KENWOOD

AUDIO VIDEO SURROUND RECEIVER

KR-897 KR-797

INSTRUCTION MANUAL

KENWOOD CORPORATION

This manual contains instructions for two models. Model availability and features (functions) may differ depending on country and sales area.

Model KR-897 is not available in except for U.S.A. and Canada.



Before applying power 🛕 Caution : Read this section carefully to ensure safe operation.

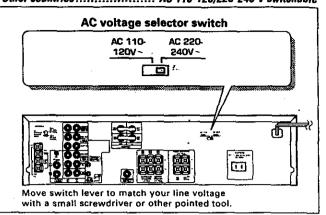
Units are designed for operation as follows.

*AC voltage selection

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.



Safety precautions

 $oldsymbol{\Delta}$ Caution : Read this section carefully to ensure safe operation.

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







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.



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.



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.

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.

Accessories

FM indoor antenna (1)



Remote control unit (1)



AM loop antenna (1)



Patteries (R6/AA) 17



Loop antenna stand (1)



Shorting pins (2) (KR-797 only)



Special features

DOLBY PRO LOGIC & DOLBY 3 STEREO

The DOLBY PRO LOGIC mode controls the audio signals of the Front Left/Right, Center and Rear surround channels using the built-in directivity enhancer circuit to reproduce the feeling of sound motions very realistically.

The DOLBY 3 STEREO mode can reproduce the motions of sound even when only the front and center speakers are used, by providing proper acoustic position using the directivity enhancer circuit.

SRS 3D Stereo

The SRS (Sound Retrieval System) is an innovative system simulating a 3-dimensional sound space, which features clearly improved feelings of depth, sound field extension and acoustic image positioning as well as a widened listening area.

Contents

Caution : Read the pages marked △ carefully to ensure safe operation.

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Connections of Audio and Video components (KR-897)

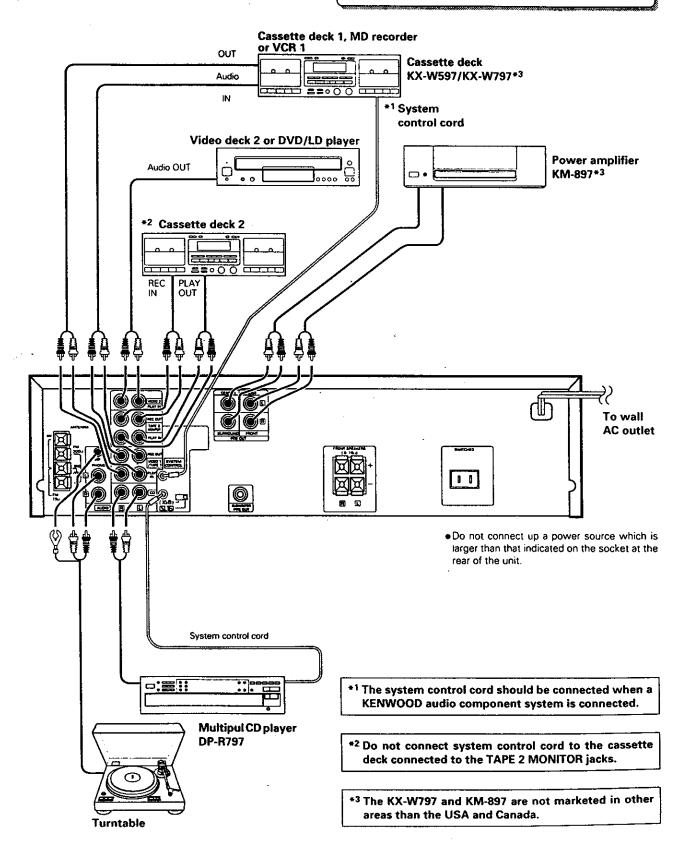
Make connection as shown below.

When connecting the related system components, refer also to the instruction manuals of the related components.

 Δ Do not plug in the power lead until all connections are completed.

Malfunction of microcomputer

If operation is not possible or erroneous display appears even though all connections have been made properly, reset the microcomputer referring to "In case of difficulty".



Connections of Audio and Video components (KR-797)

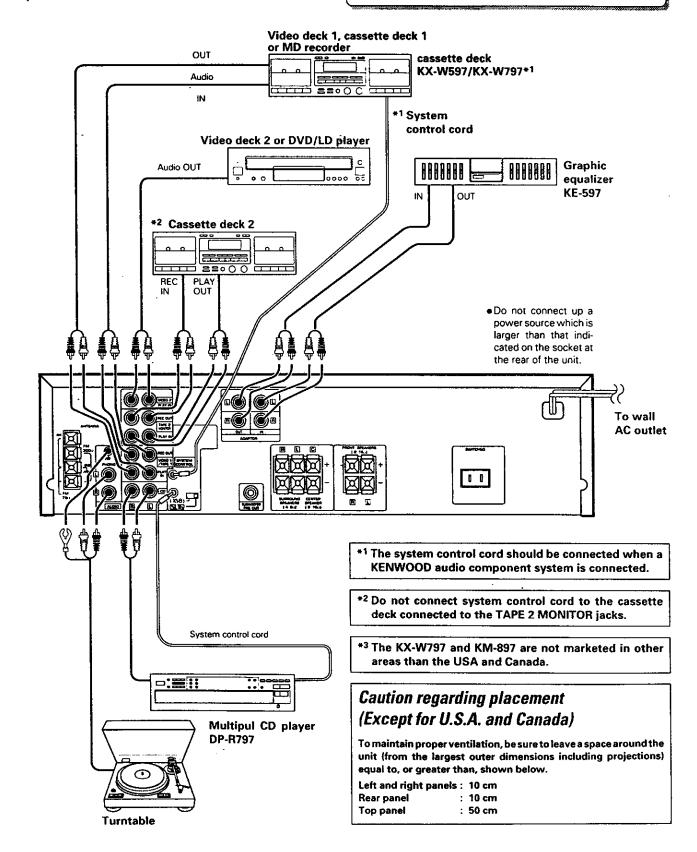
Make connection as shown below.

When connecting the related system components, refer also to the instruction manuals of the related components.

 Δ Do not plug in the power lead until all connections are completed.

Malfunction of microcomputer

If operation is not possible or erroneous display appears even though all connections have been made properly, reset the micro-computer referring to "In case of difficulty".





Connecting system control cords after connecting a KENWOOD audio component system lets you take advantage of convenient system control operations.

There are two KENWOOD system control modes. Make connections according to the groups of terminal symbols shown below.

INSTANCE: lets you combine [X7], [X5], and [X58] terminals [S16] Mode: for [S16] terminals only

This unit is compatible with both [XS8] and [SL16] modes. It comes from the factory set to the [SL16] mode. To switch to the [XS8] mode, follow the instructions in "SWITCHING BETWEEN [XS8] AND [SL16]" below.

EXAMPLE: [XS8] mode connections

The underlined portion represents the setting of the system control mode.

[SL16] [XS8]

[SL16] [XS8]

[SL16] [XS] [XS8] [XR]

[SL16] [XS] [XS8] [XR]

[SL16] [XS] [XS8] [XR]

[SL16] [XS] [XS8]

[SL16] [XS] [XS8]

EXAMPLE: (SL16) mode connections

The underlined portion represents the setting of the system control mode.

[SL16] [XS8]

[SL16] [XS8]

[SL16] [XS] [XS8] [XR]

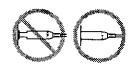
[SL16] [XS] [XS8] [XR]

[SL16] [XS] [XS8] [XR]

- Some CD players and cassette decks are not compatible with the [SL16] system control mode. Be sure to use the [XS8] system control mode when
 making system connections with equipment that is not [SL16] compatible.
- Some MD players are not system control compatible. You cannot make system control connections to this kind of equipment.



- [SL16] equipment cannot be combined with [XR], [XS], and [XS8] equipment for system operations. If your
 equipment consists of this kind of combination, please do not connect any system control cords. Even
 without system control cords, normal operations can be carried out without affecting performance.
- Do not connect system control cords to any components other than those specified by KENWOOD. It may cause a malfunction and damage your equipment.
- Be sure the system control plugs are inserted all the way in to the system control terminals.



ABOUT THE SYSTEM CONTROL OPERATIONS

Remote Control (possible when the system control mode matches)

Lets you operate source components with the system remote supplied with this unit.

Automatic Operation (Except [XR] equipment)
When you start playback from a source component, the input
selector on this unit switches to that component automatically.
(Except TAPE 2)

Synchronized Recording (Except [XR] equipment)
Lets you synchronize recording with the start of playback when
recording from CD or MD.

SWITCHING BETWEEN [XS8] AND [SL16]

The system control mode can be switched over easily with the following operation.

- Unplug the AC power cord from the wall outlet.
- Set the SYSTEM CONTROL switch on the rear panel to the desired position.







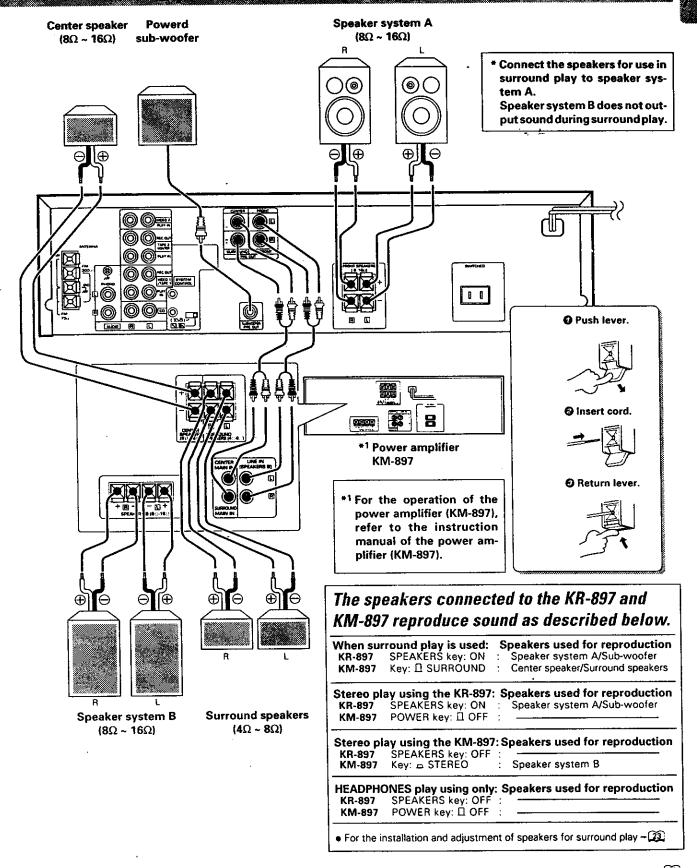


This operation does not affect the items stored in memory.



- 1. Connect all cords firmly. If connections are loose, there could be loss of sound or noise produced.
- When plugging and unplugging connection cords, be sure to first remove the power cord from the AC outlet. Plugging / unplugging connection cords without removal of the power cord can cause malfunctions or damage to the unit.
- If the system control cords or audio cords are not connected properly, the remote control or automatic operation between system components will not work properly.

Connection of speakers (KR-897)

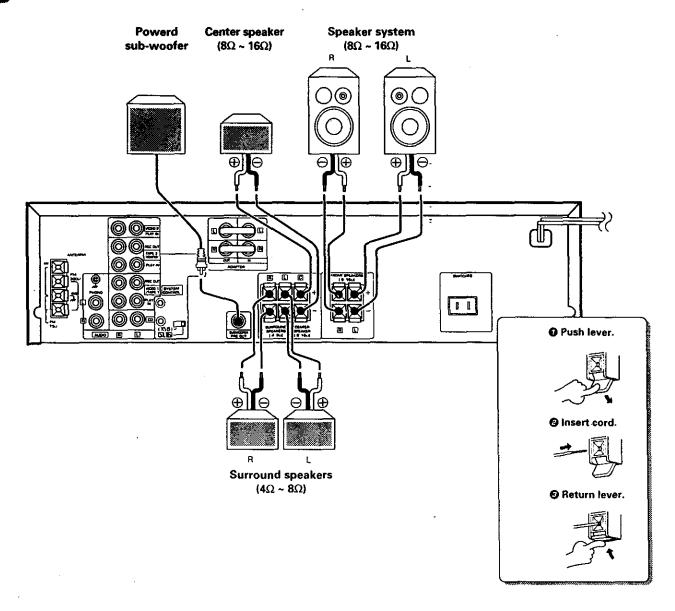


• Never short-circuit the + and - speaker cords. For the symptom and remedy when a speaker cord is shorted.

 If the left and right speakers are connected inversely or if the speaker cords are connected with reversed polarity, the sound becomes unnatural with ambiguous acoustic image positioning. Be sure to connect the speakers and speaker cords correctly.

• Connect a sub-woofer if you want to enhance the bass sound. The connected sub-woofer should be a power sub-woofer with a built-in amp.

Connection of speakers (KR-797)

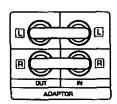


- Never short-circuit the + and speaker cords. For the symptom and remedy when a speaker cord is shorted:
- If the left and right speakers are connected inversely or if the speaker cords are connected with reversed polarity, the sound becomes unnatural with ambiguous acoustic image positioning. Be sure to connect the speakers and speaker cords correctly.
- Connect a sub-woofer if you want to enhance the bass sound. The connected sub-woofer should be a power sub-woofer with a built-in amp.

ADAPTOR jacks (KR-797)

When an adaptor-type component such as a graphic equalizer is connected, unplug the shorting pins from the ADAPTOR jacks and connect the component to these jacks.

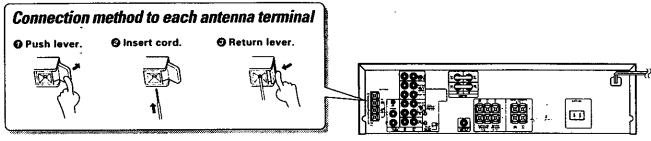
- When the ADAPTOR jacks are not used, be sure to plug the shorting pins into jacks. Otherwise, the sound will not be produced.
- When the ADAPTOR jacks are used, retain the shorting pins and be careful not to lose them.
- Never plug a shorting pin into other jacks than ADAPTOR jacks.
 Otherwise, the unit may be damaged.





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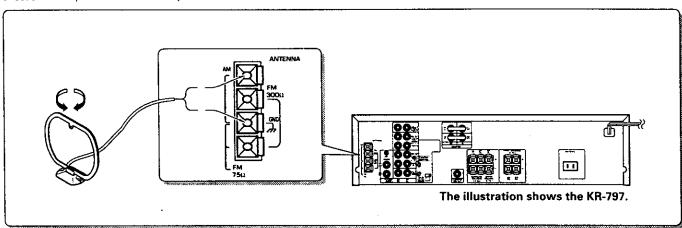
Connection of antenna



The illustration shows the KR-797.

AM loop antenna connection

The supplied antenna is for indoor use. Place it as far as possible from the main system. TV set, speaker cords and power cord, and set it to a direction which provides the best reception.

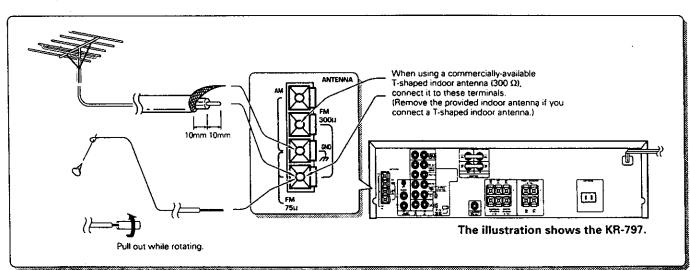


FM indoor antenna connection

The accessory antenna is for temporary indoor use only. For stable signal reception we recommend using an outdoor antenna. Remove the indoor antenna if you connect one outdoors.

FM outdoor antenna connection

Lead the 75 Ω coaxial cable connected to the FM outdoor antenna into the room and connect it to the FM 75 Ω terminal.

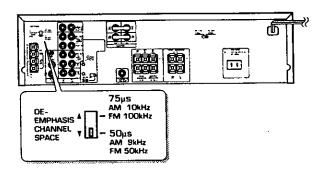




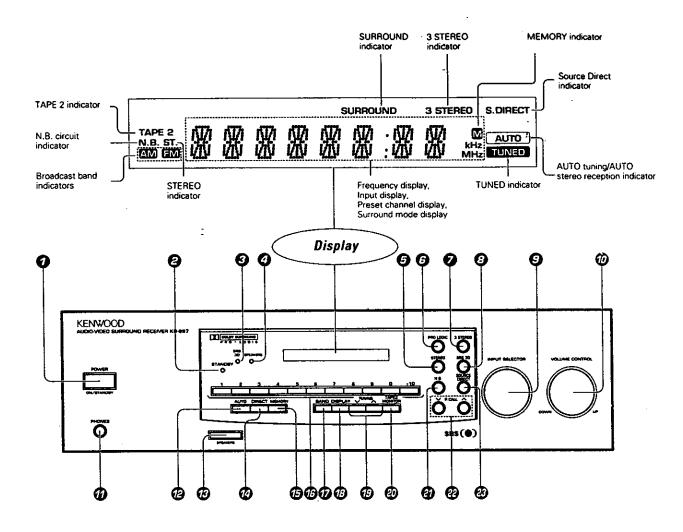
FM DE-EMPHASIS / CHANNEL SPACE switch (Except for U.S.A. and Canada)

The FM DE-EMPHASIS / CHANNEL SPACE switch on the rear panel is set to the correct setting that prevails in the area to which the unit is shipped. However, if the FM DE-EMPHASIS / CHANNEL SPACE setting is not matched to the area where the unit is to be used; for instance, when you moved from area 1 to area 2 or vice versa, desired reception of AM / FM broadcasts is not expected. In this case, change the FM DE-EMPHASIS / CHANNEL SPACE setting in accordance with the area corresponding to the table. The FM DE-EMPHASIS is switched over at the same time.

 When changing the setting of the FM DE-EMPHASIS / CHANNEL SPACE switch, first disconnect the power cord of the amplifier, then reset the channel space switch, connect the power cord again, and turn the power on.



	Area	CHANNEL SPACE freq.	FM DE- EMPHASIS
1	U.S.A., Canada, Hawaii, South American countries	FM: 100kHz AM: 10kHz	75 μs
2	Other countries	FM: 50kHz AM: 9kHz	50 µs



OPOWER key

Press to switch the power ON and OFF.

- **OSTANDBY** indicator
- **OSRS 3D indicator**

Lights when the SRS 3D system is ON.

SPEAKERS indicator

Lights when the speakers are ON.

OSTEREO key

Press to turn the surround mode OFF.

- O DOLBY PRO LOGIC key
- **ODOLBY 3 STEREO key**
- **@** SRS 3D key
- **OINPUT SELECTOR knob**

Rotate to select the input source.

- **OVOLUME CONTROL knob**
- **OPHONES** iack

Plug headphones into this jack.

@AUTO key

Press to select the tuning mode from the auto tuning and manual tuning modes. - 19 Press and hold the AUTO key for more than 2 seconds to switch the TAPE1 display to another input display. -04

®SPEAKERS key

-- [26]

Press to turn the speakers ON and OFF

- 20

@ DIRECT key

Press when tuning a broadcast station by entering the digits of its frequencies.

@MEMORY key

-21 Press when registering a broadcast station in the preset memory.

- @Numeric keys (1 to 0, +10)
- **BAND** key

-[19 Press to switch the broadcasting band.

@DISPLAY key

Press to switch the displayed information between the surround mode display and input selector display.

Press and hold the DISPLAY key for more than 2 seconds to switch the display brightness

- **®TUNING** keys (∨, ∧) -QQ
- Press to select a radio station. **@TAPE 2 MONITOR key -**᠒ Press to monitor the sound being recorded, etc.
- N.B. key -(IE)
- Press to compensate for the insufficiency in the base sound.
- ②P.CALL keys (∨, ∧) -(21) Press to select one of the preset stations.
- **® SOURCE DIRECT key** -[16]

Press to listen to the source sound with a higher sound quality.

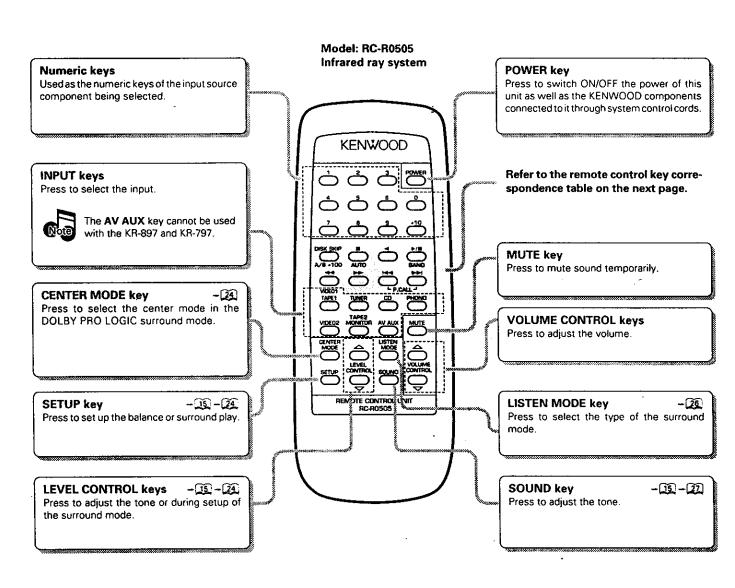
About the STANDBY indicator

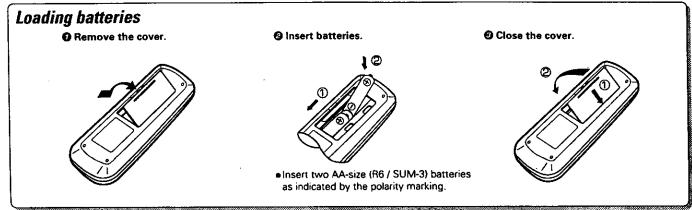
This unit has a STANDBY indicator, the lighting of which indicates that a small amount of current is supplied to back up the internal memory of the unit. This status is referred to as the standby mode of the unit. In this mode, the power of the unit can be switched ON from the remote control unit. When the unit is not to be used for a long period of time, unplug the power cord from the power outlet.

2.12

Names of keys and their functions

The remote control unit provided with the receiver can also control KENWOOD cassette decks, MULTIPLE CD player and MD recorder connected to the recieiver through system control cords. For details of the controllable functions, refer to the instruction manuals of these components.



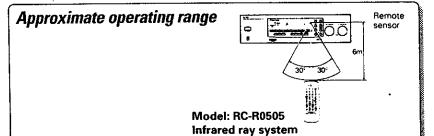


Operation procedure

- **7** Switch ON the power of the main unit.
- Select the component to be remote controlled with one of the controlled component selection keys.
- Refer to the remote control key correspondence table below and press the key for the desired operation.
- Pressing the POWER key of the remote control unit while the STANDBY indicator is lit turns the power ON. Press the desired key after the power has been turned ON.
- When two operation keys of the remote control unit are pressed successively, press each key securely reserving an interval of more than 1 second for each press.

Remote control key correspondence table (For KENWOOD component control mode)

☑Controlled component selection key ☑Operation keÿ	TUNER	· 💍	TAPE1	(When used with a MD)
P.CALL	P.CALL keys Recalls preset stations.	l≪≪ , ►►I (Skip key)		l◀◀ , ►►I (Skip key)
AUTO	AUTO key Press to select the auto tuning mode.	(Stop key)	■ (Stop key)	(Stop key)
DISK SKIP A/B +100		DISC SKIP key Press to select the disc to be played.	A/B key Press TAPE A or B	+100
BAND	BAND key Press to switch the broad- cast band.	►/II (Play/pause key)	►/II (Forward play key)	►/II (Play key)
ÖÖ	(Tuning keys) Press to tune broadcast stations.	∢ , ▶▶ (Search key)	√√ , ►► (Search key)	- - - - - - - - - - - - - - - - - - -
Ó			(Reverse play key)	

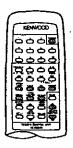


 *1: No remote control key is marked MD, but the TAPE1 key can be used to control a MD player by switching the display of the main unit from TAPE1 to MD.



- 1. The supplied batteries are intended for use in operation checks. Therefore, their lives may be shorter than ordinary batteries.
- 2. When the remote-controllable distance gets shorter than before, replace both batteries with new ones.
- 3. Malfunction may occur if direct sunlight or the light of a high-frequency lighting fluorescent lamp enters the remote control light sensor. In such a case, change the system installation position to prevent the malfunction.

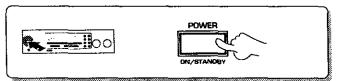




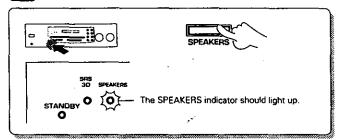


: Keys or controls to be used in this operation

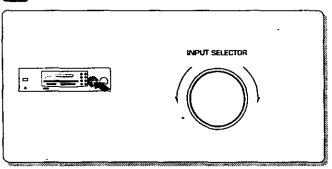
1 Turn the power ON.



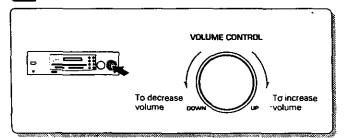
Select the SPEAKERS key setting.



Select the input source.



- Play the selected source.
- 5 Adjust the volume.



When the SPEAKERS indicator is ON:

The speakers connected to the SPEAKERS terminals on the rear panel output sound.

When the SPEAKERS indicator is OFF:

The speakers do not output sound. Use this setting when listening through headphones.

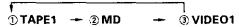
• For the operation when the power amplifier (KM-897) is connected to the KR-897, see - and refer to the instruction manual of the KM-897

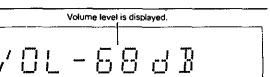
The input sources are switched in the following order:

- ①TUNER (frequency display)
 ②PHONO
- 3TAPE1 (MD or VIDEO1)*1
- **④CD**
- **⑤VIDEO2**

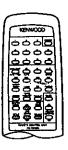
The selected source is displayed.

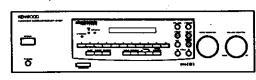
- *1: Switching the TAPE1 display to MD or VIDEO1 display When a KENWOOD MD recorder is connected in the [SL 16] system control mode, the TAPE 1 input should be switched to the MD input using the following procedure.
- OSelect TAPE1 with the INPUT SELECTOR.
- **@**Press and hold the AUTO key for more than 2 seconds to select MD.





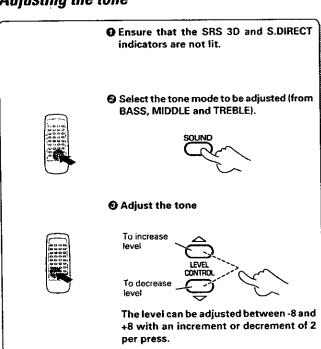
- The time taken till the volume level is displayed is variable depending on the current operating condition.
- Rotating the VOLUME CONTROL at a higher speed increases the amount of volume change (Al VOLUME function).
- The sound of input source cannot be listened to while TAPE 2 MONITOR is ON.

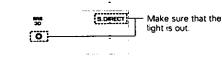




: Keys or controls to be used in this operation

Adjusting the tone





• If the S.DIRECT indicator is lit, press the **S.DIRECT** key to turn it off. If the SRS 3D indicator is lit, press the **SRS 3D** key to turn it off.

Each press of the key switches the modes as follows: (When the SRS 3D Stereo is OFF)

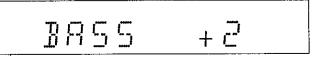
① BASS : Mode for adjusting the low frequencies.

② MIDDLE : Mode for adjusting the middle frequencies.

③ TREBLE : Mode for adjusting the high frequencies.

4 End of setting

Adjustment of SRS (Sound Retrieval System) 3D Stereo.



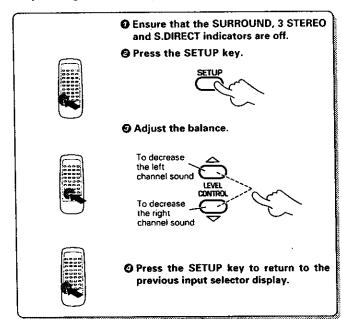
Display when "BASS" is selected.

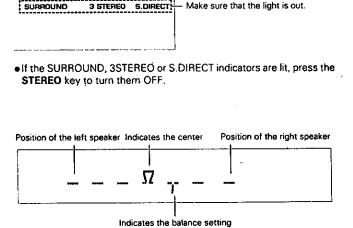
The displayed value changes.

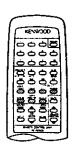
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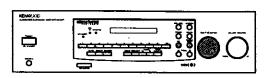


Adjusting the left/right sound balance





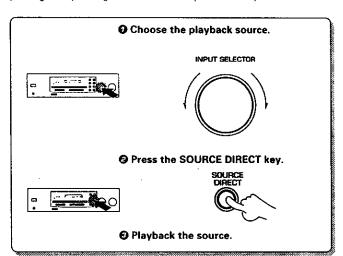




Keys or controls to be used in this operation

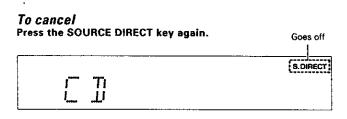
Source Direct playback

This feature allows you to play the source signal with a high quality by passing it only through the minimum required circuitry.



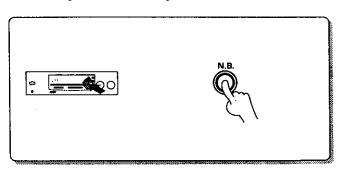


- During Source Direct playback, the tone controls (BASS,MIDDLE and TREBLE), balance control and N.B. are defeated.
- The Source Direct playback is canceled when any key associated with the surround play is pressed.



Compensating for low frequencies (N.B.: Natural Bass circuit)

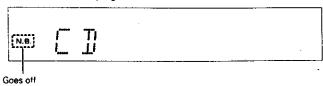
N.B. circuit is used to compensate for the low frequencies which are less audible during low-volume listening.

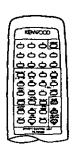


N.B.C	Ti Ti	ï		•	
Lights					

• When the S.DIRECT is selected, the N.B. control keys are not effective.

To cancel Press the N.B. key again.

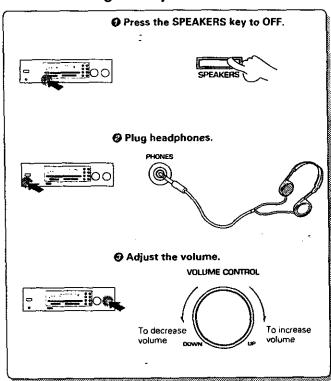


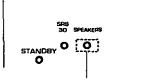




: Keys or controls to be used in this operation

To listen through headphones

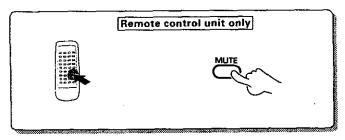


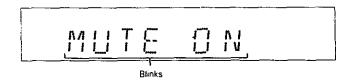


Make sure the light is out.

● For the operation when the power amplifier (KM-897) is connected to the KR-897, see — ⊋ and refer to the instruction manual of the KM-897.

To mute sound temporarily





To cancel
Press the MUTE key again.

When recording sound with a recorder component of KENWOOD, synchro recording is possible by setting the INPUT SELECTOR to select TAPE1 or MD according to the connected component.

Preparation

- Switch the TAPE1 display to MD or VIDEO1 with the following operation.
- O Select TAPE1 with the INPUT SELECTOR.
- @ Press and hold the AUTO key for more than 2 seconds.

TAPE 1

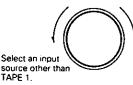
Each press switches the display.

①TAPE1 🛈 ②MD VIDEO1

To record a music source

Select the source to be recorded. INPUT SELECTOR





- @ Put the cassette deck in record-pause mode.
- Play the source and start recording.

The input sources are switched in the following order:

1 TUNER (frequency display) Ž PHONO

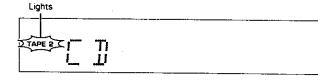
③TAPE1 (MD or VIDEO1) ④CD

§ VIDEO2

- The VIDEO1 display can be switched to the display of other input by using the procedure described in "Preparation" above.
- For the synchro recording with a cassette deck and/or MD recorder. refer to the respective instruction manuals...
- It is not possible the VIDEO1 or MD input to TAPE1 because all of these components should use the same INPUT SELECTOR position.

Copying tape (Tape dubbing TAPE 2→ TAPE 1)

O Press the TAPE 2 MONITOR key. BAND DISPLAY TUNING @ Select a source other than TAPE 1. INPUT SELECTOR



Play cassette deck 2 and start recording on cassette deck 1.

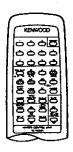
• For copying a tape using a double cassette deck, read the instruction manual of the double cassette deck.

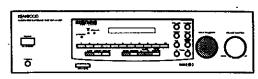
Copying tape (Tape dubbing TAPE 1 → TAPE 2)

- O Select TAPE 1 with the INPUT SELECTOR control of the main unit.
- @ Play the cassette deck connected to the TAPE 1 jacks and recording of the cassette deck connected to the TAPE 2 jacks.

Regarding TAPE 2 MONITOR

A cassette deck or graphic equalizer can be connected to this unit's TAPE 2 MONITOR terminals. If you connect a graphic equalizer, turn the TAPE 2 MONITOR key ON. If you connect a 3-head cassette deck, you can monitor the source sound, or the sound being recorded, while recording. Pressing the TAPE 2 MONITOR key lets you compare the recorded sound and the source sound. Refer to the operating manual for the component you connected for further details.

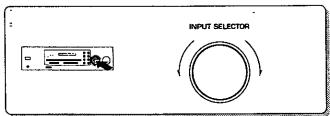




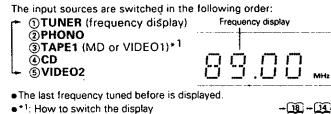
: Keys or controls to be used in this operation

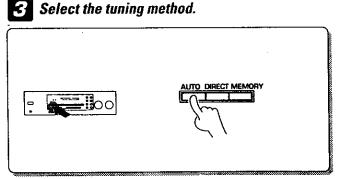
Receiving broadcast stations

Select the TUNER input.

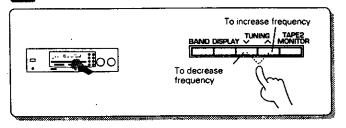


Select the broadcast band.



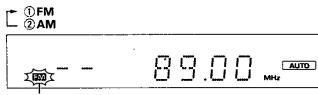


Select a station.

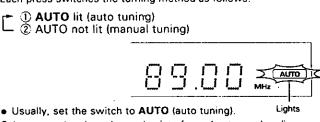


Each press switches the band as follows:

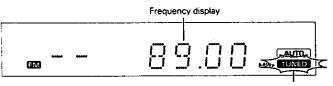
"AM" or "FM" indicator



Each press switches the turning method as follows:



Select manual tuning when noise interferes due to weak radio wave. (The stereo broadcasting is received in monaural during manual tuning.)



"TUNED" lights up when a

: The next station found is tuned automatically. Manual tuning: Press repeatedly or hold until a station is tuned.

remote control unit.

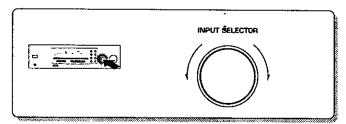




Keys or controls to be used in this operation

Receiving radio stations by specifying its frequency

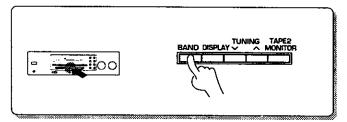
Select the TUNER input.



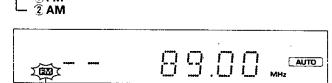
The input sources are switched in the following order:

①TUNER (frequency display) ②PHONO ③TAPE1 (MD or VIDEO1) ④CD ⑤VIDEO2 Frequency display			
	 EM	AUTO	

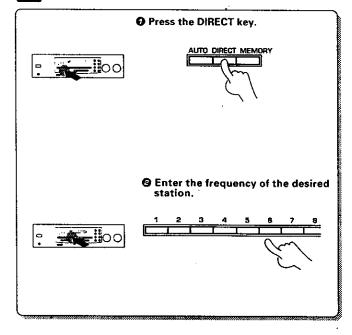
Select the broadcast band.



Each press switches the band as follows:



3 Specify the frequency.



"AM" or "FM" indicator

① FM

	Blinks		
[•	AUTO MHz

Ł		•	
Press the numeric ke shown below.	ys accordin	g to the fre	quency to be tuned a
*AM10kHz/FM100kH	z territories	(U.S.A., Ca	nada, etc.)
AM 810 kHz	. 8, 1		(10 kHz space)
AM 1260 kHz	. 1, 2, 1	6	(10 kHz space)
FM 89 MHz	. 8. 9.	0.	(100 kHz space)
FM 92.5 MHz	9. 2.	5	(100 kHz space)
*AM9kHz/FM50kHz t	erritories (o	ther countri	es)
AM 810 kHz	8, 1,	0	(9 kHz space)
AM 1260 kHz	1. 2. 1	6, O	(9 kHz space)
FM 89 MHz	8, 9, 1	0.0	(50 kHz space)
FM 92.5 MHz	. 9, 2,	5 0	(50 kHz space)
*EM DE EMPLACIC	CHARIST	COACE	63

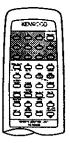
Frequency indicator ,ALTO, EΜ

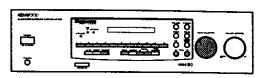
"TUNED" lights up when a station is tuned.

• If you make a mistake, the frequency display blinks for a few seconds. In this case, repeat step from the beginning.

Preparation •

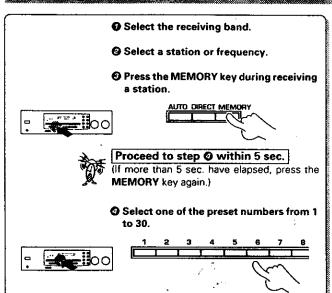
Select the TUNER input.

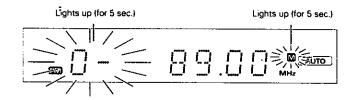




Keys or controls to be used in this operation

Storing radio stations in memory (Station preset)



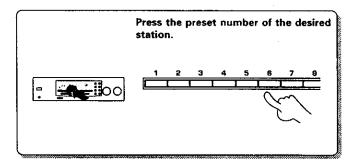


Press the numeric keys in the following order.

To store in "15" ... +10, 5
To store in "20" ... +10, +10, 0

- Repeat steps ~ for each of the stations to be stored in memory.
- If a station is stored in a preset number which has already stored a station memory under it, the previous memory is replaced by the new memory content.

Receiving a preset station



Press the numeric keys in the following order.

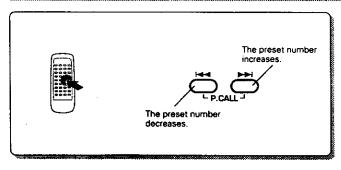
To recall "15" ... +10, 5
To recall "20" ... +10, +10, 0

 If you make a mistake in entering the figure of 10, press the 0 key repeatedly until the original display is shown, then enter the correct number.

Preset number stored in memory

Auto

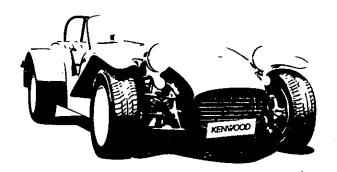
Receiving all preset stations in order (P. CALL)



 Every time the key is pressed, the next station in the order of the preset number is received.

If the key is held pressed................ Preset stations will be received successively for about half a second each.

•The same operation is also available with the O keys of the main unit.

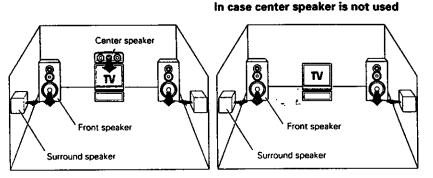


DOLBY PRO LOGIC surround mode

Video, DVD and LD software programs carrying the Downson mark contain recording of the same Dolby Surround data as those used in movie theaters.

The DOLBY PRO LOGIC surround mode uses the Dolby Surround data and brings into home a similar sound field with full of presence to movie theatres.

To use this mode, connect the surround (and center) speakers.

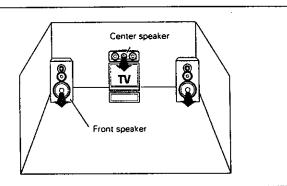


DOLBY 3 STEREO mode

If the left and right speakers are installed apart from each other, the center acoustic image (words, etc.) may vary depending on the listener's position. The DOLBY 3 STEREO mode provides an improved positioning of the center acoustic image regardless of the listening position.

Use this mode when playing videotape, DVD or LD software carrying the X DOLLY SURROUND mark.

To use this mode, connect the center speaker.



Recommended speaker installation

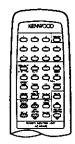


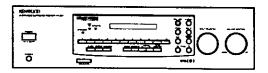
It is recommended that the surround speakers are installed straight to the left and right of the listening position or slightly behind, at a height of about 1 meter higher than the listener's ears. Each surround speaker should be installed so that the longer sides are horizontal.



To improve the feeling of presence in the surround modes, various parameters of each surround mode can be set up according to the speaker system used as well as to the environmental of the listening room. The following procedure let you set the parameters of the surround mode (DOLBY PRO LOGIC, DOLBY 3 STEREO).

Once the settings have been done, it is held in memory so readjustment is not necessary even after the mode has been changed to other modes.



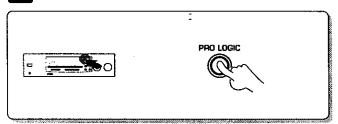


: Keys or controls to be used in this operation

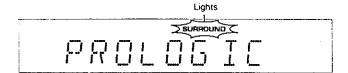
Adjustments for surround play



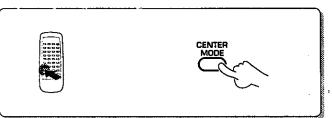
Select the DOLBY PRO LOGIC surround mode.



·Select a surround mode according to the played source and your system components.



Select the CENTER MODE.



Each press of CENTER MODE key switches the modes as follows:

① NORMAL :When the center speaker is a compact speaker.

WIDEBAND: When the center speaker is a large speaker.

PHANTOM: When no center speaker is used.

Adjust the front speaker balance.



O Press the SETUP key (on the remote control unit).



Adjust the front speaker (left & right) levels so that the left and right levels are identical.



To decrease the left channel sound LEVEL To decrease the right channel sound

19 Press the SETUP key again to establish the setup.

After this, the unit enters the condition for "D Adjust the volume level of each speaker".

Adjustment procedure: Each press of the SETUP key switches the adjusted items as shown below.

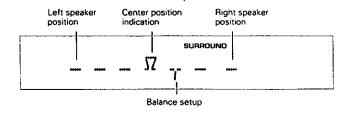
Adjusting the front speaker balance

Adjusting the volume level of each speaker

Adjusting the delay time

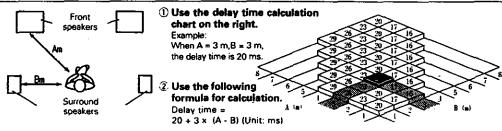
End of setup

To cancel setup in the middle, press the SETUP key repeatedly until the setup mode is cancelled.



How to calculate the proper delay time

Assuming that the distance from the front speakers is A meters and that from the surround speakers is B meters:



What is delay time?



The sound entering the ears include the direct sound coming from the sound source and the indirect sounds reflected from the walls, floor, ceiling, etc. The indirect sounds are delayed because they travel longer distance required for reflection before they reach the ears. The delay time is the difference in time between the direct sound and indirect sounds.

Adjust the volume level of each speaker.

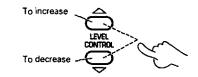
Ensure that "TEST L" is displayed. Test tone will be output from each speaker.

Adjust the volume levels of the center speaker and surround speakers with reference to the front speaker (left & right) levels.

(1) While test tone is output from the speaker(s) to be adjusted,

(2) Adjust the speaker level.





 After having adjusted all of the speaker levels, establish the setup.



After this, the unit enters the condition for "5 Adjust the delay time".

•Noise-like test tone moves across speakers at intervals of 1.5 seconds.

TEST L (Front speaker, left)

TEST C (Center speaker)

(Only when NORMAL or WIDE BAND is selected in step 2)

TEST R (Front speaker, right)

TEST S (Surround speakers)

(Only when PRO LOGIC is selected in step 2)

SURROUND SURROUND

Display when test tone is output from surround speakers

· Be sure to adjust from the listening position.

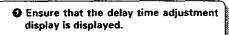
Each press of a LEVEL CONTROL key varies the level by 1 dB.

• The volume level can be adjusted in the range from -10 to +10 dB.

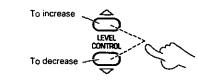
 The front speaker (left & right) levels cannot be varied with the LEVEL CONTROL keys.

 Adjust the volume level from each of the center speaker and surround speakers while test tone it output from the corresponding speaker.

5 Adjust the delay time.



@ Adjust the delay time.



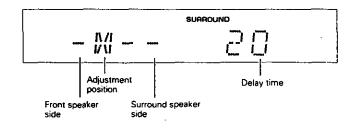
Establish the setup.





This is the end of setup (the unit returns to the condition before starting the setup operations).

- Check the proper delay time for your listening room by referring to "How to calculate the proper delay time".
- Select an integer value which is closest to the value obtained with "How to calculate the proper delay time".
- The delay time can be adjusted to 15, 20, 25 or 30 ms.

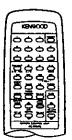


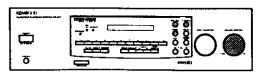


When playing videotape (DVD or LD) software carrying the Mount sufficient mark, a sound field with enhanced surround effects can be enjoyed by using the DOLBY PRO LOGIC or **DOLBY 3 STEREO mode.**

Be sure to complete "Adjustments for surround play" prior to starting playback in one of these surround modes.

÷ 24

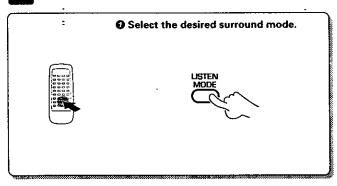




: Keys or controls to be used in this eperation

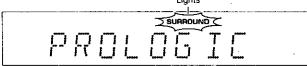
Surround play

Select one of the surround modes.



Each press of LISTEN MODE key switches the modes as follows:

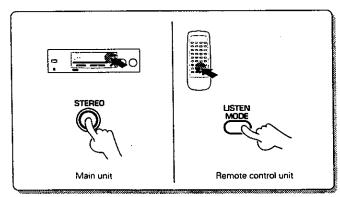
- ① STEREO
- ② PRO LOGIC
- **3 3 STEREO**
- The surround modes can also be selected directly using the corresponding keys on the main unit.



Example when DOLBY PRO LOGIC is selected

- Play a video software program.
- Adjust the volume.

To cancel the SURROUND play

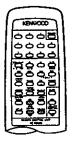


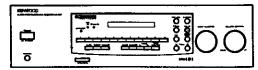
On the remote control unit, the following modes are switched every time the LISTEN MODE key is pressed.

- ① STEREO ② PRO LOGIC ③ 3 STEREO

STERE

Manufactured under licence from Dolby Laboratories Licensing Corporation. "Dolby", "Pro Logic" and the double - D symbol are trademarks of Dolby Laboratories Licensing Corporation. The Sound Retrieval System is an epochal system which produces a three-dimensional sound space by applying the most suitable processing to the sound signal on the basis of the human listening mechanism. This permits real depth and sound location, considered as difficult to realize with conventional 2-channel stereo (general stereo). A sufficient effect can be obtained for any source (CD, tape, broadcasts, etc.).





: Keys or controls to be used in this operation

SRS 3D Stereo (Sound Retrieval System)

ljusting the t	one.	Goes off
	• Ensure that the S.DIRECT indicator is not lit.	(S.DIRECT)
-	Turn the SRS 3D stereo ON. SRS 3D O Abjust the effect strength (level).	Each press of the key switches the modes as follows: ① SRS 3D is lit
	(1) "CENTER" or "SPACE" should be displayed.	Each press of the key switches the modes as follows: (**TCENTER**: Mode for adjusting the depth of SRS 3D.** (**Z SPACE**: Mode for adjusting the expansion of SRS 3D.** (**3*) End of setting
_	Increasing the "CENTER" level enhances the feeling of depth around the center.	 The BASS, MIDDLE and TREBLE adjustments are not available while the SRS 3D Stereo is ON. For the BASS, MIDDLE and TREBLE adjustment procedures:
	Increasing the "SPACE" level makes the sound expansion wider.	
	(2) Adjust the level.	CENTER 3
	To increase the level	Display when CENTER is selected Level display
2000	To decrease the level	CENTER 5
	~	The level value varies

Even if the sound is recorded while the SRS 3D stereo effect is applied, the effect is not recorded together with the source sound.

What appears to be a mulfunction 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.

Operation to reset

The microcomputer may fall into malfunction (impossibility to operate, erroneous display, etc.) when the power cord is unplugged while power is ON or due to an external factor. In this case, execute the following procedure to reset the microcomputer and return it to normal condition.

- ①Unplug the AC power plug from the wall outlet.
- ② While holding the POWER switch depressed, plug the AC plug into the power outlet.
- Please note that resetting the microcomputer clears the contents stored in and returns to the condition when it left the factory.

· -, - <u>*</u>-

Amplifier

ng Symptom	Cause	Remedy
Sound is not output or the volume level is low.	◆The speaker cords are disconnected. ◆MUTE is ON. (The MUTE ON indicator is blinking) •The SPEAKERS keys are set to OFF. •The TAPE 2 MONITOR key is set to ON.	Connect them properly referring to "Connection of speakers". Press the MUTE key to OFF. Set the SPEAKERS key to ON. Set the TAPE 2 MONITOR key to OFF. Set the input selector to the position other than tuner.
The STANDBY indicator blinks and sound is not output.	Speaker cords are short-circuited.	■Turn the power off, eliminate the short-circuiting, then turn on the power again. + 22 - 28
Sound is not output from one of the speakers.	The speaker cord is disconnected. The BALANCE control is set to an extreme position.	Connect it properly referring to "Connection of speakers". Adjust the Left/Right balance. Connection of speakers". Adjust the Left/Right balance.
Sound is not output from the surround speaker and/or center speaker, or their sound is very small.	The surround speaker cords and/or center speaker cord are disconnected. The Surround play mode has not been engaged. The surround and center speaker levels are set to the minimum positions.	Connect them properly referring to "Connection of speakers". Set the presence mode. Adjust the surround and center speaker levels.
A hum noise is generated when the PHONO input is selected.	The audio cord from the turntable is not inserted securely into the PHONO jacks. The turntable is not grounded.	Insert the audio cord plugs securely into the PHONO jacks, Connect the grounding wire to the GND terminal on the rear panel.
System control is not available when TAPE1 or MD is selected.	• "TAPE1" or "MD" is not displayed.	• Switch the display to TAPE 1 or MD. -14 -18
System control is not available.	The XS8 and SL16 modes were switched while the AC plug is left plugged into the wall power outlet.	Unplug the AC plug from the wall outlet and switch the XS8 or SL16 mode as required.
Display is dimly lit.	The setting is not correct.	• Adjust the brightness with the DISPLAY key.

Tuner

Symptom San	Cause R	Remedy
Radio stations cannot be received.	No antenna is connected. The broadcast band is not set properly. The frequency of the desired station is not tuned.	Connect an antenna. Set the broadcast band properly. Tune the frequency of the desired station.
Interference.	Noise due to ignition noise of an automobile. Noise due to an influence from an electric appliance. Noise due to a nearby TV set.	 Install the outdoor antenna away from the road. Turn off the power to the appliance. Install the system farther away from the TV set.
A station which was preset cannot be received by pressing the corresponding numeric key.	 The preset station belongs to a frequency that cannot be received. The preset memory was cleared because the power cord had been unplugged for a long period of time. The TUNER input is not selected. 	Preset a station with a receivable frequency. Preset the station again. Select the TUNER input.

Remote control unit

Symptom	Strategie Cause Ng. 196	Remedy 22 24 This
Remote control operation is not possible.	Batteries are exhausted. The remote control unit is too far away from the main system, controlling angle is too large, or there is an obstacle in between. The audio cords and system control cords are not connected properly. The source component to be operated does not contain the tape(s) or CD. An attempt is made to play a tape which is being recorded in the cassette deck.	Replace with new batteries. Operate the remote control unit within the controllable range. Connect properly referring to "System connection". Place the tape(s) or CD in the source component to be played. Wait until the recording is completed.

Memory backup function

Please note that the following items will be deleted from this unit's memory if the power cord is disconnected from the AC outlet or the main power switch is turned off for approximately three days.

- The power setting is cleared and the power is set to OFF.
- The input selection is cleared and the TUNER input is selected.
- The volume setting is cleared and the volume is set to -80 dB.
- \bullet The receiving band setting is cleared and the FM band is selected.
- The frequency setting is cleared and 87.5 MHz is selected.
- The preset station memory is cleared.



Do not use contact cleaners because it could cause a malfunction. Be specially careful against contact cleaners containing oil, for they may deform the plastic components.

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.

For the U.S.A.

Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.





Audio section

Rated power output at the STEREO operation

110 watts per channel minimum RMS, both channels driven at 8 Ω , from 40 Hz to 20,000 Hz with no more than 0.8 % total harmonic distortion. (FTC)

Power output at the SURROUND operation

110 watts per channel minimum RMS, both channels driven, at 8 Ω , 1 kHz with no more than 0.8 % total harmonic distortion.

Center

110 watts minimum RMS at 8 Ω , 1 kHz with no more than 0.8 % total harmonic distortion.

Surround

110 watts per channel minimum RMS, at 8 Ω , 1 kHz with no more than 0.8 % total harmonic distortion.

Total harmonic distortion	0.3 % (1 kHz, 55 W, 8 Ω)
Signal to noise ratio (IHF'66)	
PHONO (MM)	75 dB
LINE (CD)	93 dB
Input sensitivity / impedance	
PHONO (MM)	3.0 mV / 47 kΩ
CD	
Tone controls	
BASS	± 8 dB (at 100 Hz)
MIDDLE	
TREBLE	± 8 dB (at 10 kHz)
N.B. circuit	
Output level / impedance	
Sub woofer preout	2.0 V / 600 Ω

FM Tuner section

Tuning frequency range Usable sensitivity	87.5 MHz ~ 108 MHz
MONO	1.3 μV (at 75 Ω) / 13.2 dBf
•	(75 kHz dev., SINAD 30 dB)
50 dB quieting sensitivity	
STEREO	31.6 μV (at 75 Ω) / 41.2dBf
Total harmonic distortion (1.1	
MONO	0.5 % (65 dBf input)
	0.6 % (65 dBf input)
Signal to noise ratio (1 kHz 7	5 kHz dev.)
STEREO	68 dB (65 dBf input)
	40 dB
Selectivity (IHF ±400 kHz)	66 dB
Frequency response 30	Hz ~15 kHz, + 0.5 dB, - 3.0 dB

AM Tuner section

Tuning frequency range	
Usable sensitivity (30 % mod., S/N 20) dB)
	. 15 μV / (500 μV / m)
Signal to noise ratio (30 % mod., 1 m)	

General

Power consumption	2.8 A
∆AC outlet	
SWITCHED	1: (300 W, 2.5 A max.)
Dimensions	W:440 mm (17-5/16")
	H:127 mm (5")
	D:389 mm (15-5/16")
Weight (net)	9.0 kg (19.9 lb)



^{1.} KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

2. Full performance may not be exhibited in extremely cold locations (below 0 deg.C).

Audio section

Rated power output at the STEREO operation

100 watts per channel minimum RMS, both channels driven at 8 Ω , from 40 Hz to 20,000 Hz with no more than 0.7 % total harmonic distortion. (FTC)

	6 THD at 8 Ω	120 W + 120 W
	rom 63 Hz to 12,500 Hz,	
	l.D., at 8 Ω	
Power out	put at the Surround opera	
Front	(1 kHz, 0.7 % T.H.D. at 8	Ω) 100 W + 100 W
Center	(1 kHz, 0.7 % T.H.D. at 8	Ω) 100 W
Surround	I (1 kHz, 0.7 % T.H.D. at 8 :	Ω) 100 W
	{1 kHz, 10 % T.H.D. at 8 £	
Center	(1 kHz, 10 % T.H.D. at 8 C	2) 120 W
	l (1 kHz, 10 % T.H.D. at 8 🕻	
	onic distortion (1 kHz, 8 Ω	
Signal to n	oise ratio (IHF'66)	
PHONO (MM)	75 dB
	itivity / impedance	
•	MM)	3.0 mV / 47 kΩ
	el / impedance	
Sub woo	fer preout	2 0 V / 600 O
Tone contr	•	
		+ 8 dB (at 100 Ha)
	·····	
		-
N.B. CIFCL	.it	+ 5 as (80 Hz)

FM Tuner section

Tuning frequency range	87.5 MHz~108 MHz
Usable sensitivity	
MONO(75 kHz dev., S/N 30 dB)	2.0 μV (at 75 Ω) / 17.2 dB
50 dB quieting sensitivity	
STEREO	35 μV (at 75 Ω) / 42.2 dRf
Total harmonic distortion (1 kHz	1
MONO	0.7 % (65 dBf inpurt)
STEREO	0.8 % (65 dRf input)
Signal to noise ratio (1 kHz 75 kH	
MONO	
STEREO	66 dB (65 dB) input
Selectivity (IHF ± 400 kHz)	(1) 10 to 00 to 00 million
Stereo separation (1 kHz)	
Frequency response30 Hz ~	
AM Tuner section	
Tuning frequency range	
9 kHz	531 kHz ~ 1 602 kHz
10 kHz	530 bHz 1 610 bHz
Usable sensitivity (30 % mod., S	
***************************************	is ha \ (soo ha \ w)

General

Power consumption	250 W
∆ AC outlet	
SWITCHED	, Australia1 : (300 W max.)
Dimensions	
	H: 127 mm
	D: 389 mm
Weight (net)	9.0 kg

Signal to noise ratio (30 % mod., 1 mV input) 50 dB

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igtheta Caution : Read this page carefully to ensure safe operation.

Audio section

Rated power output at the STEREO operation

120 watts per channel minimum RMS, both channels driven at 8 Ω , from 40 Hz to 20,000 Hz with no more than 0.8 % total harmonic distortion. (FTC)

Power output at the SURROUND operation

Front

120 watts per channel minimum RMS, both channels driven, at 8 Ω , 1 kHz with no more than 0.8 % total harmonic distortion.

Total harmonic distortion

. • • • • • • • • • • • • • • • • • • •	
************************************	0.3 % (1 kHz, 55 W, 8 Ω)
Signal to noise ratio (IHF'66)	
PHONO (MM)	75 dB
LINE (CD)	93 dB
Input sensitivity / impedance	
PHONO (MM)	3.0 mV / 47 kΩ
CD	
Tone controls	
BASS	± 8 dB (at 100 Hz)
MIDDLE	
TREBLE	
N.B. circuit	
Output level / impedance	
	2.0 V / 600 Ω

FM Tuner section

Tuning frequency range	87.5 MHz ~ 108 MHz
Usable sensitivity	•
	1.3 μV (at 75 Ω) / 13.2 dBf
	(75 kHz dev., SINAD 30 dB)
50 dB quieting sensitivity	•
STEREO	31.6 μV (at 75 Ω) / 41.2dBf
Total harmonic distortion (1	kHz)
MONO	, 0.5 % (65 dBf input)
	0.6 % (65 dBf input)
Signal to noise ratio (1 kHz 7	5 kHz dev.)
MONO	75 dB (65 dBf input)
	68 dB (65 dBf input)
	40 dB
	66 dB
Frequency response 30	Hz ~15 kHz, + 0.5 dB, - 3.0 dB
, , , , , , , , , , , , , , , , , , ,	
AM Tuner section	
Usable sensitivity (30 % mod	530 kHz ~ 1,700 kHz d., S/N 20 dB)
***************************************	15 μV / (500 μV / m)
	nod., 1 mV input) 48 dB
General	
Power consumption	160 W
∆ AC outlet	
	1: (300 W, 2.5 A max.)
<u></u>	H;127 mm (5")
_	D:389 mm (15-5/16")
Weight (net)	9.0 kg (19.9 lb)
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KENWOOD

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
Model	Seliai Nutribel