Deaf Bonce MLA-160.4

Deaf Bonce Machete MLA-160.4 4-Channel Power Amplifier User Manual

1. Introduction

Thank you for choosing the Deaf Bonce Machete MLA-160.4 4-Channel Power Amplifier. This amplifier is designed to deliver high-quality audio performance for your car audio system. This manual provides essential information for proper installation, operation, and maintenance of your amplifier. Please read it thoroughly before use.

1.1 What's in the Box

- 1x Deaf Bonce Machete MLA-160.4 4-Channel Amplifier

2. Safety Information

Always observe the following safety precautions to prevent injury or damage to the amplifier and vehicle:

- **Professional Installation Recommended:** Installation of car audio components requires experience with electrical wiring and vehicle disassembly. If you are unsure, consult a qualified professional.
- **Disconnect Battery:** Before starting any installation, disconnect the vehicle's negative battery terminal to prevent electrical shorts.
- **Proper Wiring:** Ensure all wiring is correctly connected and insulated to prevent short circuits and damage. Use appropriate gauge wires as specified.
- **Ventilation:** Mount the amplifier in a location that allows for adequate air circulation to prevent overheating. Avoid mounting in enclosed spaces without ventilation.
- **Avoid Moisture:** Do not expose the amplifier to moisture or water.
- **Secure Mounting:** Securely mount the amplifier to prevent it from coming loose during vehicle operation, which could cause injury or damage.
- **Volume Levels:** Prolonged exposure to high volume levels can cause hearing damage. Adjust volume to a safe level.

3. Product Overview

The Deaf Bonce Machete MLA-160.4 is a compact and powerful Class D 4-channel amplifier designed for car audio systems. It offers flexible configuration options and precise sound customization.



Figure 3.1: Front view of the Deaf Bonce Machete MLA-160.4 amplifier, showcasing its sleek black design and branding.

3.1 Features

- Class D Topology for high efficiency and compact size.
- 4-Channel Output for versatile system configurations.
- Adjustable Low Pass Filter (LPF) and High Pass Filter (HPF) for precise frequency control.
- Bridgeable Channels for increased power output to subwoofers or higher power speakers.
- Robust 4 Ga input and 8 Ga output terminals.
- Wide frequency response of 20-20000 Hz.

4. Setup and Installation

Proper installation is crucial for optimal performance and safety. Follow these guidelines carefully.

4.1 Mounting the Amplifier

Choose a mounting location that is:

- Secure and stable, away from moving parts.
- Well-ventilated to prevent overheating.
- Protected from moisture and direct sunlight.
- Accessible for wiring and adjustments.

Use the provided mounting hardware to secure the amplifier firmly to a solid surface in your vehicle.

4.2 Wiring Connections

Refer to the diagram below for proper wiring of the power, ground, remote, input, and speaker connections.



Figure 4.1: View of the power, ground, remote, and speaker output terminals on the MLA-160.4 amplifier.

4.2.1 Power Connections

- **+12V (Power):** Connect a 4 Ga power cable directly from the positive (+) terminal of your vehicle's battery. Install an appropriate fuse (not included) within 18 inches of the battery.
- **GND (Ground):** Connect a 4 Ga ground cable from the amplifier to a clean, unpainted metal surface on the vehicle chassis. Ensure a good electrical connection. The ground cable should be as short as possible.
- **REM (Remote Turn-On):** Connect a remote turn-on wire from your head unit's remote output to this terminal. This will turn the amplifier on and off with your head unit.

4.2.2 Audio Input Connections



Figure 4.2: View of the input RCA jacks and control knobs for the MLA-160.4 amplifier.

- Connect RCA cables from your head unit's pre-amp outputs to the amplifier's INPUT (FRONT and REAR) RCA jacks.
- The amplifier supports both 2-channel and 4-channel input modes. Use the 'INPUT MODE' switch to select the appropriate setting.

4.2.3 Speaker Output Connections

- Connect your speakers to the amplifier's speaker output terminals (FRONT L/R, REAR L/R).

- Ensure correct polarity (+ to + and - to -).
- The minimum permissible load per channel is 2 Ohms.
- For bridged operation, the minimum permissible load is 4 Ohms. Connect speakers across the designated BR terminals (e.g., Front L+ and Front R- for one bridged channel).

5. Operating Instructions

Once installed, adjust the amplifier settings for optimal sound performance.

5.1 Control Panel Overview

The control panel (refer to Figure 4.2) includes:

- **FREQ (Crossover Frequency):** Adjusts the cutoff frequency for the LPF or HPF.
- **X-OVER (Crossover Type):** Selects between Full Range (FULL), Low Pass Filter (LPF), or High Pass Filter (HPF).
- **SENS (Gain Control):** Matches the amplifier's input sensitivity to the output level of your head unit. Start at minimum (MIN) and slowly increase until desired volume is achieved without distortion.
- **INPUT MODE:** Selects between 2-channel or 4-channel input.
- **PWR/PRT Indicator:** Power (green) and Protection (red) indicator LED.

5.2 Initial Setup and Adjustment

1. Set all amplifier gain controls (SENS) to minimum.
2. Set all crossover switches (X-OVER) to FULL for initial testing, or to LPF/HPF as needed for your speaker configuration.
3. Turn on your head unit and set its volume to about 75% of maximum.
4. Slowly increase the amplifier's gain control (SENS) until you hear slight distortion, then back it off slightly.
5. Adjust the crossover frequency (FREQ) as needed for your speakers. For subwoofers, use LPF. For full-range speakers, use HPF to remove low frequencies they cannot reproduce.
6. Fine-tune all settings for balanced and clear audio.

6. Maintenance

The Deaf Bonce Machete MLA-160.4 amplifier requires minimal maintenance.

- **Cleaning:** Periodically wipe the amplifier's exterior with a soft, dry cloth. Do not use harsh chemicals or abrasive cleaners.
- **Ventilation:** Ensure that the amplifier's cooling fins are free from dust and debris to maintain proper heat dissipation.
- **Connections:** Occasionally check all wiring connections to ensure they are secure and free from corrosion.

7. Troubleshooting

If you experience problems with your amplifier, refer to the following troubleshooting guide:

Problem	Possible Cause	Solution

Problem	Possible Cause	Solution
Amplifier does not turn on (PWR LED off)	No power, ground, or remote connection; Blown fuse.	Check +12V, GND, and REM connections. Verify fuse at battery is intact.
Amplifier turns on but no sound	No audio input; Speaker wires disconnected; Amplifier in protection mode.	Check RCA input cables. Verify speaker connections. Check for shorted speaker wires or impedance mismatch.
Distorted sound	Gain set too high; Improper crossover settings; Poor ground connection.	Reduce gain (SENS). Adjust LPF/HPF settings. Ensure solid ground connection.
Amplifier overheats (PRT LED on)	Insufficient ventilation; Speaker impedance too low; Prolonged high volume.	Ensure adequate airflow around amplifier. Check speaker impedance. Reduce volume.

8. Specifications

Technical specifications for the Deaf Bonce Machete MLA-160.4 amplifier:

Feature	Specification
Model	MLA-160.4
Class	D
Number of Channels	4
Frequency Response	20-20000 Hz
2 Ohm RMS Power (14.4 V)	225 W x 4
4 Ohm RMS Power (14.4 V)	160 W x 4
4 Ohm RMS Power (Bridge)	450 W x 1
Minimum Permissible Load (Channel)	2 Ohm
Minimum Permissible Load (Bridge)	4 Ohm
Low Pass Filter (LPF)	40-400 Hz
High Pass Filter (HPF)	40-400 Hz
Crossover Slope	12 dB/Oct
Input Terminal Gauge	4 Ga
Output Terminal Gauge	8 Ga
Working Voltage	9 - 15V
Dimensions (WxLxH)	8.7 x 4.3 x 1.7 inches
Material	Aluminum

Feature	Specification
Item Weight	3.5 pounds

9. Warranty and Support

Deaf Bonce products are manufactured to high-quality standards. For information regarding warranty coverage, terms, and conditions, please refer to the warranty card included with your product or visit the official Deaf Bonce website. For technical support or service inquiries, please contact your authorized dealer or the manufacturer's customer service department.

Official Brand Website: Deaf Bonce Store on Amazon