

# KENWOOD

MONO POWER AMPLIFIER

# KAC-716 INSTRUCTION MANUAL

KENWOOD CORPORATION  
© 004-0788-00 (K) (MC)

**Take the time to read through this instruction manual. Familiarity 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-716 Serial number: \_\_\_\_\_

## Safety precautions

### WARNING

**Take the following precautions to prevent fire and avoid personal injury :**

- When extending the battery cable, or ground cable, use 3mm<sup>2</sup> (AWG12) or larger automotive grade cable to avoid cable deterioration or damage to the covering.
- Check that no metal objects (coins, tools, etc.) are left inside the unit to avoid short circuits.
- If you smell or see smoke, turn the power off 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

**Take the following precautions to keep the unit in proper working order.**

- Be sure the unit is connected to a 12V DC power supply with a negative ground connection.
- Do not open the top or bottom cover.
- Do not install the unit in places it is exposed to direct sunlight, high heat or humidity, water may splash over it, or dust exists.

### NOTE

- If you have difficulty in installing this unit in your vehicle, contact your Kenwood dealer.

### Cleaning the unit

- If the surface is dirty, wipe it clean with a silicon cloth or soft dry cloth with the power off.

### CAUTION

Do not use hard cloths or paint thinner, alcohol, or other volatile solvents. These may damage external surfaces or remove indicator characters.

### 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 an unauthorized change or modification is made.

## Accessories

Part name	External View	Number of Items
Self-tapping screws (ø4 x 16mm)		4
Terminal cover (Power terminal)		1

## Troubleshooting guide

**Often, what appears to be a malfunction is due to user error. Before calling for service, please consult the following table.**

Symptom	Cause	Remedy
<b>No sound. (No sound from one side.)</b>	Input (or output) cables are disconnected.	Connect the input (or output) cables.
	Protection function is activated.	Check that the speaker cords are not short-circuited.
<b>The output level is too small (or too large).</b>	The input sensitivity adjusting control is not set to the correct position.	Adjust the control correctly referring to "Controls".
<b>The sound quality is bad. (The sound is distorted.)</b>	The speakers cable are connected with wrong (+/-) polarity.	Connect them properly checking the (+/-) of the terminals and cables well.
	A speaker cable is pinched by a screw in the car body.	Connect the speaker cable again so that it is not pinched by anything.

## Specifications

**Specifications subject to change without notice.**

### Audio Section

Max Power Output (4 Ω).....	240 W x 1 (at 100Hz)
Rated Power Output (4 Ω).....	120 W x 1 (0.08 % THD at 100Hz)
Rated Power Output (2 Ω).....	160 W x 1 (0.8 % THD at 100Hz)
Signal to Noise Ratio.....	100 dB
Sensitivity (MAX).....	0.15 V (rated output)
Sensitivity (MIN).....	4.0 V (rated output)
Input Impedance.....	10 kΩ
Low-Pass Filter (12 dB/oct.).....	30 ~ 200 Hz (variable)

### General

Operating Voltage.....	14.4 V (11 ~ 16 V allowable)
Current Consumption (1 kHz, 10% THD, 4 Ω).....	15 A
Dimensions (W x H x D).....	290 x 52 x 170 mm (11-7/16 x 2-1/16 x 6-11/16 in.)

Weight..... 2.4 kg (5.3 lb)

## System connection

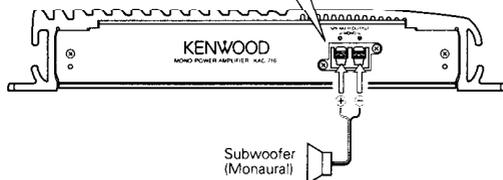
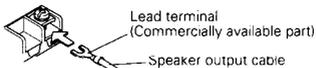
### Speaker output terminal

Connect the speaker output cables to these terminals.

Speaker terminal polarity

+

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### RCA cable ground lead terminal

When using an RCA cable with a ground lead attached, connect the ground lead to this terminal.

#### CAUTION

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

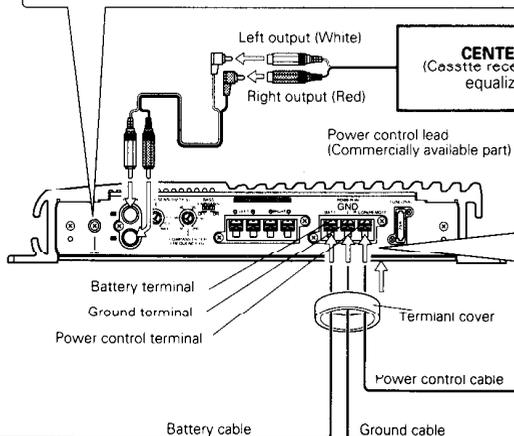


Left output (White)

Right output (Red)

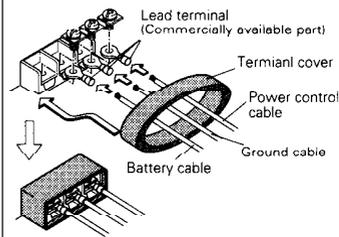
**CENTER UNIT**  
(Cassette receiver, Graphic equalizer etc.)

Power control lead  
(Commercially available part)



### Power terminal

Pass battery and ground cables through supplied terminal cover and connect to respective terminals. After completing connections, fasten terminal cover over terminal bracket.



## Installation procedure

1. Remove the ignition key and disconnect the negative  $\ominus$  terminal of the battery to prevent short circuits.
2. Connect the input and output cables of the units.
3. Connect the speaker cables.
4. Connect the ground cable and battery cable in the order listed.
5. Install the unit in the car.
6. Connect the negative  $\ominus$  terminal of the battery.

#### CAUTION

- If the fuse blows, check cables for shorts, then replace the fuse with one of the same rating.
- Check that no unconnected cables or connectors are touching the car body. Do not remove caps from unconnected cables or connectors to prevent short circuits.
- Connect the speaker cables to appropriate speaker connectors separately. Sharing the negative cable of the speaker or grounding speaker cables 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.

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 cable.

Battery

#### WARNING

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

#### NOTE

Connect the ground cable 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 cable is not connected.

## Controls

Operations of the following control and switches are required in accordance with the center unit and speakers connected with this unit.

① **RCA cable ground lead terminal**

② **LINE IN terminal**

③ **INPUT SENSITIVITY control**

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.

Maximum power output of genuine-accessory car stereo	Center unit preout level	Amplifier input sensitivity
10 W	300 mV	MAX (0.15 V)
15 W	800~1000 mV	0.3 V
25 W	1.5 V	0.5 V
	2~4 V	1.0 V~MIN

**NOTE**

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

④ **LOW PASS FILTER FREQUENCY control**

This control adjusts the frequency band output from this unit.

⑤ **BASS EMPHASIS switch**

This switch allows to emphasize the output from this unit.

⑥ **SPEAKER LEVEL INPUT terminal**

⑦ **Battery terminal**

⑧ **Ground terminal**

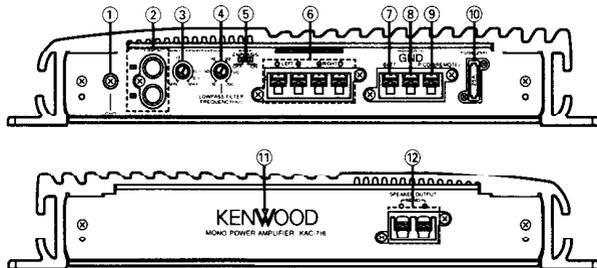
⑨ **Power control (REMOTE) terminal**

⑩ **FUSE (25 A)**

⑪ **Power indicator**

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

⑫ **SPEAKER OUTPUT terminals**



## Protection function

This unit is equipped with a protection function for protecting this unit and your speakers from various accidents or problems that can occur. When this function is activated, the sound is not output.

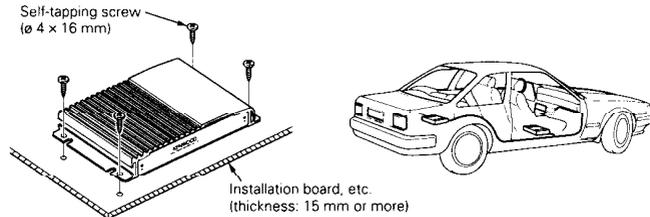
**The protection function activates in the following situations:**

- When a speaker output contacts ground.
- When the unit malfunctions and a DC signal is sent to the speaker output.
- When the temperature of internal parts exceeds 120°C (248°F).
- When a ground cable 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.

## Installation

**CAUTION**

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



- 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.

**CAUTION**

- Install this unit in a location which allows heat to easily dissipate. Once installed, do not place any object on top of the unit.
- After installing the unit, check to make sure that electrical equipment such as the brake lamps, turn signal lamps and windshield wipers operate normally.
- Install the unit securely in a location that does not interfere with driving.

## Connection with genuine-accessory car stereo

### CAUTION

- The genuine-accessory car stereo shall have a maximum power output of no more than 25 W.
- Do not connect the speaker output leads from a power amplifier (Optional) to the speaker input terminals of this unit, for this may cause malfunction or damage.
- Do not connect cables and leads to both RCA cable input jacks and the speaker input terminals simultaneously, for this may cause malfunction or damage.
- Connect the power control lead to a power supply which can be turned ON/OFF by the ignition key switch (ACC line).  
With this connection, shock noise may be generated when the power of the genuine-accessory car stereo is switched ON/OFF.

