

KENWOOD

AUDIO VIDEO SURROUND RECEIVER

VRS-7200

INSTRUCTION MANUAL

KENWOOD CORPORATION

Quick Start Reference

Please read the following pages so that you can enjoy the surround sound at the best condition.

(These pages give shortcut explanations on how to connect the speaker system to the receiver, set up the speakers and play a source.)

"Let's play DVD video software" - 16 - 17

About the supplied remote control

Compared to standard remote controls, the remote control supplied with this receiver has several operation modes. These modes enable the remote control to control other audio/video components. In order to effectively use the remote control it is important to read the operating instructions and obtain a proper understanding of the remote control and how to switch its operation modes (etc.).

Using the remote control without completely understanding its design and how to switch the operation modes may result in incorrect operations.



Before applying power

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

Units are designed for operation as follows.

U.S.A. and Canada AC 120 V only
Australia AC 240 V only

Europe AC 230 V only

Safety precautions

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

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN		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.		

How to use this manual

This manual is divided into four sections, Preparations, Operations, Remote Control, and Additional Information.

Preparations

Shows you how to connect your audio and video components to the receiver and prepare the surround processor. Since this receiver works with all your audio and video components, we will guide you in setting up your system to be as easy as possible.

Operations

Shows you how to operate the various functions available on the receiver.

Remote Control

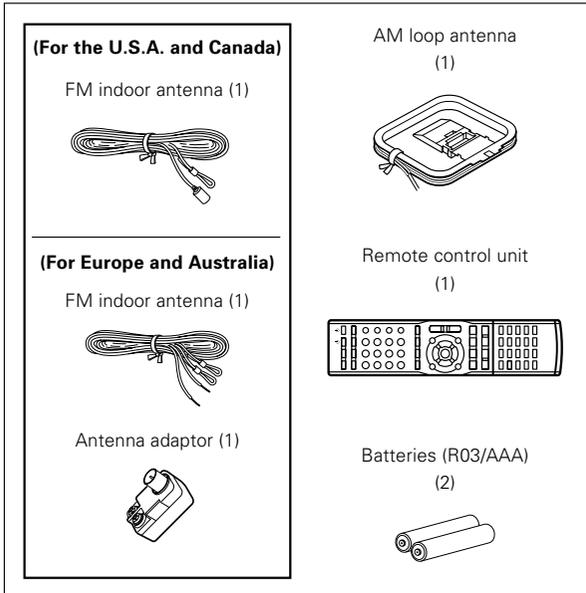
Shows you how to operate other components using the remote control, as well as a detailed explanation of all remote control operations. Once you have registered your components with the proper setup codes, you'll be able to operate both this receiver and your other AV components (TV, VCR, DVD player, CD player, etc.) using the remote control supplied with this receiver.

Additional Information

Shows you additional information such as "In case of difficulty" (trouble shooting) and "Specifications".

Unpacking

Unpack the unit carefully and make sure that all the accessories are present.



If any accessories are missing, or if the unit is damaged or fails to operate, notify your dealer immediately. If the unit was shipped to you directly, notify your shipper immediately. Kenwood recommends that you retain the original carton and packing materials in case you need to move or ship the unit in the future.

Keep this manual handy for future reference.

Special features

True home theater sound 31 ~ 33

This receiver incorporates a wide variety of surround modes to bring you maximum enjoyment from your video software and audio source. Select a surround mode according to your equipment or the software you are going to play and enjoy!

- Dolby Digital EX
- Dolby PRO LOGIC IIX, Dolby PRO LOGIC II
- Dolby Digital
- DTS-ES
- DTS NEO:6
- DTS 96/24
- DTS
- DSP Mode
- Dolby Virtual Speaker
- Dolby Headphone

GAME mode function 21

When you connect a game machine to the **GAME** jacks on the front panel, the input selector of the receiver switches automatically to "GAME" and the optimum sound field for enjoying games is set. This feature improves your convenience in playing video games.

DUAL SOURCE function 24

While you enjoy audio listening through the speakers, another person can enjoy another source (audio + video) through headphones by connecting the source to the **GAME, FRONT AUX** jacks.

ACTIVE EQ 25

ACTIVE EQ mode will produce a more dynamic sound quality in any condition. You can enjoy a more impressive sound effect when ACTIVE EQ is turned on during Dolby Digital and DTS playback.

Remote control 39

In addition to the basic receiver, the remote control supplied with this receiver can also operate almost all of your remote controllable audio and video components. Just follow the simple setup procedure to register the components you have connected.

RDS (Radio Data System) tuner (For Europe and Australia) 29

The receiver is equipped with an RDS tuner that provides several convenient tuning functions: RDS Auto Memory, to automatically preset up to 40 RDS stations broadcasting different programs; station name display, to show you the name of the current broadcast station; and PTY search to let you tune stations by program type.

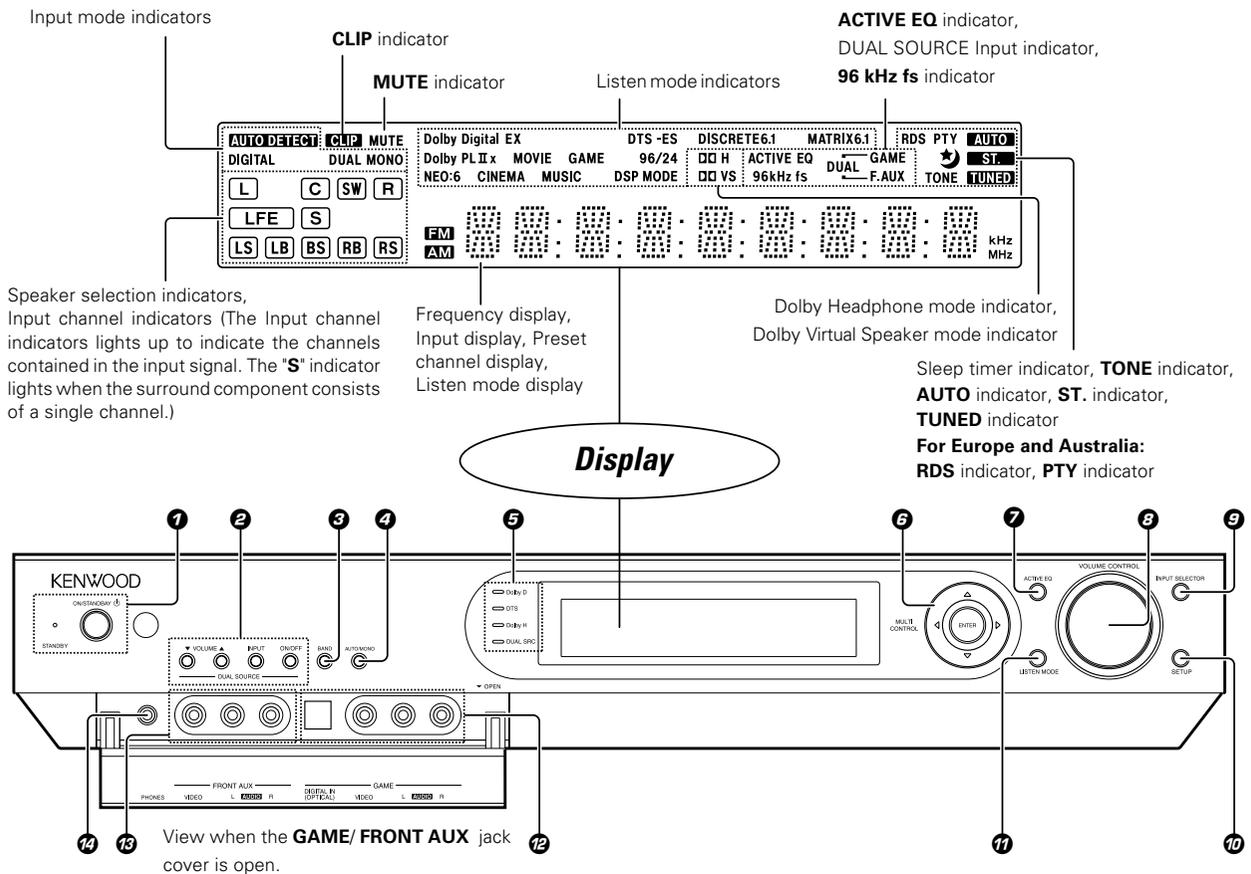
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Using the RDS DISP. (Display) key ... 29			
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			Maintenance of the unit
			When the front panel or case becomes dirty, wipe with a soft, dry cloth. Do not use thinner, benzine, alcohol, etc. for these agents may cause discoloration.
			In regard to contact cleaner
			Do not use contact cleaners because it could cause a malfunction. Be specially careful not to use contact cleaners containing oil, for they may deform the plastic component.

Names and functions of parts

Main unit



1 ON/STANDBY key

Use to turn the power ON/STANDBY. → 18

STANDBY indicator

Lights when the power is in the standby mode.

2 DUAL SOURCE VOLUME / keys

Use to adjust the volume in the DUAL SOURCE mode. → 24

DUAL SOURCE INPUT key

Use to select the input for the DUAL SOURCE mode. → 24

DUAL SOURCE ON/OFF key

Use to switch the DUAL SOURCE mode ON/OFF. → 24

3 BAND key

Use to select the broadcast band. → 27 - 29

4 AUTO/MONO key

Use to select the auto or manual tuning mode. → 27 - 29

5 Dolby D indicator

Lights when the receiver is in the Dolby Digital mode. → 34

DTS indicator

Lights when the receiver is in the DTS mode. → 34

Dolby H indicator

Lights when the Dolby Headphone mode is ON. → 33

DUAL SRC indicator

Lights when the DUAL SOURCE mode is ON. → 24

6 Joystick

MULTI CONTROL /

Use to control a variety of settings. → 16 - 18

Use to tune of radio broadcasting. → 27

MULTI CONTROL /

Use to control a variety of settings. → 16 - 18

Use to select of preset radio stations. → 28

ENTER

Use to control a variety of settings. → 16 - 18

Use to presetting of radio stations. → 27

7 ACTIVE EQ key

Use to switch the status of ACTIVE EQ. → 25

8 VOLUME CONTROL knob

Use to adjust the receiver volume. → 23

9 INPUT SELECTOR key

Use to select input sources. → 23

10 SETUP key

Use to select the speakers' settings etc. → 16 - 18

Use to switch the status of REC MODE. → 26

11 LISTEN MODE key

Use to select the listening mode. → 34

12 GAME jacks

→ 14 - 21 - 24

13 FRONT AUX jacks

→ 14 - 24

14 PHONES jack

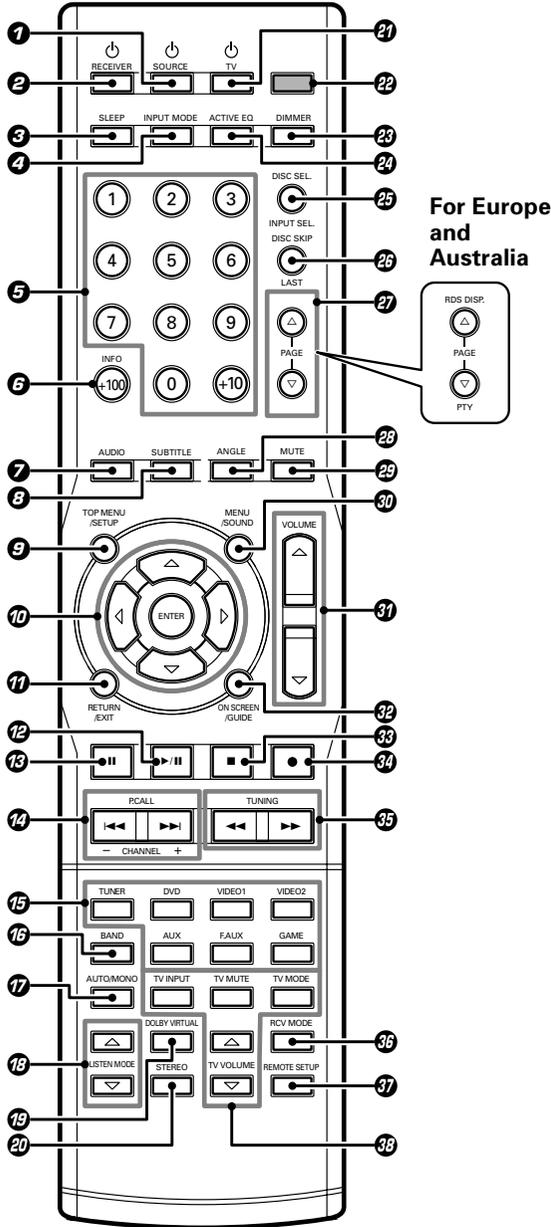
Use for headphone listening. → 24

Standby mode

While the standby indicator is lit, a small amount of power is supplied to the system to back up the memory. This is called standby mode. Under the condition, the system can be turned ON by the remote control unit.

Remote control unit

This remote control unit can be used not only for Kenwood products but also for other non-Kenwood products by setting the appropriate manufacturer's setup codes. → 41 → 44



If the name of a function is different on the receiver and on the remote control, the name of the remote control key in this manual is indicated in parentheses.

- 1** **POWER key**
Use to turn the other components ON/OFF. → 39
- 2** **RECEIVER key**
Use to turn the power ON/STANDBY. → 18
- 3** **SLEEP key**
Use to set the Sleep timer. → 38
- 4** **INPUT MODE key**
Use to switch between the full auto, digital and analog input. → 8
- 5** **Numeric keys**
Use to selection of preset radio stations. → 28
Use to operate other components. → 39
- 6** **+100 key**
Use to operate other components. → 39
- 7** **INFO key**
Use to operate other components. → 39
- 8** **AUDIO key**
Use to operate the DVD component. → 39
- 9** **SUBTITLE key**
Use to operate the DVD component. → 39
- 9** **SETUP key**
Use to select the speakers' settings etc. → 18
- 10** **TOP MENU key**
Use to operate the DVD component. → 39
- 11** **Δ / ▽ keys**
Use to control a variety of settings. → 18
Use to tuning of radio broadcasting. → 27
Use to operate other components. → 39
- 12** **</> keys**
Use to control a variety of settings. → 18
Use to selection of preset radio stations. → 28
- 13** **ENTER key**
Use to control a variety of settings. → 18
Use to operate other components. → 39
- 14** **RETURN key**
Use to operate the DVD component. → 39
- 15** **EXIT key**
Use to operate other components. → 39
- 16** **▶/|| key**
Use to operate the CD, DVD, MD or VCR component. → 39
- 17** **|| key**
Use to operate other components. → 39
- 18** **P.CALL keys**
Use to selection of preset radio stations. → 28
- 19** **◀◀ / ▶▶ keys**
Use to operate the CD, DVD or MD component. → 39
- 20** **CHANNEL +/- keys**
Use to select the channels. → 39

15 Input selector keys (TUNER, DVD, VIDEO 1, VIDEO 2, AUX, F. AUX, GAME)

Use to select input sources. → 23

Sources keys (DVD, VIDEO 1, VIDEO 2, AUX, F. AUX, GAME)

To control one of the registered sources without switching the receiver's input selector to that source, press and hold the desired input selector key for more than 3 seconds. → 39

16 BAND key

Use to select the broadcast band. → 27

17 AUTO/MONO key

Use to select the auto or manual tuning mode. → 27

18 LISTEN MODE Δ/∇ keys

Use to select the listening mode. → 34

19 DOLBY VIRTUAL key

Use to select the Dolby Virtual mode. → 33

20 STEREO key

Use to switch the listen mode temporary to the stereo mode. → 35

21 $\text{\textcircled{P}}$ TV key

Use to turn the TV on and off.

22 LED indicator

Blinks to show that signals are being transmitted.

23 DIMMER key

Use to adjust the brightness of the display. → 38

24 ACTIVE EQ key

Use to switch the status of ACTIVE EQ. → 25

25 DISC SEL. key

Use to operate other components. → 39

INPUT SEL. key

Use to operate other components. → 39

26 DISC SKIP key

Use to operate the multi-CD player. → 39

LAST key

Use to operate other components. → 39

27 PAGE Δ/∇ keys

Use to operate the DVD component. → 39

(For Europe and Australia)

RDS DISP. key → 29

Use to receive RDS broadcast.

PTY key → 30

Use for PTY search.

28 ANGLE key

Use to operate the DVD component. → 39

29 MUTE key

Use to temporarily mute the sound. → 25

30 SOUND key

Use to adjust the sound quality and the ambience effects. → 22 → 24 → 36

MENU key

Use to operate other components. → 39

31 VOLUME Δ/∇ keys

Use to adjust the receiver volume. → 23

32 ON SCREEN key

Use to operate the DVD component. → 39

GUIDE key

Use to operate other components. → 39

33 \blacksquare key

Use to operate the CD, DVD, MD or VCR component. → 39

34 \bullet key

Use to operate the MD or VCR component. → 39

35 TUNING keys

Use to tuning of radio broadcasting. → 27

\ll / \gg keys

Use to operate the CD, DVD, MD or VCR component. → 39

36 RCV (receiver) MODE key

Use to switch the remote control to the receiver control mode. → 18 → 36

37 REMOTE SETUP key

Use to register other components. → 39 → 40

38 TV INPUT key

Use to select TV input.

TV MUTE key

Use to temporarily mute the TV sound.

TV MODE key

Use to switch the remote control to the TV control mode.

TV VOLUME Δ/∇ keys

Use to adjust the TV's volume.

Setting up the system

CAUTION

Make sure that the power cord plug is disconnected from the AC wall outlet before proceeding to connections. Also be sure to disconnect the power cord plug from the AC wall outlet before changing connections. For the connections of other system components, see pages 9 to 15.

When connecting an associated system component, be sure to read its instruction manual.

Microcomputer malfunction

If operation is not possible or an erroneous display appears, even though all connections have been made properly, reset the micro computer referring to "In case of difficulty". → [57]

Notes

1. Be sure to turn off the system components before connecting them.
2. Be sure to insert every connection cable completely into the jack. Incomplete connection may result in absence of audio output or production of noise.
3. Be sure to disconnect the power cord from the AC wall outlet before inserting or removing a connection cable.
4. Installation of outdoor antenna is a dangerous work. Please have your dealer or a specialized technician install it.

Analog audio connections

Audio connections are made using RCA pin cords. These cables transfer stereo audio signal in an "analog" form. This means the audio signal corresponds to the actual audio of two channels. These cables usually have 2 plugs on each end, one red for the right channel and one white for the left channel.

These cables are to be prepared separately by the user.

CAUTION

Be sure to adhere to the following, or proper ventilation will be blocked causing damage or fire hazard.

- Do not place any objects impairing heat radiation onto the top of the unit.
- Leave some space around the unit (from the largest outside dimension including projection) equal to or greater than, shown below.

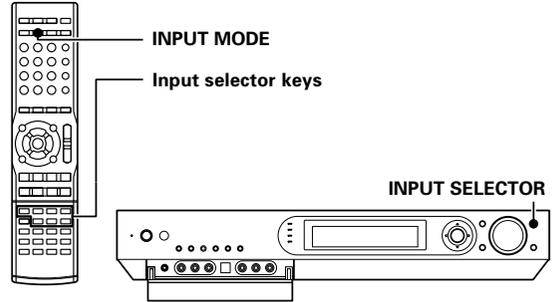
Top panel	: 50 cm (19-11/16")
Side panel	: 10 cm (3-15/16")
Back panel	: 10 cm (3-15/16")

Input mode settings

DVD, VIDEO 1, VIDEO 2, AUX and GAME inputs each include jacks for digital audio input and analog audio input.

The initial factory settings for audio signal playback for DVD, VIDEO 1, VIDEO 2, AUX and GAME are full auto.

After completing connections and turning on the receiver, follow the steps below.



① Use the INPUT SELECTOR key (or input selector keys) to select DVD, VIDEO 1, VIDEO 2, AUX or GAME.

② Press the INPUT MODE key.

Each press switches the setting as follows:

- ① "F-AUTO": Auto detect
("AUTO DETECT" indicator lights up)
 - ② "D-MANUAL": Fixed to digital input
("DIGITAL" indicator lights up)
 - ③ "ANALOG": Fixed to analog input *
("AUTO DETECT", "DIGITAL" indicator goes off)
- * Can not be selected for DTS playback.

Auto detect:

In "F-AUTO (FULL AUTO)" mode ("AUTO DETECT" indicator light up), the receiver detects the digital or analog input signals automatically. The receiver will select the input mode and listening mode automatically during playback to match the type of input signal (Dolby Digital, PCM, DTS) and the speaker setting. → [34]
The "DIGITAL" indicator lights up when a digital signal is detected. The "DIGITAL" indicator is extinguished when no digital signal is detected.

Fixed to digital input:

Select this mode if you want to keep the decoding condition (Dolby Digital, DTS, PCM, etc.) in the current listen mode.

When "D-MANUAL (DIGITAL MANUAL)" mode is selected, the set listen modes may be changed automatically depending on the input signal. → [34]

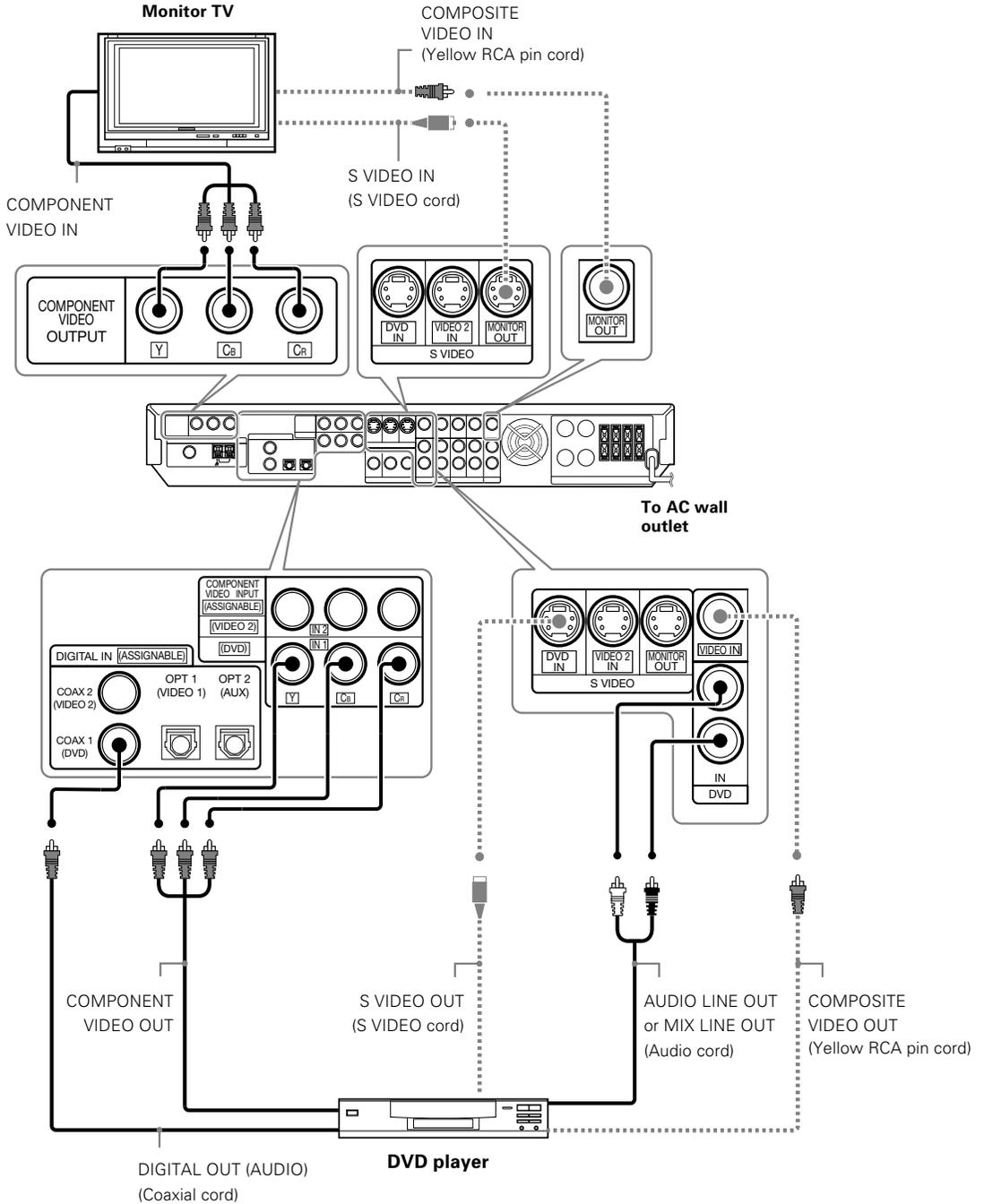
Fixed to analog input:

Select this setting to play analog signals from a VCR, etc.

If the **INPUT MODE** key is pressed quickly, sound may not be produced. Press the **INPUT MODE** key again.

Connecting a DVD player

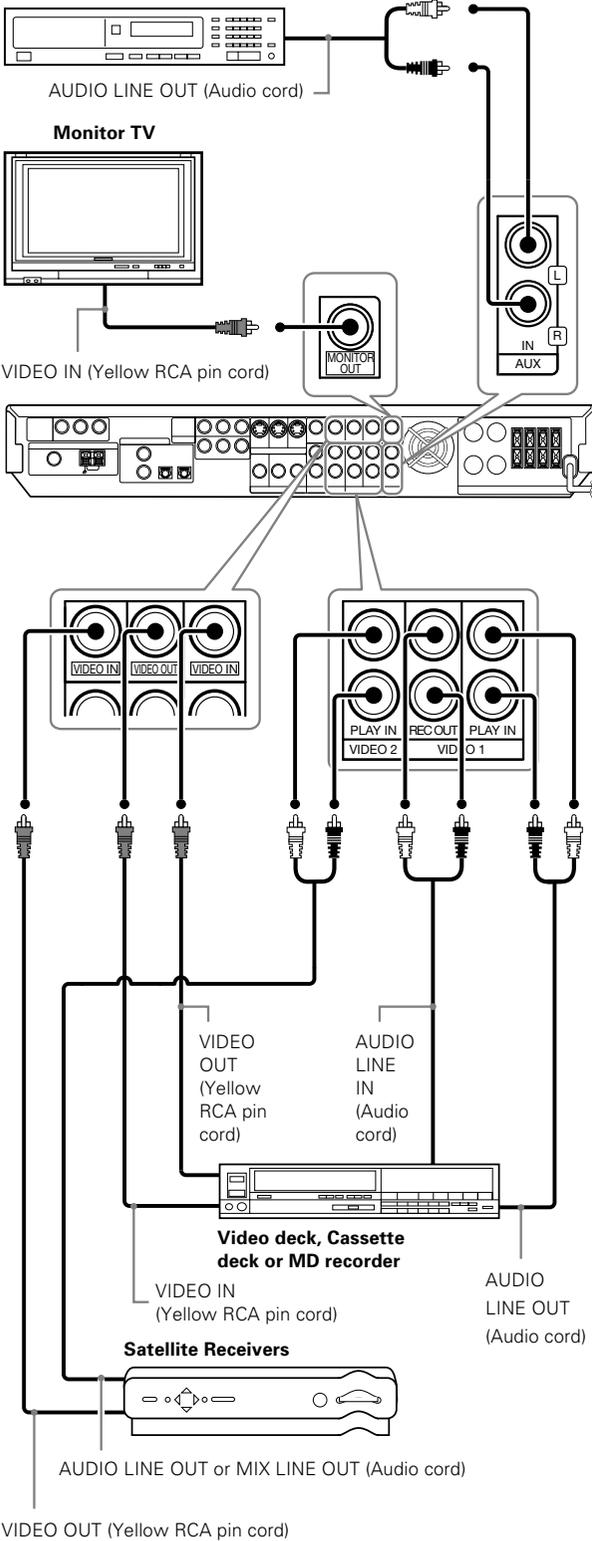
If you have connected a DVD player to the receiver with digital connection, be sure to read the "Input mode settings", "Re-assignment of rear panel jacks" section carefully. → 8 → 22



- Digital audio connections are required when playing multi-channel signals such as the Dolby Digital and DTS signals.
- To play the DVD player connected in this page, select the "DVD" input selector. → 23

Connecting video components, audio components

Audio components

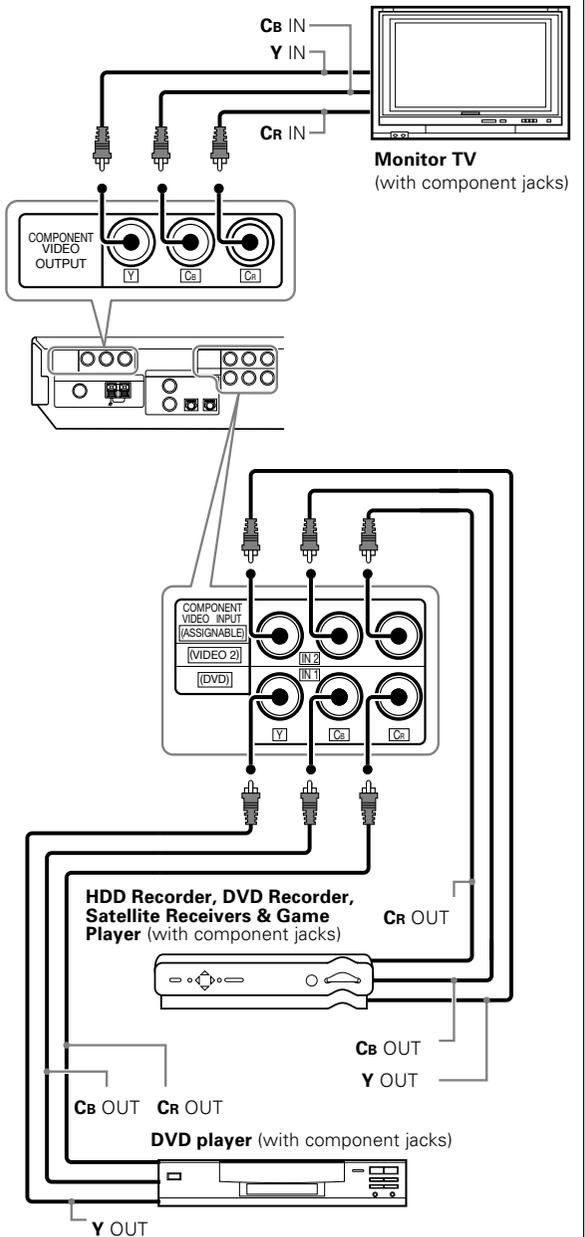


Connecting video components (COMPONENT VIDEO)

If you have connected the receiver to a video component with **COMPONENT** jacks, you can get a better picture quality than by connecting with the **S VIDEO** jacks.

When connecting a video component with **COMPONENT** jacks, see **"Re-assignment of rear panel jacks"** → 22

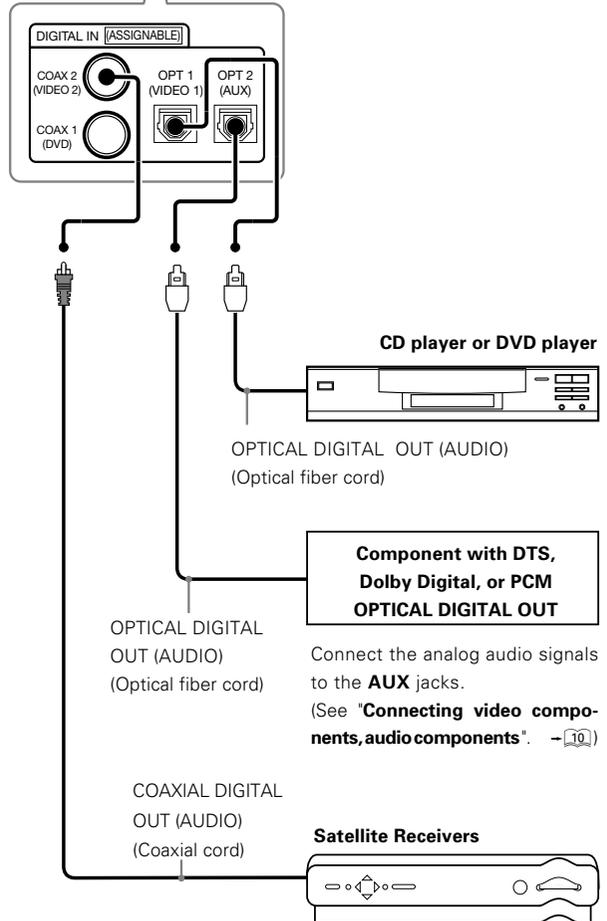
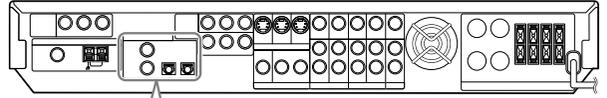
When connecting the TV to the COMPONENT jacks, be sure to connect all the other components to the COMPONENT jacks.



Digital connections

The digital in jacks can accept DTS, Dolby Digital, or PCM signals. Connect components capable of outputting DTS, Dolby Digital or PCM (CD) digital signals.

If you have connected components with digital audio output to the receiver with digital connection, be sure to read the "Input mode settings", "Re-assignment of rear panel jacks" section carefully. - [8] - [22]



Connect the analog audio signals to the **AUX** jacks.
(See "Connecting video components, audio components". - [10])

Connect the video signal and analog audio signals to the **VIDEO 2** jacks.
(See "Connecting video components, audio components". - [10])

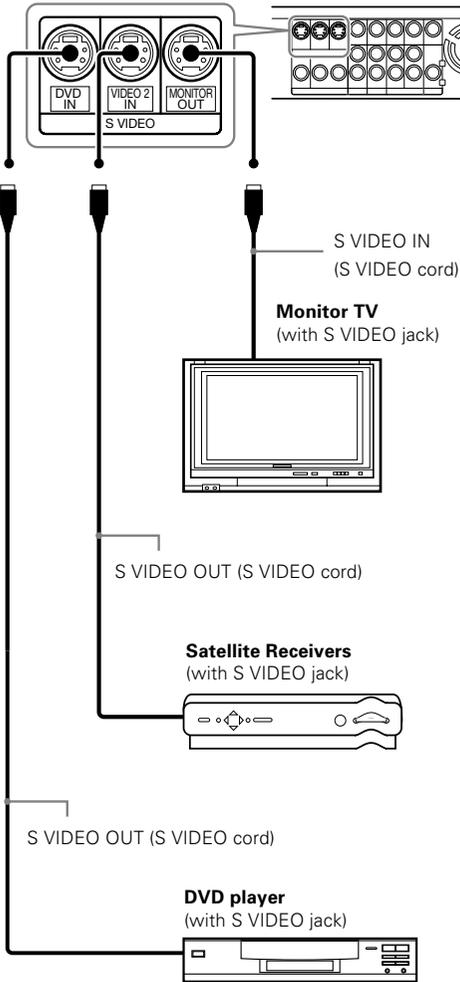
DTS disclaimer clause

When playing DTS-encoded discs, excessive noise will be exhibited from the analog stereo outputs of the CD or DVD player. To enjoy DTS Digital Surround™ playback, this unit must be connected to the digital output of the CD or DVD player.

Connecting video components (S VIDEO)

Use the S VIDEO jacks to make connections to video components with S VIDEO IN/OUT jacks.

- If you connect a video playback component such as a VCR through a S VIDEO cord, be sure to use a S VIDEO cord in connection to the monitor TV.



Connecting the speakers

CAUTION

Make sure that the power cord plug is disconnected from the AC wall outlet before proceeding to speaker cord connections. If the conductor wires on the extremity of speaker cord are untwisted, there is a risk of short-circuiting. Be sure to twist them well before connecting the speaker cord.

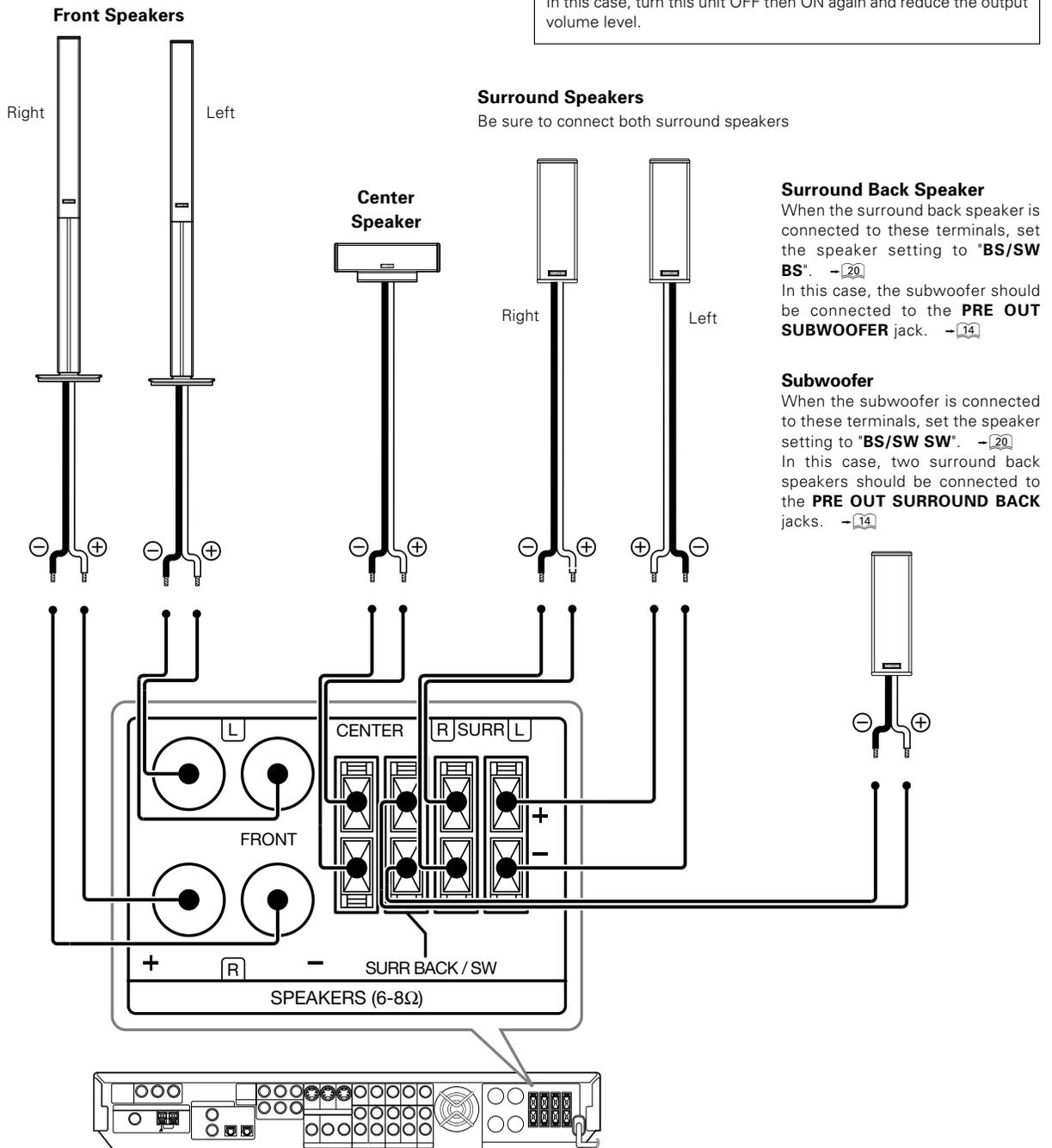
Whether each speaker is connected properly can be confirmed by outputting the test tone and checking if each speaker channel outputs audio. For details, see "Speaker settings" (Step 2 Adjust the speaker volume level). - [20]

Protection circuitry

This unit incorporates protection circuitry, which may be activated during high-power reproduction or in case of extreme rise in temperature.

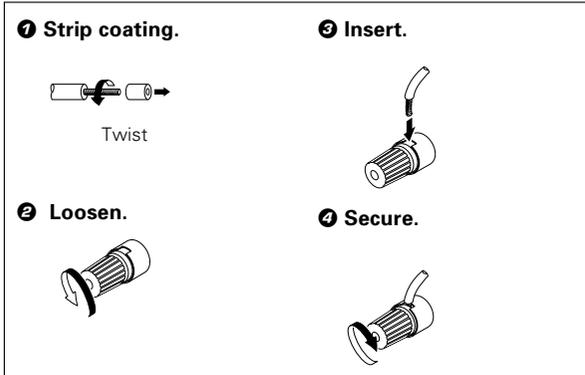
When the protection circuitry is activated, the output from this unit is shut down and the **STANDBY** indicator blinks.

In this case, turn this unit OFF then ON again and reduce the output volume level.

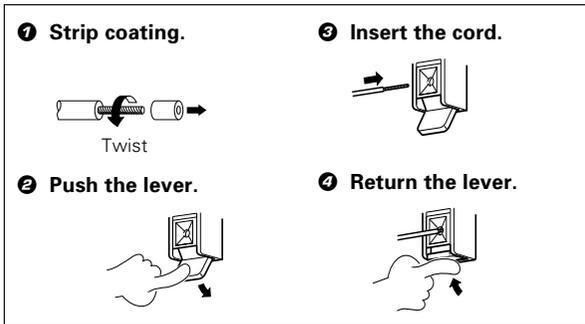


Connecting the speaker terminals

Front



Center, Surround, Surround back, Subwoofer

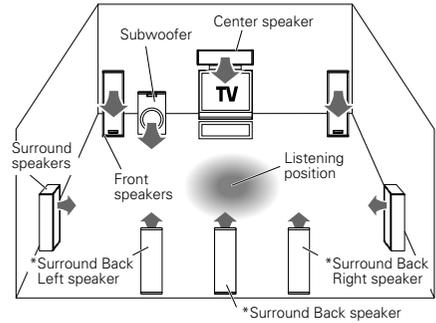


- Never short circuit the + and – speaker cords.
- If the left and right speakers are connected inversely or the speaker cords are connected with reversed polarity, the sound will be unnatural with ambiguous acoustic imaging. Be sure to connect the speakers correctly.

Speaker impedance

After confirming the speaker impedance indications printed on the rear panel of the receiver, connect speakers with matching impedance ratings. Using speakers with a rated impedance other than that indicated on the rear panel of the receiver could result in malfunctions or damage to the speakers or receiver.

Speaker placement



* For Surround Back speaker, you may place either two Surround Back speakers (Surround Back Left speaker and Surround Back Right speaker) for 7.1 channel surround sound system or one Surround Back speaker for 6.1 channel surround sound system.

Front speakers : Place the left and right speakers at each side of your TV. Angle the speakers towards the listening area to enhance the stereo effect.

Center speaker : Place the center speaker on the center between the front left and right speakers. Tilt the speaker upward or downward so that it is directly facing the listening area.

Surround speakers : Place the surround speakers as high as possible, either directly to the sides of the listening area or else slightly behind the listening area. Adjust the angles so that these speakers are facing directly towards the listeners.

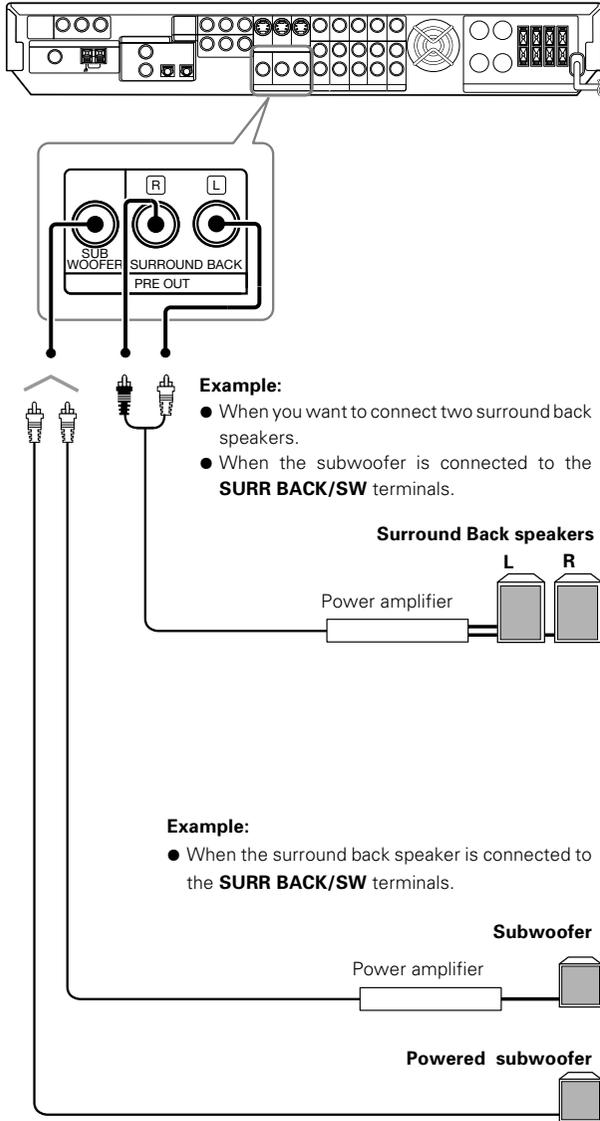
Subwoofer : Usually, place the subwoofer in the front center position in the listening room, near one of the front speakers. (Since the subwoofer has less directivity than other speakers, it can be placed almost in any position that can offer the best low frequency reproduction according to the room layout.)

Surround back speakers : Place the surround back speaker behind the listening position, at the same height as the left and right surround speakers.

- Although the ideal surround system consists of all the speakers listed above, if you don't have a center speaker or a subwoofer, you can divide those signals between the available speakers in the speaker settings steps to obtain the best possible surround reproduction from the speakers you have available. → 18

PRE OUT jacks connections

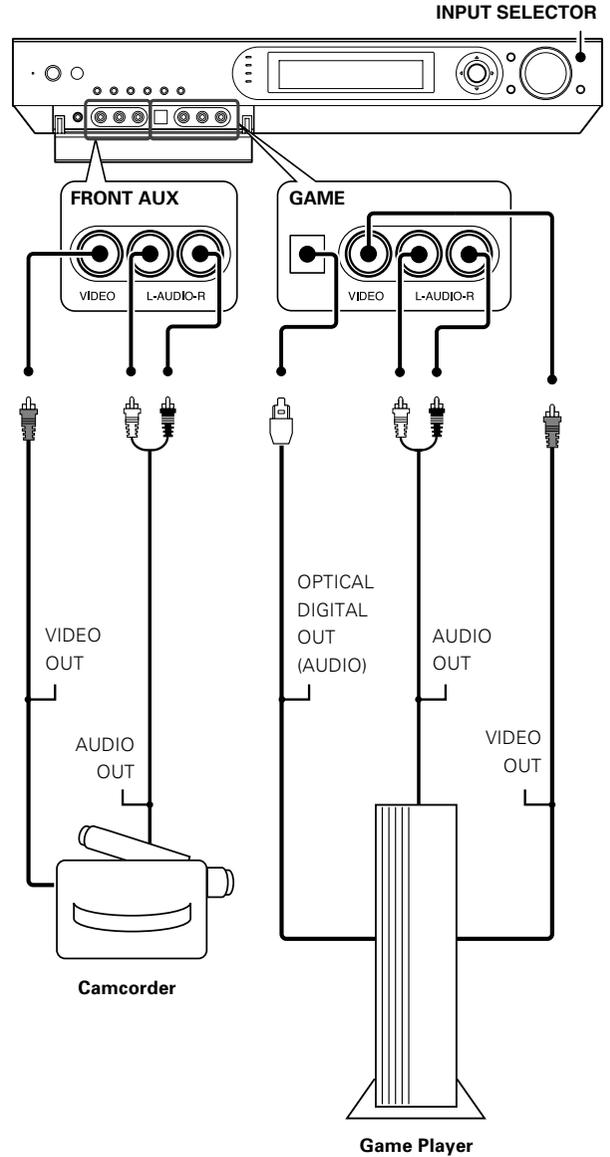
The receiver has additional **PRE OUT** jacks.
 Note that the output from the **PRE OUT** jacks needs to be connected to an external power amplifier.
 If you want to connect surround back speakers to these jacks, be always sure to connect two surround back speakers for the left and right.



● Connecting a speaker cord directly to a PRE OUT jack will not produce any sound from the speaker.

Connecting to the GAME jacks / FRONT AUX jacks

If you use a component that you do not usually connect to the receiver, such as a portable video camera, connect it to the **GAME** or **FRONT AUX** jacks on the front panel of the receiver. These jacks are particularly convenient when dubbing audio/video from a portable video camera.



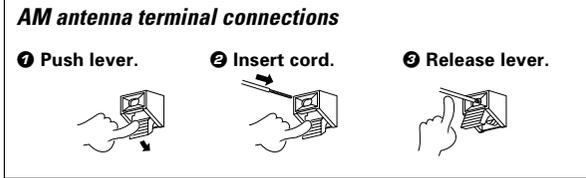
● The DIGITAL IN (OPTICAL) jack in the GAME jack section can be used for connection of digital audio input. This is convenient for playing a video game through the receiver. -21

Connecting the antennas

The broadcast reception cannot be made unless the antennas are connected. Connect the antennas correctly as instructed below.

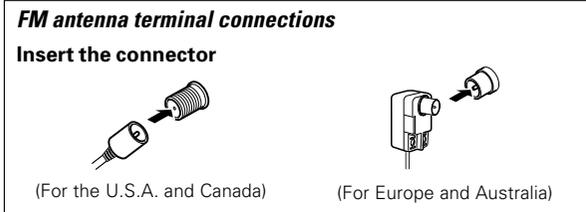
AM loop antenna

The supplied loop antenna is for use indoors. Place it as far as possible from the receiver, TV set, speaker cords and power cord, and adjust the direction for best reception.



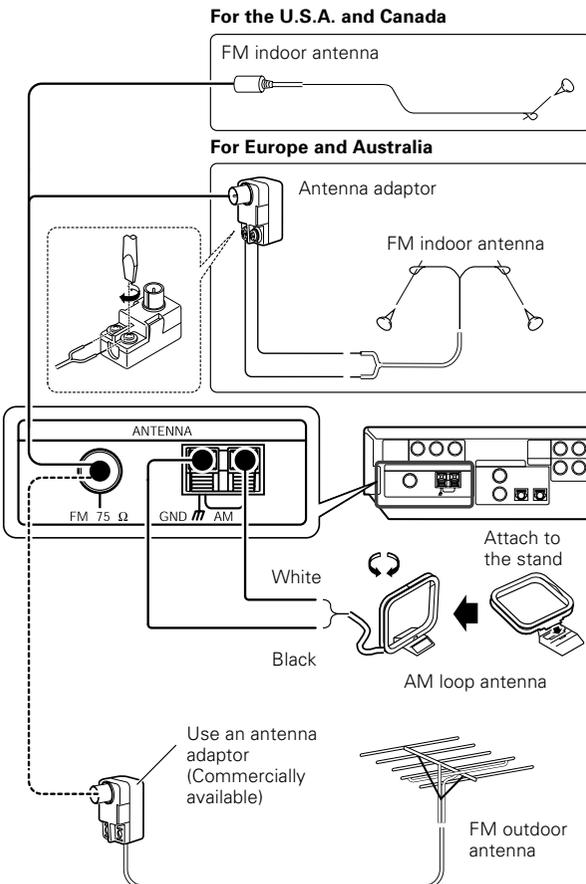
FM indoor antenna

The supplied indoor antenna is for temporary use only. For stable signal reception we recommend using an outdoor antenna. Disconnect the indoor antenna when you connect one outdoors.



FM outdoor antenna

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

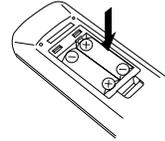
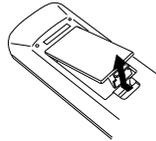


Preparing the remote control

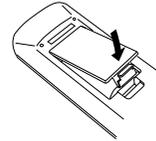
Loading the batteries

① Remove the cover.

② Insert the batteries.



③ Close the cover.

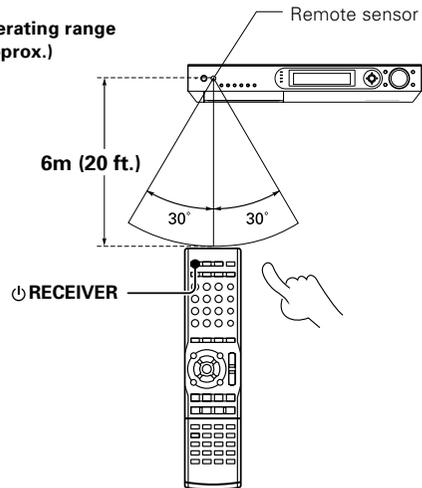


● Insert two AAA-size (R03) batteries as indicated by the polarity markings.

Remote control operation

When the **STANDBY** indicator is lit, the power turns ON when you press the **RECEIVER** on the remote control. When the power comes ON, press the key you want to operate.

Operating range (Approx.)



● When pressing more than one remote control key successively, press the keys securely by leaving an interval of 1 second or more between keys.

Notes

1. The supplied batteries may have shorter lives than ordinary batteries due to use during operation checks.
2. When the remote-controllable distance gets shorter than before, replace both batteries with new ones.

The remote control unit is designed so that the setup codes stored in it are saved even after the batteries are removed for replacement.

3. Placing the remote sensor in direct sunlight, or in direct light from a high frequency fluorescent lamp may cause a malfunction. In such a case, change the location of the system installation to prevent malfunction.

Let's play DVD video software

CAUTION

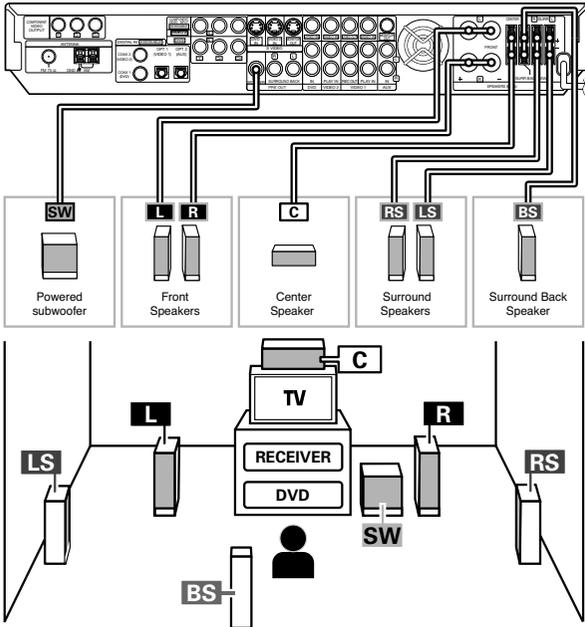
Make sure that the power cord plug is disconnected from the AC wall outlet before proceeding to speaker cord connections. If the conductor wires on the extremity of speaker cord are untwisted, there is a risk of short-circuiting. Be sure to twist them well before connecting the speaker cord.

STEP 1

Connect the speakers, DVD and TV to the receiver.

For details, see "Setting up the system" - 8 ~ 13

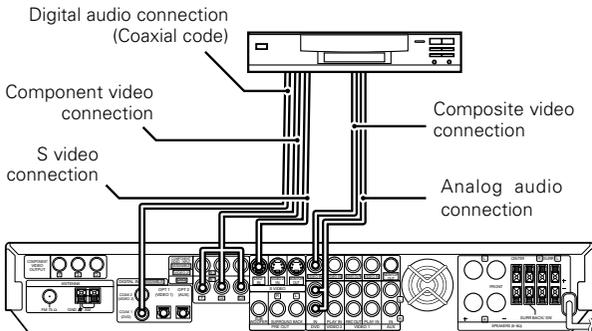
Connection of speakers:



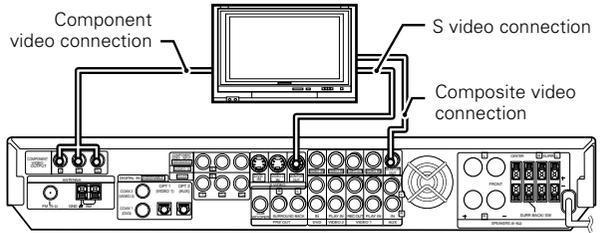
- If you want to connect two surround back speakers (LB and RB) to the **PRE OUT SURROUND BACK** jacks, see "PRE OUT jacks connections". - 14

Connection of DVD player:

For the video input connection from the DVD player and the video output connection to the TV monitor, connect any one in a pair.



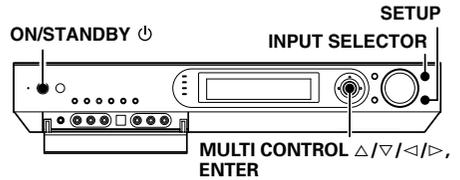
Connection of TV monitor:



STEP 2

Set up the speakers.

For details, see "Speaker settings". - 18 ~ 21



- 1 Connect the power cord to the AC wall outlet and press the **ON/STANDBY** key.
- 2 Press the **SETUP** key, press the **MULTI CONTROL** </> to select "SP SETUP" and press the **ENTER**.

If you connect KENWOOD speaker system:

- 1 Press the **MULTI CONTROL** </> to select the model of the connected speaker system and press the **ENTER**.

- 1 "HTB1 6.1CH": Speaker system **KS-4200EX***.
- 2 "HTB1 5.1CH": Speaker system **KS-2200HT***.
- 3 "HTB2 6.1CH": Speaker system **KS-3200HT*+KS-3200EX***, **KS-5200EX***, **KS-7200HT*+KS-3200EX***.
- 4 "HTB2 5.1CH": Speaker system **KS-3200HT***, **KS-5200HT***, **KS-7200HT***.
- 5 "HTB3 6.1CH": Speaker system **KS-8200EX***.
- 6 "HTB3 5.1CH": Speaker system **KS-8200HT***.

* Model availability may differ depending on the country and sales area.

- When the speaker setting is set to "HTB1 5.1CH", "HTB2 5.1CH" or "HTB3 5.1CH", the **DOLBY PRO LOGIC IIx**, **DTS-ES** and **DOLBY DIGITAL EX** listen modes cannot be selected.
- 2 If your selection is correct, press the **MULTI CONTROL** </> to select "OK" and press the **ENTER**. Now the speaker setup is complete. (Select "CANCEL" to return to the status before setup.)

• More detailed settings such as the volume level of each speaker and distance to each speaker are also available. - 20 ~ 21

Continued to next page

If you use another speaker system want a setup according to it:

❶ Press the MULTI CONTROL ◀ / ▶ to select "CUSTOM" and press the ENTER to select each of the speaker setup items.

❷ Press the MULTI CONTROL ◀ / ▶ to select the speaker setup item.

Press the MULTI CONTROL △ / ▽ to select the setting for each item.

Subwoofer	: "SUBW"	⇒ "ON" or "OFF"
Front speakers	: "FRNT"	⇒ "LRG" or "NML"
Center speaker	: "CNTR"	⇒ "LRG", "NML" or "OFF"
Surround speakers	: "SURR"	⇒ "LRG", "NML" or "OFF"
Back Surround speakers	: "BS"	⇒ "LRG", "NML" or "OFF"
BS/SW Amp	: "BS/SW"	⇒ "BS", "SW" or "OFF"
Subwoofer re-mix setting	: "REMIX"	⇒ "ON" or "OFF"

- "ON" : A subwoofer is connected. Subwoofer re-mix setting mode to the receiver is ON.
- "OFF" : No speaker is connected. Subwoofer re-mix setting mode to the receiver is OFF.
- "LRG" : Relatively large-size speakers.
- "NML" : Normal-size speakers.
- "BS" : A surround back speaker is connected to the SURR BACK/SW terminals.
- "SW" : A subwoofer is connected to the SURR BACK/SW terminals.

- When the subwoofer is set to "SUBW OFF", the front speaker is set automatically to "FRNT LRG".
- Options "LRG" for the center speaker, surround speakers and back surround speakers can be selected only when the front speakers setting is "FRNT LRG". However, when the surround speaker setting is "SURR NML", option "LRG" for the back surround speakers cannot be selected.

Subwoofer re-mix setting

If "REMIX ON" is selected as the subwoofer re-mix setting, the low frequencies are enhanced by adding the low frequencies of other channels to the subwoofer channel depending on the speaker setup.

Example: 5.1 ch Surround System

Subwoofer	: "SUBW"	⇒ "ON"
Front speakers	: "FRNT"	⇒ "LRG"
Center speaker	: "CNTR"	⇒ "NML"
Surround speakers	: "SURR"	⇒ "NML"
Back Surround speakers	: "BS"	⇒ "OFF"
BS/SW Amp	: "BS/SW"	⇒ "OFF"
Subwoofer re-mix setting	: "REMIX"	⇒ "ON"*

Example: 6.1 ch Surround System

Subwoofer	: "SUBW"	⇒ "ON"
Front speakers	: "FRNT"	⇒ "LRG"
Center speaker	: "CNTR"	⇒ "NML"
Surround speakers	: "SURR"	⇒ "NML"
Back Surround speakers	: "BS"	⇒ "NML"
BS/SW Amp	: "BS/SW"	⇒ "BS"
Subwoofer re-mix setting	: "REMIX"	⇒ "ON"*

Example: 7.1 ch Surround System

- Connect two surround back speakers (LB and RB) to the PRE OUT SURROUND BACK jacks, see "PRE OUT jacks connections". - [14]

Subwoofer	: "SUBW"	⇒ "ON"
Front speakers	: "FRNT"	⇒ "LRG"
Center speaker	: "CNTR"	⇒ "NML"
Surround speakers	: "SURR"	⇒ "NML"
Back Surround speakers	: "BS"	⇒ "NML"
BS/SW Amp	: "BS/SW"	⇒ "OFF"
Subwoofer re-mix setting	: "REMIX"	⇒ "ON"*

* When the subwoofer setting is "SUBW ON", front speakers setting is "FRNT LRG" and a stereo source is played, the low frequencies may be reproduced through the front speakers and no audio output from the subwoofer in certain listen modes. In this case, the low-frequency signal can be output from the subwoofer by selecting "REMIX ON" for the subwoofer re-mix setting.

- When the speaker setting is set to "BS OFF", the DOLBY PRO LOGIC IIx, DTS-ES and DOLBY DIGITAL EX listen modes cannot be selected.

❸ After completing the setup, press the ENTER. If your selection is correct, press the MULTI CONTROL △ / ▽ to select "OK" and press the ENTER .

Now the speaker setup is complete. (Select "CANCEL" to return to the status before setup.)

- More detailed settings such as the volume level of each speaker and distance to each speaker are also available. - [20] ~ - [21]

STEP 3

Play a disc on the DVD player.

❶ Press the INPUT SELECTOR key to select "DVD".

❷ Start playback of the DVD player.

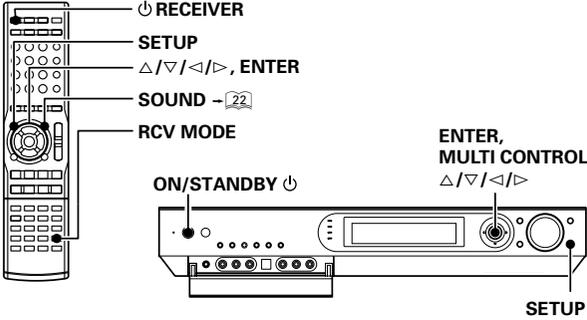
For the operation, also refer to the instruction manual for your DVD player.

- You can select various listen modes to enjoy surround playback of various kinds of video software. - [34]

Preparing for playback

Speaker settings

To enable you to obtain optimum enjoyment from the receiver's listening modes, make sure to complete the speaker settings (subwoofer, front, center, surround and surround back speakers) as described below.



1 Turn on the power to this receiver by pressing the **ON/STANDBY** key (or the **RECEIVER**).

2 If you want to use the remote control unit, press the **RCV MODE** key on the remote to set it to the receiver control mode.

3 Initiate the setup mode.

- 1 Press the **SETUP** key.
- 2 Use the **MULTI CONTROL** $\triangle/\nabla/\triangleleft/\triangleright$ (or the \triangle/∇ keys) for the following displays.

- 1 "SP SETUP"
- 2 "SP LEVEL"
- 3 "DISTANCE"
- 4 "ASSIGN."
- 5 "LFE LEVEL"
- 6 "GAME FUNC"
- 7 "EXIT"

- While the main setup screen is displayed, the setup mode can be canceled by pressing the **SETUP** key or selecting "EXIT" and then pressing the **ENTER**.

4 Select the setup method.

- 1 Select "SP SETUP" and press the **ENTER** to select the speaker setup method.

2 Use the **MULTI CONTROL** \triangle/∇ (or the \triangle/∇ keys) for the following displays.

- 1 "HTB1 6.1CH": Select "HTB1 6.1CH" if you use speaker system **KS-4200EX***.
- 2 "HTB1 5.1CH": Select "HTB1 5.1CH" if you use speaker system **KS-2200HT***.
- 3 "HTB2 6.1CH": Select "HTB2 6.1CH" if you use speaker system **KS-3200HT*+KS-3200EX***, **KS-5200EX*** or **KS-7200HT*+KS-3200EX***.
- 4 "HTB2 5.1CH": Select "HTB2 5.1CH" if you use speaker system **KS-3200HT***, **KS-5200HT*** or **KS-7200HT***.
- 5 "HTB3 6.1CH": Select "HTB3 6.1CH" if you use speaker system **KS-8200EX***.
- 6 "HTB3 5.1CH": Select "HTB3 5.1CH" if you use speaker system **KS-8200HT***.
- 7 "CUSTOM": Select to set up the speakers according to the speaker system in use. (Speaker setup is required every time after the speaker system is changed.)
- 8 "EXIT": Press the **ENTER** again to return to the main setup displays.

* Model availability may differ depending on the country and sales area.

- When the 5.1 channel speaker system configuration is used or the speaker setting is set to "BS OFF", the DOLBY PRO LOGIC IIX, DTS-ES and DOLBY DIGITAL EX listen modes cannot be selected.

If you selected "HTB1 6.1CH", "HTB1 5.1CH", "HTB2 6.1CH", "HTB2 5.1CH", "HTB3 6.1CH" or "HTB3 5.1CH" in the above:

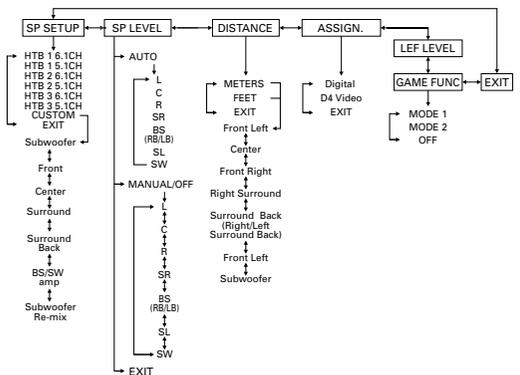
Press the **ENTER**, then press the **MULTI CONTROL** \triangle/∇ (or the \triangle/∇ keys) to select "OK", and press the **ENTER** again to establish the setup.

- Select "CANCEL" to return to the status before setup.
- When you use a KENWOOD speaker system and select "HTB1 6.1CH", "HTB1 5.1CH", "HTB2 6.1CH", "HTB2 5.1CH", "HTB3 6.1CH" or "HTB3 5.1CH" set the speaker setup, the audio will be corrected automatically according to the speaker characteristics.

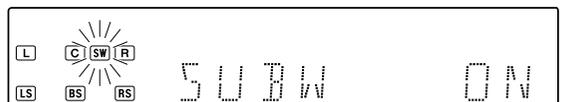
If you selected "CUSTOM" in the above:

Press the **ENTER** to proceed to detailed setups.

The flow of the SETUP is as follows;



- The subwoofer setting indication "SUBW" appears.



Continued to next page

5 Select a speaker system.

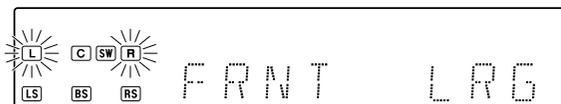
1 Use the MULTI CONTROL Δ / ∇ (or the Δ / ∇ keys) to select the appropriate subwoofer setting.

- ➔ ① "SUBW ON" :
When a subwoofer is connected.
- ➔ ② "SUBW OFF" :
When no subwoofer is connected.

- The initial setting is "SUBW ON".
- When "SUBW OFF" is selected and the selection is established by pressing the MULTI CONTROL \triangleright (or the \triangleright key) in step 2 below, the front speakers are set automatically to "FRNT LRG" and the procedure jumps to step 3.

2 Use the MULTI CONTROL \triangleright (or the \triangleright key) to accept the setting.

- The front speakers setting indication "FRNT" appears.



3 Use the MULTI CONTROL Δ / ∇ (or the Δ / ∇ keys) to select the appropriate front speakers setting.

- ➔ ① "FRNT LRG" :
Large front speakers are connected to the receiver.
- ➔ ② "FRNT NML" :
Average size front speakers are connected to the receiver.

- When the subwoofer setting is "SUBW ON", front speakers setting is "FRNT LRG" and a stereo source is played, the low frequencies may be reproduced through the front speakers and no audio output from the subwoofer in certain listen modes. In this case, set the subwoofer re-mix setting in step 10 to "REMIX ON" to output the low frequencies from the subwoofer.

4 Use the MULTI CONTROL \triangleright (or the \triangleright key) to accept the setting.

- The center speaker setting indication "CNTR" appears.

5 Use the MULTI CONTROL Δ / ∇ (or the Δ / ∇ keys) to select the appropriate center speaker setting.

- ➔ ① "CNTR LRG" :*
A large center speaker is connected to the receiver.
- ➔ ② "CNTR NML" :
An average size center speaker is connected to the receiver.
- ➔ ③ "CNTR OFF" :
When no center speaker is connected.

- * "CNTR LRG" cannot be selected when the front speakers have been set to "FRNT NML".

6 Use the MULTI CONTROL \triangleright (or the \triangleright key) to accept the setting.

- The surround speaker setting indication "SURR" appears.

7 Use the MULTI CONTROL Δ / ∇ (or the Δ / ∇ keys) to select the appropriate surround speaker setting.

- ➔ ① "SURR LRG" :*
Large surround speakers are connected to the receiver.
- ➔ ② "SURR NML" :
Average size surround speakers are connected to the receiver.
- ➔ ③ "SURR OFF" :
When no surround speakers are connected.

- * "SURR LRG" cannot be selected when the front speakers have been set to "FRNT NML".

- When "SURR OFF" is selected and the selection is established by pressing the MULTI CONTROL \triangleright in step 8 below, the procedure jumps to step 9. However, if the subwoofer setting is "SUBW OFF", the procedure jumps to step 10 so that you can complete the speaker setup and proceed to the speaker volume level adjustment in step 11.

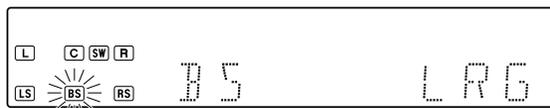
8 Use the MULTI CONTROL \triangleright (or \triangleright key) to accept the setting.

- The surround back speaker setting indication "BS" appears.

9 Use the MULTI CONTROL Δ / ∇ (or the Δ / ∇ keys) to select appropriate surround back speaker setting.

- ➔ ① "BS LRG" :*
Large surround back speaker is connected to the receiver.
- ➔ ② "BS NML" :
Average size surround back speaker is connected to the receiver.
- ➔ ③ "BS OFF" :
When no surround back speakers is connected.

- * "BS LRG" cannot be selected when the surround speaker have been set to "SURR NML".



10 Use the MULTI CONTROL \triangleright (or the \triangleright key) to accept the setting.

- The surround back speaker and subwoofer setting mode indication "BS/SW" appears.

12 Use the MULTI CONTROL Δ / ∇ (or the Δ / ∇ keys) to select the appropriate BS/SW amp setting.

① "BS/SW BS":

Select this setting when a surround back speaker is connected to the **SURR BACK/SW** terminals. In this case, the subwoofer signal will be output from the **PRE OUT SUBWOOFER** jack.

② "BS/SW SW":

Select when the subwoofer speaker is connected to the **SURR BACK/SW** terminals. In this case, the surround back signals will be output from the **PRE OUT SURROUND BACK** jacks.

③ "BS/SW OFF":

Select when no speaker is connected to the **SURR BACK/SW** terminals. In this case, the subwoofer signal will be output from the **PRE OUT SUBWOOFER** jack and the surround back signals will be output from the **PRE OUT SURROUND BACK** jacks.

- If "BS/SW BS" is selected, only one surround back speaker can be connected to the receiver.
- If "BS/SW SW" or "BS/SW OFF" is selected, two surround back speakers can be connected to the **PRE OUT SURROUND BACK** jacks through an external power amplifier. 

13 Use the MULTI CONTROL \triangleright (or the \triangleright key) to accept the setting.

- The subwoofer re-mix setting indication "REMIX" appears.

13 Use the MULTI CONTROL Δ / ∇ (or the Δ / ∇ keys) to select the appropriate subwoofer re-mix setting.

If "REMIX ON" is selected as the subwoofer re-mix setting, the low frequencies are enhanced by adding the low frequencies of other channels to the subwoofer channel depending on the speaker setup.

① "REMIX ON":

Subwoofer re-mix setting mode to the receiver is ON.

② "REMIX OFF":

Subwoofer re-mix setting mode to the receiver is OFF.

- The initial setting is "REMIX ON".
- The subwoofer re-mix setting is possible only when the subwoofer setting is "SUBW ON" and the front speaker setting is "FRNT LRG".

14 Press the ENTER. If your selection is correct, press the MULTI CONTROL Δ / ∇ (or the Δ / ∇ keys) to select "OK".

Press the ENTER again to return to the main setup displays.

- Select "CANCEL" and press the ENTER to return to the status before setup.

6 Adjust the speaker volume level.

From your usual listening position, adjust the volume levels. The volume levels from each speaker should be the same.

- In steps 6, indications appear only for the selected channels of the speakers that require adjusting.

1 Use the MULTI CONTROL \triangleleft / \triangleright (or the \triangleleft / \triangleright keys) to select "SP LEVEL" on setup displays, and press the ENTER.

2 Use the MULTI CONTROL \triangleleft / \triangleright (or the \triangleleft / \triangleright keys) to select "AUTO", "MANUAL" or "OFF".

① "AUTO": Select this setting to adjust the speaker volume levels using the test tone. The test tone will be output from every speaker channel in automatic sequence.

② "MANUAL": Select to select the speaker channel to output the test tone using the MULTI CONTROL \triangleleft / \triangleright (or the \triangleleft / \triangleright keys).

③ "OFF": Select to adjust the speaker volume levels using the current output signals. The speaker channel to output the output signal can be selected using the MULTI CONTROL \triangleleft / \triangleright (or the \triangleleft / \triangleright keys).

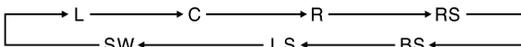
④ "EXIT": Press the ENTER again to return to the main setup displays.

When "AUTO" or "MANUAL" is selected and the ENTER is pressed again, the test tone output will start.

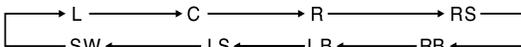
Use the MULTI CONTROL Δ / ∇ (or the Δ / ∇ keys) to adjust the volume level of the test tone output from the speaker channel to be adjusted.

For "AUTO" selection, the first test tone is heard from the front left speaker for 2 seconds. The next test tone is heard from the speakers in the following sequence for 2 seconds each.

When the "BS/SW BS" has been selected:



When the "BS/SW SW" or "BS/SW OFF" has been selected:



The channel indication blinks while the test tone is being output.



- When a speaker setup is set to off the volume level for the corresponding speakers is reset to 0 dB.

When "MANUAL" or "OFF" is selected, press the MULTI CONTROL \triangleleft / \triangleright (or the \triangleleft / \triangleright keys) to select the speaker channel and then press the MULTI CONTROL Δ / ∇ (or the Δ / ∇ keys) to adjust the speaker volume level.

3 Press the ENTER again to return to the main setup displays.

- The test tone is turned off and return to the main setup displays.

7 Input the distance to the speakers.

This setting allows the signals output from different speakers to reach the listening position simultaneously.

- In steps 7, indications appear only for the selected channels of the speakers that require adjusting.

Measure the distance from the listening position to each of the speakers.

Jot down the distance to each of the speakers.

Distance to Front speaker (L)	: ___ feet (meters)
Distance to Center speaker (C)	: ___ feet (meters)
Distance to Front speaker (R)	: ___ feet (meters)
Distance to Surround speaker (RS)	: ___ feet (meters)
Distance to Surround back speaker (RB)	: ___ feet (meters)
Distance to Surround back speaker (LB)	: ___ feet (meters)
Distance to Surround speaker (LS)	: ___ feet (meters)
Distance to Subwoofer (SW)	: ___ feet (meters)

- 1 Use the MULTI CONTROL \triangleleft / \triangleright (or the \triangleleft / \triangleright keys) to select "DISTANCE" on setup displays, and press the ENTER.

- 2 Use the MULTI CONTROL \triangleleft / \triangleright (or the \triangleleft / \triangleright keys) to select the unit and press the ENTER.

- 1 "METERS"
- 2 "FEET"
- 3 "EXIT": Press the ENTER again to return to the main setup displays.

- 3 Use the MULTI CONTROL \triangleleft / \triangleright (or the \triangleleft / \triangleright keys) to select the speakers and the MULTI CONTROL \triangle / ∇ (or the \triangle / ∇ keys) to adjust the distance to the front speakers.

The speaker indicator to be adjusted blinks.

- The speakers you have selected should appear on the display. Confirm that all the speakers have been correctly selected.



Indication in meters

- The allowable setting range is 1 to 30 feet (0.3 to 9.0 m), adjustable in 1 foot (0.3 m) increments.

- 4 Repeat steps 3 to input the distance for each of the speakers.

- 5 Press the ENTER again to return to the main setup displays.

8 Adjust the LFE LEVEL (Low Frequency Effects level).

Adjust the level of the low-frequency fields effect (LFE) signal, which is the signal used exclusively for giving the field effect of bass tone, in the Dolby Digital or DTS signal.

- 1 Use the MULTI CONTROL \triangleleft / \triangleright (or the \triangleleft / \triangleright keys) to select "LFE LEVEL" on setup displays, and press the ENTER.

- 2 Use the MULTI CONTROL \triangle / ∇ (or the \triangle / ∇ keys) to adjust the LFE LEVEL.



- The LFE LEVEL is adjusted from 0dB to -10dB in 1dB step decrements.

- 3 Press the ENTER again to return to the main setup displays.

9 Set up the GAME jacks on the front panel.

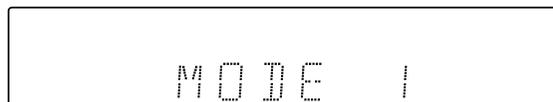
Perform the setup for convenience of playing a video game using the receiver.

- 1 Use the MULTI CONTROL \triangleleft / \triangleright (or the \triangleleft / \triangleright keys) to select "GAME FUNC" on setup displays, and press the ENTER.

- 2 Press the MULTI CONTROL \triangle / ∇ (or the \triangle / ∇ keys) to select the game mode.

- 1 "MODE 1" :
When the connected game machine is turned ON, the input selector is switched automatically to "GAME". In addition, the ACTIVE EQ function is switched to "EQ GAME" and the listen mode is switched to the appropriate mode for games.
- 2 "MODE 2" :
When the connected game machine is turned ON, the input selector is switched automatically to "GAME".
- 3 "OFF" :
The game mode is switched OFF.

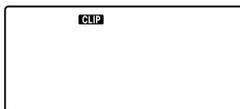
- The game mode is not activated if no video signal is input to the VIDEO jack in the GAME jack section.
- The game mode is not activated when the DUAL SOURCE function is switched ON. → [24]



- 3 Press the ENTER again to return to the main setup displays.

Input level adjustment (analog sources only)

If the input level of an analog source signal is too high, the "CLIP" indicator will light up. Adjust the input level.



- ❶ Press the **RCV MODE** key on the remote control unit to set it to the receiver control mode.
- ❷ Press the **SOUND** key.
- ❸ Use the **MULTI CONTROL** </> (or the </> keys) to select "INPUT", and press the **ENTER**.
- ❹ Use the **MULTI CONTROL** Δ / ▽ (or the Δ / ▽ keys) to adjust the input level.



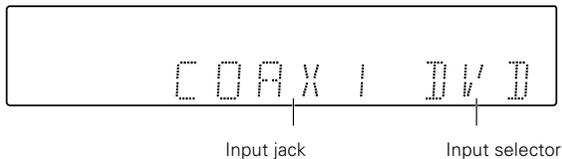
- The adjustment mode is displayed for approximately 20 seconds.
 - The input level may be adjusted to any one of three settings: 0dB, -3dB, and -6dB. (The initial setting is 0dB.)
 - You can store a separate input level for each input selector.
- ❺ Press the **SOUND** key again to return to the input indication.

Re-assignment of rear panel jacks

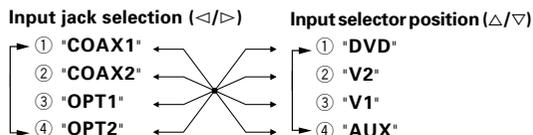
The assignment of the input selector positions to the digital audio and component video input jacks can be changed as desired.

- ❶ Press the **SETUP** key.
- ❷ Use the **MULTI CONTROL** </> (or the </> keys) to select "ASSIGN." on setup displays, and press the **ENTER**.
- ❸ Use the **MULTI CONTROL** </> (or the </> keys) to select "DIGITAL" or "COMPONENT", and press the **ENTER**.
 - ❶ "DIGITAL": Select to change the assignment of the digital audio input jacks of the receiver.
 - ❷ "COMPONENT": Select to change the assignment of the component video input jacks of the receiver.
 - ❸ "EXIT": Press the **ENTER** again to return to the main setup displays.

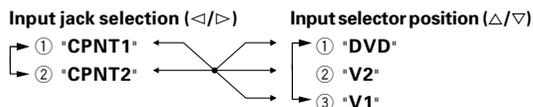
- ❹ Press the **MULTI CONTROL** </> (or the </> keys) to select the input jack name and then press the **MULTI CONTROL** Δ/▽ (or the Δ/▽ keys) to select the input selector position.



When the "DIGITAL" has been selected:



When the "COMPONENT" has been selected:



Use the following table for your memorandum.

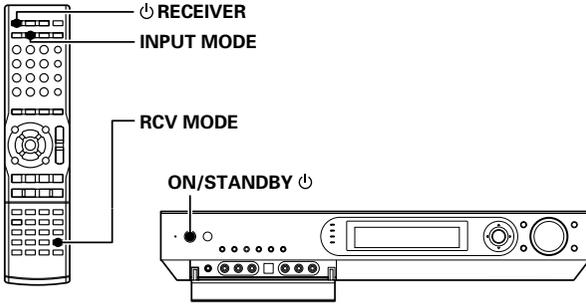
Jack name	Assigned input selector
COAX1 (DVD)	
COAX2 (VIDEO 2)	
OPT1 (VIDEO 1)	
OPT2 (AUX)	
COMPONENT VIDEO INPUT IN1 (DVD)	
COMPONENT VIDEO INPUT IN2 (VIDEO 2)	

- It is not permitted to assign two input selector positions for one input jack.

- ❺ Repeat step ❹ until you have assigned the desired jacks to the desired input selector positions.
- ❻ Press the **ENTER** again to return to the main setup displays.

Normal playback

Some preparatory steps are needed before starting playback.



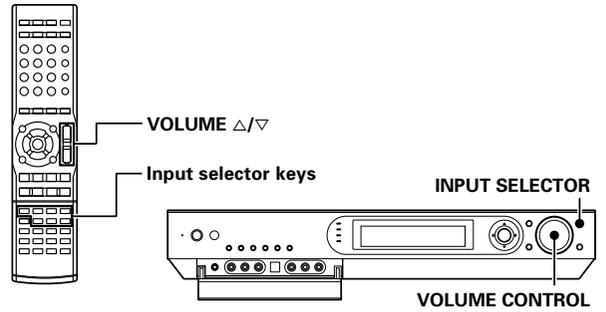
Turning on the receiver

- 1 Turn on the power to the related components.
- 2 Turn on the power to this receiver by pressing the ON/STANDBY ϕ key (or the ϕ RECEIVER key).

Selecting the input mode

If you have selected a component connected to the COAX 1 (DVD), COAX 2 (VIDEO 2), OPT 1 (VIDEO 1), OPT 2 (AUX) or DIGITAL IN (OPTICAL) jacks, make sure that the input mode setting is correct for the type of audio signal to be used. → 8

Listening to a source component



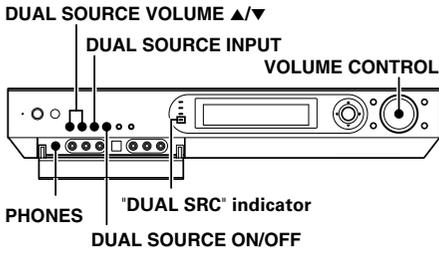
- 1 Press the INPUT SELECTOR key (or the input selector keys/DVD, VIDEO 1, VIDEO 2, AUX, F.AUX, GAME, TUNER) to select the source you want to listen to.

- 1 Tuner (FM/AM broadcast reception)
- 2 "DVD"
- 3 "VIDEO1"
- 4 "VIDEO2"
- 5 "GAME"
- 6 "FRONT AUX"
- 7 "AUX"

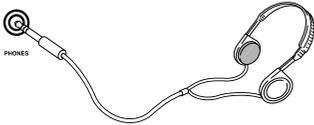
- 2 Start playback from the selected source.

- 3 Use the VOLUME CONTROL knob (or the VOLUME Δ/∇ keys) to adjust the volume.

Listening with headphones



- 1 Connect headphones to the PHONES jack.

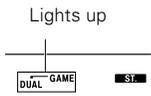


- 2 Use the VOLUME CONTROL knob (or the VOLUME ▲/▼ keys) to adjust the volume.

Playing difference sources through speakers and headphones (DUAL SOURCE function)

While you enjoy audio listening through the speakers, another person can enjoy another source (audio + video) through headphones by connecting the source to the **GAME** or **FRONT AUX** jacks.

- 1 Connect headphones to the PHONES jack.
- 2 Press the DUAL SOURCE ON/OFF key to switch the DUAL SOURCE function ON.
 - When the DUAL SOURCE function is ON, the video and headphone outputs reproduce only the second input source of the DUAL SOURCE function. At this time, the audio from the main source, which is selected with the input selector, continues to be monitored through the speakers. Switching the DUAL SOURCE function OFF restores the main input source signals to the video and headphone outputs.



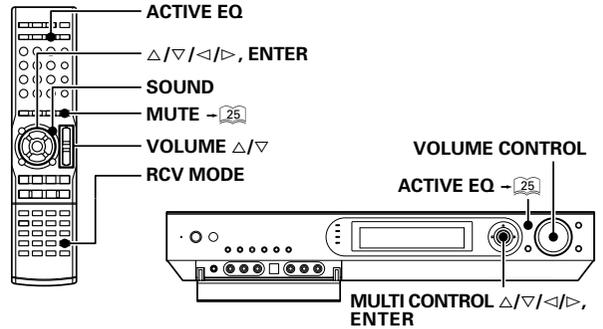
- 3 Press the DUAL SOURCE INPUT key to select the second input source for the DUAL SOURCE function.

- 1 "GAME" :
The "GAME" input is selected as the second input source for the DUAL SOURCE function.
- 2 "F. AUX" :
The "F. AUX" input is selected as the second input source for the DUAL SOURCE function.

- 4 Press the DUAL SOURCE VOLUME ▲ / ▼ to adjust the headphone listening volume.

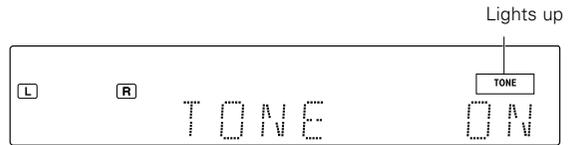
- When the DUAL SOURCE function is ON, the input mode for the second input source is fixed at "ANALOG". The listen mode cannot be changed. → [8] → [34]

Adjusting the sound

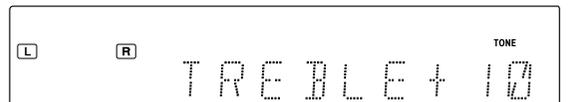


Adjusting the TONE (PCM stereo and analog stereo mode only)

- 1 Press the RCV MODE key on the remote control unit to set it to the receiver control mode.
- 2 Press the SOUND key.
- 3 Use the MULTI CONTROL ◀ / ▶ (or the ◀ / ▶ keys) to select "TONE", and press the ENTER.
- 4 Use the MULTI CONTROL ▲ / ▼ (or the ▲ / ▼ keys) to select "TONE ON", and press the ENTER.



- 5 Use the MULTI CONTROL ◀ / ▶ (or the ◀ / ▶ keys) to select "BASS" or "TREBLE".
 - 1 "BASS" :
Select this to adjust the low frequency range.
 - 2 "TREBLE" :
Select this to adjust the high frequency range.
- 6 Use the MULTI CONTROL ▲ / ▼ (or the ▲ / ▼ keys) to adjust the sound quality.



- 7 Repeat steps 5 and 6 as required.
 - The bass and treble levels are adjustable from -10 to +10 in 2 step increments.
 - The adjustment item is displayed for approximately 20 seconds.
- 8 Press the SOUND key again to return to the input indication.

ACTIVE EQ mode

You can enjoy a more impressive sound effect when ACTIVE EQ is turned ON.

Press the **ACTIVE EQ** key for the following selections:

- ① **"EQ MUSIC"** : (The **"ACTIVE EQ"** indicator lights up)
Effective when listening to music.
- ② **"EQ CINEMA"** : (The **"ACTIVE EQ"** indicator lights up)
Effective when watching a movie.
- ③ **"EQ GAME"** : (The **"ACTIVE EQ"** indicator lights up)
Effective when playing a game.
- ④ **"EQ OFF"** : (The **"ACTIVE EQ"** indicator goes off)
The ACTIVE EQ function is turned OFF.

- The ACTIVE EQ function is not available in when the REC MODE or virtual mode is ON.

Muting the sound

The **MUTE** key lets you mute the sound of the speakers or headphones.

Press the **MUTE** key.



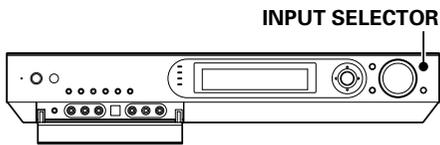
To cancel

Press the **MUTE** key again so that the **"MUTE"** indicator goes off.

- MUTE ON can also be deactivated by turning the **VOLUME CONTROL** knob (or pressing the **VOLUME** Δ/∇ keys).

Recording

Analog sources



- 1 Use the **INPUT SELECTOR** key (or the input selector key) to select the source (other than "VIDEO 1") you want to record.
- 2 Put the component connected to the **VIDEO 1** jacks to the record-pause mode.
- 3 Start playback, then start recording.
 - Recording may not be normal for some video software. This is due to the copy guard condition.

Digital sources

Switch on the REC MODE to record a digital input source. When the digital input source changes during recording in the REC MODE, the audio signal may be interrupted momentarily.



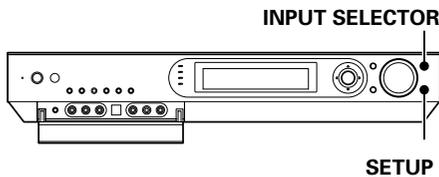
The display switches automatically.

- 4 Start playback, then start recording.

Recording music in REC mode

When a multi-channel source such as the Dolby Digital or DTS input signal is recorded in REC mode, the multi channel signal in the current surround mode can be recorded down-mixed to 2-channel.

- DTS 5.1 MUSIC DISC (DTS CD) cannot be recorded.



- 1 Use the **INPUT SELECTOR** key (or the input selector keys) to select the source ("DVD", "VIDEO 2", "AUX" or "GAME") you want to record.
- 2 Put the component connected to the **VIDEO 1** jacks to the record-pause mode.
- 3 Press and hold the **SETUP** key for more than 2 seconds to select the "REC MODE".

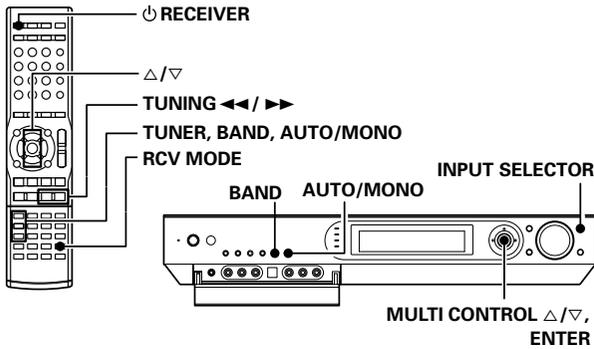
- 1 REC mode off
- 2 "REC MODE": REC mode on

Multi-channel digital signals (DTS or Dolby Digital) are down-mixed to 2-channel before being output from the analog recording (REC OUT) jacks.

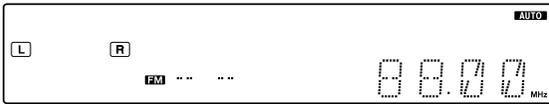
Listening to radio broadcasts

The receiver can store up to 40 stations in the memory and recall them by one-touch operation. Radio stations can be classified into RDS (Radio Data System) stations and other stations. To listen to or store RDS stations in the preset memory see "Using RDS (Radio Data System) (For Europe and Australia)". → 29

Tuning (non-RDS) radio stations



- 1** Use the **INPUT SELECTOR** key (or the **TUNER** key) to select the tuner.
 - 2** Use the **BAND** key to select the desired broadcast band.
- Each press switches the band.



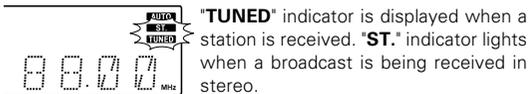
- 3** Use the **AUTO/MONO** key to select the desired tuning method.
- Each press switches the tuning method to either auto or manual tuning.

- ① Auto tuning:
The "AUTO" indicator lights up.
- ② Manual tuning:
The "AUTO" indicator goes off.



- Normally, set to "AUTO" (auto tuning). If the radio waves are weak and there is a lot of interference, switch to manual tuning. (With manual tuning, stereo broadcasts will be received in monaural.)

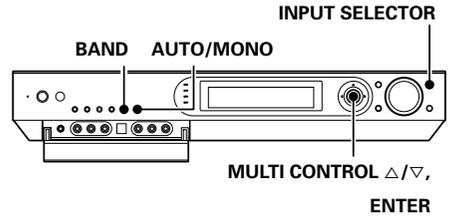
- 4** Use the **MULTI CONTROL** Δ/∇ (or the Δ/∇ keys, **TUNING** \leftarrow/\rightarrow) to select the station.



Auto tuning:
The next station is tuned automatically.

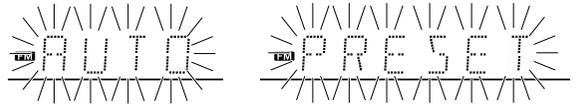
Manual tuning:
Use the **MULTI CONTROL** Δ/∇ (or the Δ/∇ keys) to select the desired station.

Presetting radio stations



Collective presetting of stations (For U.S.A. and Canada)

- 1** Use the **INPUT SELECTOR** key (or the **TUNER** key) to select the tuner.
- 2** Use the **BAND** key to select the broadcast band to "FM".
- 3** Press and hold the **ENTER** for more than 2 seconds.

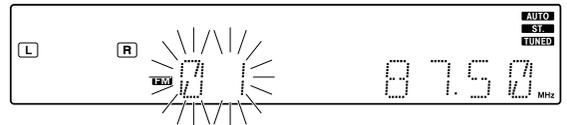


The "AUTO" display and "PRESET" display appear alternately.

- A maximum of 40 stations of the band presently being received will be preset.
- Use the Manual Preset function if a desired FM station cannot be preset using the Auto Preset function or when it is required to preset AM stations.

Presetting radio stations manually

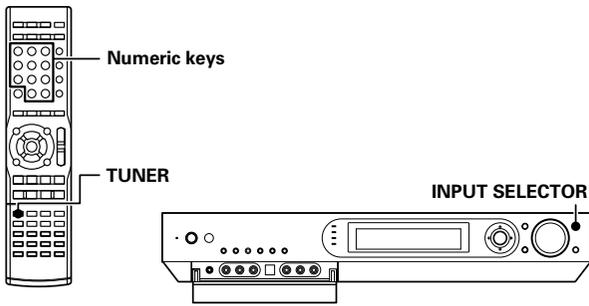
- 1** Tune to the station you want to store.
- 2** Press the **ENTER** while receiving the station.



Proceed to step **3** within 20 seconds. (If more than 20 seconds elapse, press the **ENTER** again).

- 3** Use the **MULTI CONTROL** Δ/∇ (or the Δ/∇ keys) to select one of the station presets (1 – 40).
- 4** Press the **ENTER** again to confirm the setting.
 - Repeat steps **1**, **2**, **3**, and **4** to store as many stations as necessary.
 - If you store a station at a previously used preset, the old station will be replaced by the new one.

Receiving preset stations



1 Use the **INPUT SELECTOR** key (or the **TUNER** key) to select tune as the source.

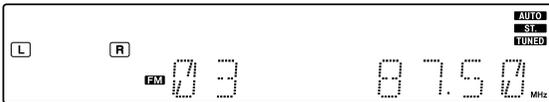
2 Enter the number of the preset station you want to receive (up to "40").

Press the numeric keys in the following order:

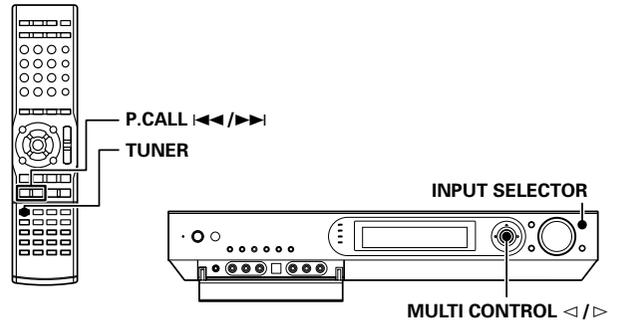
For "15", press **+10**, **5**

For "20", press **+10**, **+10**, **0**

- If you make a mistake entering a two digit number, press the **+10** key repeatedly to return to the original display and start again.



Receiving preset stations in order (P.CALL)

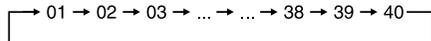


1 Use the **INPUT SELECTOR** key (or the **TUNER** key) to select tune as the source.

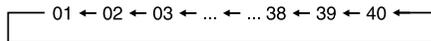
2 Use the **MULTI CONTROL** $\triangleleft/\triangleright$ (or the **P.CALL** $\triangleleft\triangleleft/\triangleright\triangleright$ keys) to select the desired station.

- Each time you push the Joystick, another preset station is received in order.

Pushing the Joystick to \triangleright does the following:



Pushing the Joystick to \triangleleft does the following:



Holding the Joystick on \triangleright or \triangleleft direction, lets you skip through the presets, receiving each preset station at 0.5 second intervals.

Using RDS (Radio Data System) (For Europe and Australia)

Before using a function utilizing the RDS, be sure to perform the RDS Auto Memory operation by referring to the description in "Presetting RDS stations (RDS AUTO MEMORY)".

RDS is a system that transmits useful information (in the form of digital data) for FM broadcasts along with the broadcast signal. Tuners and receivers designed for RDS reception can extract the information from the broadcast signal for use with various functions, such as automatic display of the station name.

RDS functions:

PTY (Program TYPe Identification) Search

-30

Automatically tunes to a station that is currently broadcasting the specified program type (genre).

PS (Program Service Name) Display

Automatically displays the station name transmitted by the RDS station.

RDS AUTO MEMORY function

Automatically selects and stores up to 40 RDS stations in the preset memory.

If fewer than 40 RDS stations have been stored in the preset memory, regular FM stations will be stored in the remaining places.

Radio Text function

Displays the radio text data transmitted by some RDS stations when you press the **RDS DISP.** (display) key. There is "NO RT" if no text data is transmitted.

The "RDS" indicator lights up when an RDS broadcast (signal) is received.

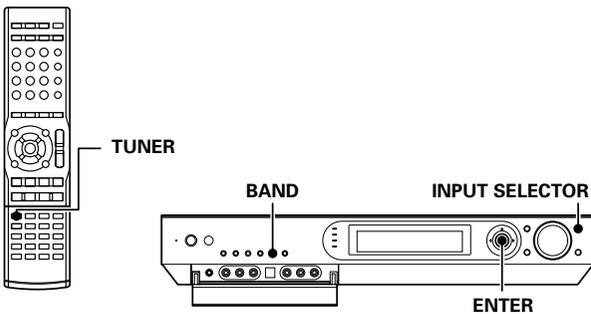


Note

Some functions and function names may differ for certain countries and areas.

Presetting RDS stations (RDS AUTO MEMORY)

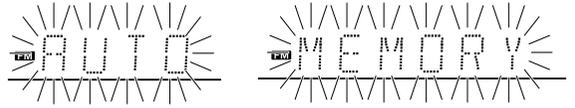
This function automatically stores up to 40 RDS stations in the preset memory. In order to use the PTY function, the RDS stations must be stored in the preset memory using the RDS Auto Memory function.



1 Use the **INPUT SELECTOR** key (or the **TUNER** key) to select tuner as the source.

2 Use the **BAND** key to select the broadcast band to "FM".

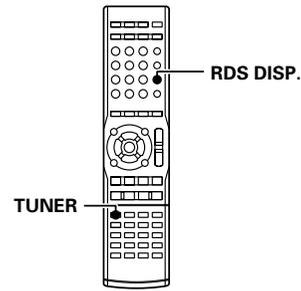
3 Press the **ENTER** key continuously for more than 2 seconds will start **AUTO MEMORY**.



The "AUTO" display and "MEMORY" display appear alternately.

- After a few minutes, up to 40 RDS stations are preset in order from channel "01".
- Stations already stored in the preset memory may be replaced by RDS stations. (i.e., If the RDS AUTO MEMORY function detects 15 RDS stations, the stations currently preset at numbers 01~15 will be replaced by the RDS stations.)

Using the RDS DISP. (Display) key



Pressing the **RDS DISP.** key changes the contents of the display.

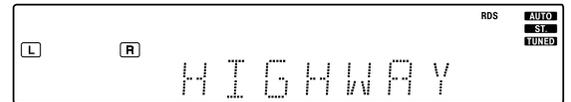
Each press switches the display mode as follows :

- 1 PS (Program Service name) display
- 2 RT (Radio Text) display
- 3 Frequency display

1 PS (Program Service name) display :

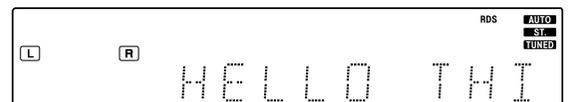
The station name is displayed automatically when an RDS broadcast is received.

If no PS data was sent, "NO PS" is displayed.



2 RT (Radio Text) display :

Text data accompanying the RDS broadcast scrolls across the display. "NO RT" or "RT ----" is displayed if the current RDS station does not provide RT data.



3 Frequency display :

Displays the frequency of the current station.



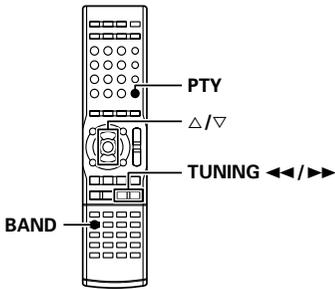
Tuning by Program Type (PTY search)

This function lets you set the tuner to automatically search for stations which are currently broadcasting the type of program (genre) you want to listen to.

Under certain receiving conditions, it may take more than 1 minute to complete the search.

Preparations

- Execute the RDS auto memory procedure.
- Set the broadcast band to FM.



3 Press the PTY key to start searching.

Example: Searching for a Pop Music broadcast.

Display while searching.

Blinks



Program type name display

Display when a station is received.

Goes out



Station name display

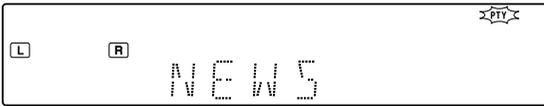
- No sound is heard while "PTY" is blinking.
- If the desired program type cannot be found, "NO PROG" is displayed, then after several seconds the display returns to the original display.

To select another program type.

Repeat steps 1, 2 and 3.

1 Press the PTY key to activate the PTY search mode.

Lights up



When an RDS broadcast is received, the program type is shown on the display. If no PTY data is available, or if the station is not an RDS station, "NONE" is displayed.

2 While the "PTY" indicator is lit, use the Δ/∇ keys (or the TUNING <</> keys) to select the program type of your choice.

Program type table

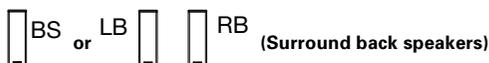
Program Type Name	Display	Program Type Name	Display
Pop Music	POP M	Weather	WEATHER
Rock Music	ROCK M	Finance	FINANCE
Easy Listening Music	EASY M	Children's Programmes	CHILDREN
Light Classical Music	LIGHT M	Social Affairs	SOCIAL
Serious Classical Music	CLASSICS	Religion	RELIGION
Other Music	OTHER M	Phone In	PHONE IN
News	NEWS	Travel	TRAVEL
Current Affairs	AFFAIRS	Leisure	LEISURE
Information	INFO	Jazz Music	JAZZ
Sport	SPORT	Country Music	COUNTRY
Education	EDUCATE	National Music	NATION M
Drama	DRAMA	Oldies Music	OLDIES
Culture	CULTURE	Folk Music	FOLK M
Science	SCIENCE	Documentary	DOCUMENT
Varied Speech	VARIED		

Ambience effects

This receiver is equipped with listening modes that allow you to enjoy an enhanced sonic ambience with a variety of video sources.

In order to obtain the optimum effect from the surround modes, make sure to input the proper speaker settings beforehand. → 18

Surround modes



Dolby Digital EX

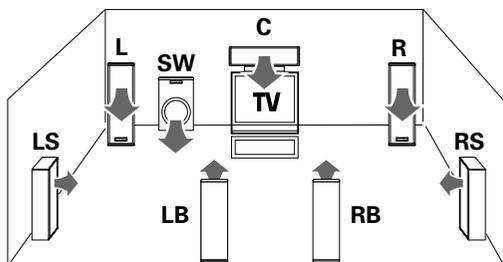
Dolby Digital EX is an extension of Dolby Digital technology, Dolby Digital EX creates six full-bandwidth output channels from 6.1-channel sources. This is done using a matrix decoder that derives three surround channels from the two in the original recording.

This is achieved by using three different surround signals, Left Surround, Right Surround, and Back Surround, each driving its own array of speakers. Think of it as adding a center channel for the rear speakers, which give more diffuse and natural surround effect, even if you wanted the ability to completely encircle the audience with sound, positioning sound effects exactly where they would be heard in real life.

Note

For best results, Dolby Digital EX should be used with movie soundtracks recorded with Dolby Digital Surround EX which contain a digital flag that will automatically activate this feature. However, for titles released prior to late 2001, this feature has to be activated manually.

This model lets you enjoy Dolby Digital (and Dolby Surround) program sources, even if you connect only the Front Speakers. However, in order to enjoy the benefit of true 6.1 channel Dolby Digital Surround EX sound, KENWOOD recommends that you connect a full set of speakers.

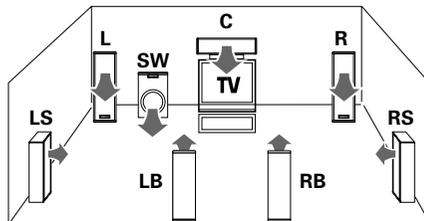


Dolby PRO LOGIC IIX/Dolby PRO LOGIC II

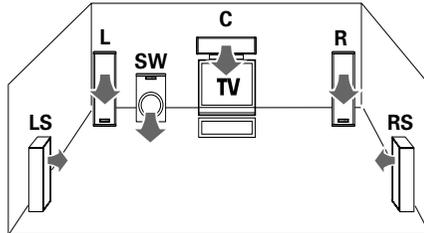
Dolby Pro Logic IIX was designed specifically to provide a new sense of spatiality, directionality and articulation of sounds from Dolby Surround encoded sources.

This is achieved with an intelligent, built-in feedback logic design, a matrix surround decoding and the decoding of stereo, full bandwidth surround outputs. The PRO LOGIC IIX modes programmed into this receiver are "MOVIE", "MUSIC" and "GAME". The "MOVIE" mode of the PRO LOGIC IIX has preset characteristics to produce a calibrated, high-level surround sound playback while the "MUSIC" mode has user-adjustable characteristics to offer the three optional controls, like "Dimension", "Center Width" and "Panorama" modes to allow optimization of the soundfields as desired. The "Dimension" control allows the user to gradually adjust the soundfield either towards the front or towards the rear; the "Center Width" control allows various adjustment of the left-center-right speakers' balance; the "Panorama" mode extends the front stereo image to include the surround speakers for an exciting "wraparound" effect with side wall imaging. The "GAME" mode is designed for playing video games and enhances the powerful feeling of sound.

Dolby PRO LOGIC IIX



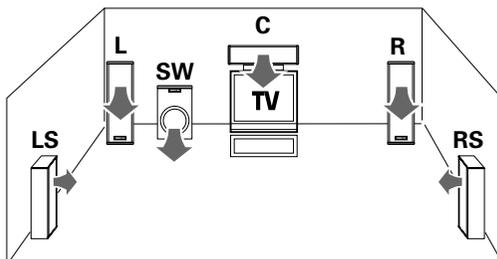
Dolby PRO LOGIC II



Dolby Digital

Dolby Digital surround format lets you enjoy up to 5.1 channels of digital surround sound from Dolby Digital program sources (such as Laserdisc or DVD software marked). Compared with previous Dolby surround, Dolby Digital provides even better sound quality, greater spatial accuracy, and improved dynamic range.

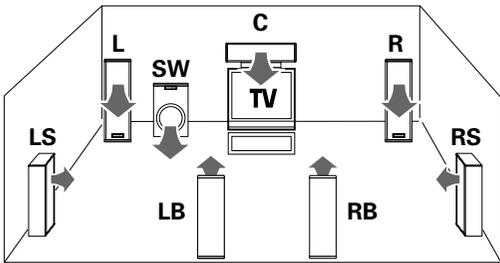
This model lets you enjoy Dolby Digital (and Dolby Surround) program sources, even if you connect only the Front Speakers. However, in order to enjoy the benefit of true 5.1 channel Dolby Digital surround sound, KENWOOD recommends that you connect a full set of speakers.



DTS-ES

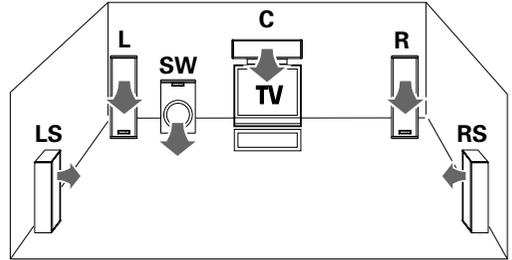
The DTS-ES (Digital Theater System-Extended Surround) represents 6.1-channel Discrete Surround format, expanding upon 5.1 surround. DTS-ES format is a 6.1 channel sound system for movie theaters that includes an additional surround center channel matrixed within surround left and surround right. It's compatible on predecessor DTS 5.1 system. The extra channel allows more accurate placement and steering of sound across the rear soundstage. The DTS-ES receiver will be required, to experience a discrete 6.1-channel mix. The DTS-ES decoders used in home cinema systems have decoding options for utilizing the extra channel, in addition to processing existing 5.1 channel surround sound :

DTS-ES Discrete 6.1 and DTS-ES Matrix 6.1 add the surround back channel audio to the DTS 5.1-channel format to improve the acoustic positioning and makes acoustic image movement more natural with the 6.1-channel reproduction.



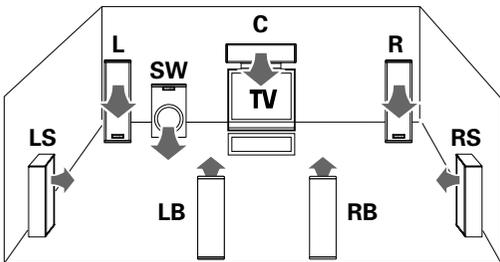
DTS

The DTS employs a larger amount of data than Dolby Digital to play surround sound with higher quality. The DTS can be used with DVD and LaserDisc software carrying the **DTS** mark. Although the number of channels is 5.1 and identical to Dolby Digital, the DTS format features lower audio compression rate in digital recording, which enables audio with more profoundness and higher S/N. The wider dynamic range and better channel separation also contribute to make the surround sound more precise and larger in scale.



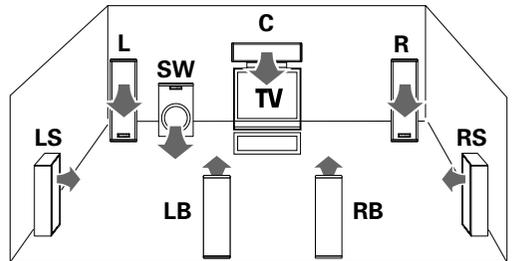
NEO:6

NEO:6 is a new technology which decodes 2-channel signals into 6-channel signals using high-accuracy digital matrix technology. For the best results, DTS-ES should be used with movie sound tracks recorded with DTS-ES format which contain a digital flag that will automatically activate this feature. However, for some titles, this feature has to be activated manually. According to the signals to be played back, DTS NEO:6 uses either the NEO:CINEMA mode optimized for movie playback or the NEO:MUSIC mode optimized for music playback.



DSP mode

The DSP mode lets you add the atmosphere of a live concert or hall to almost any type of program source. These modes are particularly effective when used with stereo program sources, like CD, television, and FM radio. You might enjoy trying the ARENA, JAZZ CLUB, THEATER, STADIUM or DISCO mode the next time you watch a concert or sporting event!

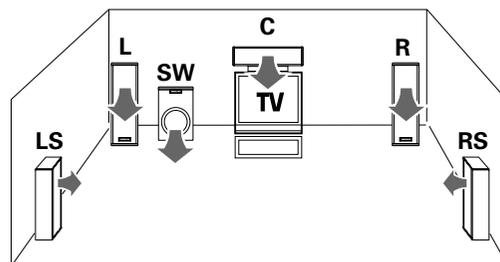


What's DSP?

DSP stands for Digital Signal Processor. The way a sound is heard in an actual environment depends on a variety of different factors. One of the most important is reverberation (the act of decaying elements of sound echoing in various places). The DSP modes produce the feeling of presence by using the DSP to create reverberation, without spoiling the sound quality of the original signal.

DTS 96/24

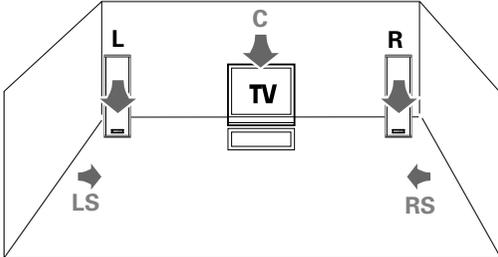
The DTS 96/24 enables 5.1-channel playback with broad bandwidth over 40 kHz and high resolution without affecting the picture quality of DVD video. As it is compatible with the DTS surround playback, it makes it possible to play DTS 5.1-channel surround audio even when the AV amplifier incorporates only the DTS or DTS-ES decoder.



LFE = Low Frequency Effects. This channel delivers separate non-directional bass signals to the subwoofer for more dynamic deep bass sound effects. When there is a LFE channel input in the DOLBY DIGITAL or DTS format, the 'LFE' indicator lights on the display of the receiver.

Dolby Virtual Speaker

The Dolby Virtual Speaker features a virtual surround sound field. This implements an effect as if there are multiple speakers in the listening room.



Dolby Headphone

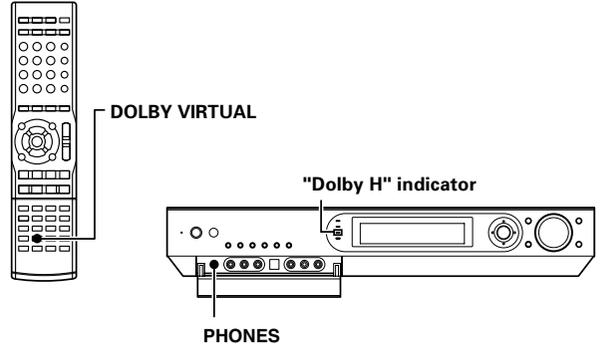
When headphones are used in music listening, the audio of the left (or right) channel reaches only the left (or right) ear so the listener cannot feel the presence of acoustic images on the front.

The Dolby Headphone simulates a virtual room and include its acoustic characteristics in the left and right headphone signals. As a result, the listener can hear the same components as in speaker listening through the left and right ears and therefore feel as if the sound source is located on the front of the listener.

Virtual modes

The following modes allow you to enjoy powerful surround audio even when you use only two speakers or listen through headphones.

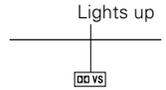
- The desired listen mode may be unable to be selected depending on the reproduced signals. → 34



How to set the Dolby Virtual Speaker mode (when not using headphones):

Press the DOLBY VIRTUAL key for the following selections:

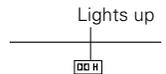
- ① **"DVS WIDE"** :
The virtual surround effect can be given added expansion and spatial feeling.
 - ② **"DVS REF"** : *
Standard setting.
 - ③ **"DVS OFF"** : Cancel
- * This mode can be selected only when the surround speaker setting is OFF.



How to set the Dolby Headphone mode (when using headphones):

Press the DOLBY VIRTUAL key for the following selections:

- ① **"DH 1"**:
Monitor room in a studio with small amount of reverberations.
- ② **"DH 2"**:
General listening with optimum amount of reverberations.
- ③ **"DH 3"**:
Wide space such as a movie theater.
- ④ **"OFF"**: Cancel



- The Dolby Virtual Speaker or Dolby Headphone mode is defeated when the DUAL SOURCE mode or REC MODE is ON.

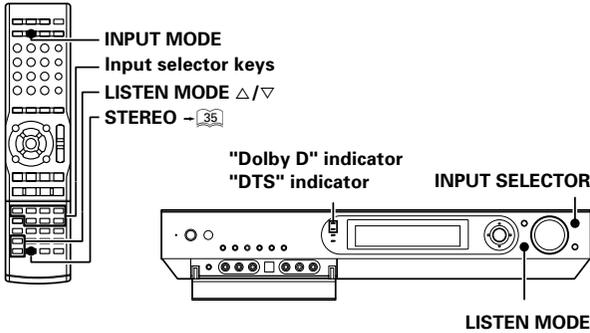
Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic", "Surround EX" and the double-D symbol are trademarks of Dolby Laboratories.

"DTS", "DTS-ES Extended Surround", "Neo:6" and "DTS 96/24" are trademarks of Digital Theater Systems, Inc.



Surround play

The desired listen mode can be selected according to the input signal.



Preparations

- Turn ON related components.
- Complete **"Preparing for playback" (Speaker settings)**. → [18]
- Use the **INPUT SELECTOR** key (or input selector keys) to select the component you wish to play back with surround sound.
- Use the **INPUT MODE** key to select the input mode (analog or digital) for the source you wish to play back. → [8]
- Noise will be produced when a DTS source is played by selecting the analog input.

1 Start playing the video software.

2 Press the LISTEN MODE key (or the LISTEN MODE Δ/▽ keys) to select the listening mode.

The listening mode settings are stored separately for each input selector.

If the input mode is set to full auto ("AUTO DETECT" lights), this model selects the optimal listening mode automatically based on the type of input signal and the speaker settings.

Each press the LISTEN MODE key (or the LISTEN MODE Δ/▽ keys) switches the setting as listed below. The listening mode settings are different depending on the type of input signal.

Listen modes available with Dolby Digital EX or Dolby Digital playback: ("Dolby D" indicator lights up)

Main example of medium:

Multi-channel digital source such as DVD.

- | | |
|----------------------------|--|
| ① "DOLBY D": | DOLBY DIGITAL surround |
| ② "DOLBY D EX": | DOLBY DIGITAL EX surround |
| ③ "DOLBY D + PLIIx MOVIE": | DOLBY DIGITAL surround +
DOLBY PRO LOGIC IIX surround MOVIE mode *1 |
| ④ "DOLBY D + PLIIx MUSIC": | DOLBY DIGITAL surround +
DOLBY PRO LOGIC IIX surround MUSIC mode |
| ⑤ "STEREO": | Stereo playback*2 |

*1 Can be selected only when two surround back speakers are connected.

*2 In Dolby Virtual Speaker and Dolby Headphone modes, the Dolby Digital signal input cannot be listened to in the stereo mode.

- You can also adjust the midnight mode as desired. → [38]

Listen modes available with DTS, DTS-ES (Matrix or Discrete) or DTS-96/24 playback: ("DTS" indicator lights up)

Main example of medium:

Multi-channel digital source such as DVD.

- | | |
|--------------------------|---|
| ① "DTS": | DTS surround |
| ② "DTS + NEO6 CINEMA": | DTS surround + DTS NEO:6 surround CINEMA mode |
| ③ "DTS-ES MATRIX 6.1": | DTS-ES 6.1-channel Matrix surround *1 |
| ④ "DTS-ES DISCRETE 6.1": | DTS-ES 6.1-channel Discrete surround *2 |
| ⑤ "DTS 96/24": | DTS 96/24 surround *3 |
| ⑥ "STEREO": | Stereo playback *4 |

*1 Can be selected only with DTS-ES 6.1ch Matrix Surround.

*2 Can be selected only with DTS-ES 6.1ch Discrete Surround.

*3 Can be selected only with DTS 96/24 Surround.

*4 In Dolby Virtual Speaker and Dolby Headphone modes, the DTS signal input cannot be listened to in the stereo mode.

- You can also adjust the midnight mode as desired. → [38]

Continued to next page

Listen modes available with analog or PCM playback:

Main example of medium:

Digital sources including DVD 96 kHz linear PCM and CD.

Analog source such as VCR or radio broadcasting.

① "PL IIx MOVIE":	DOLBY PRO LOGIC IIx surround MOVIE mode *1
② "PL IIx MUSIC":	DOLBY PRO LOGIC IIx surround MUSIC mode *1 *2
③ "PL IIx GAME":	DOLBY PRO LOGIC IIx surround GAME mode *1
④ "PL II MOVIE":	DOLBY PRO LOGIC II surround MOVIE mode
⑤ "PL II MUSIC":	DOLBY PRO LOGIC II surround MUSIC mode *2
⑥ "PL II GAME":	DOLBY PRO LOGIC II surround GAME mode *3
⑦ "PRO LOGIC":	DOLBY PRO LOGIC surround
⑧ "NEO6 CINEMA" or "NEO6 96K CINEMA":	DTS NEO:6 surround CINEMA mode
⑨ "NEO6 MUSIC" or "NEO6 96K MUSIC":	DTS NEO:6 surround MUSIC mode *1 *4
⑩ "ARENA":	DSP surround ARENA mode *5
⑪ "JAZZ CLUB":	DSP surround JAZZ CLUB mode *5
⑫ "THEATER":	DSP surround THEATER mode *5
⑬ "STADIUM":	DSP surround STADIUM mode *5
⑭ "DISCO":	DSP surround DISCO mode *5
⑮ "STEREO":	Stereo playback.

*1 Cannot be selected in Dolby Virtual Speaker and Dolby Headphone modes.

*2 The sound field can be adjusted as desired using the PANORAMA, DIMENSION and CENTER WIDTH modes. → [37]

*3 Cannot be selected in Dolby Virtual Speaker modes.

*4 The sound field can be adjusted as desired using the CENTER IMAGE modes. → [38]

*5 Cannot be selected in Dolby Virtual Speaker and Dolby Headphone modes or with a 96 kHz linear PCM signal input.

The effect level of the DSP surround mode can be adjusted as desired. → [36]

3 Adjust the volume.

Notes

- Certain modes may be unavailable depending on the type of input signal or speaker setting.
- If an optimum surround effect cannot be obtained or the desired mode cannot be selected, check the speaker and input mode settings. → [8] - [18]

Dolby Digital Surround EX compliant disc :

Dolby Digital Surround EX compliant disc contains identification signals. When you choose FULL AUTO during "Input mode settings" (→ [8]), this amplifier detects the identification signals and change the LISTEN mode to the DOLBY DIGITAL EX (Dolby Digital Surround EX mode) automatically. But sometimes we find some discs which are Dolby Digital Surround EX compliant disc but it does not contain the identification signals. If you find the notice like "Surround EX" on the label of disc or package, you can choose DOLBY DIGITAL EX, then you can enjoy Dolby Digital Surround EX sound.

Switching the listen mode temporarily to the stereo mode

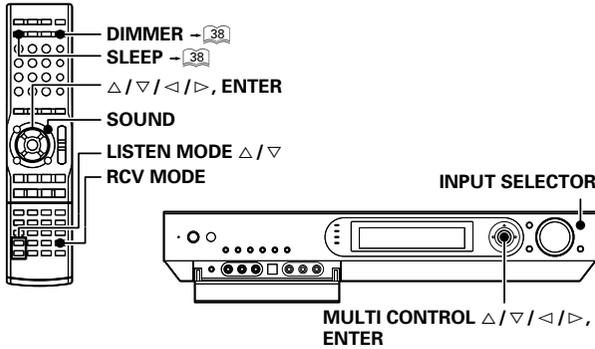
Press the **STEREO** key to switch the current listen mode temporarily to the Stereo mode. Pressing the key again restores the original listen mode.

- The original listen mode is also restored when the input selector is switched or the receiver is turned OFF then ON again.

Convenient functions

You can make further adjustments to the sound while listening to playback in the surround mode.

- The mode using the **SOUND** key is defeated when the REC MODE is ON. - [26]



Adjusting the sound

- 1 Press the **RCV MODE** key on the remote control unit to set it to the receiver control mode.
- 2 Press the **SOUND** key.
- 3 Press the **MULTI CONTROL** </> (or the </> keys) to select the setting item and press the **ENTER**.

Note that some items are not displayed in certain modes.

- 1 **"SP LEVEL":** *1
Adjusting the volume level of each channel - [22]
- 2 **"INPUT":** (Analog mode only)
Input level adjustment - [24]
- 3 **"TONE":** *2
Tone level adjustment - [37]
- 4 **"EFFECT":** (DSP mode only)
DSP effect level adjustment - [37]
- 5 **"DUAL MONO":** *3
Selection between Stereo, Main audio, Sub audio and Main + Sub audio - [38]
- 6 **"MIDNIGHT":** *4
Midnight mode adjustment - [38]
- 7 **"PANORAMA":** *5
Panorama mode ON/OFF - [37]
- 8 **"DIMENSION":** *5
Dimension adjustment - [37]
- 9 **"C WIDTH":** *5
Center width adjustment - [37]
- 10 **"C IMAGE":** *6
Center image mode adjustment - [38]

*1 The setting in the SOUND mode is temporary. It returns automatically to the original level set in "Speaker settings" when the receiver is turned OFF/ON. - [18]

*2 PCM stereo and analog stereo mode only.

*3 DOLBY DIGITAL mode only

*4 DOLBY DIGITAL, DTS mode only

*5 Only when the input signal is a 2-channel signal in the DOLBY PRO LOGIC IIx MUSIC or DOLBY PRO LOGIC II MUSIC mode.

*6 Only when the input signal is a 2-channel signal in the DTS NEO:6 MUSIC mode.

- 4 Use the **MULTI CONTROL** Δ / ▽ (or the Δ / ▽ keys) to adjust the setting as desired.

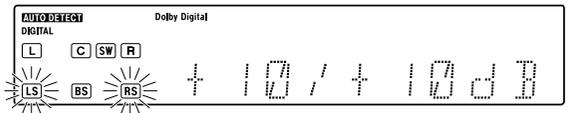
• The adjustment item is displayed for approximately 20 seconds.

- 5 Press the **SOUND** key again to return to the input indication.

Adjusting the volume level of each channel

The volume levels of the center speaker, subwoofer, surround speaker and surround back speaker channels can be adjusted during playback.

- 1 Press the **RCV MODE** key on the remote control unit to set it to the receiver control mode.
- 2 Press the **SOUND** key.
- 3 Use the **MULTI CONTROL** </> (or the </> keys) to select "SP LEVEL" on setup displays, and press the **ENTER**.
- 4 Use the **MULTI CONTROL** </> (or the </> keys) to select the speaker.
 - 1 Subwoofer level adjustment ("SW" indicator blinks)
 - 2 Center speaker level adjustment ("C" indicator blinks)
 - 3 Surround speaker level adjustment ("LS", "RS" indicator blinks)
 - 4 Surround back speaker level adjustment ("LB", "RB" or "BS" indicator blinks)
- 5 Use the **MULTI CONTROL** Δ / ▽ (or the Δ / ▽ keys) to adjust the speaker volume level.



• The level of each speaker channel can be adjusted in 1 dB steps between -10 dB and +10 dB.

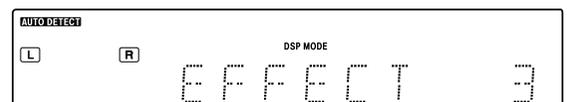
- 6 Repeat steps 4 and 5 as required.
- 7 Press the **SOUND** key again to return to the input indication.

• The setting in the SOUND mode is temporary. It returns automatically to the original level set in "Speaker settings" when the receiver is turned OFF/ON. - [18]

Adjusting the DSP effect level (DSP mode only)

The DSP effect level can be adjusted when the listen mode is a DSP surround mode "ARENA", "JAZZ CLUB", "THEATER", "STADIUM" or "DISCO".

- 1 Press the **RCV MODE** key on the remote control unit to set it to the receiver control mode.
- 2 Press the **SOUND** key.
- 3 Use the **MULTI CONTROL** </> (or the </> keys) to select "EFFECT" on setup displays, and press the **ENTER**.
- 4 Use the **MULTI CONTROL** Δ / ▽ (or the Δ / ▽ keys) to adjust the EFFECT LEVEL.



• The DSP effect level can be adjusted in the range between 1 and 5.

- 5 Press the **SOUND** key again to return to the input indication.

Switching between main audio and sub audio

(DOLBY DIGITAL mode only)

When listening to audio multiplex broadcasting such as two-language satellite digital broadcasting, the main and sub audio can be switched over.

- ➊ Press the RCV MODE key on the remote control unit to set it to the receiver control mode.
- ➋ Press the SOUND key while the "DUAL MONO" indicator is lit.
- ➌ Use the MULTI CONTROL </> (or the </> keys) to select "DUAL MONO" on setup displays, and press the ENTER.
- ➍ Use the MULTI CONTROL Δ / ▽ (or the Δ / ▽ keys) to select the audio.

- ➏ ① "MAIN": The main audio is output.
- ➏ ② "SUB": The sub audio is output.
- ➏ ③ "MAIN + SUB": The mixture of main audio and sub audio is output.
- ➏ ④ "STEREO": The left channel outputs the main audio and the right channel outputs the sub audio.



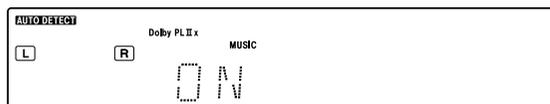
- ➎ Press the SOUND key again to return to the input indication.
 - If the audio multiplex broadcasting is not monaural, the audio cannot be switched on this receiver. In this case, use the audio switching function on the tuner.

Panorama mode

(Only when the input signal is a 2-channel signal in the DOLBY PRO LOGIC IIx MUSIC or DOLBY PRO LOGIC II MUSIC mode)

When listening to music, you will be able to enjoy the "wraparound" sound effect when you adjust the panorama mode.

- ➊ Press the RCV MODE key on the remote control unit to set it to the receiver control mode.
- ➋ Press the SOUND key.
- ➌ Use the MULTI CONTROL </> (or the </> keys) to select "PANORAMA" on setup displays, and press the ENTER.
- ➍ Use the MULTI CONTROL Δ / ▽ (or the Δ / ▽ keys) to select PANORAMA mode "ON" or "OFF".



- ➎ Press the SOUND key again to return to the input indication.

Dimension mode

(Only when the input signal is a 2-channel signal in the DOLBY PRO LOGIC IIx MUSIC or DOLBY PRO LOGIC II MUSIC mode)

When listening to music with certain recordings, you will also be able to achieve a suitable balance from all the speakers by adjusting the dimension mode.

- ➊ Press the RCV MODE key on the remote control unit to set it to the receiver control mode.
- ➋ Press the SOUND key.
- ➌ Use the MULTI CONTROL </> (or the </> keys) to select "DIMENSION" on setup displays, and press the ENTER.

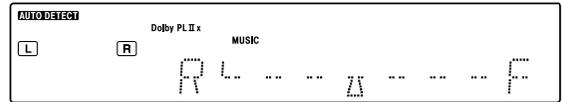
- ➍ Use the MULTI CONTROL Δ / ▽ (or the Δ / ▽ keys) to adjust the soundfield towards the rear or the front. Soundfield is adjusted towards the front.



Standard setting.



Soundfield is adjusted towards the rear.



- ➎ Press the SOUND key again to return to the input indication.

Center Width mode

(Only when the input signal is a 2-channel signal in the DOLBY PRO LOGIC IIx MUSIC or DOLBY PRO LOGIC II MUSIC mode)

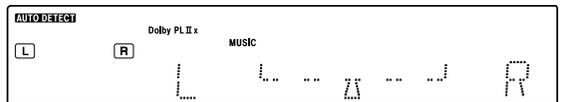
Center width adjustment allows you to enjoy an enhanced sound when listening to music through center image from only center speaker, or left and right speakers or various combinations adjustments.

- ➊ Press the RCV MODE key on the remote control unit to set it to the receiver control mode.
- ➋ Press the SOUND key.
- ➌ Use the MULTI CONTROL </> (or the </> keys) to select "CWIDTH" on setup displays, and press the ENTER.
 - When the center speaker is switched OFF, "CWIDTH" cannot be selected.
- ➍ Use the MULTI CONTROL Δ / ▽ (or the Δ / ▽ keys) to adjust the left-center-right output.

Center image will be heard from center speaker only.



Center image will be heard from left and right speakers only.



- When in other position, center image from center speaker, left and right speakers can be heard simultaneously with various combinations.

- ➎ Press the SOUND key again to return to the input indication.

Center Image mode (Only when the input signal is a 2-channel signal in the DTS NEO:6 MUSIC mode.)

In the CENTER IMAGE setting mode of the NEO:6 MUSIC listen mode, it is possible to enhance the center channel audio by adjusting the center signal component.

- ❶ Press the RCV MODE key on the remote control unit to set it to the receiver control mode.
- ❷ Press the SOUND key.
- ❸ Use the MULTI CONTROL </> (or the </> keys) to select "C IMAGE" on setup displays, and press the ENTER.

 - When the center speaker is switched OFF, "C IMAGE" cannot be selected.

- ❹ Use the MULTI CONTROL Δ / ▽ (or the Δ / ▽ keys) to adjust the left-center-right output.



- Adjust the center component level.

- ❺ Press the SOUND key again to return to the input indication.

Midnight mode (DOLBY DIGITAL and DTS mode only)

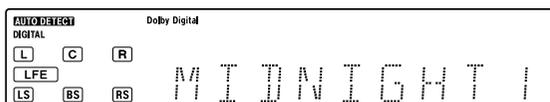
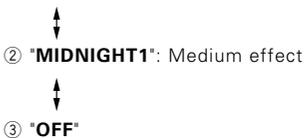
When watching movies at night, you might not be able to raise the volume as loud as normal. Midnight mode compresses the dynamic range of previously specified parts of the DOLBY DIGITAL or DTS sound track (like scenes with sudden increases in volume) to minimize the difference in volume between the specified and non-specified parts. This makes it easy to hear all of the sound track, even when listening at low volumes.

- ❶ Press the RCV MODE key on the remote control unit to set it to the receiver control mode.
- ❷ Press the SOUND key.
- ❸ Use the MULTI CONTROL </> (or the </> keys) to select "MIDNIGHT" on setup displays, and press the ENTER.

 - This can be selected only if DVD, VIDEO 1, VIDEO 2, AUX or GAME is selected as the source and the listen mode is set to "DOLBY DIGITAL" or "DTS".

- ❹ Use the MULTI CONTROL Δ / ▽ (or the Δ / ▽ keys) to select the "MIDNIGHT2", "MIDNIGHT1" or "OFF" setting.

- ❶ "MIDNIGHT2": Large effect
Suitable for late-night use.



- The adjustment item is displayed for approximately 20 seconds.
- Some DOLBY DIGITAL or DTS software may not be compatible with the Midnight mode.

- ❺ Press the SOUND key again to return to the input indication.

Display dimmer adjustment

The dimmer function lets you select the brightness of the receiver's display. You might find this useful if you darken your room to watch movies or listen to music.

Each time you press the DIMMER key, the display's brightness changes among the three available settings.

Select the brightness level you find most pleasing.

- ❶ Bright
- ❷ Dark
- ❸ Dark (LEDs on the receiver are also OFF.)

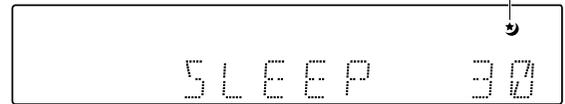
Sleep timer

The sleep timer function turns the receiver OFF (to the standby mode) automatically when the set timer period has elapsed. The sleep timer period can be set in 10-minute steps up to 90 minutes.

Press the SLEEP key repeatedly until the desired period before turning the receiver OFF (standby mode) is displayed.

- Each press increments the sleep timer period by 10 minutes.
- 10 → 20 → 3070 → 80 → 90 → Cancel → 10 → 20 → ...**

The sleep timer indicator lights up



- Pressing the SLEEP key after the sleep timer has started allows you to check the remaining time period.
- To cancel the sleep timer, turn the receiver OFF (standby mode) or press the SLEEP key repeatedly until the Sleep timer indicator disappears.

Basic remote control operations for other components

The remote control supplied with this receiver is also capable of controlling components from a variety of manufacturers once you register the appropriate setup codes into the remote control unit.

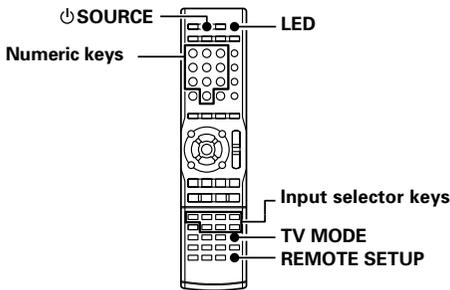
Low battery warning

Replace all two batteries with new ones when you notice a shortening of the distance from which the remote control will operate. The remote control is designed to retain setup codes in memory while you change batteries.

Registering setup codes for other components

When the setup code defined for remote control of every system component is registered in one of the input selector keys of the remote control unit, you can control that component simply after selecting it using the corresponding input selector key of the remote control unit.

- When recording audio on a VCR or MD recorder, for example, you can also control the system component by switching only the remote control unit, without switching the input source of the receiver.



1 Find the setup code of the component to be registered.

Refer to the setup code lists to find the setup code for the component to be registered. → [41] - [44]

Example: To register a DVD made by KENWOOD, you would enter "0490" or "0534".

2 Press the input selector key (DVD, VIDEO 1, VIDEO 2, AUX, F.AUX, GAME or TV MODE) you want to register a system component.

The following table shows the type of components that can be registered in each input selector key.

Input selector key	Registerable component	Input jacks where the component is connected
DVD	DVD player	DVD
VIDEO 1	VCR	VIDEO1
VIDEO 2	Cable Converters Satellite Receivers	VIDEO2
AUX	CD player, MD recorder (KENWOOD)	AUX
F. AUX	Game player (Default: Xbox), DVD player	FRONT AUX
GAME	Game player (Default: Play Station2), DVD player	GAME
TV MODE	TV (including TVs incorporating VCR)	—

- Make sure that a source belonging to the registerable component is connected to the corresponding input jacks on the receiver.
- A second DVD recorder, CD player or VCR can also be connected by changing the assignment of the registerable component devices. See "Re-assigning device keys" on page 40.

3 Press and hold the REMOTE SETUP key until the LED blinks twice, then release the REMOTE SETUP key.

- Proceed to the next steps in less than 10 seconds after the LED blinks twice.

4 Press the numeric key to enter the four-digit code for the component to be registered.

- The LED blinks twice when registration is completed successfully.

5 Ensure that the registered component functions properly.

To ensure the proper function, perform the following operation and check if the component functions as intended.

Point the remote control unit to the component and press the **SOURCE** key (or the **TV** key if the component is a TV) once. If the setup code is registered properly, the component should be turned ON or OFF. If the component is a VCR, turn the VCR ON and load a video tape and perform an operation such as playback. The VCR should function as controlled if its setup code is registered properly.

If the component does not function properly:

If more than one setup code is listed for the component, try registering another setup code by performing steps 3 to 5.

- Repeat steps 1 to 5 above to register the setup code of another component.
- To change the registered setup code, register a new setup code again by performing steps 1 to 5 above.

Note

Although each setup code is designed to work with a number of different models, certain codes may not work with some models. (Also, certain codes may only operate some of the functions available on a given model.)

Searching for your code

If your component does not respond after trying all the codes listed for your component, or if your component is not listed at all, try searching for your code.

For example, to search for a code for your TV.

1 Press the TV MODE key once.

When searching for the setup code of a component other than TV:

Press the desired input selector key instead of the **TV MODE** key.

2 Press and hold the REMOTE SETUP key until the LED blinks twice, then release the REMOTE SETUP key.

- Proceed to the next steps in less than 10 seconds after the LED blinks twice.

3 Press the numeric key to enter "9 9 1".

- The LED will blink twice.

4 Point the remote control at the TV and slowly alternate between pressing the TV and TV MODE keys. Stop when the TV turns on or off.

- In the search mode, the remote control will send IR codes from its library to the selected device, starting with the most popular code first.

When searching for the setup code of a component other than TV:

To search for the setup code of a DVD, CD, MD or VCR, press the input selector key pressed in 1 and the **SOURCE** key alternately and check if the component to be registered is turned ON and OFF.

To search for the setup code of a VCR, turn the VCR ON, load a tape and press the input selector key pressed in step 1 (i.e. VIDEO1) and an operation key such as the play key alternately and check if the VCR is controlled as intended.

5 Press the REMOTE SETUP key once to lock in the code.

Checking the codes

The 4-digit setup codes registered in the input selector keys can be checked as follows.

- 1 Press the input selector key in which the setup code of the desired component is registered.**
- 2 Press and hold the REMOTE SETUP key until the LED blinks twice, then release the REMOTE SETUP key.**
 - Proceed to the next steps in less than 10 seconds after the LED blinks twice.
- 3 Press the numeric key to enter "9 9 0".**
 - The LED will blink twice.
- 4 Press the numeric key "1" once.**

The LED blinks for the same number of times as the numeral in the first digit of the 4-digit code. When the registered setup code is "1338", for example, the LED will blink once. If a code digit is "0", the LED will not blink.
- 5 Repeat step 4 three more times for the remaining digit. Use "2" for the second digit, "3" for the third digit, and "4" for the fourth digit.**

Re-assigning device keys

The type of component device that can be registered is assigned in advance in each input selector key, but this assignment can be changed as desired by the user.

For example, the initial status is set so that a VCR can be registered in the input selector **VIDEO 1** key. If you want to register the setup code of a DVD player in the **VIDEO 1** key just like in the **DVD** key, reassign the key (change the registerable component type assignment for the input selector key) as described below.

- 1 Press and hold the REMOTE SETUP key until the LED blinks twice, then release the REMOTE SETUP key.**
 - Proceed to the next steps in less than 10 seconds after the LED blinks twice.
- 2 Press the numeric key to enter "9 9 2".**
 - The LED will blink twice.
- 3 Press the DVD key once, then press the VIDEO 1 key once.**

The LED blinks twice, and it is possible to register the setup code of a DVD player in the **VIDEO 1** key just like in the **DVD** key. Now register the setup code according to the model of the DVD player. The combination of components assignable to the input selector keys can be changed by pressing different keys in step 4. For example, to change the key assignment so that the same component as that registered in input selector "B" key can be registered in input selector "A" key, press the "B" key then the "A" key after entering "9 9 2" with the numeric keys.

 - For the originally assigned relationship between the input selector keys and system component types, see the table on the previous page.
 - To restore the original component type assignment of an input selector key, press that input selector key twice after entering "9 9 2".
 - It is not possible to register a component in the **TUNER** key.

Examples of key re-assignment and the order of pressing the keys:

Registration of a DVD player in the **VIDEO 1** key

To change the **VIDEO 1** key to the **DVD** key:

'9 9 2' → 'DVD' → 'VIDEO 1'

Restoration of the original key assignment

To return the **VIDEO 1** key to the **VIDEO 1** key:

'9 9 2' → 'VIDEO 1' → 'VIDEO 1'

Registration of a VCR in the **VIDEO 2** key

To change the **VIDEO 2** key to the **VIDEO 1** key:

'9 9 2' → 'VIDEO 1' → 'VIDEO 2'

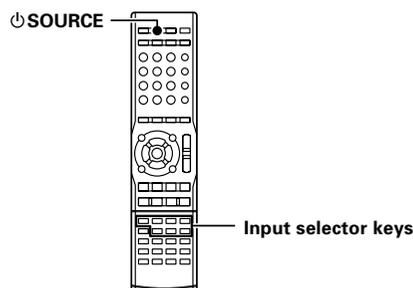
Restoration of the original key assignment

To return the **VIDEO 2** key to the **VIDEO 2** key:

'9 9 2' → 'VIDEO 2' → 'VIDEO 2'

Operating other components

This operation lets you operate the registered components.



- 1 Use the input selector keys to select the component you desire.**

When the input selector key is pressed, the system component registered in the pressed key becomes ready to be controlled. The input selector of the receiver is also switched accordingly. If you want to control the component registered in the remote's input selector key without switching the receiver's input selector to that source, press and hold the input selector key for more than 3 seconds.

 - To put the remote control unit to the receiver control mode, press the **RCV MODE** key.
- 2 Turn the component ON.**
 - A DVD player, CD player, MD recorder or VCR registered in one of the remote's input selector keys can be turned ON by pressing the remote's **⏻ SOURCE**.
 - A TV registered in one of the remote's input selector keys can be turned ON by pressing the remote's **⏻ TV** key.
- 3 Press the operation keys you desire.**
 - For the keys that can be used with each system component, see pages 55 to 56.

Clearing all of the settings registered or stored in the remote control unit

You can reset the remote control unit to the initial status after purchase, clearing all of the component registration using setup codes and other data stored using the learning functions.

- 1 Press and hold the REMOTE SETUP key until the LED blinks twice, then release the REMOTE SETUP key.**
 - Proceed to the next steps in less than 10 seconds after the LED blinks twice.
- 2 Press the numeric key to enter "9 8 1".**
 - The LED blinks four times, and all of the data you registered or stored in the remote control unit is cleared.

Setup code chart (RC-R0920) (For U.S.A. and Canada)

Even when a component is manufactured by a maker listed in the setup code chart, it may be unable to be registered depending on the model and year of production. Also, when a setup code of a non-KENWOOD maker is registered, certain component models may be unable to be controlled or only the limited functions may be controllable. In this case, it is recommended to use the remote control unit provided with the system component. For how to register the setup codes, read "Registering setup codes for other components" carefully. 

Cable Converters

Manufacturer	Setup Codes
ABC	0003, 0008
Americast	0899
Bell South	0899
Clearmaster	0883
ClearMax	0883
Coolmax	0883
Director	0476
General Instrument	0476, 0276, 0003
GoldStar	0144
Hamlin	0009, 0273
Jerrold	0476, 0276, 0003
Memorex	0000
Motorola	0476, 0276, 1376
Multitech	0883
Pace	1877, 0237
Panasonic	0000, 0107
Paragon	0000
Philips	0317, 1305
Pioneer	1877, 0877, 0144, 0533
Pulsar	0000
Quasar	0000
RadioShack	0883
Regal	0279, 0273
Runco	0000
Samsung	0144
Scientific Atlanta	1877, 0877, 0477, 0008
Sony	1006
Starcom	0003
Supercable	0276
Supermax	0883
Torx	0003
Toshiba	0000
Tristar	0883
V2	0883
Viewmaster	0883
Vision	0883
Vortex View	0883
Zenith	0000, 0525, 0899

CD player

Manufacturer	Setup Codes
Kenwood	0681, 0826, 0028, 0037, 0677, 0858, 0190, 0523, 1490, 0340, 0859, 0339, 1338
Optimus	0037
Sharp	0037

MD recorder

Manufacturer	Setup Codes
Kenwood	0681, 0826, 1339

Audio Amp/Tuners

Manufacturer	Setup Codes
Kenwood (Sirius Satellite Radio)	2000

Video Accessories

Manufacturer	Setup Codes
Macro Image Technology	1383
Motorola	1363
MyHD	1383
Panasonic	1120
Pioneer	1010
Samsung	1490
Sensory Science	1126
Sharp	1010
Viewsonic	1329

Satellite Receivers

Manufacturer	Setup Codes
AlphaStar	0772
Chaparral	0216
Crossdigital	1109
DirecTV	0392, 0566, 0639, 1639, 1142, 0247, 0749, 1749, 0724, 0819, 1856, 1076, 1109, 0099, 1442, 1108, 1414, 1640
Dish Network System	1005, 0775, 1775
Dishpro	1005, 0775, 1775
EchoStar	1005, 0775, 1775
Expressvu	0775, 1775
GE	0566
General Instrument	0869
GOI	0775, 1775
Hisense	1535
Hitachi	0819, 1250
HTS	0775, 1775
Hughes Network Systems	1142, 0749, 1749, 1442
I-Lo	1535
JVC	0775, 1775
LG	1414
Magnavox	0724, 0722
Memorex	0724
Mitsubishi	0749
Motorola	0869
Next Level	0869
Panasonic	0247, 0701
Paysat	0724
Philips	1142, 0749, 1749, 0724, 1076, 0722, 0099, 1442
Proscan	0392, 0566
Proton	1535
RadioShack	0869
RCA	0392, 0566, 0855, 0143
Samsung	1276, 1109, 1108
SKY	0856
Sony	0639, 1639, 1640
Star Choice	0869
Tivo	1142, 1442
Toshiba	0749, 1749, 0790, 1285
UltimateTV	1640
Uniden	0724, 0722
US Digital	1535
USDTV	1535
Voom	0869
Zenith	1856, 0856

TV

Manufacturer	Setup Codes
Admiral	0093, 0463
Advent	0761, 1933
Aiko	0092
Akai	0812, 0702, 0030, 0672
Albatron	0700, 0843
America Action	0180
Anam	0180
AOC	0030
Apex Digital	0748, 0765, 1943
Audiovox	0451, 0180, 0092, 0623
Bell & Howell	0154
BenQ	1032
Bradford	0180
Broksonic	0236, 0463, 1935
Candle	0030
Carnivale	0030
Carver	0054
Celebrity	0000
Celera	0765
Changhong	0765
Citizen	0060, 0030, 0092
Clarion	0180
Commercial Solutions	1447, 0047
Contec	0180
Craig	0180
Crosley	0054
Crown	0180
Curtis Mathes	0047, 0054, 0154, 0451, 0093, 0060, 0702, 0030, 0145, 0166
CXC	0180
Daewoo	0451, 1661, 0092, 0661, 0623, 0672
Dell	1080
Denon	0145
Dumont	0017
Durabrand	0463, 0180, 0178, 0171, 1034
Electroband	0000
Emerson	0154, 0236, 0463, 0180, 0178, 0171, 1963, 0623
Envision	0030
ESA	0812, 0171
Fisher	0154
Fujitsu	0853, 0683
Funai	0180, 0171
Futuretech	0180
Gateway	1755, 1756
GE	1447, 0047, 0051, 0451, 0178
Gibraltar	0017, 0030
GoldStar	0030, 0178
Grunpy	0180
Haier	1034
Hallmark	0178
Harman/Kardon	0054
Harvard	0180
Havermy	0093
Helios	0865

TV (Continued)

Manufacturer	Setup Codes
Hello Kitty	0451
Hisense	0748
Hitachi	1145, 0145
Infinity	0054
Inteq	0017
JBL	0054
JCB	0000
Jensen	0761, 1933
JVC	0053, 1253, 1923, 0731
KEC	0180
Kenwood	0030
KLH	0765
KTV	0180, 0030
LG	0178, 0856, 0700, 1934
LXI	0047, 0054, 0154, 0156, 0178
Magnavox	1454, 0054, 0030, 0706
Marantz	0054, 0030, 0704
Matsushita	0250
Maxent	1755
Megapower	0700
Megatron	0178, 0145
Memorex	0154, 0463, 0150, 0178
MGA	0150, 0030, 0178
Midland	0047, 0017, 0051
Mitsubishi	0093, 1250, 0150, 0178
Monivision	0843, 0700
Motorola	0093
MTC	0060, 0030
Multitech	0180
NAD	0156, 0178
NEC	0030, 1704
Nikko	0030, 0178, 0092
Norcent	0748, 0824
NTC	0092
Onwa	0180
Optimus	0154, 0250, 0166
Optoma	0887
Optonica	0093
Orion	0236, 0463
Panasonic	0250, 0051, 1947, 1946, 1941
Penney	0047, 0156, 0051, 0060, 0030, 0178
Philco	0054, 0030
Philips	1454, 0054, 0690, 1961
Pilot	0030
Pioneer	0166, 0679
Portland	0092
Prima	0761, 1933
Princeton	0700
Prism	0051
Proscan	1447, 0047
Proton	0178
Pulsar	0017
Quasar	0250, 0051
RadioShack	0047, 0154, 0180, 0030, 0178
RCA	1447, 0047, 1953, 0679, 1948, 0090, 1547
Realistic	0154, 0180, 0030, 0178
Runco	0017, 0030
Sampo	0030, 1755
Samsung	0060, 0812, 0702, 0030, 0178, 1959, 1060
Sansui	0463, 1935

TV (Continued)

Manufacturer	Setup Codes
Sanyo	0154
Scotch	0178
Scott	0236, 0180, 0178
Sears	0047, 0054, 0154, 0156, 0178, 0171
Sharp	0093
Sheng Chia	0093
Sony	0000, 1925
Soundesign	0180, 0178
Squareview	0171
SSS	0180
Starlite	0180
Studio Experience	0843
Supreme	0000
SVA	0748, 0865
Sylvania	0054, 0030, 0171, 1963
Symphonic	0180, 0171
Tandy	0093
Tatung	1756
Technics	0250, 0051
Techwood	0051
Teknika	0054, 0180, 0150, 0060, 0092
Telefunken	0702
TMK	0178
TNCi	0017
Toshiba	0154, 1256, 0156, 0060, 1935, 1704, 1945, 1356, 1936
TVS	0463
V Inc.	1756, 0885
Vector Research	0030
Victor	0053
Vidikron	0054
Vidtech	0178
Viewsonic	1755, 0885
Wards	0054, 0030, 0178
Waycon	0156
Westinghouse	0889
White Westinghouse	0463, 0623
Yamaha	0030
Zenith	0017, 0463, 0178, 0092

HDTV

Manufacturer	Setup Codes
Mitsubishi	0150
Panasonic	0250
Pioneer	0679
RCA	1447
Samsung	0812, 0702
Toshiba	1256

TV/VCR Combination

Manufacturer	Setup Codes
America Action	0180
Audiovox	0180
Emerson	0236
JVC	1923
LG	1934
Samsung	1959
Sony	1925
Toshiba	1936

TV/DVD Combination

Manufacturer	Setup Codes
Advent	1933
Apex Digital	1943
Broksonic	1935
Emerson	1963
Jensen	1933
Panasonic	1941
Philips	1961
Prima	1933
RCA	1948
Sansui	1935
Sylvania	0171, 1963
Toshiba	1935

VCR

Manufacturer	Setup Codes
ABS	1972
Admiral	0048, 0209
Adventura	0000
Aiwa	0037, 0000
Alienware	1972
American High	0035
Asha	0240
Audiovox	0037
Beaumarck	0240
Bell & Howell	0104
Broksonic	0184, 0121, 0209
Calix	0037
Canon	0035
Carver	0081
Citizen	0037
Craig	0037, 0047, 0240
Curtis Mathes	0060, 0035, 0162
Cybernex	0240
CyberPower	1972
Daewoo	0045
Dell	1972
Denon	0042
DirectTV	0739
Durabrand	0039
Dynatech	0000
Electrohome	0037
Electroponic	0037
Emerex	0032
Emerson	0037, 0184, 0000, 0121, 0043, 0209
Fisher	0047, 0104
Fuji	0035, 0033
Funai	0000
Garrard	0000
Gateway	1972
GE	0060, 0035, 0240
GoldStar	0037
Gradiente	0000
Harley Davidson	0000
Harman/Kardon	0081
Hewlett Packard	1972
HI-Q	0047
Hitachi	0000, 0042
Howard Computers	1972
HP	1972
Hughes Network Systems	0042, 0739
iBUYPOWER	1972
JVC	0067
KEC	0037

Basic remote control operations for other components

VCR (Continued)

Manufacturer	Setup Codes
Kenwood	0067
Kodak	0035, 0037
Lloyd's	0000
LXI	0037
Magnavox	0035, 0039, 0081, 0000
Magnin	0240
Marantz	0035, 0081
Marta	0037
Matsushita	0035, 0162
Media Center PC	1972
MEI	0035
Memorex	0035, 0162, 0037, 0048, 0039, 0047, 0240, 0000, 0104, 0209
MGA	0240, 0043
MGN Technology	0240
Microsoft	1972
Mind	1972
Minolta	0042
Mitsubishi	0067, 0043
Motorola	0035, 0048
MTC	0240, 0000
Multitech	0000
NEC	0104, 0067
Nikko	0037
Noblex	0240
Northgate	1972
Olympus	0035
Optimus	1062, 0162, 0037, 0048, 0104
Orion	0184, 0209
Panasonic	1062, 0035, 0162, 0616, 0225
Penney	0035, 0037, 0240, 0042
Pentax	0042
Philco	0035
Philips	0035, 0081, 0618, 0739
Pilot	0037
Pioneer	0067
Polk Audio	0081
Profitronic	0240
Proscan	0060
Pulsar	0039
Quasar	0035, 0162
RadioShack	0000
Radix	0037
Randex	0037
RCA	0060, 0240, 0042
Realistic	0035, 0037, 0048, 0047, 0000, 0104
ReplayTV	0616
Runco	0039
Samsung	0240, 0045
Sanky	0048, 0039
Sansui	0000, 0067, 0209
Sanyo	0047, 0240, 0104
Scott	0184, 0045, 0121, 0043
Sears	0035, 0037, 0047, 0000, 0042, 0104
Sharp	0048
Shogun	0240
Sonic Blue	0616
Sony	0035, 0032, 0033, 0000, 0636, 1972
STS	0042
Sylvania	0035, 0081, 0000, 0043
Symphonic	0000
Systemax	1972

VCR (Continued)

Manufacturer	Setup Codes
Tagar Systems	1972
Teac	0000
Technics	0035, 0162
Teknika	0035, 0037, 0000
Thomas	0000
Tivo	0739, 0636, 0618, 1503
TMK	0240
Toshiba	0045, 0043, 1972, 1503
Totevision	0037, 0240
Touch	1972
Unitech	0240
Vector	0045
Video Concepts	0045
Videomagic	0037
Videosonic	0240
Viewsonic	1972
Villain	0000
Wards	0060, 0035, 0048, 0047, 0081, 0240, 0000, 0042
White Westinghouse	0209
XR-1000	0035, 0000
Zenith	0039, 0033, 0000, 0209
ZT Group	1972

PVR

Manufacturer	Setup Codes
ABS	1972
Alienware	1972
CyberPower	1972
Dell	1972
Gateway	1972
Hewlett Packard	1972
Howard Computers	1972
HP	1972
iBUYPOWER	1972
Media Center PC	1972
Microsoft	1972
Mind	1972
Northgate	1972
Panasonic	0616
Philips	0739, 0618
ReplayTV	0616
Sonic Blue	0616
Sony	1972, 0636
Systemax	1972
Tagar Systems	1972
Tivo	0618, 0739, 0636
Toshiba	1972
Touch	1972
Viewsonic	1972
ZT Group	1972

DVD player

Manufacturer	Setup Codes
Allegro	0869
Apex Digital	0672, 0717, 1056, 0796, 1020, 0794, 1004, 1061, 0797
Blaupunkt	0717
Blue Parade	0571
Broksonic	0695
CineVision	0869
Coby	1086
CyberHome	0816
Daewoo	0784, 0833, 1172, 0869
Denon	0490

DVD player (Continued)

Manufacturer	Setup Codes
DVD2000	0521
Emerson	0591, 0675
Enterprise	0591
Fisher	0670
Funai	0675
Gateway	1158
GE	0522, 0717
Go Video	0744, 1730, 0715, 0833, 1158, 0783, 1099, 0869
Greenhill	0717
Hitachi	0573, 0664
Hiteker	0672
Initial	0717
InterAct	0697
JVC	0558, 0623, 0867
Kenwood	0490, 0534, 0682, 0737
KLH	0717, 1020
Koss	0651
Lasonic	0798
LG	0591, 0869
Lite-On	1158, 1058
Mad Catz	1108
Magnavox	0503, 0539, 0675
Marantz	0539
Memorex	0695
Microsoft	0522
Mintek	0717
Mitsubishi	1521, 0521
Nesa	0717
Onkyo	0503
Oritron	0651
Panasonic	0490, 1762
Pelican Accessories	0731
Philips	0503, 0539, 0646, 0675, 0885
Pioneer	0525, 0571
Polaroid	1086, 1061
Polk Audio	0539
Proscan	0522
Qwestar	0651
RCA	0522, 0571, 0717, 0822
Rio	0869
Rotel	0623
Saitek	0731
Sampo	0752
Samsung	0490, 0573, 0820
Sansui	0695
Sanyo	0873, 0695, 0670
Sharp	0630, 0752
Shinsonic	0533
Sonic Blue	1099, 0869
Sony	0864, 1033, 0772
Sylvania	0675
Symphonic	0675
Technics	0490
Theta Digital	0571
Thrustmaster	0498
Toshiba	0503, 0695, 1154
Urban Concepts	0503
Yamaha	0490, 0539, 0545
Zenith	0503, 0591, 0869, 1135

Game Player

Manufacturer	Setup Codes
Xbox	0522
Sony PlayStation2	0533

Setup code chart (RC-R0920E) (For Europe and Australia)

Even when a component is manufactured by a maker listed in the setup code chart, it may be unable to be registered depending on the model and year of production. Also, when a setup code of a non-KENWOOD maker is registered, certain component models may be unable to be controlled or only the limited functions may be controllable. In this case, it is recommended to use the remote control unit provided with the system component. For how to register the setup codes, read "Registering setup codes for other components" carefully. --(39)

Cable Converters

Manufacturer	Setup Codes
ABC	0003
ADB	1269, 1063
Alcatel	0896
Amstrad	1222
Austar	0276
Birmingham Cable Communications	0276
British Telecom	0003
Cable & Wireless	1068
Cabletime	0448, 0665
Comcrypt	0443
Comtec	0019
Contec	0019
Cryptovision	0600
Filmnet	0443
Foxtel	1222
France Telecom	0817, 0896, 0451
Galaxi	0008
General Instruments	0276, 0003
Golden Channel	1063, 1110
HyperVision	0619
i-CAN	1063
Jerrold	0276, 0003
Kabelvision	0003
Macab	0817
Melita	0003
MNET	0019, 0443
Motorola	0276, 1106
Mr Zap	1112
Mr Zapp	0817
Mr. Zap	1112
Multichoice	0019, 0443
Noos	0817
NTL	1068, 1060, 0276, 0003, 0277, 0250
Oak	0019
Ono	1068
Optus	1060, 0276
Pace	1068, 1060
Panasonic	0000
Paragon	0000
Philips	0817, 0619
Pioneer	0144
Pulsar	0000
PVP Stereo Visual Matrix	0003
Runco	0000
Sagem	0817, 1112
Salora	0000
Samsung	1060
Scientific Atlanta	1068, 0277, 0008
Starcom	0003
Supercable	0276
Tele Danmark	0619
Tele+1	0443
Teledanmark	0619
Telepiu	0443
Telewest	1068
Thomson	1110

Cable Converters (Continued)

Manufacturer	Setup Codes
Torx	0003
TransACT	1106
United Cable	0003
US Electronics	0276
Videotron	0250
Videoway	0250
Visionetics	1064
Visiopass	0817, 0451
Zenith	0000

CD player

Manufacturer	Setup Codes
Genexxa	0037
Kenwood	0028, 0190, 0037, 0338, 0677, 0858, 0523, 0826, 0339, 0681, 0859, 0340, 1490, 1338
Optimus	0037
Sharp	0037
Trio	0677

MD recorder

Manufacturer	Setup Codes
Kenwood	0681, 1339

Satellite Receivers

Manufacturer	Setup Codes
@sat	1300
@Sky	1334
ABsat	0832, 0123
ADB	0642, 1259
Aegir	0520
AGS	0710
Akai	0200
Alba	0455
Aldes	0520
Allsat	0200, 1043, 1017
Allvision	1412, 1334
Ampere	0132
Amstrad	0847, 1175, 0132, 0243, 1113, 0795, 0882, 0345, 0863
AntSat	1083, 1017
Apollo	0455
Arcon	1205, 1075, 1043
Arion	1205
Armstrong	0243
Arnion	1300
Asat	0200
ASCI	1334
AssCom	0853
AST	0321
Astacom	0710
Aston	1261, 0142
Astra	0607, 0243
Astro	0173, 0658, 1113, 0133, 0607, 1100, 0520, 1099
Atsat	1300
AtSky	1334

Satellite Receivers (Continued)

Manufacturer	Setup Codes
Aurora	0879, 0642
Austar	0879, 0642, 0863, 1259, 0497
Axiel	0710
Axis	1111, 0880
Beko	0455
Bentley Walker	1017
Bestar	0243
Black Diamond	1284
Blaupunkt	0173
Boca	0132, 0794, 0243
Boston	0710
Brand Unknown	0132, 1334, 0299
British Sky Broadcasting	0847, 1175
BskyB	0847, 1175
BT	1296, 0710
Bush	1284
Canal Digital	0853
Canal Satellite	0853
Canal+	0853
CanalSatellite	0853
Cherokee	0710, 0123
Chess	1085, 1334
CityCom	0607, 0299, 1176, 1075
Claasen Nachrichten	0520
CNT	0520
Colombia	0132
Columbia	0132
Comag	0132, 1412
Condor	0607
Conrad	0132, 0607
Conrad Electronic	0607
Crown	0243
Cryptovision	0795, 0455
Cyrus	0200
D-box	0723, 0873
Daewoo	1111, 1296
Daumling	0794
Delfa	0863
Deltasat	1075
Dgtec	1242
Digatron	1294
Digena	1100
Digenius	0299
Digitality	0607
DigiQuest	0863
DigitAll World	1227
Discovery	0710
Diseqc	0710
Distratel	1205
DMT	1075
DNT	0200
Dream Multimedia	1237
DREAM multimedia.TV	1237
DStv	0879, 0642
Echostar	0853, 0167, 0610, 1200, 1086, 1467, 0871, 1323

Satellite Receivers (Continued)

Manufacturer	Setup Codes
Einhell	0132, 0794, 0243
Elekta	0520
Elta	0200
Emme Esse	0871
Engel	1017
EP Sat	0455
Eurieult	0882
Eurocrypt	0455
Europa	0863, 0607
European	0794
Europhon	0132, 0607, 0299
Eurosat	0243
Eurosky	0132, 0299, 0243, 0607
Eurostar	0880, 0607
Ferguson	0711, 0455, 1291
Finlandia	0455
Finlux	0455
Force	1101
Force NO AS	1101
Fortec Star	1083, 1017
Foxtel	0879, 0720, 0497, 1176, 0455, 1356
Fracarro	0871
Freesat	0882
FTEmaximal	0863
Fuba	0173, 0299
Galaxis	0853, 1111, 1101, 0863
Galaxisat	0321
Garnet	1075
Gecco	1412
GF	1043
GF Star	1043
GOD Digital	0200
Gold Box	0853
Goldbox	0853, 0292
Goldvision	1017
Goodmans	1284, 0455
Gradiente	0887
Granada	0455
Grundig	0847, 0853, 0173, 0879, 1291, 0805, 1435, 0345, 1330
Hanseatic	1099, 1100
Hanuri	0520
Hauppauge	1294
HDT	1011
Helium	0607
Hirschmann	1111, 0173, 0299, 0882, 0710, 0607, 1085
Hitachi	0455
HNE	0132
Hornet	1300
HSnseal & Gretel	0132
Humax	0863, 1225, 1176
Huth	0132, 0794, 0607, 1075, 0243, 1017
Hyundai	1075, 1011
ID Digital	1176
Imex	0520
Ingelen	0882
International	0132, 0243
Interstar	1017
Intertronic	0243
Intervision	0607
InVideo	0871
IR	0173, 0455, 0282
Irdeto Technology	0879

Satellite Receivers (Continued)

Manufacturer	Setup Codes
Italtel	0871
ITT Nokia	0723, 0873, 0455
Jaeger	1334
JOK	0710
Kamm	0880
Kaon	1300
KaTelco	1111
Kathrein	0173, 0200, 0658, 0123, 0249, 1221
Kenwood	0853
Key West	0132, 0794, 0243
KeyWest	0794
Klap	0710
Konig	0607
Koscom	1043
Kreiling	0249, 0658
Kreiselmeier	0173
L&S Electronic	0132, 1334, 1043
Labgear	1296
LaSAT	0132, 0520, 0299, 0243, 0607
Lenco	0607
LG	1075
Lifesat	0132, 1043, 0299
Lodos	1284
Loewe	0243
Logix	1075, 1017
Lorenzen	0132, 0607, 1294, 0299, 0867, 0794
Luxor	0345
Manata	0132, 0710
Manhattan	0455, 1083, 1017, 0520
Marantz	0200
Mascom	0520
Maspro	0173
Matsui	0173, 1284, 0710
Max	0607
Maximum	1075
MDS	1225
Mediacom	1206
Mediamarkt	0243
MediaSat	0853, 0292
Medion	0132, 1075, 1043, 1412, 0299, 1334
Mega	0200
Metronic	0243, 1215, 1205, 0520, 1334
Metz	0173
Micro	1294, 0607
Micromaxx	0299
Microstar	1075
Mitsubishi	0455
Morgan's	0200, 0132, 0243, 0794
Motorola	0856
Multichoice	0879, 0642
Muratto	0321
Myryad	0200
NEOTION	1334
Netgem	1322
Netsat	0887
Neuhaus	0607
Neuling	0132
Nikko	0200, 0243
Nokia	0751, 0853, 0723, 0873, 0455, 1723, 1223, 1312, 1023, 1311, 1310
Nordmende	0520, 0455
OctalTV	1294

Satellite Receivers (Continued)

Manufacturer	Setup Codes
Okano	0243
OnDigital	0751, 0241, 0133
Opentel	1412
Optex	1043
Optus	0879
Orbitech	1100, 1099
Origo	0497
OSAT	0345
Ouralis	1205
Pace	0847, 0853, 0200, 0887, 0720, 1175, 0241, 0497, 0455, 1356, 0795, 0867, 0329, 1323
Packard Bell	1111
Packsat	0710
Palcom	0299
Palladium	0243
Panasat	0879, 0615
Panasonic	0847, 0455, 1304
Panda	0173, 0455, 0607
Pansat	1011
Patriot	0132, 0710
Philips	0853, 0173, 0200, 1114, 0292, 0710, 0455, 0133, 0805
Phonotrend	1200, 0863, 1017
Pino	1334
Pioneer	0853, 0292, 0352, 0329, 1308
Planet	0871
Preisner	0132, 1113, 1101, 0794
Premier	0292
Premiere	0853, 0873, 0292
Prima	0795
Primacom	1111
Pro Visat	0520
Profile	0710
Promax	0455
ProVision	0520
Quadral	0710
Quelle	0607, 0299
Radiola	0200
Radix	1113, 0882
RFT	0200
Roadstar	0853
Saba	0607, 0520, 0710
Sabre	0455
Sagem	0820, 1114, 1253
Samsung	0853, 1292, 0863, 1243, 1206, 1293, 1017
SAT	0321
Sat Control	1300
Sat Partner	0520
Satcom	0607
SatPartner	0520
Satplus	1100
Satstation	1083
Schneider	0805, 0710, 1206
Schwaiger	1111, 0132, 0607, 1083, 1075, 1334, 0863
SCS	0299
Sedea Electronique	0132, 1206
Seemann	0243
SEG	1075, 1087
Seleco	0871
Septimo	1205
Serino	0610
Siemens	0173
Silva	0299

Satellite Receivers (Continued)

Manufacturer	Setup Codes
SKY	0847, 0856, 0887, 1014, 1175, 0711
Sky Television	1014
SKY+	1175
Skymaster	1200, 1085, 1075, 0880
Skymax	0200
Skyplus	1334, 1412
SkySat	0607
Skyvision	1334
SL	0132, 1294, 0299, 0243
SM Electronic	1200
Smart	0132, 1113, 0299, 1101, 0882, 0794
Sony	0847, 0853, 0292, 0282
SR	0132
Starlite	0200
Strong	0853, 0879, 0132, 0520, 1300
Sunkai	0123
Sunstar	0642, 0132, 0794, 0243
Supernova	0887
Tantec	0455
Tarbs	1225
Tatung	0455
Teac	1322, 1227, 1225
Tecatel	1200
TechniSat	0200, 0863, 1195, 0455, 1100, 1099, 1322
Technowelt	0132, 0607
Techsan	1017
Techwood	1284
Teco	0243
tekComm	1017
Telasat	0607
Teleciel	1043
Telefunken	0710
Teleka	0607, 0243
Telemaster	0520
Telestar	1099, 1334, 1100
Teletech	0880
Televés	0132, 1300, 0455
Televisa	0887
Thomson	0847, 0853, 0820, 0292, 0711, 0607, 1046, 0455, 0710, 1291
Thorn	0455
Tioko	0132, 0243
Tokai	0200
Tonna	0455
Topfield	1206
Toshiba	0455
TPS	0820, 1253
Triad	0321
Triax	0853, 0200, 0132, 1227, 1113, 1296, 1099, 1291
Trio	1075
UEC	0879
Unisat	0200, 0132, 0243
Universum	0173, 0607, 0299, 1099, 1087
Variosat	0173
Ventana	0200
VH-Sat	0299
Visiosat	0142, 0710
Viva	0856
VTech	0321
Wewa	0455
Wibo	0243

Satellite Receivers (Continued)

Manufacturer	Setup Codes
Wintel	0299
Wisi	0173, 0321, 0299, 0607, 0455
Woorisat	0520
Worldsat	1323, 0710, 0123
XCOM	0123, 0832
Xsat	0847, 0123, 1323
Xtreme	1300
Yes	0887
Zehnder	1334, 1075, 0520, 1412, 0321
Zenith	0856
Zwergnase	0243, 0794

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Manufacturer	Setup Codes
A.R. Systems	0455, 0374
Accent	0009
Acec	0012
Acura	0009
Admiral	0264, 0087, 0163, 0093
Agashi	0264
AGB	0516
Agef	0087
Aiko	0264, 0009
Aim	0037, 0706, 0455
Aiwa	1916, 0701
Akai	0556, 0037, 0548, 0714, 0715, 0606, 0361, 0264, 0218, 0433, 0163, 0480, 0371, 0631, 0072, 0473, 0208, 0696, 0178, 0516, 0602, 0009, 0377, 0648
Akiba	0037, 0218, 0455, 0282, 0294
Akira	0418, 0190
Akito	0037
Akura	0037, 0714, 0668, 0264, 0218, 0282, 0009, 0412
Alba	0037, 0714, 0668, 1037, 0487, 0218, 0036, 0009, 0163, 0355, 0443, 0247, 0418, 0371
Allorgan	0294, 0206
Allstar	0037
Amplivision	0370
Amstrad	0037, 1037, 0264, 0218, 0433, 0412, 0648, 0371, 0516, 0009
Anam	0009
Anglo	0264, 0009
Anitech	0037, 0282, 0009
Ansonic	0668, 0370, 0104, 0009
Apollo	0473
Arc En Ciel	0196, 0109, 0198
Ardem	0037, 0714
Aristona	0556, 0037, 0012
Arthur Martin	0163
ASA	0104, 0087, 0070
Asberg	0037
Asora	0009
Astra	0037
Asuka	0264, 0218
ATD	0698
Atlantic	0037, 0259, 0206
Atori	0009
Auchan	0163
Audiosonic	0037, 0714, 0486, 0715, 0264, 0370, 0218, 0109, 0337, 0374, 0009

TV (Continued)

Manufacturer	Setup Codes
Audioton	0486, 0264, 0370
Autovox	0206, 0087, 0247
Awa	0606, 0264, 0036, 0108, 0374, 0011, 0009
Axxent	0009
Baird	0208, 0072, 0193, 0190, 0073
Bang & Olufsen	0565, 0087
Basic Line	0556, 0037, 0668, 1037, 0218, 0455, 0009, 0282, 0374
Baur	0037, 0361, 0455, 0512, 0009, 0535
Beaumarck	0178
Beko	0037, 0714, 1037, 0486, 0715, 0606, 0370, 0418
Beon	0037, 0418
Berthen	0668
Best	0337
Bestar	0037, 0370, 0374
Bestar-Daewoo	0374
Black Diamond	1037
Black Star	0247
Blacktron	0282
Blackway	0218, 0282
Blaupunkt	0195, 0036, 0455, 0535, 0200, 0328, 0170, 0327
Blue Sky	0556, 0037, 0714, 0668, 1037, 0715, 0487, 0218, 0455, 0282
Blue Star	0282
Bondstec	0247
Boots	0009
BPL	0037, 0282
Brandt	0625, 0560, 0196, 0109, 0335, 0198
Brinkmann	0037, 0668, 0486, 0418, 0519
Brionvega	0087
Bruns	0087
BSR	0294, 0163
BTC	0218
Bush	0556, 0037, 0714, 0668, 1037, 0698, 0487, 0361, 0264, 0218, 0036, 0661, 0355, 0374, 0294, 0009, 0371, 0208, 0519, 0282
Canton	0218
Capsonic	0264
Carad	0668, 1037, 0610
Carena	0037, 0455
Carrefour	0036, 0070
Carver	0170
Cascade	0037, 0009
Casio	0037
Cathay	0037
CCE	0037
Centrex	0780, 0826
Centrum	1037
Centurion	0037
Century	0087, 0247
CGE	0370, 0084, 0418, 0074, 0247
Cimline	0218, 0009
Cinex	0648
City	0009
Clarivox	0037, 0070
Clatronic	0037, 0714, 0264, 0370, 0218, 0579, 0009, 0247, 0371
Clayton	1037

TV (Continued)

Manufacturer	Setup Codes
Concorde	0009
Condor	0037, 0264, 0370, 0418, 0247, 0282, 0009
Conrac	0808
Contec	0037, 0036, 0009
Continental Edison	0487, 0198, 0196, 0109
Cosmel	0037, 0009, 0337
Crosley	0084, 0074, 0247, 0087
Crown	0037, 0714, 0486, 0715, 0487, 0606, 0712, 0370, 0412, 0009, 0208, 0418, 0579
CS Electronics	0218, 0247
CTC	0247
Cybertron	0218
D-Vision	0556, 0037
Daewoo	0556, 0037, 0634, 1909, 0218, 0499, 0661, 0009, 0374
Dainichi	0218
Dansai	0037, 0036, 0009, 0208
Dansette	0412
Dantax	0714, 0715
Dawa	0037, 0009
Dayton	0009
Daytron	0037, 0374, 0009
De Graaf	0548, 0208
Decca	0037, 0621, 0516, 0072
Deitron	0374
Denko	0264
Denver	0037
DER	0190, 0193
Desmet	0037, 0087, 0009
Diamant	0037
Diamond	0698, 0706, 0264, 0009, 0371
Digatron	0037
Digiline	0668
Digital Life	0780
Digitor	0037
Dixi	0037, 0087, 0009
DL	0780
Domeos	0668
DTS	0009
Dual	0037, 1137, 0631, 0519, 0259
Dumont	0087, 0070
Dux	0037, 0012
Dynatron	0037, 0012
E-Elite	0218
Ecco	0706
Edison-Minerva	0487
Elbe	0610, 0516, 0259
Elbe-Sharp	0516
Elekta	0264, 0282, 0009
ELG	0037
Elin	0037, 0548, 0361, 0009, 0104
Elite	0218
Elta	0264, 0009
Emco	0247
Emerson	0037, 0714, 1909, 0486, 0361, 0370, 0087, 0282, 0371, 0070, 0247, 0178
Emperor	0282
Erres	0037, 0012
ESC	0037
Etron	0009, 0163

TV (Continued)

Manufacturer	Setup Codes
Eurofeel	0264
Euroman	0037, 0264, 0370
Europa	0037
Europhon	0516
Expert	0259, 0206, 0163
Exquisit	0037, 0247
Fenner	0009, 0374
Ferguson	0037, 0625, 0548, 0560, 0335, 0073, 0193, 0190, 0109
Fidelity	0037, 0361, 0264, 0412, 0193, 0371, 0163, 0512
Finlandia	0548, 0163, 0072, 0346, 0208
Finlux	0037, 0714, 0715, 0629, 0087, 0473, 0621, 0072, 0346, 0516, 0070, 0631, 0104, 0480
Firstline	0556, 0037, 0714, 0668, 1037, 0361, 0072, 0294, 0247, 0374, 0009, 0208
Fisher	0370, 0036, 0072, 0208, 0104, 0087
Flint	0037, 0610, 0264, 0218, 0455, 0072
Forgestone	0193
Formenti	0037, 0087
Fortress	0093, 0087
Fraba	0037, 0370
Friac	0037, 0610, 0370, 0009, 0499
Frontech	0264, 0009, 0247, 0163
Fujitsu	0009, 0259, 0206, 0072
Fujitsu General	0206, 0009
Funai	0668, 0264, 0294
Futronic	0264
Galaxi	0037
Galaxis	0037, 0370
GBC	0218, 0009, 0374
GE	0625, 0560, 0093, 0282, 0178
GEC	0037, 0361, 0163, 0072, 0516
Geloso	0009, 0374
General Technic	0009
Genesis	0037, 0009
Genexxa	0037, 0218, 0163, 0412, 0009
Goldfunk	0668
GoldStar	0037, 0714, 0715, 0606, 0361, 0178, 0377, 0163, 0109, 0247
Gooding	0487
Goodmans	0556, 0037, 0714, 0560, 0668, 0634, 1909, 1037, 0487, 0264, 0218, 0036, 0480, 0516, 0579, 0374, 0499, 0371, 0661, 0009, 0072, 0335
Gorenje	0370
GPM	0218
Gradiente	0170
Graetz	0487, 0361, 0163, 0371
Gran Prix	0648
Granada	0037, 0548, 0560, 0108, 0226, 0473, 0072, 0208, 0516, 0163
Grandin	0037, 0714, 0668, 1037, 0715, 0610, 0455, 0579, 0163, 0374, 0009, 0282
Grundig	0556, 0037, 0195, 0487, 0706, 0036, 0587, 0535, 0009, 0070, 0443

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Manufacturer	Setup Codes
Haaz	0706
Haier	0698
Halifax	0264
Hanimex	0218, 0294
Hanseatic	0556, 0037, 0714, 0634, 0361, 0519, 0661, 0294, 0499, 0009, 0282, 0808, 0377, 0087
Hantarex	0037, 0009, 0516
Hantor	0037
Harwood	0037, 0487, 0009, 0412
Hauppauge	0037
Havermy	0093
HCM	0037, 0264, 0218, 0282, 0009, 0418, 0412
Hema	0009
Hifivox	0109, 0198, 0196
Highline	0037, 0264
Hikona	0218
Hinari	0037, 0264, 0218, 0036, 0009, 0355, 0294
Hisawa	0714, 0610, 0218, 0455, 0282
Hisense	0508, 0009, 0780, 0208
Hit	0087
Hitachi	0037, 0548, 0634, 1037, 1137, 0036, 0108, 0225, 0730, 0072, 0499, 0163, 0578, 0198, 0719, 0480, 0109, 0196, 0473, 0744, 0516, 1481, 0194, 0629
Hitachi Fujian	0108
Hitsu	0610, 0218, 0455, 0009
HMV	0087, 0193
Home Electronics	0606
Hornlyphon	0037, 0012
Hoshai	0282
Huanyu	0374
Hyper	0247, 0009
Hypson	0037, 0714, 0668, 1037, 0715, 0264, 0455, 0621, 0282
H_er	0714
Iberia	0037
ICE	0264, 0218, 0371
ICeS	0218
Imperial	0037, 0370, 0196, 0418, 0084, 0074, 0247
Indiana	0037
Ingelen	0714, 0610, 0487, 0163
Ingersoll	0009
Inno Hit	0009, 0282, 0247, 0072, 0516
Innovation	0519
Interbuy	0037, 0264, 0247
Interfunk	0037, 0361, 0512, 0200, 0012, 0163, 0327, 0087, 0247
Internal	0037
Intervision	0037, 0486, 0487, 0264, 0218, 0455, 0009, 0519, 0247, 0377, 0282
IR	0556, 0037, 0195, 0361, 0370, 0036, 0108, 0225, 0226, 0193, 0327, 0087, 0196, 0374, 0011, 0535, 0190, 0294, 0073, 0104, 0206, 0516, 0163, 0247, 0072, 0194, 0093, 0200, 0512, 0012, 0109, 0070
Irradio	0037, 0218, 0371, 0009, 0247

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Manufacturer	Setup Codes
Isukai	0037, 0218, 0455, 0282
ITS	0037, 0264, 0218, 0282, 0371
ITT	0548, 0610, 0361, 0473, 0193, 0163, 0346, 0480, 0208
ITT Nokia	0548, 0610, 0606, 0361, 0346, 0480, 0208, 0473, 0163
ITV	0037, 0264, 0374, 0247
Jean	0036
JMB	0556, 0634, 0499, 0443
Jocel	0712
Jubilee	0556
JVC	0606, 0218, 0036, 0653, 0193, 0418, 0190, 0371, 0093
Kaisui	0037, 0218, 0455, 0009, 0282
Kapsch	0361, 0206, 0163, 0104
Karcher	0714, 0610, 0264, 0282
Kathrein	0556
Kawa	0371
KB Aristocrat	0163
Kendo	0037, 0610, 0247, 0519, 0294
Kennedy	0206, 0163
Kiota	0455
Kioto	0706
Kiton	0037, 0668
Kneissel	0556, 0037, 0610, 0499, 0374, 0259
Kolster	0247
Konichi	0009
Konka	0037, 0714, 0218, 0587, 0371, 0418
Kontakt	0487
Korpel	0037
Korting	0087
Kotron	0412
Koyoda	0009
Kriesler	0012
Kyoshu	0412, 0418
Kyoto	0163
L&S Electronic	0714, 0808
LaSAT	0486
Leader	0009
Lecson	0037
Legend	0009
Lenco	0037, 0374
Lenoir	0009
Lesa	0247
Leyco	0037, 0264, 0072, 0579, 0294
LG	0556, 0037, 0714, 0715, 0698, 0178, 0109
Liesenk & Tter	0037
Liesenkotter	0037, 0012, 0328, 0327
Lifetec	0037, 0714, 0668, 1037, 1137, 0218, 0519, 0009, 0374
Lloyd's	0009
Loewe	0037, 0087, 0633, 0516, 0512, 0655
Logik	0698, 0193, 0011, 0009, 0371
Logix	0668
Luma	0259, 0206
Lumatron	0037, 0264, 0259, 0206, 0163, 0073
Lux May	0037, 0009

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Manufacturer	Setup Codes
Luxman	0579
Luxor	0548, 1037, 0361, 0480, 0194, 0473, 0631, 0163, 0208
M Electronic	0037, 0109, 0374, 0104, 0346, 0163, 0480, 0009
Madison	0037
Magnadyne	0087, 0516, 0247
Magnafon	0516
Magnavox	0036, 0011, 0780
Magnum	0037, 0714, 0715, 0648
Mandor	0264
Manesth	0037, 0264, 0294
Manhattan	0037, 0668, 1037
Marantz	0556, 0037, 0412
Marelli	0087
Mark	0037, 0714, 0715, 0374, 0009
Master's	0499
Masuda	0037, 0264, 0218, 0371, 0009
Matsui	0556, 0037, 0714, 0195, 1037, 0487, 0036, 0455, 0433, 0294, 0579, 0011, 0371, 0072, 0208, 0009, 0355, 0443, 0516, 0335, 0629, 0163
MCE	0009
Mediator	0037, 0012
Medion	0556, 0037, 0714, 0668, 1037, 0698, 1137, 0808, 0512
Megas	0610
MEI	1037
Meletronic	0037, 0714, 0634, 0104, 0346, 0512, 0247, 0480, 0009, 0661, 0163, 0374
Memorex	1037, 0009, 0178
Memphis	0337
Mercury	0037, 0009
Metronic	0625
Metz	0037, 0668, 0587, 0746, 0447, 0367, 0087, 0535
MGA	0218, 0374, 0178
Micromaxx	0037, 0668, 1037, 0808
Microstar	0808
Minato	0037
Minerva	0487, 0108, 0070, 0516, 0535
Minoka	0037, 0412
Mistral Electronics	0193
Mitsubishi	0556, 0037, 1037, 0036, 0108, 0087, 0178, 0535, 0093, 0512
Mivar	0609, 0516
Monaco	0009
Morgan's	0037
MTC	0370, 0512
MTlogic	0714
Multibroadcast	0193
Multitec	0037, 0668, 1037, 0486
Multitech	0037, 0486, 0264, 0009, 0247
Murphy	0163
Musikland	0218, 0247
Myryad	0556
NAD	0361, 0178
Naiko	0037, 0606
NAT	0226
National	0226

TV (Continued)

Manufacturer	Setup Codes
NEC	0036, 0455, 0011, 0374, 0661, 0009, 0170, 0499
Neckermann	0556, 0037, 0370, 0087, 0327, 0247, 0418, 0200
NEI	0037, 0371, 0337
Nesco	0247
Netsat	0037
Network	0337
Neufunk	0556, 0037, 0714, 0610, 0218, 0009
New Tech	0556, 0037, 0009
New World	0218
Nikkai	0037, 0264, 0218, 0036, 0009, 0072, 0337
Nikko	0178
Noblisko	0070
Nogamatic	0196, 0109
Nokia	0548, 0610, 0606, 0361, 0480, 0346, 0473, 0208, 0374, 0163, 0631
Nordmende	0037, 0714, 0560, 0195, 0109, 0198, 0196
Normerel	0037
Novak	0012
Novatronic	0037, 0374
NU-TEC	0698, 0455
Oceanic	0548, 0361, 0208, 0163, 0473
Odeon	0264
Okano	0037, 0370, 0009
Omega	0264
Omni	0698, 0826, 0780
Onimax	0714
Onwa	0218, 0433, 0371, 0602
Opera	0037
Orbit	0037
Orion	0556, 0037, 0714, 0264, 0443, 0655, 0412, 1916, 0355, 0516, 0011, 0294
Orline	0037, 0218
Ormond	0668, 1037
Orsowe	0516
Osaki	0556, 0037, 0264, 0218, 0412, 0374, 0072, 0355
Osio	0037
Oso	0218
Osume	0037, 0218, 0036, 0072
Otto Versand	0556, 0037, 0361, 0036, 0226, 0093, 0247, 0512, 0109, 0294, 0535
Pacific	0556, 0714, 1037, 1137
Palladium	0037, 0714, 0370, 1137, 0519, 0418, 0655, 0247
Palsonic	0037, 0698, 0264, 0218, 0418, 0377
Panama	0037, 0264, 0247
Panasonic	0037, 0548, 0361, 0650, 0108, 0226, 0516, 0163, 0367
Panavision	0037
Pathe Cinema	0163
Pathe Marconi	0198, 0196
Pausa	0009
Penney	0178
Perdio	0037, 0163, 0072, 0282
Perfekt	0037
Philco	0037, 0370, 0247, 0087, 0418, 0084, 0074
Philex	0193
Philips	0556, 0037, 0361, 0200, 0012, 0193, 0374, 0009, 0087

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Manufacturer	Setup Codes
Phoenix	0037, 0486, 0087
Phonola	0037, 0012, 0193, 0087
Pioneer	0037, 0486, 0361, 0512, 0011, 0163, 0109, 0170
Pionier	0486, 0370
Plantron	0037, 0264, 0009
Playsonic	0037, 0714, 0715
Polytron	0697, 0282
Poppy	0009
Portland	0374
Powerpoint	0037, 0487
Prandoni-Prince	0361, 0516
Premier	0264, 0009
Prima	0264, 0009, 0412
Prinston	1037
Prinz	0361, 0072, 0194
Profex	0361, 0163, 0009
Profi	0009
Profitronic	0037
Proline	0037, 0625, 0634, 0072, 0012, 0621
Prosonic	0037, 0714, 0668, 0370, 0374, 0371, 0579
Protech	0037, 0668, 1037, 0486, 0264, 0247, 0418, 0337, 0009
Proton	0178
ProVision	0556, 0037, 0714
Pye	0556, 0037, 0412, 0012, 0374, 0087
Pymi	0009
Quadral	0218
Quasar	0009, 0247
Quelle	0037, 0668, 0361, 0104, 0328, 0535, 0084, 0327, 0011, 0512, 0074, 0200, 0070
Questa	0036
R-Line	0037
Radialva	0218, 0337
Radiola	0556, 0037, 0012
Radiomarelli	0037, 0516, 0087
RadioShack	0037, 0178
Radiotone	0037, 0668, 1037, 0264, 0009, 0412, 0648, 0579
Rank	0070
Rank Arena	0036, 0602
RBM	0070
RCA	0625, 0560, 0093
Recor	0037, 0418
Rectiligne	0037
Rediffusion	0548, 0361, 0036, 0346
Reflex	0037, 0668, 1037
Reoc	0714
Revox	0037
Rex	0264, 0163, 0259, 0206
RFT	0037, 0264, 0087, 0072
Roadstar	0037, 0668, 1037, 0264, 0218, 0418, 0282, 0009
Robotron	0087
Rowa	0698, 0712, 0264, 0587, 0009
Royal Lux	0370, 0335, 0412
Saba	0625, 0548, 0714, 0560, 0361, 0163, 0335, 0109, 0198, 0516, 0087, 0196
Sagem	0610, 0455
Saisho	0264, 0011, 0009, 0516
Saivod	0037, 0668, 1037, 0712
Sakan	0163

TV (Continued)

Manufacturer	Setup Codes
Sakyno	0455
Salora	0548, 0361, 0516, 0631, 0194, 0480, 0621, 0163, 0208
Salsa	0335
Sambers	0516
Samsung	0556, 0037, 0264, 0370, 0587, 0618, 0163, 0718, 0009, 0093, 0644, 0208, 0519, 0072, 0178
Sansui	0037, 0706, 0455, 0371, 0655, 0602
Santon	0009
Sanyo	0370, 0036, 0108, 0072, 0208, 0011, 0104
SBR	0556, 0037, 0193, 0012
Schaub Lorenz	0548, 0714, 0486, 0606, 0361, 0374
Schneider	0556, 0037, 0714, 0668, 1037, 0361, 1137, 0218, 0519, 0070, 0247, 0371, 0648, 0012, 0163, 0259
Scotch	0178
Scotland	0163
Sears	0178
Seaway	0634
Seelver	1037
SEG	0037, 0668, 0634, 1037, 0264, 0218, 0036, 0009
SEI	0037, 0206, 0163, 0516, 0087, 0294
Sei-Sinudyne	0037, 0087, 0516, 0294, 0206
Seleco	0264, 0259, 0371, 0206, 0346, 0163
Sencora	0009
Serino	0610, 0455, 0093
Sharp	0036, 1193, 0193, 0516, 0093, 0294, 0200
Shintoshi	0037
Shivaki	0037, 0178, 0443
Shorai	0294
Show	0072, 0009, 0418
Siarem	0516, 0087
Siemens	0037, 0195, 0200, 0535, 0328, 0327
Siera	0012
Siesta	0370
Silva	0037, 0361, 0648
Silva Schneider	0037
Silver	0715, 0361, 0036, 0455
Singer	0037, 0433, 0009, 0335, 0087
Sinudyne	0037, 0361, 0163, 0087, 0294, 0206, 0516
SKY	0037
Skysonic	0696
SLX	0668
Smaragd	0487
Solavox	0037, 0548, 0361, 0072, 0163
Sonawa	0218
Soniko	0037
Sonitron	0370, 0208
Sonneclair	0037
Sonoko	0037, 0264, 0009, 0282
Sonorol	0548, 0361, 0163, 0282, 0208
Sontec	0037, 0370, 0294, 0009
Sony	0037, 1505, 0036, 1010, 0170, 1651, 0011, 0093
Sound & Vision	0218, 0374

TV (Continued)

Manufacturer	Setup Codes
Soundesign	0178
Soundwave	0037, 0715, 0418
Spectra	0009
Ssangyong	0009
Staksonic	0009
Standard	0037, 1037, 0218, 0009, 0374
Starlite	0037, 0264, 0009
Stenway	0218, 0282
Stern	0206, 0163, 0259
Strato	0037, 0264, 0009
Sunkai	0610, 0487, 0455, 0355, 0294
Sunstar	0037, 0264, 0579, 0009, 0371
Sunwood	0037
Superla	0516
Supersonic	0455, 0009, 0208
SuperTech	0556, 0037, 0218, 0009
Supra	0009, 0178
Susumu	0218, 0335
Sutron	0009
SVA	0587
Swissline	0247
Sysline	0037
T + A	0447
T+A	0447
Tandberg	0367
Tandy	0218, 0163, 0093, 0072
Tashiko	0036, 0163
Tatung	0037, 0011, 0516, 0072, 0629, 0621
TCM	0714, 0808
Teac	0037, 0714, 0668, 1909, 1037, 0698, 0706, 0712, 0264, 0455, 0170, 0282, 0418, 0009, 0178, 0412, 0512
Tec	0037, 0247, 0337, 0009, 0259
Tech Line	0037, 0668
Techica	0218
Technics	0556, 0650
TechniSat	0556, 0655
Tecnimagen	0556
Tedex	0606, 0418, 0208, 0009
Tek	0009
Televia	0196
Telecor	0037, 0218, 0259, 0163
Telefunken	0037, 0625, 0560, 0486, 0698, 0712, 0587, 0074, 0196, 0073, 0109, 0346, 0084, 0335
Telefusion	0037
Telegazi	0037, 0264, 0218, 0163, 0259
Telesonic	0037
Telestar	0556, 0037, 0009, 0579
Teletech	0037, 0668, 1037, 0009, 0337, 0247
Teleton	0036, 0206, 0259
Televideon	0163
Television	0037
Temco	0294
Tempest	0264, 0455, 0009
Tennessee	0037
Tensai	0037, 0715, 0218, 0104, 0294, 0377, 0247, 0374, 0009, 0371
Tenson	0009

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Manufacturer	Setup Codes
Tevion	0037, 0714, 0668, 1037, 1137, 0648
Texet	0218, 0009, 0374
Thomson	0037, 0625, 0560, 0196, 0109, 0335, 0198
Thorn	0037, 0361, 0036, 0499, 0084, 0190, 0074, 0535, 0109, 0335, 0073, 0512, 0104, 0193, 0072
Thorn-Ferguson	0073, 0499, 0193, 0190
TMK	0178
Tobishi	0218
Tokai	0037, 0668, 1037, 0337, 0009, 0163, 0072, 0374
Tokaido	1037
Tomashi	0218, 0282
Tongtel	0780
Toshiba	0714, 0195, 0036, 0618, 0650, 0508, 0718, 0070, 0009, 1508, 0109
Toyoda	0264, 0009, 0371
Trakton	0264, 0009
Trans Continens	0037, 0668, 1037
TRANS-continents	0621
Trasonic	0037, 0698, 0712, 0264, 0455, 0587, 0512, 0009, 0418
Triad	0556
Trident	0516
Tristar	0264, 0218, 0193
Triumph	0556, 0516, 0346
Tsoschi	0282
TVTEXT 95	0556
Uher	0037, 0486, 0480, 0418, 0374, 0206
Ultravox	0037, 0087, 0247
Unic Line	0037, 0455
United	0037, 0714, 0715
Universal	0037
Universum	0037, 0668, 1037, 0361, 0264, 0370, 0036, 0618, 0200, 0473, 0294, 0535, 0074, 0346, 0170, 0418, 0011, 0512, 0070, 0328, 0631, 0104, 0009, 0247, 0480, 0327, 0084
Univox	0037, 0163, 0087, 0337
Vestel	0556, 0037, 0668, 1037
Vexa	0037, 0009
Videologic	0218
Videologique	0218
Videomac	0009
Videosat	0247
VideoSystem	0037
Vidtech	0178
Vision	0037, 0264
Vistar	0206
Vortec	0037
Voxson	0178, 0163, 0087, 0418
Waltham	0037, 0668, 1037, 0163, 0109, 0418
Wards	0178
Watson	0037, 0668, 1037, 0218, 0579, 0519, 0009, 0163
Wega	0037, 0036, 0087
Wharfedale	0556, 0037, 0519
White Westinghouse	0037, 0337
Windsor	0668, 1037
Windstar	0282, 0337
Windy Sam	0556
Wintel	0714

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Manufacturer	Setup Codes
Worldview	0455
Xenius	0634, 0661
XLogic	0698
XMS	0698
Xrypton	0037
Yamaha	0650
Yamishi	0037, 0218, 0455, 0282
Yokan	0037
Yoko	0037, 0264, 0218, 0009, 0247
Yorx	0218
Zanussi	0264, 0206

TV/VCR Combination

Manufacturer	Setup Codes
Aiwa	1916
Daewoo	1909
Emerson	1909
Goodmans	1909
Teac	1909

TV/DVD Combination

Manufacturer	Setup Codes
Bush	1037, 0698

VCR

Manufacturer	Setup Codes
Accent	0072
Adyson	0072
Aim	0278, 0020
Aiwa	0037, 0348, 0000, 0307, 0352, 0734, 0687, 1137, 0742
Akai	0037, 0348, 0642, 0352, 0315, 0106, 0240, 0020, 0041
Akiba	0072
Akura	0072
Alba	0081, 0278, 0348, 0000, 0072, 0352, 0315, 0020
Allorgan	0240
Allstar	0081
Ambassador	0020
America Action	0278
Amstrad	0278, 0000, 0072, 1942
Anam	0037, 0226, 0240
Anam National	0226
Anitech	0072
Ansonic	0000
Aristona	0081
ASA	0081, 0037
Asuka	0037, 0038
Audiosonic	0278
Audioton	0020
AVA Technology	0615
AVP	0000, 0352
Awa	0278, 0037, 0642, 0043
Baird	0000, 0104, 0106, 0041
Bang & Olufsen	0499
Basic Line	0278, 0072, 0104, 0020
Beko	0104
Bell & Howell	0104
Bestar	0278, 0020
Black Diamond	0642
Black Panther	0278
Blaupunkt	0081, 0226, 0195

VCR (Continued)

Manufacturer	Setup Codes
Blue Sky	0278, 0037, 0348, 0642, 0072, 0352, 0480, 1137
Bondstec	0072, 0020
Brand Unknown	0348, 0104
Brandt	0320, 0041, 0493, 0321
Brandt Electronic	0041
Brandt Electronique	0041
Brinkmann	0348
British Sky Broadcasting	1942
Bush	0081, 0278, 0348, 0000, 0642, 0072, 0352, 0315
Carena	0081
Carrefour	0045
Carver	0081
Casio	0000
Cathay	0278
Catron	0020
CGE	0000, 0041
Cimline	0072
Citizen	0278, 0037
Clatronic	0000, 0072, 0020
Comb	0072
Combitech	0352
Condor	0278, 0020
Craig	0037, 0072, 0240
Crown	0278, 0037, 0072, 0480, 0020
Cyrus	0081
Daewoo	0278, 0637, 0642, 0352, 0045, 0020
Dansai	0278, 0072
Dantax	0352
Daytron	0278, 0020
De Graaf	0081, 0104, 0048, 0042, 0166
Decca	0081, 0000, 0352, 0067, 0041
Deitron	0278
Denko	0072
Denon	0042
Diamant	0037
Diamond	0348
Dream Multimedia	1968
DREAM multimedia.TV	1968
Dual	0081, 0278, 0348, 0000, 0041
Dumont	0081, 0000, 0104
Elbe	0278, 0038
Elcatech	0072
Elin	0240
Elsay	0072
Elta	0278, 0072
Emerson	0278, 0637, 0037, 0000, 0072, 0045, 0043, 0593
ESC	0278, 0240, 0020
Etzuko	0072
Europhon	0020
Fenner	0020
Ferguson	0278, 0000, 0320, 0493, 0041, 0321
Fidelity	0000, 0072, 0352, 0432, 0240
Finlandia	0081, 0037, 0000, 0384, 0104, 0048, 0043, 0042, 0106, 0226, 0166
Finlux	0081, 0000, 0104, 0042
Firstline	0278, 0037, 0348, 0072, 0045, 0043, 0480, 1137

VCR (Continued)

Manufacturer	Setup Codes
Fisher	0104, 0020
Flint	0348
Frontech	0072, 0020
Fujitsu	0000
Fujitsu General	0037
Funai	0000
Galaxi	0000
Galaxis	0278
Garrard	0000
GBC	0020
GE	0320, 0048, 0240
GEC	0081
General	0020
General Technic	0348
Genexxa	0104
Go Video	0432, 0620
GoldHand	0072
GoldStar	0037, 0480
Goodmans	0081, 0278, 0637, 0037, 0348, 0000, 0642, 0072, 0352, 0020
GPX	0037
Gradiente	0000
Graetz	0104, 0240, 0041
Granada	0081, 0037, 0000, 0104, 0048, 0042, 0226, 0240
Grandin	0278, 0037, 0000, 0072, 0020
Grundig	0081, 0348, 0072, 0320, 0352, 0226, 0195, 0347, 0742
Haaz	0348
Hanimex	0352
Hanseatic	0081, 0037, 0038
Hantor	0020
Harley Davidson	0000
Harman/Kardon	0038
Harwood	0072
HCM	0072
Hinari	0278, 0072, 0352, 0041, 0240
Hisawa	0352
Hischito	0045
Hitachi	0081, 0000, 0042, 0240, 0041, 0166, 0593
Hornlyphon	0081
Hughes Network Syst	0042
Hypson	0278, 0037, 0000, 0072, 0352, 0480
H_er	0278, 0642
Impego	0020
Imperial	0000
Ingersoll	0240
Inno Hit	0072, 0020
Interbuy	0037, 0072
Interfunk	0081, 0104
Internal	0278, 0637
International	0278, 0037, 0642
Intervision	0278, 0000
IR	0081, 0348, 0072, 0104, 0045, 0042, 0106, 0226, 0240, 0041, 0020
Irradio	0081, 0037, 0072
ITT	0384, 0104, 0106, 0041, 0240
ITV	0278, 0037, 0020
ITV Videomaster	0020
JBL	0278

VCR (Continued)

Manufacturer	Setup Codes
Jensen	0041
JMB	0348, 0352, 0742
Joyce	0000
JVC	0081, 0384, 0067, 0041
Kaisui	0072
Kambrook	0037
Karcher	0081, 0278
KEC	0278, 0037
Kendo	0278, 0348, 0642, 0072, 0315, 0106
Kenwood	0067, 0041, 0038
KIC	0000
Kneissel	0278, 0037, 0348, 0352
Korpel	0072
Kuwa	0226
Kyoto	0072
Lenco	0278
Leyco	0072
LG	0037, 0480, 1137
Lifetec	0348
Lloyd's	0000
Loewe	0081, 1562, 0037
Logik	0072, 0106, 0240
Lumatron	0593
Lux May	0072
Luxor	0104, 0048, 0043, 0315, 0106
LXI	0037
M Electronic	0000, 0038
Magnasonic	0278, 0593
Magnavox	0081, 0000, 0642
Magnin	0240
Magnum	0642
Manesth	0081, 0072, 0045
Marantz	0081, 0038
Mark	0278, 0000, 0020
Master's	0278
Matsui	0278, 0348, 0352, 0742, 0687, 0240
Mediator	0081
Medion	0348, 0642, 0352
Meletronic	0037, 0000, 0038
Memorex	0037, 0348, 0000, 0104, 0048, 0240
Memphis	0072
Mercury	0020
Metronic	0081
Metz	0081, 1562, 0037, 0226, 0195, 0836, 0347
MGA	0043, 0240
Micormay	0348
Migros	0000
Minerva	0195
Minolta	0042
Mitsubishi	0081, 0000, 0642, 0067, 0048, 0043, 0480
MTC	0000, 0240
Multitec	0037
Multitech	0000, 0072, 0020
Murphy	0000
Myryad	0081
NAD	0104
Naiko	0642

VCR (Continued)

Manufacturer	Setup Codes
National	0226
NEC	0278, 0037, 0104, 0067, 0041, 0038
Neckermann	0081
Nesco	0000, 0072
Nikkai	0278, 0072, 0020
Nikko	0037
Nokia	0081, 0278, 0104, 0048, 0042, 0315, 0106, 0240, 0041
Nordmende	0320, 0384, 0067, 0041, 0321, 0493
Oceanic	0081, 0000, 0104, 0048, 0106, 0041
Okano	0278, 0348, 0072, 0315
Onimax	0642
Optimus	0037, 0104, 0048, 0432, 0593
Orbit	0072
Orion	0348, 0352, 0742, 0687
Orson	0000
Osaki	0037, 0000, 0072
Osume	0072
Otto Versand	0081
Pace	0352, 1942
Pacific	0348, 0000, 0642
Palladium	0037, 0348, 0072, 0041
Palsonic	0000, 0642, 0072
Panasonic	1562, 0226, 0836, 1662
Pathe Cinema	0043
Pathe Marconi	0041
Penney	0037, 0042, 0240, 0038
Pentax	0042
Perdio	0000
Philco	0072, 0038
Philips	0081, 0384, 0593
Phoenix	0278
Phonola	0081
Pilot	0037
Pioneer	0081, 0067, 0042
Portland	0278, 0637, 0020
Prinz	0000
Profitronic	0081, 0240
Proline	0278, 0000, 0642, 0320, 0615, 0321
Proscopro	0278
Prosonic	0278
Protech	0081
ProVision	0278
Pye	0081, 0000
Quasar	0278
Quelle	0081
Radialva	0081, 0037, 0072, 0048
Radiola	0081
Radionette	0037, 1137
RadioShack	0037, 0000
Rank	0041
Rank Arena	0041
RCA	0320, 0048, 0042, 0240
Realistic	0037, 0000, 0104, 0048
Reoc	0348
Rex	0384, 0041
RFT	0072, 0020

VCR (Continued)

Manufacturer	Setup Codes
Roadstar	0081, 0278, 0037, 0072, 0240, 0742
Royal	0072
Saba	0278, 0320, 0384, 0321, 0041
Saisho	0348
Salora	0104, 0043, 0106
Samsung	0045, 0432, 0620, 0240
Samurai	0020
Sansei	0048
Sansui	0348, 0000, 0072, 0067, 0106, 0041
Sanyo	0348, 0104, 0067, 0048, 0240
Saville	0278, 0352, 0240
SBR	0081
Schaub Lorenz	0348, 0000, 0104, 0315, 0106, 0041
Schneider	0081, 0278, 0037, 0348, 0000, 0642, 0072, 0352, 0042, 0240
Scott	0043
Sears	0037, 0000, 0104, 0042
Seaway	0278
SEG	0081, 0278, 0637, 0642, 0072, 0240
SEI	0081
Sei-Sinudyne	0081
Seleco	0037, 0384, 0020, 0041
Semp	0045
Sentra	0072, 0020
Setron	0072
Sharp	0037, 0048, 0569
Shintom	0072, 0104
Shivaki	0037
Siemens	0081, 0037, 0320, 0104, 0195, 0347
Siera	0081
Silva	0037
Silver	0278
Singer	0348, 0045
Sinudyne	0081, 0352
SKY	1942
Smaragd	0348
Solavox	0020
Sonneclair	0072
Sontec	0037
Sony	0000, 0032, 0106, 1032
Soundwave	0037, 0348
Ssangyong	0072
Standard	0278
Stern	0278
Sunkai	0278, 0348
Sunstar	0000
Suntronic	0000
Sunwood	0072
Supra	0278, 0037, 0348
Sylvania	0081, 0043
Symphonic	0000, 0593
Tandberg	0278
Tandy	0000, 0104
Tashiko	0081, 0037, 0000, 0048, 0240
Tatung	0081, 0348, 0000, 0352, 0048, 0043, 0041
Tchibo	0348
TCM	0348

VCR (Continued)

Manufacturer	Setup Codes
Teac	0278, 0637, 0037, 0000, 0307, 0642, 0072, 0593, 0041
Tec	0072, 0020
Tech Line	0072
Technics	0081, 0226
TechniSat	0348
Tedelex	0037, 0348
Teknika	0037, 0000
Teleavia	0493, 0041
Telefunken	0278, 0642, 0320, 0384, 0041, 0321, 0493
Telestar	0037
Teletech	0278, 0000, 0072
Tempest	0020
Tenosal	0072
Tensai	0278, 0000, 0072
Tevion	0348, 0642
Texet	0278, 0020
Thomas	0000
Thomson	0278, 0320, 0384, 0067, 0041, 0493, 0321, 0722
Thorn	0037, 0104, 0041
Tivo	0722
Tokai	0037, 0072, 0104, 0041
Topline	0348
Toshiba	0081, 0384, 0352, 0045, 0043, 0432, 0742, 0041
Totevision	0037
Towada	0072
Tradex	0081
Trakton	0020
Triad	0278
TVA	0020
Uher	0240
Ultravox	0278
Unitech	0240
United	0348
United Quick Star	0278
Universum	0081, 0037, 0348, 0000, 0104, 0106, 0240, 0195, 1137
Victor	0067
Video Concepts	0045
Video Pro	0020
Video Technic	0000
Videomagic	0037
VideoPro	0020
Videosonic	0240
Villain	0000
Wards	0081, 0000, 0072, 0045, 0048, 0042, 0240, 0038
Watson	0081, 0642, 0352
Weltblick	0037
Wewa	0493
Wharfedale	0642, 0615, 0593
White Westinghouse	0278, 0072
World	0348
Yamaha	0038
Yamishi	0278, 0072
Yokan	0072
Yoko	0037, 0072, 0020, 0240
Zenith	0637, 0000
ZX	0348, 0352

PVR

Manufacturer	Setup Codes
Dream Multimedia	1968
Pace	1942
SKY	1942
Thomson	0722
Tivo	0722

DVD player

Manufacturer	Setup Codes
3DLAB	0539
A-Trend	0714
Acoustic Solutions	0730
AEG	0770, 0790, 0788
Afreedy	0698
Aim	0699
Aiwa	0533, 0641, 1912
Akai	0790, 1115, 0716, 0705, 0788, 0690, 0766
Akira	0699
Akura	1170, 0898
Alba	0539, 0695, 0730, 0717, 0672, 0713, 0783, 0699
Alize	1151
Amitech	0770, 0850
Amstrad	0713
AMW	0872
Ansonic	0831
Apex Digital	1004, 0672
Audiosonic	0690
Audiovox	0717
Awa	0730, 0872
Axion	0730
Baze	0672
Beko	1153
Bellagio	1004
Black Diamond	0766, 0713
Blue Sky	0695, 0651, 0713, 0672
Boghe	1004
Boman	0783
Brainwave	0770, 1115
Brand Unknown	0490, 0730, 0717
Brandt	0503, 0551, 0651
Broksonic	0695
Bush	0695, 0730, 0831, 0690, 0713, 0672, 0699, 0516, 0717
C-Tech	0768
Cambridge Audio	0751
Cat	0699
CCE	0730
Centrex	1004, 0672
Centrum	0713
CGV	1115, 0751
Cinetec	0872, 0713
cineULTRA	0699
Classic	0730
Clatronic	0672, 0788
Clayton	0713
Coby	0730
Compacts	0826
Conia	0852, 0672, 0516
Contel	0788
Continental Edison	0831, 0872
Crown	0770, 1115, 0690
Cybercom	0831
CyberHome	0714

DVD player (Continued)

Manufacturer	Setup Codes
Cytron	0651, 0705, 0716
D-Vision	1115
Daewoo	0770, 0705, 0872, 0714
Daewoo International	0872
Dansai	0770, 1115, 0783
Dantax	0790, 0723
Daytek	0872
Dayton	0872
DCE	0831
Decca	0770, 1115
Denon	0490, 1634
Denver	0672, 0898, 0788, 0699
Denzel	0665
Diamond	0768, 0651, 0751
Digihome	0713
digiRED	0717
Digitor	0651
Digitrex	0672
DIGIXmedia	0826
DiK	0831
Dinamic	0788
DiViDo	0705
DK digital	0831
DMTECH	0783
Dragon	0831
DreamX	1151
Dual	0730, 0831, 0651, 0790, 0783, 0713, 0665
Durabrand	0713
DVX	0768
Eclipse	0751, 0723
Elin	0770
Elion	0850
Elta	0770, 0690, 0850, 0672, 0788, 1151, 1115
Eltax	0766
Emerson	0591, 0705
Encore	0698
Enterprise	0591
Enzer	0766
EuroLine	1115, 0788
Fenner	0651
Ferguson	0651
Finlux	0741, 0591, 0770, 0672, 0751, 0783
Firstline	0713
Fisher	0670
Funai	0695
GE	0717
Global Solutions	0768
Global Sphere	0768
Go Video	0783
GoldStar	0741, 0591
Goodmans	0730, 0651, 0790, 0713, 0783, 0690, 1004, 0723
GPX	0699
Graetz	0665
Gran Prix	0831, 0898
Grandin	0713, 0716
Greenhill	0717
Grundig	0539, 0551, 0695, 0651, 0790, 0775, 0723, 1004, 0670, 0713, 0705
Grunkel	0770

DVD player (Continued)

Manufacturer	Setup Codes
H & B	0850
H&B	0850, 0713
Haaz	0768, 0751
Hanseatic	0741, 0783, 1153
Harman/Kardon	0702
HCM	0788
HDT	0705
HE	0730
HenØ	0713
Hitachi	0573, 0664
Hiteker	0672
Home Electronics	0730
Humax	0646
Hyundai	0850, 0783
H_er	0831, 0651, 0826, 0713
ICP	1153
Ingelen	0788
InterAct	0697
IRT	0783
ISP	0695
Jaton	0665
JDB	0730
Jeken	0699
JMB	0695
JVC	0623, 0539, 0503, 0558, 1940, 1901, 1164, 1988
Karcher	0783
Kendo	0713, 0699
Kennex	0770
Kenwood	0490, 0534
Kiirō	0770
Kiss	0665
Lawson	0768, 0716
Lenco	0770, 0651, 0699, 0672, 0713
Lenoxx	0690
Lexia	0768, 0699
LG	0741, 0591, 1906
Lifetec	0831, 0651
Limit	0768, 0716
Loewe	0539, 0885
Logix	0783, 0705
Lumatron	0705
Luxman	0573
Luxor	1004
Mad Catz	1002, 1108
Magnavox	0503
Magnex	0723
Manhattan	0705, 0713
Marantz	0539
Mark	0713
Marquant	0770
Matsui	0695, 0651, 0672, 1004, 0713
Maxdorf	0788
Maxim	0713
MBO	0730, 0690
Mecotek	0770
Medion	0630, 0831, 0651, 0716, 0783
Memorex	0831
Metronic	0690
Metz	0571, 0525, 0713
MiCO	1179, 0751, 0723
Micromedia	0539, 0503

DVD player (Continued)

Manufacturer	Setup Codes
Micromega	0539
Microsoft	0522
Microstar	0831
Minato	0752
Minax	0713
Minerva	0705
Minoka	0770
Mirror	0752
Mitsubishi	0713
Monyka	0665
Mustek	0730
Mx Onda	0651, 1179, 0751
NAD	0741
Naiko	0770, 1004
Neufunk	0665
Nevir	0770, 0831
Nordmende	0831
Noriko	0752
NU-TEC	0516
Okano	0752
Olidata	0672
Omni	0698, 0690
Onkyo	0503, 0612, 1924, 0627
Optimus	0525
Orion	0695
Oritron	0651
Ormond	0713
Otic	0826
Pacific	0831, 0768, 0790, 0713
Palladium	0695
Palsonic	0672, 0852
Panasonic	0490, 1908, 1907, 1910, 1909
Panda	0717
Pelican	0731
Philco	0788, 0690
Philips	0539, 0503, 0646, 1914
Phonotrend	0699
Pioneer	0571, 0525, 0631, 1902, 1900, 0638, 1965
Plu2	0850
Powerpoint	0872
Prima	0766
Prima Electronic	0766
Prinz	0831
Prism	0705
Proline	0651, 1004, 0672
Proscan	0522
Prosonic	0699
ProVision	0699
Radionette	0741
Raite	0665
RCA	0522
REC	0490, 0766
Red Star	0770, 0898, 0788
Redstar	0898
Reoc	0768, 0752
Revoy	0699
Roadstar	0730, 0690, 0672, 0713, 0699
Ronin	0872
Rotel	0623, 0558
Rowa	0516, 1004, 0872, 0717
Saba	0551, 0651
Saitek	0731

DVD player (Continued)

Manufacturer	Setup Codes
Saivod	0831
Salora	0741
Sampo	0752, 0698
Samsung	0490, 0573, 1932, 0744
Sansui	0695, 0768, 0751, 0716, 1153
Sanyo	0670
Scan	0850, 0705
ScanMagic	0730
Schaub Lorenz	0770, 1151, 1115, 0788
Schneider	0539, 0831, 0651, 0790, 0705, 0788, 1153, 0783
Schwaiger	0752
Scientific Labs	0768
Scott	0651, 1036, 0672
SEG	0768, 0872, 0713, 0665
Shanghai	0672
Sharp	0630, 0752
Sherwood	0741, 0717
Shinco	0717
Silva	0788, 0898
Silva Schneider	0831, 0898
Simaudio	0885
Singer	0768, 0716, 0690, 0751
Skymaster	0730, 0768
Skysonic	0766
Skyworth	0766
Slim Devices	0533
SM Electronic	0730, 0768, 0690
Smart	0713, 0705
Sonashi	0831, 0716
Sonic Blue	0783
Sony	0573, 1633, 1981, 1070, 1934, 0864, 1903, 0772
Soundmaster	0768
Soundmax	0768
Soundwave	0783
Spectra	0872
Standard	0768, 0651, 0788
Sunkai	0770, 0850
Sunwood	0788, 0898
Supervision	0768
SVA	0672
Synn	0768
Tandberg	0713
Tatung	0770
Teac	0571, 0741, 0768, 0790, 0516, 0717
Tec	0898
Technics	0490, 1905
Technika	0770, 0831, 1115
Technisson	1115
Technosonic	1115
Techwood	0713
Tedelex	0690
Telefunken	0790
Teletech	0768, 0713
Tensai	0770, 0651, 0690
Tevion	0768, 0651, 1036
Theta Digital	0571
Thomson	0551, 0522
Thrustmaster	0498
Tokai	0790, 0698, 0898, 0665, 0788
Tokaido	0698
Tokiwa	0716

DVD player (Continued)

Manufacturer	Setup Codes
Toshiba	0503, 1045, 1988
Trans Continens	0826
TRANS-continents	0831, 0826, 0872
Transonic	0672
Umax	0690, 1151
United	0730, 1115, 0672, 0826, 0788
Universum	0741, 0591, 0713
Venturer	0790
Vestel	0713
Vieta	0705
Voxson	0730, 0831, 0690
Waitec	1151
Walkvision	0717
Welkin	0831
Wellington	0713
Wesder	0699
Wharfedale	0790, 0752, 0751, 0698
Wilson	0831
Windy Sam	0573
WIZE	1115
Woxter	1151
Xenius	0790
XLogic	0768
XMS	0788
Yakumo	1004
Yamada	1151, 1004, 0872
Yamaha	0490, 0539, 0646
Yamakawa	0665, 0872
Yukai	0730
Zenith	0503, 0591, 1135

Game Player

Manufacturer	Setup Codes
Xbox	0522
Sony PlayStation2	0533

DVD player, MD recorder CD player & TV operations

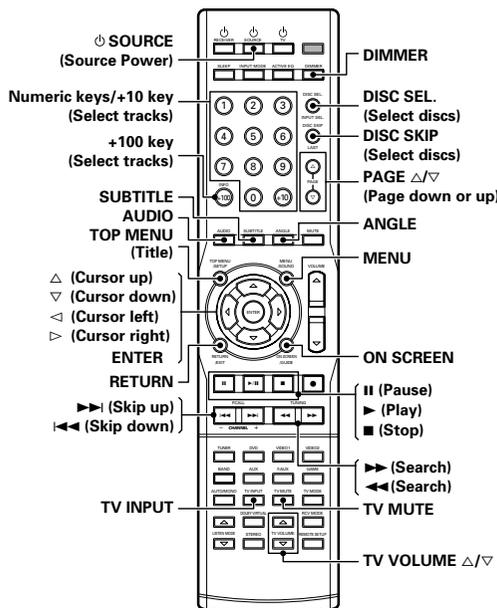
Refer to the following for the type of remote control operations available for each component.

- ❶ Select the input source.
- ❷ Press the keys corresponding to the operations you desire. Refer to the following sections for details.

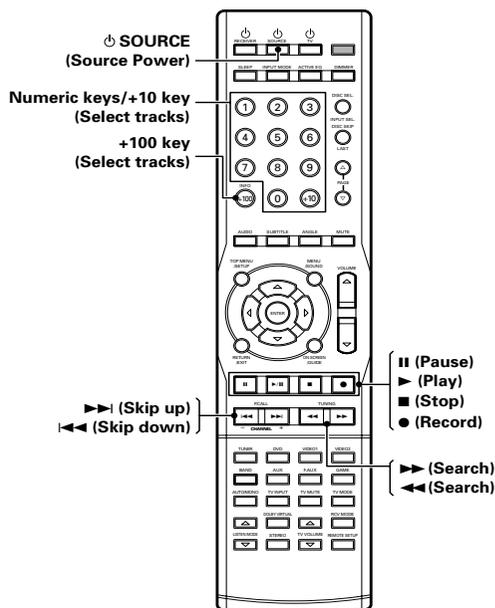
- When pressing keys in succession, press each key firmly and be sure to wait at least 1 second before pressing the next key.
- Numeric keys function the same as the numeric keys on the original remote.

These keys can be used to perform the basic operations of KENWOOD and other manufacturers' components which the setup code for each component had been entered beforehand. - 41 - 44

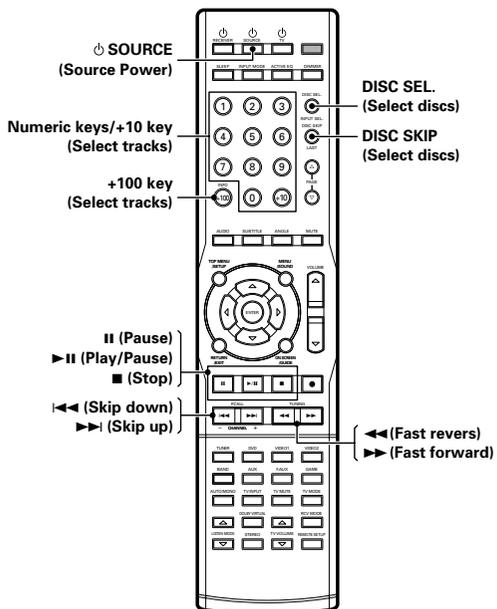
DVD player operation keys



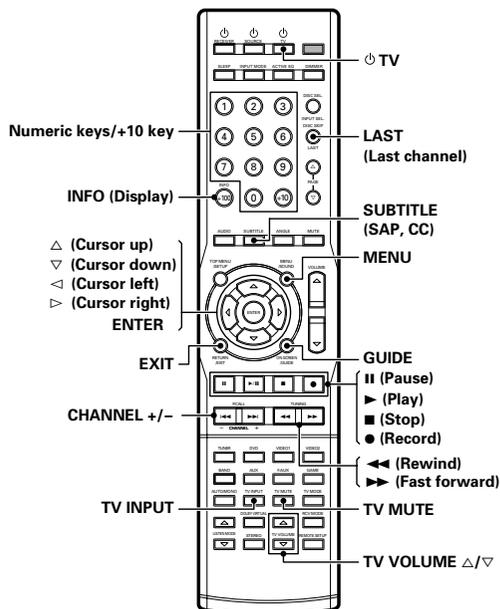
MD recorder operation keys (made by KENWOOD)



CD player operation keys



TV operation keys (including TVs incorporating VCR)



VCR, Satellite receiver & Cable converter operations

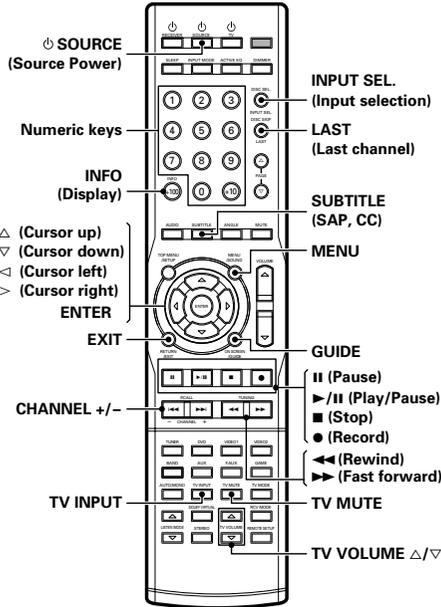
Refer to the following for the type of remote control operations available for each component.

- ❶ Select the input source.
- ❷ Press the keys corresponding to the operations you desire. Refer to the following sections for details.

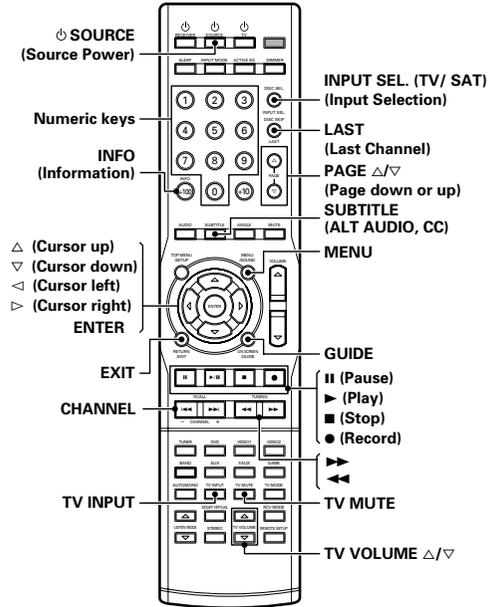
- When pressing keys in succession, press each key firmly and be sure to wait at least 1 second before pressing the next key.
- Numeric keys function the same as the numeric keys on the original remote.

These keys can be used to perform the basic operations of KENWOOD and other manufacturers' components which the setup code for each component had been entered beforehand. → 41 → 44

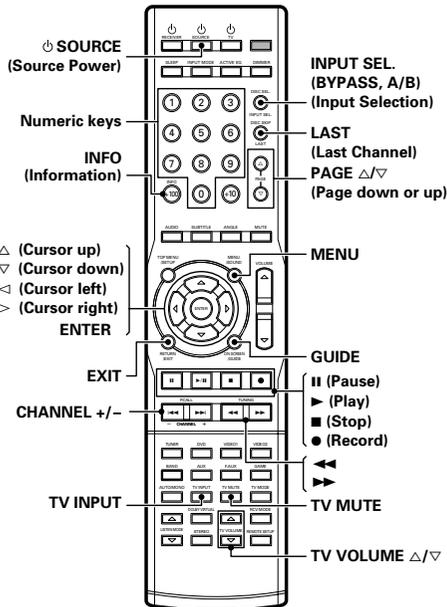
VCR operation keys



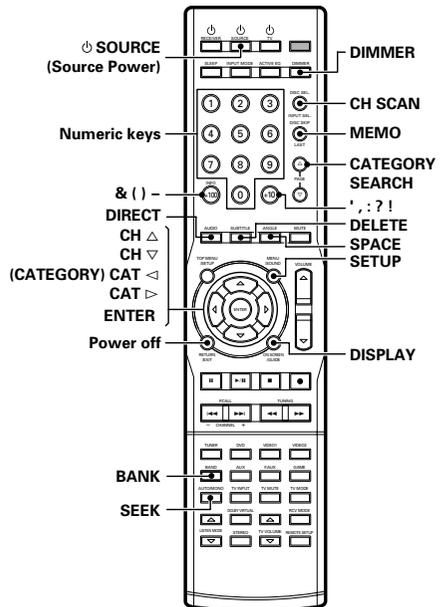
Satellite receiver operation keys



Cable converter operation keys



Sirius operation keys (made by KENWOOD)



In case of difficulty

Resetting the Microcomputer

The microcomputer may malfunction (unit cannot be operated, or shows an erroneous display) if the power cord is unplugged while the power is ON, or due to some other external factor. If this happens, execute the following procedure to reset the microcomputer and return the unit to its normal operating condition.

Unplug the power cord from the wall outlet, then plug it back in while holding down the ON/STANDBY  key.

- Please note that resetting the microcomputer will clear the contents of the memory and returns the unit to the state it was in when it left the factory.

Amplifier

Symptom	Remedy
No sound from the speakers.	<ul style="list-style-type: none"> ● Connect the components properly referring to "Connecting the speakers". - 12 ● If muting is ON, release it. - 25 ● If headphones are connected, disconnect them. - 24 ● Press the INPUT MODE key to select to full auto mode. - 8 ● Check if the assignment of digital audio input jacks is correct. - 22
Sound is not output from the speaker, or their sound is very small.	<ul style="list-style-type: none"> ● Connect the components properly referring to "Connecting the speakers". - 12 ● See "Speaker settings" and check if the setting for all of the speakers is correct. - 18 ● Select a surround mode. ● Adjust the speaker levels using the test tone. - 20
The standby indicator blinks and sound is not output.	<ul style="list-style-type: none"> ● The protection circuitry is activated because speaker cords are short-circuited. Disconnect the power cord from the AC wall outlet, switch the receiver OFF, remove the short-circuiting and turn the receiver ON again. ● The protection circuitry is activated because the output power is too high. Turn this unit OFF then ON again and reduce the output volume level. ● The protection circuitry activated due to extreme rise in temperature. Turn this unit OFF then ON again and reduce the output volume level. ● The protection circuitry is activated because the impedance of the speakers in use is lower than specified. Use speakers of the specified impedance.
The audio and video of a different channel are output.	<ul style="list-style-type: none"> ● Check if the assignment of digital audio input jacks and component video jacks is correct. - 22
The video is not output.	<ul style="list-style-type: none"> ● Connect the video source to be played to this unit and this unit to the monitor TV using the same type of cords (Component video cords, S VIDEO cords or yellow RCA video cords) correctly. - 10
Audio cannot be recorded.	<ul style="list-style-type: none"> ● Connect the equipment correctly by referring to "Connecting video components, audio components" and "Digital connections". - 10 - 11 ● If it is the digital audio that you attempt to record, set up the unit correctly by referring to "Recording music in REC mode". - 26
A video source cannot be recorded normally.	<ul style="list-style-type: none"> ● Copy-guarded video software cannot be recorded. ● The S VIDEO and component video inputs cannot be recorded. Connect the video source to the yellow RCA video jack. - 10
When playing a digital source signal, the sound is cut off soon after it starts.	<ul style="list-style-type: none"> ● There are many possible causes for this problem, depending on the type of player used. Switch the input mode to DIGITAL MANUAL during playback of the digital source, and restart the playback from the beginning. - 8
Dolby Digital or DTS audio software cannot be played in multi-channel audio.	<ul style="list-style-type: none"> ● Check if the digital output setting of the digital audio player is correct.
The audio of a satellite digital broadcasting cannot be switched.	<ul style="list-style-type: none"> ● With certain broadcasting, the audio cannot be switched on the receiver. In this case, switch the audio on your satellite digital tuner.
The input for the unit is set automatically to "GAME" when the unit is turned ON.	<ul style="list-style-type: none"> ● The GAME mode function is activated. - 21

Tuner

Symptom	Remedy
Radio stations cannot be received.	<ul style="list-style-type: none"> ● Connect an antenna properly. -- [15] ● Set the broadcast band properly. -- [27] ● Tune the frequency of the desired station.
Interference.	<ul style="list-style-type: none"> ● Install the outdoor antenna away from the road. ● Turn off the power to the appliance. ● Install the receiver farther away from the TV.
A station which was preset cannot be received by pressing the corresponding numeric key.	<ul style="list-style-type: none"> ● Preset a station with a receivable frequency.

Remote control unit

Symptom	Remedy
Control of other component is impossible.	<ul style="list-style-type: none"> ● Register its setup code correctly. -- [39]
Remote control operation is not possible.	<ul style="list-style-type: none"> ● Press the input selector key and select the optimum control mode. ● Replace with new batteries. ● Point the remote control unit to the remote sensor of the receiver. -- [15] ● Connect the components properly referring to "Setting up the system". ● The remote control has not been set to the operation mode for the component you wish to control. Press the source select keys or ϕ SORUCE key to activate the operation mode for the component you want to control before operation. -- [40]

Memory back-up function

If the power supply to the receiver is shut down for about a day or more, the following settings will be reset to the initial conditions. Please be careful.

- Power mode = OFF
- Volume level = - 66 dB
- Dimmer level = OFF (Brightest condition)
- Broadcast band = FM
- Frequency setting = 87.50 MHz
- Tuning mode = AUTO

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.

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.



As an ENERGY STAR® Partner, Kenwood Corporation has determined that this products meets the ENERGY STAR® guidelines for energy efficiency. This product can save energy. Saving energy reduces air pollution and lowers utility bills.

Specifications (For U.S.A. and Canada)

AUDIO section

Rated power output during STEREO operation

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

100 watts per channel minimum RMS, both channels driven, at 6 Ω from 20 Hz to 20 kHz with no more than 0.5% total harmonic distortion.

Effective power output during STEREO operation 130 W + 130 W
(1 kHz, 10% T.H.D. at 6 Ω)

Effective power output during SURROUND operation

FRONT 100 W + 100 W
(1 kHz, 0.5% T.H.D. at 6 Ω one channel driven)
130 W + 130 W
(1 kHz, 10% T.H.D. at 6 Ω one channel driven)
CENTER 100 W
(1 kHz, 0.5% T.H.D. at 6 Ω one channel driven)
130 W
(1 kHz, 10% T.H.D. at 6 Ω one channel driven)
SURROUND 100 W + 100 W
(1 kHz, 0.5% T.H.D. at 6 Ω one channel driven)
130 W + 130 W
(1 kHz, 10% T.H.D. at 6 Ω one channel driven)
SURROUND BACK/SUBWOOFER 100 W
(1 kHz, 0.5% T.H.D. at 6 Ω one channel driven)
130 W
(1 kHz, 10% T.H.D. at 6 Ω one channel driven)

Total harmonic distortion 0.09% (1 kHz, 50 W, 6 Ω)

Frequency response (IHF' 66)

DIGITAL IN (DVD, VIDEO 1, VIDEO 2, AUX, GAME)
..... 10 Hz ~ 44 kHz, Sampling frequency 96kHz, +0 dB ~ -3.0 dB

Signal to noise ratio (IHF' 66)

DIGITAL IN (DVD, VIDEO 1, VIDEO 2, AUX, GAME) 96 dB

Input sensitivity / impedance

LINE (DVD, VIDEO 1, VIDEO 2, AUX, FRONT AUX, GAME)
..... 200 mV / 47 kΩ

Output level / impedance

REC OUT 200 mV / 1 kΩ
PRE OUT (SURROUND BACK) 1 V / 1 kΩ
PRE OUT (SUBWOOFER) 1 V / 1 kΩ

Tone control

BASS ±10 dB (at 100 Hz)
TREBLE ±10 dB (at 10 kHz)

DIGITAL AUDIO section

Sampling frequency

..... 32 kHz, 44.1 kHz, 48 kHz, 64 kHz, 88.2 kHz, 96 kHz

Input level / impedance / wave length

Optical (VIDEO 1, AUX, GAME)
..... (-15 dBm ~ -24 dBm), 660 nm ±30 nm
Coaxial (DVD, VIDEO 2) 0.5 Vp-p / 75 Ω

VIDEO section

Input sensitivity / impedance

Composite (DVD, VIDEO 1, VIDEO 2, FRONT AUX, GAME)
..... 1 Vp-p / 75 Ω

S VIDEO (DVD, VIDEO 2)

Luminance signal 1 Vp-p / 75 Ω
Chrominance signal 0.286 Vp-p / 75 Ω

COMPONENT VIDEO (DVD, VIDEO 2)

Luminance signal 1 Vp-p / 75 Ω
Cb/Cr-signal 0.64 Vp-p / 75 Ω

Output level / impedance

Composite (VIDEO 1, MONITOR OUT) 1 Vp-p / 75 Ω
S VIDEO (MONITOR OUT)

Luminance signal 1 Vp-p / 75 Ω
Chrominance signal 0.286 Vp-p / 75 Ω

COMPONENT VIDEO (MONITOR OUT)

Luminance signal 1 Vp-p / 75 Ω
Cb/Cr-signal 0.64 Vp-p / 75 Ω

FM tuner section

Tuning frequency range 87.5 MHz ~ 108 MHz

Usable sensitivity (MONO)

..... 1.3 μV (75 Ω) / 13.2 dBf (75 kHz dev, SINAD 30 dB)

50 dB quieting sensitivity

STEREO 28 μV (75 Ω) / 40.2 dBf (75 kHz dev)

Total harmonic distortion (1 kHz)

MONO 0.5% (71.2 dBf input)
STEREO 0.7% (71.2 dBf input)

Signal to noise ratio (1 kHz)

MONO 75 dB (71.2 dBf input)
STEREO 68 dB (71.2 dBf input)

Selectivity (±400 kHz) 70 dB

Stereo separation (1 kHz) 40 dB

Frequency response (30 Hz ~ 15kHz) +0.5 dB, -3.0 dB

AM tuner section

Tuning frequency range 530 kHz ~ 1,700 kHz

Usable sensitivity (30% mod, S/N 20 dB) 16 μV / (600 μV/m)

Signal to noise ratio (30% mod, 400 Hz)
..... 50 dB (60 dBμ V EMF input)

GENERAL

Power consumption 85 W

Standby power consumption 0.2 W

Dimensions W: 440 mm (17-5/16")

H: 79 mm (3-1/8")

D: 364 mm (14-5/16")

Weight (Net) 4.4 kg (9.7 lb)

Notes

- 1.KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.
- 2.The full performance may not be exhibited in an extremely cold location (under a water-freezing temperature).

Specifications (For Europe and Australia)

AUDIO section

For Europe

Rated power output during STEREO operation 100 W + 100 W
DIN/IEC (20 Hz ~ 20 kHz, 0.7% T.H.D. at 6 Ω)
Effective power output during STEREO operation ... 130 W + 130 W
(1 kHz, 10% T.H.D. at 6 Ω)

For Australia

Rated power output during STEREO operation

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

Rated power output during STEREO operation .. 100 W + 100 W
DIN/IEC (20 Hz ~ 20 kHz, 0.7% T.H.D. at 6 Ω)
Effective power output during STEREO operation ... 130 W + 130 W
(1 kHz, 10% T.H.D. at 6 Ω)

Effective power output during SURROUND operation

FRONT 100 W + 100 W
(1 kHz, 0.5% T.H.D. at 6 Ω one channel driven)
130 W + 130 W
(1 kHz, 10% T.H.D. at 6 Ω one channel driven)
CENTER 100 W
(1 kHz, 0.5% T.H.D. at 6 Ω one channel driven)
130 W
(1 kHz, 10% T.H.D. at 6 Ω one channel driven)
SURROUND 100 W + 100 W
(1 kHz, 0.5% T.H.D. at 6 Ω one channel driven)
130 W + 130 W
(1 kHz, 10% T.H.D. at 6 Ω one channel driven)
SURROUND BACK/SUBWOOFER 100 W
(1 kHz, 0.5% T.H.D. at 6 Ω one channel driven)
130 W
(1 kHz, 10% T.H.D. at 6 Ω one channel driven)
Total harmonic distortion 0.09% (1 kHz, 50 W, 6 Ω)
Frequency response (IHF' 66)
DIGITAL IN (DVD, VIDEO 1, VIDEO 2, AUX, GAME)
..... 10 Hz ~ 44 kHz, Sampling frequency 96kHz, +0 dB ~ -3.0 dB
Signal to noise ratio (IHF' 66)
DIGITAL IN (DVD, VIDEO 1, VIDEO 2, AUX, GAME) 96 dB
Input sensitivity / impedance
LINE (DVD, VIDEO 1, VIDEO 2, AUX, FRONT AUX, GAME)
..... 200 mV / 47 kΩ
Output level / impedance
REC OUT 200 mV / 1 kΩ
PRE OUT (SURROUND BACK) 1 V / 1 kΩ
PRE OUT (SUBWOOFER) 1 V / 1 kΩ
Tone control
BASS ±10 dB (at 100 Hz)
TREBLE ±10 dB (at 10 kHz)

DIGITAL AUDIO section

Sampling frequency

..... 32 kHz, 44.1 kHz, 48 kHz, 64 kHz, 88.2 kHz, 96 kHz

Input level / impedance / wave length

Optical (VIDEO 1, AUX, GAME)
..... (-15 dBm ~ -24 dBm), 660 nm ±30 nm
Coaxial (DVD, VIDEO 2) 0.5 Vp-p / 75 Ω

VIDEO section

Input sensitivity / impedance

Composite (DVD, VIDEO 1, VIDEO 2, FRONT AUX, GAME)
..... 1 Vp-p / 75 Ω
S VIDEO (DVD, VIDEO 2)
Luminance signal 1 Vp-p / 75 Ω
Chrominance signal 0.286 Vp-p / 75 Ω
COMPONENT VIDEO (DVD, VIDEO 2)
Luminance signal 1 Vp-p / 75 Ω
Cb/Cr-signal 0.7 Vp-p / 75 Ω

Output level / impedance

Composite (VIDEO 1, MONITOR OUT)
..... 1 Vp-p / 75 Ω
S VIDEO (MONITOR OUT)
Luminance signal 1 Vp-p / 75 Ω
Chrominance signal 0.286 Vp-p / 75 Ω
COMPONENT VIDEO (MONITOR OUT)
Luminance signal 1 Vp-p / 75 Ω
Cb/Cr-signal 0.7 Vp-p / 75 Ω

FM tuner section

Tuning frequency range 87.5 MHz ~ 108 MHz
Usable sensitivity (DIN at 75 Ω)
MONO 1.3 μV / 13.2 dBf (40 kHz dev, S/N 26 dB)
STEREO 45 μV / 42.1 dBf (40 + 6 kHz dev, S/N 46 dB)
Total harmonic distortion (DIN at 1 kHz)
MONO 0.2% (71.2 dBf input)
STEREO 0.8% (71.2 dBf input)
Signal to noise ratio (DIN weighted at 1 kHz)
MONO 65 dB (71.2 dBf input)
STEREO 60 dB (71.2 dBf input)
Selectivity (DIN ±300 kHz) 64 dB
Stereo separation (1 kHz) 36 dB
Frequency response (30 Hz ~ 15kHz) +0.5 dB, -3.0 dB

AM tuner section

Tuning frequency range 531 kHz ~ 1,602 kHz
Usable sensitivity (30% mod, S/N 20 dB) 16 μV / (600 μV/m)
Signal to noise ratio (30% mod, 400 Hz)
..... 50 dB (60 dBμ V EMF input)

GENERAL

Power consumption 85 W
Standby power consumption 0.2 W
Dimensions W: 440 mm (17-5/16")
H : 79 mm (3-1/8")
D : 364 mm (14-5/16")
Weight (Net) 4.4 kg (9.7 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 _____