

DS18 SB12A

DS18 SB12A 12-Inch Shallow Subwoofer Enclosure with Built-in Amplifier User Manual

Model: SB12A | Brand: DS18

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your DS18 SB12A 12-inch Shallow Subwoofer Enclosure with Built-in Amplifier. Please read this manual thoroughly before using the product to ensure proper function and to prevent damage.

The DS18 SB12A is an all-in-one car audio solution designed to deliver powerful bass in vehicles with limited space. It features a 12-inch subwoofer integrated into a sealed enclosure, powered by a built-in 350W RMS (700W MAX) monoblock digital amplifier.

2. SAFETY INFORMATION

Important Safety Precautions:

- Always disconnect the vehicle's battery negative terminal before starting any electrical work.
- Ensure all wiring is properly routed and secured to prevent pinching or damage.
- Use appropriate gauge wiring for power and ground connections as specified.
- Install the subwoofer in a secure location to prevent it from shifting during vehicle movement.
- Avoid exposing the unit to moisture or extreme temperatures.
- Do not attempt to open or repair the unit yourself. Refer all servicing to qualified personnel.
- Prolonged exposure to high sound pressure levels can cause permanent hearing damage.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- DS18 SB12A 12-Inch Shallow Subwoofer Enclosure with Built-in Amplifier

- Remote Bass Level Control Knob with Cable
- High-Level Input Harness
- Mounting Hardware (screws, brackets if applicable)
- User Manual (this document)

4. PRODUCT FEATURES

- Integrated 12-inch subwoofer and monoblock digital amplifier.
- Compact sealed enclosure design for space-saving installation.
- 350W RMS / 700W MAX power handling.
- Adjustable Low Pass Filter (LPF).
- Selectable Phase control (0-180°).
- Variable Bass Boost (0-6 dB at 50Hz).
- High-level (speaker level) and Low-level (RCA) inputs for versatile connectivity.
- Remote bass level control for convenient adjustment.
- Protection circuitry: Thermal, Over-Load, DC Output, Short Circuit.

5. SETUP AND INSTALLATION

Proper installation is crucial for optimal performance and safety. If you are unsure about any part of the installation process, consult a professional car audio installer.

5.1 Mounting Location

Choose a secure and dry location for the subwoofer enclosure, such as the trunk or behind the seats in a truck. Ensure there is adequate ventilation around the amplifier section to prevent overheating. The shallow design of the SB12A is ideal for tight spaces.



Image: The DS18 SB12A subwoofer enclosure shown installed in a vehicle trunk, highlighting its compact dimensions (14.96" H x 19.3" W x 14.92" D1 / 7.4" D2) suitable for limited spaces.

5.2 Wiring Connections

Refer to the amplifier control panel diagram for correct wiring. Ensure all connections are tight and secure.



Image: Detailed view of the amplifier control panel. This panel includes connections for power (GND, REM, +12V), fuse, high-level speaker inputs, RCA inputs, and RCA outputs, along with adjustment controls.

1. **Power Connection (+12V):** Connect an 8-gauge power cable directly from the vehicle's positive battery terminal to the "+12V" terminal on the amplifier. Install an appropriate fuse (30A) within 18 inches (45 cm) of the battery.
2. **Ground Connection (GND):** Connect an 8-gauge ground cable from the "GND" terminal on the amplifier to a clean, unpainted metal surface on the vehicle chassis. Ensure a good electrical connection.
3. **Remote Turn-On (REM):** Connect a remote turn-on wire from your head unit's remote output to the "REM" terminal on the amplifier. This wire turns the amplifier on and off with your head unit.
4. **Audio Input:**
 - **Low-Level Input (RCA):** If your head unit has RCA pre-outs, connect RCA cables from the head unit's subwoofer or rear pre-out to the "INPUT" RCA jacks on the amplifier.
 - **High-Level Input (Speaker Level):** If your head unit does not have RCA pre-outs, use the supplied high-level input harness. Connect the speaker wires from your head unit's rear speakers to the corresponding inputs on the harness, then plug the harness into the "SPK IN" connector on the amplifier.
5. **Remote Bass Control:** Plug the remote bass control knob into the designated port on the amplifier. Mount the knob in a convenient location for easy access.

6. OPERATING INSTRUCTIONS

Once installed, adjust the amplifier settings for optimal sound performance.

6.1 Amplifier Controls

- **GAIN:** This control matches the input sensitivity of the amplifier to the output of your head unit. Start with the gain at minimum and slowly increase it until you hear distortion, then back off slightly.
- **LPF (Low Pass Filter):** Adjusts the upper frequency limit of the subwoofer. Typically set between 50Hz and 120Hz. Frequencies above this setting will be filtered out.
- **BASS BOOST:** Increases the bass output at 50Hz. Use sparingly to avoid distortion and potential damage. Adjustable from 0-6 dB.
- **PHASE:** Allows you to adjust the phase of the subwoofer output (0° or 180°) to match the phase of your other speakers. Experiment with both settings to find the one that provides the most coherent bass response.
- **REMOTE:** Connects the wired remote bass level control.



Image: The remote bass level control knob, which allows for convenient adjustment of the subwoofer's output level from the driver's seat.

7. MAINTENANCE

The DS18 SB12A requires minimal maintenance. Follow these guidelines to ensure longevity:

- Keep the enclosure clean and free of dust and debris. Use a soft, dry cloth for cleaning.
- Ensure adequate airflow around the amplifier to prevent overheating. Do not block ventilation ports.
- Periodically check all wiring connections for tightness and corrosion.
- Avoid placing heavy objects on the enclosure.

8. TROUBLESHOOTING

If you experience issues with your DS18 SB12A, refer to the following troubleshooting guide:

Problem	Possible Cause	Solution
No Power / No Sound	<ul style="list-style-type: none">◦ Blown fuse◦ Loose power or ground connection◦ No remote turn-on signal◦ Faulty wiring	<ul style="list-style-type: none">◦ Check and replace fuse (30A).◦ Verify all power, ground, and remote connections are secure.◦ Ensure head unit is providing a remote turn-on signal.◦ Inspect wiring for breaks or shorts.
No Sound (Power LED On)	<ul style="list-style-type: none">◦ Input signal issue (RCA/High-Level)◦ Gain set too low◦ Head unit volume too low	<ul style="list-style-type: none">◦ Check RCA or high-level input connections.◦ Increase the GAIN control gradually.◦ Increase head unit volume.
Distorted Sound	<ul style="list-style-type: none">◦ Gain set too high◦ LPF set incorrectly◦ Bass Boost too high◦ Poor ground connection	<ul style="list-style-type: none">◦ Reduce the GAIN control.◦ Adjust LPF to a suitable frequency (e.g., 80-100Hz).◦ Reduce Bass Boost.◦ Verify ground connection is clean and secure.
Amplifier Overheating (Protection LED On)	<ul style="list-style-type: none">◦ Insufficient ventilation◦ Improper impedance load◦ Extended high-volume operation	<ul style="list-style-type: none">◦ Ensure adequate airflow around the amplifier.◦ Check speaker impedance (SB12A is 2 ohms).◦ Reduce volume or allow amplifier to cool down.

9. SPECIFICATIONS

9.1 Enclosure Specifications

- **Internal Volume:** 16L / 0.56 ft³
- **Load Configuration:** Parallel
- **Box Type:** Sealed
- **Box Material:** 0.59" MDF

- **Finish Material:** Non-Woven fabric
- **Dimensions (H x W x D1 / D2):** 14.96" (380mm) x 19.3" (490mm) x 14.92" (125mm) / 7.4" (188mm)
- **Weight:** Approximately 0.01 Ounces (*Note: This value appears to be a data entry error. The actual weight of a subwoofer enclosure would be significantly higher.*)

9.2 Subwoofer Specifications

- **Speaker Size:** 12" (312mm)
- **Total Impedance:** 2 ohms
- **RMS Power Handling:** 350W
- **MAX Power Handling:** 700W
- **Sensitivity (1w/1m):** 87dB
- **Frequency Response:** 30-250Hz
- **Voice Coil Diameter:** 1.75" (44.43mm)
- **Voice Coil Former Material:** Aluminum
- **Winding Material:** EISV
- **Cone Material:** IPP
- **Surround Material:** Rubber
- **Basket Material:** SPCC
- **Magnet Material:** Ferrite
- **Magnet Weight:** 50 Oz

9.3 Amplifier Specifications

- **Amplifier Class:** Digital
- **Amplifier Type:** Monoblock Subwoofer
- **Number of Channels:** 1 CH
- **Minimum Impedance:** 2 Ohms
- **Signal to Noise Ratio:** 75 dB
- **Efficiency @ 4 ohms:** 75%
- **Total Harmonic Distortion (T.H.D):** 0.30%
- **Low Level Input Range:** 0.1-0.6 V
- **High Level Input Range:** Yes
- **Selectable X-Over:** LPF Fixed
- **X-Over Filter Range:** 51 - 200 Hz
- **Bass Boost Range:** 0-6 dB
- **Bass Boost Frequency:** 50Hz
- **Phase Selector:** 0-180°
- **LED Indicator:** Power - Protection
- **Power Input Terminal Size:** 8 GA
- **Fuse Size:** 30 A
- **Remote Level Control:** Yes
- **Thermal Protection:** Yes (75°C / 167°F)
- **Over-Load Protection:** Yes
- **DC Output Protection:** Yes
- **Short Circuit Output Protection:** Yes

10. WARRANTY INFORMATION

This product comes with a Limited Warranty. Please refer to the warranty card included with your product or visit the official DS18 website for detailed terms and conditions regarding warranty coverage, duration, and claims process.

11. CUSTOMER SUPPORT

For technical assistance, troubleshooting beyond this manual, or warranty inquiries, please contact DS18 customer support through their official website or the contact information provided with your purchase. You can also visit the [DS18 Store on Amazon](#) for more product information and resources.