium Japan directed by Masaaki Suzuki, were presented with such flow and so much spatial information that I forgot to take notes because all I wanted to do was just listen with a big lump in my throat. The same recording in PCM is also very nice, and if you didn't know better you'd be perfectly happy with it. But in this case, the DSD takes a significant and clearly audible next step in sound quality. The same goes for the album Chet by Chet Baker. It sounded more colourful, more relaxed and more lifelike than I ever heard before. Days of Future Passed by the The Moody Blues? Same thing... And before you get the wrong impression, recordings in 'normal' PCM sound extremely well too, with a drive, spatiality and timbre that puts my older reference to shame. Flipping the switch of the zero-jitter filter to 'on' gives a tad more spatiality, and timbres become brighter and more colorful. A useful function that I would apply anyway if you suspect that your USB-source causes some jitter. I also recommend to use a better USB cable than the one that comes with the iDSD. The one provided is of reasonable quality and ensures that you can get started immediately, but an aftermarket USB cable (which iFi also makes, more about this later) will give a clearly audible improvement. I can only imagine what would happen if you fed the iDSD from the iFi Micro iUSB Power...





# iFi iPurifier (€99)



Strictly speaking, this small passive purifier is not part of the Nano series, but because it's been launched at the same time, it seems logical to test them at the same time. You should put this passive component at the end of the USB chain, so between your cable and the USB input of your da-converter. What the iPurifier does is very simple: it lowers the electromagnetic noise (EMI) in the signal by approximately 5dB, which is much in terms of audibili-

ty. That EMI can occur if because the signal and electricity are transported by adjacent conductors in the USB cable. I can be short about the operation of the iPurifier. For the mere 100 Euros it costs, it is a no brainer and a man-



datory purchase. Not only with the iDSD, but with every USB DAC that doesn't have a galvanically separated input. The music gains 'ease' and (cliché-alert!) stands against a blacker background. In other words: There is more silence between the notes. The construction quality of this audiophile gem is of the very highest level.



# iFi Mercury USB cable (€99)



Like I indicated earlier, using a better USB cable with the iDSD is basically a 'must'. Recently, iFi started the distribution of their new, single-lead Mercury USB cable. It has metal plugs, excellent shielding and three RF stoppers, which are made of carbon and are put around the cable in such a way that they can be moved. I'm not a lover of RF stoppers on digital cables, because I think the sound can get a bit dull, but because there's also electricity running

through the cable you could argue that the RF stoppers more or less work to prevent radiating outwards rather than inwards. In this case, iFi advises to slide two stoppers as close to the connectors as possible and position the third one somewhere in the middle. The Mercury cable gives a clear improvement over the free cable that's included with the iDSD. The music gets more contour and better timbre, but as far as I'm concerned, this beautifully



crafted cable doesn't have the last word in spatiality and detail. A slightly cheaper Audioquest Cinnamon managed to surpass the Mercury USB on those parameters and sounded better as a whole. But those who prefer to have all their stuff from the same brand will really enjoy the Mercury USB from iFi.



# Conclusion

I was enthusiastic about the Micro series by iFi, and that hasn't changed. But what they have achieved with the smaller and cheaper Nano series, especially in case of the iDSD, is almost a miracle. If iFi decided to build the technology of this tiny DSD USB DAC into a larger device with a bigger choice of digital inputs, and if they'd achieve the same sound quality at a decent price, the competition would have a tough time beating it. Computer-audiophiles who just need a USB DAC and are on a limited budget (lets say: less than 600 Euros) can stop looking.

The Nano iCan is a real treat but I have to make one small footnote: In portable applications the sound quality is absolutely fantastic, but you'll be nursing a HIP (Heavy Inner Pocket) for unreasonable amounts of time.

When you need a headphone amplifier for home-use I think you'd be better off with the larger Micro iCan. The iPurifier... Do I need to say more? It's a pity I already have a galvanically separated input on my DAC, because Santa Claus would be welcome to start his ride a lot earlier this year. As for the iDSD: I actually consider buying one myself. Not because I need it, but because I WANT it. That sort of sums it up, doesn't it?





# Music and information

## Music links on Spotify

[Lulu Rouge - Bless You](#)

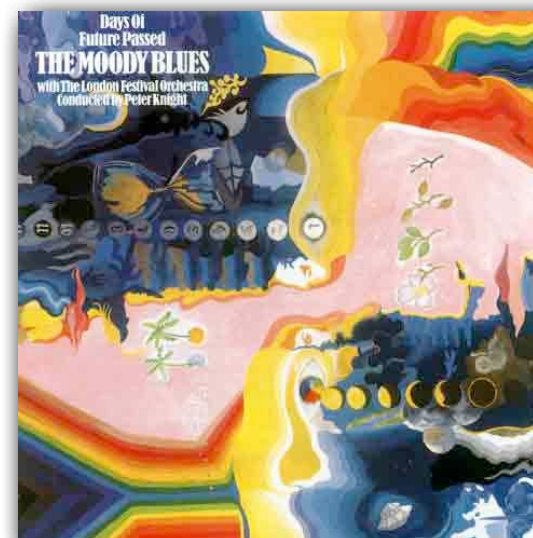
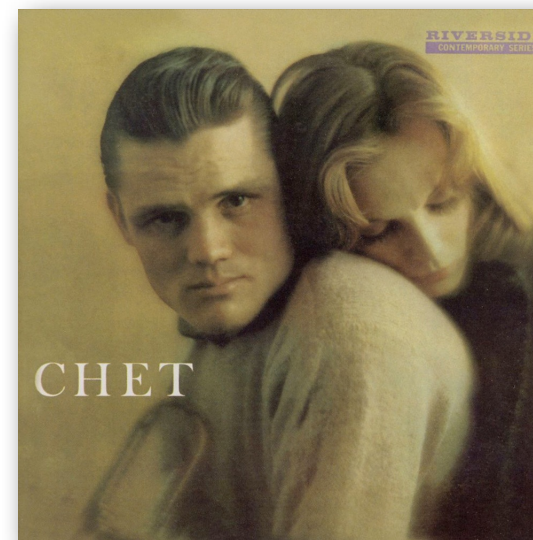
[Chet Baker - Chet](#)

[The Moody Blues - Days Of Future Passed](#)

## Webstore

For more additional information about the iFi Nano series, see our webstore:

[iFi Audio Nano products](#)



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