



iFi audio iPower X

Silence improved



Power - cleaner than ever

During the R&D stage of iPower, introduced into our portfolio in 2015, we challenged ourselves by aiming to manufacture the quietest power supply available and make it compliant with as many products as possible. The feedback from the audiophile community and the longevity of this product was very positive.

We never rest on our laurels and would now like to introduce the new higher model - more visually pleasing and suitable for more products than ever - the new iPower X.

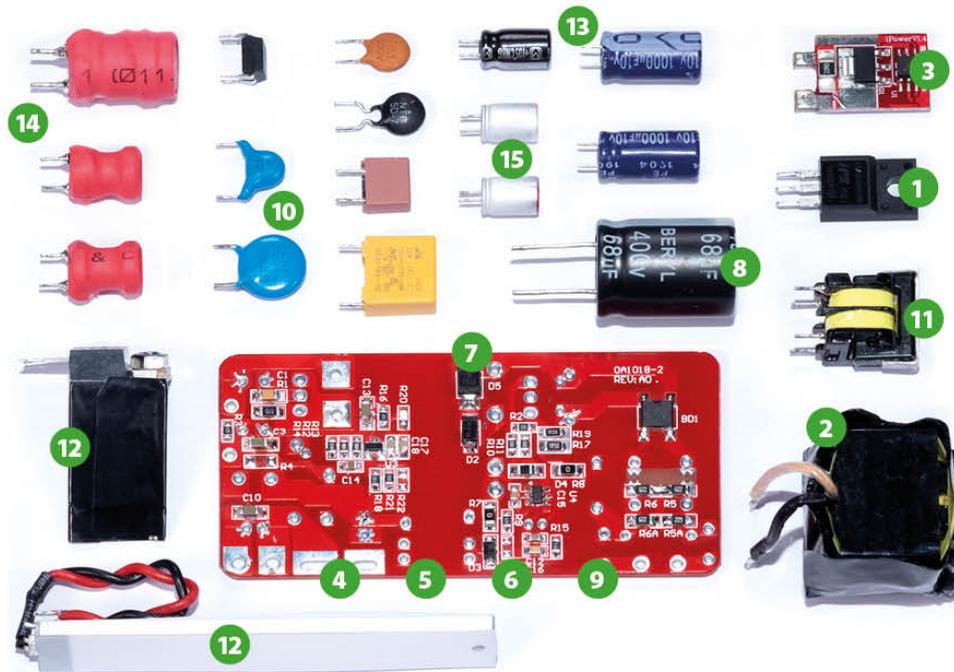
Audio Band Noise Floor*



*Noise floor is the random noise and excl. AC mains related components and switching freq (<30uV).



iPower X Teardown



System

- 1 New! Oversized Power MOSFET
- 2 New! low leakage transformer (Black colour vs Yellow colour in iPower)
- 3 New! Active Noise Cancellation 2
- 4 New! 45W high performance adaptive multi-mode controller, optimized for high efficiency, low standby power and audio noise-free design
- 5 'Frequency shuffling' to achieve excellent EMI performance
- 6 220% increase in power supply capacitance for the adaptive multi-mode controller
- 7 Upgraded RF designed PCB

Input

- 8 106% increase in input filter capacitance (68uF vs 33uF @400v)
- 9 New input high-frequency filtering capacitor
- 10 New metal-oxide varistor protection for excessive transient input voltages
- 11 New oversized input common-mode choke (xxH vs xxH)
- 12 New oversized heatsink for the Power Rectifier

Output

- 13 79% increase in output filter capacitance
- 14 New high-density oversized output inductors (Red)
- 15 New aluminium conductive polymer solid capacitor in the output stage

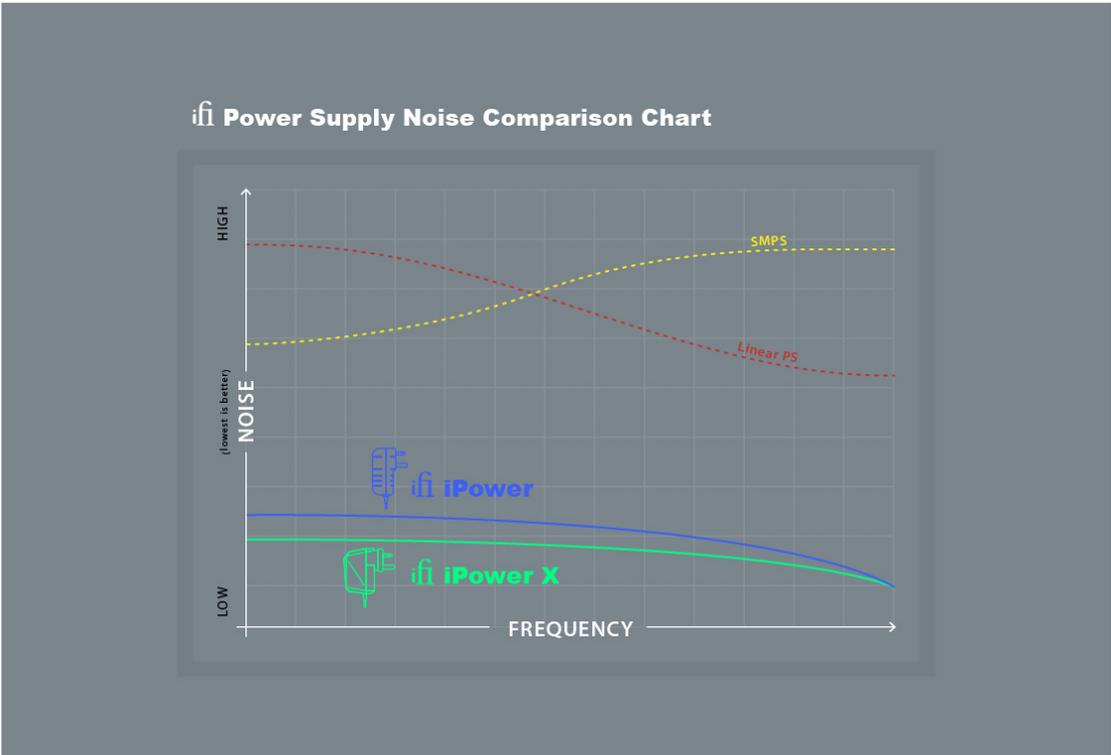


Active Noise Cancellation2®



Active beats passive

iPower X uses our latest Active Noise Cancellation 2 (ANC2) technology to cancel all incoming EMI/RFI noise. This technology is, in principle, similar to how active noise-cancelling headphones work. The intelligent circuit inside of the iPower X measures the signal coming from the mains and injects an identical wave of the opposite-phase. The result - the initial wave and its mirror reflection interfere destructively cancelling out all noise pollution.



Have you ever tried to compare passive and ANC headphones on a plane? The former is not capable of picking up the low-frequency noise, such as a loud engine inside of a cabin, but the latter neutralises it before the unwanted buzz reaches your ear.

Now, picture a regular wall-wart power supply as passive cans and our iPower X as an active product with the most potent version of the ANC tech on-board. The latest generation noise suppression method implemented in the iPower X is far more efficient than the regular filter blocks. It eliminates more unwanted noise and works across a far broader range, liberating your connected device from the oppression of unclean power!

Our previous iPower generation was quieter than even audiophile linear power supplies and 1,000x quieter than the standard SMPS wall adapters. The newly-optimised circuit, together with the new oversized power MOSFET and low leakage transformer implemented inside of the iPower X enabled us to surpass these multipliers even further.

The iPower X increased its previous generation's input filter capacitance by 106% and its power supply capacitance for the adaptive multi-mode controller by 220%.

We also added the new aluminium conductive polymer solid capacitors and high-density output inductors as well as increased the output capacitance by 79% for better suppression of high-frequency noise.



Modernised visuals, even broader usability

As much as we enjoy how our iPower looks like, its successor, iPower X features a brand new satisfying cream/harmonious beige chassis design. The captivating carvings on its top form an elegant pattern, behind which a pleasant soft blue LED indicates the connection with mains.



Tech Notes



We also managed to add more power to the previous generation of iPower, the new iPower X can deliver 150% more peak power than the original.

Power Rating:

Version	iPower X (Max.)	iPower X (Cont.)	iPower (Cont.)
5V	4.5A	3A	2.5A
9V	3.75A	2.5A	2A
12V	3A	2A	1.8A
15V	2.25A	1.5A	1.2A



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About iFi

iFi audio is part of AGL and is headquartered in Southport, UK. It owns the hifi brand Abbingdon Music Research (AMR). They respectively design and manufacture portable and desktop 'ultra-fidelity' audio products and high-end audio 'home-based' components. The combined in-house hardware and software development team enables iFi audio and AMR to bring to market advanced audio products.