

hifi & records

Das Magazin für
hochwertige Musikwiedergabe

Reprint
Issue January 2009



»Memorial in honour of the CD«:

Soudation 740

In all those years where I have been dealing with hifi and high end, I have seen lots of firms come and, in some cases, go again as well. Newcomers from other disciplines mostly had an especially hard time in the past and some of them got a bloody nose. Maybe the weirdest, but certainly the most ambitious story I had the pleasure to witness was the foundation of Souolution. We had come to know Cyrill Hammer and Roland Manz from the Spemot AG as true hifi enthusiasts who have been in charge of our magazine in Switzerland for more than ten years. In 2000, at the High End on Lake Zurich, the first Souolution power amplifier was on display. But the project did not run smoothly right away, the first amplifiers were not yet good enough for action ment Hammer and Manz. So back to the drawing board, starting all over again. The way to the top, and this is where the two of them wished to be, is stony and steep. Six years later the power amp 710, which is as broadband as it is heavy, made its perfect debut. The high end scene has already seen lots of extravagant, image-building prestigious products, but the truth that a newcomer was able to muscle in at the premium league of the established big names, had been unknown in the electronics market so far.

This story conveys quite a good impression of the remarkable consistency which sort of stands as a philosophy behind the Souolution products. »Make it better«, even if the consequences do not always suit the book. Ok, the power amp is going to weigh 80 kg then, so what? If necessary, the power supply will be outsourced on a CD player, too. On a CD player? The majority of them are half empty nowadays. What the heck are the Swiss brewing here again?

The project with the »740« type designation was plainly about designing the best CD player in the world and everything else was subordinated to this goal. Therefore the 740 plays only CDs; SACD and DVD compatibility was purposely waived. And therefore the 740 was equipped with no less than three separate power supplies

Test: CD-Player Souolution 740

In the era of mp3 downloads the Swiss erect a memorial in honour of the 16-bit compact disc: the CD player 740, made by Souolution.

for the drive, the digital section and the output stages. And since this uncompromising power supply did not fit by all means into a standard player case, it was simply outhoused to a separate cabinet – »form follows function«. The fact that no power transformer can hum or leak any more in the player unit, can't be detrimental either.

Here the CD-only drive resides comfortably on a solid copper plate mounted on four damping elements – a sub-chassis construction, in a sense. The actual drive comes from Stream Unlimited (JPL-2580 M) and reads out CDs with double speed. Souolution argues, and this probably with reason, that potentially faulty data blocks can be read once more this way. However, Souolution does not leave the error correction to the Stream Unlimited drive, but controls it via a proprietary digital signal processor (DSP) which monitors the data reading process in realtime.

The music data are then buffered in a large RAM memory, then another DSP provides the sample rate conversion using eight times oversampling. For this purpose the Souolution uses the Sonic-2 module from Anagram Technologies which, owing to a special algorithm, is said to handle the curve interpolations with utmost precision. The upsampling function of the subsequent D/A converters, two Burr Brown PCM 1792 working in a balanced symmetrical mode, remains unused – a point which is explicitly mentioned by Souolution. The fact that the two 24-bit converters can handle sample rates of up to 384 kHz is primarily relevant for external signal sources; the 740 features an entire range of digital inputs and outputs (AES/EBU, coaxial, BNC and TOS-Link).

At the analogue output stage not the smallest concessions were tolerated either. Here the 740 was indeed equipped with the same amplifier circuits as the 720 preamp – and this even including the power supply that was banned into its external domicile. Add to this two super high-grade aluminium cabinets in the proven Souolution quality, -

Monumental

a motor-driven cover for the disc tray and it should be obvious that this player ventures into new dimensions also pricewise: the 740 is quoted in the Souldution pricelist at 29,500 Euro. Which is no longer the much-cited equivalent value of a compact car, but touches already the automotive middle class. Out of reach for us ordinary mortals, of course, yet extremely appealing to a clientele who wear a Swiss chronograph costing as much as the 740 on their wrists and still have two more watches of that calibre at home in the drawer. For the essential question introduced by the 740 is: wouldn't it make more sense to choose the loudspeaker one or two sizes smaller and instead accept no compromise with the CD player?

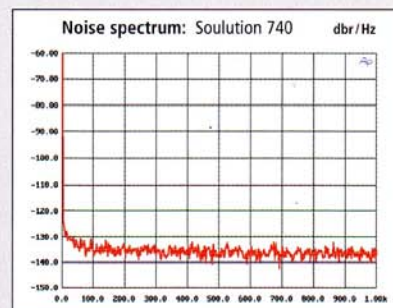
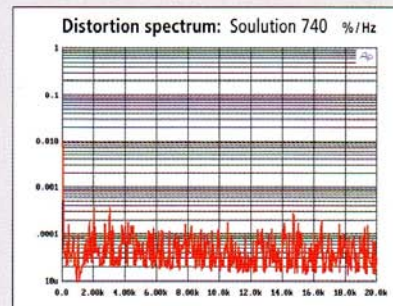
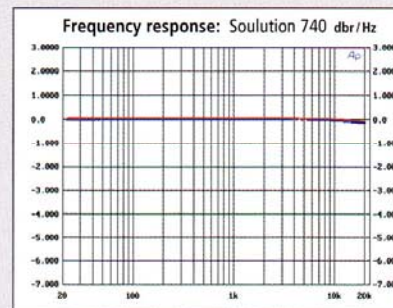
But before we deal with the gist of the matter, I'd like to touch on a technical

subject. The modern mixed converter technology entails that, for better SNR specs, the quantization noise is shifted via noise shaping to higher audio bands which – as it's often heard – are irrelevant for further signal processing and where the noise energy can be filtered out afterwards. Sounds great for a start, but as always the devil is in the details. Because a steep filter close to the audible range, as was common practice for a long time, is anything but desirable for acoustic reasons (at least on this issue there seems to be a consensus among the audiophile digital experts). A mild filter does not cut off the disturbing HF energy completely, which in turn raises the question as to the »irrelevance for further signal processing«.

In the light of this doom loop, Souldution did not decide for the »clean« solution of a rigorous filtering like it would



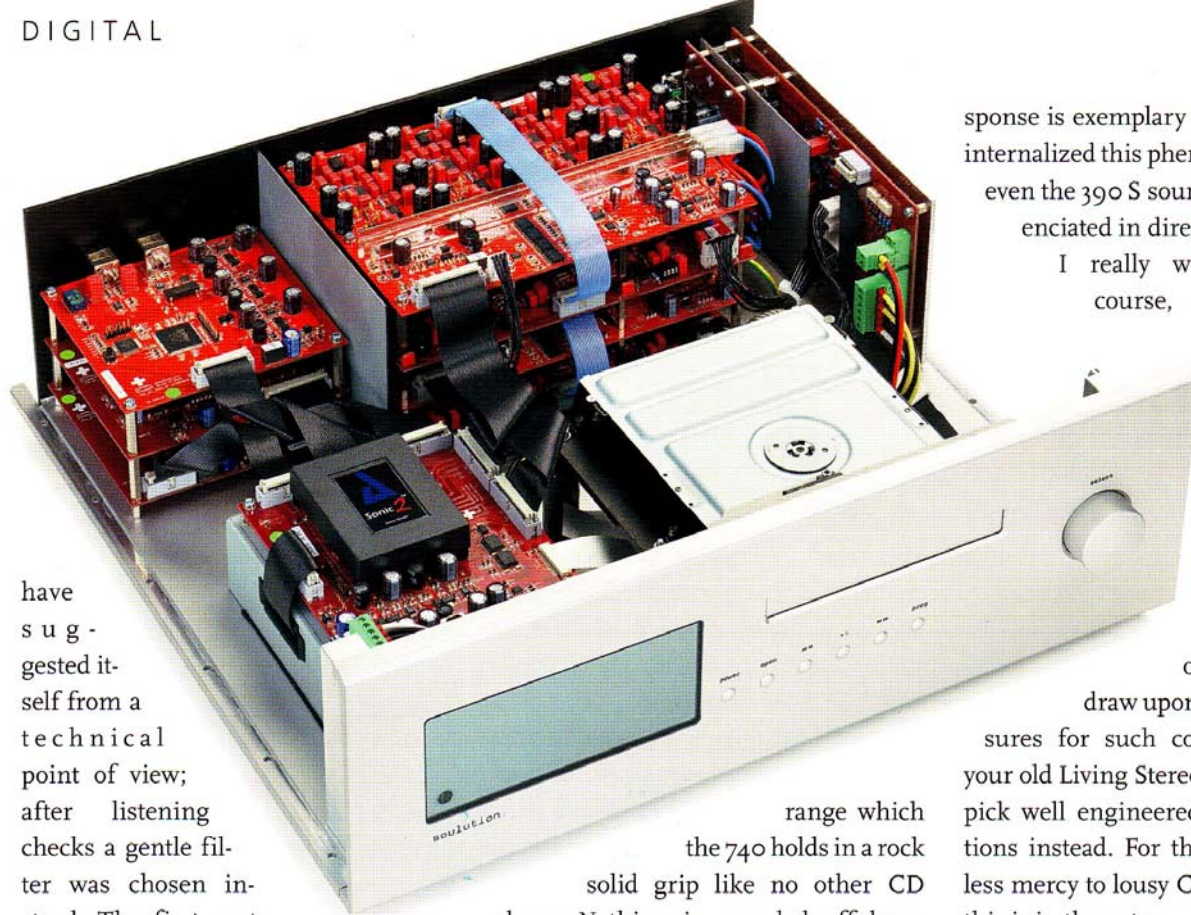
Lab Report



CD-Player Souldution 740 (CD bal.)

Distortion (THD+N)	0.00165 %
IM distortion (SMPTE)	0.010 %
IM distortion (CCIF)	0.00093 %
Unweighted S/N (30k/500k filter)	-88.5/-44.1 dB
S/N ratio (A-weighted)	-92.5 dB
Converter linearity:	
-50/-60/-70 dB	0.00/0.02/0.04 dB
-80/-90 dB	0.19/0.85 dB
Channel synchronicity	0.05 dB
Output voltage	2.98 V
Output resistance (1kHz)	<10 Ω
DC output offset	10.2 mV
Signal shape at digital output	very good

Except for the unweighted S/N ratio with the 500 kHz measuring filter where the gentle filter of the 740 takes its toll, the specifications of the Souldution are beyond doubt. The crunchpoint of a digital interface is the highclass digital output. The outstanding noise spectrum without any peaks is to be credited to the sophisticated power supply. ■



have suggested itself from a technical point of view; after listening checks a gentle filter was chosen instead. The first prototype of the 740 had still a conventional filter, but as Cyrill Hammer explains, this one wouldn't have had the ghost of a chance against a production model. So in the Swiss town of Dulliken the final decision was made by ear.

But »sound« will always be a subjective matter and with CD players we have kind of two factions: the first demands ultimate precision with highest resolution, the other is looking for analogue richness and warmth and rather prefers an unobtrusive treble range. Personally, I feel most definitely inclined towards the first group and on balance, the Mark Levinson ML 390 S was my benchmark for CD reproduction which the competition had to match. But now the American has met its match, for the 740 beats the Levinson on its very own terrain of precision and resolution.

This begins way down in the bass

range which the 740 holds in a rock solid grip like no other CD player. Nothing is rounded off here, tympani heads are firmly tightened. What was formerly more of a grumble, sounds incredibly sophisticated over the 740 and therefore not just »deep«, but downright menacing. The middle pitches are so transparent and clear that with voices one simply can't stop being flabbergasted. The image is perfectly focused, right to the point and without that marginal blur commonly associated with »analogue«.

The Soudution does not permit itself one iota of artificial warmth, it sounds as pure as clear water (but not as cool as a Swiss mountain lake), transient re-

sponse is exemplary and once you have internalized this phenomenal precision, even the 390 S sounds a bit less differentiated in direct comparison (am

I really writing this?). Of course, such distinctions

depend largely on the recording (and how the player is placed; we took care of identical conditions). Actually, it should be out

of the question to draw upon old analogue treasures for such comparisons. Leave your old Living Stereo CDs at home and pick well engineered modern productions instead. For the 740 shows even less mercy to lousy CDs than the 390 S; this is in the nature of things.

Conclusion

If I were a rich man, I would not have to work any more and would love to sweeten my leisure time with such an uncompromising CD player like the Soudution 740: people who appreciate precision and resolution won't find anything better for now. And with the necessary dough to spare, they should envisage the 740 and rather cheap out on the loudspeaker. *Wilfried Kress* ■



Soudution 740

WxHxD*	48 x 16,7 x 45 cm
Warranty	5 years
Price	29.500 Euro
Distributor	Spemot AG Industriestraße 70 CH-4657 Dulliken
Phone	00 41 62 - 2 85 30-40

* Power supply: 48 x 11,5 x 45 cm