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› [Kicker 47KEY2004 4-Channel DSP Smart Amplifier Instruction Manual](#)

KICKER 47KEY2004

Kicker 47KEY2004 4-Channel DSP Smart Amplifier Instruction Manual

Model: 47KEY2004 | Brand: KICKER

1. INTRODUCTION

The Kicker 47KEY2004 Key 4-Channel DSP Smart Amplifier is designed to enhance your vehicle's audio system by providing clearer, more powerful sound. This compact amplifier features a powerful internal computer for digital signal processing (DSP), including a 40-band equalizer and a 24dB crossover, to optimize sound output for your specific vehicle environment. It delivers 50 watts per channel across four channels, significantly improving the performance of factory or aftermarket speakers.



Figure 1.1: Front view of the Kicker 47KEY2004 Key 4-Channel DSP Smart Amplifier.

2. SETUP AND INSTALLATION

The Kicker 47KEY2004 is designed for straightforward installation, often fitting discreetly within the vehicle's interior, such as behind the glove box. It can be integrated with existing factory stereo systems, typically without requiring replacement of the original speakers. Specialized wiring harnesses are available to facilitate a plug-and-play connection, minimizing the need for cutting or splicing factory wires.

2.1 Wiring Connections

Ensure all power, ground, and speaker connections are secure and correctly polarized. Refer to the detailed wiring diagram provided in the amplifier's packaging for specific connections. The amplifier typically connects to the vehicle's factory stereo output and then to the individual speakers.



Figure 2.1: Kicker 47KEY2004 amplifier with its wiring harness connections.

2.2 Mounting the Amplifier

Due to its compact size, the amplifier can be mounted in various locations. Common placements include under the dashboard, behind the glove box, or under a seat. Ensure the mounting location allows for adequate ventilation and protects the unit from moisture and excessive heat.



Figure 2.2: The compact dimensions of the Kicker KEY amplifier allow for flexible installation.

3. OPERATING THE AUTO-TUNING FEATURE

The KEY amplifier's primary feature is its automatic digital signal processing (DSP) tuning. This process uses a supplied microphone to analyze your vehicle's acoustic environment and optimize the audio output.

3.1 Auto-Tuning Process

- 1. Connect Microphone:** Plug the included microphone into the designated port on the amplifier.
- 2. Position Microphone:** Place the microphone in the primary listening position (e.g., driver's headrest).
- 3. Initiate Tuning:** Follow the instructions in the full user manual to activate the auto-tuning sequence. The amplifier will emit a series of test tones.
- 4. Completion:** Once the tones cease, the tuning process is complete. The amplifier's internal computer will have applied a 40-band equalizer and a 24dB crossover to each speaker, optimizing the soundstage and tonality.

The auto-tuning feature significantly improves sound clarity and realism, revealing the full potential of your speakers.



Figure 3.1: The Kicker 47KEY2004 amplifier shown with its auto-tuning microphone.

4. MAINTENANCE

To ensure optimal performance and longevity of your Kicker 47KEY2004 amplifier, follow these general maintenance guidelines:

- **Cleaning:** Periodically clean the amplifier's exterior with a soft, dry cloth. Avoid using harsh chemicals or abrasive cleaners.
- **Ventilation:** Ensure the amplifier's cooling fins are free from dust and debris to prevent overheating. Do not obstruct airflow around the unit.
- **Connections:** Regularly check all wiring connections for tightness and corrosion. Loose connections can lead to poor performance or damage.
- **Environment:** Avoid exposing the amplifier to extreme temperatures, direct sunlight, or excessive moisture.

5. TROUBLESHOOTING

If you experience issues with your Kicker 47KEY2004 amplifier, consider the following troubleshooting steps:

- **No Sound:**
 - Check all power, ground, and speaker connections.
 - Verify the vehicle's stereo is powered on and outputting a signal.
 - Ensure the amplifier's power indicator light is on.
- **Distorted Sound:**
 - Check speaker impedance compatibility with the amplifier.
 - Reduce the input gain on the amplifier if the sound is clipping.
 - Re-run the auto-tuning process to re-calibrate the DSP settings.
- **Noise Floor/Hissing:**
 - Ensure proper grounding of the amplifier and head unit.
 - Check for interference from other electrical components in the vehicle.
 - While a slight noise floor can be inherent in some compact amplifiers, ensure it is not excessive.

For persistent issues, consult a professional car audio technician or contact Kicker customer support.

6. SPECIFICATIONS

Below are the technical specifications for the Kicker 47KEY2004 Key 4-Channel DSP Smart Amplifier:

Feature	Specification
Item Model Number	47KEY2004
Product Dimensions	10 x 12 x 9 inches; 2.2 Pounds
Voltage	12 Volts
Maximum Supply Voltage	12 Volts

Feature	Specification
Mounting Type	Freestanding
Manufacturer	Kicker

7. WARRANTY AND SUPPORT

For detailed warranty information, please refer to the official Kicker website or the warranty card included with your product. Kicker provides customer support for product inquiries, technical assistance, and warranty claims. Contact information can typically be found on the manufacturer's website.