Series 5

soulution
nature of sound

550 Phono-preamplifier

User manual

-

Dear client

We are proud that you decided yourself for a soulution product. You have acquired a preamplifier with outstanding sonic performance which you will enjoy for many years.

We understand your eagerness to get started but even though please study this manual step by step before you integrate the phono-preamplifier 550 in your High Fidelity system. This manual contains also useful tips for the optimisation of your overall HiFi-system.

If there are any questions regarding the start-up or operation of your phono-preamplifier please do not hesitate to contact your dealer.

Have fun!

Your soulution team

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CE-Declaration of Conformity

Spemot AG declares that this product is in conformance with the following directives and standards:

Low Voltage Directive 2006/95/EG (EN/IEC 60065:2002)

Electromagnetic Compatibility 2004/108/EG (EN 55013:2001, EN 55020:2002, EN 61000-3-2:2006, EN61000-3-3:1995)

FCC-Notice

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- adjust or relocate the receiving antenna
- increase the separation between the equipment and the receiver
- connect the equipment into a mains outlet on a circuit different from that to which the receiver is connected
- consult the dealer or an experienced radio/TV technician for help
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Disposal

According to the Directive 2002/96/EG of the European Parliament used consumer-electro technical appliances have to be disposed separately and have to be indicated with the following symbol.

In the case of disposal of this component please do so in conformity with legal and environmental regulations.

Table of contents

Quick-start

Unpacking	⇨ Unpack your phono-preamplifier 550 ⇨ Keep the packing for future transportations ⚠ Treat the top class surface with care
Positioning	⇨ Position the phono-preamplifier 550 on a stable base. ⚠ Cooling air must be able to escape unrestricted.
Cabling	⇨ Disconnect all appliances of your system from the mains ⇨ Connect the 550 with your amplifier ⇨ Connect the 550 with your source components ⇨ Connect all appliances of your system with the mains ⚠ While changing cables the 550 must remain disconnect from the mains.
Programming	⇨ Default values for all functions are programmed. ⇨ No additional programming is required for the start-up.
Switch-on	⇨ Switch-on the 550 phono-preamplifier ⇨ Select a moderate volume level ⇨ Switch-on your source components and your amplifier ⚠ Check the cabling before switch-on

1 Technical Highlights

Layout

The 550 phono-preamplifier is built in dual-mono layout. Both audio channels have their dedicated power supply. The audio section is physically separated from the digital circuits.

Power supply

The phono-preamplifier 550 has separate power supply units for the audio section as well as for its digital section. All supply voltages are provided by modern switched mode power modules which are combined with precise, low-noise linear regulators. The physical separation of the power supplies for the digital and analog section ensures minimal interference.

Termination impedance

Relays switched high precision metal foil resistors define the termination imped-ance for each input. The adjustment can be done via the remote control from the listening position.

Output stage

The output stage is optimised for velocity, precision and impulse current rating. Thanks to its low output impedance of 10Ω the output stage is stable on every load (also long cables are driven without problems).
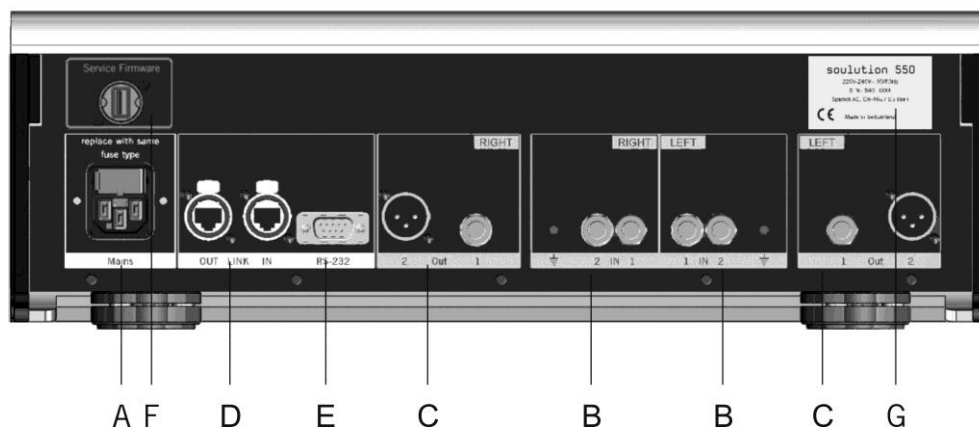
2   Safety advice: ⚠

User manual	⇨ Follow the safety advices ⇨ Keep this user manual.
Mains supply	Exclusively use 3 phase power cords with ground conductor. Unplug the 550 from the mains in the following cases: ⇨ before you manipulate with cables ⇨ before cleaning ⇨ during thunder storms ⇨ before you leave for longer periods
Cabling	While manipulating with cables the 550 has to remain disconnected from the mains. Wrong cabling may cause damages to your 550, (pre)amplifier and loudspeakers. Excessive volumes due to inappropriate handling may cause hearing damages.
Transport	Use only with the cart, stand, tripod, bracket or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving cart/apparatus combination to avoid injury or tip over.
Packing	In order to omit condensation of water inside your phono-preamplifier 550, let it warm up within the packing. Please keep the original packing for future transports.
Operation	Never run your phono-preamplifier 550 ⇨ with opened housing ⇨ with closed cooling-slots ⇨ with high ambient temperatures (>40°C) ⇨ close to heat sources like radiators, etc. ⇨ with extremely high humidity for example in humid cellars ⇨ close to water (Sink, bathtub, or similar equipment)
Cleaning	Use a soft and dry towel. We suggest using a non-abrasive micro fibre towel. Please do not use any solvents or liquidities
Service	Service by a qualified person required if ⇨ the mains-cable or the mains connectors are damaged ⇨ foreign substances or liquidity have entered the 550 ⇨ the 550 has seen rain ⇨ the 550 seems to malfunction ⇨ the 550 has fallen to the floor or the housing is damaged

3   Scope of delivery

- Preamplifier 550
- Remote control
- Power cord
- Phono-Termination-Plug
- User manual

4   Rear side

Mains (A)

Connect the phono-preamplifier 550 with the mains supply. Depending on the settings in the function PWR-MODE the 550 will change to operating condition OFF (consumption< 0.5W), wait for the LINK signal or switch-on automatically.

⚠️ Before disconnecting the 550 phono preamplifier from the mains you should bring it in operating condition OFF.

Input IN 1...IN2 (B)

Use top quality cables for the connection to your turntable. Both inputs can be configured as MM or MC- inputs. A relay switched resistor network allows for optimal adjustment of the termination impedance. If required the subsonic filter according to RIAA-IEC specification can be activated.

Output (C)

Due to the exceptional load stability there are no restrictions regarding the selection of your connecting cables. We recommend using balanced cables for longer cable runs. For short cable lengths also unbalanced cables represent a high quality connection.

A potential a hum-loop may be suppressed by the GND-LIFT function (page 12).

LINK (D)

The switch-on of the 550 phono preamplifier can be remote controlled through the LINK-connection. The function PWR-MODE (page 12) defines the behaviour of the 550 after switch-on.

RS 232 Interface (E)

All functions can be controlled through the RS 232 interface.
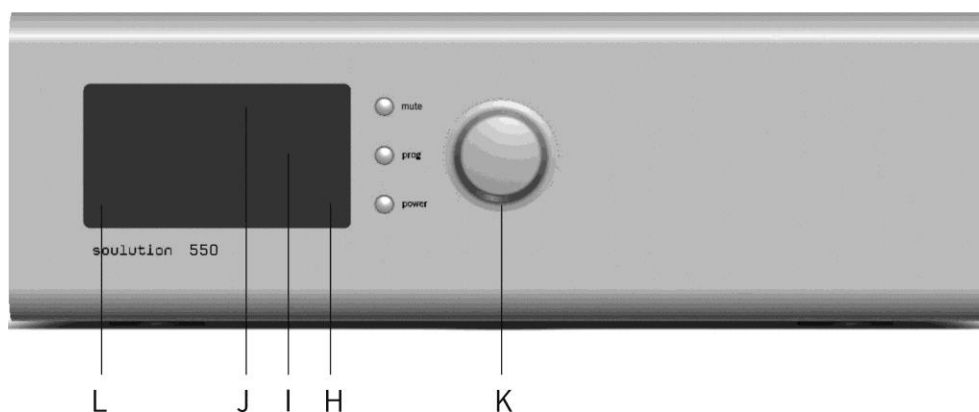
Firmware/Service (F)

The 550's firmware may be updated through the USB interface.

Type label (G)

The type label shows the serial number and the nominal rating of your product.
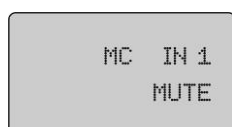
5   **Front side**

L   J I H   K

Power (H)

The Power button defines the operating condition ON or OFF (red LEDs). In operating condition OFF the audio circuits are completely disconnected from the outputs. Unplug your 550 from the mains before you manipulate with cables, before cleaning, during thunder storms or before you leave for longer periods.
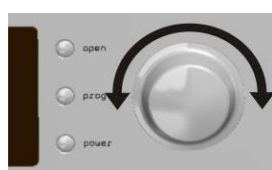
Mute (I)

In case of an emergency the safety function Mute allows disconnecting all inputs from the outputs (wrong cabling, feedback loops, etc.).

Prog (J)

The Prog-button switches the 550 to Programming-Mode.

Select (K)

Input-Select
The new input can be selected and will be activated after timeout of approx. 3 sec.

6   Remote control

Button	Pre-Mode	CD-Mode
(1) IR-transmitter	Operation until 5m distance and angel of ±45°.	
(2,3) ▲ ▼	Volume +/-	
(4) DIM / ▶ ❚❚	Volume-Dim	Play/Pause
(5/6) ◀ ▶	Select +/-	Next / Previous track
(7) ↵	Enter Function for Program-Mode	
(8) P	(De)activates Program-Mode	
(9) 🔇	Mute	-
(10) ⏻	ON / OFF	
(11) ⏏	-	Open/Close
(12) PRE	-	Activates PRE-Mode
(13) CD	Activates CD-Mode	-

Change of Remote Ctrl ID:
Press the respective buttons for approx. 5 seconds.
⇨   Pre 1:   ◀ (6), ▶ (5), ⏻ (10)
⇨   Pre 2:   ◀ (6), ▶ (5), 🔇 (9)
⇨   Phono   ◀ (6), ▶ (5), ↵ (7)
⇨   DAC   ◀ (6), ▶ (5), P (8)

Exchange of batteries (2 x AAA):
⇨   Open the battery tray on the rear side.
⇨   Insert the batteries into the tray as indicated.
⇨   Ensure correct polarity of the batteries.
⇨   Close the tray with corresponding screw.
⇨   Dispose the exhausted batteries
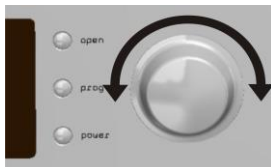
7 Program-Mode

General

The phono-preamplifier 550 can be adjusted to your individual setup. It is already programmed with default settings. Further programming is not mandatory.
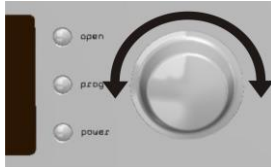
Function

Push on the Prog button switches the phono-preamplifier 550 between operating-mode and programming-mode. Timeout after 10 seconds.

Rotating of the Select knob allows selecting the desired Program-Function

Push on the Select knob for approval of the selected function. Now the value domain of the selected Program-Function is active. (red LEDs in display).

Rotating of the Select knob allows for adjusting the desired value.

Push on the Select knob for approval of the respective value.

7.1   Program functions

Function	Values	Remarks
PWR-MODE LINK	**NORM**, AUTO, LINK	NORM = controlled by power-button AUTO = automatic when mains activ LINK = wait LINK-signal
START-IN IN 1	**IN 1**, IN 2	Defines the active input after start-up.
IN1-TYPE MC	**MC**, MM	Configures the input as MM or MC. Gain and available impedance values
IEC IN 1 ON	**ON**, OFF	(De)activates the IEC high pass filter
RES IN 1 150 ohm	MC: 20Ω…**1kΩ** MM: 1kΩ…**47kΩ**	Defines the impedance of the input
CAP IN 2 100pF	**0pF** – 200pF	Defines the impedance of the input. Only available for MM inputs
GND-LIFT OFF	**OFF**, ON	Switches ground of the balanced outputs. OFF = ground connected ON = ground disconnected
BRIGHTN. 3	1 = low 2 = medium **3 = high**	Adjusts the brightness of the display
REMOTE Phono	Pre 1, Pre 2, **Phono**, DAC	Defines the IR- identification of the 550. The identification of the remote control has to be defined accordingly
LOAD-DEF YES		Activates the default values **(bold)** for all functions.

8   Trouble shooting

Error	Action
No display	Check the cabling to the mains supply. Eventually replace the fuse.
No music	Check - the cabling to the turntables and the amplifier. - if the proper input has been selected - if the preamplifier powered-up or in MUTE - if the power amplifier powered-up or in MUTE
POWER FAIL	If one of the 550's power supplies fails, the unit switches off automatically. The display shows which power supply failed. Please note the reported error code.
OVERCURRENT	MUTE is activated whenever the current at the output is higher than 0.2 A. If the overcurrent situation disappears the 550 will deactivate MUTE. Should the error remain for more than 2 sec. the unit will power-down automatically. OVERCURRENT can have the following root causes - short-cut in the cable to the preamplifier - defective input stage of the preamplifier - defective output stage of the 550 Check - the cabling to preamplifier - the preamplifier

If you cannot identify the error please disconnect the phono-preamplifier 550 from the mains supply and contact your soulution dealer.

9   Service

If your soulution product needs service please contact your soulution dealer. For further information see www.soulution-audio.com

10   Safety functions

Overcurrent	For currents > 0.2 Ampere at the output the phono-preamplifier 550 shuts down automatically.
Power supply	The power supply is monitored for correct operation. In case of an error the 550 gets shut down automatically.
Fuse	Model 220-240 V 2A/T 250V micro fuse 5x20mm Model 220V/60Hz 2A/T 250V micro fuse 5x20mm Model 100-120 V 4A/T 250V micro fuse 5x20mm

11   Warranty

All soulution products are guaranteed against defects in material and workmanship for five years from date of purchase.

The guarantee is void if the product has been subject to misuse or negligence or has been modified, repaired or opened by a non-authorised person without written authorisation of Spemot AG.

For the return transport to our premises please use exclusively the original packaging. Transport damages are not subject to this guarantee, repairs will be charged. We recommend effecting a transport insurance.

If you do not possess the original packaging no more please contact your soulution dealer.

Basic repairs may be completed by your soulution dealer. Please clarify whether he is able to do the work before you send the product back to us.
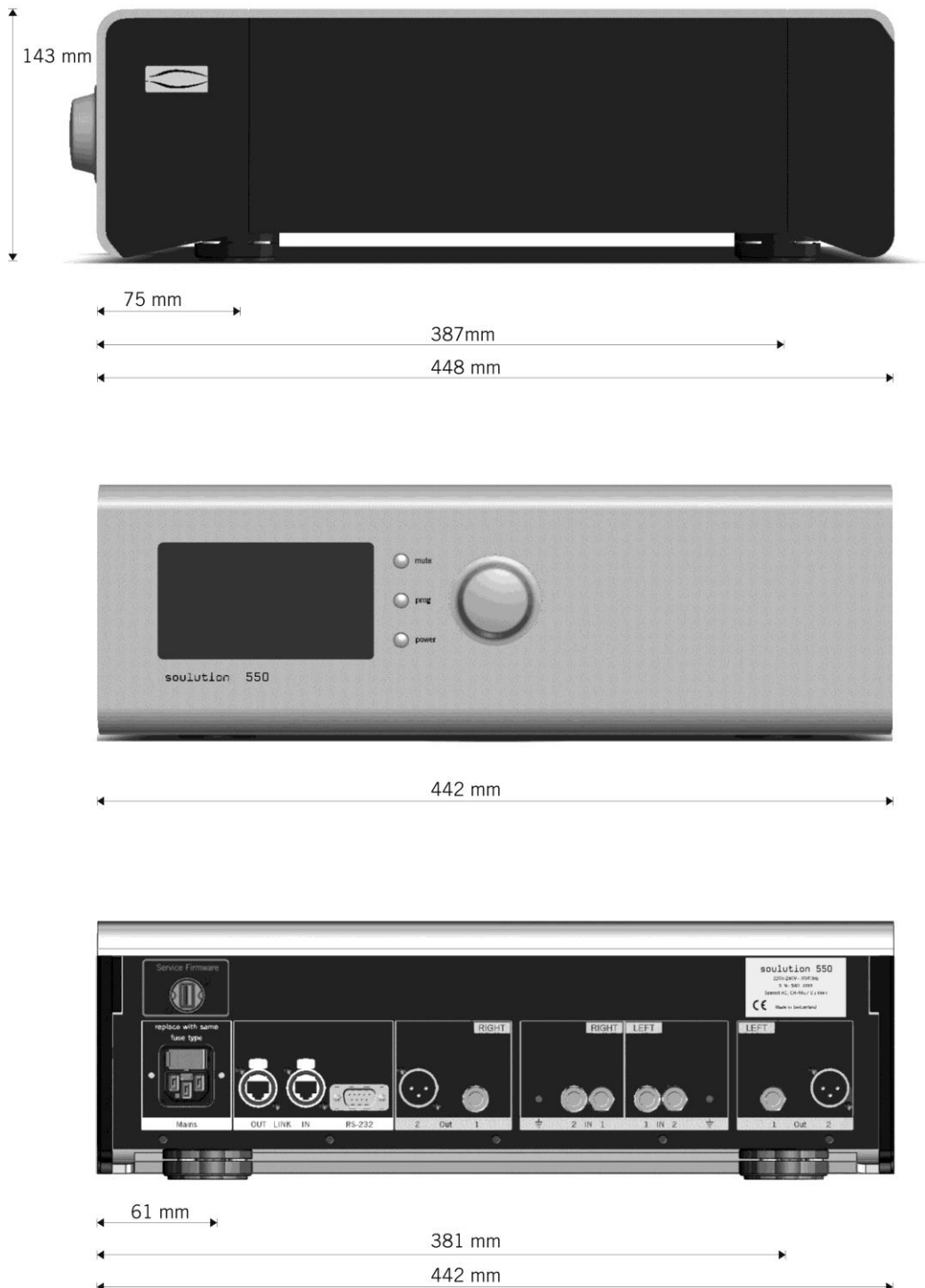
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12   Specification

Specification		Data
General		
Nominal Voltage		220-240 V
Power consumption	ON	50 W
	Standby	<0.5 W
Input	**(IN 1…IN 2)**	
Impedance	MC	20 – 1'260 Ω
	MM	1 - 47 kΩ
		0 -200 pF
Output		
Gain	MM @ 1kHz	48 dB
	MC @ 1kHz	60 dB
THD+N		<0.001 %
Signal-to-Noise Ratio		>95 dB
Crosstalk		<-120 dB
Output impedance		10 Ω
LINK-Out		+12 V
Dimensions		
Dimensions		442x448x143 mm
Weight		ca. 20 kg

Technical specifications are subject to change without prior notification.

13   Dimensions

143 mm

75 mm

387mm

448 mm

soulution   550

442 mm

61 mm

381 mm

442 mm

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