

Series 7



Monoamplifier 701

User manual



Dear client

We are proud that you decided yourself for a soulution amplifier. You have acquired an 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 monoamplifier 701 in your High Fidelity system. This manual contains also useful tips for the optimization of your overall HiFi-system.

If there are any questions regarding the start-up or operation of your monoamplifier 701 please do not hesitate to contact your dealer.

Have fun!

A handwritten signature in black ink, appearing to read 'Gallen', with a large, stylized initial 'G'.

Your soulution - team



soulution
nature of sound

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

FCC-Notice

Note: This equipment has been tested and found to comply with the limits for a Class A 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 an 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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1 Quick start

Unpacking	<ul style="list-style-type: none"> ⇒ Unpack the monoamplifier 701 ⇒ Store the packing for future transportations. ▲ Treat the high quality surface with care
Positioning	<ul style="list-style-type: none"> ⇒ Position the monoamplifier 701 on a stable base ▲ Do not put the 701 in a closed cabinet, at least two sides must be open for unrestricted airflow
Cabling	<ul style="list-style-type: none"> ⇒ Disconnect all components of your system from the mains ⇒ Connect the 701 with your preamplifier ⇒ Connect the 701 with your speakers ⇒ Connect all components with the mains. ▲ While manipulating with cables the monoamplifier 701 has to remain disconnected from the mains.
Settings	Define the brightness of the display, the start-input, start-mode, as well as the operation-mode.
Switch-On	<ul style="list-style-type: none"> ⇒ Switch-on your source components and the preamplifier ⇒ Turn down the preamplifier to low volume ⇒ Switch on the monoamplifier 701 ▲ Check the cabling before switching on the 701.



2 Technical Highlights

2.1 Philosophy

The ideal amplifier is perfectly load stable and 100% level and phase accurate. The monoamplifier 701 is closest of all to this ideal. It is capable to output up to 1'200W of continuous power (into 4Ω) and more than 12,000W of transient power. More than enough to breathe new sonic life into even the most demanding loudspeakers.

2.2 Layout

To deliver these impressive power levels we have used bridged amplifiers. Optimized mechanical construction ensures both amplifier circuits are perfectly balanced, sharing identical thermal conditions and ideal grounding. When no music is playing an intelligent control system automatically lowers the quiescent current. And when loudspeakers dictate bi-amping, the 701 can be easily switched to this mode. We think of it as tailor-made amplification.

2.3 Amplification

From the input the 701 first buffers the music signal. A high performance correction amplifier is then used to capture and correct any deviations in the signal, very quickly and very precisely. Ultra wideband amplification using no feedback loops follows, a less than 10 nanosecond transit time and level accuracy to within 0.1dB ensuring signal purity. The whole is housed within a sealed module, maintaining a common temperature across all stages to further guarantee precision. The output stage comprises 14 power transistors per channel (28 per monoamplifier), all mounted onto a massive copper rail which is temperature controlled for a constant quiescent current. The 701's impressive low level signal handling is reflected in its raw power delivery. Current levels of 60A and more are readily attainable.

2.4 Power supply

The supply of the amplifier section is based on modern switched mode power supplies. Four modules with 600VA each optimized for audio application combined with audiophile capacitors (>1'000'000 microFarad) provide enough power reserves even for the most demanding music signals. Circuitry that does not process audio signals should not be able to influence them. That's why we use no less than 3 dedicated power supplies within each monoamplifier for the ancillary stages.



Safety advice:

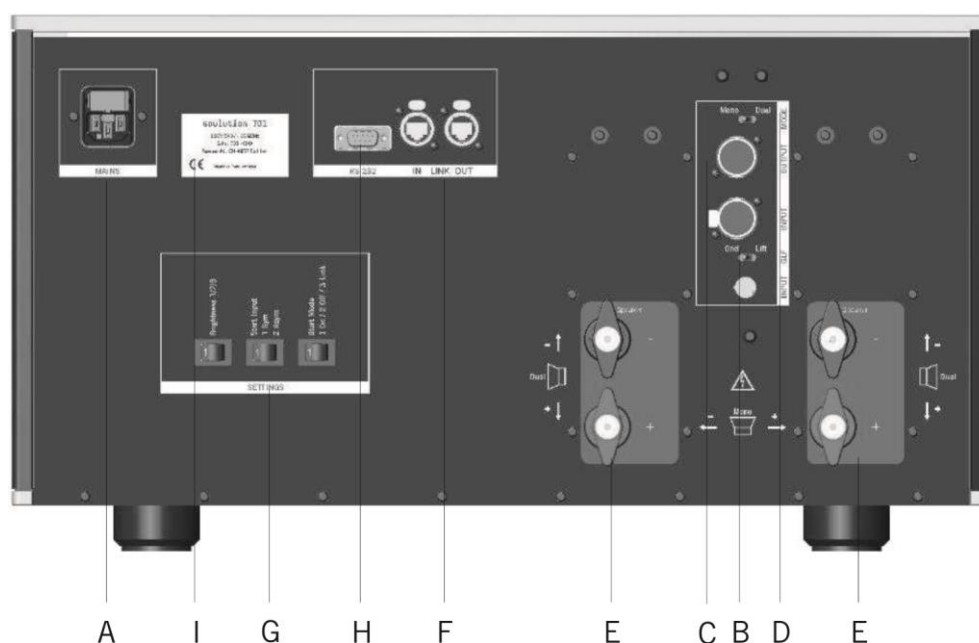
User manual	<ul style="list-style-type: none"> ⇒ Follow the safety advices ⇒ Keep this user manual.
Mains supply	<p>Exclusively use 3 phase power cords with ground conductor. Unplug the 701 from the mains in the following cases:</p> <ul style="list-style-type: none"> ⇒ before you manipulate with cables ⇒ before cleaning ⇒ during thunder storms ⇒ before you leave for longer periods
Cabling	<p>While manipulating with cables the 701 has to remain disconnected from the mains. Wrong cabling may cause damages to your 701, amplifier 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 monoamplifier 701, let it warm up within the packing. Please keep the original packing for future transports.</p>
Operation	<p>Never run your monoamplifier 701</p> <ul style="list-style-type: none"> ⇒ 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	<p>Use a soft and dry towel. We suggest using a nonabrasive microfiber 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"> ⇒ the mains-cable or the mains connectors are damaged ⇒ foreign substances or liquidity have entered the 701 ⇒ the 701 has seen rain ⇒ the 701 seems to malfunction ⇒ the 701 has fallen to the floor or the housing is damaged



4 Scope of delivery

- Monoamplifier 701
- Mains power cord
- User manual

5 Rear panel



5.1 Mains (A)

The monoamplifier 701 does have no mains switch. As soon as connected with the mains it will be in operation mode OFF (<0.5W)

5.2 Input (B)

Please use top grade audio cables. For longer connecting cables we suggest using the balanced inputs. If there is no music signal (>10min) the idle current gets reduced automatically (C LOW = Consumption Low).

5.3 Output (C)

The music can be transmitted the next amplifier through the output connector (only balanced connectors).



5.4 Operation-Mode (D)

Defines the operation mode „Mono“ or „Dual“. The new setting gets activated after the 701 has been unplugged from the mains.

5.5 Speaker (E)

Connect the speakers according to the chosen operation mode. Check the connectors for tight fit. Check the cables for eventual damages. Short circuits provoked by thin threads from loudspeaker cables may end in a fire.

5.6 LINK (F)

Connect the LINK-In of the 701 with the LINK-Out of your solution preamplifier. LINK-Out allows including further components in the LINK-network.

5.7 Settings (G)

The new setting gets activated after the 701 has been unplugged from the mains.

Start-Mode	OFF:	The 701 remains in operation mode OFF
	ON:	The 701 switches ON automatically
	LINK:	The LINK-System defines the operation mode
Start-Input	Start-Input defines the active input after switch on.	
Brightness	Defines the brightness of the display (1=low / 2=medium / 3=high).	

5.8 RS232 – Interface (H)

The monoamplifier 701 can be remote controlled through the RS232 interface. All functions can be controlled and relevant information is provided to the control unit.

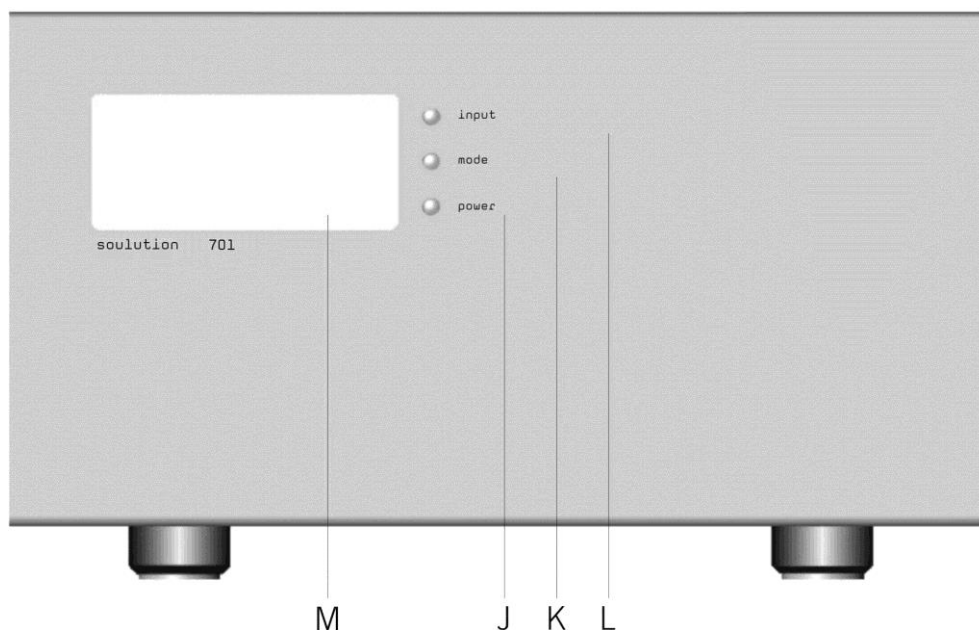
5.9 Type label (I)

The type label shows the serial number and the nominal power rating.

- 220 - 240 V, 50-60Hz, 2'500W
- 100 - 120 V, 50-60Hz, 2'500W
- 220 V, 60Hz, 2'500W



6 Front panel



6.1 Power (J)

The power button defines the operating condition ON or OFF (red LEDs). In operating condition OFF the loudspeaker terminals are muted.

6.2 Mode (K)

The mode button (de)activates the LINK function. The monoamplifier 701 can always be switched on/off via the front panel.

6.3 Input (L)

The input button defines the active input. The inactive input gets muted.

6.4 Display (M)

The display shows all relevant information.



7 Protection functions

Comprehensive protection functions ensure safe operation and a long lifetime. The monoamplifier 701 has the following protection functions:

Level limitation:

For too high levels at the input of the monoamplifier 701 the soft clip circuit is activated. The activated soft clip circuit will distort the output signal significantly, the sonic performance is reduced. Please ensure that the input levels are within the limit of 1.8 Vrms.

Overcurrent:

If the output current to the loudspeakers exceeds 80 A the monoamplifier 701 is switched off automatically. This represents a maximal power rating of ca. 8'000 W (100V @ 0.6Ω)

Overtemperature:

The temperature of the power transistors is permanently monitored. If the maximal operating temperature is exceeded despite of active cooling system the monoamplifier 701 is switched off automatically.

Fuse

The mains connection has a fuse which protects your monoamplifier 701 against too high power consumption. Please replace with the same fuse type. The fuse is located within the mains switch on the rear side of the monoamplifier 701.

Model 220 - 240 V, 50-60Hz	10A/T 250V micro fuse 5x20mm
Model 100 - 120 V, 50-60Hz	15A/T 250V micro fuse 5x20mm
Model 220 V, 60Hz	10A/T 250V micro fuse 5x20mm



8 Trouble shooting

Error	Measure
No display	Check the cabling to the mains supply. Eventually replace the fuse of your monoamplifier 701.
No music	Check the cabling, whether the correct input (SYM/ASYM) is activated, whether the preamplifier is switched on and if the right source has been selected, whether the source component is switched on and does output signal (Mute, Pause, etc.).
PS-A FAIL	The switched-mode power supply A has failed. Switch-off the 701 and try again after approx. 30sec.
PS-B FAIL	The switched-mode power supply B has failed. Switch-off the 701 and try again after approx. 30sec.
PS60 FAIL	The auxiliary 60V power supply has failed
AMP1 FAIL	The inner amplifier channel has a malfunction
AMP2 FAIL	The outer amplifier channel has a malfunction
DATA -CON	The communication to the audio channels is broken

8.1 Actions after the appearance of an error

If you cannot identify the error please disconnect the mains supply (before you disconnect the monoamplifier 701 has to be in operating condition OFF) and contact your soulution dealer.



9 Warranty

All soulution products are guaranteed against defects in material and workmanship for five years from date of purchase. The warranty is not transferable.

The warranty is void if the monoamplifier 701 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 monoamplifier 701 back to us.

10 Service

If your monoamplifier 701 needs service please contact your soulution dealer. For further information see www.soulution-audio.com



11 Specification

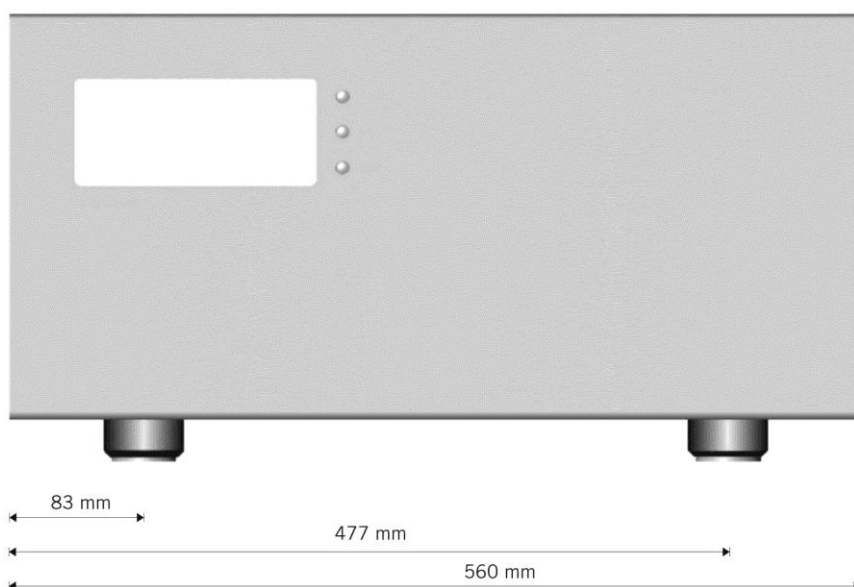
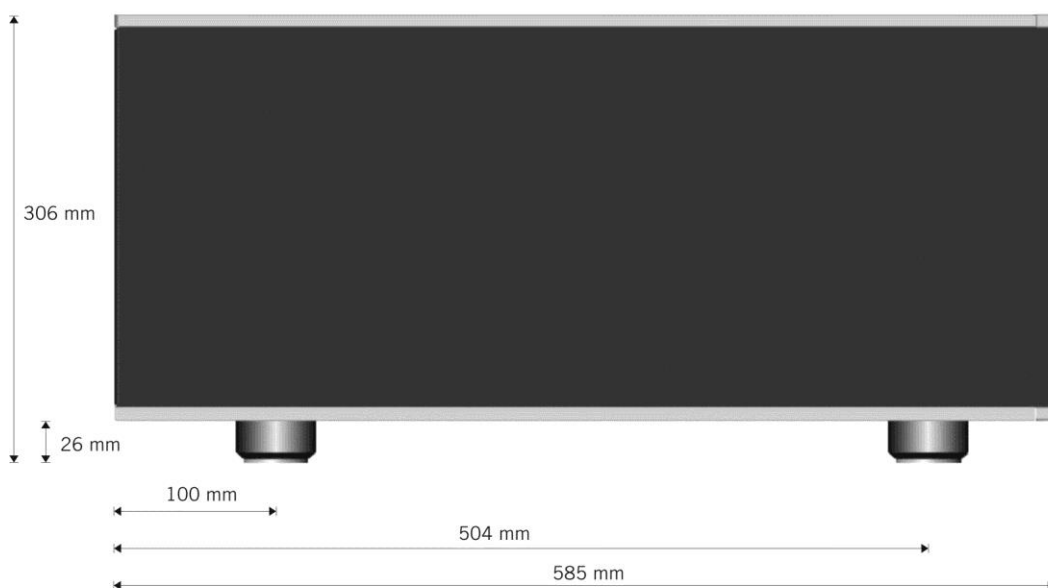
		Dual	Mono
Power rating			
Audio power rating	@ 8Ω	2 x 150 W	600 W
	@ 4Ω	2 x 300 W	1'200 W
	@ 2Ω	2 x 600 W	2'000 W
General data			
Standby / OFF		<0.5 W	<0.5 W
Idle "High Consumption"		ca. 250 W	ca. 250 W
Idle "Low Consumption"		ca. 150 W	ca. 150 W
Input			
Impedance	XLR	2.3 kΩ	2.3 kΩ
	cinch	4.0 kΩ	4.0 kΩ
Sensitivity		1.38 Vrms	1.38 Vrms
Output			
Impedance		0.001 Ω	0.002 Ω
Output voltage max.		35 Vrms	70 Vrms
Output current max.		120 A	120 A
Impulse rating		> 2x6'000 W	>12'000 W
Performance			
Voltage amplification		+26 dB	+32 dB
Frequency response		DC-1 MHz	DC-2 MHz
Slew rate		400 ns	200 ns
THD+N		<0.001 %	<0.00015 %
Signal to noise ratio	@ 1kHz	107 dB	101 dB
Damping factor	@ 100Hz	> 10'000	> 5'000
Weight		ca. 76 kg	

Technical specifications are subject to change without prior notification.



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Dimensions



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