

DS18 ZR8.4D

DS18 ZR8.4D Elite-Z 8-Inch Car Audio Subwoofer Instruction Manual

Model: ZR8.4D | Brand: DS18

1. INTRODUCTION

The DS18 ZR8.4D Elite-Z is an 8-inch car audio subwoofer designed to deliver powerful and clear bass. This manual provides essential information for proper installation, operation, and maintenance of your subwoofer. Please read these instructions carefully before attempting installation or use.



Image 1.1: Front view of the DS18 ZR8.4D Elite-Z 8-inch subwoofer, highlighting its design and key features like the large foam surround and PPI dust cap.

2. PRODUCT FEATURES

- **Large Foam Surround:** Provides excellent excursion (Xmax) for deep bass and maintains precise cone control, even at high power levels.
- **High Power Handling:** Rated for 450W RMS and 900W Max power, ensuring robust performance.
- **2-Inch Aluminum Voice Coil:** A high-strength voice coil designed for durability and efficient power transfer.
- **Dual 4-Ohm Voice Coils:** Offers flexible wiring options to match various amplifier impedances.
- **Durable Stamped Basket:** Features a robust steel basket with DS18 logos, providing structural integrity and a clean aesthetic.
- **Versatile Enclosure Compatibility:** Optimized for use in both sealed and ported enclosures, allowing for diverse installation options.
- **Non-Pressed Paper Cone with PPI Dust Cap:** Delivers smooth and crisp bass reproduction.



Image 2.1: Detailed view of the subwoofer, illustrating the 2-inch aluminum voice coil, mounting depth, and magnet weight specifications.

3. SPECIFICATIONS

Parameter	Value
Nominal Diameter	8 inches
Nominal Impedance	4+4 OHMS (Dual Voice Coil)
RMS Power Handling	450W
MAX Power Handling	900W
Sensitivity (1w/1m)	82 dB

Parameter	Value
Frequency Response	33Hz - 200 Hz
Recommended Lo Pass Crossover	120 Hz
Voice Coil Diameter	2 inches / 50.8mm
VC Former Material	Aluminum
Winding Material	Copper
Cone Material	Non Pressed Paper
Dust Cap Material	PP
Surround Material	Foam
Basket Material	Steel
Magnet Material	Ferrite
Magnet Weight	55 oz
Overall Diameter	8.42 inches / 214mm
Overall Depth	5.3 inches / 134mm
Front Mount Baffle Cutout	7.24 inches / 184mm
Mounting Depth	4.4 inches / 111.4mm
Motor Diameter	5.7 inches / 145mm
Item Weight	10.23 pounds (4.65 Kilograms)

8" CAR SUBWOOFER



900W MAX Power
450W RMS Power



Impedance:
4+4 Ohms



8 inches

**Large foam surround giving
great xmax and bass precision.**

4. WHAT'S IN THE BOX

- 1x DS18 ZR8.4D Elite-Z 8-Inch Subwoofer

5. SAFETY INFORMATION

Always observe the following safety precautions during installation and operation:

- Disconnect the vehicle's battery negative terminal before starting any electrical work to prevent short circuits.
- Ensure all wiring is correctly routed and secured to prevent damage from moving parts or sharp edges.
- Use appropriate gauge wiring for power, ground, and speaker connections to handle the subwoofer's power requirements.
- Avoid installing the subwoofer in locations that obstruct vehicle operation or safety features.
- Prolonged exposure to high sound pressure levels can cause permanent hearing damage. Use caution when adjusting volume.
- If you are unsure about any part of the installation process, seek professional assistance from a qualified car audio technician.

6. INSTALLATION AND SETUP

6.1 Enclosure Selection

The DS18 ZR8.4D subwoofer performs well in both sealed and ported enclosures. The choice of enclosure will affect the subwoofer's sound characteristics. Sealed enclosures typically provide tighter, more accurate bass, while ported enclosures can offer louder, deeper bass at specific frequencies. Consult with a car audio specialist or use enclosure design software for optimal results based on your preferences.

**THESE SUBS WORK GREAT IN BOTH SEALED AND PORTED BOXES
GIVING YOU MANY OPTIONS FOR PLACEMENT IN ANY VEHICLE.**



Sensitivity:
82 dB



Frequency Response:
33 Hz - 200 Hz

6.2 Mounting

Ensure the mounting surface is rigid and free from obstructions. Use the provided mounting dimensions:

- **Front Mount Baffle Cutout:** 7.24 inches / 184mm
- **Mounting Depth:** 4.4 inches / 111.4mm

Pre-drill pilot holes for mounting screws to prevent damage to the enclosure material.

6.3 Wiring the Subwoofer (Dual 4-Ohm Voice Coils)

The ZR8.4D features dual 4-ohm voice coils, offering flexibility in wiring configurations to achieve different impedance loads for your amplifier. Always ensure your amplifier is stable at the chosen impedance.

6.3.1 Series Wiring (8-Ohm Load)

To achieve an 8-ohm load, connect the positive terminal of one voice coil to the negative terminal of the other voice coil. Then, connect the remaining positive terminal to the amplifier's positive output and the remaining negative terminal to the amplifier's negative output.

6.3.2 Parallel Wiring (2-Ohm Load)

To achieve a 2-ohm load, connect both positive terminals of the voice coils together, and connect both negative terminals of the voice coils together. Then, connect the combined positive terminals to the amplifier's positive output and the combined negative terminals to the amplifier's negative output.



Image 6.2: Close-up of the subwoofer's terminal, showing the direct copper 10-gauge wire connection points for voice coil wiring.

7. OPERATING INSTRUCTIONS

7.1 Break-in Period

Allow a break-in period of approximately 10-20 hours of normal listening before operating the subwoofer at its maximum potential. This allows the suspension components (surround and spider) to loosen up and reach their optimal performance.

7.2 Amplifier Settings

- **Gain Setting:** Adjust the amplifier gain to match the output voltage of your head unit. Start with the gain at minimum and slowly increase it until you hear distortion, then back off slightly.
- **Low-Pass Crossover (LPF):** Set the LPF on your amplifier to filter out high frequencies from the subwoofer. The recommended low-pass crossover frequency for the ZR8.4D is 120 Hz.
- **Subsonic Filter (HPF):** If your amplifier has a subsonic filter, set it slightly below the tuning frequency of your ported enclosure (if applicable) or around 25-30 Hz for sealed enclosures to protect the subwoofer from over-

excursion.

8. MAINTENANCE

- Keep the subwoofer cone and surround free from dust and debris. Use a soft, dry cloth for cleaning.
- Periodically check all wiring connections to ensure they are secure and free from corrosion.
- Avoid exposing the subwoofer to extreme temperatures or direct sunlight for extended periods.

9. TROUBLESHOOTING

If you experience issues with your subwoofer, refer to the following common troubleshooting steps:

- **No Sound:**

- Check all power, ground, and remote turn-on connections to the amplifier.
- Verify the amplifier is receiving an audio signal from the head unit.
- Inspect subwoofer wiring for proper polarity and secure connections.
- Ensure the amplifier is powered on and not in protection mode.

- **Distorted Sound:**

- Reduce the amplifier gain setting.
- Check for proper crossover settings; ensure the subwoofer is not playing frequencies too high for its design.
- Verify the subwoofer is not over-driven by the amplifier.
- Inspect the subwoofer cone and surround for any physical damage.

- **Weak or Lack of Bass:**

- Increase the amplifier gain gradually.
- Check the phase setting on your amplifier or head unit.
- Ensure the low-pass filter is set correctly (e.g., 120 Hz).
- Verify the enclosure is properly sealed (if applicable) and free from air leaks.

10. WARRANTY AND SUPPORT

The DS18 ZR8.4D Elite-Z subwoofer comes with a limited warranty. For specific warranty terms and conditions, please refer to the documentation provided with your purchase or visit the official DS18 website. For technical support, troubleshooting assistance beyond this manual, or warranty claims, please contact DS18 customer service directly.

DS18 Official Website: www.ds18.com