Troubleshooting Guide

What might appear to be a malfunction in your unit may just be the result of slight misoperation or miswiring. Before calling service, first check the following table for possible problems.

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>POSSIBLE CAUSE</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>No sound</td>
<td>(No sound from one side.)</td>
<td>Input or output cables are disconnected.</td>
</tr>
<tr>
<td></td>
<td>(Blown fuse.)</td>
<td>Check connections referring to “Power indicator”.</td>
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<tr>
<td></td>
<td></td>
<td>Replace the fuse and use lower volume.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Replace the fuse.</td>
</tr>
<tr>
<td></td>
<td>The speaker cord is shorted.</td>
<td>Use “Controls”.</td>
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<tr>
<td></td>
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</tr>
<tr>
<td>The output level is too small (or too large).</td>
<td>The input sensitivity adjusting control is not set to the correct position.</td>
<td>Adjust the control correctly referring to “Controls”.</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>The sound quality is bad.</td>
<td>(The sound is distorted.)</td>
<td>The speakers wire are connected with wrong polarities.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A speaker wire is pinched by a screw in the car body.</td>
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<tr>
<td></td>
<td></td>
<td>The switches may be set improperly.</td>
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</tbody>
</table>

Specifications

Specifications subject to change without notice.

Audio Section

Max Output Power .................................................. 160 W x 2
Rated Power Output (4 Ω) ......................................... 30 W x 4
4 Channel Mode (20 Hz – 20 kHz, less than 0.08 % THD) .... 30 W x 2 + 30 W x 2
2 Channel Mode (20 Hz – 20 kHz, 0.08 % THD + 1 kHz, 0.8 % THD) ... 30 W x 2 + 80 W x 1
2 Channel Mode (20 Hz – 20 kHz, 0.8 % THD) .... 80 W x 2
Rated Power Output (2 Ω) ......................................... 40 W x 4
4 Channel Mode (1 kHz, 0.8 % THD) ............................ 40 W x 4
Frequency Response (+0, –3 dB) .................................. 5 Hz – 50 kHz
Signal to Noise Ratio .................................................. 90 dB
Sensitivity (MAN) (rated output) .................................. 0.2 V
Sensitivity (MIN) (rated output) ................................... 0.6 V
Input Impedance ......................................................... 10 kΩ
Low Pass Filter Frequency (12 dB/oct.) ......................... 80 Hz
High Pass Filter Frequency (12 dB/oct.) .......................... 150 Hz

General

Frequency response ................................................... 14.4 V
Current Consumption ................................................. 14.4 V
Dimensions (W x H x D) .............................................. 90 x 260 x 230 mm (3 x 9/16 x 11/16 in.)
Weight ........................................................................ 2.9 kg (6.4 lbs)

Troubleshooting Guide

1. Remove the ignition key and disconnect the negative (–) terminal of the battery to prevent short circuits.
2. Set the unit according to the intended usage.
3. Connect the input and output cables of the unit.
4. Connect the speaker wires.
5. Connect the power wire, power control wire and grounding wire following this ordering.
6. Install the unit in the car.
7. Connect the negative (–) terminal of the battery.

WARNING

Do not perform sound equalization or crossover adjustment. If this is done, the sound output will be caused by a short in the wiring. Connect a fusible link or breaker near the battery's positive terminal.

Take the time to read through this instruction manual. Familiarization with installation and operation procedures will help you obtain the best performance from your new power amplifier.

For your records

Record the serial number, found on the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your KENWOOD dealer for information or service on the product.

Model KAC-6401
Serial number

Safety precautions

Prevent injury or fire, take the following precautions:

Prepare the ignition battery, or ground wires, make sure to use automotive-grade wires or other wires with a 2 mm2 (GUW2) or more to prevent wire deterioration and damage to the wire.

To prevent a short circuit, never put or leave any metal object (such as coins or metal tools) inside the unit.

To prevent injury or fire, take the following precautions:

When replacing a fuse, first turn off the power immediately and consult your Kenwood dealer.

Do not open the top or bottom covers of the unit.

To prevent damage to the machine, take the following precautions:

When disconnecting the battery, or ground wires, make sure to use automotive-grade wires or other wires with a 2 mm2 (GUW2) or more to prevent wire deterioration and damage to the wire.

To prevent damage to the machine, take the following precautions:

Be sure the line is connected to a 12 V DC power supply with a negative ground connection.

Do not open the top or bottom covers of the unit.

Do not install the unit in a spot exposed to direct sunlight or excessive heat or humidity. Also avoid places with too much dust or the possibility of water splashing.

When replacing a fuse, only use a new one with the prescribed rating. Using a fuse with the wrong rating may cause the fuse to melt.

To prevent a short circuit when replacing a fuse, first disconnect the battery's positive terminal.

FCC WARNING

This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if unauthorized changes or modifications are made.

Cleaning the unit

If the panel becomes dirty, turn off the power and wipe the panel with a dry soft cloth.

Wiring

If a buzzing noise is heard from the speakers when the engine is running, check the radio noise filter (optional) to each of the battery wire.

Do not allow the wire to directly contact the edge of the car plate by using Grommets.

Connect the ground wire to a metal part of the car chassis that acts as an earth ground passing electricity to the battery's negative (–) terminal. Do not turn the power on if the ground wire is not connected.

Connect the power cable directly to the battery. It can cause blown fuses if you connect to the vehicle wiring harness.

Be sure to install a protective fuse in the power cord near the battery. The protective fuse should be the same capacity as the unit's fuse capacity or somewhat larger.

For the power cord and ground, use a vehicle type (fireproof) power wiring cord with a current capacity greater than the unit's fuse capacity.

Use a power wiring cord with a diameter of 3 mm (AWG 12) or greater.

When more than one power amplifier is going to be used, use a power supply wiring cord and protective fuse of greater current-handling capacity than the total maximum power drawn by each amplifier.

Speaker Selection

The rated input power of the speakers that are going to be connected should be greater than the maximum output power (in Wattage) of the amplifier. Use speakers having input power ratings that are less than the output power of the amplifier will cause smoke to be emitted as well as damage.

The impedance of the speakers that are going to be connected should be 2Ω or greater for stereo speakers, or 4Ω or greater (for bridged connections). When more than one set of speakers are going to be used, calculate the combined impedance of the speakers then connect suitable speakers to the amplifier.

Installation

Since the power amplifier has no parts which require operation, it can be installed at a position away from the driver's seat without any hindrances. As generally accepted positions for its installation, places such as inside the trunk, etc. can be considered.

ACUTION

Do not install the unit under the carpet. Otherwise heat build-up occurs and the unit may be damaged.

Install this unit in a location which allows heat to easily dissipate. Once installed, do not place any object on top of the unit.

The surface temperature of the amplifier will become hot during use. Install the amplifier in a place where people, resins, and other substances that are sensitive to heat will not come into contact with it.

When making a hole under a seat, inside the trunk, or somewhere else in the vehicle, check that there is nothing hazardous on the opposite side such as a gasoline tank, brake pipe, or wiring harness, and be careful not to cause scratches or other damage.

Do not install near the dashboard, rear tray, or air bag safety parts.

The installation to the vehicle should securely fasten the unit in a place in which it will not obstruct driving. If the unit comes off due to a shock and hits a person or safety part, it may cause injury or an accident.

After installing the unit, check to make sure that electrical equipment such as the brake lamps, turn signal lamps and windshield wipers operate normally.

Installation board, etc. (thickness : 15 mm or more)

Self-tapping screw (ø4 x 16 mm)
**Example:**

**Principle of Tri-mode**

Method of frequency band division using a coil and capacitor - in case of 6dB/ Oct, slope Col. L1: Pass low frequencies and blocks low frequencies. (Low pass) Capacitor (C): Passes low frequencies and blocks high frequencies. (High pass)

**Example:** When it is required to set a crossover frequency of 150 Hz using speakers with an impedance of 4 ohms. 1. Cut of Frequency (HP) 2. High Pass 3. Subwoofer Impedance 4. Subwoofer

**NOTE**

For the pre-echo output or the maximum power output, refer to the "Specifications" in the instruction manual of the center unit.

**A.CH OPERATION**

- **INPUT SELECTOR switch**
  - B.Ch position: Amplifies both the signals input to amplifiers A and B.
  - A position: Amplifies only input signal amplifier A with both amplifiers A and B.

**CAUTION**

- Do not use the terminal for power source grounding. This unit will be damaged if the power source grounding wire is connected to this terminal.

**INPUT SENSITIVITY (V)**

- 0.5 (W): The original sound without filtering is output.
- 0 dB (W): The Lch and Rch will be mixed before output, even if the operation switch is set to STEREO.
- -3 dB (W): Amplifies only signal input amplifier A with both amplifiers A and B.

**Filter switch**

These switches allow filtering of the speaker output signals:

- **HPF (High Pass Filter) position**
  - Only frequencies of 150 Hz or higher are output.
  - Frequencies below 150 Hz are cut.

- **LPF (Low Pass Filter) position**
  - Only frequencies of 80 Hz or lower are output.
  - Frequencies above 80 Hz are cut.

Failure to do so will result in a drop of the maximum power output of the genuine-accessory speaker or other equipment.

**Power indicator**

When the power is turned on, the Power indicator lights.

* If the Power indicator does not light when the power is turned on, the protection function may be activated. Check whether there is any indication of trouble.

**The protection function is activated in the following situations:**

- This unit is equipped with a protection function for protecting this unit and your speakers from various accidents or problems that can occur.
- When the protection function is triggered, the Power indicator goes off and the amplifier stops operating.
- When a speaker wire may be short-circuited.
- When a speaker output contacts ground.
- When the unit malfunctions and a DC signal is sent to the speaker output.
- When the internal temperature is high and unit won’t operate.

**NOTE**

- When a ground wire of the center unit (cassette receiver, CD receiver, etc.) or this unit is not connected to a metal part serving as an electrical ground passing electricity to the battery’s negative (-) terminal.

<table>
<thead>
<tr>
<th>Connection</th>
<th>System examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCA cable connection</td>
<td>4-channel</td>
</tr>
<tr>
<td>Speaker level input connection</td>
<td>2-channel</td>
</tr>
<tr>
<td>Speaker stereo connection</td>
<td>2-channel</td>
</tr>
<tr>
<td>Speaker bridge connection</td>
<td>Tri-mode</td>
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</table>