

Nova AMP-100

Nova AMP-100 2-Channel Mini Amplifier User Manual

Model: AMP-100

1. INTRODUCTION

Welcome to the user manual for the Nova AMP-100 2-Channel Mini Amplifier. This compact amplifier is designed to enhance the audio experience in your car or motorcycle, providing 300 watts of power across two channels. Please read this manual thoroughly before installation and operation to ensure proper use and optimal performance.

2. SAFETY INFORMATION

Observe the following safety precautions to prevent injury or damage to the amplifier and connected components:

- **Professional Installation Recommended:** Installation of car audio equipment can be complex. If you are unsure about any part of the installation process, seek assistance from a qualified professional.
- **Power Source:** Connect the amplifier only to a 12-14.8 Volt DC power source with a negative ground.
- **Wiring:** Ensure all wiring is correctly routed and secured to prevent pinching, cutting, or short circuits. Use appropriate gauge wiring for power and ground connections.
- **Ventilation:** Mount the amplifier in a location that allows for adequate air circulation to prevent overheating. Do not cover the amplifier's heat sinks.
- **Moisture:** Avoid exposing the amplifier to moisture or direct water contact.
- **Volume Levels:** Prolonged exposure to high volume levels can cause hearing damage. Adjust volume to a safe and comfortable level.

3. PACKAGE CONTENTS

Please verify that your package contains the following items:

- Nova AMP-100 2-Channel Mini Amplifier
- Power/Speaker Wiring Harnesses (with wafer connectors)
- Mounting Screws



Image: Nova AMP-100 Mini Amplifier shown with its included wiring harnesses and mounting screws.

4. PRODUCT FEATURES

- 2-Channel 300 Watts Amplifier
- Compact Dimensions: 3.94" L x 2.5" W x 1.6" H
- Gold Plated RCA Connectors
- Power On LED Indication
- High/Flat/Low Pass Filter Built-In
- Power & High Level Input & Speaker Output with wafer connectors
- Stereo Separation: More Than 55dB
- Frequency Response: 20-20k Hz
- High/Low Level Input Capability
- 3-way Selectable Electronic Crossover Network
- 4 Ohm Stereo Stable
- Adjustable Gain Control
- Anti-Thump Turn On Circuitry
- Remote Turn On/Off Functionality
- Power Protection Circuitry
- Operating Voltage: 12-14.8 Volt DC

5. SETUP AND INSTALLATION

Proper installation is crucial for the performance and longevity of your amplifier. Follow these general guidelines:

5.1 Mounting Location

- Choose a dry, well-ventilated location away from direct heat sources or moisture.
- Ensure sufficient space around the amplifier for air circulation.
- Securely mount the amplifier using the provided screws to prevent movement during vehicle operation.

5.2 Wiring Connections

Refer to the image below for an overview of the amplifier's connections. Always disconnect the vehicle's battery before making any electrical connections.



Image: Top view of the Nova AMP-100 Mini Amplifier, highlighting the power input, speaker output, and RCA input sections.

- **Power (B+):** Connect the main power wire from the amplifier to the positive terminal of the vehicle's battery. An in-line fuse (not included) should be installed within 18 inches of the battery.
- **Ground (GND):** Connect the ground wire from the amplifier to a clean, unpainted metal surface on the vehicle's chassis. Ensure a solid, low-resistance connection.
- **Remote (REM):** Connect the remote turn-on wire from the amplifier to the remote output of your head unit. This wire turns the amplifier on and off with your stereo.
- **Audio Input (RCA or High Level):**
 - **RCA Input:** Use RCA cables to connect the amplifier's RCA inputs to the RCA outputs of your head unit.
 - **High Level Input:** If your head unit does not have RCA outputs, use the provided high-level input harness to connect directly to your head unit's speaker wires.
- **Speaker Output:** Connect your speakers to the amplifier's speaker output terminals using the provided wafer connectors. Ensure correct polarity (+ to + and - to -) for each speaker. The amplifier is 4 Ohm stereo stable.

6. OPERATING INSTRUCTIONS

6.1 Gain Adjustment

The gain control adjusts the input sensitivity of the amplifier to match the output level of your head unit. To set the gain:

1. Turn the amplifier's gain control to its minimum (fully counter-clockwise) setting.
2. Set your head unit's volume to about 75% of its maximum level.
3. 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 amplifier features a 3-way selectable electronic crossover network with High/Flat/Low Pass filter options. This allows you to direct specific frequency ranges to your speakers.

- **HIGH PASS:** Allows only frequencies above a certain point to pass through, typically used for tweeters or full-range speakers to prevent low bass distortion.
- **FLAT (FULL RANGE):** Allows all frequencies to pass through, suitable for full-range speakers or if an external crossover is used.
- **LOW PASS:** Allows only frequencies below a certain point to pass through, typically used for subwoofers.

Select the appropriate setting based on your speaker configuration and desired sound.

7. MAINTENANCE

The Nova AMP-100 amplifier requires minimal maintenance. Follow these guidelines to ensure its longevity:

- **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 remain free of dust and debris to maintain proper heat dissipation.
- **Connections:** Occasionally check all wiring connections to ensure they are secure and free from corrosion.

8. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
No Power / Power LED Off	Blown fuse; Loose power/ground/remote wire; Incorrect wiring.	Check in-line fuse; Verify all power, ground, and remote connections are secure and correct.
No Sound Output	Loose speaker wires; Incorrect input connection; Head unit issue; Gain set too low.	Check speaker connections and polarity; Verify RCA or high-level input is connected correctly; Test head unit; Adjust gain.
Distorted Sound	Gain set too high; Incorrect crossover setting; Speaker impedance mismatch.	Reduce gain; Adjust crossover settings; Ensure speakers are 4 Ohm stable.
Engine Noise / Whining	Poor ground connection; RCA cables routed near power wires; Ground loop.	Ensure solid ground connection; Reroute RCA cables away from power wires; Install a ground loop isolator if necessary.

9. SPECIFICATIONS

Feature	Specification
Model Number	AMP-100
Channels	2
Total Power Output	300 Watts
Output (at 14.4V DC input)	2Ch x 150 Watts
Dimensions (L x W x H)	3.94" x 2.5" x 1.6" (10 x 6.35 x 4.06 cm)
Frequency Response	20-20k Hz
Stereo Separation	More Than 55dB
Signal To Noise Ratio	More Than 90 Db
Peak Total Harmonic Distortion	Less Than 0.1%
Operating Voltage	12-14.8 Volts DC
Item Weight	13 ounces (0.37 kg)

10. WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the documentation provided at the time of purchase or contact your retailer. Keep your proof of purchase for any warranty claims.