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OceanAudio OAE-170.1

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Model: OAE-170.1

1. INTRODUCTION

Thank you for choosing the OceanAudio OAE-170.1 Monoblock Class A/B Car Audio Subwoofer Amplifier. This amplifier is designed to deliver powerful and efficient audio performance for your car's subwoofer system. This manual provides essential information for proper installation, operation, and maintenance to ensure optimal performance and longevity of your amplifier.

2. SAFETY INFORMATION

- Always disconnect the vehicle's battery negative terminal before starting any electrical work.
- Ensure all wiring is properly routed and secured to prevent damage or short circuits.
- Use appropriate gauge wiring for power, ground, and speaker connections as specified in this manual.
- Install the amplifier in a dry, well-ventilated location, away from direct sunlight, heat sources, and moisture.
- Do not operate the amplifier if it is damaged or malfunctioning. Refer to the troubleshooting section or contact support.
- Professional installation is recommended for optimal safety and performance.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- OceanAudio OAE-170.1 Monoblock Amplifier
- Remote Subwoofer Level Controller with Cable
- Mounting Hardware (screws)
- User Manual (this document)

4. PRODUCT OVERVIEW

Familiarize yourself with the components of your OceanAudio OAE-170.1 amplifier.



Figure 4.1: OceanAudio OAE-170.1 Monoblock Amplifier and included remote subwoofer level controller.



Figure 4.2: Top view showing control panel (BASS, LPF, X-OVER, LEVEL, HI-INPUT, REMOTE) and bottom view showing power (GND, REM, +12V), fuse, and speaker terminals.



Figure 4.3: Amplifier dimensions: 8.9" (225mm) length, 5.6" (143mm) width, 1.9" (49mm) height.

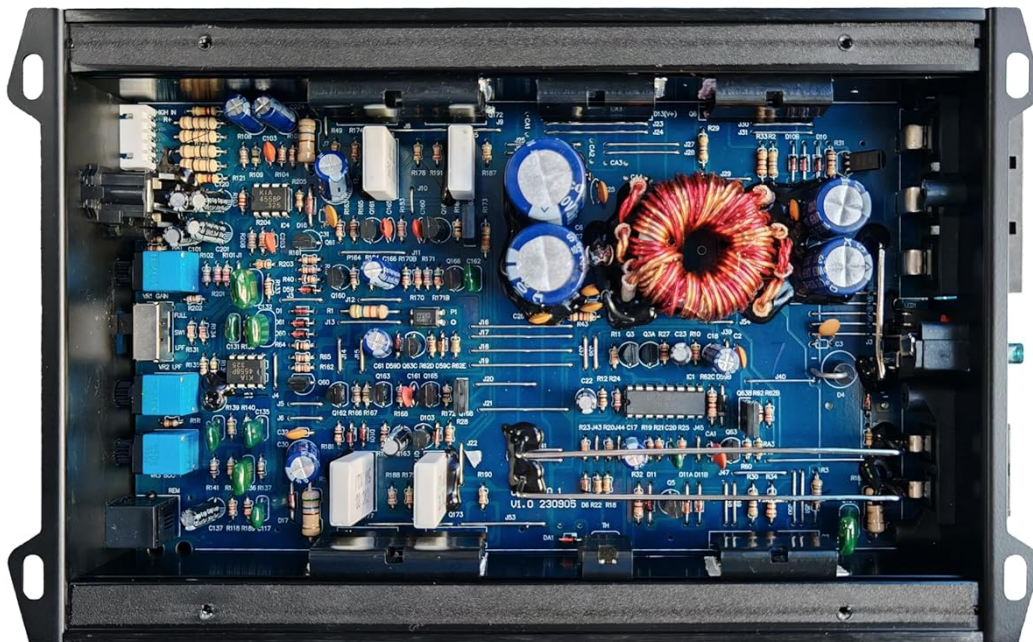


Figure 4.4: Internal view of the amplifier, showcasing the MOSFET power supply and circuit board components.



Figure 4.5: Included remote subwoofer level controller with MIN/MAX adjustment knob.

5. SETUP AND INSTALLATION

5.1 Mounting Location

Choose a mounting location that is dry, well-ventilated, and provides sufficient space for wiring and air circulation. Avoid mounting the amplifier directly on carpet or in enclosed spaces that can restrict airflow. Secure the amplifier firmly using the provided mounting hardware.

5.2 Wiring Connections

Ensure all connections are secure and properly insulated to prevent short circuits. Refer to Figure 4.2 for terminal locations.

- **Power (+12V):** Connect a direct wire from the positive terminal of your vehicle's battery to the +12V terminal on the amplifier. Use an appropriate gauge wire (e.g., 8-gauge or thicker for runs up to 17 feet) and install an in-line fuse holder within 18 inches of the battery.
- **Ground (GND):** Connect a wire of the same gauge as the power wire from the GND terminal to a clean, unpainted metal surface on the vehicle's chassis. Ensure a good electrical connection.
- **Remote (REM):** Connect this terminal to the remote turn-on output of your head unit. This wire signals the amplifier to turn on and off with your car's audio system. If using high-level inputs, the amplifier features an auto-turn on function.
- **Speaker Output:** Connect your subwoofer(s) to the SPEAKER terminals. This amplifier is 2 Ohm stable. Ensure your subwoofer's impedance (or combined impedance for multiple subwoofers) is within the amplifier's stable operating range (2 or 4 Ohms).
- **Audio Input (RCA or High-Level):**

- **RCA Input:** Connect RCA cables from your head unit's subwoofer pre-out to the LINE-INPUT (RCA) terminals on the amplifier.
- **High-Level Input:** If your head unit does not have RCA outputs, use the HI-INPUT (AUTO-ON) terminal. Connect the speaker wires from your head unit directly to this input. The amplifier will automatically turn on when it detects an audio signal.
- **Remote Subwoofer Controller:** Connect the remote level controller to the REMOTE port on the amplifier. This allows for convenient bass level adjustment from the driver's seat.

6. OPERATING INSTRUCTIONS AND ADJUSTMENTS

After installation, carefully adjust the amplifier settings for optimal sound performance.

- **LEVEL (Input Gain Control):** This control matches the amplifier's input sensitivity to the output of your head unit. Start with the LEVEL control at minimum (MIN). Play a familiar track at about 75% of your head unit's maximum volume. Slowly increase the LEVEL control on the amplifier until you hear slight distortion, then back it off slightly. The range is 0.2V to 8V.
- **LPF (Low-Pass Filter):** This filter allows only frequencies below the set point to pass through to the subwoofer. The variable range is 50Hz to 250Hz. Adjust this to blend your subwoofer with your main speakers. A common starting point is 80Hz.
- **BASS (Bass Boost):** This control provides a variable bass boost from 0dB to 12dB at 50Hz. Use sparingly to enhance bass response. Excessive boost can lead to distortion and potential speaker damage.
- **X-OVER (Mode Switch):** This switch selects between Full Range and LPF (Low-Pass Filter) modes. For subwoofer applications, set this to LPF.
- **Remote Subwoofer Controller:** Use the wired remote to conveniently adjust the subwoofer output level from your listening position.

7. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
No Power (Power LED Off)	Blown fuse, poor power/ground connection, no remote turn-on signal.	Check amplifier fuse, vehicle's main fuse. Verify +12V, GND, and REM connections. Ensure head unit is on and sending a remote signal.
Protection LED On	Speaker short circuit, impedance too low, overheating, DC offset.	Check speaker wiring for shorts. Verify subwoofer impedance is 2 Ohm or higher. Ensure adequate ventilation. Disconnect speakers and test.
No Sound (Power LED On)	No audio input signal, incorrect gain setting, speaker wires disconnected.	Check RCA or high-level input connections. Adjust LEVEL control. Verify speaker connections. Test with a known working audio source.
Distorted Sound	Gain set too high, LPF set incorrectly, poor ground connection, damaged speaker.	Reduce LEVEL control. Adjust LPF. Check ground connection. Inspect subwoofer for damage.

If problems persist after following these steps, contact OceanAudio customer support.

8. SPECIFICATIONS

Technical specifications for the OceanAudio OAE-170.1 amplifier.

ENGLISH	SPANISH	FRENCH	SPECIFICATIONS
Output Power Watt	Salida de Poder de Vatios	Sortir de Watt de Pouvoir	
Max Power @ 4Ω	Max Power @ 4Ω	Puissance Maximale @ 4ω	1 x 220W
Max Power @ 2Ω	Max Power @ 2Ω	Puissance Maximale @ 2ω	1 x 340W
RMS Power @ 4Ω	RMS Power @ 4Ω	Puissance RMS @ 4ω	1 x 110W
RMS Power @ 2Ω	RMS Power @ 2Ω	Puissance RMS @ 2ω	1 x 170W
THD	THD	THD	0.01%
Input Sensitivity	Sensibilidad de Entrada	Sensibilité D'entrée	0.2-8V
S/N	S/N	S/N	>102dB
Frequency Response (±3dB)	Respuesta de Frecuencia (±3dB)	Réponse en Fréquence (±3dB)	9Hz - 50kHz
Subsonic	Subsónicos	Subsonique	N/A
Bass Boost	Sobre el Motivo	Boost de basse	0dB - 12dB
Fuse Rating	Clasificación de Fusibles	Estimation de Fusible	30A x 1
Variable Hi-Pass	La variable del Paso Alto	La variable Haute Passe	N/A
Variable Low-Pass	La variable Paso Bajo	Bas-Passe variable	50Hz - 250Hz
Features Subject To Change Without Notice			
Dimensions(overall) 225x143x49mm(8.9"x5.6"x1.9")			

Figure 8.1: Detailed specifications for the OAE-170.1 amplifier.

Feature	Specification
Output Power RMS @ 4Ω	1 x 110W
Output Power RMS @ 2Ω	1 x 170W
Max Power @ 4Ω	1 x 220W
Max Power @ 2Ω	1 x 340W
THD	0.01%
Input Sensitivity	0.2V - 8V
S/N Ratio	>102dB
Frequency Response (±3dB)	9Hz - 50kHz
Bass Boost	0dB - 12dB
Fuse Rating	30A x 1
Variable Low-Pass Filter	50Hz - 250Hz
Dimensions (Overall)	225 x 143 x 49mm (8.9" x 5.6" x 1.9")

Features and specifications are subject to change without notice.

9. MAINTENANCE

To ensure the longevity and performance of your amplifier:

- Keep the amplifier clean and free from dust and debris. Use a soft, dry cloth for cleaning.
- Ensure proper ventilation around the amplifier to prevent overheating.
- Regularly check all wiring connections for tightness and corrosion.

- Avoid exposing the amplifier to extreme temperatures or moisture.

10. WARRANTY AND SUPPORT

OceanAudio provides a 1-Year Limited Warranty for the OAE-170.1 amplifier. This warranty covers defects in materials and workmanship under normal use. For warranty claims or technical support, please contact OceanAudio customer service through their official channels or the retailer where the product was purchased.

Please retain your proof of purchase for warranty service.