

Reprint issue 2/2012

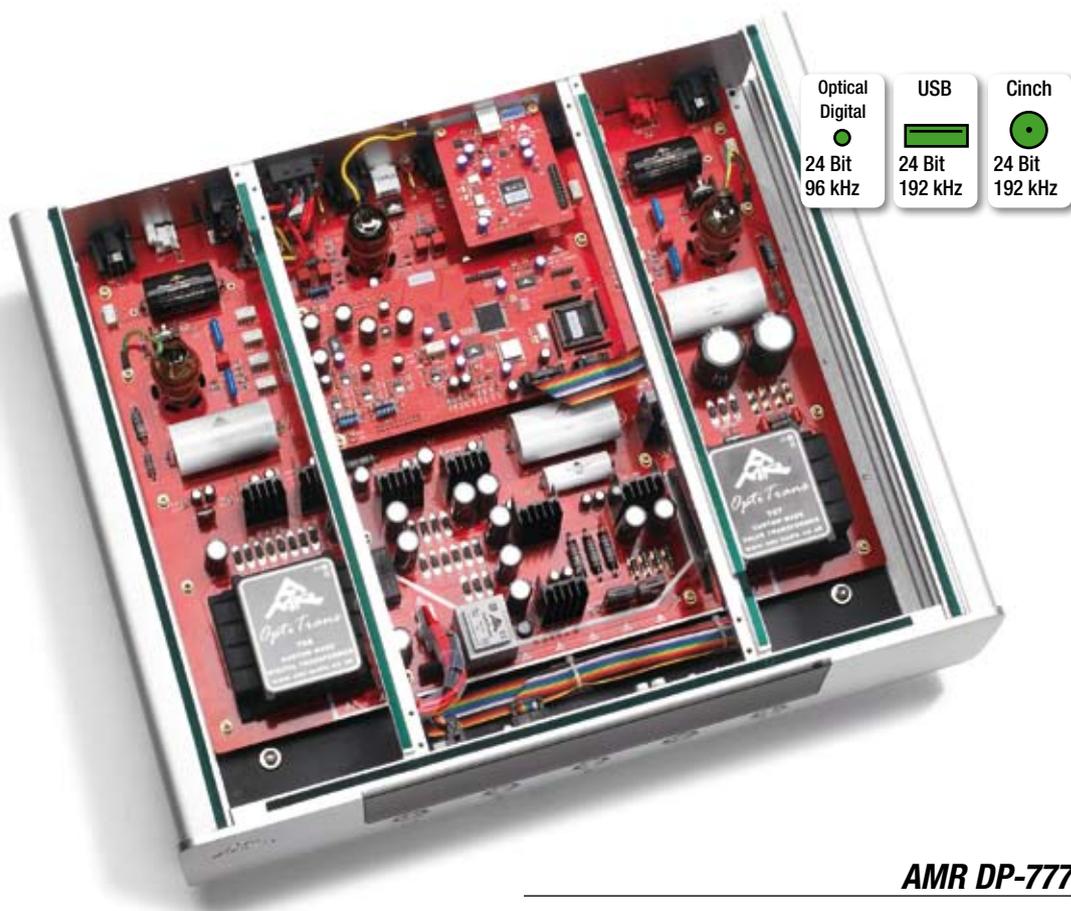


Next Generation

D/A-Converters with a USB-Input have become acceptable in HiFi Saloons – optimised circuitry now wants to provide the audiophile polish. stereoplay introduces 3 new and 3 upgraded Bit-Virtuosos with USB Interface.

D/A-Converters with a USB Interface have, owing to their flexibility, been aiming at a central role in high performance HiFi Systems for some time now. The new generation not only shines with even more sophisticated digital technology. Rather, several new models bring along a high performance volume control and even analogue inputs – so they can be used as full preamplifiers. Such devices now have their own section in the stereoplay name-and-rank list. The Door Pass: Next to the digital section and volume control they require at least one selectable analogue input.

So a perfect fit for the nearly 3900 Euro AMR DP-777, which offers two analogue high-level inputs. However, they only form the whole cream topping on the feature list. It is no exaggeration to say that the technology of this Meteor developed in England and made in the Far East could fill a small book. In the spotlight is D/A Converter itself. Just like many audiophiles AMR Mastermind Thorsten Lösch feels that for CD-Sources classic multi-bit converter chips a'la Philips



AMR DP-777

An exemplary bridging act; High-Tech to Old School: The Asynchronous USB-board (top centre) and the output stage semiconductor-free with 6N1-EV-Doubletriode live in peaceful co-existence under the solid Alu-roof. The components are of the very finest.



Valves for the Correct Bits

The main drawback of the S/P-DIF connection is that data and clocks are mixed in the single transmission line. For the correct timing of the D/A converter the receiver must re-extract the clock carefully – not a simple task, because even small imprecisions or distorted impulses caused for example by unsuitable interconnections or incorrect impedance match, produce noticeable, sound impairing jitter. Aggravating is that common S/P-DIF Receivers have electrical repercussions

that do not contribute to signal quality: to detect the signal they use a so-called threshold comparator (Schmitt-Trigger), which due to the positive feedback precisely during the switchover sends undefined signal disruptions back to the source. These spread as electrical reflection swamp in the cable and increase the uncertainty for the correct impulse detection. This again makes the digital signal transmission an analogue problem. AMR counters this problem with an analogue solution. The

DP-777 HD-S/P-DIF input uses a very wideband 6N11 dual triode in a zero feedback configuration as buffer – this ensures the correct impedance match as well as a complete separation of source and receiver. The disruptions caused by the S/P-DIF receiver hence cannot happen anymore. As the oscillogram shows, not only is the signal quality on the interconnect improved. It is also relieved of disrupting Reflections, which reduces the interconnects sonic impact.

TDA1541 still sound best. Hi-res reproduction however requires different solutions, which is why the DP-777 possesses two D/A Converter systems: up to 88.2KHz operates a 16-Bit Multibit converter, above this a 32-Bit chip that offers full 192KHz operation.

The clue is the AMR exclusive digital filter, which operates for both converter systems. It offers multiple selectable optimised filter responses. A selection optimised for minimal pre- and post-ringing (organic) is available, just as is an Apodising filter that helps to suppress eventual ringing on the recording side. In "Bit-Perfect" mode the DP-777 even offers real 16-Bit reproduction of 44.1KHz sources without digital filter.

The AMR eliminates sound impairing jitter similar to the Naim DAC.

Instead of trying to use a Jitter prone PLL to continuously follow after the sources clock, it first loads a large number of samples into RAM-buffer to establish the average clock rate. It then sets its own stable time base to this, with a precision of 28 Million finest steps.

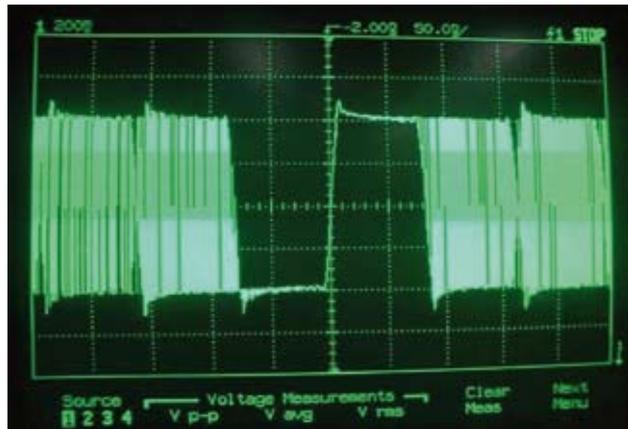
The DAC Chips thus receive their samples for best sound "just in time" – who doesn't believe it can disable the function called "Zero Jitter" for listening comparisons.

The three Russian dual triodes in the DP-777 are not for show, but are used where it makes sonic and technical sense – for example for the HD-Digital inputs (see box below).

The listening test

The AMR DP-777 acted a touch more airy and three dimensional. That holds for the analogue inputs as well as for the D/A converter. The dual DAC and the widely variable digital filter showed themselves as highly effective. The DP-777 when playing CD material really did sound most compelling using the 16-Bit classic DAC with the "Bit Perfect I"

mode activated, while Hi-Res material came across most naturally via the 32-Bit DAC in the position "Organic" or "MP-Listen". Big praise for the the AMR – only the slow level adjustment requires a little patience.



Thanks to the valves the S/P-DIF signal shows steep edges and exactly defined pulse width.

stereoplay
Highlight



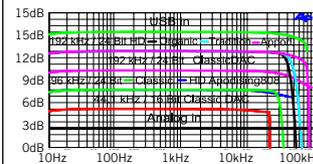
AMR DP-777 3900 Euro

Vertrieb: WOD Audio
Telefon: 0 61 87 / 90 00 77
www.wodaudio.de
www.amr-audio.co.uk
Auslandsvertretungen siehe Internet

Maße: B: 45 x H: 12 x T: 37 cm
Gewicht: 11,5 kg

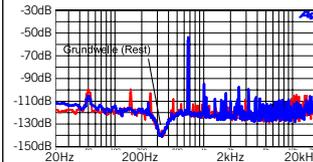
Messwerte

Frequency Responses



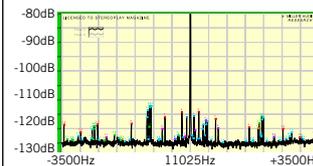
Always balanced, switchable filter

Distortion Spectrum 96/24



Relatively high, dominant component is 2nd harmonic

Jitter Spectrum



Very low Jitter via USB-Zerojitter

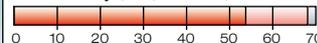
Signal/Noise ratio: Analogue/Digital
114/101dB

Output Impedance RCA/XLR
256/402 Ω

Power Consumption:
Standby/Operation 1,2/50 W

Bewertung

Sound Quality (Preamp/USB/Network) **53/68/-**



Measurements **8**

Practicality **10**

Value **10**

Technically extravagant converter/preamp with extreme free, natural sound and representative looks. The dual DAC and multiple digital filters offer wise sound variations.

Technically extravagant converter/preamp with extreme free, natural sound and representative looks. The dual DAC and multiple digital filters offer wise sound variations.

stereoplay test verdict

Sound Quality (Preamp/USB/Network)

Absolute Top-class 53/68/- Points

Total Verdict

Outstanding 96 Points

Value for Money Outstanding