

Dayton Audio SPA100 D

Dayton Audio SPA100-D 100 Watt Class-D Subwoofer Plate Amplifier User Manual

Model: SPA100 D

1. INTRODUCTION

Thank you for choosing the Dayton Audio SPA100-D 100 Watt Class-D Subwoofer Plate Amplifier. This amplifier is designed to provide powerful and efficient bass reproduction for your home audio system. Featuring 100 watts RMS power, Class-D efficiency, and adjustable controls for gain, crossover, and phase, it offers versatile integration into various setups. This manual provides detailed instructions for installation, operation, and troubleshooting to ensure optimal performance and longevity of your amplifier.

2. SAFETY INFORMATION

Please read and understand all safety instructions before operating this device. Failure to do so may result in injury or damage to the unit.

- **Power Source:** Connect the amplifier only to a power supply of the type described in this manual or marked on the unit. Ensure the voltage selector switch (120V/240V) is set correctly for your region before connecting to power.
- **Ventilation:** Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- **Water and Moisture:** Do not expose this appliance to rain or moisture. Do not use near water.
- **Heat:** Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- **Servicing:** Do not attempt to service this product yourself. Refer all servicing to qualified service personnel.
- **Cleaning:** Clean only with a dry cloth.

3. PRODUCT OVERVIEW

3.1 Features

- 100W RMS Power at 4 Ohms for robust bass output.
- Efficient Class-D output for cool operation and high power delivery.
- Adjustable gain, crossover, and phase controls for seamless room integration.

- Manual and Auto On/Off modes for convenience and power saving.
- Switchable 120V/240V input for international compatibility.
- Selectable 6 dB bass boost at 30 Hz for enhanced low-frequency impact.

3.2 Package Contents

The package should contain the following items:

- Dayton Audio SPA100-D Subwoofer Plate Amplifier
- Power Cord
- User Manual (this document)

3.3 Internal Components View



Figure 1: Internal view of the SPA100-D amplifier board, highlighting the electronic components and wiring.

3.4 Side Profile View



Figure 2: Side profile of the SPA100-D amplifier, illustrating its compact design and component layout.

4. CONTROLS AND CONNECTIONS

Familiarize yourself with the rear panel controls and connections before installation.



Figure 3: Rear Panel Diagram of the SPA100-D Amplifier.

1. **AC Power Input:** Connect the supplied power cord here.
2. **Low-Level Input (L/R):** RCA inputs for connecting to the LFE or subwoofer output of your receiver/processor.
3. **Speaker Output:** Connect to your subwoofer driver. Ensure correct polarity (+ to + and - to -).
4. **Power Indicator LED:** Illuminates when the amplifier is powered on.
5. **Volume Control:** Adjusts the overall output level of the subwoofer.
6. **Frequency (Crossover) Control:** Adjusts the low-pass filter frequency from 40 Hz to 200 Hz.
7. **Phase Switch (0°/180°):** Adjusts the phase of the subwoofer output relative to the main speakers.
8. **Bass Boost Switch (OFF/ON):** Engages or disengages a 6 dB bass boost at 30 Hz.
9. **Power Mode Switch (OFF/AUTO/ON):** Selects the amplifier's power-on mode.
10. **Main Power Switch:** Turns the amplifier's main power on or off.

5. SETUP

Follow these steps for proper installation and initial setup:

1. **Mounting:** If installing into a custom subwoofer enclosure, ensure the cutout dimensions are appropriate for the SPA100-D. Secure the amplifier plate firmly to the enclosure using appropriate screws.
2. **Subwoofer Connection:** Connect your subwoofer driver to the **Speaker Output** terminals (3) on the amplifier. Ensure correct polarity: positive (+) from the amplifier to positive (+) on the subwoofer, and negative (-) to negative (-).

3. **Input Connection:** Connect the **Low-Level Input** (2) from your audio source (e.g., receiver's LFE or subwoofer output) using an RCA cable. If your source has a single LFE output, connect it to either the L or R input on the amplifier.
4. **Voltage Selection: IMPORTANT:** Before connecting the power cord, verify that the voltage selector switch (located near the AC Power Input, not explicitly numbered but implied by context) is set to the correct voltage for your region (120V or 240V). Incorrect voltage selection can damage the unit.
5. **Power Connection:** Connect the supplied AC power cord to the **AC Power Input** (1) on the amplifier, then plug the other end into a suitable wall outlet.
6. **Initial Settings:**
 - Set the **Volume Control** (5) to its minimum setting.
 - Set the **Frequency (Crossover) Control** (6) to its maximum setting (200 Hz) initially, or as recommended by your receiver's setup guide.
 - Set the **Phase Switch** (7) to 0°.
 - Set the **Bass Boost Switch** (8) to OFF.
 - Set the **Power Mode Switch** (9) to OFF.
7. **Power On:** Turn on the **Main Power Switch** (10). The Power Indicator LED (4) should illuminate.

6. OPERATING INSTRUCTIONS

Once the amplifier is set up, you can adjust its settings for optimal audio performance.

6.1 Power Modes (9)



Figure 4: Power Mode Switch.

- **OFF:** The amplifier remains off, regardless of input signal.
- **AUTO:** The amplifier will automatically turn on when an audio signal is detected and enter standby mode after approximately 15 minutes of no signal. This is the recommended setting for most users.
- **ON:** The amplifier remains continuously on.

6.2 Volume Control (5)

Adjust the **Volume Control** to match the output level of your main speakers. Start with a low volume and gradually increase it until the subwoofer blends seamlessly with your system without overpowering it.

6.3 Crossover Frequency (6)



Figure 5: Crossover Frequency Control.

The **Frequency Control** sets the upper limit of the subwoofer's frequency response. Frequencies above this setting will be filtered out. Adjust this to blend the subwoofer's output with your main speakers. A common starting point is 80 Hz to 100 Hz, but this may vary depending on your main speakers' low-frequency capabilities.

6.4 Phase Control (7)



Figure 6: Phase Control Switch.

The **Phase Switch** (0°/180°) helps to ensure that the subwoofer's output is in phase with your main speakers. Experiment

with both settings while listening to music with strong bass. Choose the setting that provides the most impactful and coherent bass response. If the subwoofer is placed far from the main speakers, 180° might be more appropriate.

6.5 Bass Boost (8)



Figure 7: Bass Boost Switch.

The **Bass Boost Switch** provides a 6 dB boost at 30 Hz. Use this feature to enhance low-frequency impact if desired. Turn it ON for a more pronounced bass response, or OFF for a flatter frequency response.

7. MAINTENANCE

The Dayton Audio SPA100-D amplifier requires minimal maintenance.

- **Cleaning:** Disconnect the power before cleaning. Use a soft, dry cloth to wipe the exterior surfaces. Do not use liquid cleaners or aerosols.
- **Ventilation:** Ensure that the ventilation openings are kept clear of dust and debris to prevent overheating.
- **Storage:** If storing the amplifier for an extended period, disconnect it from power and store it in a cool, dry place.

8. TROUBLESHOOTING

If you experience issues with your SPA100-D amplifier, refer to the following table for common problems and solutions.

Problem	Possible Cause	Solution
No power/Power LED off	• Power cord not connected. • Main Power Switch (10) is OFF. • Power Mode Switch (9) is OFF. • Blown fuse.	• Ensure power cord is securely plugged into the amplifier and wall outlet. • Turn Main Power Switch (10) to ON. • Set Power Mode Switch (9) to AUTO or ON. • Replace fuse with the correct type and rating (refer to specifications).
No sound from subwoofer	• Input cables not connected or faulty. • Subwoofer speaker wires not connected or incorrect polarity. • Volume control (5) too low. • Crossover frequency (6) set too low. • Source device not sending signal.	• Check RCA input connections (2) and try a different cable. • Verify subwoofer speaker wire connections (3) and polarity. • Increase Volume Control (5) gradually. • Increase Crossover Frequency (6). • Ensure your receiver/source is configured to send a signal to the subwoofer output.
Distorted or unclear bass	• Volume control (5) too high. • Incorrect phase setting (7). • Subwoofer enclosure issues.	• Reduce Volume Control (5). • Toggle Phase Switch (7) between 0° and 180° to find the best setting. • Ensure subwoofer is properly mounted and enclosure is sealed.

9. SPECIFICATIONS

Feature	Specification
Brand	Dayton Audio
Model Number	SPA100 D
Speaker Maximum Output Power	100 watts RMS at 4 Ohms
Frequency Response	20 Hz (lower limit, adjustable crossover up to 200 Hz)
Connectivity Technology	RCA (Wired)
Audio Output Mode	Mono
Mounting Type	Plate (for enclosure mounting)
Enclosure Material	ABS plastic (for internal components)
Additional Features	Bass Boost (+6 dB at 30 Hz)
Input Voltage	115V / 240V AC (Switchable)
Impedance	4 ohm
Signal-to-Noise Ratio	90 dB
Item Weight	1250 g

10. WARRANTY AND SUPPORT

Dayton Audio products are designed for reliability and performance. This product comes with a limited warranty against defects in materials and workmanship.

- **Warranty Period:** Please refer to the warranty card included with your product or visit the official Dayton Audio website for specific warranty terms and duration.
- **Technical Support:** For technical assistance, troubleshooting beyond this manual, or warranty claims, please contact Dayton Audio customer support. Contact information can typically be found on the Dayton Audio website or on the product packaging.
- **Online Resources:** Visit the [Dayton Audio Store on Amazon](#) for additional product information and resources.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question