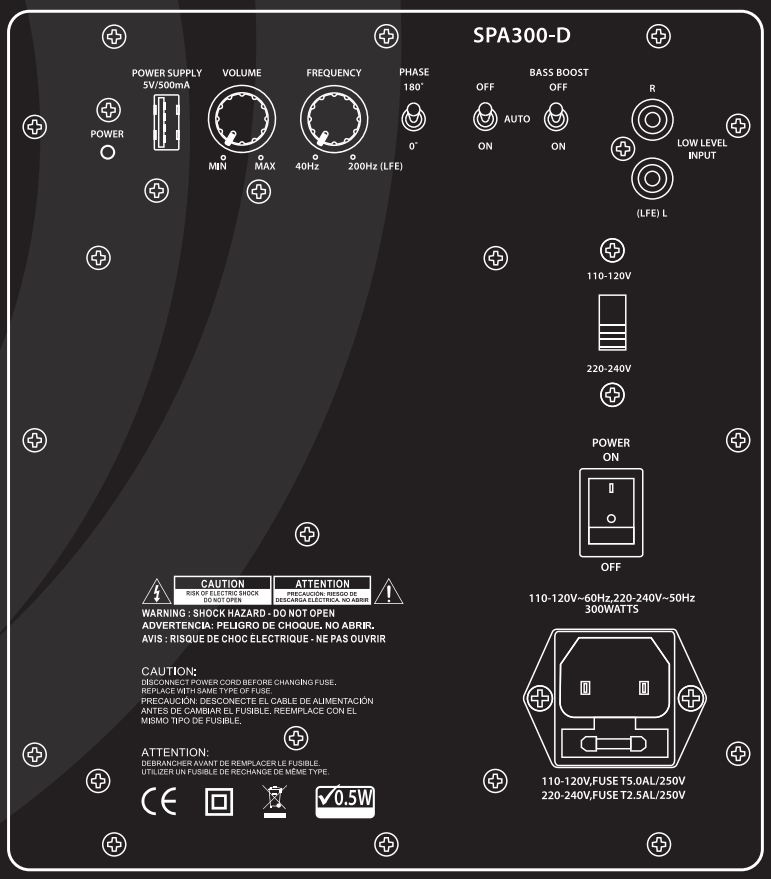
DAYTONAUDIO

300 WATT CLASS-D SUBWOOFER PLATE AMPLIFIER

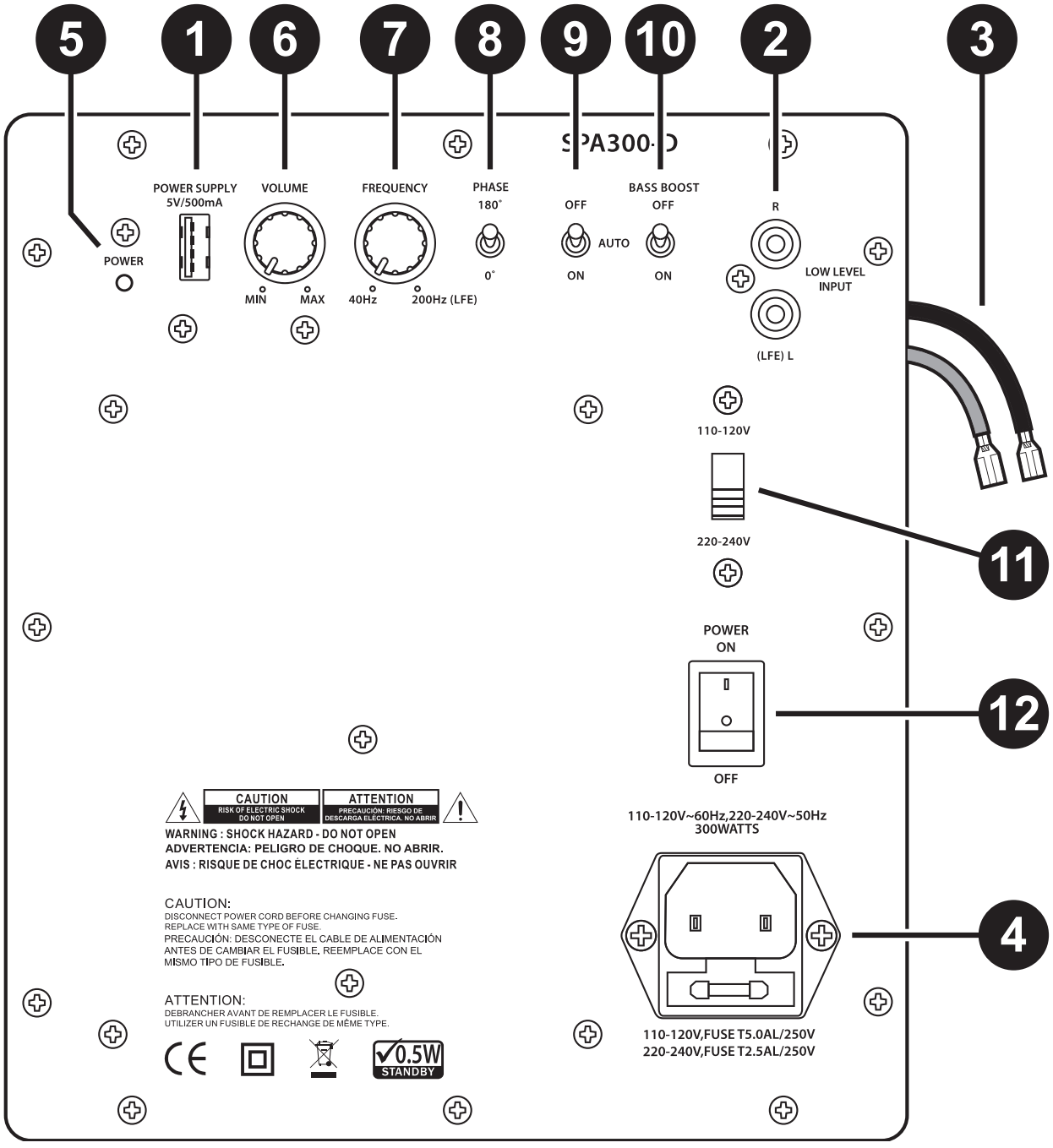
Model: SPA300-D User Manual



Thank you for purchasing the Dayton Audio® SPA300-D Subwoofer Amplifier. It has been designed and built to provide years of high quality sound reproduction, and is ideal for use in both home stereo and home theatre systems. This amplifier has been engineered to include features like low level audio connections, adjustable crossover frequency, adjustable level, switchable bass boost (6 dB @ 30 Hz), auto on/off circuit activated by input signal, and comprehensive internal protection against shorted speaker loads, thermal faults, and overload conditions.

FEATURES:

- Efficient class-D design keeps size and weight to a minimum
- Adjustable level to match the output of the main speakers
- Auto-on feature conserves power when no signal is present
- Variable 40 to 200 Hz low-pass crossover for a smooth transition to main speakers
- Switchable 6 dB @ 30 Hz bass boost for maximum performance from smaller drivers and enclosures
- 0° to 180° phase switch for better integration
- 5V USB power output for powering wireless audio receiver
- Compatible with 120 and 240 VAC input (use 2.5A fuse with 240 VAC)
- Full complement of protection circuitry for reliable operation



INPUT/OUTPUT CONNECTIONS:

1. USB Power Supply:
5V 500 mA USB power supply. This output will supply power when the amplifier is on or in stand-by mode (if the Main Power Switch is off then the USB output is off). This USB Power Supply is ideal for powering a wireless audio receiver such as the Dayton Audio Wave-Link WLS Wireless Audio Transmitter & Receiver System, making it easy to create a wireless subwoofer system.

2. Low-Level Inputs (Left/Right):
RCA style jacks that will accept standard line level inputs from a pre-amp level source. They will accept a stereo signal and internally combine it into mono. Both left and right input jacks must be connected to the source in order to drive the amplifier to full output. **Note:** If using a LFE output from a preamp or receiver connect it to the Left (mono) input.

3. Output Lead for Subwoofer Driver:
This rear mounted output lead connects the amplifier to the subwoofer driver. The output lead is roughly 20" long and is color coded. The red and black wires each include an insulated .250" disconnect. These connectors can be easily removed if your driver requires another size or type of connector. Be sure to observe proper polarity when connecting the amplifier to your subwoofer driver (red = positive, black = negative).

4. Power Input:
This unit features an IEC type power jack. This allows the user to change the power cord depending on the country and voltage used. The IEC jack also houses an integrated fuse holder that contains the AC line fuse. The unit is set at the factory for 115/120V operation. It is supplied with a 5A, 250V fuse and USA type power cord. For 230/240V applications a separate power cord and 2.5A, 250V fuse will be required (not included).

CONTROLS/INDICATORS:

5. Power/Clipping LED:
This LED indicator will display the current status of the amplifier. When the amplifier is on the LED will glow blue. When the amplifier is in stand-by the LED will be red. As the output signal increases to the onset of clipping the LED will flash red, this indicates that the clip limiting circuitry is activated.

6. Volume (Gain):
This control will match the amplifier's input sensitivity to the output of the pre-amp source. If the source output has a variable control, we recommend that the user spend a moment or two determining the best balance between the two controls. When a balance is found between low noise, linear level control, and sufficient level to drive the amp to the required output, the gain knob can be considered the "volume control" for the subwoofer system.

7. Frequency (Low-pass crossover):
This control is used to establish the highest frequency that the subwoofer will reproduce and has a range between 40 to 200 Hz with a slope of 18 dB per octave. If you are using the system for music and your main speakers have good bass capability, you could set the control to a fairly low value at 40, 60, or even 100 Hz. If the main speakers are smaller or do not have much bass output, set the control higher. Experiment with the amount of "overlap" that you will experience when all speakers are playing in the same range. This can be helpful when integrating the subwoofer with the rest of the system and with the room. Note: When using a pre-amp or home theatre receiver with a LFE (Low Frequency Effects) output the internal low-pass filter circuitry should be bypassed by turning the frequency control to maximum (200 Hz). The pre-amp or home theater receiver should be used to control the low pass crossover frequency.

8. Phase:
This two-position switch helps to compensate for differences in the acoustical and electrical characteristics between the subwoofer and the main speakers. The relative locations of speakers in the system can cause significant disturbances in speaker interaction due to time delay issues, or the destructive phase interferences that can occur at certain frequencies. The use of this switch in conjunction with altering the location of the subwoofer can have a dramatic effect on system integration. The 0° setting would be considered the normal or default setting, but be sure to experiment during system set-up.

9. Auto Turn On/Off:
When the "Auto" position is selected the amp is in stand-by mode until an input signal of about 10 millivolts or greater is detected. The amp will go back to standby mode 15-18 minutes after the input signal stops. In the "Off" position the amplifier is in stand-by mode. In the "On" position the amplifier is always on.

10. Bass Boost:
This allows the user to add a 6 dB boost to the response centered at 30 Hz. This bass boost is generally used to extend the low end response of designs with decreased output below 40 Hz. Bass boost is most commonly used on sealed and low tuned vented/passive radiator designs. Note: Use caution when using bass boost. With low excursion drivers or designs tuned higher than 30 Hz the bass boost can sometimes push a driver beyond its excursion limits.

11. Voltage Selector Switch:
This switch allows the user to select 115/120VAC or 230/240VAC operation. The unit is set at the factory for 115/120VAC operation and contains a 5A, 250V fuse. When operating at 230/240VAC be sure to change the fuse to a 2.5A, 250V.

12. Main Power Switch:
Main power disconnect. In the "Off" position the amplifier is off. In the "On" position the amplifier will be on or in stand-by (depending on the position of the Auto Turn On/Off switch). If you will not be using the subwoofer for a long period of time then set this switch in the "Off" position so the amplifier will not use any power.

SPECIFICATIONS:

Rated Power Output:	300 watts RMS into 4 ohms @ < 1.5% THD
Signal to Noise Ratio:	101 dB A-weighted
Maximum Input Sensitivity Voltage:	200 mV
Bass Boost:	Switchable, 6 dB @ 30 Hz
Low Pass Adjustment:	Variable 40 Hz – 200 Hz
Phase Adjustment:	Switched 0° or 180°
Dimensions:	8-1/16" H x 7-1/6" W x 2-1/8" D
Enclosure Cutout:	7" H x 6" W
Power Requirements:	115/230 VAC, 60 Hz/50 Hz, 300W
Stand-By Power Rating:	< 8.5W
Weight:	2.2 lbs.

IMPORTANT SAFETY INSTRUCTIONS

Read these instructions – All the safety and operating instructions should be read before this product is operated.
Keep these instructions – The safety and operating instructions should be retained for future reference.

To reduce the risk of electric shock, never use this amplifier when not installed into an enclosure. No user serviceable parts inside. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet. Refer servicing to qualified personnel. To reduce the risk of fire and shock do not expose unit to rain or moisture. Clean only with dry cloth. Unplug the unit during lightning storms or when unused for long periods of time. The unit should be operated in a well-ventilated area. Minimum clearance is 2 inches from the amplifier plate to allow proper heat dissipation. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus which produce heat (including amplifiers). Protect the power cord from being stepped on or pinched, particularly at the plugs, convenience receptacles, and at the point where they exit the unit. Only use attachments/accessories specified by the manufacturer.

Note: Unit is set at the factory for 115/120V operation. Be sure to change the fuse to a 2.5A rating before switching to 230/240V operation.

5-Year Limited Warranty
See daytonaudio.com for details

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