

DS18 PRO-DR2

DS18 PRO-DR2 2-inch Titanium Screw-On Compression Driver User Manual

Model: PRO-DR2

1. INTRODUCTION

The DS18 PRO-DR2 is a high-performance 2-inch titanium screw-on compression driver designed for professional audio applications. This manual provides essential information for the proper installation, operation, and maintenance of your PRO-DR2 driver to ensure optimal performance and longevity.

DS18®



2" Titanium
Voice Coil



Impedance:
8 Ohms



Twist On
Throat



400W RMS Power
800W MAX Power



Frequency:
980Hz-20KHz



Sensitivity:
110dB

PRO

PRO-DR2

Image 1.1: The DS18 PRO-DR2 compression driver, highlighting its 2-inch titanium voice coil, 8 Ohm impedance, 400W RMS / 800W MAX power, 980Hz-20KHz frequency response, and 110dB sensitivity.

Key Features:

- **2-inch Titanium Voice Coil:** Ensures high-frequency reproduction with clarity and precision.
- **High Power Handling:** Rated at 400W RMS and 800W MAX power for robust performance.
- **8 Ohm Impedance:** Compatible with a wide range of audio systems.
- **38 oz Ferrite Magnet:** Provides strong magnetic flux for efficient sound production.
- **Screw-On Design:** Facilitates secure and straightforward mounting.

2. SETUP AND INSTALLATION

2.1 Safety Precautions

- Always disconnect power from your audio system before installation.
- Wear appropriate safety gear, including eye protection.
- Ensure proper ventilation around the driver to prevent overheating.
- Consult a professional installer if you are unsure about any steps.

2.2 Mounting the Driver

The PRO-DR2 features a screw-on throat for secure attachment to compatible horn flares or waveguides. Ensure the mounting surface is stable and free from obstructions.

1. Align the driver's screw-on throat with the corresponding threads on your horn or waveguide.
2. Carefully twist the driver clockwise until it is hand-tight. Do not overtighten, as this can damage the driver or horn.
3. Ensure the driver is seated flush and securely.



Image 2.1: Side view of the DS18 PRO-DR2, illustrating the screw-on throat for mounting.

2.3 Wiring Connections

Connect the driver to your amplifier or crossover network. Pay close attention to polarity to ensure correct phase alignment with other speakers in your system.

- Identify the positive (+) and negative (-) terminals on the PRO-DR2 driver.
- Connect the positive output from your amplifier or crossover to the positive terminal of the driver.
- Connect the negative output from your amplifier or crossover to the negative terminal of the driver.
- Ensure all connections are secure and free from short circuits.



Image 2.2: Bottom view of the DS18 PRO-DR2, showing the input terminals for wiring connections.

2.4 Crossover Settings

A passive or active crossover is essential to protect the compression driver from low frequencies that can cause damage. Refer to your system's amplifier or crossover manual for specific settings.

- Set the high-pass filter (HPF) for the driver channel to at least 1.5 kHz (1500 Hz) with a slope of 12dB/octave or higher.
- Adjust the crossover point based on your specific system and listening preferences, ensuring the driver is not subjected to frequencies below its recommended range.

3. OPERATING INSTRUCTIONS

3.1 Initial Power-Up

After installation, perform a low-volume test to confirm proper functionality.

1. Turn on your audio system with the volume set to minimum.
2. Gradually increase the volume to a low listening level.

3. Listen for clear, undistorted sound from the PRO-DR2 driver.

3.2 Gain and Level Adjustment

Proper gain staging is crucial to prevent distortion and maximize sound quality.

- Set the amplifier gain for the driver channel according to the amplifier's instructions, typically by playing a test tone and adjusting until the clipping indicator just begins to flash, then backing off slightly.
- Avoid setting the gain too high, as this can lead to clipping and damage to the driver.

3.3 Avoiding Distortion

Distortion is a primary cause of driver failure. Always operate your system within its clean power limits.

- If you hear any harsh, crackling, or fuzzy sounds, immediately reduce the volume.
- Ensure your amplifier is not clipping.
- Verify that your crossover settings are correct and protecting the driver from low frequencies.

4. MAINTENANCE

The DS18 PRO-DR2 driver requires minimal maintenance to ensure long-term performance.

4.1 Cleaning

- Periodically wipe the exterior of the driver with a soft, dry cloth to remove dust and debris.
- Do not use harsh chemicals, solvents, or abrasive cleaners, as these can damage the finish or internal components.
- Avoid getting moisture into the driver's voice coil or terminals.

4.2 Inspection

- Regularly check all wiring connections to ensure they are secure and free from corrosion.
- Inspect the mounting points for any signs of loosening or damage.
- Listen for any unusual noises during operation that might indicate a problem.

4.3 Storage

If storing the driver for an extended period, keep it in a cool, dry place, away from direct sunlight and extreme temperatures. Use original packaging if available to protect it from physical damage.

5. TROUBLESHOOTING

If you experience issues with your PRO-DR2 driver, refer to the following troubleshooting guide:

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
No sound from driver	<ul style="list-style-type: none"> Loose or incorrect wiring Amplifier off or in protect mode Incorrect crossover settings Damaged driver 	<ul style="list-style-type: none"> Check all wiring connections for proper polarity and security. Verify amplifier is powered on and not in protect mode. Confirm high-pass filter is enabled and set correctly. Test driver with a known good amplifier/source. If still no sound, driver may be damaged.
Distorted or harsh sound	<ul style="list-style-type: none"> Amplifier clipping Gain set too high Crossover set too low Damaged voice coil 	<ul style="list-style-type: none"> Reduce amplifier gain. Check amplifier for clipping indicator. Increase high-pass filter frequency. Reduce overall system volume. If distortion persists at low volumes, driver may be damaged.
Low volume output	<ul style="list-style-type: none"> Low amplifier gain Incorrect wiring (e.g., out of phase) Low input signal 	<ul style="list-style-type: none"> Increase amplifier gain gradually. Verify correct wiring polarity. Check source unit output level.

6. SPECIFICATIONS

Detailed technical specifications for the DS18 PRO-DR2 compression driver:

Feature	Specification
Model Number	PRO-DR2
Nominal Impedance	8 Ohms
RMS Power Handling	400 Watts
MAX Power Handling	800 Watts
Sensitivity (1W/1m)	110 dB
Frequency Response	980 Hz - 20 kHz
Voice Coil Size	2 inches
Diaphragm Material	Titanium
Magnet Weight	38 oz (Ferrite)

Feature	Specification
Bolt Type	Screw Down
Overall Depth	3.07 inches (78 mm)
Connectivity Technology	Wired
Enclosure Material	Titanium
Item Weight	38 Ounces

7. WARRANTY INFORMATION

The DS18 PRO-DR2 compression driver comes with a limited manufacturer's warranty. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for any warranty claims.

For specific details regarding warranty duration and terms, please refer to the warranty card included with your product or visit the official DS18 website.

8. SUPPORT

If you require further assistance or have questions not covered in this manual, please contact DS18 customer support.

- **Website:** www.ds18.com
- **Email:** Refer to the DS18 website for contact email.
- **Phone:** Refer to the DS18 website for contact phone number.

When contacting support, please have your product model (PRO-DR2) and purchase information readily available.