KENWOOD

KAC-X4R
KAC-PS4D

FOUR CHANNEL DIGITAL POWER AMPLIFIER ► page 2-11

INSTRUCTION MANUAL

AMPLIFICATEUR 4 CANAUX DIGITAL ► page 12-21

MODE D'EMPLOI

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MANUAL DE INSTRUCCIONES

Kenwood Corporation

AE86

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-X4R/ KAC-PS4D Serial number _____

US Residence Only

Register Online

Register your Kenwood product at
www.kenwoodusa.com

Safety precautions

⚠WARNING

To prevent injury or fire, take the following precautions:

- Mounting and wiring this product requires skills and experience. For safety's sake, leave the mounting and wiring work to professionals.
- When extending the battery, or ground wires, make sure to use automotive-grade wires or other wires with the range of 10 mm² (AWG 8) to 25 mm² (AWG 4) 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.
- Digital processing is performed inside this amplifier. Therefore, when used in conjunction with other amplifiers, there may be a slight delay. If this occurs, input the pre-output audio from this amplifier into the other amplifier.

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.

FCC NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment may cause harmful interference to radio communications, if it is not installed and used in accordance with the instructions. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTE

This Class B digital apparatus complies with Canadian ICES-003.

Information on Disposal of Old Electrical and Electronic Equipment (applicable for EU countries that have adopted separate waste collection systems)

Products with the symbol (crossed-out wheeled bin) cannot be disposed as household waste.
Old electrical and electronic equipment should be recycled at a facility capable of handling these items and their waste byproducts. Contact your local authority for details in locating a recycle facility nearest to you. Proper recycling and waste disposal will help conserve resources whilst preventing detrimental effects on our health and the environment.

This Product is not installed by the manufacturer of a vehicle on the production line, nor by the professional importer of a vehicle into an EU Member State.

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 display informs you of the condition.

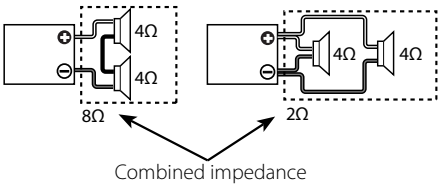
Display	Informations
"E-01"	When the inside of the unit is overheating.
"E-02"	When the unit has failed and direct current voltage is generated to the speaker's output. **NOTE** Turn the power OFF and release the protection. If the "E-02" code does not disappear, contact your Kenwood dealer.
"E-03"	When the speaker cord is shorted. When the speaker output is in contact with the vehicle ground.
"E-99"	When a system error occurs. Press the Reset button. If the "E-99" code does not disappear, contact your Kenwood dealer.
"VOLT" display is blinked.	When voltage gets out of operation range.

Wiring

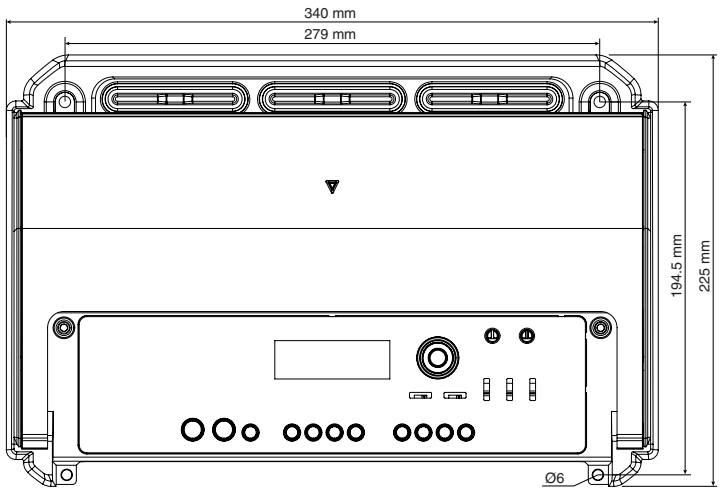
- Take the battery wire for this unit directly from the battery. If it's connected to the vehicle's wiring harness, it can cause blown fuses etc.
- If a buzzing noise is heard from the speakers when the engine is running, connect a line noise filter (optional) to each of the battery wire.
- Do not allow 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 ⊖ 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 wring cord with a current capacity greater than the unit's fuse capacity. (Use a power wiring cord with a diameter between 10 mm² (AWG 8) to 25 mm² (AWG 4).)
- 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.

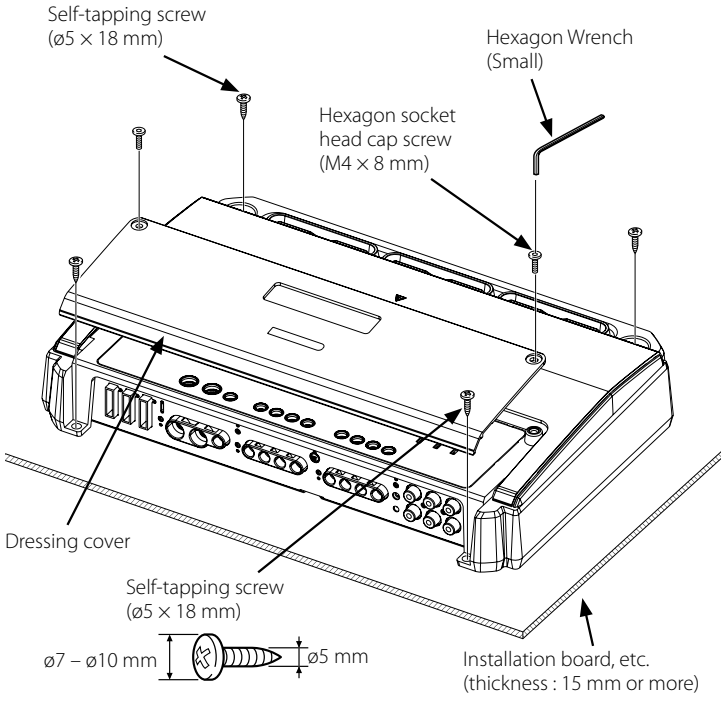
Speaker Selection

- 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 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





Accessories

Part name	External View	Number of Items
Self-tapping screws (ø5 × 18 mm)		4
Hexagon Wrench (Large)		1
Hexagon Wrench (Small)		1
Test tone Disc		1

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 ⊖ 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 installation fittings in the unit.
7.Attach the unit.
8.Connect the negative ⊖ terminal of the battery.

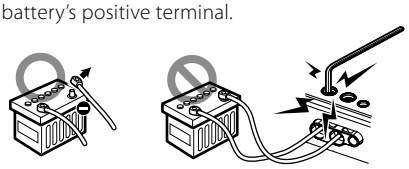
⚠CAUTION

- 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.
- This unit has cooling fan to decrease the internal temperature. Do not mount the unit in a place where the cooling fan and ducts of the unit are blocked. Blocking these openings will inhibit the cooling of the internal temperature and result in malfunction.
- 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.

Connection

⚠WARNING

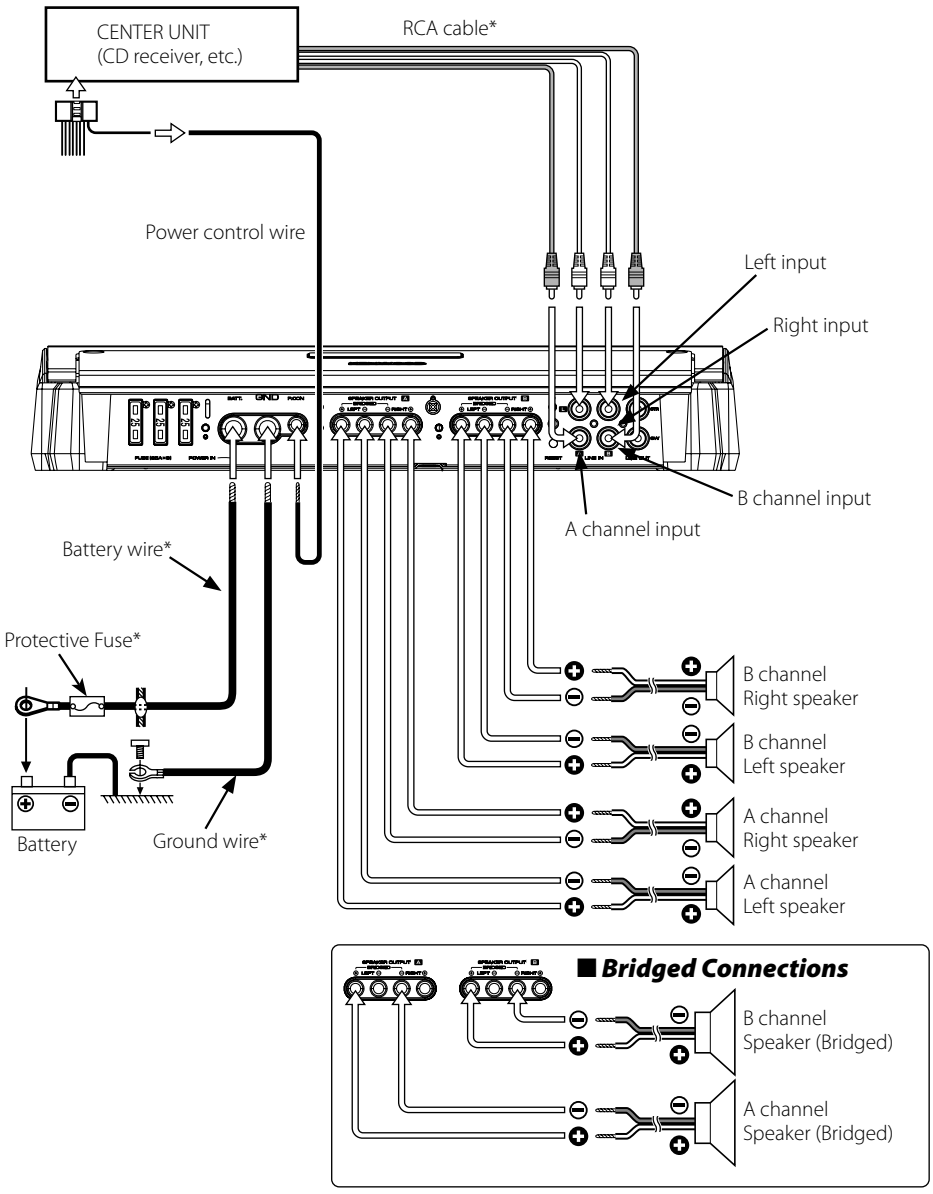
To prevent fire caused by a short in the wiring, connect a fusible link or breaker nearby the battery's positive terminal.



⚠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, winkers, and wipers work properly.

* Commercially available parts



About the Lead Terminals

1 Wire Thicknesses

You can use wires with the following thicknesses:

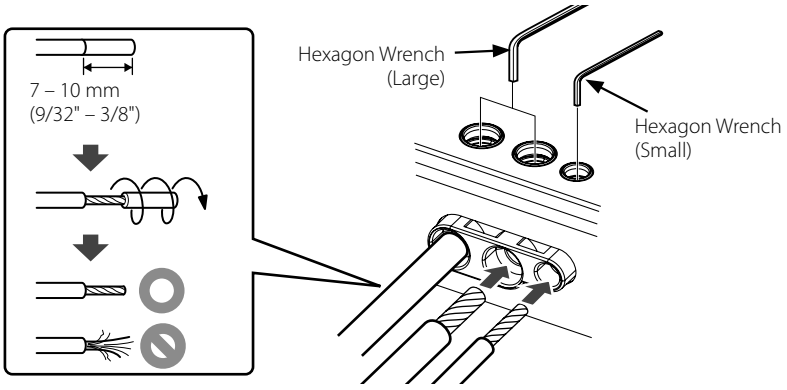
Battery wire and ground wire	AWG 4 – AWG 8
Power control wire and speaker wire	AWG 6 – AWG 18

2 Strip the wire

Make a cut in the wire sheath (insulator made from vinyl, etc.) at the position 7-10 mm away from the end of the wire, and then remove the unnecessary portion of the sheath by twisting it.

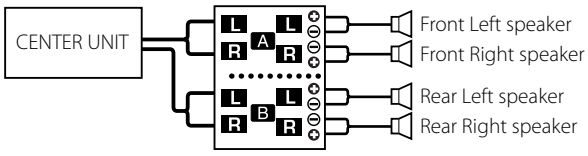
3 Install the wire

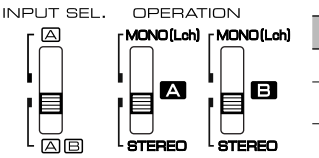
Loosen the screw using the supplied hexagon wrench.
Insert the conductor of the wire in the terminal hole, and then tighten the screw.



System examples

■ 4-channel system



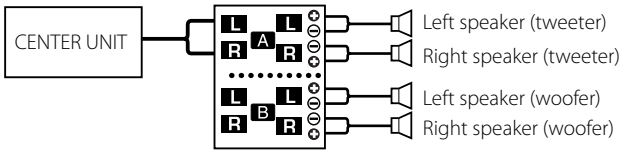


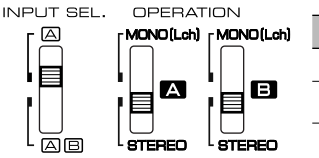
Switch	Setting
INPUT SEL.	AB
OPERATION A	STEREO
OPERATION B	STEREO

• DSP Settings (page 8)

Channel	Setting Item	Setting value
A ch	HPF > FREQ	TH(through)
B ch	HPF > FREQ	TH(through)

■ 2-channel system



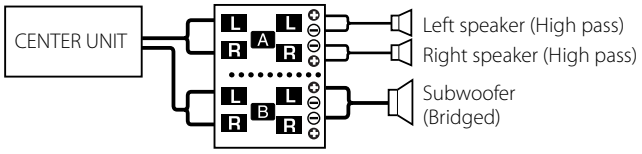


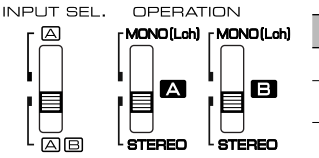
Switch	Setting
INPUT SEL.	A
OPERATION A	STEREO
OPERATION B	STEREO

• DSP Settings (page 8)

Channel	Setting Item	Setting value
A ch	HPF > FREQ	150 Hz
B ch	LPF > FREQ	150 Hz

■ 2-channel + Subwoofer system



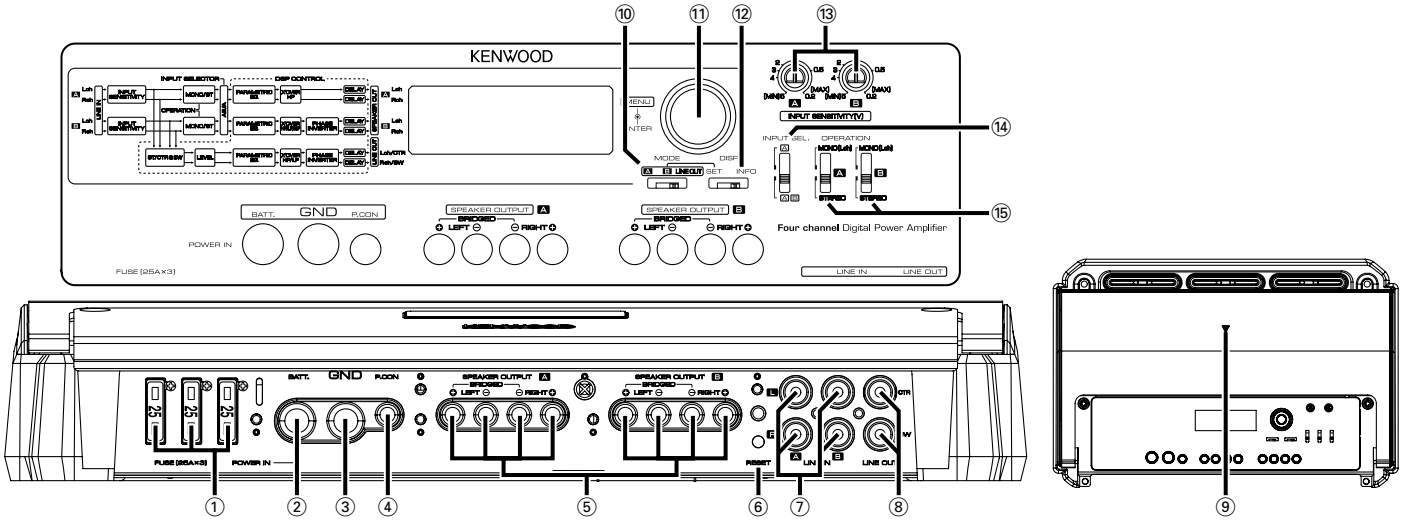


Switch	Setting
INPUT SEL.	AB
OPERATION A	STEREO
OPERATION B	STEREO

• DSP Settings (page 8)

Channel	Setting Item	Setting value
A ch	HPF > FREQ	150 Hz
B ch	LPF > FREQ	150 Hz

Controls



NOTE

The control panel locates under the dressing cover. Remove the cover to access to its controls for adjustment. (See page 3)

This is a 4 channel amplifier including 2 stereo amplifiers in a body. One amplifier is referred to as amplifier A and the other is amplifier B. This unit is compatible with a large variety of systems by combining the switches and functions described in the following.

① *Fuse (25 A × 3)*

② *Battery terminal*

③ *Ground terminal*

④ *Power control terminal*

Controls the unit ON/OFF.

NOTE

Controls the unit power. Be sure to connect it with all the systems.

⑤ *Speaker output terminals (A.ch/B.ch)*

- **Stereo Connections:**
  When you wish to use the unit as a stereo amplifier, stereo connections are used.
  The speakers to be connected should have an impedance of 2Ω or greater.
  When multiple speakers are to be connected, ensure that the combined impedance is 2Ω or greater for each channel.
- **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.)
  The speakers to be connected should have an impedance of 4Ω or greater.
  When multiple speakers are to be connected, ensure that the combined impedance is 4Ω or greater.

⚠CAUTION

The rated input of the speakers should be no less than the maximum output of the amplifier. Otherwise malfunction may result.

⑥ *RESET button*

Resets the microprocessor of the unit.

⑦ *LINE IN terminal*

⑧ *LINE OUT terminal*

Outputs the audio signal set in DSP settings (stereo or center speaker/ subwoofer).

⑨ *Power indicator*

Lights when the POWER switch is turned On.
The indicator flashes several seconds when the POWER switch is turned On or when the Protection function is activated.

⑩ *MODE switch (A/B/LINE OUT)*

This switch selects the channel set in DSP settings (A, B, LINE OUT).

⑪ *Control knob*

Allows you to switch between and determine Menu System items.

⑫ *DISP switch (SET/INFO)*

- **INFO position:**
  Sets <Status Information Display and Settings> (page 7).
- **SET position:**
  Sets <DSP Settings> (page 8).

⑬ *INPUT SENSITIVITY control (A.ch/B.ch)*

Set this control according to the pre-output level of the center unit connected with this unit.
See <Input Sensitivity> (page 10) for details on setting.

NOTE

- For the LINE OUT level, refer to the <Specifications> in the instruction manual of the center unit.
- When A is selected with the INPUT SELECTOR switch, the control portion for **B** cannot be used.

⑭ *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 the signal input to amplifier A with both amplifiers A and B.

⑮ *OPERATION switch (A.ch/B.ch)*

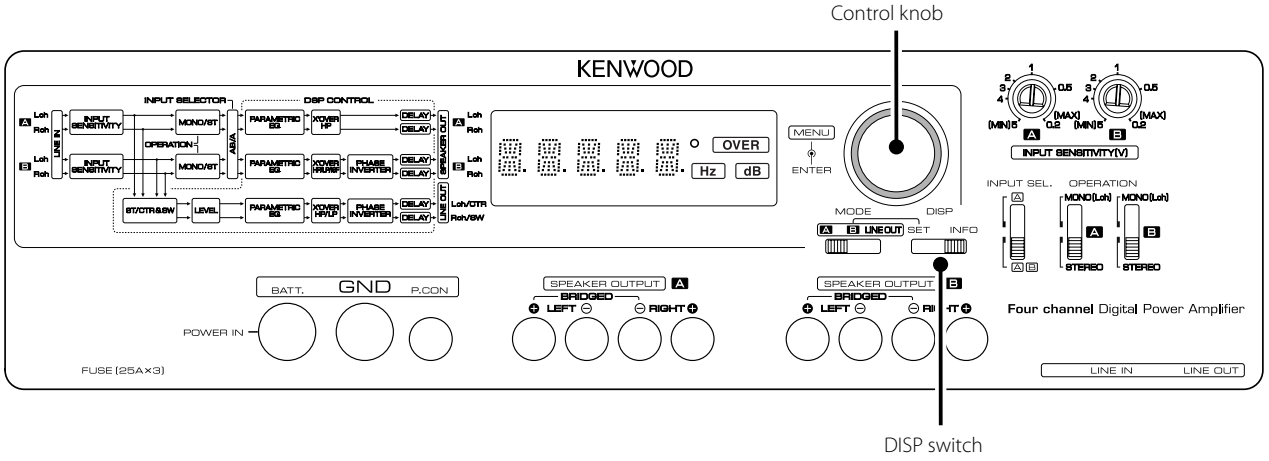
The amplification methods of the signals input to amplifiers A and B can be selected independently according to the setting of this switch.

- **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.)

Status Information Display and Settings

Displays the operating voltage, current consumption and internal temperature.
Additionally, changes the units for temperature or turns ON/OFF the demonstration.

Display type



1 Slide the DISP switch towards INFO.
"INFO" appears on the display for 1 second.

2 Turn the control knob to change the display type in the following order.

Display	Information / Function
"VOLT"	Displays the operating voltage (V).
"CURRT"	Displays the current consumption (A).
"TEMP"	Displays the internal temperature (°C / °F).
"DEMO"	Sets demonstration display ON / OFF.

NOTE

- Temperatures lower than -22°F or -30°C are displayed as "-22F" or "-30C" respectively.
- Displayed information may differ from actual conditions.

Changing the units for temperature

Select °F (Fahrenheit) or °C (Celsius).

1 Turn the control knob, display "TEMP" and push the control knob.

2 Turn the control knob, display "---F" (Fahrenheit) or "---C" (Celsius) and push the control knob.

NOTE

The default setting is "---F" (Fahrenheit).

Turning DEMO ON/OFF

Turn the demonstration function ON to display "VOLT", "CURRT" and "TEMP" information. The demonstration display changes every five seconds.

1 Turn the control knob, display "DEMO" and push the control knob.

2 Turn the control knob, display "ON" or "OFF" and push the control knob.

NOTE

The default setting is "OFF".

DSP Settings

Perform DSP settings for channels A, B and LINE OUT.

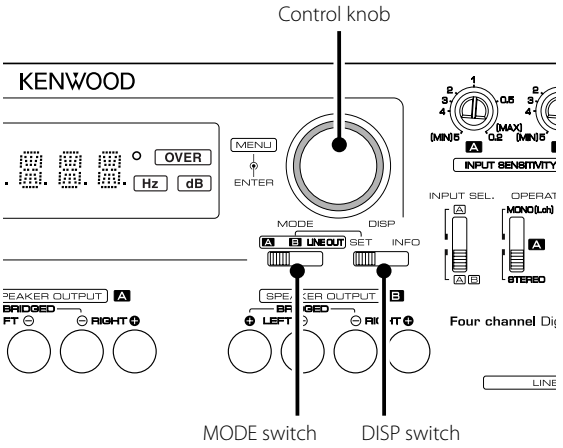
Setting

1 Slide the DISP switch towards SET.

2 Slide the MODE switch to set the channel ("Ach", "Bch" or "LINE OUT").

3 Turn the control knob, display the item to set and push the control knob.
Repeat this step until the item to set is displayed.
To return to the previous menu, turn the control knob, display "RTN" and press the control knob.

4 Turn the control knob, display the value to set and press the control knob. The displayed value is set.



Items and setting values

Item			Setting value	Ach	Bch	LINE OUT			
LN.SEL			ST / CT/SW (Default setting value : ST)	×	×	O	ST (When LN.SEL. is set to "ST")	CTR (When LN.SEL. is set to "CT/SW")	SW (When LN.SEL. is set to "CT/SW")
LEVEL			-20 – 0 (Default setting value : 0)	×	×		O	O	O
BAND1 (Parametric EQ-1)	FREQ (Hz) (Mean frequency)		25/40/60/80/100 (Default setting value : 25)	O	O		O	×	O
	Q		1.0/2.0/3.0/5.0 (Default setting value : 1.0)						
	GAIN		-9 – +9 (Default setting value : 0)						
BAND2 (Parametric EQ-2)	FREQ		150/200/300/400/500 (Default setting value : 150)	O	O		O	O	×
	Q		1.0/2.0/3.0/5.0 (Default setting value : 1.0)						
	GAIN		-9 – +9 (Default setting value : 0)						
BAND3 (Parametric EQ-3)	FREQ		600/800/1k/1.5k/2k (Default setting value : 600)	O	O		O	O	×
	Q		1.0/2.0/3.0/5.0 (Default setting value : 1.0)						
	GAIN		-9 – +9 (Default setting value : 0)						
BAND4 (Parametric EQ-4)	FREQ		3k/4k/5k/6.3k (Default setting value : 3k)	O	O		O	O	×
	Q		2.0/4.0/8.0/10 (Default setting value : 2.0)						
	GAIN		-9 – +9 (Default setting value : 0)						
BAND5 (Parametric EQ-5)	FREQ		8k/10k/12.5k/16k (Default setting value : 8k)	O	O		O	O	×
	Q		2.0/4.0/8.0/10 (Default setting value : 2.0)						
	GAIN		-9 – +9 (Default setting value : 0)						
LPF (Low Pass Filter)	FREQ	Low	TH/30/40/50/60/70/80/90/100/120/150/180/220/250 (Default setting value : TH)	×	O		O	×	O
		High	500/630/800/1k/1.25k/1.6k/2k/2.5k/3.15k/4k/5k (Default setting value : TH)	×	O		×	×	×
	SLOPE		–24/–12 (Default setting value : -12)	×	O		O	×	O
ISF (Infrasonic Filter)	FREQ		TH/20/30/40/50/60 (Default setting value : TH)	×	O		×	×	×
HPF (High Pass Filter)	FREQ	Low	TH/30/40/50/60/70/80/90/100/120/150/180/220/250 (Default setting value : TH)	O	O		O	O	×
		High	500/630/800/1k/1.25k/1.6k/2k/2.5k/3.15k/4k/5k (Default setting value : TH)	O	×		×	×	×
	SLOPE		–24/–12 (Default setting value : -12)	O	O		O	O	×
DELAY	L		0 – 3.9 (Default setting value : 0)	O	O		O (L/R is not differentiated)	O	×
	R		0 – 3.9 (Default setting value : 0)	O	O			×	O
PHASE			-180/0 (Default setting value : 0)	×	O		O	O	O

NOTE

- For LPF, HPF must be set to "TH".
- For ISF, HPF must be set to "TH".
- For HPF, LPF and ISF must be set to "TH".
- If LPF and ISF are set simultaneously, LPF frequency cannot be lower than ISF frequency.

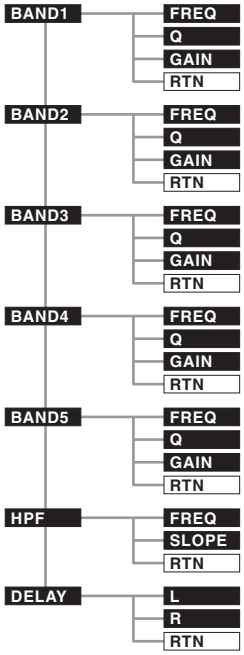
NOTE

- If speakers are bridged, set "L" and "R" for "DELAY" to the same value. Effects will not be applied properly if they are set to different values.
- DSP settings will not be cleared even when the reset button is pressed.

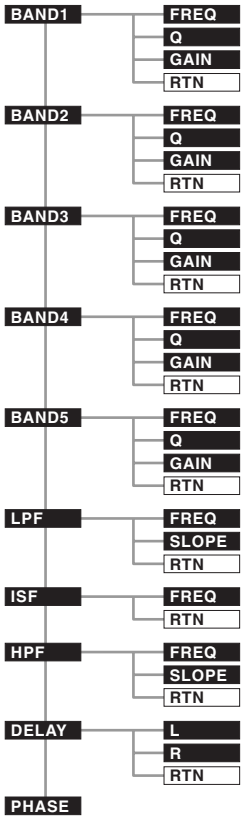
DSP settings menu list

See <Items and setting values> (page 8) for setting values.

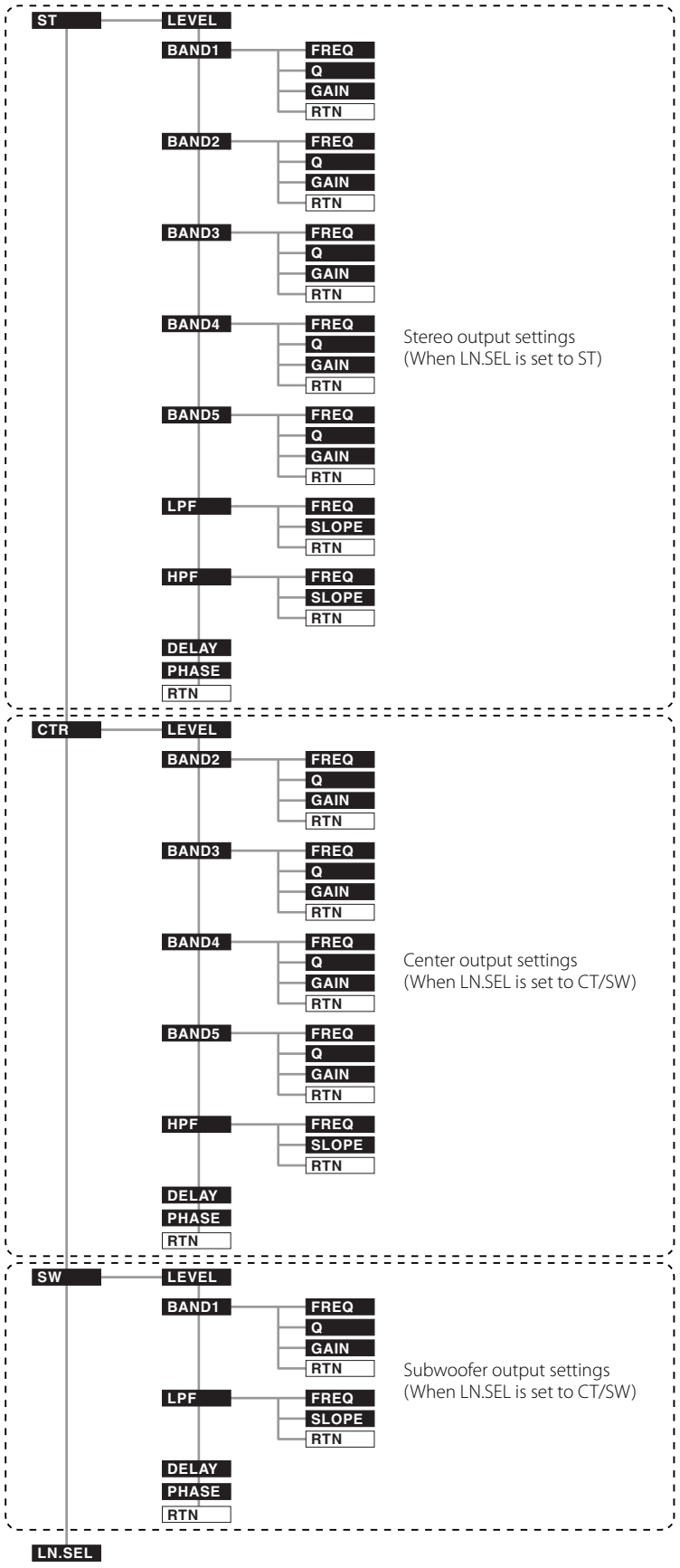
■ *Ach setting menu*



■ *Bch setting menu*

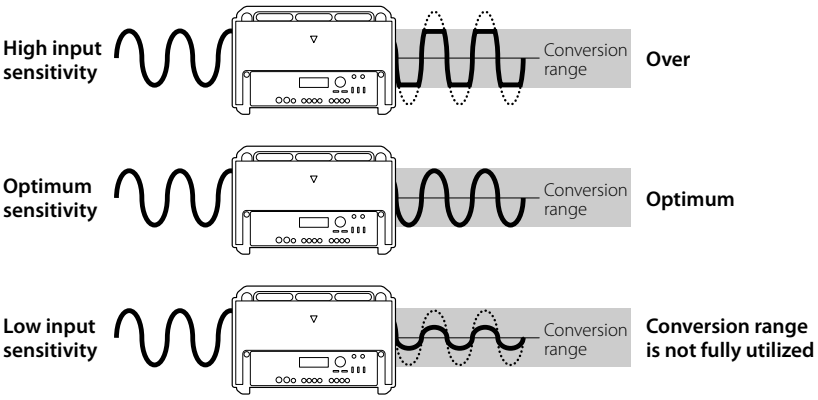


■ *LINE OUT setting menu*



Input Sensitivity

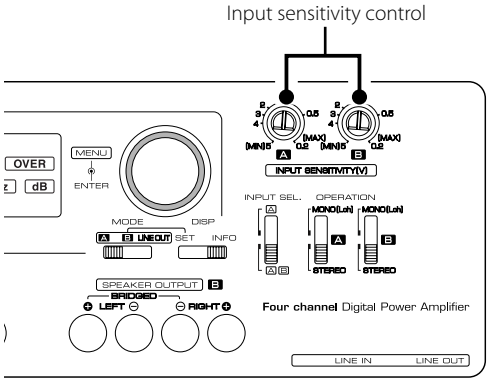
This amplifier features a digital signal processor (DSP). By processing signals digitally, finer equalization and filtering are possible.
Input sensitivity is important to efficiently convert analog signals to digital signals. If the input signal is too high, sound is distorted. If it is too soft, sound quality deteriorates.



Adjusting input sensitivity

⚠CAUTION

- Be sure to disconnect speakers before adjusting input sensitivity.
- The test disc includes high volume test signals. Speakers may be damaged if input sensitivity is adjusted while connected.
- Do not use the test disc for purposes other than adjusting input sensitivity.



1 Disconnect the speakers.

2 Turn the audio system on.

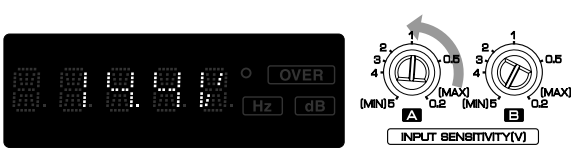
3 Playback Track 2 in Test tone Disc with a CD receiver or other device.
Track 2 is 3 minutes long.

4 Set the device to the loudest volume you listen to.
For example, if this volume is approximately 80% of the maximum volume, the volume is 30 on a device where volume can be set between 0 and 35.

5 Turn the input sensitivity control counterclockwise and set A.ch and B.ch to MIN.

6 Turn the input sensitivity control for A.ch clockwise (towards MAX) until the "OVER" indicator lights.

7 Slowly turn the input sensitivity control for A.ch counterclockwise (towards MIN) until the "OVER" indicator turns off.



8 Turn the input sensitivity control for B.ch clockwise (towards MAX) until the "OVER" indicator lights.

9 Slowly turn the input sensitivity control for B.ch counterclockwise (towards MIN) until the "OVER" indicator turns off.
The setting where the "OVER" indicator turns off for A.ch and B.ch is the optimum input sensitivity.

10 Turn the audio system off and connect the speakers.

NOTE

- To fine tune while listening to music
  - If there is not enough volume: Turn the input sensitivity control clockwise (towards MAX).
  - If there is too much volume: Turn the input sensitivity control counterclockwise (towards MIN).

Contents of the Test tone Disc

Track 1: Warning announcement (English and Japanese)	10 minutes
Track 2: Test tone (Sinusoidal-wave, 100 Hz, 0 dB)	3 minutes

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. **(Blown fuse.)**	• Input (or output) cables are disconnected. • Protection circuit may be activated. • Volume is too high. • The speaker cord is shorted.	• 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).	• The input sensitivity adjusting control is not set to the correct position.	• Adjust the control correctly referring to <Input Sensitivity>.
The sound quality is bad. **(The sound is distorted.)**	• The speakers wire are connected with wrong ⊕ /⊖polarity. • A speaker wire is pinched by a screw in the car body. • The switches may be set improperly. • The "OVER" indicator is lit.	• Connect them properly checking the ⊕ / ⊖ 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 <Controls> or <DSP Settings>. • Input level is too high. See <Input Sensitivity> and adjust.

Specifications

Specifications subject to change without notice.

CEA-2006

RMS Watts per channel @ 4 ohms, 1 % THD+N ..... 100 W × 4
Signal to Noise Ratio (Reference: 1Watt into 4 ohms) ..... 78 dBA

Audio Section

Max Power Output ..... 1200 W
Rated Power Output (+B = 12.0 V)
(4 Ω) (20 Hz – 20 kHz, 0.8 % THD) ..... 75 W × 4
(2 Ω) (1 kHz, 1.0 % THD) ..... 100 W × 4
(Bridged 4 Ω) (1 kHz, 1.0 % THD) ..... 200 W × 2
Rated Power Output (+B = 14.4 V)
(4 Ω) (20 Hz – 20 kHz, 0.8 % THD) ..... 100 W × 4
(4 Ω) (DIN45324, +B = 14.4 V) ..... 100 W × 4
(2 Ω) (1 kHz, 1.0 % THD) ..... 150 W × 4
(Bridged 4 Ω) (1 kHz, 1.0 % THD) ..... 300 W × 2

Frequency Response (+0, -1 dB) ..... 20 Hz – 20 kHz
Sensitivity (rated output) (MAX.) ..... 0.2 V
(MIN.) ..... 5.0 V
Input Impedance ..... 10 kΩ
Signal to Noise Ratio ..... 105 dB
Low Pass Filter Frequency (-24 / -12 dB/oct.)
Low Range ..... 30 – 250 Hz
High Range ..... 500 – 5k Hz
High Pass Filter Frequency (-24 / -12 dB/oct.)
Low Range ..... 30 – 250 Hz
High Range ..... 500 – 5k Hz
Infrasonic Filter Frequency (-24 dB/oct.) ..... 20 / 30 / 40 / 50 / 60 Hz
Built in Parametric EQ Control
Frequency BAND 1 ..... 25 / 40 / 60 / 80 / 100 Hz
Frequency BAND 2 ..... 150 / 200 / 300 / 400 / 500 Hz
Frequency BAND 3 ..... 600 / 800 / 1 k / 1.5 k / 2 k Hz
Frequency BAND 4 ..... 3 k / 4 k / 5 k / 6.3 k Hz
Frequency BAND 5 ..... 8 k / 10 k / 12.5 k / 16 k Hz
Quality Factor BAND 1 – BAND3 ..... 1.0 / 2.0 / 3.0 / 5.0
Quality Factor BAND 4 – BAND5 ..... 2.0 / 4.0 / 8.0 / 10
Gain (Boost or Cut) ..... -9 dB – +9 dB
Delay Control ..... 0 ms – 3.9 ms (0.1 ms Step)
Phase Inverter ..... 0° (Normal) / -180° (Reverse)

General

Operating Voltage ..... 14.4 V (11 – 16 V allowable)
Current Consumption ..... 60 A
Installation Size (W × H × D) ..... 340 × 60 × 225 mm
13-3/8 × 2-3/8 × 8-7/8 inch
Weight ..... 3.8 kg (8.4 lbs)