

Soundstream DPA4.1600D

Soundstream DPA4.1600D Amplifier User Manual

Model: DPA4.1600D | Brand: Soundstream

1. INTRODUCTION

The Soundstream DPA4.1600D is a compact Class-D 4-channel amplifier designed for automotive audio systems. This amplifier provides 1600 Watts maximum power, delivering 80 watts RMS per channel at 4 ohms. It features Class-D amplifier technology, offering an efficient approach to sound processing. The DPA4.1600D functions as two full-range 2-channel amplifiers and one mono subwoofer amplifier within a single chassis. Both full-range sections are bridgeable, allowing configurations as 4-channel or 3-channel amplifiers. This manual provides essential information for the proper installation, operation, and maintenance of your DPA4.1600D amplifier.



Image 1.1: Front view of the Soundstream DPA4.1600D amplifier, showcasing its compact design and control panel.

2. SAFETY INFORMATION

Please read all instructions carefully before installing and operating your amplifier. Failure to follow these guidelines may result in damage to the amplifier, vehicle, or personal injury.

- Always disconnect the vehicle's negative battery terminal before beginning any installation.
- Ensure proper grounding of the amplifier to the vehicle chassis.
- Use appropriate wire gauges for power, ground, and speaker connections to prevent overheating and ensure

optimal performance.

- Avoid installing the amplifier in locations exposed to direct sunlight, excessive heat, moisture, or dust.
- Do not operate the amplifier if it has been damaged or exposed to water.
- Seek professional assistance if you are unsure about any installation or wiring procedures.

3. PACKAGE CONTENTS

Verify that all items are present in the box upon unpacking:

- Soundstream DPA4.1600D 4-Channel Amplifier
- Owner's Manual
- (3) 20-amp Fuses
- (2) 8-inch Line Level Input Harnesses
- 5-inch Speaker Output Harness

4. PRODUCT FEATURES

The DPA4.1600D amplifier incorporates several features designed for enhanced audio performance and protection:

- **Class-D Amplifier Technology:** High-efficiency design for powerful and clear audio output.
- **4-Channel Configuration:** Can be configured as a 4-channel or 3-channel amplifier with bridgeable full-range sections.
- **Digital Signal Processing:** Includes variable high-pass and low-pass filters (20-20K Hz, 48 dB/octave) for precise frequency control.
- **Bass Boost:** Adjustable bass boost (0-14 dB at 45Hz) to enhance low-frequency response.
- **Automatic Turn-On Hi-Level Signal Sensing:** Simplifies integration with factory head units by automatically turning on the amplifier when an audio signal is detected.
- **Protection Circuits:** Built-in protection against direct short, thermal overload, and electrical overload to ensure amplifier longevity.
- **Hybrid Aluminum Alloy Heatsink:** Designed for optimum heat dissipation, maintaining stable performance.
- **Input Flexibility:** Supports both 250mV – 8V High-Level Speaker Input and Low-Level RCA Input.
- **Impedance Stability:** Stable operation at 2-ohm stereo and 4-ohm bridged impedance.



Image 4.1: Detailed view of the amplifier, illustrating its compact size and key features such as the digital display and control buttons.

5. SETUP AND INSTALLATION

Proper installation is crucial for optimal performance and safety. Ensure the vehicle's battery is disconnected before proceeding.

5.1 Mounting Location

- Choose a location that is dry, well-ventilated, and away from direct heat sources.
- Ensure sufficient airflow around the amplifier's heatsink for proper cooling.
- Mount the amplifier securely to a solid surface to prevent movement during vehicle operation.

5.2 Wiring Connections

Refer to the following guidelines for wiring your amplifier. Use appropriate gauge wiring for all connections.

1. **Power (B+):** Connect a fused power cable directly from the positive terminal of the vehicle's battery to the amplifier's B+ terminal. The fuse should be located within 18 inches of the battery.
2. **Ground (GND):** Connect a ground cable of the same gauge as the power cable from the amplifier's GND terminal to a clean, unpainted metal surface of the vehicle's chassis. Ensure a solid electrical connection.
3. **Remote (REM):** Connect a remote turn-on wire from your head unit's remote output to the amplifier's REM terminal. If using high-level inputs, the amplifier's automatic signal sensing will turn it on.
4. **Audio Input:**
 - **Low-Level (RCA):** Connect RCA cables from your head unit's pre-amp outputs to the amplifier's RCA input jacks.
 - **High-Level (Speaker Level):** If your head unit does not have RCA outputs, use the provided speaker-level input harness to connect directly to your head unit's speaker wires.
5. **Speaker Output:** Connect your speakers to the amplifier's speaker output terminals. Pay close attention to

polarity (+/-) for each speaker. For bridged configurations, refer to the specific wiring diagram for your desired setup.

6. OPERATING INSTRUCTIONS

Once installed, the DPA4.1600D amplifier offers several adjustments to fine-tune your audio system.

6.1 Controls and Adjustments

- **Level (Gain) Control:** Adjusts the input sensitivity of the amplifier to match the output voltage of your head unit. Start with the gain at minimum and slowly increase it until the desired volume is achieved without distortion.
- **Hi-Pass Filter (HPF):** This filter allows frequencies above the set point to pass through to the speakers, blocking lower frequencies. Useful for protecting full-range speakers from damaging bass notes. Adjustable from 20Hz to 20KHz.
- **Low-Pass Filter (LPF):** This filter allows frequencies below the set point to pass through, blocking higher frequencies. Primarily used for subwoofers to ensure they only reproduce bass. Adjustable from 20Hz to 20KHz.
- **Bass Boost:** Increases the output level of frequencies around 45Hz. Use sparingly to avoid distortion and speaker damage. Adjustable from 0 to 14 dB.
- **Digital Display:** Provides visual feedback on current settings and status.
- **Save Function:** Allows you to save preferred settings for quick recall.

6.2 Initial Setup Procedure

1. Turn off your head unit and set all amplifier gain controls to minimum.
2. Set all crossover filters (HPF/LPF) to their default or desired starting positions.
3. Turn on your head unit and set its volume to about 75% of maximum.
4. Slowly increase the amplifier's gain control until you hear slight distortion, then back off slightly.
5. Adjust the HPF, LPF, and Bass Boost settings to achieve the desired sound balance for your system.

7. MAINTENANCE

Regular maintenance helps ensure the longevity and performance of your amplifier.

- **Cleaning:** Periodically wipe the amplifier's exterior with a soft, dry cloth. Do not use harsh chemicals or abrasive cleaners.
- **Ventilation:** Ensure that the heatsink fins are free from dust and debris to maintain proper cooling.
- **Connections:** Occasionally check all wiring connections (power, ground, remote, RCA, speaker) to ensure they are secure and free from corrosion.
- **Fuses:** If a fuse blows, replace it only with a fuse of the same type and rating (20-amp). Using an incorrect fuse can damage the amplifier or cause a fire.

8. TROUBLESHOOTING

If you experience issues with your DPA4.1600D amplifier, refer to the following table for common problems and solutions.

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Amplifier does not turn on	No power, poor ground, no remote signal, blown fuse	Check power and ground connections. Verify remote wire connection. Check and replace fuses if necessary.
No audio output	No input signal, incorrect gain setting, speaker wiring issues, amplifier in protection mode	Check RCA/high-level input connections. Adjust gain. Verify speaker wiring polarity and connections. Check for protection light.
Distorted sound	Gain set too high, improper crossover settings, poor speaker connection, damaged speaker	Reduce gain. Adjust HPF/LPF settings. Inspect speaker wiring. Test speakers.
Amplifier overheats	Insufficient ventilation, low impedance load, prolonged high volume use	Ensure proper airflow around amplifier. Verify speaker impedance. Reduce volume or allow cooling time.
Noise (hiss, whine)	Poor grounding, RCA cable interference, engine noise	Improve ground connection. Reroute RCA cables away from power wires. Install a ground loop isolator if necessary.

9. SPECIFICATIONS

Technical specifications for the Soundstream DPA4.1600D amplifier:

Feature	Specification
Model	DPA4.1600D
Amplifier Class	Class-D
Max Power	1600 Watts
RMS Power (4 ohms)	80 watts x 4 channels
Number of Channels	4 (Bridgeable)
Impedance Stability	2-ohm Stereo & 4-ohm Bridged
High-Pass Filter (HPF)	Variable (20-20K Hz, 48 dB/octave)
Low-Pass Filter (LPF)	Variable (20-20K Hz, 48 dB/octave)
Bass Boost	0-14 dB at 45Hz
Input Sensitivity	250mV – 8V (High-Level Speaker Input or Low-Level RCA Input)
Fuse Rating	60A (3 x 20A)
Item Weight	3.45 pounds
Package Dimensions	12.4 x 5.91 x 3.4 inches
Manufacturer Part Number	DPA41600D
UPC	709483059542

10. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries regarding your Soundstream DPA4.1600D amplifier, please contact Soundstream directly or refer to their official website. Keep your purchase receipt as proof of purchase for any warranty claims.

For additional assistance, you may visit the [Soundstream Store on Amazon](#).

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