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BOSS Audio Systems NX2800.1

BOSS Audio System NX2800.1 Onyx Monoblock Amplifier User Manual

Model: NX2800.1 | Brand: BOSS Audio Systems

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1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your BOSS Audio System NX2800.1 Onyx Monoblock Amplifier. Please read this manual thoroughly before attempting to install or operate the amplifier to ensure proper function and safety. This Class A/B amplifier is designed to deliver powerful and clear audio output for your car's subwoofer system.



Figure 1: BOSS Audio System NX2800.1 Onyx Monoblock Amplifier. This image shows the amplifier unit with its various

2. KEY FEATURES

- **Class A/B Topology:** Utilizes two sets of transistors, offering a balance between efficiency and sound quality, minimizing distortion.
- **MOSFET Power Supply:** Features Metal-Oxide-Semiconductor Field-Effect Transistors for efficient power switching and amplification.
- **High and Low Level Inputs:** Provides flexibility for connecting to various head units, either via RCA (low-level) or speaker wire (high-level). Low-level RCA inputs are recommended for optimal audio performance.
- **Variable Crossover:** Allows adjustment of the frequency at which the amplifier filters audio, enabling precise sound tuning to match your speakers and subwoofers.
- **Variable Bass Boost:** Offers control over the amount of bass enhancement, allowing users to customize the low-frequency output.
- **Remote Subwoofer Level Control:** Provides convenient adjustment of subwoofer output level from the driver's seat.
- **Protection Circuitry:** Includes thermal and short protection to safeguard the amplifier from damage due to overheating or electrical shorts.
- **Soft Turn-On Circuit:** Ensures a smooth power-up sequence, preventing pops or thumps in the audio system.
- **Remote Turn-On/Off Circuit:** Allows the amplifier to be turned on and off automatically with the car's head unit.
- **Gray Anodized Aluminum Heatsink:** Designed for efficient heat dissipation to maintain optimal operating temperature.
- **LED Indicators:** Power and protection LEDs provide visual status of the amplifier's operation.

3. INSTALLATION AND SETUP

3.1 Safety Precautions

- Always disconnect the vehicle's battery negative terminal before starting any electrical work.
- Ensure proper grounding of the amplifier to the vehicle chassis.
- Use appropriate gauge wiring for power, ground, and speaker connections.
- Install a fuse within 18 inches of the battery's positive terminal.
- Mount the amplifier securely in a well-ventilated area, away from moisture and direct sunlight.

3.2 Wiring Connections

1. **Power Connection:** Connect the +12V terminal of the amplifier to the positive terminal of the car battery using a fused power cable.
2. **Ground Connection:** Connect the GND terminal of the amplifier to a clean, unpainted metal surface on the vehicle chassis. Ensure a solid, low-resistance connection.
3. **Remote Turn-On:** Connect the REM terminal of the amplifier to the remote output wire from your head unit. This wire typically provides +12V when the head unit is on.
4. **Audio Input:**
 - **Low-Level Input (RCA):** Connect RCA cables from the head unit's RCA outputs to the amplifier's RCA inputs. This is the preferred method for best audio quality.
 - **High-Level Input (Speaker Wire):** If your head unit does not have RCA outputs, connect the speaker

output wires from the head unit to the amplifier's high-level input terminals.

Note: Do not connect both low-level and high-level inputs simultaneously. Choose one method.

5. **Speaker/Subwoofer Output:** Connect your subwoofer(s) to the amplifier's speaker output terminals. Ensure correct polarity (+ to + and - to -). This amplifier is stable at 2-8 Ohm impedance.
6. **Remote Level Control:** Connect the remote level control module to the designated port on the amplifier. Mount the control in an accessible location for easy adjustment.

4. OPERATING INSTRUCTIONS

4.1 Initial Power-Up

After all connections are made and verified, reconnect the vehicle's battery. Turn on your car's ignition and head unit. The amplifier's power LED should illuminate. If the protection LED illuminates, refer to the Troubleshooting section.

4.2 Gain Adjustment

The gain control matches the amplifier's input sensitivity to the output of your head unit. Start with the gain control at its minimum setting. Play a familiar piece of music with the head unit volume set to about 75% of maximum. Slowly increase the amplifier's gain control until you hear distortion, then back it off slightly. This ensures maximum clean output from the amplifier.

4.3 Crossover Adjustment

The variable crossover allows you to set the frequency range that the amplifier will reproduce. For subwoofers, this is typically a low-pass filter (LPF). Adjust the LPF control to filter out high frequencies, allowing only bass frequencies to pass through to the subwoofer. The ideal setting depends on your subwoofer and other speakers in your system, usually between 80Hz and 120Hz.

4.4 Bass Boost Control

The variable bass boost feature allows you to enhance the low-frequency output. Use this control sparingly, as excessive bass boost can lead to distortion and potential damage to your subwoofer. Adjust it to your preference while monitoring for sound clarity.

4.5 Remote Subwoofer Level Control

This remote control allows you to adjust the subwoofer output level conveniently from your driving position without needing to access the amplifier directly. Use it for on-the-fly adjustments to match different music genres or listening preferences.

5. MAINTENANCE

- **Cleaning:** Periodically clean the amplifier's exterior with a soft, dry cloth. Avoid using harsh chemicals or abrasive cleaners.
- **Ventilation:** Ensure that the amplifier's heatsink fins are free from dust and debris to maintain proper cooling. Do not block any ventilation openings.
- **Connections:** Regularly check all wiring connections (power, ground, remote, RCA, speaker) to ensure they are secure and free from corrosion. Loose connections can cause performance issues or damage.
- **Environment:** Protect the amplifier from extreme temperatures, moisture, and direct sunlight.

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
No Power / Power LED Off	Blown fuse, loose power/ground connection, faulty remote turn-on wire.	Check inline fuse near battery. Verify all power, ground, and remote connections are secure and have proper voltage.
Protection LED On	Overheating, speaker short circuit, impedance too low, DC offset.	Allow amplifier to cool down. Check speaker wiring for shorts. Verify speaker impedance is within 2-8 Ohm range. Disconnect speakers and check if LED turns off.
No Sound Output	No input signal, incorrect gain setting, faulty RCA cables, speaker wires disconnected.	Check RCA or high-level input connections. Ensure head unit is on and playing audio. Adjust gain. Verify speaker connections.
Distorted Sound	Gain set too high, bass boost too high, incorrect crossover setting, poor ground connection.	Reduce gain. Lower bass boost. Adjust crossover. Check ground connection for tightness and cleanliness.
Amplifier Overheats	Insufficient ventilation, impedance too low, prolonged high output.	Ensure adequate airflow around the amplifier. Verify speaker impedance. Reduce listening volume or gain settings.

If problems persist after following these steps, consult a qualified car audio technician.

7. SPECIFICATIONS

Feature	Detail
Amplifier Class	Class A/B
Technology	MOSFET
Number of Output Channels	1 (Monoblock)
Total Power Output	2800 Watts (Peak)
Max Power @ 2 Ohm	2800 Watts x 1
RMS Power @ 4 Ohm	1500 Watts x 1
Frequency Response	15 Hz to 250 Hz
Total Harmonic Distortion (THD) @ RMS Output	0.01%
Voltage	12V (DC)
Product Dimensions (L x W x H)	38.35 x 6.05 x 25.4 cm (15.1 x 2.38 x 10 inches)
Weight	453.59 grams (approx. 1 lb)
Installation Type	Surface Mount
Model Number	NX2800.1
ASIN	B0032FOKNS
UPC	872182699170

8. WARRANTY AND SUPPORT

For specific warranty information, please refer to the warranty card included with your product or visit the official BOSS Audio Systems website. Keep your purchase receipt as proof of purchase for any warranty claims. For technical support, troubleshooting assistance, or service inquiries, please contact BOSS Audio Systems customer support through their official channels. Contact information can typically be found on their website or in the product packaging.

- **Online Support:** Visit the [BOSS Audio Systems Support Page](#) for FAQs, manuals, and contact options.
- **Phone Support:** Refer to your product documentation for regional phone support numbers.