
SPA-8

Stereo Power Amplifier

USER MANUAL

PLAYBACK
DESIGNS

THANK YOU

Congratulations and thank you for selecting the Playback Designs SPA-8 Stereo Power Amplifier for your high-performance music system. We are certain it will provide you with years of listening pleasure. The SPA-8 represents years of our experience and innovation in analog audio designs that have helped establish the reputation of Playback Designs as a premier audio manufacturer.

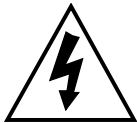
Please take a few minutes to read through this user manual prior to using the product. This will help you to understand the basic functions and unique capabilities of the amplifier. It will also allow you to maximize the exceptional performance for which it was designed.

IMPORTANT SAFETY INSTRUCTIONS

- Read and follow these instructions and keep this manual in a safe place.
- Do not use this apparatus near water.
- Do not block any ventilation openings.
- Do not install near any heat sources such as radiators, heaters, or other apparatus (including pre-amplifiers and amplifiers) that produce heat.
- Do not install this apparatus in a confined space such as bookcases or closed cabinets.
- Unplug this apparatus from the mains during lightning storms or when unused for long periods of time.



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of non-insulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

INFORMATION TO THE USER

Alteration or modification carried out without appropriate approval may invalidate the user’s right to operate the equipment.

WARRANTY

Playback Designs warrants the SPA-8 product against defects in material and workmanship under normal use and service for a period of time specified by the product's serial number from the date of first delivery to the owner. The warranty time period is for 30 days. If within the first 30 days of ownership you register your Playback Designs product, by sending us a copy of your sales receipt, your name, address, city, state, zip code, phone number, email address and your dealer's store name, we will extend the warranty 3 years. This warranty is limited to the original owner.

Playback Designs will pay for return shipping charges (domestically) back to the owner when the product is sent to Playback Designs within the first 30 days after purchase and the fault can be confirmed by Playback Designs. Otherwise, owner will be responsible for all shipping charges to and from Playback Designs. International customers must deal with their local dealer or distributor.

For all warranty claims, a copy of the original invoice must accompany the product. Opening the product or modifying it in any way by the owner, including but not limited to cryogenic treatment, will void any warranty.

Please contact Playback Designs for a RA (Return Authorization) number and shipping instructions before shipping any product to Playback Designs.

Playback Designs products are sold worldwide through authorized dealers with restricted territories. If any Playback Designs product is purchased from non-authorized dealers or from a dealer selling outside his / her authorized territory all warranties will be void.

If you purchased this product from a dealer please take a moment and send us an email to info@playbackdesigns.com so we can register you for the warranty. If this product has been shipped to you directly from Playback Designs, you are automatically registered.

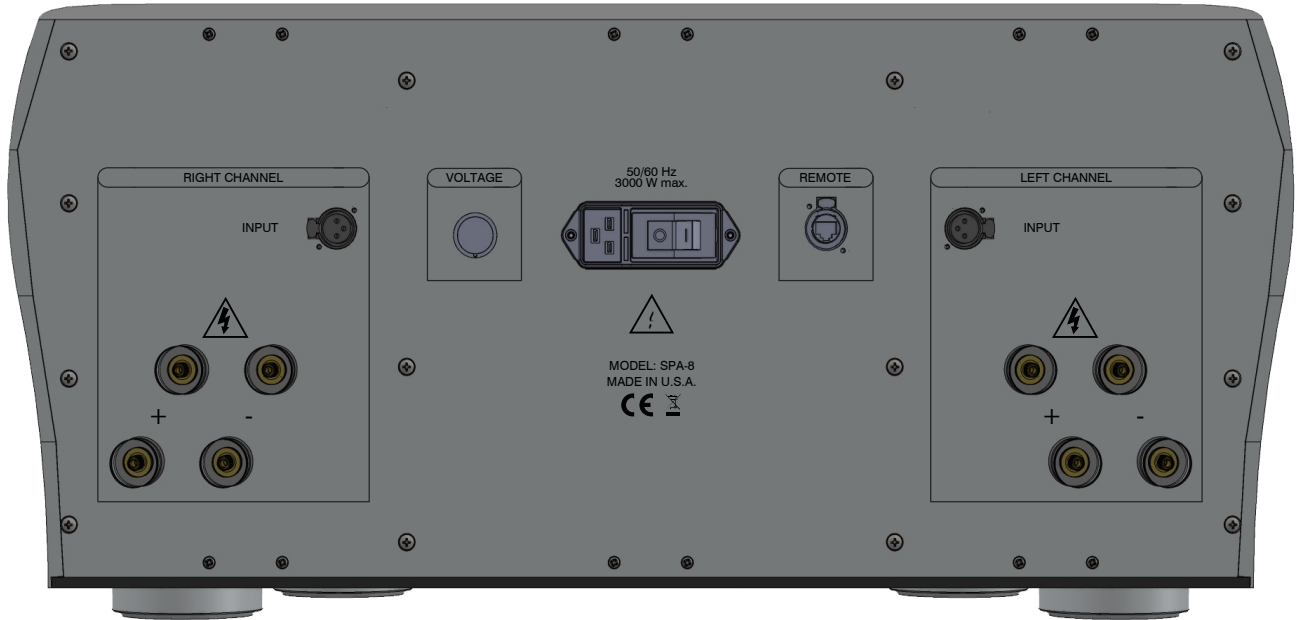
BEFORE USING THE PRODUCT

- What is in the box: SPA-8 power amplifier
Power cord
User manual
- Registration: If you purchased this product from a dealer please take a moment and send us an email to info@playbackdesigns.com so we can register you for the warranty.
- Installation: The AC voltage supplied to the unit should match the voltage rating indicated on the rear panel.
Do not place the player over an amplifier or any other equipment that generates heat.



As this product may become warm during operation, always leave sufficient space around the amplifier for ventilation. Always allow adequate air circulation around the product.

BACK PANEL CONNECTORS



Analog inputs: XLR, Balanced
pin1: shield, pin2: hot, pin3: cold.

Speaker Terminals: Speaker output terminals, 2 pairs per channel
red: hot, black: cold.



Attention! The output terminals may carry high voltage! Never change or touch cabling when device is switched on! Always unplug the device from mains before re-cabling!

System Control Ethernet, Remote control via tablet app (future expansion).

Voltage Selector Rotary switch for AC voltage selection.

Mains AC Input Mains connector for AC.

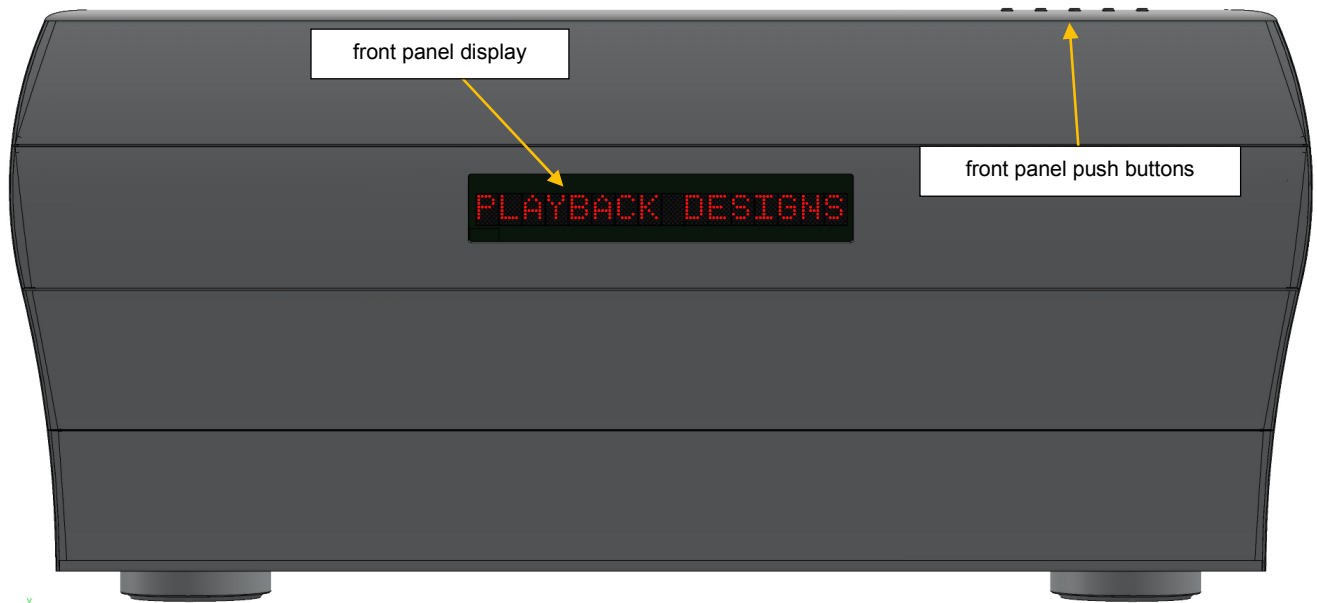


Before connecting the amplifier to the AC mains, please make sure to set the voltage with the rotary selector on the rear panel to match with the one of your AC line.

Operating the amplifier at the wrong voltage will damage the unit.

Never change the rotary switch during operation!

FRONT PANEL FUNCTIONS



Buttons:



Up / Down toggle buttons for display selection during normal operation and setting selection in setup mode.



Press this button to enter setup mode and press it repeatedly to scroll through all setup menu items. This mode is automatically exited when no button is pressed for at least 10 seconds.

Some setup menu items can be changed with the Up / Down buttons on the front panel. See setup menu chapter for more information.



Mute toggle on / off.



Standby power on / off: Press this button when the amplifier is in standby mode to switch on the amplifier or when it is running to shut it down again.

The AC Power switch on the back panel must be in "on" position. During the power-on and power-off sequence the amplifier goes through a special sequence of internal checks. This takes a while and is indicated on the front panel.

Between each power-off and power-on sequence there is a 10 second delay i.e. you have to wait at least 10 seconds before the unit can be turned on again after powering off.

NOTE: In order to power off the SPA-8 it is important to always first use the button on the front panel to set the amplifier into standby mode and let it discharge its internal circuits. **Do not turn power off with the rear panel switch during normal operation or before the amplifier has not finished its internal power-down sequence and the front panel display is turned off signaling standby mode!**

DISPLAY MODES DURING NORMAL OPERATION

- Dot in middle:** This is the most discreet display and won't change during playback.
- Musical dynamics:** The display shows musical dynamics e.g. pianissimo etc.
- Level:** A power level meter is displayed.
- Playback Designs:** "Playback Designs" is displayed and does not change during playback.

SETUP MENU

The SPA-8 has several options that can be displayed and set via the front panel buttons. Enter the settings menu by pressing the Setting button and press it repeatedly to toggle through all settings. Some of them can be changed with the up / down buttons. After no button press for 10 seconds the display will automatically go back to normal operation. All settings are stored in memory.

Press the FUNCTION button to toggle through the following items:

1. Normal operation Use the up / down buttons to change the display modes (see above paragraph).
2. Display brightness Use the up / down buttons to adjust the brightness.
3. Serial number Cannot be changed. Use the up / down buttons to display firmware revision.
4. Time of operation Cannot be changed.
5. Status This shows any status and / or error code that can be used in case of any malfunction.

BREAKING IN THE SPA-8

Breaking in the SPA-8 is time consuming but well worth the effort. During break-in when you do not listen to music it is best to feed an external audio signal with the speakers disconnected.

STATUS MESSAGES DURING NORMAL OPERATION

The amplifier has a complex safety and self checking system and can display various status information on the front panel during normal operation:

Trafo switch-on / off	Big power transformers are switched on or off
Charging	Large reservoir of capacitors are being charged
Discharging	Large reservoir of capacitors are being discharged
Checking input	Audio inputs are being checked for signal presence and volume level
Checking DC	Outputs are being checked for any DC offset
Checking Speaker	The amplifier checks the impedance of your speakers and theirs cabling to prevent the amplifier from turning on when there is a short in your speaker setup.
...muted...	Both speaker outputs are muted
Turn input down!	The level at the audio input is too high and the amplifier is waiting for you to turn it down. This is for safety reasons and it is always best to turn on power with a muted pre-amp.
Goodbye!	The amplifier is entering standby mode and is being polite about it.

ERROR MESSAGES

The amplifier performs an extensive self check at power up and also continuously monitors various parameters during operation. If it finds any fault in the system whether inside the amplifier or outside in your speaker and cabling system it will display various messages that will help you in identifying the issue:

High temperature	One of the supervised temperatures is too high. Shut down the amplifier and let it cool down. Make sure all air vents are not obstructed.
Input signal hi	The input signal is too high to start safely without being too loud. Turn down the volume on your pre-amp or stop your playback device.
Rail voltage low	The internal power rails are too low. Check for correct voltage setting and make sure your AC outlet provides adequate power.
High output current	The output current at the speaker terminals is too high. Check your speaker cables for any short or your speakers for any damage.
x.xR !RES! y.yR	The connected cable speaker combination is shorted. Check your speaker cables for any short and your speakers for any damage. The x.x and y.y values are the measured impedances in Ohm for left and right channels. The amplifier does not start when it measures values below 0.5R.
Too many clips	The amplifier detected too many clips at the output and is muting to protect your speakers. Turn down the volume.

Power protect	The power stage was close to its power limit and to protect your speakers the amplifier mutes the outputs. Make sure the impedance of your cable speaker combination is not too low and the connected speakers are not faulty.
Current protect	The power stage was close to its current limit and to protect your speakers the amplifier mutes the outputs. Make sure the impedance of your cable speaker combination is not too low and the connected speakers are not faulty.
Power outage	The mains AC voltage had an outage or dropout. To protect your speakers the amplifier mutes the outputs. Check your AC cables.
DC protect	The output has too much DC voltage and to protect your speakers the amplifier mutes the outputs. Check your pre-amp for proper operation and does not have any DC offset at its output.

BEEP CODES

When the power to the amplifier is turned on with the back panel switch it starts checking the mains voltage and goes into standby mode. Normal operation and any malfunction at this point is indicated with a series of beep codes:

1 short beep	The amplifier detected mains voltage.
3 short beeps	The mains voltage is not within its limits.
6 long beeps	The amplifier detected a mismatch between selected voltage (selector switch in back panel) and actual mains voltage at its power inlet. Make sure you selected the correct voltage.

WIRING THE SPA-8

Connecting to the mains outlet

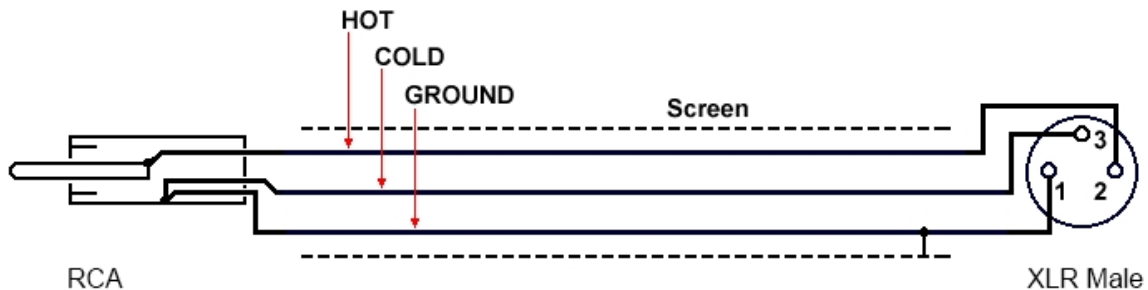
Connect the SPA-8 with the supplied mains power cable. It is constructed of large enough wire gauge and an appropriate plug. Do not substitute with another power cable.

Connecting balanced sources

To fully realize the sonic potential of your SPA-8 Stereo Power Amplifier, use balanced connections at its input. Balanced cables minimize interferences from magnetic and RF sources. Connect your preamplifier output to the input provided on the rear panel of the SPA-8. The SPA-8 conforms to the standard of pin2 as "hot" i.e. a positive voltage at pin2 will produce a positive voltage at the "+" speaker terminal.

Connecting unbalanced sources

If you should need to connect unbalanced equipment, use the following special cable wiring to get the best performance.



Connecting your loudspeakers

Two sets of output terminals are provided for easy bi-wiring. Do not use tools on the speaker terminals but rather tighten them by hand only.



This is a high-power amplifier, when driven there is high voltage at the speaker terminals! Connections should be only made with the mains disconnected!

SPECIFICATIONS

Abbr.	Name	Value	Units	Condition
THD+N	Total Harmonic Distortion plus noise	0.0004	%	20Vrms out, 1 kHz, no load BW 22 Hz - 22 kHz, (A-weighted)
SNR	Signal-to-Noise Ratio	93	dB	2.83Vrms out, BW 22 Hz - 22 kHz, (A-weighted)
DNR	Dynamic Range	119	dB	57.8 Vrms out, no load, BW 22 Hz - 22 kHz (A-weighted)
BW	Frequency Response	0 / -3	dB	10 Hz / 100 kHz 2.83Vrms out, no load
X-Talk	Crosstalk	<-120	dB	26.5 Vrms out, 1 kHz BW 22 Hz - 22 kHz (A-weighted) Left-to-Right/Right-to-Left
Zout	Output Impedance	<0.2	Ω	Unbalanced (0Hz to 20kHz)
	Maximum Output Power per Channel	1600	W	Continuous Peak into 4 Ohm
	Maximum Output Level	37.4 57.8 163.4	dBu Vrms Vpp	Unbalanced, no load BW 22 Hz - 22 kHz THD+N 1%
	Gain	30.7	dB	Balanced to Unbalanced
	Standby Power	<1	W	switched to standby Power Factor 45
	Power Consumption	300	W	switched on, no load Power Factor 61
	Maximum Power Consumption	5750	W	switched on, 2 Ohm load 230VAC Mains, short term <1min
	Dimensions	73 x 87 x 34 29 x 34 x 14	cm inch	Width x length x height
	Weight	137 292	kg lbs	
	Shipping weight	182 400	kg lbs	

All specifications are taken at 230V AC mains.

CLEANING THE CHASSIS OF THE SPA-8

It is possible that the chassis can stain slightly from fingerprints or you may discover subtle stains on the surface that can be caused by the packaging material during shipping. You can easily clean the chassis with either window cleaning solution and a clean and soft cloth. The best way is with a micro fiber cloth that you spray slightly with WD-40. Do not spray it directly on the chassis, but rather on the cloth. Then gently rub the entire chassis until it is dry again.