



D 10-2 CD-SACD PLAYER

The D 10-2 is the most unusual SACD player available anywhere in the world; it is an absolute high-end machine, from the case to the valve output stage. The results in terms of sound quality are incredible, and at least equal to the vinyl disc. The D 10-2 is equipped with an absolutely first-class disc mechanism and decoder, and a superb quadruple D/A converter. Two specially developed, carefully matched mains power supply sections provide power entirely independently to the analogue and digital sections. For the digital components we employ a secondary switch-mode mains section, with a torroidal transformer which offers excellent stability under load; for the analogue valve output stage we have developed an extremely stable high-voltage mains section which features a reservoir capacity corresponding to more than 100,000 μ F with a conventional pre-amplifier.

Quadruple – D/A – converter

The new converter is unique even by the standards of T+A. The D 10-2 is fitted with no fewer than eight Burr Brown D/A converters in the latest 32 bit version – acknowledged as the best of all types. The quadruple converter is an enhancement of the differential converter, reducing uncorrelated converter errors to one quarter, and background noise by 6 dB. The effort invested in this converter layout is immense, but the results are worth it! As you would expect, the machine exploits a freely programmable signal processor, which means that it provides the characteristic T+A switchable oversampling algorithms for CD playback, enabling the user to select the optimum reproduction to suit any particular disc. Our engineers have also developed four-stage oversampling and noise-shaper circuits for SACD playback, which generate different filter gradients and secondary wave suppression, providing a highly effective means of fine-tuning the sound characteristics to match the other links in the equipment chain. The converter stage is followed by an ingenious valve output stage. To prevent any danger of the digital section influencing the analogue circuit, these two sections are separated and de-coupled using a unique T+A technique. Opto-couplers transfer the control signals optically, while the latest magnetic, jitter-free iCouplers from Analogue Devices are employed for the high-speed data signals. The net result is genuine high-end analogue sound quality both with CD as well as SACD.

Valve output stage

The really striking aspect of the D 10-2 is the section which follows the converters: its analogue valve output and filter stage. The pre-amplifier consists of the extremely linear, low-distortion 12AX7 LPS double triode, while the output stage features the ECC 99 double triode, with its high current delivery capacity.

All the amplification and filtering is carried out by these valves. This concept is totally unique, and ensures that all the machine's sound characteristics are determined by the valves – they are not just there for show! With the ECC 99 we have also succeeded in keeping the output resistance to below 100 Ohm. This is a sensational value for a valve pre-amplifier, and we think it must be a record! In the simplest case the amplifier just becomes very warm, but in many instances the amplifier also generates intermodulation effects or other distortion products, and these can have an adverse and extremely disturbing effect in the audible frequency range. One solution would have been for us to limit the frequency response of the player to the lowest common denominator, in order to cope with amplifiers of moderate quality, and this would certainly have been the safe route. However, we were not content with this, so we decided to equip the D 10-2's valve output stage with a means of switching the bandwidth between 60 kHz and 120 kHz. By this means it is possible to set up the player very accurately to match any amplifier, and there is no need to forfeit anything in terms of frequency response and phase linearity in systems which incorporate a good amplifier with a wide bandwidth. Naturally all T+A amplifiers are an excellent match for the machine.

Mechanical system

The mechanical construction of the machine maintains the same philosophy and superb quality as the other V-series components. The combination of solid aluminium and special high-quality acrylic is extremely pleasing visually, and gives superb results in audio terms. The high mass of the metal and the damping effect of the acrylic ensure that the top-loader disc mechanism is totally de-coupled and isolated from the outside world. The components of the top-loader are machined and turned from solid blocks of aluminium. The complex cover sealing ring is turned from a single piece of metal, and bonded permanently to the acrylic plate. This design provides outstanding damping and absolute freedom from resonance effects, as well as sealing the disc hermetically from the environment.



Specifications

<i>Audio formats</i>	CD, CD-R / RW, SACD-Stereo
<i>Audio outputs (analogue)</i>	Stereo (quadruple-circuit with 8 converters)
<i>Output level / Impedance</i>	2,5 Veff / 100 Ohm
<i>Audio outputs (digital)</i>	1 x co-axial, 1 x optical IEC 60958 (CDDA / LPCM)
<i>D/A-Converter for CDDA</i>	Double mono quadruple 4x32 Bit, 384 kHz Sigma/delta
<i>D/A-Converter for SACD</i>	Double mono quadruple Differential converter
<i>Valve output stage</i>	2 x 12AX7 LPS double triode

	2 x ECC 99 double triode	
<i>Frequency response</i>	CD	2 Hz – 20 KHz
	SACD normal	2 Hz – 60 kHz
	SACD wide	2 Hz – 120 kHz
<i>Total harmonic distortion</i>	< 0.015 %	
<i>Effective system dynamics</i>	CD	98 dB
	SACD	100 dB
<i>Signal / Noise (A-weight)</i>	100 dB	
<i>Channel separation</i>	100 dB	
<i>Dimensions (H x B x T)</i>	17 x 44 x 39 cm	
<i>Weight</i>	12 kg	
<i>Remote control</i>	via V 10 2	
<i>Finishes</i>	Silver aluminium, titanium	
	acrylic glass alternatively in grey or blue	
<i>We reserve the right to alter technical specifications.</i>		