

KENWOOD

4/3/2 CHANNEL POWER AMPLIFIER

KAC-6402

INSTRUCTION MANUAL

KENWOOD CORPORATION

Safety precautions

▲WARNING

To prevent injury or fire, take the following precautions:

- When extending the ignition, battery, or ground wires, make sure to use automotive-grade wires or other wires with a 5 mm² (AWG 10) or more to prevent wire deterioration and damage to the wire coating.
- To prevent a short circuit, never put or leave any metallic objects (such as coins or metal tools) inside the unit.
- If the unit starts to emit smoke or strange smells, turn off the power immediately and consult your Kenwood dealer.
- Do not touch the unit during use because the surface of the unit becomes hot and may cause burns if touched.

▲CAUTION

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

- Be sure the unit is connected to a 12V 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 your unit to malfunction.
- To prevent a short circuit when replacing a fuse, first disconnect the wiring harness.

NOTE

- If you experience problems during installation, consult your Kenwood dealer.
- If the unit does not seem to be working right, consult your Kenwood dealer.

Cleaning the unit

If the front panel gets dirty, turn off the power and wipe the panel with a dry silicon cloth or soft cloth.

▲CAUTION

Do not wipe the panel with a hard cloth or a cloth dampened by volatile solvents such as paint thinner and alcohol. They can scratch the surface of the panel and/or cause the indicator letters to peel off.




To prevent battery rise

When the unit is used in the ACC ON position without turning the engine ON, it depletes the battery. Use it after starting the engine.

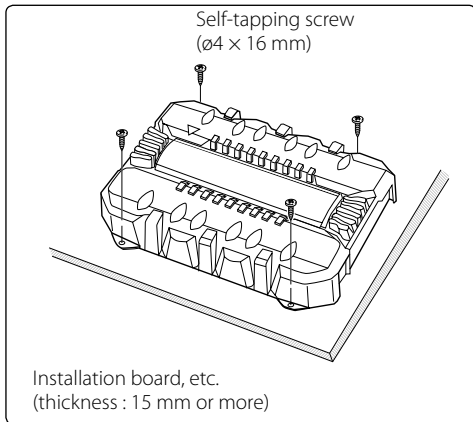
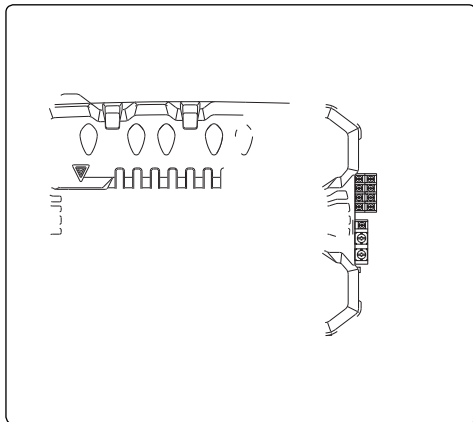
Protection function

There is a Protection function installed in the unit to protect the unit and speakers from various problems. When Protection operates, the indicator informs you of the condition. (Refer to page 5)

Accessories

Part name	External View	Number of Items
Self-tapping screws ($\varnothing 4 \times 16$ mm)		4
Terminal cover (Power terminal)		1
Speaker level input cable		1

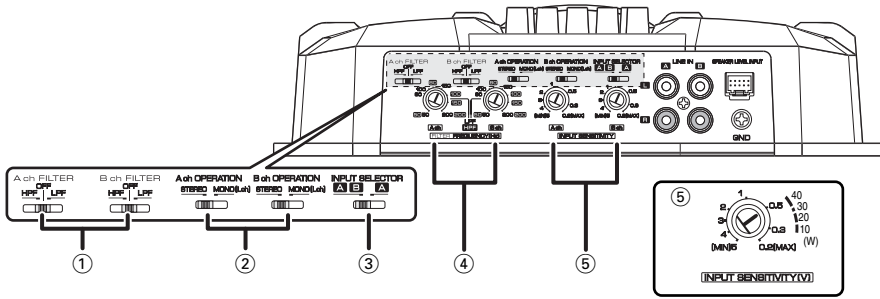
Installation



⚠ CAUTION

- Do not install in the below locations;
(Unstable location, In a location that interferes with driving, In a location that gets wet, In a dusty location, In a place that gets hot, In a place that gets direct sunlight, In a location that gets hit by hot air)
- 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 to 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.

Controls / Indicator



① FILTER switch (A.ch/B.ch)

This switch allows to apply high-pass or low-pass filtering to the speaker outputs.

- **HPF (High-Pass Filter) position:**

The filter outputs the band of higher frequencies than the frequency set with the FILTER FREQUENCY control.

- **OFF position:**

The entire bandwidth is output without filtering.

- **LPF (Low-Pass Filter) position:**

The filter outputs the band of lower frequencies than the frequency set with the FILTER FREQUENCY control.

② OPERATION switch (A.ch/B.ch)

This switch is used to select the operation mode of the amplifier.

- **STEREO position:**

The amplifier can be used as a stereo amplifier.

- **MONO (Lch) position:**

Amplifies the signal input from the left side only. Set to this position and make bridged connections to use as a high-power monaural amplifier. (The input right signal is not output.)

③ INPUT SELECTOR switch

This switch selects the input method of the signals to be amplified by amplifiers A and B.

- **A B position:**

Amplifies both of the signals input to amplifiers A and B.

- **A position:**

Amplifies only signal input amplifier A with both amplifiers A and B.

④ FILTER FREQUENCY control (A.ch/B.ch)

Sets the cutoff frequency when the FILTER switch is set to LPF or HPF.

⑤ INPUT SENSITIVITY control (A.ch/B.ch)

Set this control according to the pre-output level of the center unit connected with this unit, or to the maximum power output of the genuine-accessory car stereo.

The sensitivities of amplifiers A and B can be adjusted independently regardless of the position of the input selector switch. Use the diagram on the right as a guide.

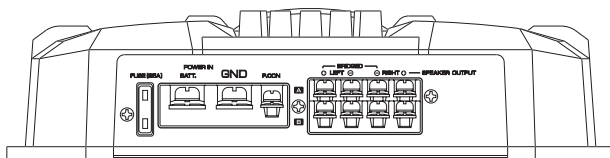
NOTE

For the pre-output level or the maximum power output, refer to the <Specifications> in the instruction manual of the center unit.

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Connection



■ Installation procedure

Since there are large variety of settings and connections possible according to applications, read the instruction manual well to select the proper setting and connection.

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

▲WARNING

To prevent fire caused by a short in the wiring, connect a fusible link or breaker nearby the battery's positive terminal.

▲CAUTION

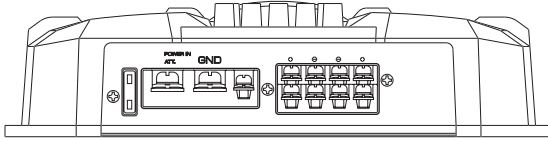
- If sound is not output normally, immediately turn power off and check connections.
- Be sure to turn the power off before changing the setting of any switch.
- If the fuse blows, check wires for shorts, then replace the fuse with one of the same rating.
- Check that no unconnected wires or connectors are touching the car body. Do not remove caps from unconnected wires or connectors to prevent short circuits.
- Connect the speaker wires to appropriate speaker connectors separately. Sharing the negative wire of the speaker or grounding speaker wires to the metal body of the car can cause this unit to fail.
- After installation, check that the brake lamps, wipers, and wipers work properly.

■ Wiring

- Take the battery wire for this unit directly from the battery. If it's connected to the vehicle's wiring harness, it can cause blown fuses etc.
- If a buzzing noise is heard from the speakers when the engine is running, connect a line noise filter (optional) to each of the battery wire.
- Do not allow the wire to directly contact the edge of the iron plate by using Grommets.
- Connect the ground wire to a metal part of the car chassis that acts as an electrical ground passing electricity to the battery's negative \ominus terminal. Do not turn the power on if the ground wire is not connected.
- 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 5 mm² (AWG 10) or greater.)
- When more than one power amplifier are going to be used, use a power supply wiring wire and protective fuse of greater current-handling capacity than the total maximum current drawn by each amplifier.

■ Speaker Selection

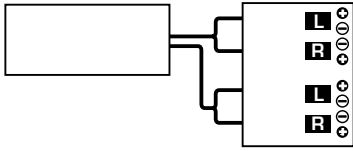
- The rated input power of the speakers that are going to be connected should be greater than the maximum output power (in Watts) of the amplifier. Use of speakers having input power ratings that are less than the output power of the amplifier will

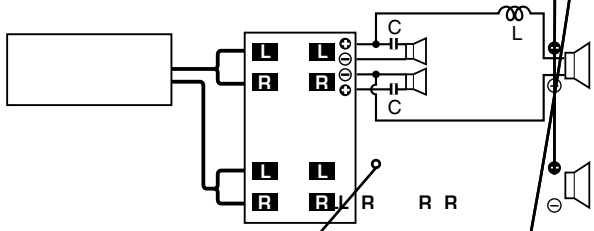


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System examples





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.

PROBLEM	POSSIBLE CAUSE	SOLUTION
No sound. (No sound from one side.) (Blown fuse.)	<ul style="list-style-type: none">• Input (or output) cables are disconnected.• Protection circuit may be activated.• Volume is too high.• The speaker cord is shorted.	<ul style="list-style-type: none">• Connect the input (or output) cables.• Check connections by referring to <Protection function>.• Replace the fuse and use lower volume.• After check the speaker cord and fixing the cause of the short, replace the fuse.
The output level is too small (or too large).	<ul style="list-style-type: none">• The input sensitivity adjusting control is not set to the correct position.	<ul style="list-style-type: none">• Adjust the control correctly referring to <Controls>.
The sound quality is bad. (The sound is distorted.)	<ul style="list-style-type: none">• The speakers wire are connected with wrong \oplus / \ominus polarity.• A speaker wire is pinched by a screw in the car body.• The switches may be set improperly.	<ul style="list-style-type: none">• Connect them properly checking the \oplus / \ominus of the terminals and wires well.• Connect the speaker wire again so that it is not pinched by anything.• Set switches properly by referring to <System examples>.

Specifications

Specifications subject to change without notice.

Audio Section

Max Power Output	400 W
Rated Power Output	
Normal (4 Ω) (20 Hz – 20 kHz, 0,08 % THD)	35 W x 4
(2 Ω) (1 kHz, 0,8 % THD).....	50 W x 2
Bridged (4 Ω) (1 kHz, 0,8 % THD).....	100 W x 2
Frequency Response (+0, –3 dB).....	10 Hz – 45 kHz
Sensitivity (rated output) (MAX.)	0,2 V
(MIN.)	5,0 V
Signal to Noise Ratio.....	100 dB
Input Impedance.....	10 k Ω
Low Pass Filter Frequency (12 dB/oct.)	50 – 200 Hz (variable)
High Pass Filter Frequency (12 dB/oct.)	50 – 200 Hz (variable)

General

Operating Voltage.....	14,4 V (11 – 16 V allowable)
Current Consumption	25 A
Dimensions (W x H x D).....	330 x 59 x 242 mm
Weight.....	3,0 kg

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