

## MTX TH2500.1

# MTX TH2500.1 Thunder Series Mono Block Amplifier Instruction Manual

Brand: MTX | Model: TH2500.1

## 1. INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your MTX TH2500.1 Thunder Series Mono Block Class-D Amplifier. Designed for high-power audio systems, this amplifier delivers a robust 2500 watts RMS at 1Ω, ensuring powerful and clear bass reproduction. Please read this manual thoroughly before installation and use to ensure optimal performance and safety.

### 1.1. What's in the Box

- MTX TH2500.1 Amplifier
- Wired Remote Bass Control (for mono block and 5-channel models)
- Allen Head Wrench (for cover removal)
- Amplifier Dyno Certificate
- Instruction Manual

The included Dyno Certificate verifies the actual power output of your specific amplifier, ensuring you receive the performance you expect from MTX.

## 2. KEY FEATURES

- **Unrivalled Power and Performance:** Delivers 2500 watts RMS at 1Ω, providing deep, clean bass. Advanced Class D technology ensures efficient power usage and distortion-free performance.
- **Compact Design for Versatile Installation:** Sleek and compact design allows for seamless integration into various vehicle spaces without sacrificing power or sound quality.
- **Advanced Control and Tuning Features:** Includes an external wired bass control remote for easy bass adjustments. A clip detection light assists in accurate tuning, and a hidden control panel maintains a clean aesthetic.
- **Built-in Cooling Fan for Continuous Operation:** Prevents overheating during extended use, ensuring reliable performance for demanding audio enthusiasts.
- **Durable and Protected:** Engineered with surface mount technology and direct-insert terminals for

vibration-resistant durability. LED power and protection indicators alert you to thermal, short, or voltage issues.

### 3. SETUP AND INSTALLATION

Proper installation is crucial for the performance and longevity of your amplifier. It is recommended that installation be performed by a qualified professional.

#### 3.1. Amplifier Overview



Figure 1: Top-down angled view of the MTX TH2500.1 amplifier, highlighting its sleek brushed aluminum design and the MTX logo.



Figure 2: Top view of the MTX TH2500.1 amplifier, showcasing its minimalist design.



Figure 3: Rear view of the MTX TH2500.1 amplifier, displaying the power, ground, remote, RCA input, and speaker output terminals.

### 3.2. Power Connections

- **Power (+12V):** Connect to the positive terminal of your vehicle's battery using appropriate gauge wiring and an inline fuse.
- **Ground (GND):** Connect to a clean, unpainted metal surface on the vehicle chassis. Ensure a solid connection for optimal performance and safety.
- **Remote (REM):** Connect to the remote turn-on lead from your head unit. This signal turns the amplifier on and off with your audio system.



Figure 4: Detailed view of the direct-insert power and speaker terminals, designed for secure and reliable connections.

### 3.3. Audio Input and Output

- **RCA Input:** Connect your head unit's RCA outputs to the amplifier's RCA inputs.
- **Speaker Output:** Connect your subwoofer(s) to the amplifier's speaker terminals. Ensure correct polarity and impedance matching. The TH2500.1 is 1Ω stable.

### 3.4. Control Panel Access

The amplifier's tuning controls are located under a removable display cover. Use the supplied Allen head wrench to remove the small Allen head screws and access the settings.



Figure 5: The amplifier with its protective cover removed, exposing the tuning controls for adjustment.

## 4. OPERATING THE AMPLIFIER

### 4.1. Tuning Controls

Once the display cover is removed, you will find the following controls:

- **LPF (Low Pass Filter):** Adjusts the upper frequency limit for the subwoofer. (Range: 50Hz - 250Hz)
- **Boost:** Adjusts the bass boost level. (Range: 0dB - 12dB)
- **Subsonic Filter:** Filters out ultra-low frequencies that are inaudible and can damage subwoofers. (Range: 10Hz - 55Hz)
- **Phase:** Adjusts the phase of the subwoofer output (0° or 180°) to match other speakers.
- **Gain:** Matches the amplifier's input sensitivity to the output of your head unit. Set carefully to avoid distortion.
- **Clip Indicator:** An LED that illuminates when the amplifier is clipping (distorting). Adjust gain to prevent clipping.

### 4.2. Wired Remote Bass Control

The TH2500.1 includes a wired remote bass control. This allows you to adjust the bass level conveniently from your listening position without accessing the amplifier directly.

### 4.3. Product Overview Video

Your browser does not support the video tag.

Video 1: An official product overview from Creative Audio, detailing the features and benefits of the MTX Thunder Series Amplifiers, including the TH2500.1. This video provides visual demonstrations of the amplifier's design and discusses its capabilities.

## 5. MAINTENANCE

- **Cleaning:** Periodically clean the amplifier's exterior with a soft, dry cloth. Avoid using harsh chemicals or abrasive cleaners.
- **Ventilation:** Ensure the amplifier has adequate ventilation. Do not block the cooling fan or heat sinks.

- **Connections:** Regularly check all power, ground, remote, and speaker connections to ensure they are secure and free from corrosion.

## 6. TROUBLESHOOTING

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

- **No Power:** Check the inline fuse on the power cable, ensure the ground connection is solid, and verify the remote turn-on signal is present.
- **No Sound:** Check all RCA and speaker connections. Ensure the head unit is sending an audio signal and the amplifier's gain is set correctly.
- **Distorted Sound:** Reduce the gain setting on the amplifier. Check the clip indicator; if it's lit, the signal is distorting. Ensure speaker impedance matches the amplifier's capabilities.
- **Amplifier Overheating:** Ensure proper ventilation around the amplifier. Check speaker impedance; running too low an impedance can cause overheating.
- **Protection LED On:** This indicates a fault (thermal, short, or over/under voltage). Disconnect power, check all connections, and allow the amplifier to cool down before reconnecting.

## 7. SPECIFICATIONS







Specification	Value
Description	Mono Block Amplifier
Topology	Class D
4Ω RMS Power Output	1000W x 1 Channel
2Ω RMS Power Output	1750W x 1 Channel
1Ω RMS Power Output	2500W x 1 Channel
THD	<0.1%
Signal to Noise Ratio	> 100dB
Frequency Response	20Hz - 250Hz
Crossover	50Hz - 250Hz
Subsonic Filter	10Hz - 55Hz
Maximum Input Signal	10V
Length	14 ½" (367mm)
Width	7" (176mm)
Depth	2" (50mm)
Weight	9.31 lbs (4.22 kg)

## 8. WARRANTY AND SUPPORT

The MTX TH2500.1 amplifier comes with a **2-Year Manufacturer Warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use.

MTX is committed to providing accurate power ratings, and each amplifier includes a Dyno Certificate to confirm its tested output. For technical support, warranty claims, or further assistance, please refer to the official MTX website or contact your authorized MTX dealer.

## Related Documents - TH2500.1

	<p><a href="#">MTX Marine Series Amplifiers MA Series - User Manual &amp; Specifications</a></p> <p>Comprehensive user manual and technical specifications for MTX Marine Series Amplifiers, including models MA750.1, MA1500.1, MA2500.1, MA400.4, MA800.4, MA1400.5, and MA900.6. Covers installation, wiring, controls, features, and warranty.</p>
	<p><a href="#">MTX Audio Thunder 251D &amp; 311D Power Amplifier Owner's Manual</a></p> <p>Comprehensive owner's manual for MTX Audio Thunder 251D and 311D power amplifiers. Covers installation, features, technical specifications, gain adjustment, troubleshooting, and warranty information.</p>
	<p><a href="#">Nakamichi NKTE1200.1 User Manual - Class-D Mono Block Power Amplifier</a></p> <p>User manual for the Nakamichi NKTE1200.1 Class-D Mono Block Power Amplifier, covering specifications, connections, controls, features, troubleshooting, and interference.</p>
	<p><a href="#">Nakamichi NHPD600.1 Class-D Mono Block Power Amplifier User Manual</a></p> <p>Comprehensive user manual for the Nakamichi NHPD600.1 Class-D Mono Block Power Amplifier, detailing its features, specifications, installation, controls, troubleshooting, and interference prevention.</p>
	<p><a href="#">Nakamichi NRO-D3000.1 Class-D Mono Block Power Amplifier User Manual</a></p> <p>This user manual provides detailed information for the Nakamichi NRO-D3000.1 Class-D Mono Block Power Amplifier. It includes product specifications, accessory list, panel controls, wiring diagrams, installation instructions, operation guidance, and troubleshooting tips for car audio systems.</p>
	<p><a href="#">Soundstream REIGN 1-Channel Amplifier Owner's Manual</a></p> <p>Owner's manual for the Soundstream REIGN Series Class D Mono block 1-Channel Amplifier, including models SR1-3500D, SR1-5000D, and SR1-7500D. Details features, functions, power and speaker connections, troubleshooting, and specifications.</p>