

AV SURROUND PROCESSOR

**SS-79**

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# INSTRUCTION MANUAL

KENWOOD CORPORATION

**KENWOOD**

Your choice of this product indicates that you are a devotee of excellence in sound reproduction.

We appreciate your patronage and take pride in the long tradition of quality components that our company represents.

So that you can get the most out of your unit, we suggest that you take the time to read through this manual before you hook up and operate your system. This will acquaint you with the operating features and system-connection considerations, so that your listening pleasure will be enhanced right from the start. You will notice that in all aspects of planning, engineering, styling, operating convenience and adaptability, we have sought to anticipate your needs and desires.

**Keep this manual handy for future reference.**

## 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 dealer for information or service on this product.

Model \_\_\_\_\_ Serial Number \_\_\_\_\_

## Unpacking

Unpack the unit carefully and make sure that all accessories are put aside so they will not be lost.

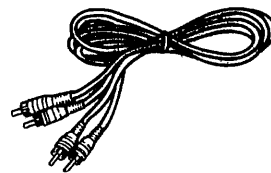
Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage.

We recommend that you retain the original carton and packing materials for use should you transport or ship the unit in the future.

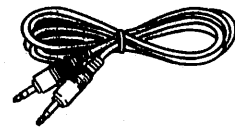
Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. numbers 3,632,886, 3,746,792 and 3,959,590; Canadian numbers 1,004,603 and 1,037,877. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

## Accessories

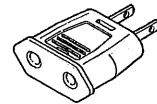
Audio cord ..... 2



System control cord ..... 1



AC plug adaptor ..... 1  
(except for some areas)  
For the unit with a Euro-  
pean AC plug in areas  
other than Europe.



## Contents

**Caution: Read the pages marked  $\triangle$  carefully to ensure safe operation.**

Introduction .....	2	Controls and indicators .....	8
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## For the U.S.A. and Canada

### Important!

Units shipped to the U.S.A. and Canada are designed for operation on 120 volts AC only.

#### Safety precaution for a Polarized AC plug

**CAUTION:** TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

## For the United Kingdom

### Important!

Units shipped to the U.K. are designed for operation on 240 volts AC only.

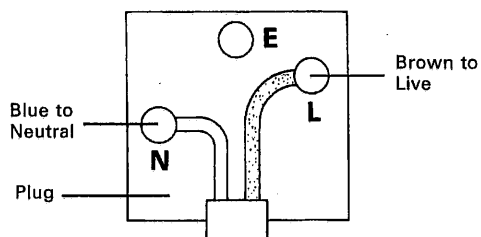
The mains plug must be removed from the wall socket prior to any internal examination.

The wires in this mains lead are coloured in accordance with the following code:

Blue ..... Neutral  
Brown ..... Live

The wires in this mains lead must be connected to the terminals in the plug as follows:

Wire colour	Plug terminal marking
Blue .....	N or Black
Brown .....	L or Red



#### Notes:

1. If a 13-amp plug is used, this must be fitted with a 5-amp fuse.
2. If a 3-pin plug with earthing contact is used, no wire must be connected to the E terminal.

## For Australia and Europe

### Important!

Units shipped to Australia are designed for operation on 240 V AC only.

Units shipped to Europe are designed for operation on 220 V AC only.

## For other countries

### Important!

Units shipped to countries other than the above countries are equipped with an AC voltage selector switch on the rear panel. Refer to the following paragraph for the proper setting of this switch.

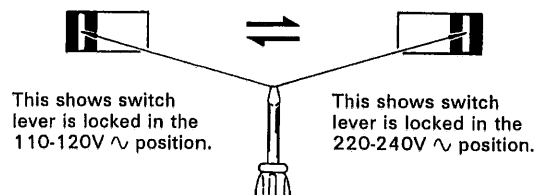
#### AC voltage selection

This unit operates on 110-120 or 220-240 volts AC. The AC voltage selector switch on the rear panel is set to the voltage that prevails in the area to which the unit is shipped. Before connecting the power cord to your AC outlet, make sure that the setting position of this switch matches your line voltage. If not, it must be set to your voltage in accordance with the following direction.

#### Note:

Our warranty does not cover damage caused by excessive line voltage due to improper setting of the AC voltage selector switch.

AC 110-120V ~ ◀▶ AC 220-240V ~ AC 110-120V ~ ◀▶ AC 220-240V ~



This shows switch lever is locked in the 110-120V ~ position.





This shows switch lever is locked in the 220-240V ~ position.

Move switch lever to match your line voltage with a small screwdriver or other pointed tool.

#### AC voltage selector switch

## Safety precautions

**WARNING:** TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

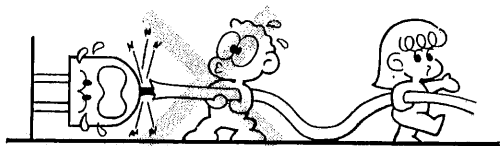
 <div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>CAUTION</b>              RISK OF ELECTRIC SHOCK              DO NOT OPEN         </div> 	<p>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE; REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>
	<p>THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.</p>
	<p>THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.</p>

Please read all of the safety and operating instructions before operating this unit. For best results, follow all warnings placed on the unit and adhere to the operating and use instructions. These safety and operating instructions should be retained for future reference.

**1. Power sources** — The unit should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

**2. Power-cord protection** — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.

Never pull or stretch the cord.

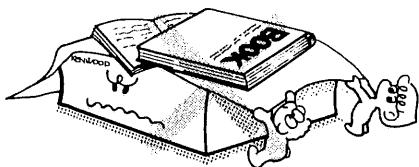


**3. Grounding or polarization** — The precautions should be taken so that the grounding or polarization means of this unit is not defeated.

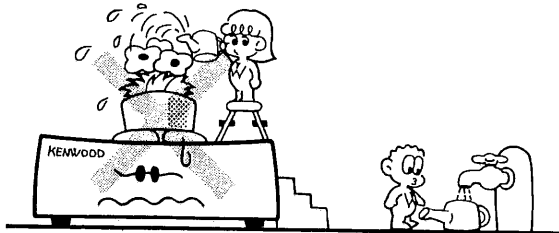
**4. Ventilation** — The unit should be situated so that its location or position does not interfere with its proper ventilation.

To maintain good ventilation, do not put records or a table-cloth on the unit. Place the unit at least 10 cm away from the walls.

Do not use the unit on a bed, sofa, rug or similar surface that may block the ventilation openings.

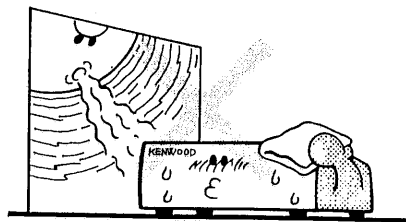


**5. Water and moisture** — The unit should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

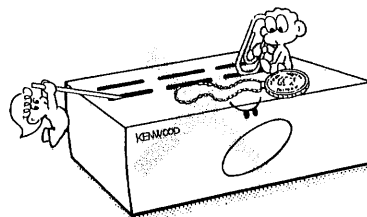


**6. Temperature** — The unit may not function properly if used at extremely low, or freezing temperatures. The ideal ambient temperature is above +5°C (41°F).

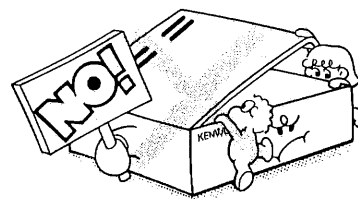
**7. Heat** — The unit should be situated away from heat sources such as radiators, heat registers, stoves, or other units (including amplifiers) that produce heat.



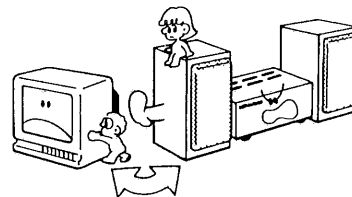
**8. Electric shock** — Care should be taken so that objects do not fall and liquid is not spilled into the enclosure through openings. If a metal object, such as a hair pin or a needle, comes into contact with the inside of this unit, a dangerous electric shock may result. For families with children, never permit children to put anything, especially metal, inside this unit.



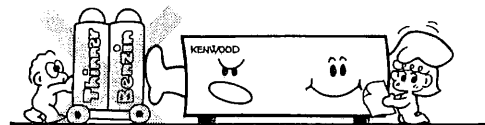
**9. Enclosure removal** — Never remove the enclosure. If the internal parts are touched accidentally, a serious electric shock might occur.



**10. Magnetic fields** — Keep the unit away from sources of magnetic fields such as TV sets, speaker systems, radios, motorized toys or magnetized objects.



**11. Cleaning** — Do not use volatile solvents such as alcohol, paint thinner, gasoline, or benzine, etc. to clean the cabinet. Use a clean dry cloth.



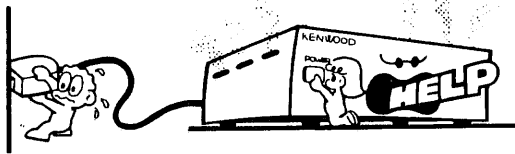
**12. Carts and stands** — An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



**13. Nonuse periods** — The power cord of the unit should be unplugged from the outlet when left unused for a long period of time.

**14. Abnormal smell** — If an abnormal smell or smoke is detected, immediately turn the power OFF and pull out the power cord. Contact your dealer or nearest service center.

**POWER OFF!**



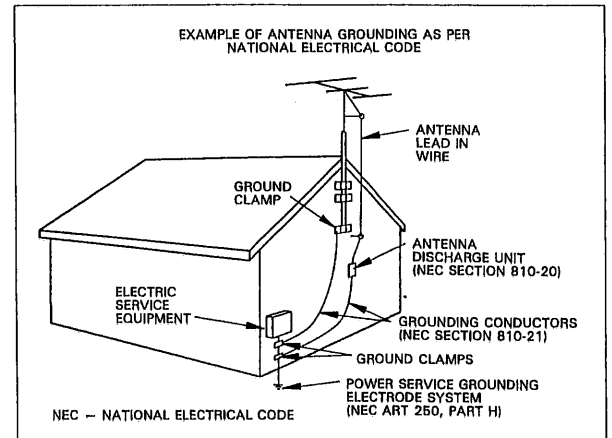
**15. Damage requiring service** — The unit should be serviced by qualified service personnel when:

- A. The power-supply cord or the plug has been damaged; or
- B. Objects have fallen, or liquid has been spilled into the unit; or
- C. The unit has been exposed to rain; or
- D. The unit does not appear to operate normally or exhibits a marked change in performance; or
- E. The unit has been dropped, or the enclosure damaged.

**16. Servicing** — The user should not attempt to service the unit beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

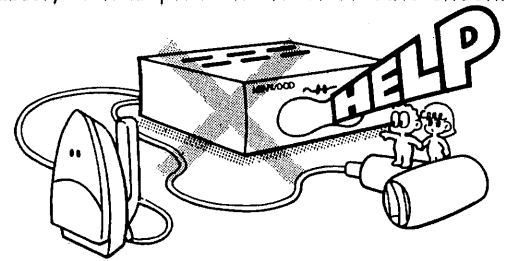
**17. Outdoor antenna grounding** — If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI/ NFPA No. 70—1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding con-

ductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure.



**18. Power lines** — An outdoor antenna should be located away from power lines.

**19. AC outlets** — Do not connect other audio equipment with a power consumption larger than that specified to the AC outlet on the rear panel. Never connect other electrical units, such as an iron or toaster, to it to prevent fire or electric shock.



The maximum capacities indicated for the AC outlets on the rear panel of this unit are as follows.

UNSWITCHED outlet ; 200 W

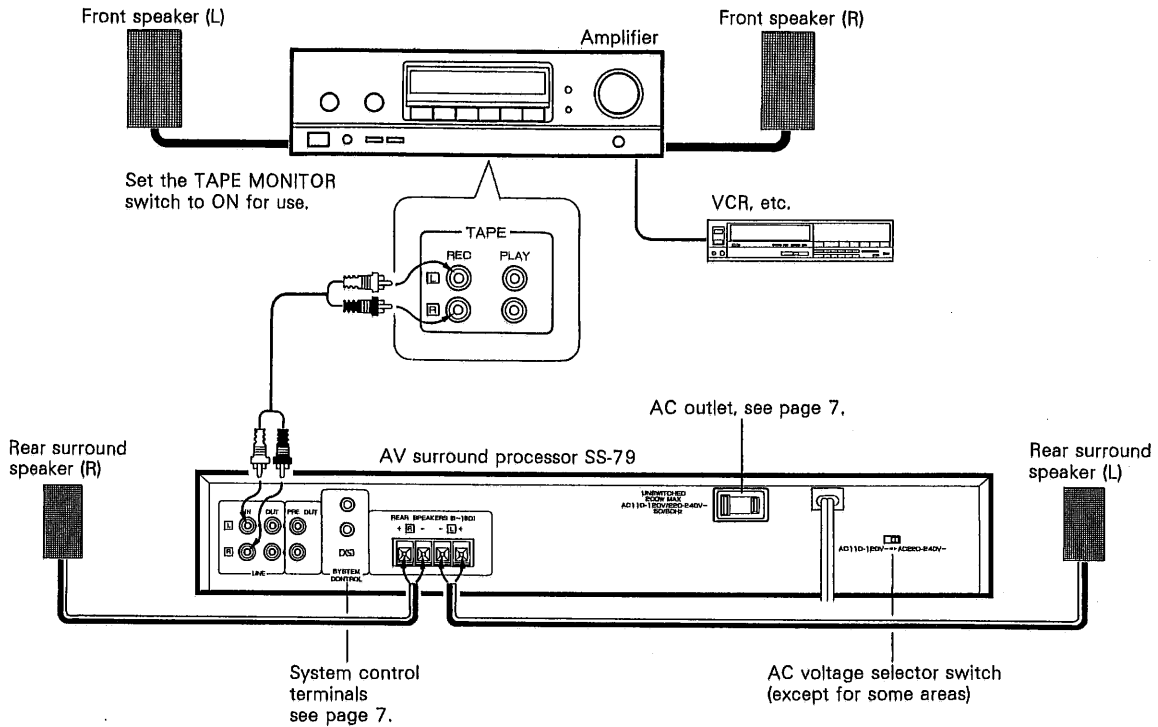
**Notes:**

- 1. Item 3 is not required except for grounded or polarized equipment.
- 2. Item 17 and 18 are not required except for units provided with antenna terminals.
- 3. Item 17 complies with UL in the U.S.A.

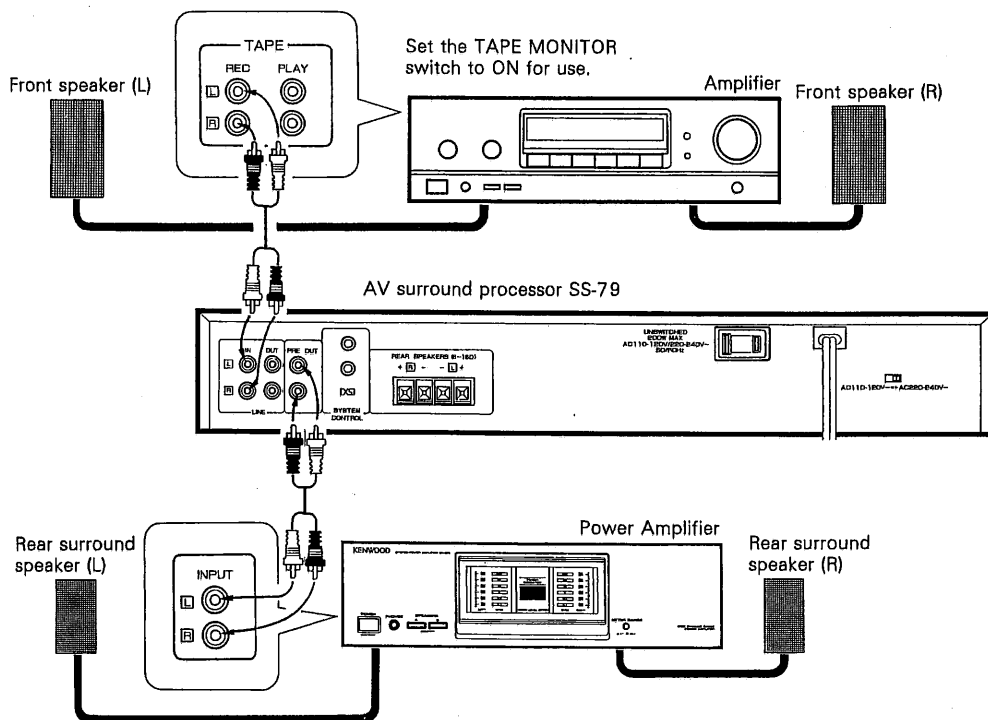
# System connections

Make connection as shown below. When connecting the related system components, refer also to the instruction manuals of the related components.  
Do not plug in the power lead until all connections are complete.

## Ordinary amplifier + SS-79

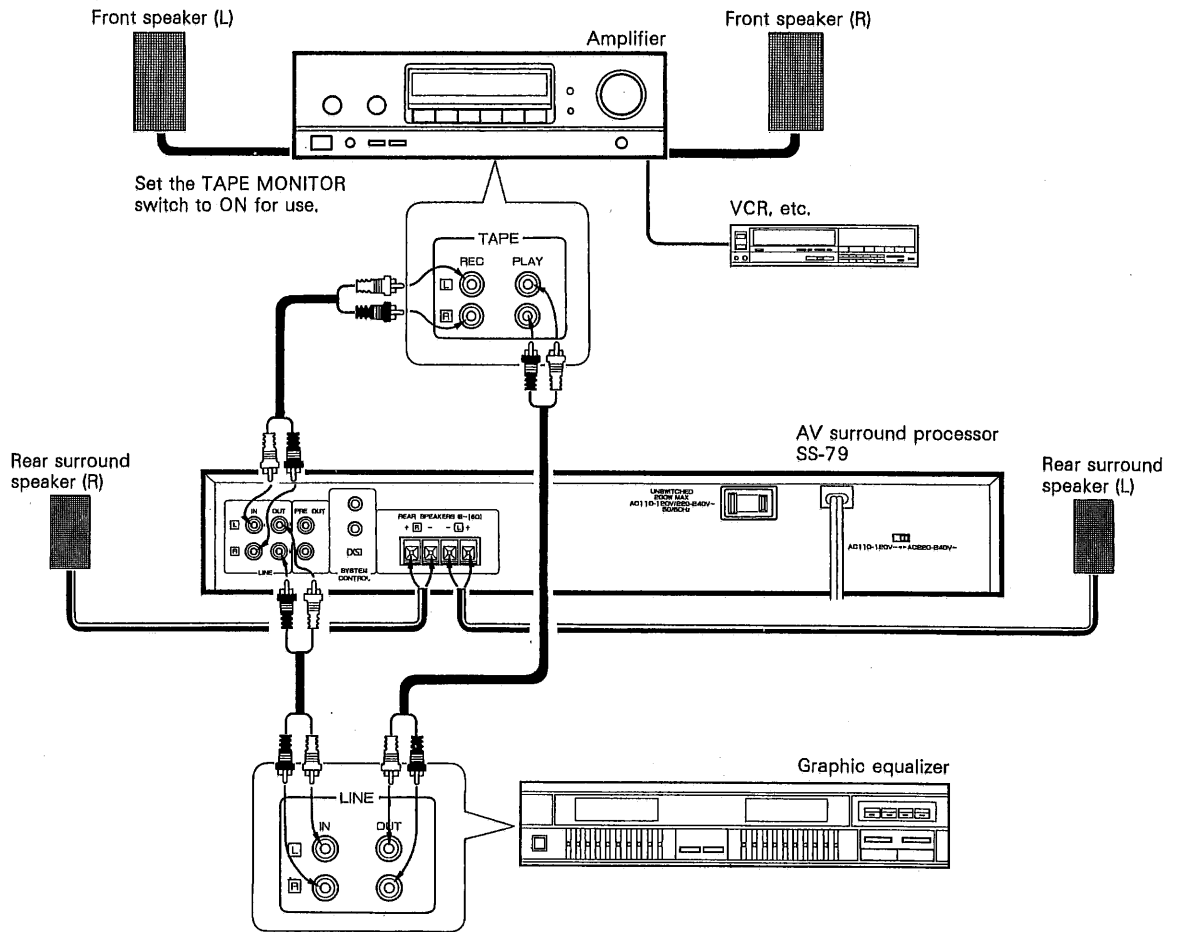


## Two ordinary amplifiers + SS-79



The pre-out output level can be varied using the VOLUME control.

# When connecting both the graphic equalizer and SS-79

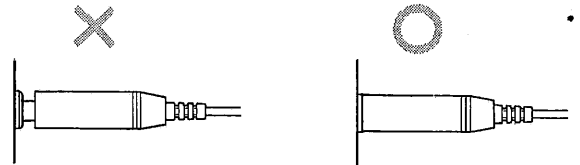


## System control connection

When connected to an \*amplifier having KENWOOD SYSTEM CONTROL terminals, system operation such as remote control is made possible. For details, refer to the instruction manual of the amplifier.

If your amplifier is not equipped with the SYSTEM CONTROL Terminals, do not connect anything to any SYSTEM CONTROL Terminal.

Do not connect the unit in any system configuration other than specified. (\*Refer to page 8.)

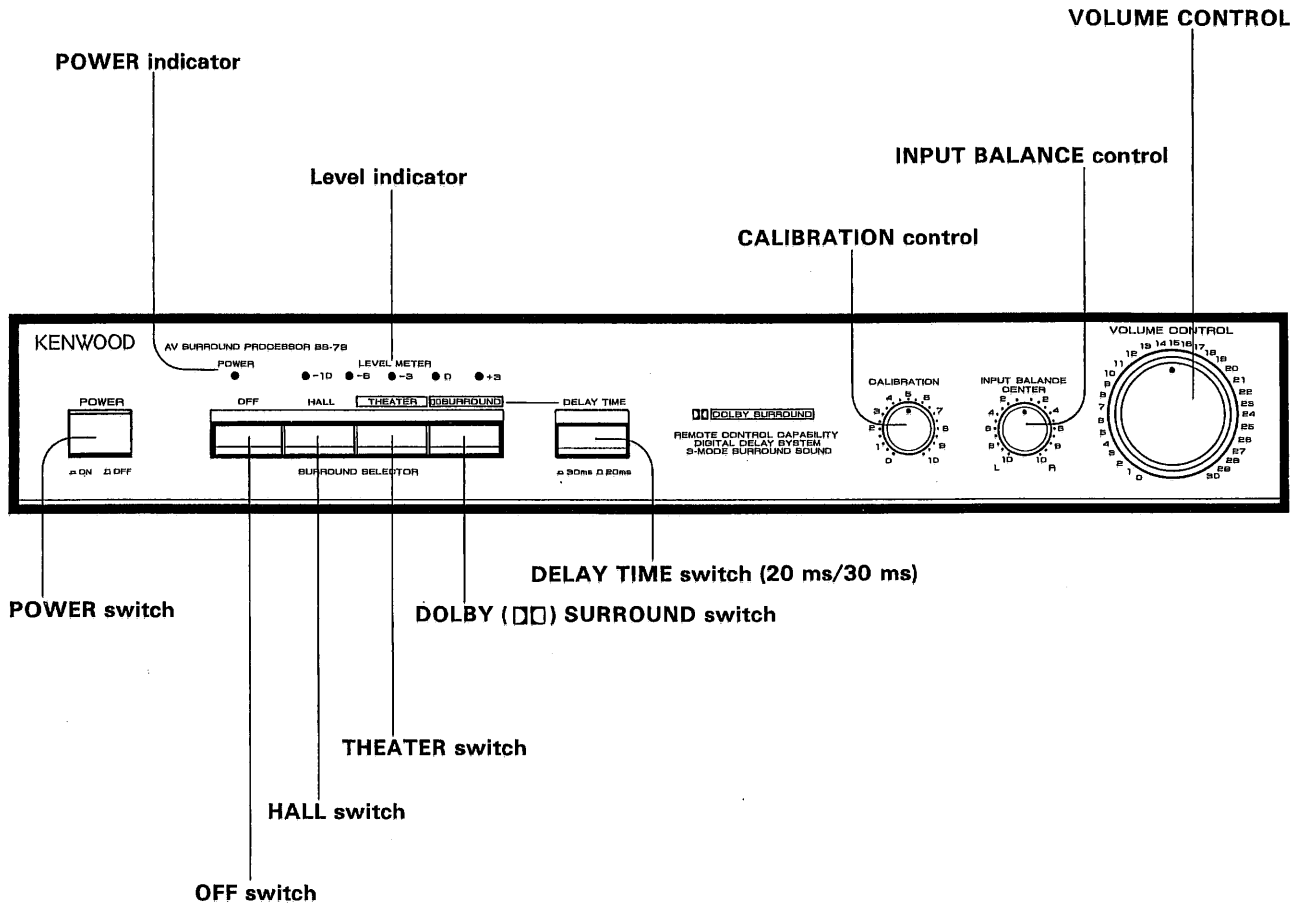


- Be sure to insert the System Control cord plugs fully into the SYSTEM CONTROL Terminals.
- If the system control cord and audio cords are not connected properly, the automatic system governing remote control and system functions will not operate.

## AC outlet and Voltage selector on the rear panel

Unit destination	Shape of the AC outlet	AC Voltage selector
For U.S.A. and Canada		Not equipped
For U.S. Military		110-120V/220-240V
For Australia	Not equipped	Not equipped
For other countries		110-120V/220-240V

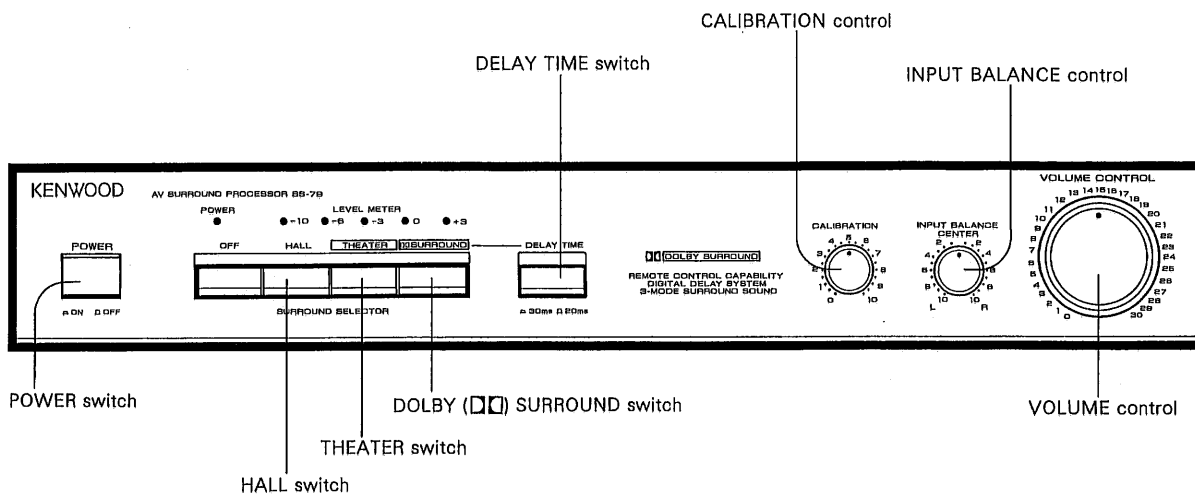
# Controls and indicators



By connecting this unit with one of the following amplifiers using a system control code, the volume of this unit can be controlled from the remote control unit provided with the amplifier.  
 Amplifier models: KA-129, KA-109, KA-99, KA-79, KC-209



# Operating instructions



## ■ Surround effects

To obtain surround sound effects such as those experienced in concert halls and theaters, or to reproduce movie software recorded with Dolby Surround, this system incorporates normal Surround modes (THEATER, HALL) and Dolby Surround decoding circuitry.

### HALL switch

A powerful sound effect, as if the listener is in a concert hall, can be obtained.

### THEATER switch

A natural reverberation effect, like when viewing a movie in a movie theater, can be obtained with sources which are not recorded with Dolby Surround.

### DOLBY SURROUND switch

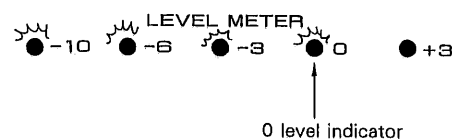
Use this mode for playing video software marked ; the similar Dolby Surround effect to movies projected in movie theaters can be obtained.

### OFF switch

The output terminals (SPEAKERS and PRE -OUT) do not supply and output.

## ■ Playback with the surround effect

1. Set the **POWER** switch to **ON**.
2. Press one of the **SURROUND SELECTOR** switches according to the source.
3. Turn the **CALIBRATION** control so that the level indicator reads "0".



4. Adjust the rear speaker volume with the **VOLUME** control.
5. Refer to the charts and select the delay time, of **20 ms** or **30 ms**, with the **DELAY TIME** switch. (See page 10.)
  - The delay time adjustment is not valid with the "HALL" effect.

## ■ How to adjust the INPUT BALANCE control

Normally, dialogue should not come from surround speakers.

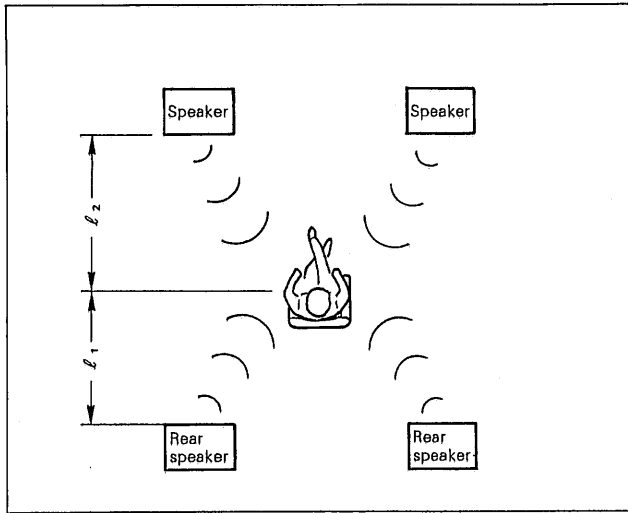
Thus if dialogue becomes audible, mute the front speakers and adjust **INPUT BALANCE** for minimum dialogue in surround speakers.

### Note:

When a source is played in monaural, select "HALL" with the **SURROUND SELECTOR** switch.

# Speaker arrangements

## Typical installation example



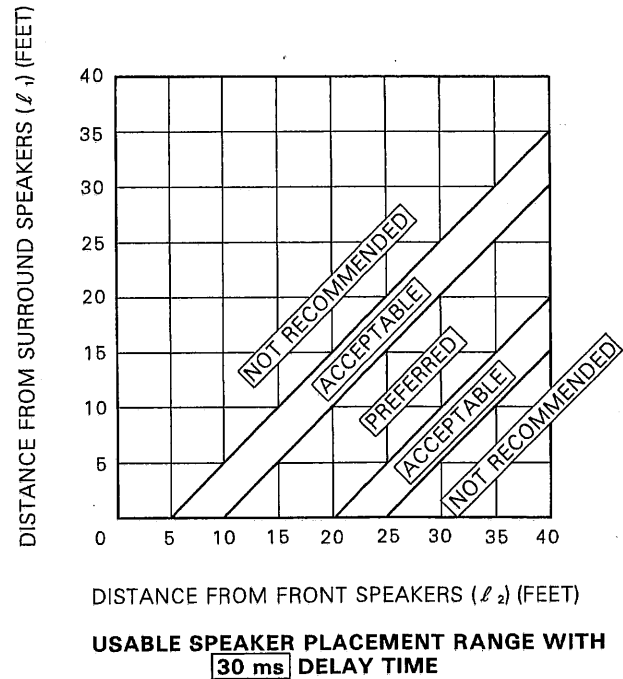
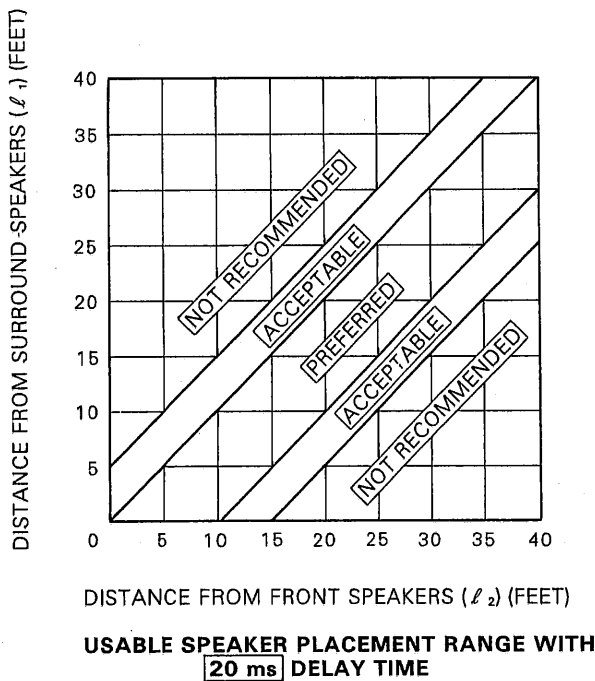
Rear speakers can be placed with various arrangements according to the listening room size and its reverberation characteristics.

The example shown on the left is a typical example among several arrangements which allow efficient enjoyment of Surround effects. In addition to it, other arrangements are also possible. Please install speakers according to your individual taste as well as to the listening room.

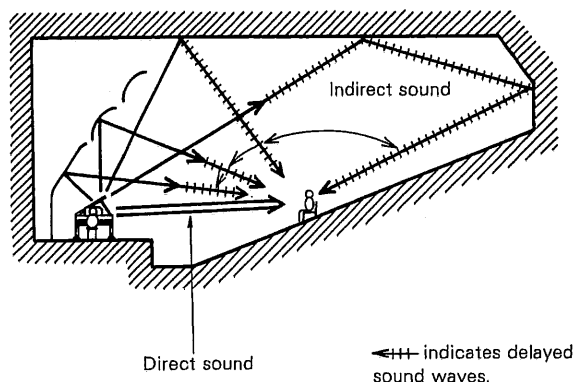
## ■ Setting the delay time

The delay time is an important factor in providing the "being there" feeling of the surround effect.

Using the following charts for reference, set the delay time to 20 ms or 30 ms depending on the distance between the speakers and the listening point.



## Example of a concert hall



## Note on delay time

As shown in this example of a concert hall, the listener hears the sound of the piano played on the stage as a composite sound consisting of the direct sound from the piano, indirect sound which are reflected by the ceiling and side and back walls before reaching the listener's ears, and reverberation sound which fades after repeating several reflections.

The indirect sound is always transmitted through a longer spatial distance than the direct sound, and the time it takes before reaching the listener is referred to as the delay time. This indirect sound with certain delay time plays a critical role in providing better sound effect and live feeling of the hall.

The sound field setting in your listening room may also be dependent on the positions of the speakers. It is recommended to vary and try different delay times to obtain an optimum sound field.

# In case of difficulty

What appears to be a malfunction may not always be serious. If your unit should not perform as expected, consult the table below to see if the problem can be corrected before seeking help from your dealer or service representative.

Symptom	Cause	Remedy
No power, no sound.	<ul style="list-style-type: none"> <li>Power cord not plugged in.</li> <li>Poor connection at wall outlet. Power outlet inactive.</li> </ul>	<ul style="list-style-type: none"> <li>Check plug contact.</li> <li>Check outlet using a lamp or other appliance (outlet may be controlled by a wall switch).</li> </ul>
No sound from speakers.	<ul style="list-style-type: none"> <li>Speaker cords may be disconnected.</li> <li>The VOLUME control may be set to "0".</li> <li>The SURROUND SELECTOR "OFF" switch may be selected.</li> <li>The CALIBRATION controls may be set to "0".</li> <li>The audio source is monaural.</li> </ul>	<ul style="list-style-type: none"> <li>Check the speaker connections.</li> <li>Adjust for an optimum sound level.</li> <li>Press the desired SURROUND SELECTOR switch.</li> <li>Adjust the CALIBRATION controls.</li> <li>When the audio source is monaural, sound is not output from the rear speakers when the unit is set to the DOLBY SURROUND or THEATER surround position. Set the surround position to HALL.</li> </ul>

## Specifications

### Power Output

10 watts per channel minimum RMS, both channels driven, at 8  $\Omega$  from 40 Hz to 6.000 Hz with no more than 0.9% total harmonic distortion.

**Frequency Response** ..... 40 Hz ~ 6 kHz  $\begin{matrix} +0 \\ -3 \end{matrix}$  dB  
**Signal to Noise Ratio** ..... 62 dB (at 1kHz)  
**Input Sensitivity/Impedance** ..... 150 mV/47 k $\Omega$   
**Pre Output Level/Impedance (VR MAX)** ..... 1 V/600  $\Omega$   
**Delay Time** ..... 20 ms/30 ms

### General

**Power Consumption** ..... 50 W (U.S.A and Canada models)  
 33 W (Other countries)

**Dimensions** ..... W: 440 mm (17 - 5/16")  
 H: 74 mm (2 - 15/16")  
 D: 282 mm (11 - 1/8")

**Weight (Net)** ..... 3.5 kg (7.7 lb)

### Note:

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

### For CANADA DOC REGULATION

"This digital apparatus does not exceed the CLASS B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian department of communications."

### For the U.S.A. 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.

### 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.

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