Deaf Bonce MFA-2.320

Deaf Bonce Machete Fight MFA-2.320 2-Channel Class D Amplifier User Manual

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your Deaf Bonce Machete Fight MFA-2.320 2-Channel Class D Amplifier. Please read this manual thoroughly before attempting installation or operation to ensure proper use and to prevent damage to the unit or associated components. Retain this manual for future reference.

2. Safety Information

Always observe the following safety precautions during installation and operation:

- Disconnect the vehicle's negative battery terminal before beginning any wiring.
- Ensure all wiring is properly routed and secured to prevent damage from sharp edges or moving parts.
- Use appropriate wire gauges for power, ground, and speaker connections as specified in this manual.
- Avoid mounting the amplifier in locations exposed to direct sunlight, excessive heat, moisture, or dust.
- Do not attempt to open or modify the amplifier. Refer all servicing to qualified personnel.
- Ensure adequate ventilation around the amplifier to prevent overheating.

3. Package Contents

Verify that your package contains the following items:

- One (1) Deaf Bonce Machete Fight MFA-2.320 2-Channel Class D Amplifier

4. Product Overview

The Deaf Bonce Machete Fight MFA-2.320 is a high-performance 2-channel Class D amplifier designed for car audio systems. It features adjustable low-pass and high-pass filters, allowing for precise audio tuning.

Figure 1: Top view of the Deaf Bonce Machete Fight MFA-2.320 amplifier, showing the brand logo and model number.

4.1. Connections and Controls

Familiarize yourself with the amplifier's connection terminals and control panel:

Figure 2: Rear panel of the amplifier, detailing the power input terminals (+12V, REM IN, GND) and speaker output terminals (CH1, CH2, Bridge).

- **Power Input (+12V, REM IN, GND):** Connections for main power, remote turn-on, and ground.
- **Speaker Outputs (CH1, CH2, Bridge):** Terminals for connecting speakers in stereo or bridged mono configuration.

Figure 3: Front panel of the amplifier, showing RCA input/output, gain control, HPF, LPF, crossover switch, and power/protect indicator LEDs.

- **Input (CH1, CH2):** RCA inputs for connecting the audio source (e.g., head unit).
- **Output (CH1, CH2):** RCA outputs for passing the signal to another amplifier (if applicable).
- **GAIN:** Input sensitivity control to match the output of your source unit.
- **HPF (High Pass Filter):** Adjusts the high-pass crossover frequency (50-12000 Hz).
- **LPF (Low Pass Filter):** Adjusts the low-pass crossover frequency (50-12000 Hz).
- **Crossover Switch:** Selects between HPF, FLAT (full range), or LPF operation.
- **Power/Protect Indicators:** LEDs indicating amplifier status. 'Power' illuminates when the amplifier is on; 'Protect' illuminates during fault conditions.

5. Setup and Installation

5.1. Mounting the Amplifier

Choose a mounting location that provides adequate ventilation and protection from moisture. Secure the amplifier firmly to a solid surface using appropriate hardware. Avoid mounting on carpet or directly to metal surfaces without insulation.

5.2. Wiring Connections

Ensure all connections are secure and properly insulated to prevent short circuits.

5.2.1. Power, Ground, and Remote Wiring

- **+12V (Power):** Connect to the positive terminal of the vehicle's battery using a fuse holder within 18 inches of the battery. Use 4 Ga wire for this connection.
- **GND (Ground):** Connect to a clean, unpainted metal surface of the vehicle chassis. Ensure a good electrical connection. Use 4 Ga wire for this connection, keeping the length as short as possible.
- **REM IN (Remote Turn-On):** Connect to the remote output of your head unit. This wire turns the amplifier on and off with the head unit.

5.2.2. Input Signal Wiring

Connect the RCA cables from your head unit's pre-out to the amplifier's RCA input terminals (CH1, CH2).

5.2.3. Speaker Wiring

Connect your speakers to the amplifier's speaker output terminals. The MFA-2.320 supports both stereo and bridged mono configurations.

- **Stereo Mode (2-Channel):** Connect one speaker to CH1 outputs (+ and -) and another speaker to CH2 outputs (+ and -). Ensure the minimum permissible load per channel is 2 Ohms.
- **Bridged Mono Mode (1-Channel):** To bridge the amplifier for a single, higher power output, connect the speaker's positive terminal to the CH1+ terminal and the speaker's negative terminal to the CH2- terminal. Ensure the minimum permissible load in bridged connection is 4 Ohms. This configuration combines the power of both channels into one.

Use 10 Ga wire for speaker connections.

6. Operating Instructions

6.1. Gain Adjustment

The GAIN control matches the amplifier's input sensitivity to the output level of your head unit. To set the gain:

1. Turn the amplifier's GAIN control to its minimum (counter-clockwise) position.
2. Set your head unit's volume to about 75-80% of its maximum level.
3. Play a dynamic piece of music.
4. Slowly increase the amplifier's GAIN control until you hear distortion, then back it off slightly until the sound is clear.

6.2. Crossover Settings

The MFA-2.320 features adjustable High Pass Filter (HPF) and Low Pass Filter (LPF) with a 12 dB/Octave slope. The LPF and HPF can operate simultaneously.

- **HPF (High Pass Filter):** Allows frequencies above the set point to pass through. Use this for full-range speakers or tweeters to prevent low frequencies from damaging them.
- **LPF (Low Pass Filter):** Allows frequencies below the set point to pass through. Use this for subwoofers to prevent high frequencies from playing.
- **FLAT:** Disables both HPF and LPF, allowing the full frequency range (20-20000 Hz) to pass through.

Adjust the HPF and LPF controls according to your speaker types and desired sound characteristics. For

example, if using full-range speakers, you might set the HPF to 80 Hz to remove damaging low bass. If using a subwoofer, you would set the LPF to around 80-100 Hz.

7. Maintenance

To ensure long-term performance of your amplifier:

- Keep the amplifier clean and free of dust. Use a soft, dry cloth for cleaning.
- Ensure that the cooling fins are not obstructed to allow for proper heat dissipation.
- Regularly check all wiring connections for tightness and corrosion.

8. Troubleshooting

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

Problem	Possible Cause	Solution
No Power / Power LED Off	Blown fuse, poor power/ground connection, no remote signal.	Check inline fuse, verify +12V, GND, and REM IN connections.
Protect LED On	Short circuit in speaker wiring, speaker impedance too low, overheating, DC offset.	Check speaker wiring for shorts, ensure correct speaker impedance, allow amplifier to cool, consult professional.
No Sound	No input signal, incorrect gain setting, speaker wires disconnected.	Verify RCA input connections, adjust gain, check speaker wiring.
Distorted Sound	Gain set too high, poor ground connection, damaged speakers.	Reduce gain, improve ground connection, inspect speakers.

9. Specifications

Technical specifications for the Deaf Bonce Machete Fight MFA-2.320 amplifier:

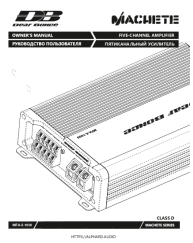
Feature	Specification
Class	D
Number of Channels	2
Frequency Response	20-20000 Hz
2 Ohm RMS Power (14.4 V)	480 W x 2
4 Ohm RMS Power (14.4 V)	320 W x 2
4 Ohm RMS Power (Bridge)	960 W x 1
Minimum Permissible Load (Channel)	2 Ohm
Minimum Permissible Load (Bridge)	4 Ohm
Input SPL	0.4 - 8V

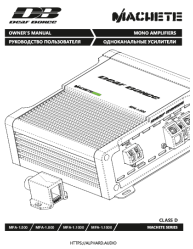
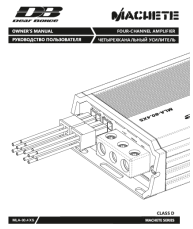
Feature	Specification
Low Pass Filter (LPF)	50-12000 Hz
High Pass Filter (HPF)	50-12000 Hz
LPF and HPF Simultaneous Operation	True
Crossover Slope	12 dB/Oct
Input Terminal Gauge	4 Ga
Output Terminal Gauge	10 Ga
Working Voltage	9 - 15V
Signal-to-Noise Ratio	≥ 90 dB
Length	8.5 inches
Width	6 inches
Height	2.2 inches

10. Warranty and Support

Deaf Bonce products are designed for reliability and performance. For warranty information, 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 Deaf Bonce dealer or customer service.

Related Documents - MFA-2.320

	Deaf Bonce Machete Series Two-Channel Amplifiers Owner's Manual Comprehensive owner's manual for Deaf Bonce Machete series two-channel car amplifiers (MFA-2.80, MFA-2.120, MFA-2.220, MFA-2.320, MFA-2.420). Covers safety instructions, installation, wiring diagrams, specifications, troubleshooting, warranty, and disposal.
	Deaf Bonce Machete MFA-5.1000 Five-Channel Amplifier Owner's Manual Comprehensive owner's manual for the Deaf Bonce Machete MFA-5.1000 five-channel amplifier, covering installation, safety, wiring, specifications, and troubleshooting.

	Deaf Bonce Machete MFA Series Amplifiers: Installation and User Manual Comprehensive guide for Deaf Bonce Machete MFA series car amplifiers, covering installation, wiring, specifications, troubleshooting, and warranty information for models MFA-1.500, MFA-1.800, MFA-1.1000, and MFA-1.1500.
	Deaf Bonce Machete MLA-80.4 XS Four-Channel Amplifier User Manual This user manual provides comprehensive instructions for the Deaf Bonce Machete MLA-80.4 XS four-channel Class D amplifier. It covers safety precautions, installation procedures, wiring diagrams for speakers and subwoofers, technical specifications, troubleshooting guidance, box contents, warranty information, and proper disposal procedures.
	Deaf Bonce Machete Series Four-Channel Amplifiers Owner's Manual This manual provides instructions and specifications for the Deaf Bonce Machete Series Four-Channel Amplifiers, including models MLA-4080 and MLA-4120. It covers safety instructions, installation procedures, wiring diagrams, connection methods, specifications, troubleshooting, and warranty information.
	Deaf Bonce Machete MLA Series Class D Amplifiers: Installation and User Manual Comprehensive guide for Deaf Bonce Machete MLA-600.1, MLA-900.1, and MLA-1200.1 Class D amplifiers, covering installation, wiring, specifications, and troubleshooting.