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› Deaf Bonce Apocalypse ATOM-500.2 PRO Amplifier User Manual

Deaf Bonce AP-ATOM-500.2

Deaf Bonce Apocalypse ATOM-500.2 PRO Amplifier User Manual

Model: ATOM-500.2 PRO | Brand: Deaf Bonce

1. INTRODUCTION AND OVERVIEW

The Deaf Bonce Apocalypse ATOM-500.2 PRO is a high-performance 2-channel Class D amplifier designed for car audio systems. It delivers substantial power output while maintaining a compact form factor, making it suitable for various speaker configurations, including full-range speakers and subwoofers. This manual provides essential information for the proper installation, operation, and maintenance of your amplifier.

Key features include:

- Class D topology for high efficiency and compact size.
- Two channels with bridgeable functionality for flexible power delivery.
- Adjustable Low Pass Filter (LPF) and High Pass Filter (HPF) for precise sound tuning.
- Robust design for reliable performance in automotive environments.



Figure 1: Front-top view of the Apocalypse ATOM-500.2 PRO Amplifier, showcasing its compact design and heat sink fins.

2. WHAT'S IN THE BOX

Upon opening the product packaging, please verify that all listed components are present and in good condition:

- (1) Apocalypse ATOM-500.2 PRO 2-Channel Amplifier



Figure 2: The product packaging for the ATOM-500.2 PRO Amplifier.

3. SETUP AND INSTALLATION

Proper installation is crucial for optimal performance and safety. It is recommended that installation be performed by a qualified professional.

3.1. Mounting Location

- Choose a dry, well-ventilated location away from direct sunlight and heat sources.
- Ensure adequate airflow around the amplifier's heat sink.
- Mount the amplifier securely to a solid surface to prevent movement during vehicle operation.

3.2. Wiring Connections

Refer to the diagram below for proper terminal identification. Always disconnect the vehicle's battery before making any electrical connections.



Figure 3: Input/Output terminals and control panel layout.

1. **Power Connection (+12V):** Connect a high-quality power cable (4 Ga recommended) from the amplifier's +12V terminal to the positive terminal of the vehicle's battery. Install an appropriate fuse (not included) within 18 inches of the battery.
2. **Ground Connection (GND):** Connect a power cable of the same gauge (4 Ga recommended) from the amplifier's GND terminal to a clean, unpainted metal surface of the vehicle's chassis. Ensure a solid, low-resistance connection.
3. **Remote Turn-On (REM):** Connect a remote turn-on wire (typically 18 Ga) from the amplifier's REM terminal to the remote output of your head unit or a switched 12V source.
4. **Audio Input (RCA/HI-INPUT):** Connect your head unit's RCA outputs to the amplifier's RCA input jacks. Alternatively, use the HI-INPUT for high-level speaker signal input if your head unit does not have RCA outputs.
5. **Speaker Output:** Connect your speakers to the amplifier's speaker output terminals (10 Ga recommended). Observe correct polarity (+ to + and - to -). The minimum permissible load on each channel is 1 Ohm. For bridged operation, the minimum permissible load is 2 Ohm.

4. OPERATING INSTRUCTIONS

Once the amplifier is correctly installed and wired, you can proceed with initial power-up and adjustment.

4.1. Initial Power-Up

1. Double-check all wiring connections for correctness and security.
2. Reconnect the vehicle's battery.
3. Turn on your head unit. The amplifier's power indicator should illuminate, indicating it is receiving power.

4.2. Adjusting Controls

The ATOM-500.2 PRO features several adjustable controls to fine-tune your audio system (refer to Figure 3 for control locations):

- **GAIN:** This control matches the amplifier's input sensitivity to the output voltage of your head unit. Start with the gain set to minimum (MIN) and slowly increase it until the desired volume is achieved without distortion. Avoid setting the gain too high, as this can lead to clipping and speaker damage.
- **X-OVER (Crossover):** This section allows you to select between Low Pass Filter (LPF), Full Range (FULL), or High Pass Filter (HPF) operation. The crossover slope is 12 dB/Oct.
 - **LPF (Low Pass Filter):** When selected, the amplifier will only pass frequencies below the set frequency. Adjustable from 50-12000 Hz. Ideal for subwoofers.
 - **HPF (High Pass Filter):** When selected, the amplifier will only pass frequencies above the set frequency. Adjustable from 50-12000 Hz. Ideal for full-range speakers or tweeters to protect them from low frequencies.
 - **FULL:** The amplifier will pass the full frequency range (10-20000 Hz) without filtering.
- **BASS BOOST:** This control provides an adjustable bass boost at a specific frequency (typically around 45Hz). Use sparingly and with caution to avoid distortion or speaker damage. Adjustable from 0dB to 12dB.

5. MAINTENANCE

The Deaf Bonce ATOM-500.2 PRO amplifier is designed for reliable operation with minimal maintenance. However, following these guidelines can help ensure its longevity:

- **Cleaning:** Periodically wipe the amplifier's exterior with a soft, dry cloth to remove dust and debris. Do not use harsh chemicals or abrasive cleaners.
- **Ventilation:** Ensure that the amplifier's heat sink fins remain clear of obstructions to allow for proper heat dissipation. Overheating can lead to the amplifier entering protection mode or sustaining damage.
- **Connections:** Occasionally check all power, ground, remote, and speaker connections to ensure they remain tight and free of corrosion. Loose connections can cause performance issues or damage.

6. TROUBLESHOOTING

If you experience issues with your amplifier, consult the table below for common problems and their solutions. If the problem persists, contact a qualified service technician.

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Amplifier does not turn on (no power indicator)	No power to +12V terminal; Blown fuse; Loose ground connection; No remote turn-on signal.	Check battery connection and fuse; Verify ground connection; Check remote wire connection and head unit output.
No sound output	No audio input signal; Speaker wires disconnected or shorted; Amplifier in protection mode.	Check RCA/HI-INPUT connections; Verify speaker wiring and impedance; Refer to protection mode solutions.
Distorted sound	Gain set too high; Improper crossover settings; Speaker impedance mismatch; Damaged speakers.	Adjust gain to appropriate level; Reconfigure LPF/HPF settings; Verify speaker impedance meets amplifier requirements; Inspect speakers for damage.
Amplifier goes into protection mode (protection indicator on)	Overheating; Speaker short circuit; Speaker impedance too low; DC offset.	Ensure proper ventilation; Check speaker wiring for shorts; Verify speaker impedance; Consult a professional for DC offset issues.

7. SPECIFICATIONS

The following table details the technical specifications of the Deaf Bonce Apocalypse ATOM-500.2 PRO amplifier:

Feature	Specification
Model	ATOM-500.2 PRO
Class	D
Number of Channels	2
Frequency Response	10-20000 Hz
1 Ohm RMS Power (14.4 V)	500W x 2
2 Ohm RMS Power (14.4 V)	390W x 2
4 Ohm RMS Power (14.4 V)	231W x 2
2 Ohm RMS Power (Bridge)	1000W x 1
4 Ohm RMS Power (Bridge)	780W x 1
Minimum Permissible Load on Channel	1 Ohm
Minimum Permissible Load in Bridge Connection	2 Ohm
Low Pass Filter	50-12000 Hz
High Pass Filter	50-12000 Hz

Feature	Specification
Crossover Slope	12 dB/Oct
Input Terminal Gauge	4 Ga
Output Terminal Gauge	10 Ga
Working Voltage	9 - 15V
Signal-to-Noise Ratio	> 82 dB
Dimensions (LxWxH)	7.7 x 5.5 x 2.1 inches
Weight	3.7 Pounds
Manufacturer	Deaf Bonce
Country of Origin	China

8. WARRANTY AND SUPPORT

Deaf Bonce products are manufactured to high standards and undergo rigorous quality control. Specific warranty terms and conditions are typically provided by the manufacturer or authorized reseller at the time of purchase. Please retain your proof of purchase for any warranty claims.

For technical support, service, or warranty inquiries, please contact the authorized Deaf Bonce dealer from whom you purchased the product or visit the official Deaf Bonce website for contact information.

You can also visit the [Deaf Bonce Store on Amazon](#) for more information and product resources.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question