

# Series 3



311 Stereo amplifier

User manual





Dear client

We are proud that you decided yourself for a solution product. You have acquired a stereo amplifier 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 311 stereo amplifier 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 311 stereo amplifier please do not hesitate to contact your dealer.

Have fun!



Your solution team



## 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
- 

## 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.



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Quick start

Unpacking	<ul style="list-style-type: none"> <li>⇒ Unpack the 311 stereo amplifier</li> <li>⇒ Keep the packing for future transportations</li> <li>▲ Treat the top class surface with care</li> </ul>
Positioning	<ul style="list-style-type: none"> <li>⇒ Position the 311 stereo amplifier on a stable base.</li> <li>▲ Cooling air must be able to escape unrestrictedly.</li> </ul>
Cabling	<ul style="list-style-type: none"> <li>⇒ Disconnect all components of your system from the mains</li> <li>⇒ Connect the 311 with your loudspeakers</li> <li>⇒ Connect the 311 with your preamplifier</li> <li>⇒ Reconnect all components of your system with the mains</li> <li>▲ While changing cables the 311 must remain disconnect from the mains.</li> </ul>
Programming	<ul style="list-style-type: none"> <li>⇒ Default values for all functions are programmed.</li> <li>⇒ No additional programming is required for the start-up.</li> </ul>
Switch-on	<ul style="list-style-type: none"> <li>⇒ Switch-on your preamplifier</li> <li>⇒ Select a moderate volume level</li> <li>⇒ Switch-on your source components</li> <li>⇒ Switch-on your 311 stereo amplifier</li> <li>▲ Check the cabling before switch-on</li> </ul>



## 1 Highlights

### Power amplifier

At its core is an innovative voltage amplification stage that consists of linearized amplifiers operating up to a cut-off frequency of 80MHz. Current amplification is done in three stages, each with a narrow, almost linear operating range.

### Power supply

Four switched mode power modules with multi stage filter networks provide the required power for the amplifier. Induction of noise is omitted by physical separation from the amplifier boards and effective shielding. Switched mode power supplies provide supply voltages that are more stable and lower in noise than other power supply technologies.



## 2 Safety advice: ⚠

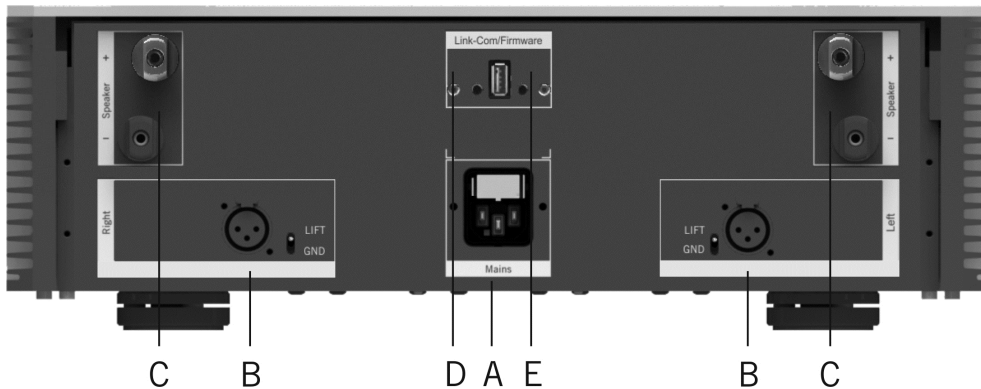
User manual	<ul style="list-style-type: none"> <li>⇒ Follow the safety advices</li> <li>⇒ Keep this user manual.</li> </ul>
Mains supply	<p>Exclusively use 3 phase power cords with ground conductor. Unplug the 311 from the mains in the following cases:</p> <ul style="list-style-type: none"> <li>⇒ before you manipulate with cables</li> <li>⇒ before cleaning</li> <li>⇒ during thunder storms</li> <li>⇒ before you leave for longer periods</li> </ul>
Cabling	<p>While manipulating with cables the 311 stereo amplifier must be disconnected from the mains. Wrong cabling may cause damages to your 311 and loudspeakers. Excessive volumes due to inappropriate handling may cause hearing damages.</p>
Transport	<p>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.</p>
Packing	<p>In order to omit condensation of water inside your 311 stereo amplifier, let it warm up within the packing. Please keep the original packing for future transports.</p>
Operation	<p>Never run your 311 stereo amplifier</p> <ul style="list-style-type: none"> <li>⇒ with opened housing</li> <li>⇒ with closed cooling-slots</li> <li>⇒ with high ambient temperatures (&gt;40°C)</li> <li>⇒ close to heat sources like radiators, etc.</li> <li>⇒ with extremely high humidity for example in humid cellars</li> <li>⇒ close to water (Sink, bathtub, or similar equipment)</li> </ul>
Cleaning	<p>Use a soft and dry towel. We suggest using a non-abrasive micro fibre towel. Please do not use any solvents or liquidities</p>
Service	<p>Service by a qualified person required if</p> <ul style="list-style-type: none"> <li>⇒ the mains-cable or the mains connectors are damaged</li> <li>⇒ foreign substances or liquidity have entered the 311</li> <li>⇒ the 311 has seen rain</li> <li>⇒ the 311 seems to malfunction</li> <li>⇒ the 311 has fallen to the floor or the housing is damaged</li> </ul>



### 3 Scope of delivery


- ⇒ 311 stereo amplifier
- ⇒ IR-remote control
- ⇒ Power cord
- ⇒ Link-Com cable
- ⇒ User manual

### 4 Rear side



#### Mains (A)

Depending on the PWR-MODE settings the 311 will change to operating condition OFF (consumption < 0.5W), wait for the Link-Com signal (operating. condition OFF) or switch-on automatically when connected with the mains.

 Ensure the 311 is OFF condition before disconnecting it from the mains.

#### Input (B)

Use high grade balanced cables for the connection to your preamplifier. In case of hum-noise due to ground loops you may activate the ground-lift.

#### Speaker (C)

Due to its exceptional load stability and peak current capacities the 311 stereo amplifier can easily drive any loudspeaker.





### Link-Com (D)

The Link Com can remote control the power-up/down sequence of connected solution series3 components.

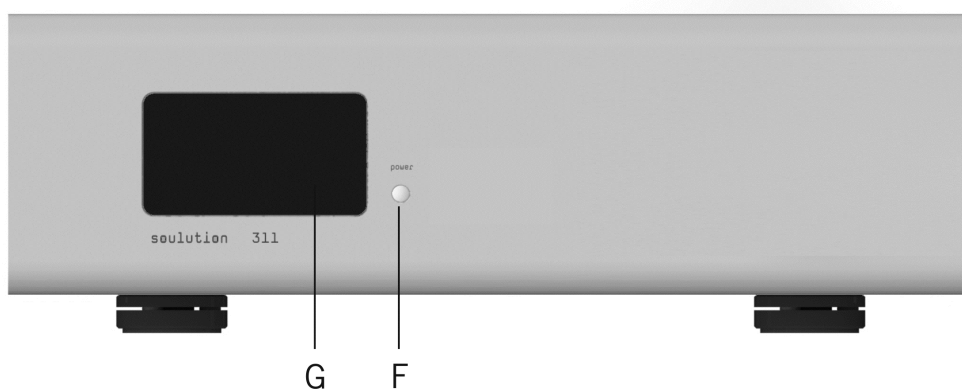
### Firmware (E)

The firmware can be updated through the USB interface.

- ⇒ Disconnect the unit from the mains
- ⇒ Copy the new firmware file on a USB stick, no other files on the stick
- ⇒ Plug the USB stick in the “Firmware” interface
- ⇒ Connect the unit with the mains
- ⇒ Follow the instructions in the display

## 5

### Front side



### Power (F)

The power buttons toggles between ON and OFF (red LEDs in display). We suggest switching the 311 to OFF whenever you do not listen to music.

### Display / IR-receiver (G)

The display shows all relevant information.



6 Remote control

Button	Pre-Mode	CD-Mode
(1) IR-transmitter	Operation until 5m distance and angel of $\pm 45^\circ$ .	
(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

### 7.1 Overview

The 311 stereo amplifier as well as the IR remote control are set to the remote-ID „Pre 2“. If you deactivate the reception of IR signals for the 311 with the function REMOTE, the program function remain accessible through the IR remote control (Remote ID: „Pre 2“).



Press the P button (Prog) for switching 311 stereo amplifier to program-mode.



The ◀ ▶ buttons allow selecting the desired program-function



Press the ↵ button (Enter) to activate the value domain of the selected program-function (red LEDs in display).



The ◀ ▶ buttons allow for adjusting the value of the selected program-function.



Press the ↵ button to approve the selected value.



## 7.2 Program-Functions

Function	Values	Remarks
<div style="border: 1px solid black; padding: 2px; width: fit-content;">PWR-MODE</div> <u>Power-Mode:</u> Defines start-up behaviour	<div style="border: 1px solid black; padding: 2px; width: fit-content;">PWR-NORM :</div>	Power-up with power-button, default value
	<div style="border: 1px solid black; padding: 2px; width: fit-content;">PWR-LINK :</div>	311 waits for external LINK Signal
	<div style="border: 1px solid black; padding: 2px; width: fit-content;">PWR-AUTO :</div>	Switches on automatically as soon as mains voltage is active.
<div style="border: 1px solid black; padding: 2px; width: fit-content;">BRIGHTH.</div> <u>Brightness:</u> Defines the brightness of the display	<div style="border: 1px solid black; padding: 2px; width: fit-content;">BR. LOW :</div>	Low
	<div style="border: 1px solid black; padding: 2px; width: fit-content;">BR. MID :</div>	Mid
	<div style="border: 1px solid black; padding: 2px; width: fit-content;">BR. HIGH :</div>	High, Default value
<div style="border: 1px solid black; padding: 2px; width: fit-content;">REMOTE</div> <u>Remote-ID:</u> Defines the Remote-ID for the 311.	<div style="border: 1px solid black; padding: 2px; width: fit-content;">REM Pre2 :</div>	Default value
	<div style="border: 1px solid black; padding: 2px; width: fit-content;">REM OFF :</div>	The ID of the remote control has to be changed accordingly (see chapter 6)
	<div style="border: 1px solid black; padding: 2px; width: fit-content;">REM Pre1 :</div>	
<div style="border: 1px solid black; padding: 2px; width: fit-content;">DEFAULT</div> <u>Default-Values</u> Activates the default values for all functions.	<div style="border: 1px solid black; padding: 2px; width: fit-content;">LOAD NO :</div>	No action
	<div style="border: 1px solid black; padding: 2px; width: fit-content;">LOAD YES :</div>	Loads the default values.
	<div style="border: 1px solid black; padding: 2px; width: fit-content;">DONE</div>	
<div style="border: 1px solid black; padding: 2px; width: fit-content;">FIRMWARE</div>	<div style="border: 1px solid black; padding: 2px; width: fit-content;">FW 1.01</div>	Firmware version



## 8 Trouble shooting

Error	Action
No display	Check the cabling to the mains supply. Eventually replace the fuse.
No music	Check <ul style="list-style-type: none"><li>- the cabling to your preamplifier</li><li>- the cabling to your loudspeakers</li><li>- if the proper input has been selected on the preamplifier</li><li>- if the preamplifier is powered-up or in MUTE</li><li>- if the source component is powered-up or in MUTE</li></ul>
PROTECT	Protect function is activated in the following situations: <ul style="list-style-type: none"><li>- output current to the loudspeakers &gt;30 A</li><li>- DC-offset in the input signal</li><li>- HF oscillation in the power-amplifiers</li><li>- Too high temperature on the output transistor rail</li></ul>
POWER FAIL	The 311 switches-off automatically if one of the power supplies fails. The display shows which power supply failed. Please note the reported error code.

If you cannot identify the error please disconnect the 311 stereo amplifier from the mains supply and contact your solution dealer.

## 9 Service

If your solution product needs service please contact your solution dealer. For further information see [www.soulution-audio.com](http://www.soulution-audio.com)



10 Safety functions

Overcurrent	The 311 will switch-off automatically if the output current to the loudspeakers exceeds > 30A	
Power supplies:	The 311 switches-off automatically if one of the 311's power supplies fails. The display shows which power supply failed. Please note the reported error code	
Audio signal	The audio gets monitored for HF oscillation and DC offsets. If the tolerated thresholds are surpassed the 311 switches-off automatically.	
Temperature	In case of over-temperature the 311 gets switched-off automatically.	
Fuse:	Model 100-240V	10A/T 250V micro fuse 5x20mm
	Model 220V/60Hz	10A/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-authorized 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.



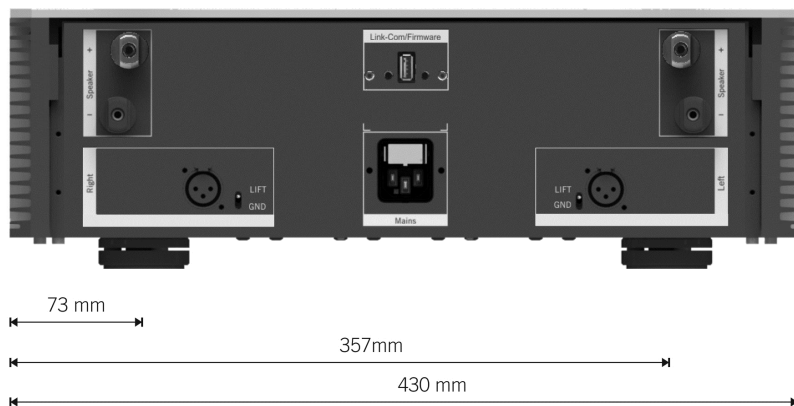
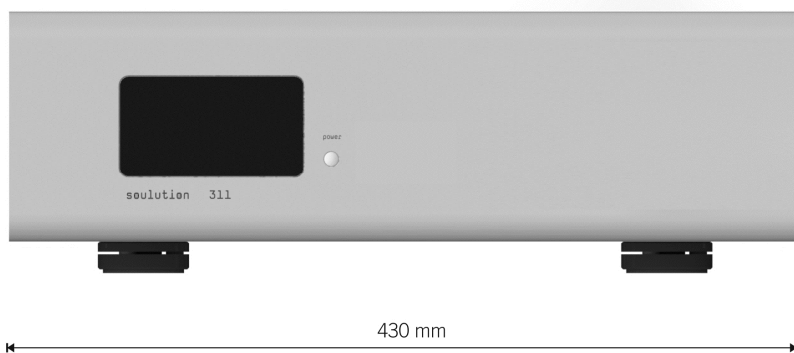
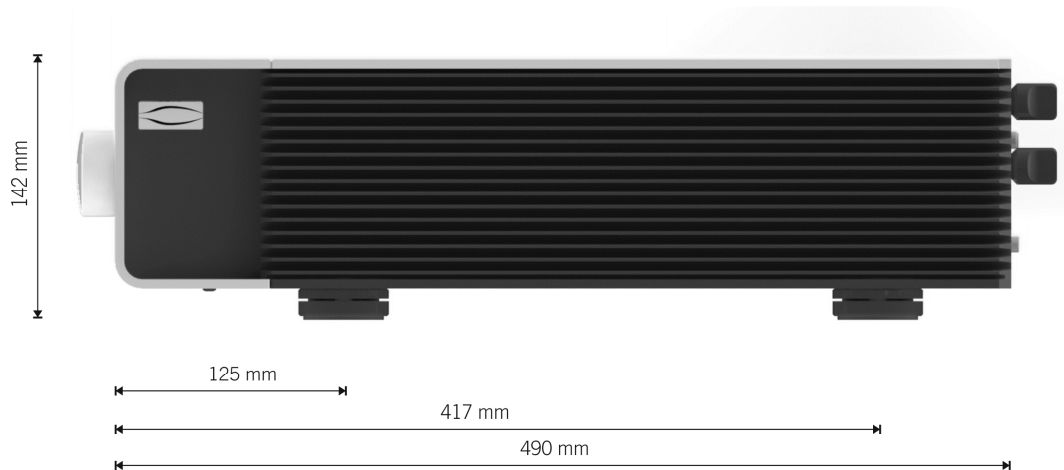
## 12 Specification

General		
Nominal voltage	Model 100-240V Model 220V/60Hz	100 - 240 V, 50-60Hz 220 V, 60Hz
Nominal consumption		1200 W
Consumption	Standby	<0.5 W
Input		
Impedance		2 k $\Omega$
Sensitivity		1.55 Vrms
Main-Out		
Audio power	@ 8 $\Omega$ @ 4 $\Omega$ @ 2 $\Omega$ (dynamic)	120 W 240 W 480 W
Peak output current		30 A max.
Gain		+26 dB
Frequency response		DC-800 kHz
THD+N		<0.001 %
Damping factor		>5'000
Signal-to-Noise Ratio (SNR)		>120 dB
Crosstalk		< -110 dB
Dimensions		
Dimensions		430 x 490 x 142 mm
Weight		ca. 30 kg

Technical specifications are subject to change without prior notification.



13 Dimensions







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