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Infinity Reference-6001A

Infinity Reference-6001A Mono Amplifier User Manual

Model: Reference-6001A

1. INTRODUCTION

The Infinity Reference-6001A is a high-performance 600-watt mono subwoofer amplifier designed to enhance your vehicle's audio system. This amplifier delivers robust bass output with minimal strain on your vehicle's electrical system, thanks to its Class D design. It features versatile input options and precise tuning controls to optimize subwoofer performance.



Figure 1: Top view of the Infinity Reference-6001A Mono Amplifier, showcasing its compact design and Infinity logo.

2. KEY FEATURES

- **Compact Design:** Features a low-profile chassis and small footprint for installation in vehicles with limited space.
- **Variable Electronic Crossovers and Bass Boost:** Allows for precise system tuning and optimized subwoofer performance.
- **Balanced Differential Inputs:** Engineered to ensure low noise and distortion, even at high output levels, and reduces susceptibility to line-induced engine noise.
- **On-board Protection Circuitry:** Protects the amplifier from shorts, high-temperature, overvoltage, and undervoltage conditions. An LED indicator signals when these conditions occur.
- **RBC Wired Remote:** Provides convenient volume adjustment for the subwoofer from the driver's seat.
- **High and Low-Level Inputs:** Compatible with both aftermarket and factory car stereo systems.

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 the Amplifier

Select a mounting location that is dry, well-ventilated, and secure. The compact size of the Reference-6001A allows for flexible placement in various vehicles. Ensure adequate airflow around the amplifier to prevent overheating.

3.2 Wiring Connections

Refer to the diagram below for typical wiring connections. Always disconnect the vehicle's battery before making any power connections.



Figure 2: Rear view of the amplifier showing power, ground, remote, speaker, and RCA input terminals.

- **Power (+12V):** Connect to the positive terminal of the vehicle's battery using a fuse-protected power cable.
- **Ground (GND):** Connect to a clean, unpainted metal surface of the vehicle chassis.
- **Remote (REM):** Connect to the remote turn-on output of your head unit.
- **Speaker Output (SUB):** Connect your subwoofer(s) to these terminals. Ensure correct polarity.

- **Input (RCA or Speaker Level):** Use RCA cables for low-level inputs from an aftermarket head unit or speaker-level inputs for factory radios.
- **Remote Control (RBC):** Connect the wired remote bass knob to the designated port for convenient bass level adjustment.

4. OPERATING THE AMPLIFIER

Once installed, adjust the amplifier settings to match your audio system and personal preferences.

4.1 Gain Adjustment

Set the gain control to match the output voltage of your head unit. Start with the gain at minimum and slowly increase it until the desired volume is achieved without distortion.

4.2 Low-Pass Filter (LPF)

The LPF controls the upper frequency limit of the audio signal sent to the subwoofer. Adjust this to blend the subwoofer's output seamlessly with your full-range speakers.

4.3 Bass Boost

The variable bass boost allows you to increase the bass output at a specific frequency. Use this sparingly to avoid distortion and potential damage to your subwoofer.

4.4 Phase Switch

The phase switch (0°/180°) helps ensure that the subwoofer's output is in phase with the rest of your speakers, providing a more cohesive and impactful bass response.

4.5 RBC Wired Remote

Use the wired remote to conveniently adjust the subwoofer's output level from your driving position.

5. MAINTENANCE

The Infinity Reference-6001A amplifier requires minimal maintenance. Keep the unit clean and free from dust and debris. Periodically check all wiring connections to ensure they are secure and free from corrosion. Do not use harsh chemicals or abrasive cleaners.

6. TROUBLESHOOTING

If you experience issues with your amplifier, consult the following guide before seeking professional service.

6.1 Protection LED Indicator

The amplifier features an LED indicator that illuminates when the on-board protection circuitry is activated due to shorts, high temperature, overvoltage, or undervoltage. If the LED is lit, check the following:

- **Short Circuit:** Inspect speaker wiring for any shorts to ground or between positive and negative terminals.
- **Overheating:** Ensure the amplifier has adequate ventilation. Allow the unit to cool down.
- **Voltage Issues:** Verify the vehicle's battery voltage is within the operating range (typically 11V-16V).

6.2 Common Issues

- **No Power:** Check the main fuse, power cable connection, ground connection, and remote turn-on wire.
- **No Sound:** Verify input signal connections (RCA or speaker level), speaker connections, and amplifier gain settings. Check head unit output.
- **Distorted Sound:** Reduce gain setting, check speaker impedance, and ensure bass boost is not set too high.



Figure 3: Bottom view of the amplifier, showing the model and serial number label.

7. SPECIFICATIONS

Specification	Value
Model Number	Reference-6001A
Output Power	600 Watts (Mono)
Number of Channels	1

Specification	Value
Voltage	16 Volts (Max)
Mounting Type	Surface Mount
Item Weight	6 pounds
Package Dimensions	11.14 x 9.06 x 4.57 inches
Material	Semiconductor
Specification Met	FCC

8. WARRANTY INFORMATION

Infinity products are designed and manufactured to the highest quality standards. This product is covered by a limited warranty against defects in materials and workmanship. The duration and terms of the warranty may vary by region. Please refer to the warranty card included with your product or visit the official Infinity website for detailed warranty information.

9. CUSTOMER SUPPORT

For technical assistance, troubleshooting, or warranty claims, please contact Infinity customer support. You can find contact information on the official Infinity website or through your authorized dealer.

Website: www.infinityspeakers.com