

CT Sounds STRATO-12-D2

CT Sounds STRATO-12-D2 12-inch Car Subwoofer Instruction Manual

Model: STRATO-12-D2

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your CT Sounds STRATO-12-D2 12-inch Car Subwoofer. Please read this manual thoroughly before attempting installation or use to ensure optimal performance and safety.

1.1. Safety Information

- Always disconnect the vehicle's battery before performing any electrical work.
- Ensure all wiring connections are secure and properly insulated to prevent short circuits.
- Mount the subwoofer securely to prevent movement during vehicle operation.
- Avoid exposing the subwoofer to excessive moisture or extreme temperatures.
- Professional installation is recommended for optimal results and to avoid damage to the product or vehicle.

2. PRODUCT OVERVIEW

The CT Sounds STRATO-12-D2 is a high-performance 12-inch car subwoofer designed for robust bass reproduction. It features a dual 2-ohm voice coil configuration, allowing for flexible wiring options to match various amplifier setups.

2.1. Key Features

- 12-inch dual 2-ohm car subwoofer
- RMS Power: 1250 Watts; Max Power: 2500 Watts
- 3-inch, 4-layer high-temperature CCAW voice coil

- 170 Oz triple stacked Y35 grade ferrite magnet
- Competition mega foam surround
- 4% carbon fiber reinforced cone
- Advanced air cooling system
- Signature chrome plated low carbon iron bottom plate
- Dual round weaved copper tinsel leads
- 8 gauge push terminals

2.2. Product Images



Figure 1: Angled view of the CT Sounds STRATO-12-D2 12-inch car subwoofer, showcasing the cone, surround, and branding.



Figure 2: Front view of the subwoofer, highlighting the cone and surround.



Figure 3: Side view of the subwoofer, showing the robust basket and terminal connections.



Figure 4: Close-up view of the 8-gauge push terminals for secure wiring.



Figure 5: Detail of the dual round weaved copper tinsel leads, designed for durability and signal transfer.



Figure 6: Rear view of the subwoofer, showing the magnet structure and basket design.

3. SPECIFICATIONS

The following table details the technical specifications of the CT Sounds STRATO-12-D2 subwoofer:

Specification	Value
Model Name	STRATO-12-D2
Speaker Type	Subwoofer
Subwoofer Diameter	12 Inches
RMS Power	1250 Watts
Max Power	2500 Watts
Impedance	Dual 2 Ohm

Specification	Value
Voice Coil	3 Inch - 4 Layer High-Temperature CCAW
Magnet Weight	170 Oz Triple Stacked Y35 Grade Ferrite
Frequency Response	31.1 Hz
Product Dimensions (D x W x H)	9"D x 13"W x 13"H
Item Weight	10.63 Pounds
Connectivity Technology	Wired (Auxiliary, RCA)
Mounting Type	Car Mount
Water Resistance Level	Not Water Resistant

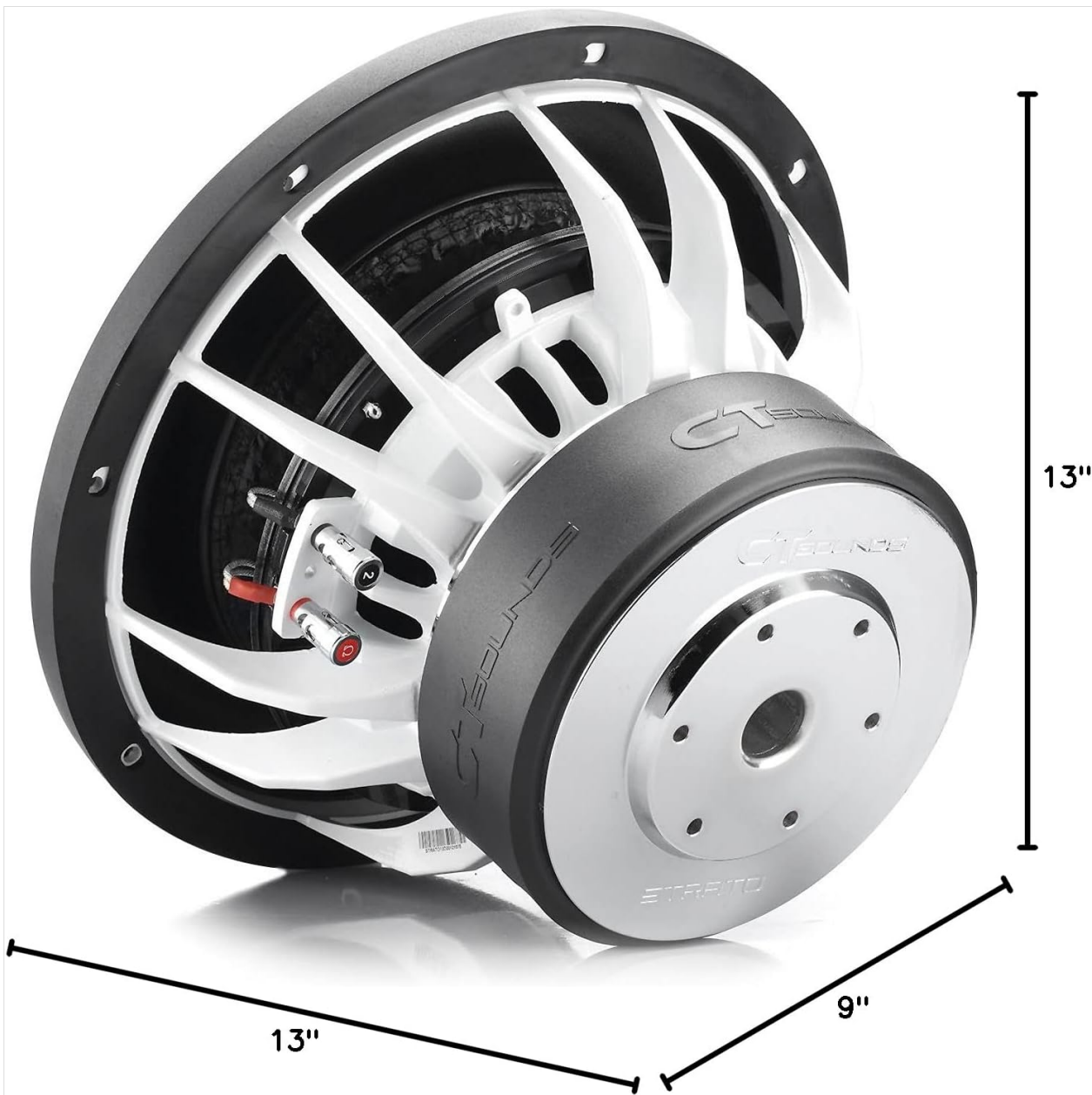


Figure 7: Dimensional diagram of the STRATO-12-D2 subwoofer, showing overall height, width, and depth.

Subwoofer Impedance: Dual 2 Ohm
Magnet Size: 180*25 mm (DxH)
Magnet Qty: Double / 2 Pcs
Magnet Weight: 2*85 Oz / 170 Oz
Motor Plate Coating: Chromed
Top Plate Thickness: 12 mm
T-Plate: 9 mm
Spring Terminal Size: 8 Gauge

STRATO-12-D2 12" subwoofer was engineered to savor the sonic euphoria that can only be achieved with a Strato Subwoofer.



Figure 8: Visual representation of key subwoofer specifications including magnet size, motor plate coating, and terminal size.

4. SETUP & INSTALLATION

Proper setup and installation are crucial for the performance and longevity of your subwoofer. Follow these guidelines carefully.

4.1. Wiring Options

The STRATO-12-D2 features dual 2-ohm voice coils, offering flexibility in wiring configurations to achieve desired impedance loads for your amplifier. Refer to the diagram below for common wiring options.



Figure 9: Wiring options for single and dual STRATO-12-D2 subwoofers. Option (1) shows two subwoofers wired at 1 Ohm.

Option (2) shows two subwoofers wired at 2 Ohms. It is recommended to wire at 1 Ohm to maximize amplifier power output. Dual 2 Ohm subwoofers can only be wired at 2 Ohms.

4.2. Enclosure Specifications

The performance of your subwoofer is highly dependent on the enclosure it is installed in. Below are recommended box specifications and Thiele-Small (T/S) parameters for optimal performance.

WIRING OPTIONS

(1) STRATO-12-D2
WIRED @ 1 OHM

(2) STRATO-12-D2
WIRED @ 2 OHMS

YOU CAN WIRE MORE THAN (2) SUBWOOFERS IF DESIRED

We recommend running (1) or (4) Dual 2 Ohm Subwoofers wired at 1 Ohm to maximize your amplifier's power output. (2) Dual 2 Ohm Subwoofers can only be wired at 2 Ohms.

Figure 10: Recommended box specifications for sealed and ported enclosures, including tuning frequency and port area. Also shown are the Thiele-Small parameters (F_s , Q_{ms} , Q_{es} , Q_{ts} , V_{as} , Spl , X_{max}) for the STRATO-12-D2.

4.3. General Installation Tips

- Ensure the enclosure is properly sealed and braced to prevent air leaks and vibrations.
- Use appropriate gauge wiring for power, ground, and speaker connections to minimize power loss and ensure safety.
- Position the subwoofer in the vehicle to achieve desired sound characteristics and avoid obstructing safety features.
- Consult a professional car audio installer if you are unsure about any aspect of the installation process.

5. OPERATING INSTRUCTIONS

5.1. Break-in Period

Like many high-performance audio components, your STRATO-12-D2 subwoofer requires a break-in period. During this time, the suspension components (surround and spider) will loosen up, allowing the subwoofer to reach its full performance potential.

- Operate the subwoofer at moderate volume levels for the first 20-30 hours of use.
- Avoid playing extremely loud or distorted audio during the break-in period.
- Gradually increase volume and bass levels after the break-in period.

5.2. Amplifier Settings

Properly setting your amplifier's gain, crossover, and bass boost is essential for optimal sound quality and to prevent damage to the subwoofer.

- Set the low-pass filter (LPF) on your amplifier to a suitable frequency, typically between 60Hz and 100Hz, to ensure the subwoofer only reproduces low frequencies.
- Adjust the gain setting carefully. Do not use the gain control as a volume knob; it should be set to match the output voltage of your head unit.
- Avoid excessive bass boost, as this can lead to distortion and potential damage.

6. MAINTENANCE

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

- Keep the subwoofer cone and surround free from dust and debris. Use a soft, dry cloth for cleaning.
- Periodically check all wiring connections for tightness and corrosion.
- Inspect the subwoofer for any signs of physical damage, such as tears in the cone or surround.
- Ensure adequate ventilation around the subwoofer and amplifier to prevent overheating.

7. TROUBLESHOOTING

If you experience issues with your subwoofer, refer to the following common problems and solutions:

7.1. No Sound from Subwoofer

- **Check Power:** Ensure the amplifier is receiving power and is turned on. Check fuses and power connections.
- **Check Signal:** Verify RCA cables are securely connected from the head unit to the amplifier.
- **Check Speaker Wires:** Ensure speaker wires are correctly connected to both the subwoofer and the amplifier, with no short circuits.
- **Amplifier Settings:** Confirm amplifier gain is set correctly and the low-pass filter is enabled.

7.2. Distorted Sound

- **Gain Setting:** Reduce the amplifier's gain setting if it is too high.
- **Bass Boost:** Decrease or disable any bass boost settings on the amplifier or head unit.
- **Crossover:** Adjust the low-pass filter frequency to ensure the subwoofer is not playing frequencies too high for its design.
- **Power:** Ensure the amplifier has sufficient power for the subwoofer. Underpowering can cause distortion.

7.3. Subwoofer Overheating

- **Ventilation:** Ensure the amplifier and subwoofer have adequate airflow.
- **Impedance Mismatch:** Verify the subwoofer's impedance matches the amplifier's stable operating impedance.
- **Playing Level:** Reduce prolonged high-volume playback.

8. WARRANTY & SUPPORT

8.1. Warranty Information

The CT Sounds STRATO-12-D2 subwoofer comes with a Limited Warranty. Please refer to the official CT Sounds website or your purchase documentation for specific terms, conditions, and duration of the warranty.

8.2. Customer Support

For technical assistance, warranty claims, or further inquiries, please contact CT Sounds customer support through their official website or the contact information provided with your purchase.

9. WHAT'S IN THE BOX

Upon opening your product packaging, you should find the following item:

- CT Sounds STRATO-12-D2 12" Dual 2 Ohm Car Subwoofer