

3 Channel Mode.....	100 W × 2 + 300 W × 1	80 W × 2 + 250 W × 1
2 Channel Mode.....	300 W × 2	250 W × 2
Rated Power Output (4 Ω)		
4 Channel Mode (20 Hz ~ 20 kHz, less than 0.08 % THD).....	50 W × 4	40 W × 4
(DIN45324, +B=14.4V).....	50 W × 4	40 W × 4
3 Channel Mode (20 Hz ~ 20 kHz, 0.08 % THD) + (1 kHz, 0.8 % THD)		
.....	50 W × 2 + 150 W × 1	40 W × 2 + 120 W × 1
2 Channel Mode (1 kHz, 0.8 % THD).....	150 W × 2	120 W × 2
Rated Power Output (2 Ω)		
4 Channel Mode (1 kHz, 0.8 % THD).....	75 W × 4	60 W × 4
Frequency Response (+0, -3 dB).....	5 Hz ~ 50 kHz	5 Hz ~ 50 kHz
Signal to Noise Ratio.....	100 dB	100 dB
Sensitivity (MAX) (rated output).....	0.2 V	0.2 V
(MIN) (rated output).....	5.0 V	5.0 V
Input Impedance.....	10 kΩ	10 kΩ
Low Pass Filter Frequency (12 dB/oct.) (Variable).....	50 ~ 200 Hz	50 ~ 200 Hz
High Pass Filter Frequency (12 dB/oct.) (Variable).....	50 ~ 200 Hz	50 ~ 200 Hz
Bass Boost Circuit (90 Hz).....	6 dB	6 dB



**Take the time to become familiar with your stereo. For your records, record the serial number of the unit designated on the front panel. Refer to the model number KENWOOD dealer for Model KAC-849S.**

© PRINTED IN USA

<b>General</b> .....	<b>KAC-849</b>	<b>KAC-749S</b>
Operating Voltage (11 ~ 16 V allowable).....	14.4 V	14.4 V
Current Consumption (1 kHz, 10 % THD).....	31 A	26 A
Dimensions (W × H × D).....	261 × 57 × 256 mm (10-1/4×2-1/4×10-1/16 in.)	261 × 57 × 256 mm (10-1/4×2-1/4×10-1/16 in.)
Weight.....	3.5 kg (7.7 lb)	3.5 kg (7.7 lb)

## 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 5mm<sup>2</sup> (AWG10) 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.

## 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.

## ■ 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

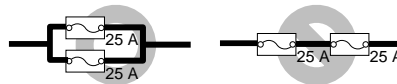
Do not wipe the panel with a hard cloth or a cloth dampened by volatile solvents such as paint thinner and alcohol. They can scratch the surface of the panel and/or cause the indicator letters to peel off.

## ■ Wiring

- 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 ⊖ terminal. Do not turn the power on if the ground wire is not connected.
- Be sure to attach a protective fuse into the battery wire close to the battery. Use a protective fuse having a capacity that is about 10 A higher than the maximum current drawn by the amplifier.
- Use vehicle-type (fire-resistant) power supply wiring wire for the battery wire and the ground wire. The current capacity of the power supply wiring wire should be about 10 A higher than that of the protective fuse capacity (which means about 20 A higher than the maximum current drawn by the amplifier).
- 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.

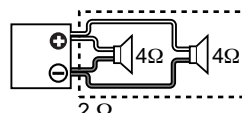
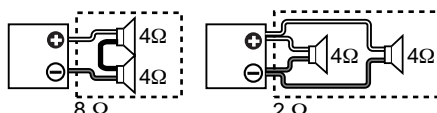
**Example: One Power Amplifier Is Used**

<b>Maximum Current Drawn</b>	31 A / 26 A
<b>Protective Fuse</b>	50 A × 1 [25 A × 2]
<b>Cross-sectional Area of Wiring Wire (AWG)</b>	5 mm <sup>2</sup> (AWG 10) or greater × 1



## ■ 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 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 connections), 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 and then connect suitable speakers to the amplifier.



## Installation procedure

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 order.
6. Install the unit in the car.
7. Connect the negative ⊖ 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

- 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 cables or connectors are touching the car body. Do not remove caps on unconnected cables 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 body of the car can cause this unit to fail.
- After installation, check that the brake lamps, wipers, and wipers work properly.

## ■ Speaker level input terminals (①)

- The genuine-accessory car stereo shall have a maximum power output of no more than 40 W.
- Do not connect the speaker output leads from a power amplifier (Optional) to the speaker level input terminals of this unit, for this may cause malfunction or damage.
- Do not connect cables and leads to both R and L cable input jacks and the speaker level 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 stereo is switched ON/OFF.

## ■ Power terminal (②③④)

Connect to their respective terminals the power supply wire, and ground wire, all of which pass through the associated terminal cover. Once the connections are complete, place the cover on the terminal section.

- **Stereo Connections:**  
When you wish to use the unit as a stereo amplifier, stereo connections are used.

- **Bridged Connections:**  
When you wish to use the unit as a high-output monaural amplifier, bridged connections are used. (Make connections to the LEFT channel (+) and the RIGHT channel (-) SPEAKER OUTPUT terminals.)

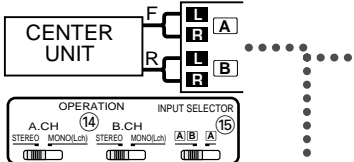
- ⑥ **INPUT SENSITIVITY control**  
Set this control according to the pre-output level of the center unit connected with this unit, or to the maximum power output of the genuine-accessory car stereo.  
The sensitivities of amplifiers A and B can be

- ⑨ **Amplifier A/B LINE IN terminals**  
⑩ **LINE OUT terminal**  
These jacks output respectively the signals input to amplifiers A and B. They always output the stereo signals regardless of the position of the OPERATION switch.
- ⑪ **Speaker level input terminals**  
⑫ **BASS BOOST switch**  
When the switch is in "ON" position, the bass is boosted by 6 dB.  
The bass boost applies only to the B amplifier.

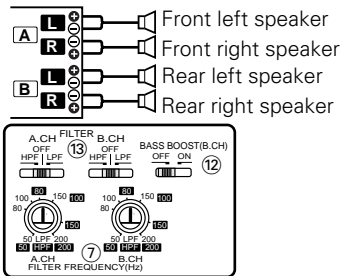
- **STEREO position:**  
The amplifier can be used as a stereo amplifier.
- **MONO (Lch) position:**  
Amplifies the signal input from the left side only. Set to this position and make bridged connections to use as a high-power monaural amplifier. (The input right signal is not output.)
- ⑬ **INPUT SELECTOR switch**  
This switch selects the input method of the signal to be amplified by amplifiers A and B.
- **A B position:**  
Amplifies both of the signals input to amplifiers A and B.
- **A position:**

## System examples

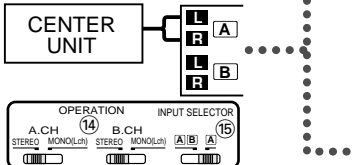
### 4-channel



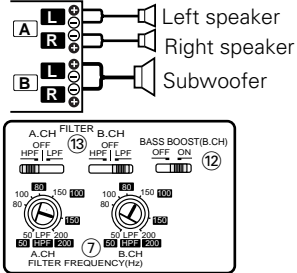
### 4-channel



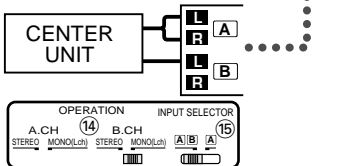
### 2-channel



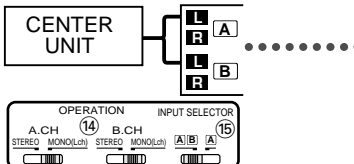
### 3-channel



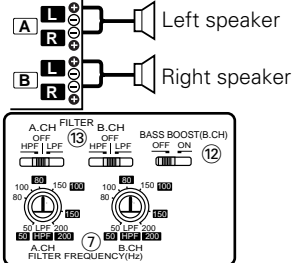
### 2ch + woofer



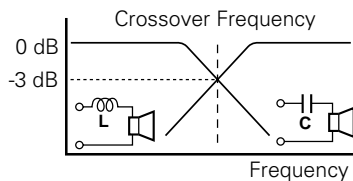
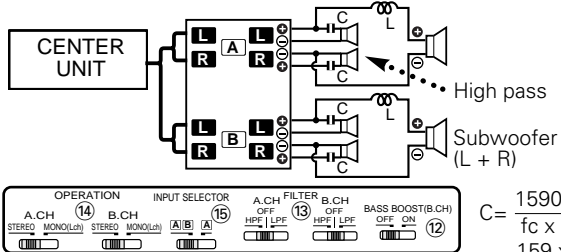
### 2-channel



### 2-channel



### Tri-mode



$$C = \frac{159000}{f_c \times R} \text{ (}\mu\text{F)} = \frac{159000}{120\text{Hz} \times 4\Omega} = 331.25 \mu\text{F}$$

$$L = \frac{159 \times R}{f_c} \text{ (mH)} = \frac{159 \times 4\Omega}{120\text{Hz}} = 5.3 \text{ mH}$$

### Principle of Tri-mode

Method of frequency band division using a coil and capacitor ... in case of 6dB/oct. slope  
Coil (L): Passes low frequencies and blocks high frequencies. (Low pass)  
Capacitor (C): Passes high frequencies and blocks low frequencies. (High pass)

### Example:

When it is required to set a crossover frequency of 120 Hz using speakers with an impedance of 4 ohms.  
fc=Cut of Frequency (Hz)  
R=Speaker Impedance (Ω)

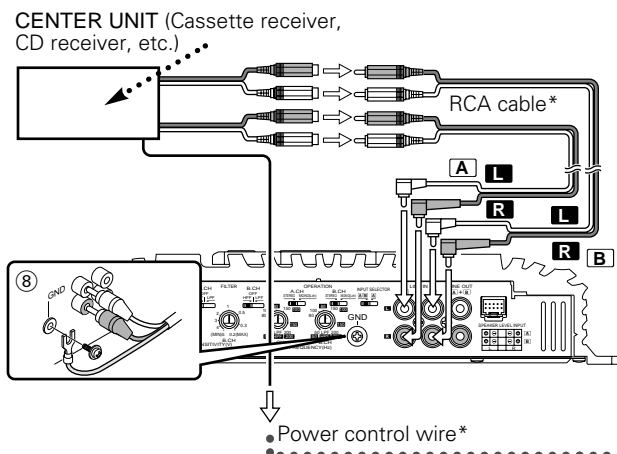
### CAUTION

- If you wish to bridge-connect a speaker, the speaker impedance must be no less than 4 ohms. Connecting a speaker with an impedance lower than 4 ohms may damage the unit.
- Be sure to connect capacitors to speakers to which high frequencies will be passed. Failure to do so will result in a drop of the combined impedance with the subwoofer.
- Ensure that the withstand voltage and current ratings of the capacitors (C) and coils (L) are sufficient.

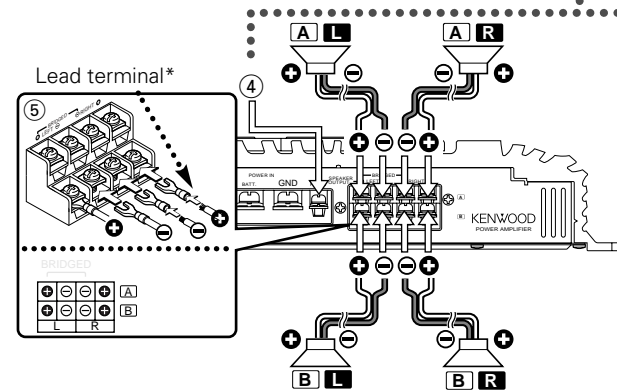
## Connection

**NOTE** For safe installation, read "Installation procedure" before starting.

### RCA cable connection



### Speaker stereo connection



### Power wire connection

