

CD player 740



soultion
nature of sound

nature of sound



Preserving the natural purity of the sound in all its facets – the great challenge first-class manufacturers have to master. And this is especially true of the signal sources which play such an essential role in high fidelity. Of the competing digital formats, the CD has once more stood its ground. For years to come, it will remain the most important and maybe the last true sound medium available for high-quality music reproduction.

We, the makers of soulution, firmly believe that the inherent beauty of music does not need any artificial enhancement and that the music signal should pass as immaculately as possible through every hifi component. When developing our CD player 740 we have consistently pursued the aim that a soulution player must not sound »digital«. However, the wrong compromise of compensation, i.e. either masking or sugarcoating, was likewise out of the question. The soulution 740 is a CD player that neither adds nor omits anything and hence demonstrates how amazingly fascinating the 16-bit format of the CD can sound – this is what we understand by »nature of sound«.



reddot design award
winner 2006

soulution
nature of sound

CD player 740



The quality of the recording and that of the signal supplier are of fundamental importance in high fidelity. For what is lost at the source, cannot be made good by any amplifier or loudspeaker, be it ever so eminent. Therefore the task of a reference CD player reads as follows: read out all musical information and transfer them with no digital artefacts into the analogue domain.

A CD player is not merely a digital, yet also an analogue device in the hifi chain. For ultimate reproduction standards all aspects need to be taken into account during the design process; a high-quality D/A converter alone – as was once commonly accepted – just won't do here. Only the synthesis of a superb drive unit for perfect data readout, a high-precision master clock generator that eliminates jitter right from the start, an intelligent digital signal processing with oversampling technology and preamp-grade analogue output stages can assure by their dovetailed interaction that nothing is lost at the digital source of hifi reproduction.

But the solution 740 is more than just a CD player: it's the digital control centre of your hifi system. Fitted with four digital input and output jacks, the 740 offers total versatility. Whether you wish to record from the 740 to a digital medium or make its top-class converter section available to external digital sources – the connecting capabilities of the solution 740 permit all options including balanced, unbalanced and optical digital connections. This way, you are all geared up for the future.

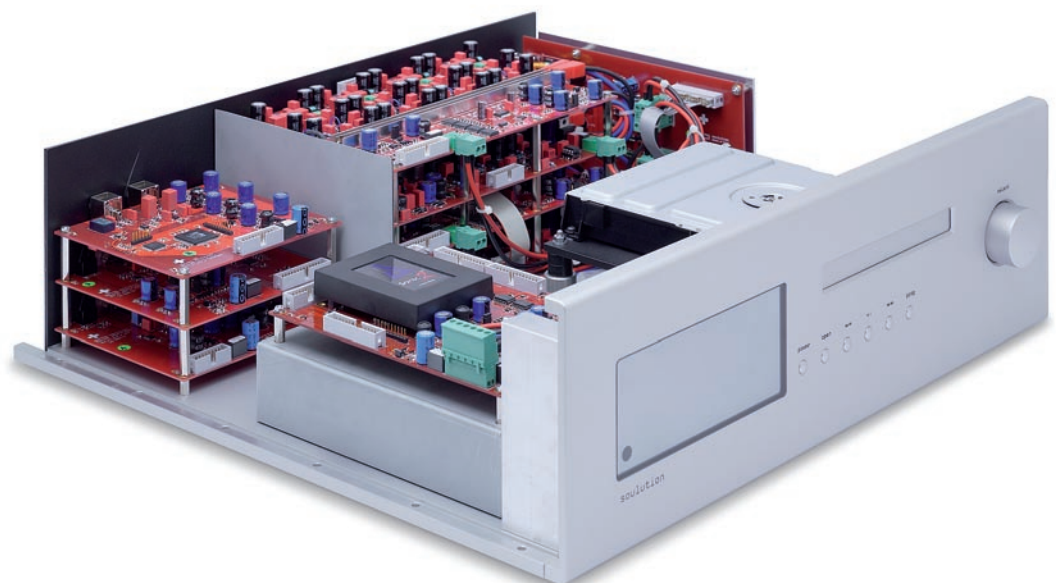


CD player
concept

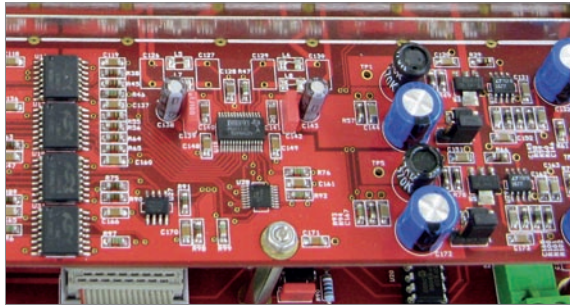
Technology
for
music

In many modern CD players the eye of the technophile music lover will spot a lot of air. Not so with the soulution 740. The consistent dual-mono layout even required outsourcing the three individual power supplies for the drive, the digital electronics and the analogue output stages into a separate cabinet (see illustration below left). Pleasant side effect: any parasitic interferences upon the signal-bearing modules from mains transformers or the like are thus nipped in the bud.

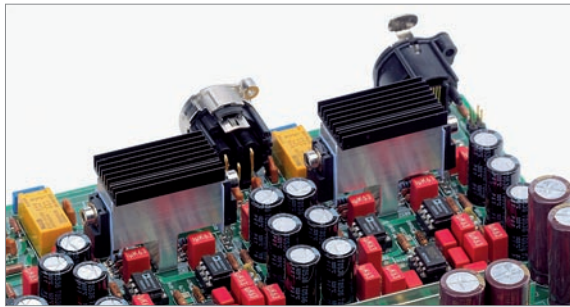
In the soulution 740 the data readout is provided by the extremely well-reputed highend drive unit StreamUnlimited JPL-2580M. This transport mechanism with its solid steel guiding rods is also SACD-compatible, however, we deliberately use the »CD« version with a Sanyo laser and have the CD read out with double speed. As a result defective data blocks can be scanned once more, the JPL-2580M itself will not carry out any error correction. It rests on a massive copper plate, decoupled mechanically as a subchassis by four damper elements. While playing a CD, the drive unit has no contact with the front panel. It is controlled by a digital signal processor (DSP) which monitors the data readout in realtime and takes over the effective error correction. The audio data are buffered in a large RAM memory, while a second DSP provides the 8-fold oversampling conversion to 24 bit / 352.8 kHz.



CD player 740



Two Burr Brown PCM 1792 in symmetrical mode take care of the D/A conversion in the solution 740. These converters can process 24 bits with clock rates of up to 384 kilohertz. The internal upsampling remains unused.



The ultra-wideband output stage (40 megahertz) has an extremely low impedance (2 ohms) and can deliver high currents of up to 3 amperes. It is equal to the output stage of the 720 preamplifier.



Due to its polynomial algorithm the Sonic 2 module by Anagram Technologies achieves a ultra-precise sampling rate conversion to 24 bit / 352.8 kilohertz and is able to calculate exact curve values.

Technology
for
music

Regarding up- and oversampling, we hold the view that highest precision rather than highest clockrates should be given priority with the interpolation of the intermediate values. We therefore use the polynomial algorithm by digital specialist Anagram Technologies which allows an ultra-precise curve calculation. The upsampling function of the succeeding Burr Brown PCM 1792 D/A converters is not used. Two of these converter groups are operated in a digital-balanced mode, passing the analogue signal to the extremely wideband output stage which is identical to that of the reference preamplifier 720, inclusive of the excellent power supply – an unparalleled effort for a CD player.

Technology in detail

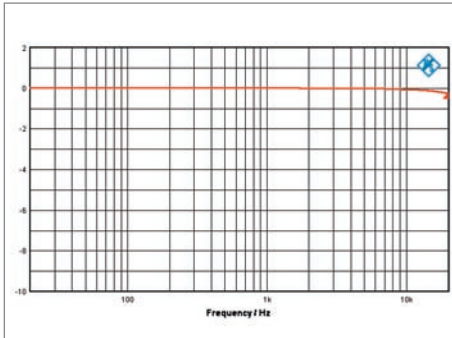
Technology is no end in itself and good measuring values alone do not necessarily guarantee a musical result. On the other hand, a metrological inspection will clearly reveal where a CD player is making mistakes, what it can and what it cannot do. Outstanding specifications are therefore a must for a top-class player.

Let us yet point to two technical titbits which often tend to go under when contemplating on CD players. The first is the master clock generator in the solution 740 that feeds an ultra-precise clock signal above all to the D/A converter. Residual jitter is below one pico second, so with today's measuring procedures, the solution 740 cannot be blamed for virtually any jitter. We deem such a precise clock signal as absolutely essential for a reference-class CD player.

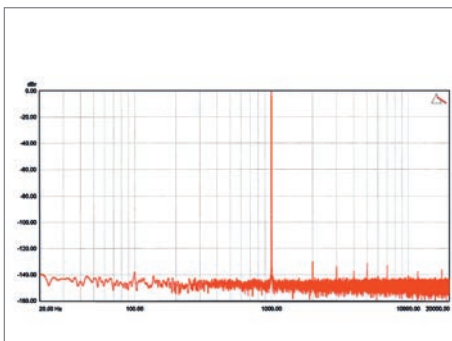
No less important: since the Burr Brown converters are switched to dual-mono mode, there are hence four output currents which are normally added right at the converter's output. Now, in the solution 740 those currents are first transformed into a voltage and then filtered. That current-voltage-converter operates with an internal bandwidth of 80 megahertz, thereby laying the basis for ultimate S/N ratios and maximum dynamic range in the analogue domain. Mutual interferences of the D/A converters' current output stages are simply impossible. Accordingly forceful are the technical specifications of the solution 740. The extremely low distortion figures, excellent channel separation and perfect linearity guarantee you: whatever the best sound engineers may pack into the 16-bit format of the CD – the solution 740 will get it out again. With this signal source nothing will be lost to you.

Compatible with the entire »digital world«: with its four digital input and output jacks, the solution 740 is ready for all connection types including AES/EBU digital-balanced. You can even output or feed in the master clock signal via BNC sockets.

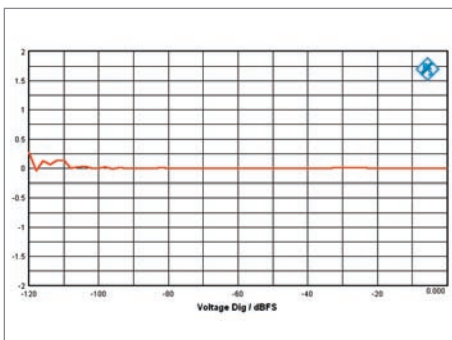




Bandwidth



THD + N



DAC linearity

The acoustic result of this superb signal purity and incredibly precise reproduction is indeed like building a bridge from the digital to the analogue world. Just imagine the wealth of tonal shades and the suppleness commonly associated with »analogue«, joined with the precision and dynamics of the best digital techniques – and the sound of the solution 740 is already close at hand. So by all means we can say that the CD player 740 with its precise, natural sound quality has cast off the flaws of previous reproduction systems while combining their strong points. solution 740: nothing will be lost of your CDs. Nothing will be adulterated. »Nature of sound«.

Your solution-dealer



soulution
Spemot AG
Industriestrasse 70
4657 Dulliken
Switzerland

Phone +41 62 2 85 30 40
Fax +41 62 2 95 52 02
www.soulution-audio.com



soulution
nature of sound

Technical specifications

CD player	solution 740
Frequency response	0 - 100 kilohertz (24 bit/192 kHz)
THD + N	<0.0005% (20 Hz to 20 kHz)
Signal-to-noise ratio	> 140 dB
Channel separation	> 130 dB
Jitter	below measuring threshold
Analogue outputs	balanced XLR unbalanced RCA
Output impedance	2 ohms balanced and unbalanced
Digital inputs	AES/EBU balanced, SPDIF-RCA and -BNC TOS-Link, Clock (BNC)
Digital outputs	AES/EBU balanced, SPDIF-RCA and -BNC TOS-Link, Clock (BNC)
Mains	100 - 230 volts (50/60 Hz)
Power consumption	100 watts / 2 watts stand-by
Dimensions	480 mm * 167 mm * 450 mm (W * H * D) 480 mm * 115 mm * 450 mm (power supply)
Weight	23.5 kg CD player 23.5 kg power supply
Cabinet	Aluminium, black / natural
Remote turn-on	12 volts control signal

We reserve the right to alter technical specifications without prior notice.