

Preamplifier 720/721



soulution
nature of sound

nature of sound



To preserve the natural purity of sound in its entirety – this is the challenge that first class high fidelity components must master. During the development and production of our amplifiers, we at souldution have never let this challenge out of our sight. Our team is firmly convinced that the acoustical beauty of music does not need artificial enhancement, and that the music signal should pass through every component as purely as possible. For an amplifier, the requirement of true high fidelity has always been: »no deletions, no additions«.

This sounds simple. However it is no easy task for a preamplifier to truly approach the ideal of natural music reproduction: reducing its own imposed signature to nearly nothing, so that the finest details of the musical performance are revealed. Details that make audible even the »breathing of the room«, providing the most authentic close-up feeling of »being there« ever achieved.

For the natural reproduction of music, state-of-the-art technology is a prerequisite, but not an end unto itself. Amplifiers should not adulterate the music by their own sound. For the listener, becoming absorbed in the music is a sensual experience, full of emotional fireworks. The technology must be subordinate – and transparent – to the music. This is souldution's understanding of »nature of sound«.



reddot design award
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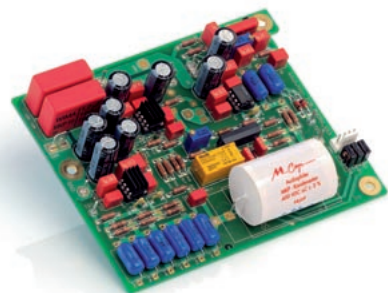


The tasks of a preamplifier have changed considerably over time. Analogue turntables with MC cartridges require a »pre-amplification« of 60 decibels (amplification by factor 1000) while CD-players provide output levels that can drive power amplifiers directly. Theoretically, digital signal sources would not require any »pre-amplification«.

The preamplifier is still the central control unit of each High-Fidelity system. It is responsible for source selection and volume control. Its output stage must be able to drive long and critical connecting cables to the power amplifier – with optimal quality – via symmetrical as well as asymmetrical connectors. sounution believes that the preamplifier is the »heart of the HiFi system«. The opinion that a preamplifier is redundant or should be replaced by a passive volume control is a viewpoint we at sounution do not share. Because our fundamental research has shown that the preamplifier is simply not replaceable for sonic reasons.

The sounution preamplifier is available in two models. The sounution 721 is the first choice for the pure CD/SACD listener who will not be connecting either analogue turntables or recording equipment. The fully equipped flagship preamplifier sounution 720 additionally includes a top-class phono-stage input for moving-coil cartridges featured with the finest components (picture right), a second symmetrical input, and a recording output – it is truly the reference preamplifier for all analogue and digital music sources.

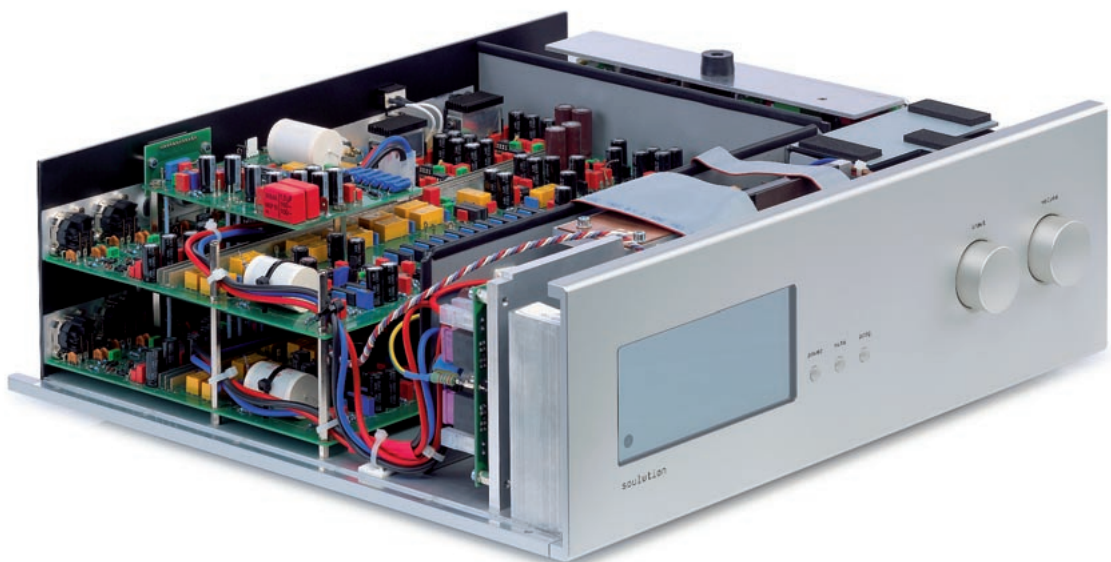
Sound
concept



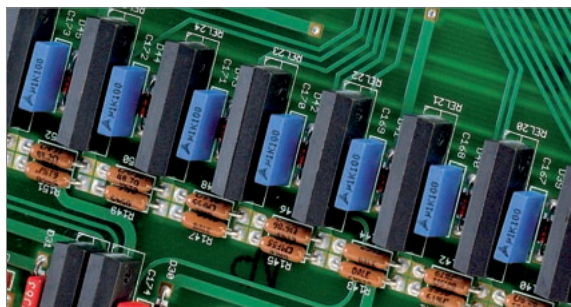
Technology
for
music

An ideal preamplifier is stable, regardless of the load, provides constant amplification and zero phase-shift across all frequencies. This should happen without long signal paths or the popular transistor technology circuit design with excessive amplification (open loop gain) and very high negative feedback. Even though we have omitted these »features« our preamplifiers 720 and 721 work nearly free of distortion, hum and noise – providing maximum channel separation and the highest frequency bandwidth (up to 1 MHz / -3dB)

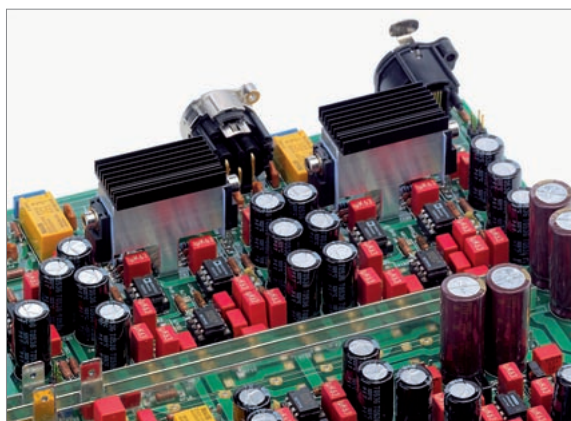
We at soulution are convinced that an asymmetrical circuit design is superior due to its lower number of elements in the signal path. The required stereo channel separation is only achievable by a consequent dual mono layout with separate circuit boards for the left and the right channel (picture below). The source selection is realised with high quality relays also (dis)connecting ground. Immediately following the input connector the music signal is buffered in the soulution 720/721, thanks to this impedance conversion the preamplifier represents an uncritical load to your source equipment. Differences in output level of signal sources can be adjusted by individual gain-settings for each input (3/6/9 Decibels). The input signal is permanently monitored for DC-components, at a level of > 15 mV a high-class coupling capacitor is switched into the signal path. If DC-offset has decreased the coupling



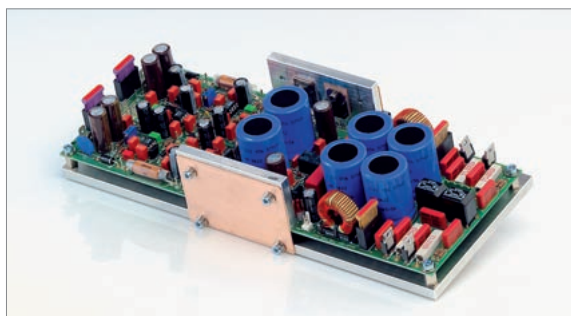
Preamplifier 720/721



The perfect volume control: highest quality relays combine finest vishay dale resistors to an 80 level volume control. The volume is adjustable in 1 dB steps without the slightest click-noise.



The extremely low impedance output stage (2 ohms) with a maximal current rating of 3 amperes is able to drive also long and critical cables. It works up until 40 MHz (!) and is realised in a multi stage design similar to the power amplifier solution 710.



The ideal power supply: Two separate (analogue/digital) mechanically decoupled power supplies provide the ultra stable supply voltages with lowest residual ripple. These are distributed through solid copper bars (picture middle).

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capacitor is removed automatically after 15 seconds – this guarantees optimal security. Digital sources may emit high frequency noise which can adulterate sound quality considerably. Therefore the bandwidth can be limited individually in three steps (20, 200 kHz and 1 Megahertz / -3dB) for each input. In combination with top quality source equipment we suggest to operate the preamplifier with maximal bandwidth. This allows the music signal to pass the preamplifier with the smallest interference possible. This is the ambition: »nature of sound«.

Technology in detail

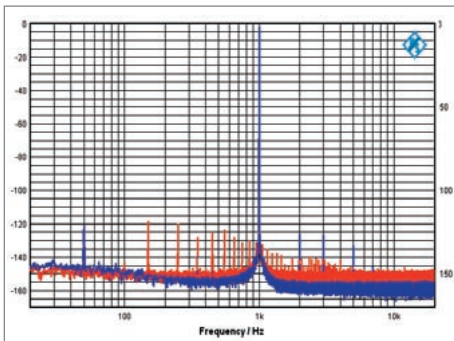
We have stated: technology is not for technology's sake, and good measurement results alone do not guarantee a musical result. But a review of the technical performance does show very clearly where an amplifier excels and where it is making mistakes. Therefore first-class measurement results are a must for a reference amplifier.

The solution 720/721 has not been optimised artificially for best measurement results while depriving musical performance. Even though harmonic distortion, hum and noise are signal deformations imposed over the music which are covering details and artificially changing the music. The credo of true high fidelity – »no deletions, no additions« – does not allow any deformations irrespective of its nature. Once a pre-amplifier works without any distortions the question how the THD-spectrum is influencing sound quality gets irrelevant.

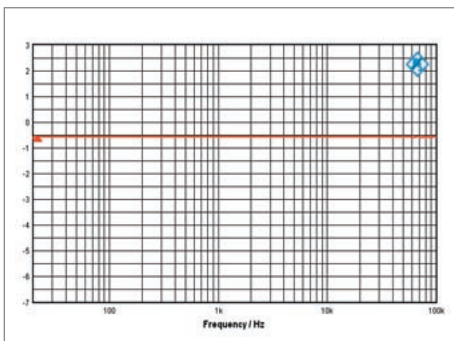
The upper diagram demonstrates how clean solution pre-amplifiers are working. The blue measurement represents the generator of the Audio-Analyzer Rhode & Schwarz UPV, the red one has been taken with connected preamplifier solution 720. The harmonics of the mains frequency (50 Hz) account for less than -120 dB each – a proof for the extremely clean power supply unit. The blue THD-peaks at 2, 3 and 5 kilohertz are not provoked by the preamplifier but by the UPV itself. This means: Not even the today's probably best Audio-Analyzer is able to detect the solution 720's harmonic distortion – they are simply »not measurable«. The »Megahertz-Bandwidth« and respective velocity of signal processing is proven by the frequency response – even at 100 kHz not the slightest decrease in amplification is visible. Also in terms of channel separation – essential for spatial reproduction – the solution 720 sets new standards with results of > 110 dB up until highest frequencies.

The solution 720 disposes of four asymmetrical (WBT-NextGen Cinch) as well as two symmetrical inputs (XLR). The output is available via symmetrical and asymmetrical connectors.

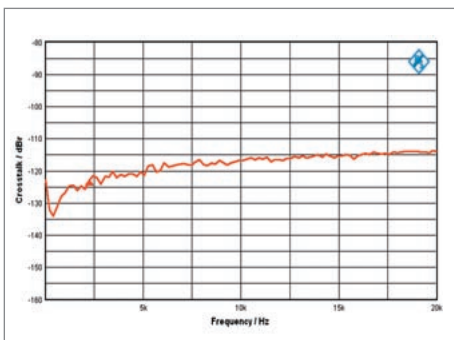




Precision



Bandwidth



Cross-talk

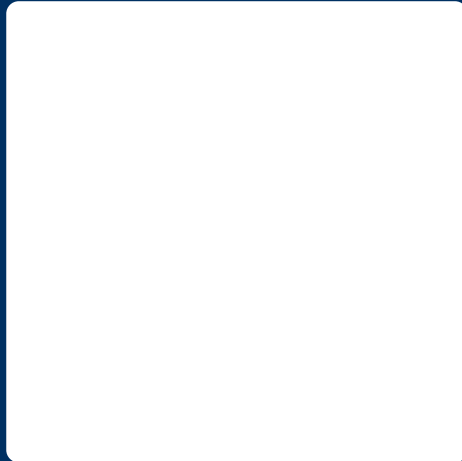
The sonic qualities resulting from the »virtually lacking« of the preamplifier are breathtaking. The transparency and richness of details revealed by the solution 720 are peerless. Even more exciting is the almost holographic and three dimensional spatial reproduction resulting in a nearly unbelievable realistic sound stage (high quality recording prerequisite). The incredible drive in the low bass area unfolded by the solution 720 can not even roughly be matched by passive volume controls. With absolute control and precision across all frequencies. solution 720 – the perfect preamplifier.

Specifications

Preamplifier	solution 720/721
Gain	+9,5 dB symmetrical +3,5 dB asymmetrical +54/+60 dB Phono-MC asymmetrical +Gain adjust +3/+6/+9 dB
Frequency response	0 - 1 Megahertz (-3 dB)
THD + N	<0,0006% (20 Hz to 20 kHz)
Signal to Noise Ratio	> 140 dB
Channel separation	> 110 dB
Input impedance	2 kOhm symmetrical 47 kOhm asymmetrical 1 kOhm Phono-MC (adjustable)
Output voltage	max. 16 Vrms (100 Ohm) symmetrical max. 8 Vrms (100 Ohm) asymmetrical
Output impedance	2 Ohm symmetrical and asymmetrical 100 Ohm Record-Out
Inputs	720: 2 symmetrical, 3 asymmetrical, Phono 721: 1 symmetrical, 3 asymmetrical
Outputs	1 symmetrical, 1 asymmetrical 720 with Record-Out asymmetrical
Mains	100 - 240 Volt (50/60 Hz)
Power consumption	60 Watts / 6 Watts Stand-by
Dimensions	480 mm * 167 mm * 450 mm (W * H * D)
Weight	30 kg
Chassis	Aluminium, black/silver anodised
Features	Gain and bandwidth chooseable via presets, brightness of display adjustable
Link	12 Volts control-signal (master)

Specifications subject to change without prior notification.

Your solution-dealer



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