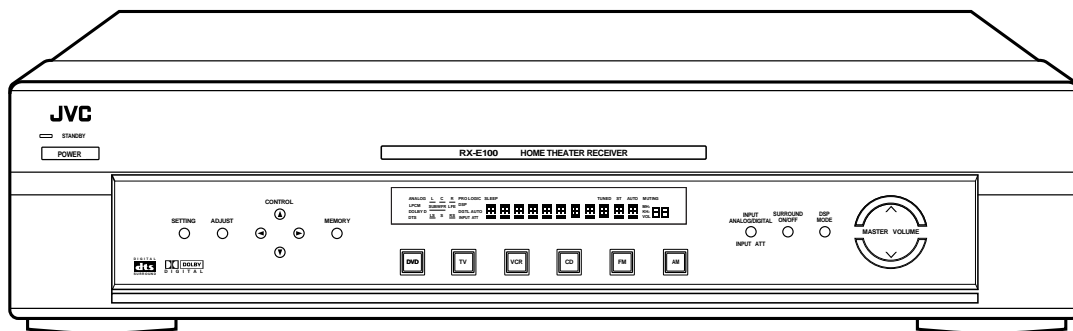
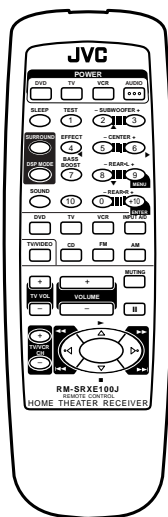


JVC



HOME THEATER RECEIVER

RX-E100SL



INSTRUCTIONS

For Customer Use:

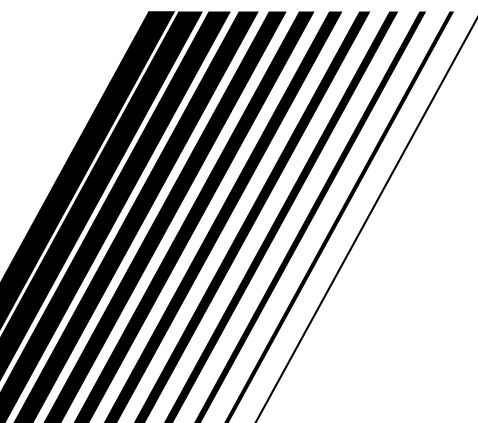
Enter below the Model No. and Serial No. which are located either on the rear, bottom or side of the cabinet. Retain this information for future reference.

Model No. _____


Serial No. _____

LVT0650-001A


[J]



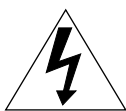
Warnings, Cautions and Others



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.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION

To reduce the risk of electrical shocks, fire, etc.:

1. Do not remove screws, covers or cabinet.
2. Do not expose this appliance to rain or moisture.

ATTENTION

Afin d'éviter tout risque d'électrocution, d'incendie, etc.:

1. Ne pas enlever les vis ni les panneaux et ne pas ouvrir le coffret de l'appareil.
2. Ne pas exposer l'appareil à la pluie ni à l'humidité.

Caution — POWER switch!

Disconnect the mains plug to shut the power off completely. The POWER switch in any position does not disconnect the mains line. The power can be remote controlled.

Attention — Commutateur POWER!

Déconnecter la fiche de secteur pour couper complètement le courant. Le commutateur POWER ne coupe jamais complètement la ligne de secteur, quelle que soit sa position. Le courant peut être télécommandé.

Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Section 820-40 of the NEC which 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 Canada/pour le Canada

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT

ATTENTION: POUR ÉVITER LES CHOCs ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND

For U.S.A.

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 generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. 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 Canada/pour Le Canada

THIS DIGITAL APPARATUS DOES NOT EXCEED THE CLASS B LIMITS FOR RADIO NOISE EMISSIONS FROM DIGITAL APPARATUS AS SET OUT IN THE INTERFERENCE-CAUSING EQUIPMENT STANDARD ENTITLED "DIGITAL APPARATUS," ICES-003 OF THE DEPARTMENT OF COMMUNICATIONS. CET APPAREIL NUMÉRIQUE RESPECTE LES LIMITES DE BRUITS RADIOÉLECTRIQUES APPLICABLES AUX APPAREILS NUMÉRIQUES DE CLASSE B PRÉSCRITES DANS LA NORME SUR LE MATÉRIEL BROUILLEUR; "APPAREILS NUMÉRIQUES", NMB-003 ÉDICTÉE PAR LE MINISTRE DES COMMUNICATIONS.

Caution: Proper Ventilation

To avoid risk of electric shock and fire and to protect from damage.

Locate the apparatus as follows:

- Front: No obstructions open spacing.
- Sides: No obstructions in 10 cm from the sides.
- Top: No obstructions in 10 cm from the top.
- Back: No obstructions in 15 cm from the back
- Bottom: No obstructions, place on the level surface.

In addition, maintain the best possible air circulation as illustrated.

Attention: Ventilation Correcte

Pour éviter les chocs électriques, l'incendie et tout autre dégât.

Disposer l'appareil en tenant compte des impératifs suivants

- Avant: Rien ne doit gêner le dégagement
- Flancs: Laisser 10 cm de dégagement latéral
- Dessus: Laisser 10 cm de dégagement supérieur
- Arrière: Laisser 15 cm de dégagement arrière
- Dessous: Rien ne doit obstruer par dessous; poser l'appareil sur une surface plate.

Veiller également à ce que l'air circule le mieux possible comme illustré.

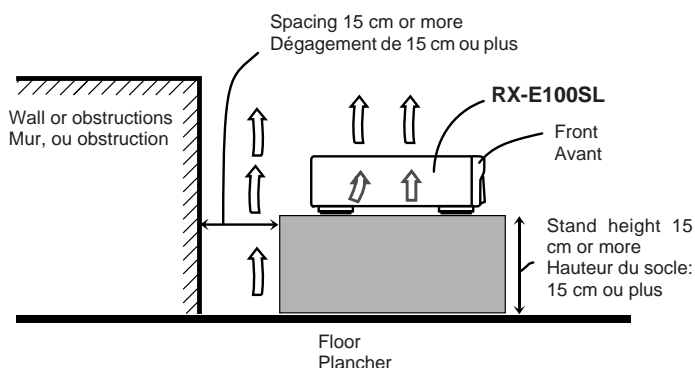


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This mark indicates that the remote control CAN ONLY be used for the operation explained.



This mark indicates that only the remote control CANNOT be used for the operation explained.

Getting Started

Before Installation

General Precautions

- DO NOT insert any metal object into the receiver.
- DO NOT disassemble the receiver or remove screws, covers, or cabinet.
- DO NOT expose the receiver to rain or moisture.

Locations

- Install the receiver in a location that is level and protected from moisture.
- The temperature around the receiver must be between 23°F and 95°F (-5°C and 35°C).
- Make sure there is good ventilation around the receiver. Poor ventilation could cause overheating and damage the receiver.

Handling the receiver

- DO NOT touch the power cord with wet hands.
- DO NOT pull on the power cord to unplug the cord. When unplugging the cord, always grasp the plug so as not to damage the cord.
- Keep the power cord away from the connecting cords and the antenna. The power cord may cause noise or screen interference. It is recommended to use a coaxial cable for antenna connection, since it is well-shielded against interference.
- When a power failure occurs, or when you unplug the power cord, the preset settings such as preset FM/AM channels and sound adjustments may be erased in a few days.

Checking the Supplied Accessories

Check to be sure you have all of the following supplied accessories. The number in the parentheses indicates the quantity of the pieces supplied.

- Remote Control (1)
- Batteries (2)
- AM Loop Antenna (1)
- FM Antenna (1)

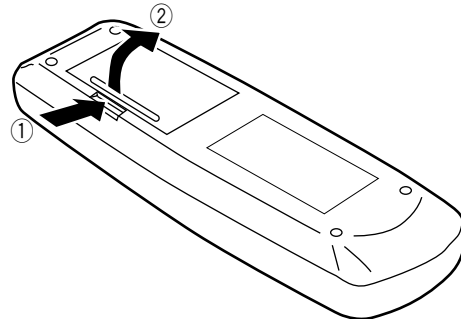
If anything is missing, contact your dealer immediately.

Putting Batteries in the Remote Control

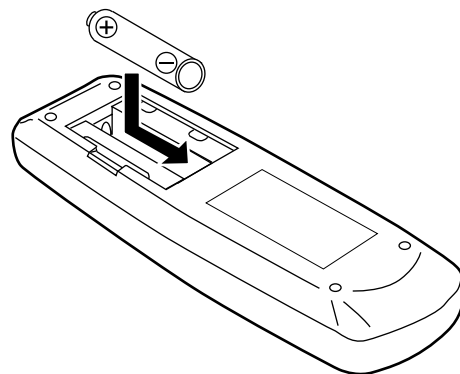
Before using the remote control, put two supplied batteries first.

- When using the remote control, aim the remote control directly at the remote sensor on the receiver.

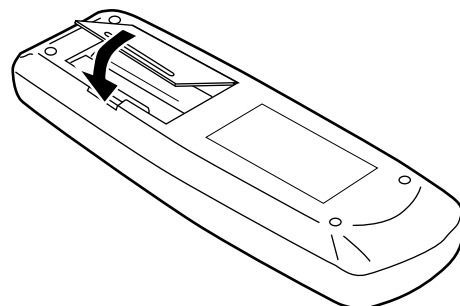
1. On the back of the remote control, remove the battery cover.



2. Insert batteries. Make sure to match the polarity: (+) to (+) and (-) to (-).



3. Replace the cover.



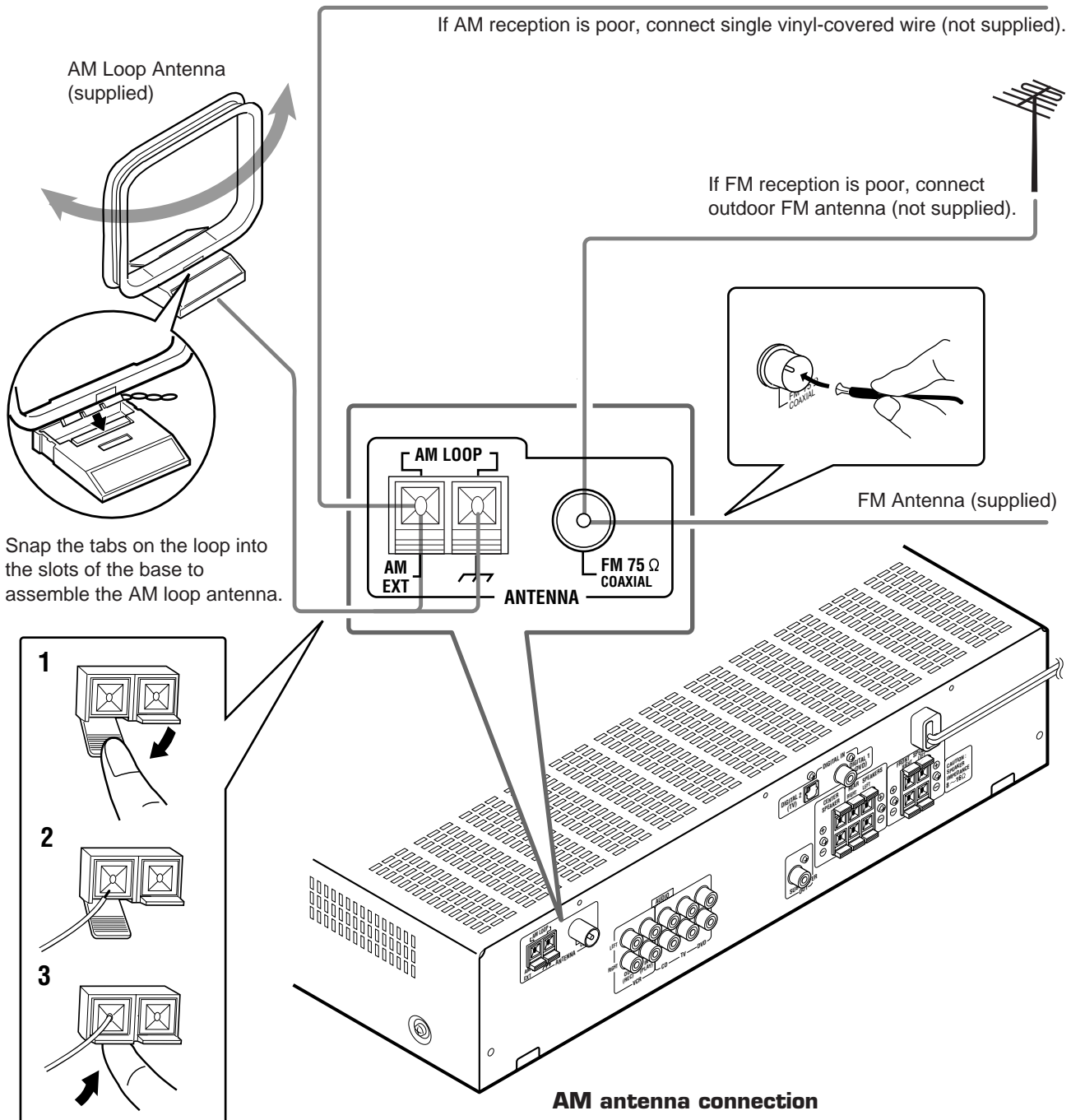
If the range or effectiveness of the remote control decreases, replace the batteries. Use two R6P(SUM-3)/AA(15F) type dry-cell batteries.

CAUTION:

Follow these precautions to avoid leaking or cracking cells:

- Place batteries in the remote control so they match the polarity: (+) to (+) and (-) to (-).
- Use the correct type of batteries. Batteries that look similar may differ in voltage.
- Always replace both batteries at the same time.
- Do not expose batteries to heat or flame.

Connecting the FM and AM Antennas



AM antenna connection

Connect the AM loop antenna supplied to the AM LOOP terminals.

Turn the loop until you have the best reception.

- If reception is poor, connect an outdoor single vinyl-covered wire to the AM EXT terminal. (Keep the AM loop antenna connected.)

FM antenna connection

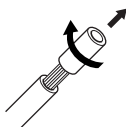
Connect the FM antenna supplied to the FM 75 Ω COAXIAL terminal as temporary measure.

Extend the supplied FM antenna horizontally.

- If reception is poor, connect an outdoor antenna. Before attaching a 75 Ω coaxial cable (with a standard type connector), disconnect the supplied FM antenna.

Notes:

- If the AM loop antenna wire is covered with vinyl, remove the vinyl while twisting it as shown to the right.
- Make sure the antenna conductors do not touch any other terminals, connecting cords and power cord. This could cause poor reception.



Getting Started

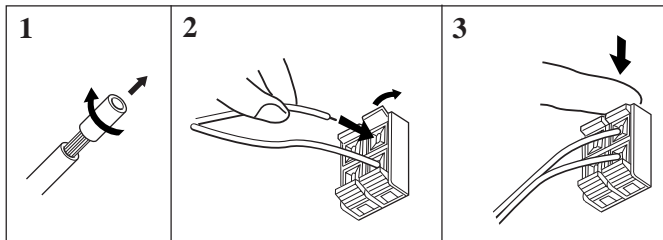
Connecting the Speakers

After connecting the front, center, rear speakers and/or a subwoofer, set the speaker setting information properly to obtain the best possible DSP effect. For details, see page 12.

CAUTION:

Use speakers with the SPEAKER IMPEDANCE indicated by the speaker terminals.

Connecting the front, center, and rear speakers

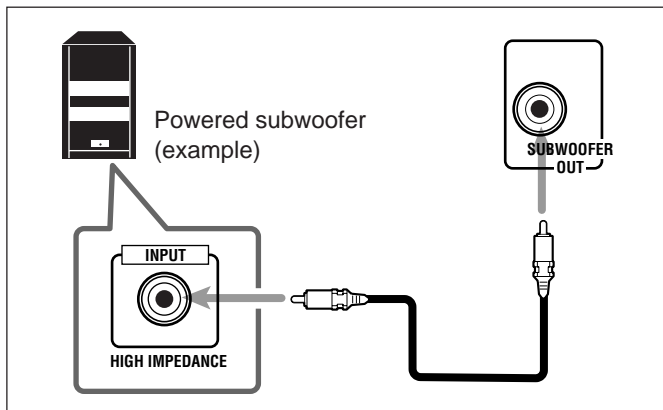


For each speaker, connect the (+) and (-) terminals on the rear panel to the (+) and (-) terminals marked on the speakers respectively.

- 1 Cut, twist and remove the insulation at the end of each speaker cord (not supplied).
- 2 Open the terminal, then insert the speaker cord.
- 3 Close the terminal.

Connecting the subwoofer

By connecting a subwoofer, you can enhance the bass or reproduce the original LFE signals recorded in the digital software.

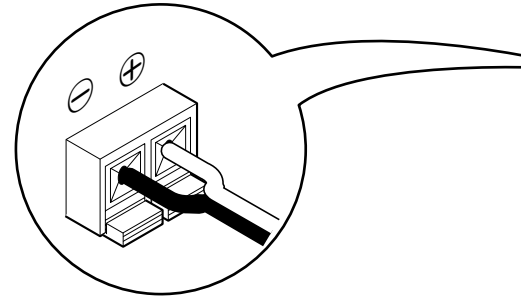


Connect the input jack of a powered subwoofer to the SUBWOOFER OUT jack on the rear panel, using a cable with RCA pin plugs (not supplied).

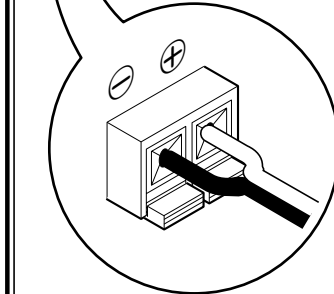
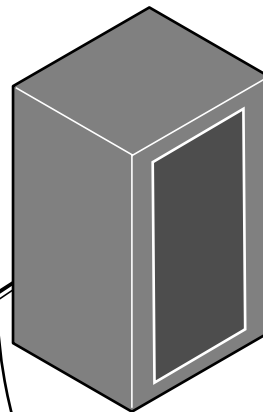
- Refer also to the manual supplied for your subwoofer.

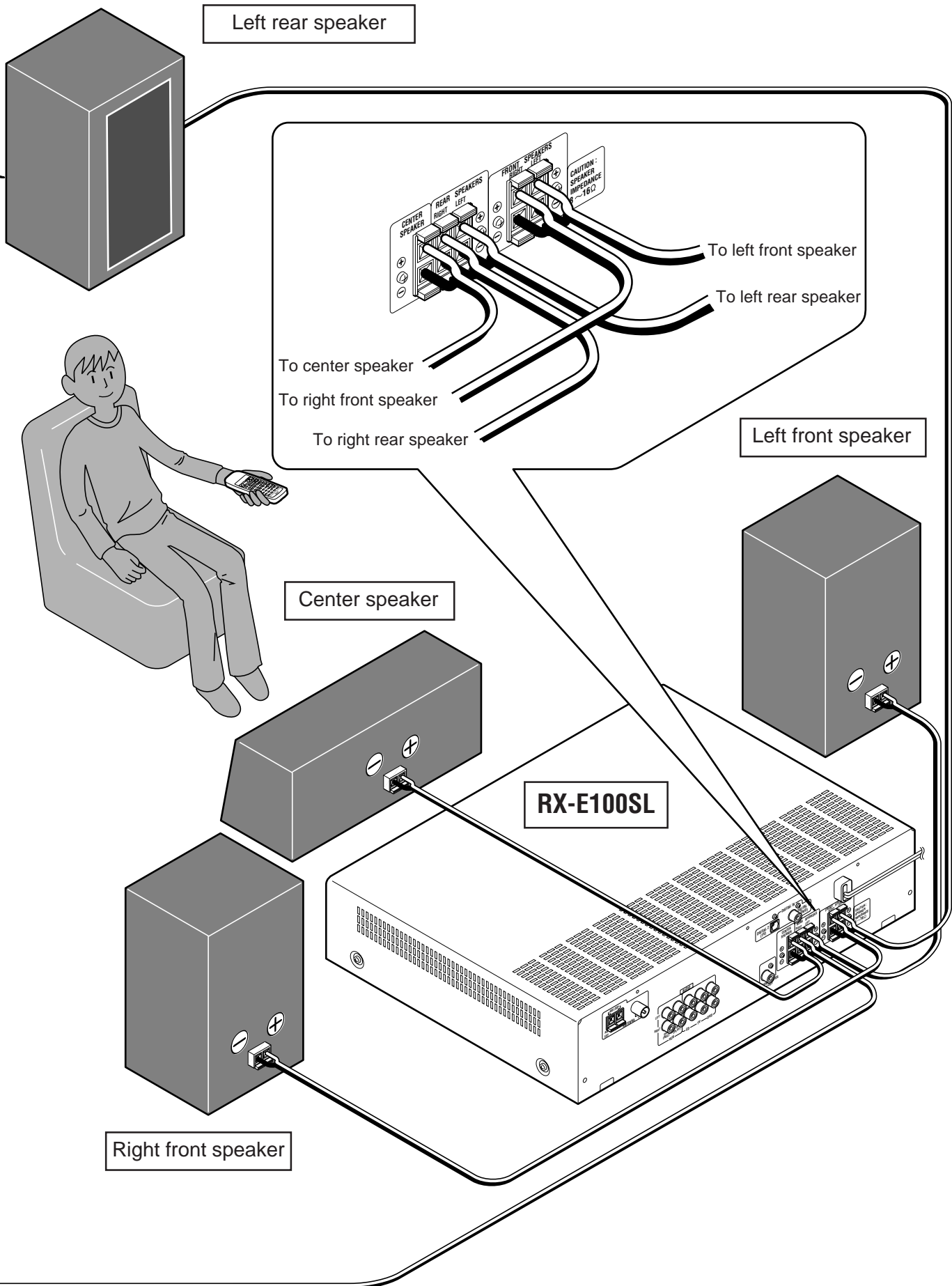
Since bass sound is non-directional, you can place a subwoofer wherever you like. Normally place it in front of you.

Speaker Layout Diagram



Right rear speaker



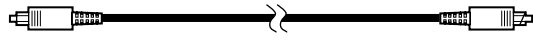


Getting Started

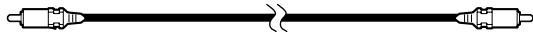
Connecting Audio/Video Components

Connecting cords are not supplied with this unit. Use the cords supplied for the other components or purchase them at an audio or electric appliance store.

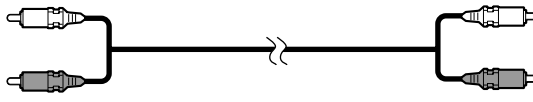
A Optical digital cord



B Coaxial digital cord

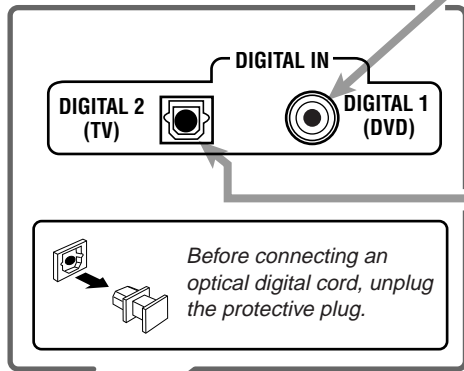


C Audio cord

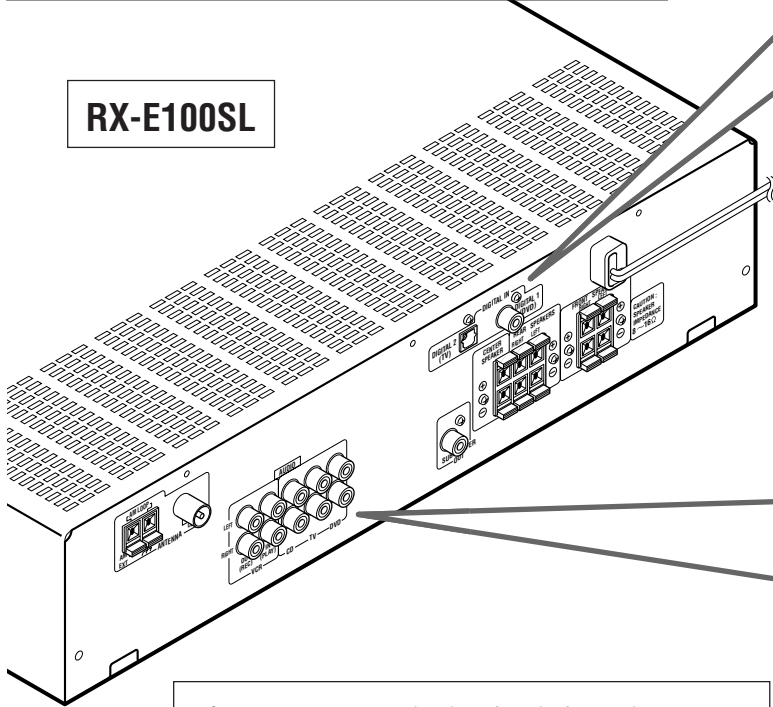


Turn the power off to all components before connections.

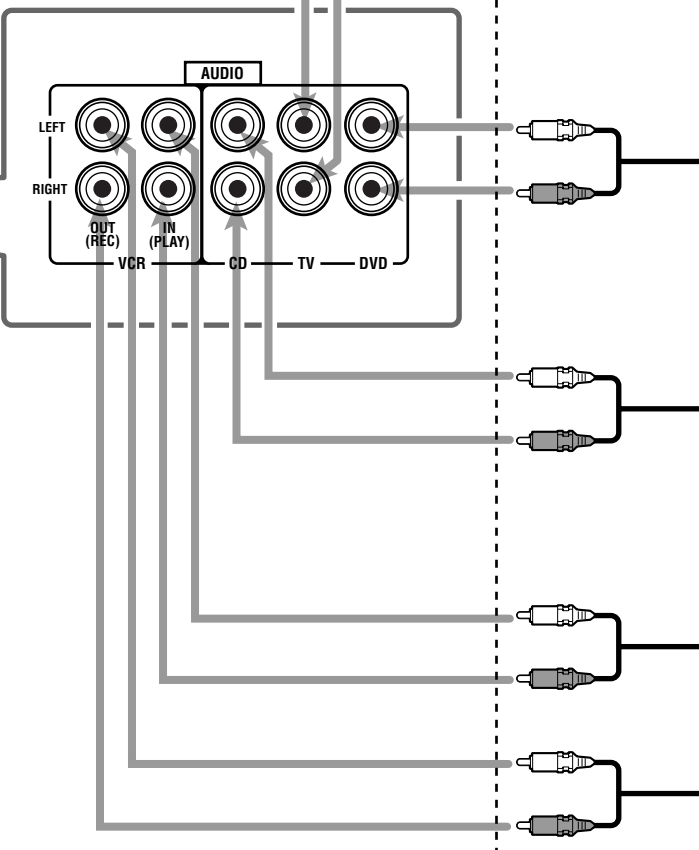
Digital connections



RX-E100SL



Analog connections

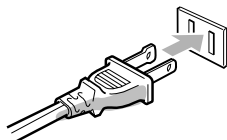


If you connect a sound-enhancing device such as a graphic equalizer between the source components and this receiver, the sound output through this receiver may be distorted.

Connecting the Power Cord

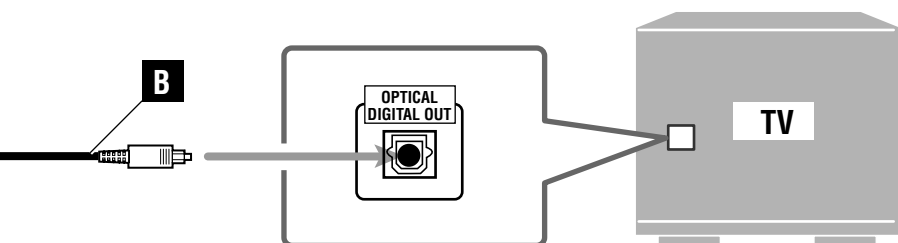
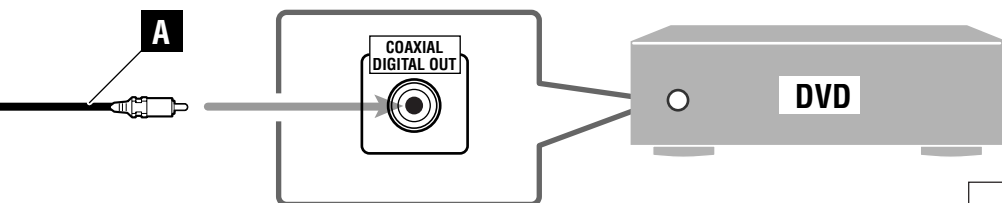
Before plugging the receiver into an AC outlet, make sure that all connections have been made.

Plug the power cord into an AC outlet.

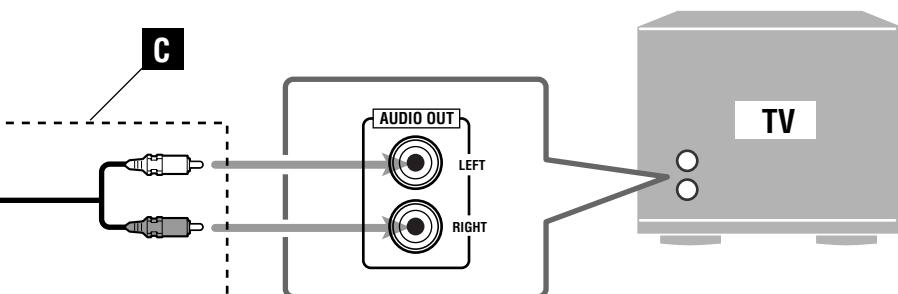


Illustrations of the input/output terminals below are typical examples.

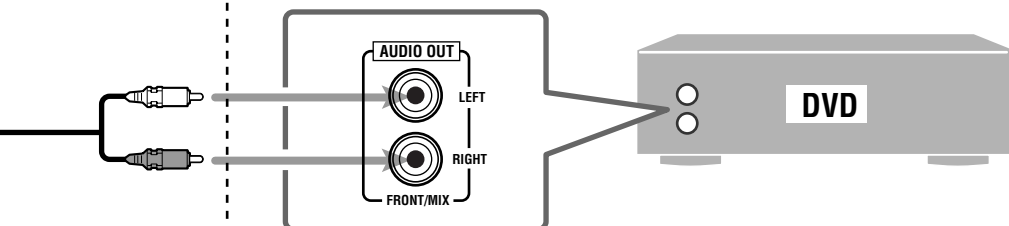
When you connect other components, refer also to their manuals since the terminal names actually printed on the rear vary among the components.



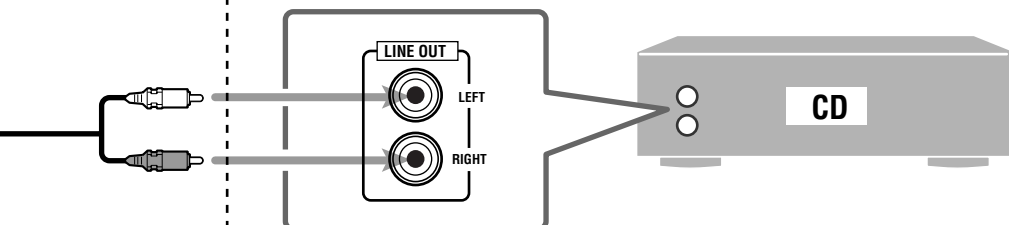
- When shipped from the factory, the DIGITAL IN terminals have been set for use with the following components.
 - DIGITAL 1 (coaxial): For DVD player
 - DIGITAL 2 (optical): For digital TV tuner
 If you connect other components, change the digital input (DIGITAL IN) terminal setting correctly. See "Setting the Digital Input Terminals" on page 10.
- Select the digital input mode correctly. See "Selecting the Analog or Digital Input Mode" on page 11.



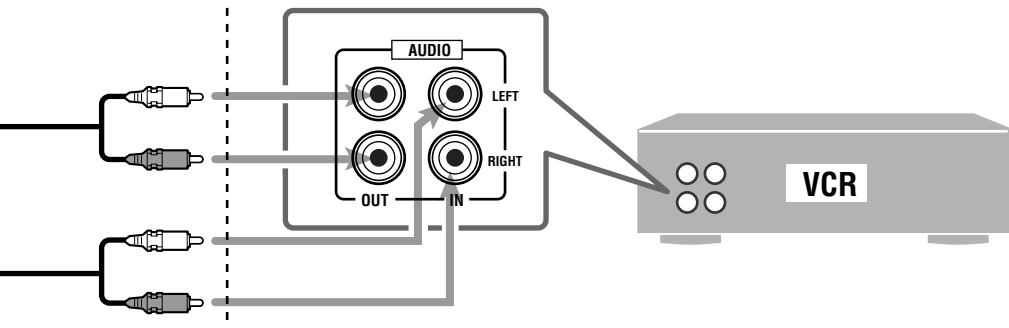
- Connect the video input directly to the video output on the DVD player and/or VCR.
- You can also connect the digital TV tuner using the optical digital cable (see above).



- Connect the video out directly to the video input on the TV.
- To enjoy the software encoded with Dolby Digital or DTS Digital Surround, connect the DVD player using one of the DIGITAL IN terminals (see above).



You can also connect the CD player using one of the DIGITAL IN terminals (see above).



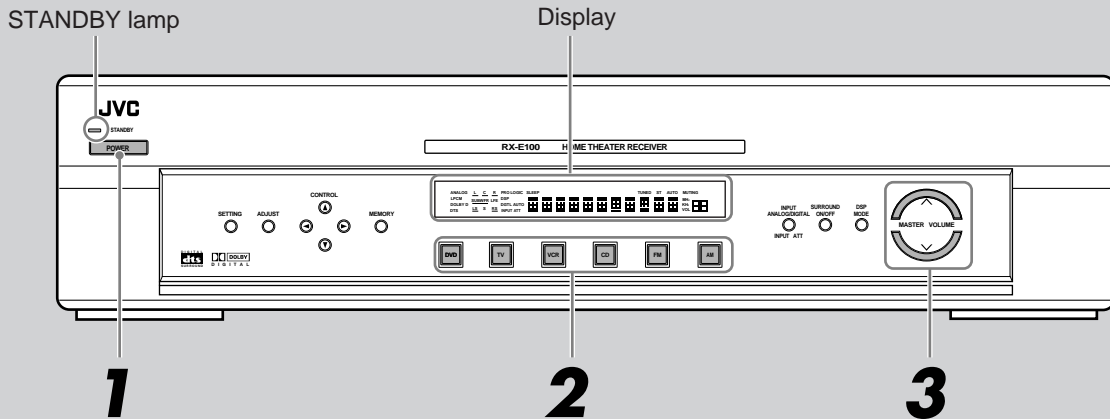
Connect the video out directly to the video input on the TV.

Basic Operations

This manual mainly explains operations using the buttons and controls on the front panel. You can also use the buttons on the remote control if they have the similar names (or marks) as those on the front panel.

If operations using the remote control are different from those using the front panel, they are then explained.

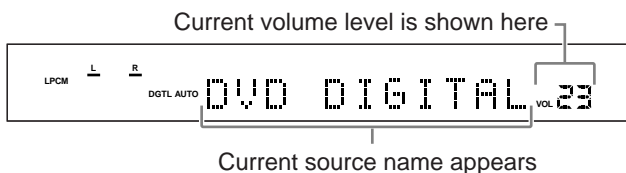
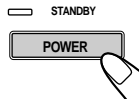
- You can also see “Mastering Remote Operations” on page 32.



1 Turn On the Power

Press **POWER** (or **AUDIO** of the **POWER** buttons on the remote control).

The **STANDBY** lamp goes off. The name of the current source (or station frequency) appears on the display.

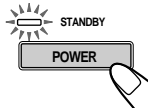


To turn off the power (into standby)

Press **POWER** (or **AUDIO**) again.

The **STANDBY** lamp lights up.

A small amount of power is consumed in standby mode. To turn the power off completely, unplug the AC power cord.



2 Select the Source to Play

Press one of the source selecting buttons.



- DVD : Select the DVD player.
- TV : Select the TV sound.
- VCR : Select the VCR.
- CD : Select the CD player.
- FM : Select an FM broadcast.
- AM : Select an AM broadcast.

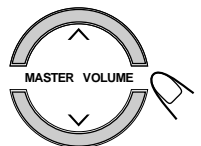
Note:

When you have connected some digital source components using the digital terminals (see page 6), see “Basic Settings” on pages 10 and 11 to finish the digital input terminal setting and digital input mode setting correctly before use.

3 Adjust the Volume

To increase the volume, press and hold **MASTER VOLUME** \wedge (or **VOLUME** + on the remote control).

To decrease the volume, press and hold **MASTER VOLUME** \vee (or **VOLUME** - on the remote control).



CAUTION:

Always set the volume to the minimum before starting any source. If the volume is set at its high level, the sudden blast of sound energy can permanently damage your hearing and/or ruin your speakers.

Notes:

- The volume level can be adjusted within the range of “0” (minimum) to “70” (maximum).
- Each time you press the button, the volume level changes by 2 steps from “0” (minimum) to “14” and by 1 step from “14” to “70” (maximum).

To turn off the sounds temporarily

Press **MUTING on the remote control** to mute the sound through all speakers connected.



MUTING

“MUTING” appears on the display and the volume turns off (the volume level indicator goes off).

To restore the sound, press **MUTING** again so that “MUTING OFF” appears on the display.

- Pressing **MASTER VOLUME** \wedge/\sphericalangle (or **VOLUME** $+/-$) also restores the sound.

Turning Off the Power with the Timer



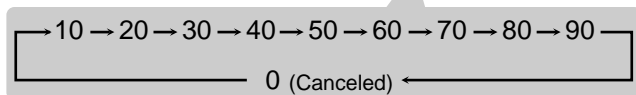
You can fall asleep while listening to music — Sleep Timer.

Press **SLEEP on the remote control** repeatedly.

The **SLEEP** indicator lights up on the display, and the shut-off time changes in 10 minute intervals.



SLEEP 10 VOL 23



When the shut-off time comes

The receiver turns off automatically.

To check or change the time remaining until the shut-off time

Press **SLEEP** once.

The remaining time (in minutes) until the shut-off time appears.

- To change the shut-off time, press **SLEEP** repeatedly.

To cancel the Sleep Timer

Press **SLEEP** repeatedly until “SLEEP 0” appears on the display. (The **SLEEP** indicator goes off.)

- Turning off the power also cancels the Sleep Timer.

Basic adjustment auto memory

This receiver memorizes sound settings for each source

- when you turn on the power,
- when you change the source, and
- when you change the analog/digital input mode (see page 11).

When you change the source, the memorized settings for the newly selected source are automatically recalled.

The following can be stored for each source:

- Analog/digital input mode (see page 11)
- Input attenuator mode (see page 17)
- Balance (see page 17)
- Bass boost (see page 18)
- Tone adjustment (see page 19)
- Subwoofer output level (see page 19)
- Surround mode settings (see pages 25, 29)
 - Theater Surround settings (see pages 27, 30)
 - DAP mode settings (see pages 28, 31)

Note:

If the source is FM or AM, you can assign a different setting for each band.

For recording

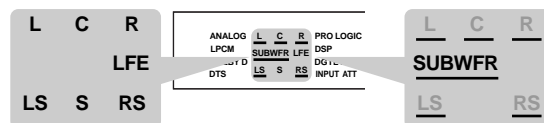
You can record sounds of any source playing through the receiver to the VCR connected to the VCR jacks.

While recording, you can listen to the selected sound source at whatever sound level you like without affecting the sound levels of the recording.

Note:

Sound adjustments (see page 17) and DSP modes (see page 22) cannot affect the recording.

Signal and speaker indicators on the display



Signal indicators

Speaker indicators

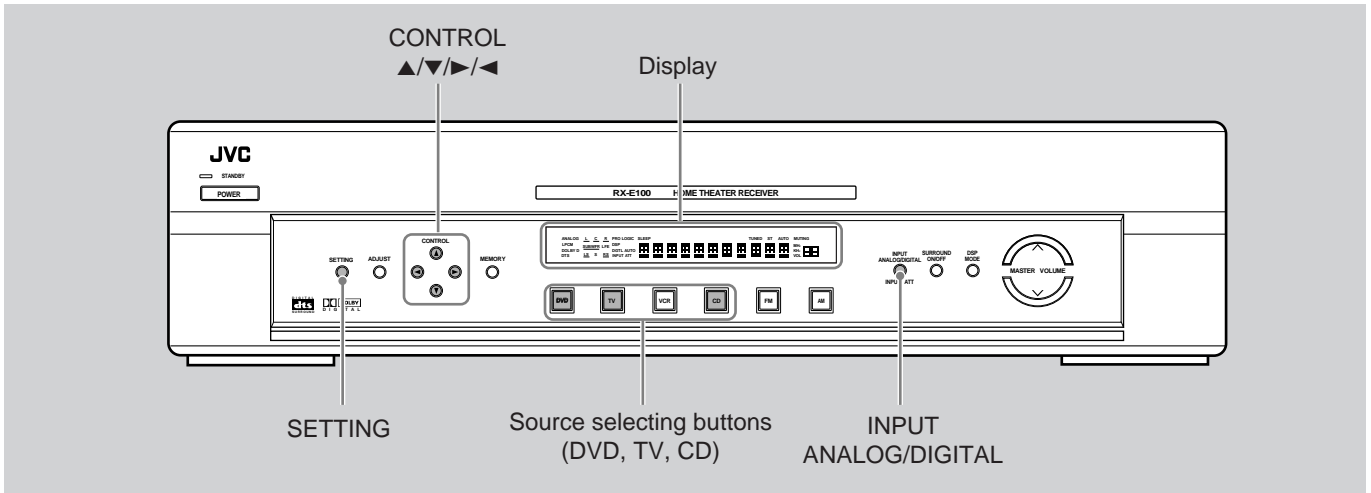
The following signal indicators light up —:

- L:**
 - **When digital input is selected:** Lights up when the left channel signal comes in.
 - **When analog input is selected:** Always lights up.
- R:**
 - **When digital input is selected:** Lights up when the right channel signal comes in.
 - **When analog input is selected:** Always lights up.
- C:** Lights up when the center channel signal comes in.
- LS:** Lights up when the left rear channel signal comes in.
- RS:** Lights up when the right rear channel signal comes in.
- S:** Lights up when the monaural rear channel signal comes in.
- LFE:** Lights up when the LFE channel signal comes in.

The speaker indicators light up as follows:

- The subwoofer speaker indicator (**SUBWFR**) lights up when “SUBWFR” is set to “YES” (see page 12).
- The other speaker indicators light up only when the corresponding speaker is activated AND when the corresponding speaker is required for the DSP mode currently selected.

Basic Settings



Setting the Digital Input Terminals



When you use the digital input terminals, register what components are connected to which terminals (DIGITAL IN 1/2) so that the correct source name will appear when you select the digital source.

Before you start, remember...

There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

1 Press SETTING.



The CONTROL buttons now work for basic settings.

2 Press CONTROL ▼ (or ▲) repeatedly until “DGT (Digital)” (with the current setting)* appears on the display.



DGT 1DVD2TV VOL.23

* “1DVD2TV” is the initial setting. If you have already changed the setting, another combination will be shown.

3 Press CONTROL ► (or ◀) to select the appropriate digital terminal setting.

- Each time you press the button, the display changes to show the following:

CONTROL

DGT 1DVD2TV VOL.23

DGT 1DVD2TV	↔	DGT 1DVD2CD	↔
DGT 1TV2DVD	↔	DGT 1TV 2CD	↔
DGT 1CD2DVD	↔	DGT 1CD 2TV	↔

(back to the beginning)

Note:

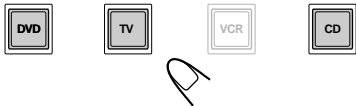
When shipped from the factory, the DIGITAL IN terminals have been set for use with the following components.

- DIGITAL 1 (coaxial): For DVD player
- DIGITAL 2 (optical): For digital TV tuner

Selecting the Analog or Digital Input Mode

When you have connected digital source components using both the analog connection and the digital connection methods (see page 6), you need to select the input mode correctly.

1 Press one of the source selecting buttons (DVD, TV, or CD)* for which you want to change the input mode.

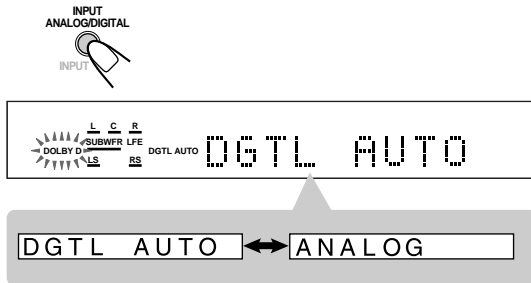


Note:

* Among the sources listed above, you can select the digital input only for the sources which you have selected the digital input terminals for. (See "Setting the Digital Input Terminals" on page 10.)

2 Press INPUT ANALOG/DIGITAL (or INPUT A/D on the remote control) to select the analog or digital input mode.

- Each time you press the button, the input mode alternates between the analog input (ANALOG) and the digital input (DGTL AUTO).



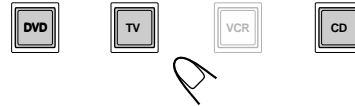
DGTL AUTO : Select this for the digital input mode. The receiver automatically detects the incoming signal format. (The DGTL AUTO indicator lights up on the display, then the digital signal indicator for the detected signals lights up.)

ANALOG : Select this for the analog input mode. (Initial setting when shipped from the factory)

If the following symptoms occur while playing Dolby Digital or DTS Digital Surround software with "DGTL AUTO" selected, follow the procedure below.

- Sound does not come out at the beginning of playback.
- Noise comes out while searching or skipping chapters or tracks.

1 Press one of the source selecting buttons (DVD, TV, or CD) for which you want to change the input mode.



2 Press INPUT ANALOG/DIGITAL (or INPUT A/D) to select the digital input mode (DGTL AUTO).



3 Press CONTROL (right or left arrow) to select "DGTL D.D." or "DGTL DTS" while "DGTL AUTO" still remains on the display.

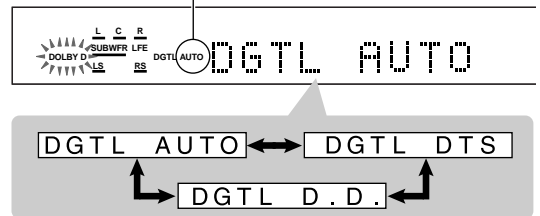


- Each time you press the button, the digital input mode changes as follows:

CONTROL



When "DGTL D.D." or "DGTL DTS" is selected, "AUTO" goes off.



- To play back software encoded with Dolby Digital, select "DGTL D.D."
- To play back software encoded with DTS Digital Surround, select "DGTL DTS."

Note:

When you turn off the power or select another source, "DGTL DTS" and "DGTL D.D." are canceled and the digital input mode is automatically reset to "DGTL AUTO."

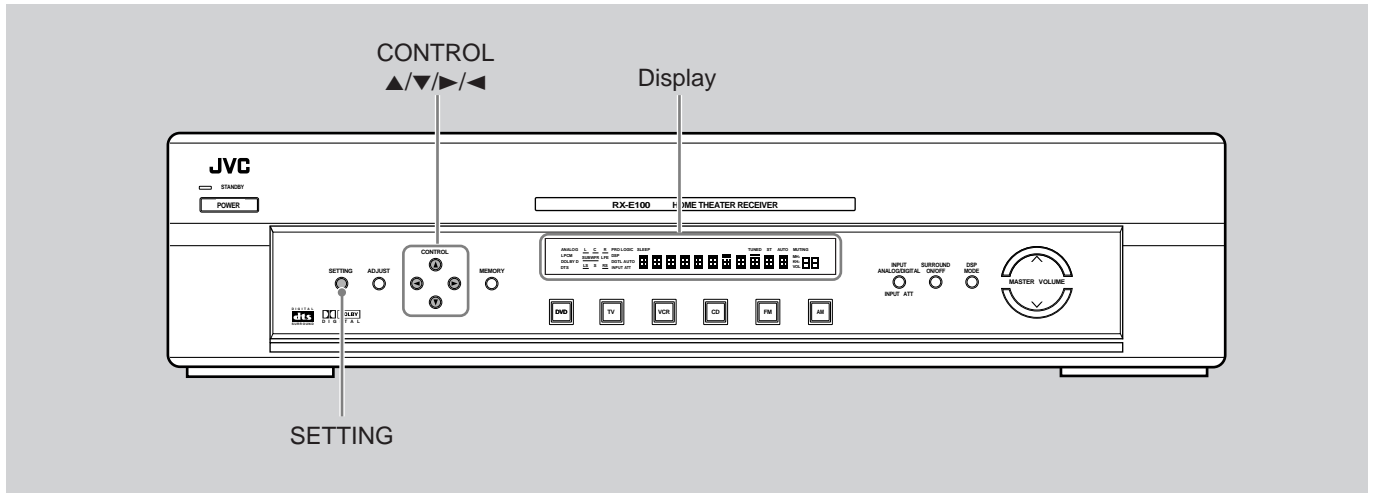
The following are the analog/digital signal indicators on the display to indicate what type of the signal comes into the receiver.

- ANALOG** : Lights when the analog input is selected.
- LPCM** : Lights when Linear PCM signals come in.
- DOLBY D** : • Lights when Dolby Digital signals come in.
 - Flashes when "DGTL D.D." is selected for software not encoded with Dolby Digital.
- DTS** : • Lights when DTS Digital Surround signals come in.
 - Flashes when "DGTL DTS" is selected for software not encoded with DTS Digital Surround.

Note:

When "DGTL AUTO" cannot recognize the incoming signals, no digital signal indicators light up on the display.

Basic Settings




Setting the Subwoofer Information

When you have connected a subwoofer, follow the procedure below. If you do not use a subwoofer, you can skip this setting.

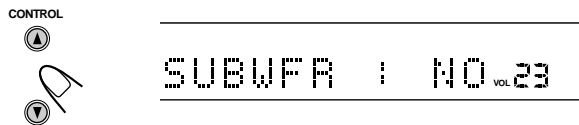
Before you start, remember...

There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

1 Press SETTING.

 The CONTROL buttons now work for basic settings.

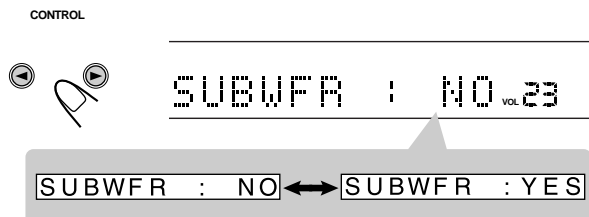
2 Press CONTROL ▼ (or ▲) repeatedly until "SUBWFR (Subwoofer)" (with the current setting)* appears on the display.



* "NO" is the initial setting. If you have already changed the setting, "YES" will be shown.

3 Press CONTROL ▶ (or ◀) to select "YES."

- Each time you press the button, the subwoofer setting alternates between "YES" and "NO."



- | | |
|------------|--|
| YES | : Select this when a subwoofer is used. The subwoofer speaker indicator (SUBWFR) lights up on the display (see page 9). You can adjust the subwoofer output level (see page 19). |
| NO | : Select this when you have not connected or have disconnected a subwoofer. |

Setting the Speakers for DSP Modes

To obtain the best possible surround effect from the DSP (Digital Signal Processor) modes (see page 22), register the following information after all connections are completed.

- Speaker Size — FR SP, CTR SP, REAR SP
- Delay Time — CTR DL, REAR DL
- Crossover Frequency — CROSS
- Dynamic Range Compression — D.R.C.
- Low Frequency Effect Attenuator — LFE

Speaker Size — FR SP, CTR SP, REAR SP


Register the sizes of all the connected speakers.

- When you change your speakers, register the information about the speakers again.

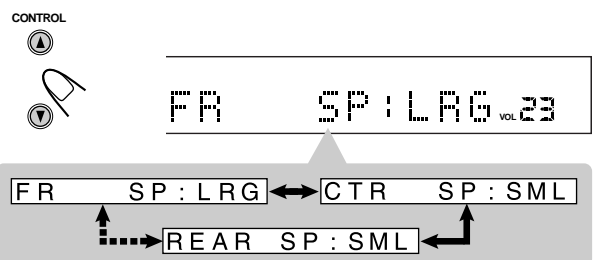
Before you start, remember...

There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

1 Press SETTING.

 The CONTROL buttons now work for basic settings.

2 Press CONTROL ▼ (or ▲) repeatedly until one of the following speakers (with the current setting)* appears.



FR SP (Front Speaker) : To register the front speaker size.

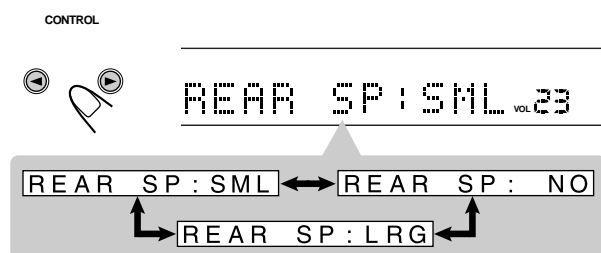
CTR SP (Center Speaker) : To register the center speaker size.

REAR SP (Rear Speaker) : To register the rear speaker size.

* “LRG (large)” is the initial setting for the front speakers, and “SML (small)” is for the center and rear speakers.
If you have already changed the setting, another size will be shown.

3 Press CONTROL ► (or ◀) to select the appropriate speaker size.

- Each time you press the button, the speaker size changes as follows:



Ex.: When registering the rear speaker size

LRG (Large) : Select this when the speaker size is relatively large. (See “Notes” below.)

SML (Small) : Select this when the speaker size is relatively small. (See “Notes” below.)

NO : Select this when you have not connected a speaker. (Not selectable for the front speakers)

4 Repeat steps 2 and 3 to select the appropriate size for the other speakers.

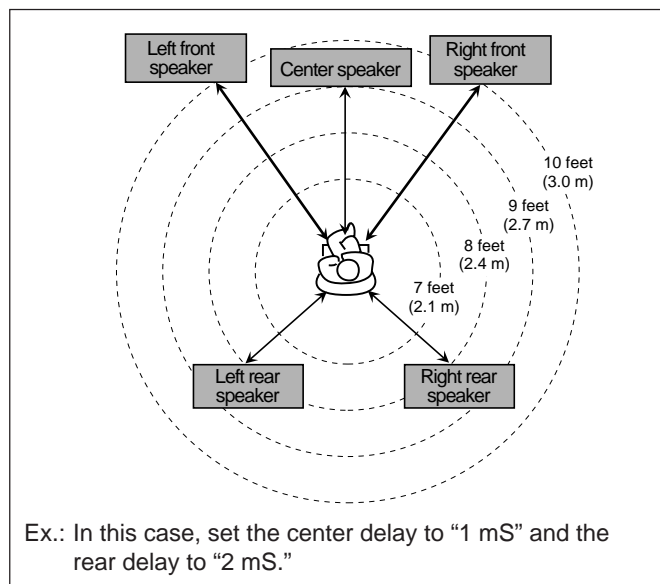
Notes:

- Use the following criteria as reference when adjusting:
 - If the size of the cone speaker unit built in your speaker is greater than 4 3/4 inches (12 cm), select “LRG (large),” and if it is smaller than 4 3/4 inches (12 cm), select “SML (small).”
- If you have selected “NO” for the subwoofer, you can only select “LRG (large)” for the front speaker size.
- If you have selected “SML (small)” for the front speaker size, you cannot select “LRG (large)” for the center and rear speaker sizes.

Delay Time — CTR DL, REAR DL

Adjust the delay time of the sounds from the center speaker and from the rear speakers, comparing to that of the sounds from the front speakers. If the distance to the center speaker and/or the rear speakers from your listening point is almost the same as that to the front speakers, select 0 msec.

- 1 msec increase (or decrease) in delay time corresponds to 1 foot (30 cm) increase (or decrease) in distance.



Ex.: In this case, set the center delay to “1 mS” and the rear delay to “2 mS.”

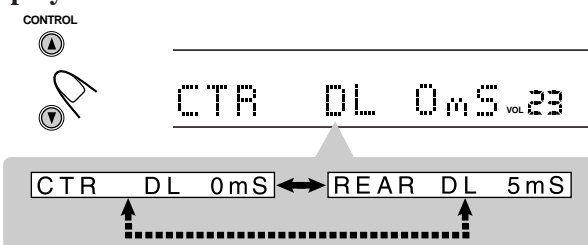
Before you start, remember...

There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

1 Press SETTING.

The CONTROL buttons now work for basic settings.

2 Press CONTROL ▼ (or ▲) repeatedly until “CTR DL (Center Delay)” or “REAR DL (Rear Delay)” (with the current setting)* appears on the display.



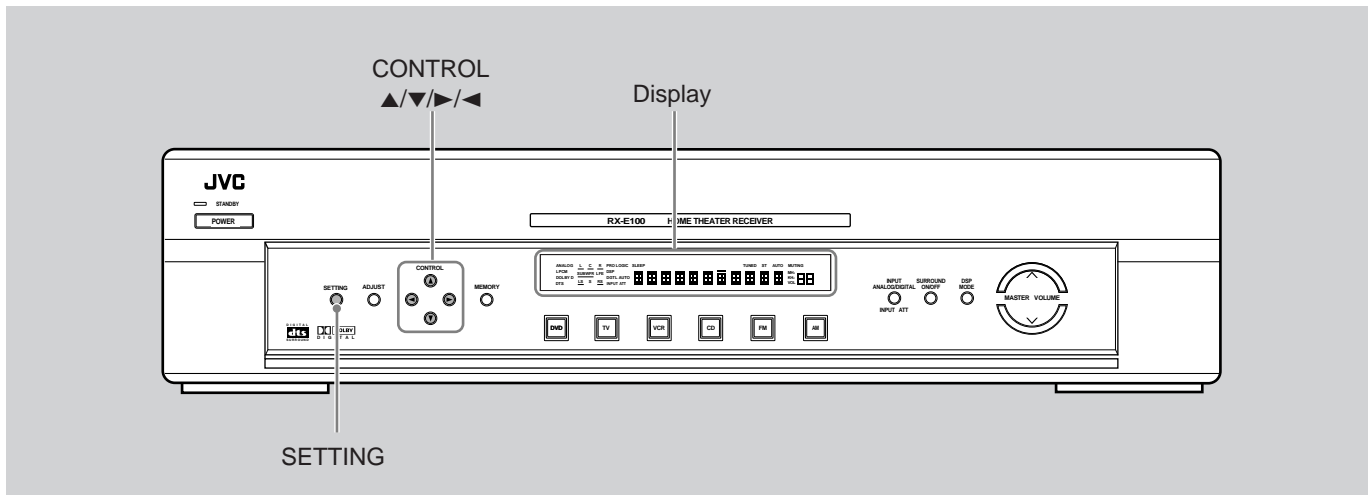
CTR DL (Center Delay) : To adjust the center delay time (from 0 msec to 5 msec).

REAR DL (Rear Delay) : To adjust the rear delay time (from 0 msec to 15 msec).

* “0 mS (msec)” is the initial setting for the center delay time and “5 mS (msec)” for the rear delay time. If you have already changed the setting, another setting will be shown.

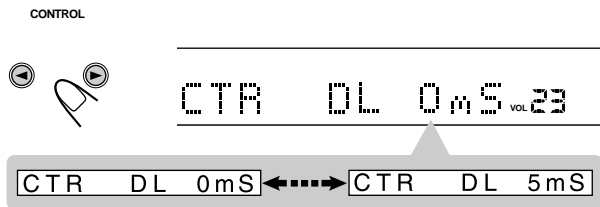
TO BE CONTINUED TO THE NEXT PAGE

Basic Settings



3 Press CONTROL ▶ (or ◀) to select the delay time.

- Each time you press the button, the delay time changes by “1 mS (msec).”



Ex.: When adjusting the center delay

4 Repeat steps 2 and 3 to adjust the other delay time.

Crossover Frequency — CROSS

Small speakers cannot reproduce the bass sounds efficiently. If you use a small speaker in any position, this receiver automatically reallocates the bass sound elements assigned to the small speaker to large speakers.

To use this function properly, set this crossover frequency level according to the size of the small speaker connected.

- If you have selected “LRG (large)” for all speakers, this function will not take effect.

Before you start, remember...

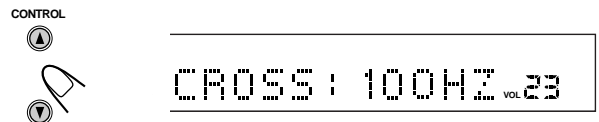
There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

1 Press SETTING.



The CONTROL buttons now work for basic settings.

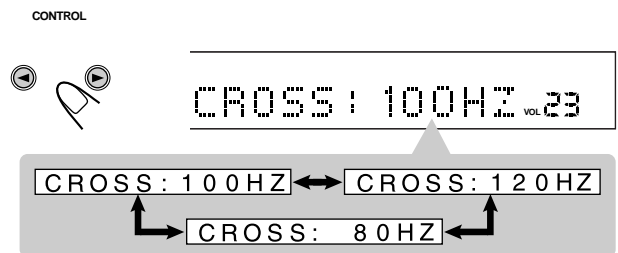
2 Press CONTROL ▼ (or ▲) repeatedly until “CROSS (Crossover)” (with the current setting)* appears on the display.



* “100HZ” is the initial setting. If you have already changed the setting, another frequency will be shown.

3 Press CONTROL ▶ (or ◀) to select the crossover frequency level.

- Each time you press the button, the crossover frequency level changes as follows:



- Use the following criteria as reference when adjusting:

80HZ: Select this frequency when the cone speaker unit built in the speaker is about 4 ³/₄ inches (12 cm).

100HZ: Select this frequency when the cone speaker unit built in the speaker is about 3 ¹⁵/₁₆ inches (10 cm).

120HZ: Select this frequency when the cone speaker unit built in the speaker is about 3 ³/₁₆ inches (8 cm).

Dynamic Range Compression — D.R.C.

You can compress the dynamic range (difference between maximum sound and minimum sound) of the reproduced sound. This is useful when enjoying surround sound at night.

- This function takes effect only when playing back a source using Dolby Digital.

Before you start, remember...

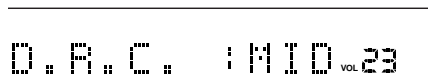
There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

1 Press SETTING.



The CONTROL buttons now work for basic settings.

2 Press CONTROL ▼ (or ▲) repeatedly until “D.R.C. (Dynamic Range Compression)” (with the current setting)* appears on the display.

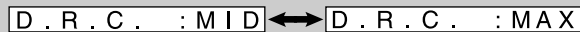


* “MID” is the initial setting. If you have already changed the setting, another setting will be shown.

3 Press CONTROL ► (or ◀) to select the appropriate compression level.

- Each time you press the button, the compression level changes as follows:

CONTROL



OFF : Select this when you want to enjoy surround with its full dynamic range. (No effect applied.)

MID : Select this when you want to reduce the dynamic range a little.

MAX : Select this when you want to apply the compression effect fully. (Useful at night.)

Low Frequency Effect Attenuator — LFE

If the bass sound is distorted while playing back software using Dolby Digital or DTS Digital Surround, follow the procedure below.

- This function takes effect only when the subwoofer (LFE) signals come in, (with “SUBWFR” set to “YES”).

Before you start, remember...

There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

1 Press SETTING.



The CONTROL buttons now work for basic settings.

2 Press CONTROL ▼ (or ▲) repeatedly until “LFE (Low Frequency Effect)” (with the current setting)* appears on the display.



* “0” is the initial setting. If you have already changed the setting, “-10dB” will be shown.

3 Press CONTROL ► (or ◀) to select the LFE attenuator level.

- Each time you press the button, the LFE attenuator level changes as follows:

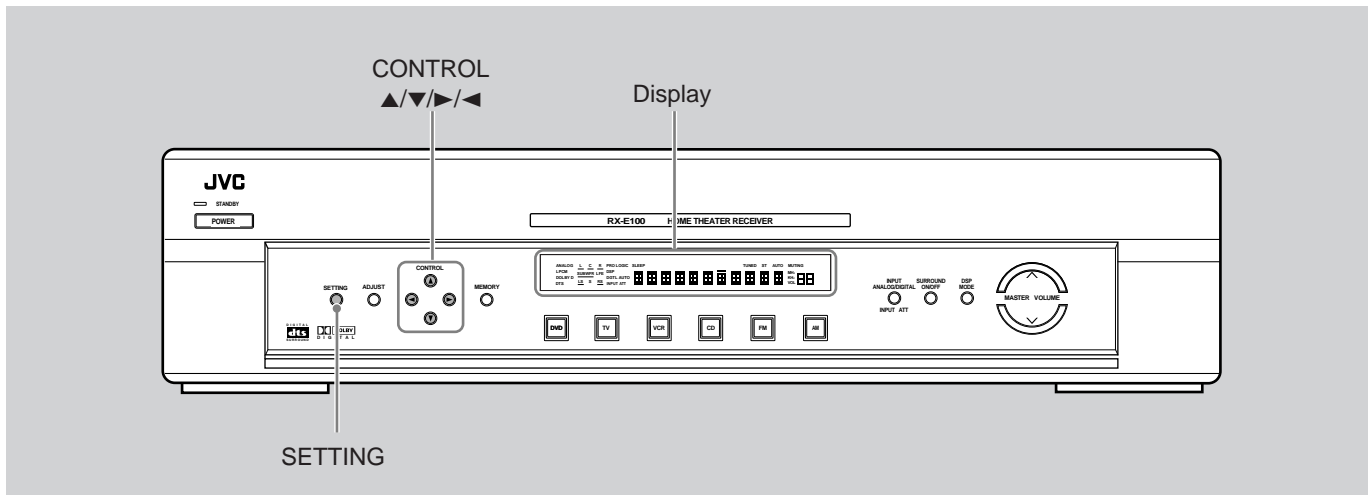
CONTROL



0dB : Normally select this.

-10dB : Select this when the bass sound is distorted.

Basic Settings



Setting Auto Surround


Surround mode is automatically activated when a multichannel digital signal comes into this receiver through the digital terminal. You can enjoy Surround mode simply by selecting the source (with digital input selected for that source) — Auto Surround.

To activate Auto Surround, follow the procedure below.

Before you start, remember...

There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

1 Press SETTING.

 The CONTROL buttons now work for basic settings.

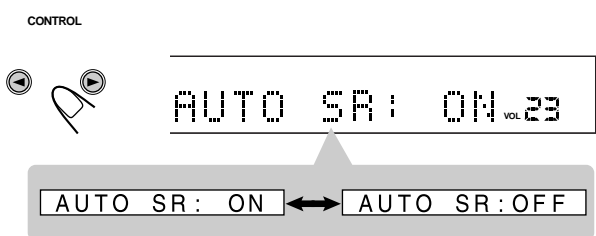
2 Press CONTROL ▼ (or ▲) repeatedly until “AUTO SR (Auto Surround)” (with the current setting)* appears on the display.



* “OFF” is the initial setting. If you have already changed the setting, “ON” will be shown.

3 Press CONTROL ▶ (or ◀) to select “ON.”

- Each time you press the button, Auto Surround turns “ON” or “OFF.”



- ON** : • If multichannel signals come in, an appropriate Surround mode will be turned on
 • If Dolby Digital 2 channel or DTS 2 channel signals come in, “STEREO” will be selected.
 • If linear PCM signals come in, nothing will change.
- OFF** : Select this to deactivate Auto Surround.

Notes:

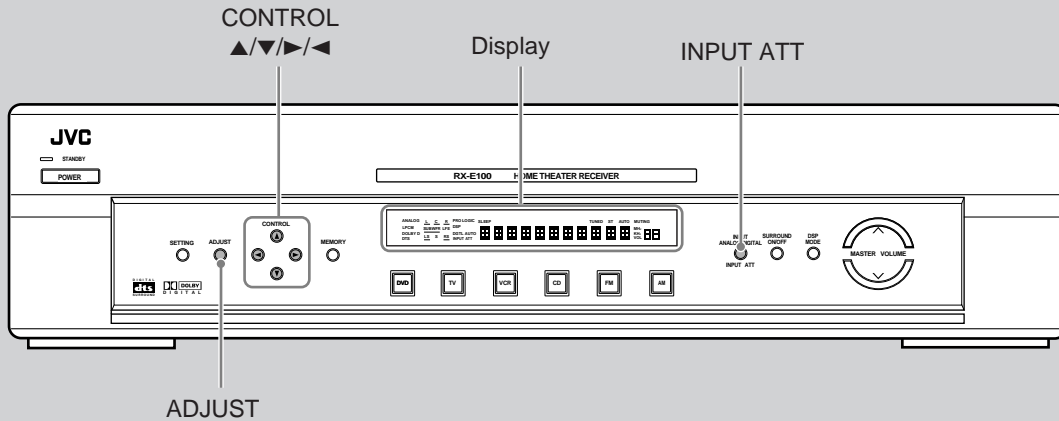
- This function does not take effect in the following cases:
 - While playing an analog source.
 - While selecting “DGTL DTS” or “DGTL D.D.” as the fixed digital input mode (see page 11).
- If Surround mode is automatically activated by Auto Surround, another DSP mode in use will be canceled temporarily. When multichannel digital signals stop coming in, the selected surround mode is canceled, and the previous DSP mode resumes.
- If you press SURROUND ON/OFF (SURROUND on the remote control) or DSP MODE with Auto Surround activated, Auto Surround will be canceled temporarily for the currently selected source. Auto Surround setting will be restored in the following cases.
 - When you turn off and on the unit,
 - When you change the source, and
 - When you reset “AUTO SR” to “ON” again.

To cancel Auto Surround

Repeat step 1 and 2, then select “OFF” in step 3.

You can also use the remote control for some sound adjustments.

- When using the remote control, see also “Mastering Remote Operations” on page 32.



Attenuating the Input Signal

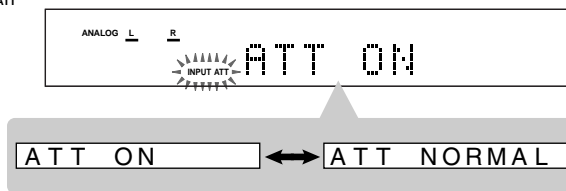


When the input level of the **analog source** is too high, the sounds will be distorted. If this happens, you need to attenuate the input signal level to prevent the sound distortion.

- You have to make this adjustment for each **analog source**.

Press and hold **INPUT ATT (INPUT ANALOG/DIGITAL)** so that the **INPUT ATT indicator lights up on the display**.

- Each time you press and hold the button, the Input Attenuator turns on (“ATT ON”) or off (“ATT NORMAL”).



Adjusting the Front Speaker Output Balance



If the sounds you hear from the front right and left speakers are unequal, you can adjust the speaker output balance.

- You have to make this adjustment for each source.

Before you start, remember...

There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

1 Press ADJUST.

ADJUST



The **CONTROL** buttons now work for sound adjustments.

2 Press CONTROL ▼ (or ▲) repeatedly until “BAL (Balance)” (with the current setting)* appears on the display.

CONTROL



BAL CENTER VOL. 23

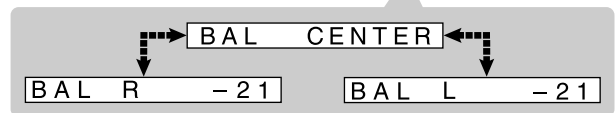
- * “CENTER” is the initial setting. If you have already changed the setting, another setting will be shown.

3 Press CONTROL ► or ◀ to adjust the front speaker balance.

CONTROL

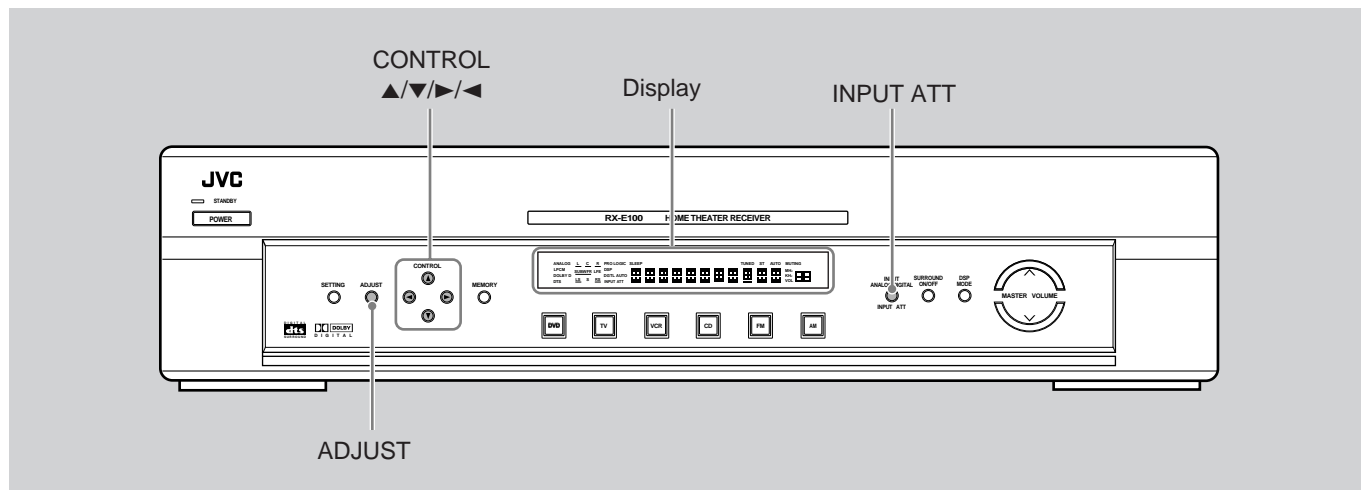


BAL CENTER VOL. 23



- Pressing **CONTROL ►** decreases the left channel output (from CENTER to L-21).
- Pressing **CONTROL ◀** decreases the right channel output (from CENTER to R-21).

Sound Adjustments



Reinforcing the Bass

You can boost the bass level — Bass Boost.

- You have to make this adjustment for each source.

Before you start, remember...

There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

1 Press ADJUST.

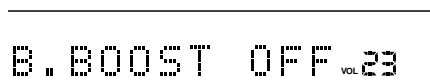
ADJUST



The CONTROL buttons now work for sound adjustments.

2 Press CONTROL ▼ (or ▲) repeatedly until “B. BOOST (Bass Boost)” (with the current setting)* appears on the display.

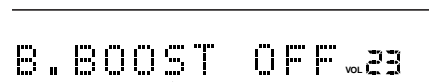
CONTROL



* “OFF” is the initial setting. If you have already changed the setting, “ON” will be shown.

3 Press CONTROL ▶ (or ◀) to turn “ON” or “OFF” Bass Boost.

CONTROL



ON : Select this to boost the bass level. (Bass Boost)

OFF : Select this to deactivate Bass Boost.

Note:

This function affects the sound outputting only through the front speakers.

When using the remote control

- 1 Press SOUND.
10 keys now work for sound adjustments.
- 2 Press BASS BOOST.
 - Each time you press the button, Bass Boost turns on and off alternately.

Adjusting the Tone



You can adjust the bass and treble sounds as you like.
 • You have to make these adjustments for each source.

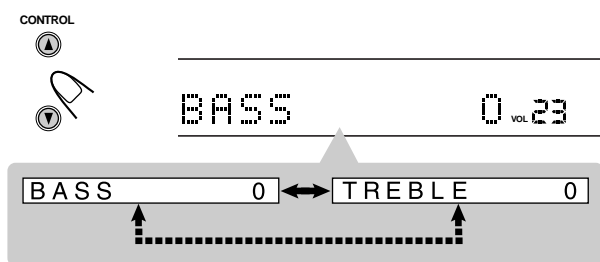
Before you start, remember...

There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

1 Press ADJUST.

ADJUST  The CONTROL buttons now work for sound adjustments.

2 Press CONTROL ▼ (or ▲) repeatedly until “BASS” or “TREBLE” (with the current setting)* appears.

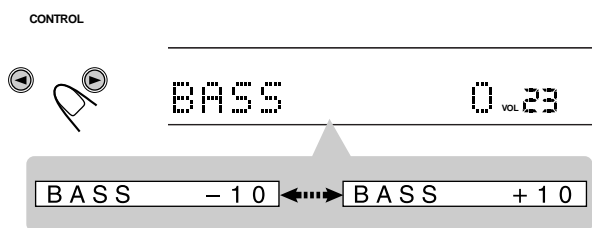


BASS : To adjust the bass.

TREBLE : To adjust the treble.

* “0” is the initial setting. If you have already changed the setting, another number (level) will be shown.

3 Press CONTROL ► or ◀ to adjust the sound level.



Ex.: When adjusting the bass level

- Pressing CONTROL ► increases the sound level by +2 steps (from -10 to +10).
- Pressing CONTROL ◀ decreases the sound level by -2 steps (from +10 to -10).

4 Repeat steps 2 and 3 to adjust the other sound level.

Adjusting the Subwoofer Output Level


You can adjust the subwoofer output level if you have connected a subwoofer and set the subwoofer information correctly – “YES.”

- You have to make this adjustment for each source.

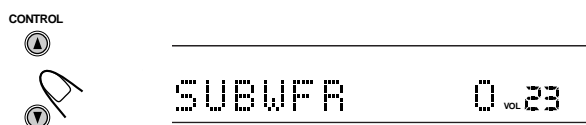
Before you start, remember...

There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

1 Press ADJUST.

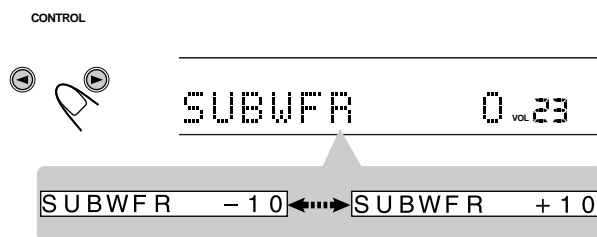
ADJUST  The CONTROL buttons now work for sound adjustments.

2 Press CONTROL ▼ (or ▲) repeatedly until “SUBWFR (subwoofer)” (with the current setting)* appears.



* “0” is the initial setting. If you have already changed the setting, another number (level) will be shown.

3 Press CONTROL ► or ◀ to adjust the sound output level.



- Pressing CONTROL ► increases the sound output level (from -10 to +10).
- Pressing CONTROL ◀ decreases the sound output level (from +10 to -10).

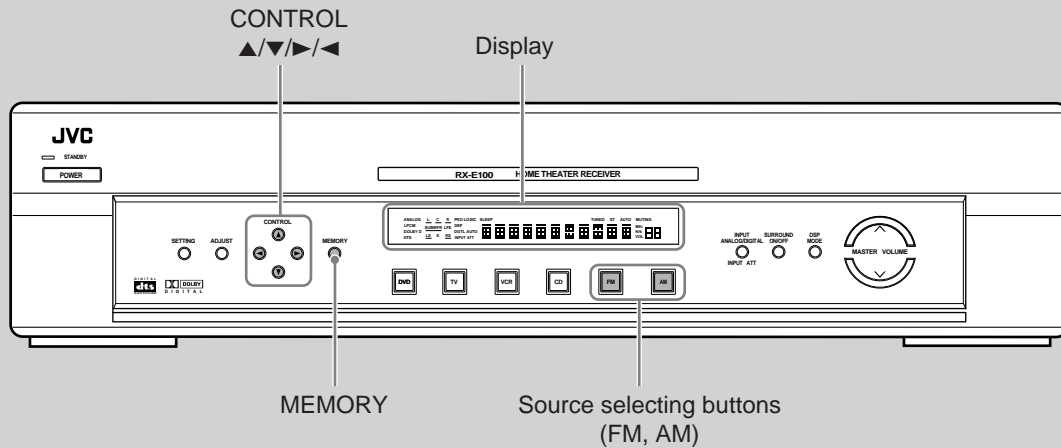
When using the remote control

- 1 Press SOUND.
10 keys now work for sound adjustments.
- 2 Press SUBWOOFER +/- to adjust the sound output level (from -10 to +10).

Tuner Operations

You can also use the remote control for some tuner operations.

- When using the remote control, see also “Mastering Remote Operations” on page 32.

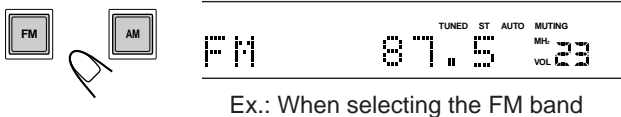


Tuning in Stations Manually

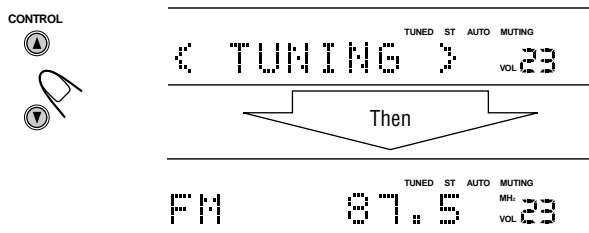


1 Press FM or AM to select the band.

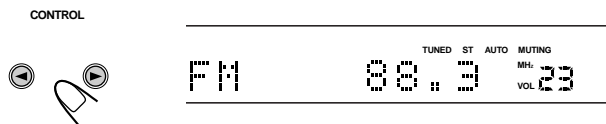
The last received station of the selected band is tuned in, and the CONTROL buttons now work for tuner operations.



2 Press CONTROL ▼ (or ▲) repeatedly until “< TUNING >” appears on the display.



3 Press repeatedly or hold CONTROL ▶ or ◀ until you find the frequency you want.



- Pressing (or holding) CONTROL ▶ increases the frequencies.
- Pressing (or holding) CONTROL ◀ decreases the frequencies.

Notes:

- When you hold and release CONTROL ▶ or CONTROL ◀, the frequency keeps changing until a station is tuned in.
- When a station of sufficient signal strength is tuned in, the TUNED indicator lights up on the display.
- When an FM stereo program is received, the ST (Stereo) indicator also lights up.

Using Preset Tuning

Once a station is assigned to a channel number, the station can be quickly tuned. You can preset up to 30 FM and 15 AM stations.

To store the preset stations

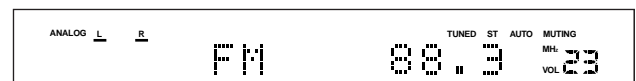


Before you start, remember...

There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

1 Tune in the station you want to preset (see “Tuning in Stations Manually”).

- If you want to store the FM reception mode for this station, select the FM reception mode you want. See “Selecting the FM Reception Mode” on page 21.

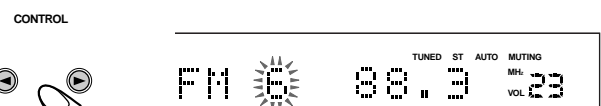


2 Press MEMORY.

The channel number position starts flashing on the display for about 10 seconds.



3 Press CONTROL ▶ (or ◀) to select a channel number while the channel number position is flashing.



4 Press MEMORY again while the selected channel number is flashing on the display.

The selected channel number stops flashing.
The station is assigned to the selected channel number.



5 Repeat steps 1 to 4 until you store all the stations you want.

To erase a stored preset station

Storing a new station on a used channel number erases the previously stored one.

To tune in a preset station

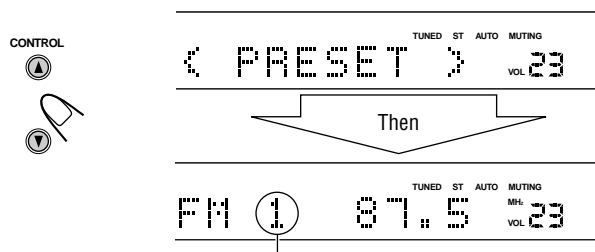
1 Press FM or AM to select the band.

The last received station of the selected band is tuned in, and the CONTROL buttons now work for tuner operations.



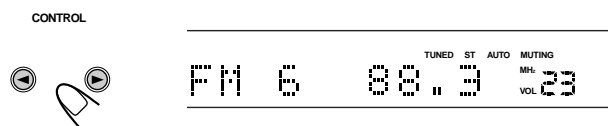
Ex.: When selecting the FM band

2 Press CONTROL ▼ (or ▲) repeatedly until “< PRESET >” appears on the display.



Preset channel number appears.

3 Press CONTROL ► or ◀ to select a preset channel number you want.



- Pressing (or holding) CONTROL ► increases the preset channel numbers.
- Pressing (or holding) CONTROL ◀ decreases the preset channel numbers.

When using the remote control

1 Press FM or AM.

The last received station of the selected band is tuned in, and the 10 keys now work for tuner operations.

2 Press the 10 keys to select a preset channel number.

- For channel number 5, press 5.
- For channel number 15, press +10 then 5.
- For channel number 30, press +10, +10, then 10.

Selecting the FM Reception Mode



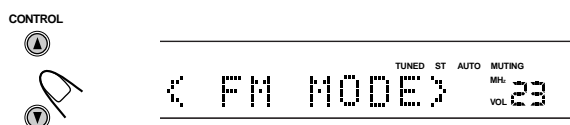
When an FM stereo broadcast is hard to receive or noisy, you can change the FM reception mode while receiving an FM broadcast.

- You can store the FM reception mode for each preset station.

Before you start, remember..

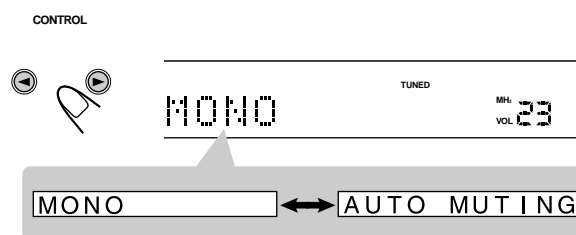
There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

1 While listening to an FM station, press CONTROL ▼ (or ▲) repeatedly until “< FM MODE >” appears on the display.



2 Press CONTROL ► (or ◀) to select “MONO.”

- Each time you press the button, the FM reception mode alternates between “AUTO MUTING” and “MONO.”



* “AUTO MUTING” is the initial setting.

MONO

: Select this to improve the reception (but stereo effect will be lost).

In this mode, you will hear noise while tuning into the stations. The AUTO MUTING indicator goes off from the display. (The ST indicator also goes off.)

AUTO MUTING

: Normally select this. When a program is broadcasted in stereo, you will hear stereo sound; when in monaural, you will hear monaural sounds. This mode is also useful to suppress static noise between stations. The AUTO MUTING indicator lights up on the display.

To restore the stereo effect

Repeat step 1, then select “AUTO MUTING” in step 2.

Creating Realistic Sound Fields


You can use the following DSP (Digital Signal Processor) modes to reproduce a realistic sound field.

- Surround modes
- DAP modes

■ Surround modes

Surround modes cannot be used when only the front speakers are connected to this receiver (without the rear speakers or center speaker).

Dolby Surround (Dolby Pro Logic)*


Used to reproduce sound tracks of the software encoded with Dolby Surround ( DOLBY SURROUND).

Dolby Surround encoding format records the left front channel, right front channel, center channel, and rear channel signals (total 4 channels) into 2 channels.

The **Dolby Pro Logic** decoder built in this receiver decodes these 2 channel signals into original 4 channel signals — matrix-based multichannel reproduction, and allows you to enjoy a realistic stereo sound in your listening room.

- When Dolby Pro Logic is activated, the PRO LOGIC indicator lights up on the display.
 - Dolby Pro Logic will be activated for all 2 channel-encoded software.

Dolby Digital*


Used to reproduce multichannel sound tracks of the software encoded with Dolby Digital ( DOLBY DIGITAL).

- To enjoy the software encoded with Dolby Digital, connect the source component using the digital terminal on the rear of this receiver. (See page 6.)

Dolby Digital encoding method (so-called discrete 5.1 channel digital audio format) records and digitally compresses the left front channel, right front channel, center channel, left rear channel, right rear channel, and LFE channel signals (total 6 channels, but LFE channel is counted as 0.1 channel. Therefore, called 5.1 channel). Since each channel is completely independent from the other channel signals to avoid interference, you can obtain much better sound quality with much stereo and surround effects.

In addition, Dolby Digital enables stereo rear sounds, and sets the cutoff frequency of the rear treble at 20 kHz, compared to 7 kHz for Dolby Pro Logic. These facts enhance the sound movement and being-there feelings much more than Dolby Pro Logic.

DTS Digital Surround**


Used to reproduce multichannel sound tracks of the software encoded with DTS Digital Surround ().

- To enjoy the software encoded with DTS Digital Surround, connect the source component using the digital terminal on the rear of this receiver. (See page 6.)

DTS Digital Surround is another discrete 5.1 channel digital audio format available on CD, LD, and DVD software.

Compared to Dolby Digital, audio compression rate is relatively low. This fact allows DTS Digital Surround format to add breadth and depth to the reproduced sounds. As a result, DTS Digital Surround features natural, solid and clear sound.

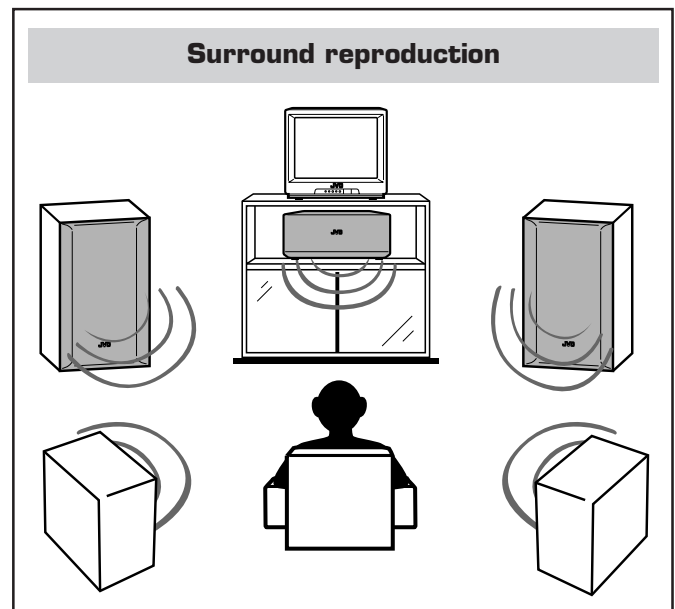
JVC Theater Surround

Used to reproduce sound tracks of the software encoded with Dolby Surround ( DOLBY SURROUND).

- **Theater Surround cannot be used only when the front speakers and rear speakers are connected to this receiver (without respect to the center speaker connection).**

Theater Surround can add acoustic surround effects (DAP mode effects) to Dolby Surround software, and create a sound field of a theater in your listening room.

- When Theater Surround is selected, the PRO LOGIC and DSP indicators light up on the display.



* Manufactured under license from Dolby Laboratories. "Dolby," "Pro Logic," and the double-D symbol are trademarks of Dolby Laboratories. Confidential Unpublished Works. ©1992–1997 Dolby Laboratories, Inc. All rights reserved.

** Manufactured under license from Digital Theater Systems, Inc. US Pat. No. 5,451,942 and other world-wide patents issued and pending. "DTS" and "DTS Digital Surround" are trademarks of Digital Theater Systems, Inc. ©1996 Digital Theater Systems, Inc. All rights reserved.

■ DAP (Digital Acoustic Processor) Modes

DAP modes have been designed to create important acoustic surround elements.

The sound heard in a hall, live club, dance club or pavilion consists of direct sound and indirect sound — early reflections and reflections from behind. Direct sounds reach the listener directly without any reflection. On the other hand, indirect sounds are delayed by the distances of the ceiling and walls (see the diagram to the right).

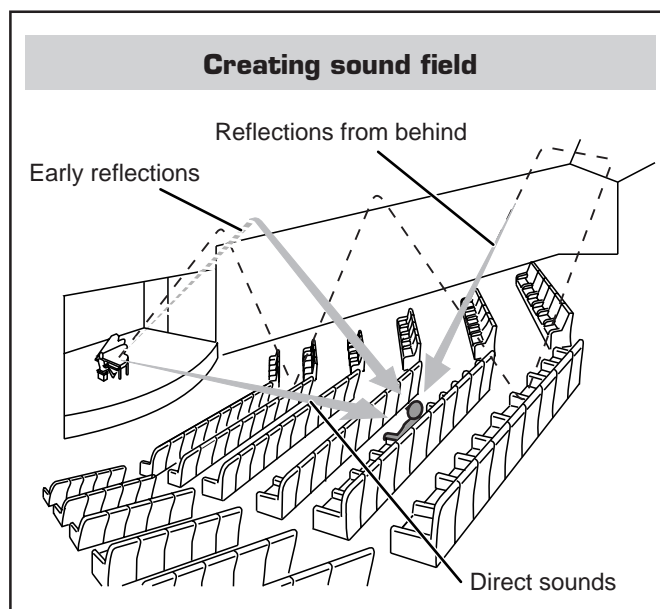
These indirect sounds are important elements of the acoustic surround effects.

The following DAP modes are provided with this receiver.

LIVE CLUB	: Gives the feeling of a live music club with a low ceiling.
DANCE CLUB	: Gives a throbbing bass beat.
HALL	: Gives clear vocal and the feeling of a concert hall.
PAVILION	: Gives the spacious feeling of a pavilion with a high ceiling.

These DAP modes can be used to add the acoustic surround effects while reproducing stereo analog software or Linear PCM digital software, and can give you a real “being there” feeling.

- **DAP modes can be used when the front and rear speakers are connected to this receiver (without respect to the center speaker connection: no sound comes out of the center speaker if it is connected).**
- When one of the DAP modes is selected, the DSP indicator lights up on the display.



Available DSP modes according to the input signal format

○: Possible ×: Impossible

DSP Modes		SURROUND	THEATER	LIVE CLUB	DANCE CLUB	HALL	PAVILION	STEREO
Input Signal format	Analog (Dolby Pro Logic)	○	○	○	○	○	○	○
	Linear PCM (Dolby Pro Logic)	○	○	○	○	○	○	○
	Dolby Digital (Dolby Digital) *1	○	×	×	×	×	×	○
	DTS (DTS Digital Surround) *2	○	×	×	×	×	×	○

*1 Dolby Digital is activated except when 2 channel signals come in (in this case, Dolby Pro Logic is activated).

*2 DTS Digital Surround is activated except when 2 channel signals come in (in this case, Dolby Pro Logic is activated).

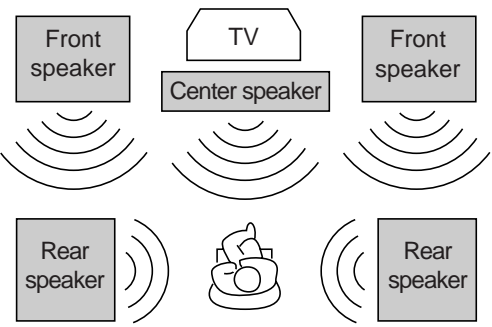



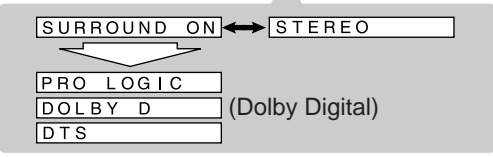
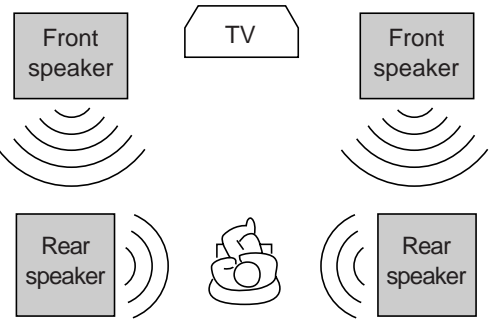



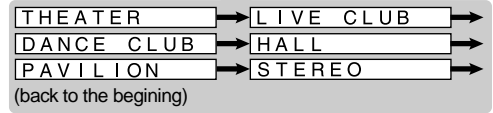
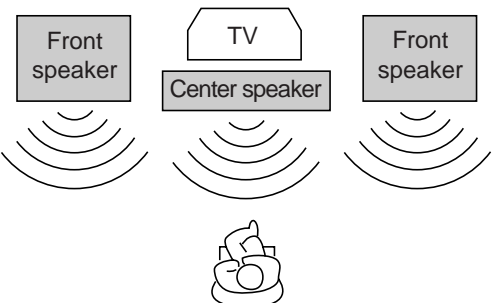



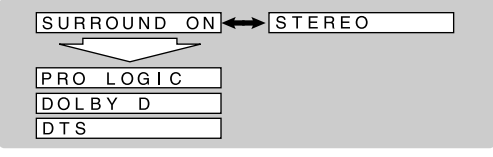
Creating Realistic Sound Fields

About Relations between Speaker Layout and DSP Modes

Available DSP modes will vary depending on how many speakers are used with this receiver.

Make sure that you have set the speaker information correctly (see page 12).

- If only front speakers are connected, you cannot use the DSP modes.
- If rear speakers are not connected, you cannot use Theater Surround and DAP modes.

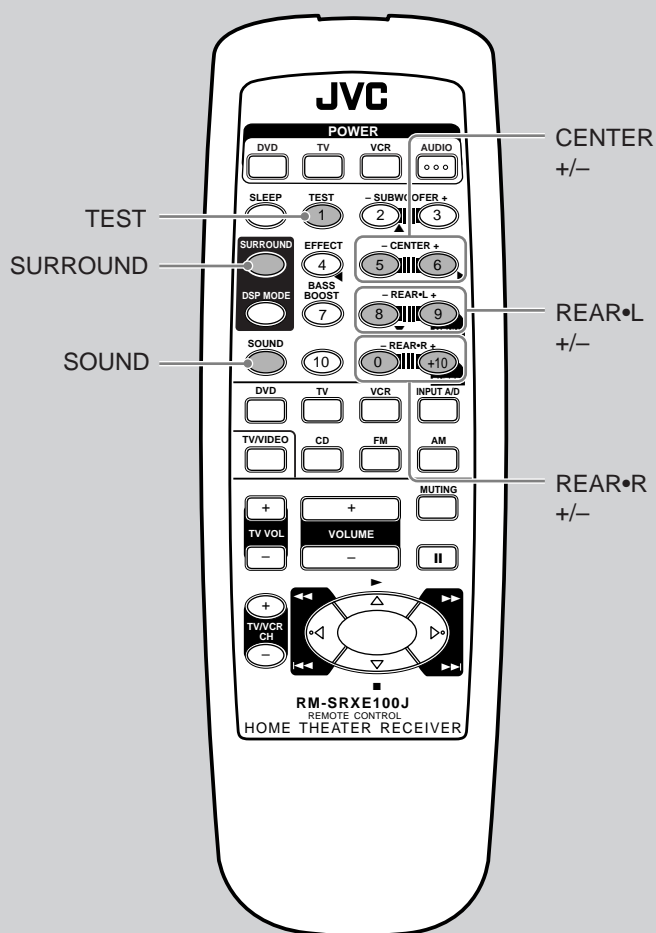
Speaker Layouts	Available DSP modes
<p>5 Channels</p> 	<p>Surround mode</p> <p>Each time you press SURROUND or SURROUND ON/OFF, Surround mode turns on or off (“STEREO”):</p>  (Remote)  (Front panel)  
<p>4 Channels</p> 	<p>DSP mode</p> <p>Each time you press DSP MODE, the DSP modes (Theater Surround and DAP modes) change as follows:</p>  (Remote)  (Front panel)  
<p>3 Channels</p> 	<p>Surround mode</p> <p>Each time you press SURROUND or SURROUND ON/OFF, Surround mode turns on or off (“STEREO”):</p>  (Remote)  (Front panel)  

When “AUTO SR (Auto Surround)” is turned “ON”

Surround mode is automatically activated when you select and start playing back a multichannel digital source.

It will be convenient for you to use the remote control for DSP operations, since you can adjust them from your listening point, and use the test signal.

- When using the buttons on the front panel, see pages 29 to 31.



IMPORTANT

To view the pictures on the TV, connect the video components directly to the TV, and select an appropriate input on the TV.

Before you start, remember...

- Make sure that you have set the speaker information correctly (see page 12).
- You cannot adjust the center speaker output level when you have set “CTR SP” to “NO.”
- You cannot adjust the rear speaker output levels when you have set “REAR SP” to “NO.”
- Remember not to change the speaker setting while using any DSP mode; otherwise, it may be canceled when you deactivate the speakers required for the DSP mode.

Using Surround Modes (Remote Control)

Surround mode cannot be used with another DSP mode. Once Surround mode is activated, the other DSP mode in use will be canceled.

- You have to make this adjustment for each source.

1 Select and play software encoded with Dolby Surround, Dolby Digital, or DTS Digital Surround.

If “AUTO SR (Auto Surround)” is set to “ON”
Playing a digital source automatically activates an appropriate Surround mode. (See page 16.)

2 Press SURROUND to activate an appropriate Surround mode — Pro Logic, Dolby Digital, or DTS Digital Surround.

- Each time you press the button, Surround mode turns on and off alternately.



Then



Ex.: When Dolby Digital is activated

Note:

When playing back an analog source, “SURROUND ON” will not appear, and “PRO LOGIC” appears as soon as you press SURROUND. (The PRO LOGIC indicator also lights up on the display.)

3 Press SOUND.

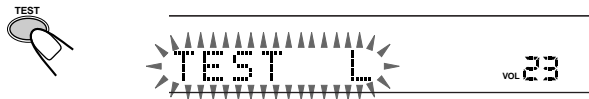


The 10 keys now work for sound adjustments.

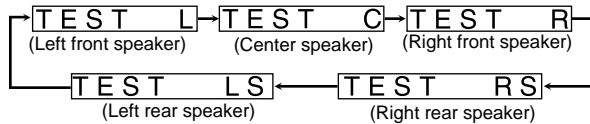
TO BE CONTINUED ON THE NEXT PAGE

Creating Realistic Sound Fields

4 Press TEST to check the speaker output balance.



“TEST L” starts flashing on the display, and a test tone comes out of the speakers in the following order:



Notes:

- You can adjust the speaker output levels without outputting the test tone.
- No test tone comes out of the center speaker when “CTR SP” is set to “NO.”
- No test tone comes out of the rear speakers when “REAR SP” is set to “NO.”

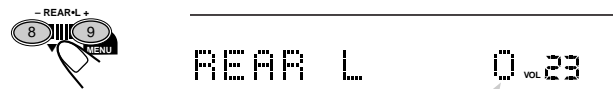
5 Adjust the following speaker output levels (from -10 to +10).

- Make adjustments so that the sound level of the selected speaker is set at the same level as that of the front speakers.

To adjust the center speaker level, press CENTER +/-.



To adjust the left rear speaker level, press REAR•L +/-.



To adjust the right rear speaker level, press REAR•R +/-.



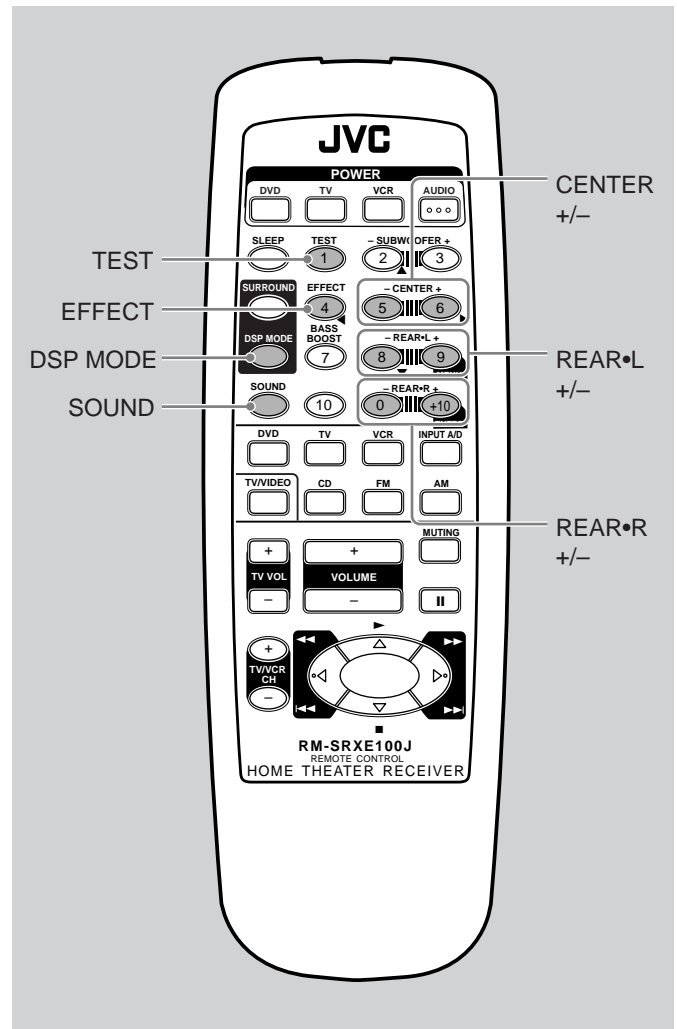
6 Press TEST again to stop the test tone.



To cancel Surround Mode

Press SURROUND again so that “STEREO” appears on the display.

- If Surround mode is canceled while playing back multichannel digital software, all channel signals are mixed and output through the front speakers (and subwoofer if you have connected a subwoofer and set the subwoofer setting correctly – “YES.”)



Using Theater Surround (Remote Control)

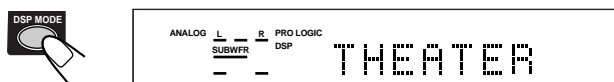
Theater Surround cannot be used with another DSP mode. Once Theater Surround is activated, the other DSP mode in use will be canceled.

- You have to make this adjustment for each source.
- You cannot use Theater Surround if no rear speakers are connected.

7 Select and play software encoded with Dolby Surround.

2 Press DSP MODE repeatedly until “THEATER” appears on the display.

The PRO LOGIC and DSP indicator light up on the display.

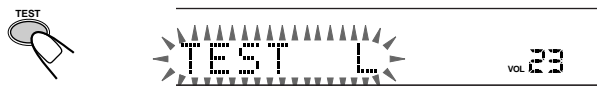


3 Press SOUND.

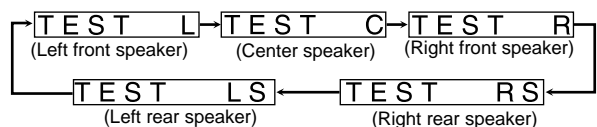
The 10 keys now work for sound adjustments.



4 Press TEST to check the speaker output balance.



“TEST L” starts flashing on the display, and a test tone comes out of the speakers in the following order:



Notes:

- You can adjust the speaker output levels without outputting the test tone.
- No test tone comes out of the center speaker when “CTR SP” is set to “NO.”

5 Adjust the following speaker output levels (from -10 to +10).

- Make adjustments so that the sound level of the selected speaker is set at the same level as that of the front speakers.

To adjust the center speaker level, press CENTER +/-.



To adjust the left rear speaker level, press REAR•L +/-.



To adjust the right rear speaker level, press REAR•R +/-.

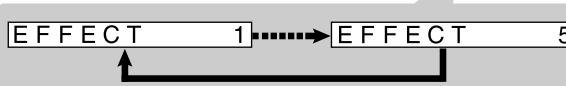


6 Press TEST again to stop the test tone.



7 Press EFFECT to select the DSP effect level (1 to 5) you want.

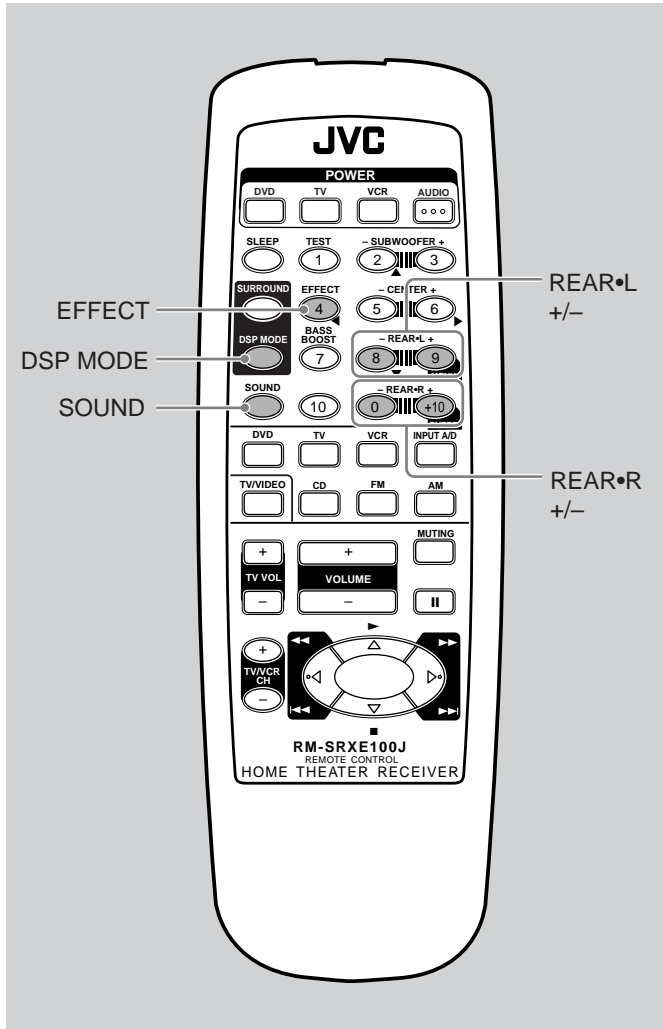
- As the number increases, the DSP effect becomes stronger (normally set it to “EFFECT 3”).



To cancel Theater Surround

Press DSP MODE repeatedly until “STEREO” appears on the display. The PRO LOGIC and DSP indicators go off.

Creating Realistic Sound Fields



3 Press SOUND.

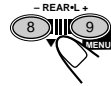


The 10 keys now work for sound adjustments.

4 Adjust the rear speaker output levels (from -10 to +10).

- Make adjustments so that the sound level of the selected speaker is set at the same level as that of the front speakers.

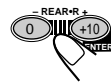
To adjust the left rear speaker level, press REAR•L +/-.



REAR L 0 VOL 23

REAR L -10 ↔ REAR L +10

To adjust the right rear speaker level, press REAR•R +/-.



REAR R 0 VOL 23

REAR R -10 ↔ REAR R +10

5 Press EFFECT to select the DSP effect level (1 to 5) you want.

- As the number increases, the DSP effect becomes stronger (normally set it to “EFFECT 3”).



EFFECT 3 VOL 23

EFFECT 1 ↔ EFFECT 5

Using DAP Modes (Remote Control)

A DAP mode cannot be used with another DSP mode. Once one of the DAP modes is activated, the other DSP mode in use will be canceled.

- You have to make this adjustment for each source.
- You cannot use any DAP mode if no rear speakers are connected.

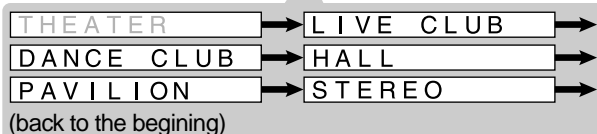
1 Select and play stereo analog software or Linear PCM digital software.

2 Press DSP MODE repeatedly until one of the DAP modes appears on the display.

The DSP indicator lights up on the display.

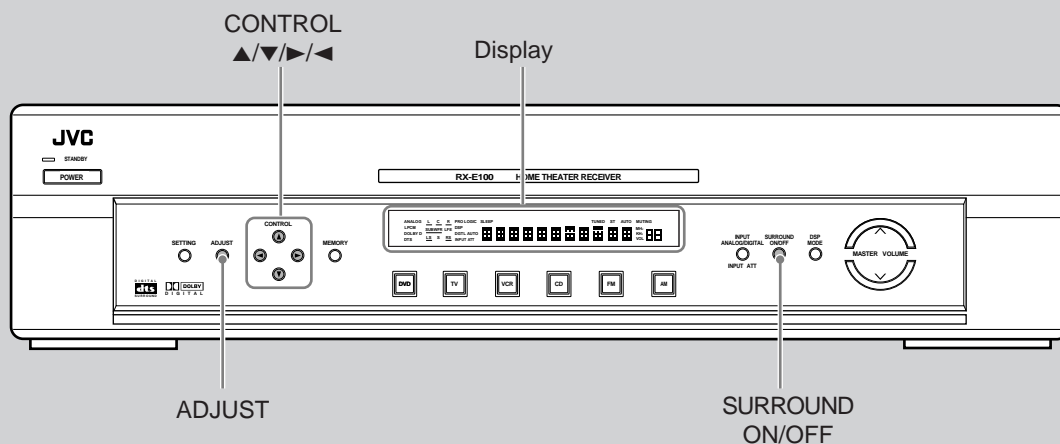


LIVE CLUB VOL 23



To cancel DAP Mode

Press DSP MODE repeatedly so that “STEREO” appears on the display. The DSP indicator goes off.



IMPORTANT

To view the pictures on the TV, connect the video components directly to the TV, and select an appropriate input on the TV.

When using the remote control for DSP operations, see pages 25 to 28.

Before you start, remember...

- Make sure that you have set the speaker information correctly (see page 12).
- You cannot adjust the center speaker output level when you have set “CTR SP” to “NO.”
- You cannot adjust the rear speaker output levels when you have set “REAR SP” to “NO.”

Using Surround Modes (Front Panel)

Surround mode cannot be used with another DSP mode. Once Surround mode is activated, the other DSP mode in use will be canceled.

When using the buttons on the front panel, no test tone is available. Make adjustments while listening to the sound of the source played back.

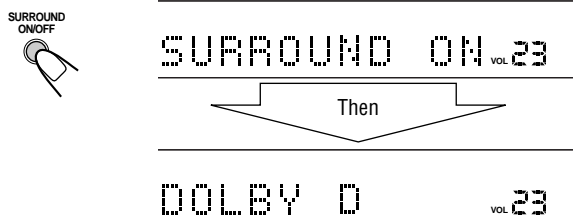
- You have to make this adjustment for each source.

1 Select and play software encoded with Dolby Surround, Dolby Digital, or DTS Digital Surround.

If “AUTO SR (Auto Surround)” is set to “ON”
Playing a digital source automatically activates an appropriate Surround mode. (See page 16.)

2 Press SURROUND ON/OFF to activate an appropriate Surround mode — Pro Logic, Dolby Digital, or DTS Digital Surround.

- Each time you press the button, Surround mode turns on and off alternately.



Ex.: When Dolby Digital is activated

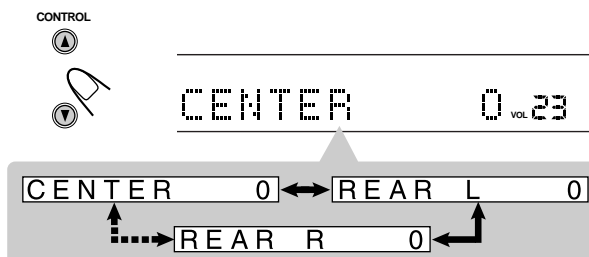
Note:

When playing back an analog source, “SURROUND ON” will not appear, and “PRO LOGIC” appears as soon as you press SURROUND. (The PRO LOGIC indicator also lights up on the display.)

3 Press ADJUST.

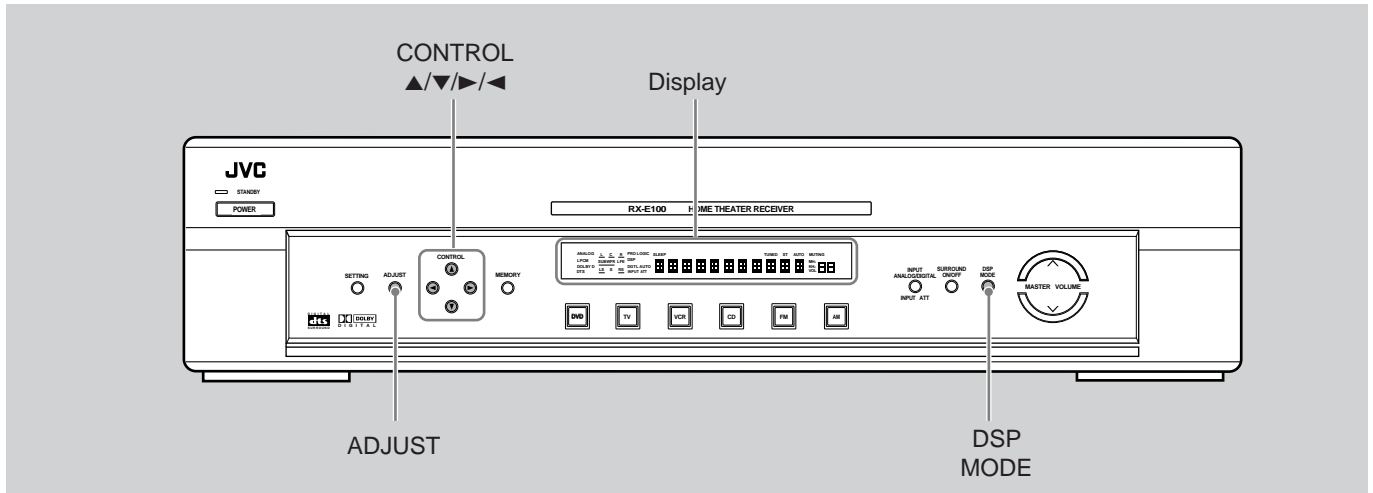
The CONTROL buttons now work for sound adjustments.

4 Press CONTROL ▼ (or ▲) repeatedly until one of the following indications (with the current setting)* appears.



TO BE CONTINUED ON THE NEXT PAGE

Creating Realistic Sound Fields

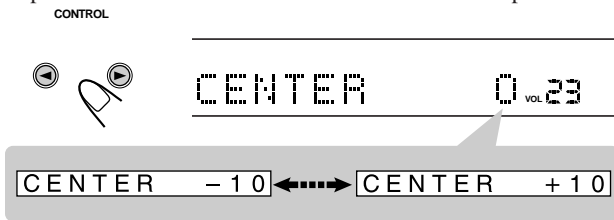


- CENTER** : To adjust the center speaker output level (from -10 to +10).
- REAR L** : To adjust the left rear speaker output level (from -10 to +10).
- REAR R** : To adjust the right rear speaker output level (from -10 to +10).

* "0" is the initial setting for these speaker output levels. If you have already changed the setting, another setting will be shown.

5 Press CONTROL ► (or ◀) to adjust the speaker output level.

- Make adjustments so that the sound level of the selected speaker is set at the same level as that of the front speakers.



Ex.: When adjusting the center speaker output level

6 Repeat steps 4 and 5 to adjust the other speaker levels.

To cancel Surround Mode

Press SURROUND ON/OFF again so that "STEREO" appears on the display.

- If Surround mode is canceled while playing back multichannel digital software, all channel signals are mixed and output through the front speakers (and subwoofer if you have connected a subwoofer and set the subwoofer setting correctly – "YES.")

Using Theater Surround (Front Panel)

Theater Surround cannot be used with another DSP mode. Once Theater Surround is activated, the other DSP mode in use will be canceled.

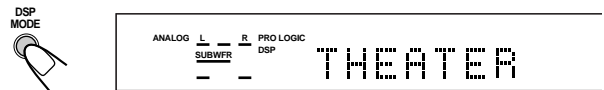
When using the buttons on the front panel, no test tone is available. Make adjustments while listening to the sound of the source played back.

- You have to make this adjustment for each source.
- You cannot use Theater Surround if no rear speakers are connected.

1 Select and play software encoded with Dolby Surround.

2 Press DSP MODE repeatedly until "THEATER" appears on the display.

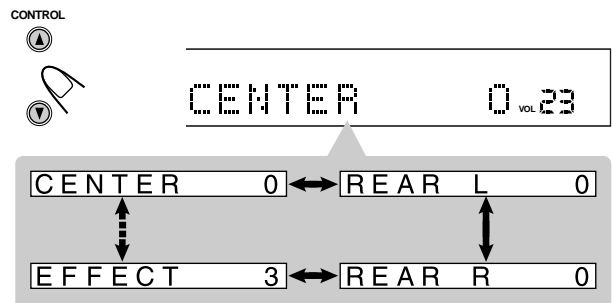
The PRO LOGIC and DSP indicators light up on the display.



3 Press ADJUST.

The CONTROL buttons now work for sound adjustments.

4 Press CONTROL ▼ (or ▲) repeatedly until one of the following indications (with the current setting)* appears.

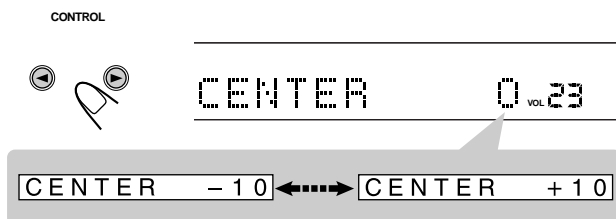


- CENTER** : To adjust the center speaker output level (from -10 to +10).
- REAR L** : To adjust the left rear speaker output level (from -10 to +10).
- REAR R** : To adjust the right rear speaker output level (from -10 to +10).
- EFFECT** : To adjust the DSP effect level. As the number increases, the effect becomes stronger (normally set it to "EFFECT 3").

* "0" is the initial setting for the speaker output levels, and "EFFECT 3" is for the DSP effect level.
If you have already changed the setting, another setting will be shown.

5 Press CONTROL ► (or ◀) to make an adjustment.

- When adjusting the speaker output levels, make adjustments so that the sound level of the selected speaker is set at the same level as that of the front speakers.



Ex.: When adjusting the center speaker output level

6 Repeat steps 4 and 5 to make other adjustments.

To cancel Theater Surround

Press DSP MODE repeatedly until "STEREO" appears on the display. The PRO LOGIC and DSP indicators go off.

Using DAP Modes (Front Panel)

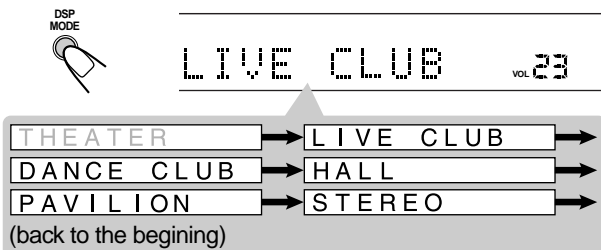
A DAP mode cannot be used with another DSP mode. Once one of the DAP modes is activated, the other DSP mode in use will be canceled.

- You have to make this adjustment for each source.
- You cannot use any DAP mode if no rear speakers are connected.

1 Select and play stereo analog software or Linear PCM digital software.

2 Press DSP MODE repeatedly until one of the DAP modes appears on the display.

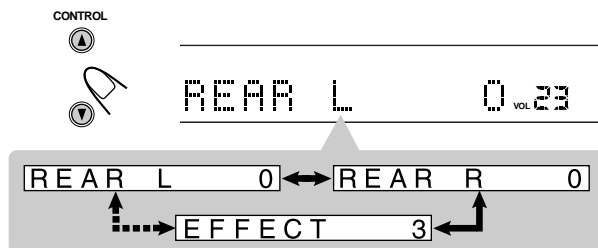
The DSP indicator lights up on the display.



3 Press ADJUST.

The CONTROL buttons now work for sound adjustments.

4 Press CONTROL ▼ (or ▲) repeatedly until one of the following indications (with the current setting)* appears.

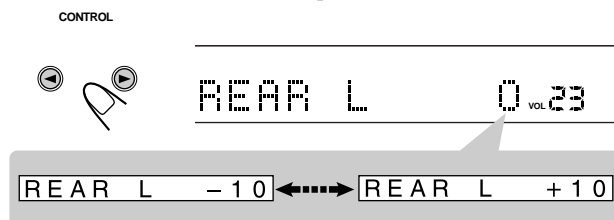


- REAR L** : To adjust the left rear speaker output level (from -10 to +10).
- REAR R** : To adjust the right rear speaker output level (from -10 to +10).
- EFFECT** : To adjust the DSP effect level. As the number increases, the effect becomes stronger (normally set it to "EFFECT 3").

* "0" is the initial setting for the speaker output levels, and "EFFECT 3" is for the DSP effect level.
If you have already changed the setting, another setting will be shown.

5 Press CONTROL ► (or ◀) to make an adjustment.

- When adjusting the speaker output levels, make adjustments so that the sound level of the selected speaker is set at the same level as that of the front speakers.



Ex.: When adjusting the left rear speaker output level

6 Repeat steps 4 and 5 to make other adjustments.

To cancel DAP Mode

Press DSP MODE repeatedly so that "STEREO" appears on the display. The DSP indicator goes off.

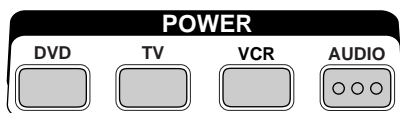
Mastering Remote Operations

You can use the remote control to operate not only this receiver but also other JVC products.

- Refer also to the manuals supplied for the other products.
 - This remote control can operate a VCR whose remote control code is set to A code.
- To operate the other products, aim the remote control directly at the remote sensor on the target product.



Turning on the Power — POWER buttons



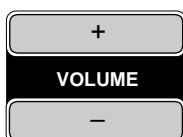
DVD : Turn on or off a JVC DVD player.

TV : Turn on or off a JVC TV.

VCR : Turn on or off a JVC VCR.

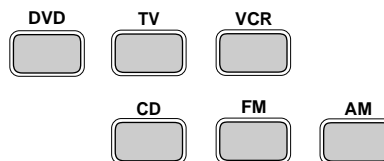
AUDIO : Turn on or off this receiver.

Adjusting the volume — VOLUME buttons (see also page 8)



Adjust the volume level.

Selecting the source — Source selecting buttons (see also page 8)



DVD : Select the DVD player.

TV : Select the TV.

VCR : Select the VCR.

CD : Select the CD player.

FM : Select the FM band.

AM : Select the AM band.

These buttons also change the functions of the 10 keys, and make them work to operate the target source components. (See the next page.)

Selecting analog or digital input — INPUT A/D button (see also page 11)



Select either analog input or digital input for the digital source.

Turning off the sound temporarily — MUTING button (see also page 9)



Turn on or off the sound output.

Creating realistic sound fields — SURROUND and DSP MODE buttons (see also pages 24 – 28)



SURROUND : Turn on or off Surround mode.

DSP MODE : Select the DSP modes (Theater Surround and DAP modes). Each time you press the button, the DSP modes change.

Adjusting the sound — SOUND button (see also pages 18, 19, 25, 27, 28)



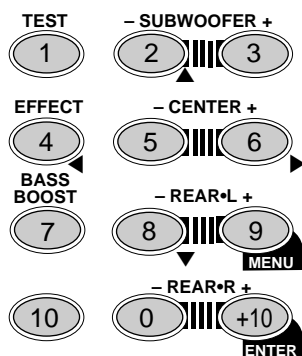
Change the functions of 10 keys, and make them work for sound adjustments.

Turning off the receiver automatically — SLEEP button (see also page 9)



Set the shut-off time until the receiver turns off automatically.

Adjusting the sound and operating other JVC products — 10 keys



- After pressing **SOUND**, you can use the 10 keys for sound adjustments. (See also pages 18, 19, 25 – 28)

TEST	: Turn on or off the test tone output.
EFFECT	: Change the DSP effect level.
BASS BOOST	: Turn on or off Bass Boost.
SUBWOOFER +/-	: Adjust the subwoofer level.
CENTER +/-	: Adjust the center speaker output level.
REAR L +/-	: Adjust the left rear speaker output level.
REAR R +/-	: Adjust the right rear speaker output level.

- After pressing **DVD** (source selecting button), you can use the 10 keys (2, 4, 6, 8, 9, +10) for DVD menu operations.

MENU	: Display the menu screen.
ENTER	: Enter a selected item.
▲ / ▼ / ◀ / ▶	: Select an item on the menu screen.

- After pressing **TV** (source selecting button), you can use the 10 keys for selecting a channel on the TV.

1 – 9, 0	: Select a channel.
10	: Functions as the RETURN button.
+10	: Functions as the +100 button.

- After pressing **VCR** (source selecting button), you can use the 10 keys for VCR operations.

1 – 9, 0	: Select a channel on the VCR.
-----------------	--------------------------------

- After pressing **CD**, you can use the 10 keys for CD operations.

1 – 10, +10	: Select a track.
--------------------	-------------------

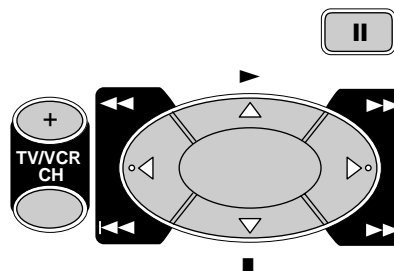
- After pressing **FM** or **AM**, you can use the 10 keys for tuner operations.

1 – 10, +10	: Select a preset channel.
--------------------	----------------------------

Example: Selecting CD track numbers or preset FM/AM channel numbers using the 10 keys

- For number 5, press 5.
- For number 15, press +10, then 5.
- For number 30, press +10, +10, then 10.

Operating other JVC products — Audio/video operation buttons



- After pressing **DVD** (source selecting button), you can use the following buttons for DVD operations.

▶	: Start playback.
■	: Stop playback.
 	: Pause playback. To release it, press ▶.
▶▶	: Skip to the beginning of the next track.
◀◀	: Return to the beginning of the current (or previous) track.

- After pressing **TV** (source selecting button), you can use the following buttons for changing the channels on the TV.

TV/VCR CH +/-	: Change channel numbers.
----------------------	---------------------------

- After pressing **VCR** (source selecting button), you can use the following buttons for VCR operations.

TV/VCR CH +/-	: Change channel numbers on the VCR.
▶	: Start playback.
■	: Stop playback.
 	: Pause playback. To release it, press ▶.
▶▶	: Fast-wind a tape.
◀◀	: Rewind a tape.

- After pressing **CD** (source selecting button), you can use the following buttons for CD operations.

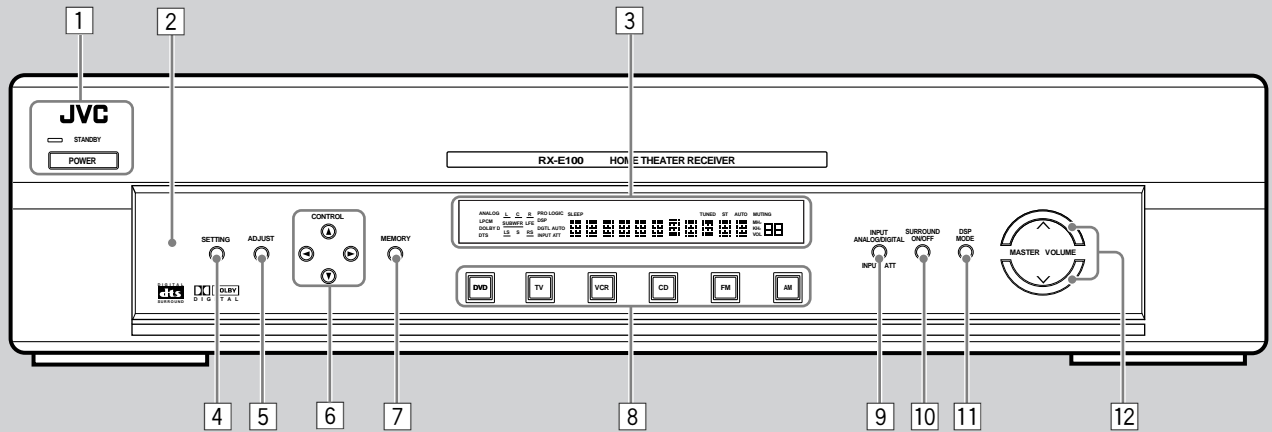
▶	: Start playback.
■	: Stop playback.
 	: Pause playback. To release it, press ▶.
▶▶	: Skip to the beginning of the next track.
◀◀	: Return to the beginning of the current (or previous) track.

- These buttons works only for TVs.

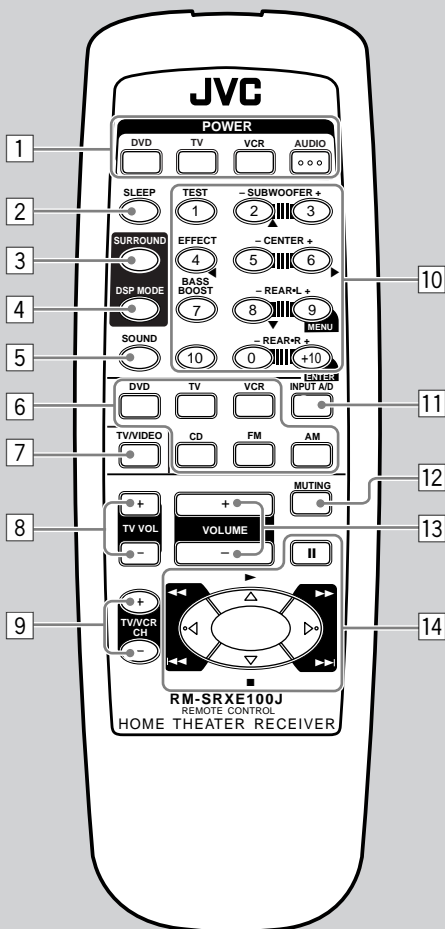
TV/VIDEO	: Change the input mode (Video input and TV tuner) on the TV.
TV VOL +/-	: Adjust the volume on the TV.

Parts Identification

Front Panel



Remote Control



See pages in the parentheses for details.

Front Panel

- 1 POWER button and STANDBY lamp (8)
- 2 Remote sensor
- 3 Display
- 4 SETTING button (10, 12 – 16)
- 5 ADJUST button (17 – 19, 29 – 31)
- 6 CONTROL buttons (10 – 21, 29 – 31)
▲ / ▼ / ◀ / ▶
- 7 MEMORY button (20, 21)
- 8 Source selecting buttons (8, 11, 20, 21)
DVD, TV, VCR, CD, FM, AM
- 9 INPUT ANALOG/DIGITAL button (11)
INPUT ATT button (17)
- 10 SURROUND ON/OFF button (24, 29)
- 11 DSP MODE button (24, 30, 31)
- 12 VOLUME ▲/▼ buttons (8)

Remote Control

- 1 POWER buttons (8, 32)
TV, VCR, AUDIO
- 2 SLEEP button (9, 32)
- 3 SURROUND button (24, 25, 32)
- 4 DSP MODE button (24, 27, 28, 32)
- 5 SOUND button (18, 19, 25, 27, 28, 32)
- 6 Source selecting buttons (8, 11, 20, 21)
DVD, TV, VCR, CD, FM, AM
- 7 TV/VIDEO button (33)
- 8 TV VOL +/- buttons (33)
- 9 TV/VCR CH +/- buttons (33)
- 10 • 10 keys for selecting preset channels (21, 33)
• 10 keys for adjusting sound (18, 19, 26 – 28)
• 10 keys for operating audio/video components (33)
- 11 INPUT A/D (analog/digital) button (11)
- 12 MUTING button (9)
- 13 VOLUME +/- buttons (8)
- 14 Operating buttons for audio/video components (33)

Troubleshooting

Use this chart to help you solve daily operational problems. If there is any problem you cannot solve, contact your JVC service center.

PROBLEM	POSSIBLE CAUSE	SOLUTION
The power does not come on.	The power cord is not plugged in.	Plug the power cord into an AC outlet.
No sound from speakers.	Speaker signal cables are not connected.	Check speaker wiring and reconnect if necessary.
	An incorrect source is selected.	Select the correct source.
	Muting is activated.	Press MUTING to cancel the mute.
	An incorrect input mode (analog or digital) is selected.	Select the correct input mode (analog or digital).
	Connections are incorrect.	Check connections.
Sound from one speaker only.	The balance is set to one extreme.	Adjust the balance properly (see page 17).
Continuous hiss or buzzing during FM reception.	Incoming signal is too weak.	Connect an outdoor FM antenna or contact your dealer.
	The station is too far away.	Select a new station.
	An incorrect antenna is used.	Check with your dealer to be sure you have a correct antenna.
	Antennas are not connected properly.	Check connections.
Occasional cracking noise during FM reception.	Ignition noise from automobiles.	Move the antenna farther from automobile traffic.
"OVERLOAD" starts flashing on the display.	Speakers are overloaded because of high volume.	<ol style="list-style-type: none"> 1. Press POWER on the front panel to turn off the receiver. 2. Stop the playback source. 3. Turn on the receiver again, and adjust the volume.
	Speakers are overloaded because of short circuit of speaker terminals.	Press POWER on the front panel to turn off the receiver, then check the speaker wiring. If "OVERLOAD" does not disappear, unplug the AC power cord, then plug it back again. If speaker wiring is not short-circuited, contact your dealer.
The STANDBY lamp lights up after turning on the power, but soon the receiver turns off (into standby mode).	The receiver is overloaded because of a high voltage.	Press POWER on the front panel to turn off the receiver. After unplugging the power cord, consult your dealer.
Remote control does not operate as you intend.	The remote control is not ready for your intended operation.	Press SOUND or source selecting buttons first, then press the button you want to use. (See pages 32 and 33.)
Remote control does not work.	There is an obstruction hiding the remote sensor on the receiver.	Remove the obstruction.
	Batteries are weak.	Replace batteries.

Amplifier

Output Power	At Stereo operation:
	Front channels: 70 W per channel, min. RMS, driven into 8 Ω, 40 Hz to 20 kHz with no more than 0.8% total harmonic distortion.
	At Surround operation:
	Front channels: 70 W per channel, min. RMS, driven into 8 Ω at 1 kHz with no more than 0.8% total harmonic distortion.
	Center channel: 70 W, min. RMS, driven into 8 Ω at 1 kHz, with no more than 0.8% total harmonic distortion.
	Rear channels: 70 W per channel, min. RMS, driven into 8 Ω at 1 kHz, with no more than 0.8% total harmonic distortion.
Audio Input Sensitivity/Impedance (1 kHz):	CD, TV, VCR, DVD: 200 mV/47 k Ω
Audio Input (DIGITAL IN)* :	Coaxial: DIGITAL 1 (DVD): 0.5 V p-p/75 Ω Optical: DIGITAL 2 (TV): -21 dBm to -15 dBm (660 nm ±30 nm)
	* Corresponding to Linear PCM, Dolby Digital, and DTS Digital Surround (with sampling frequency — 32 kHz, 44.1 kHz, 48 kHz).
Audio Output Level:	VCR: 200 mV
Signal-to-Noise Ratio (*66 IHF/'78 IHF):	CD, TV, VCR, DVD: 85 dB/75 dB
Frequency Response (8 Ω):	CD, TV, VCR, DVD: 20 Hz to 20 kHz (±1 dB)
Tone Control:	Bass (100 Hz): ±10 dB Treble (10 kHz): ±10 dB
Bass Boost:	+6 dB ± 1 dB at 70 Hz

FM tuner (IHF)

Tuning Range:	87.5 MHz to 108.0 MHz
Usable Sensitivity:	Monoaural: 12.8 dBf (1.2 μV/75 Ω)
50 dB Quieting Sensitivity:	Monoaural: 21.3 dBf (3.2 μV/75 Ω) Stereo: 41.3 dBf (31.5 μV/75 Ω)
Signal-to-Noise Ratio (IHF-A weighted):	Monoaural: 78 dB at 85 dBf Stereo: 73 dB at 85 dBf
Total Harmonic Distortion:	Monoaural: 0.4% at 1 kHz Stereo: 0.6% at 1 kHz
Stereo Separation at REC OUT:	35 dB at 1 kHz
Alternate Channel Selectivity:	45 dB: (±400 kHz)
Frequency Response:	30 Hz to 15 kHz: (+0.5 dB, -3 dB)

AM tuner

Tuning Range:	530 kHz to 1 710 kHz
Usable Sensitivity:	Loop antenna 400 μV/m
Signal-to-Noise Ratio:	50 dB (100 mV/m)

General

Power Requirements:	AC 120V [~] , 60 Hz
Power Consumption:	150 W/190 VA (at operation) 2 W (in standby mode)
Dimensions (W x H x D):	17 ³ / ₁₆ in. x 3 ¹⁵ / ₁₆ in. x 15 ¹¹ / ₁₆ in. (435 mm x 100 mm x 398 mm)
Mass:	16.4 lbs (7.4 kg)

Memorandum

Note the adjustments you have made for each source below for your future reference.

The following adjustments can be stored for each source:

- Analog/digital input mode (see page 11)
- Input attenuator mode (see page 17)
- Balance (see page 17)
- Bass boost (see page 18)

- Tone adjustment (see page 19)
- Subwoofer level (see page 19)
- Surround mode settings (see pages 25, 29)
Theater Surround settings (see pages 27, 30)
DAP mode settings (see pages 28, 31)

Source Name:

• Analog/digital input:	ANALOG / DGTL AUTO
• Input Attenuator:	ON / NORMAL
• Bass Boost:	ON / OFF
• Tone adjustment	
Bass:	
Treble:	
• Subwoofer level	
• Balance	
• Surround mode/Theater Surround/DAP modes	
Mode:	SURROUND / THEATER LIVE CLUB DANCE CLUB / HALL PAVILION / STEREO
Center level :	
Left rear level:	
Right rear level :	
Effect level:	

Source Name:

• Analog/digital input:	ANALOG / DGTL AUTO
• Input Attenuator:	ON / NORMAL
• Bass Boost:	ON / OFF
• Tone adjustment	
Bass:	
Treble:	
• Subwoofer level	
• Balance	
• Surround mode/Theater Surround/DAP modes	
Mode:	SURROUND / THEATER LIVE CLUB DANCE CLUB / HALL PAVILION / STEREO
Center level :	
Left rear level:	
Right rear level :	
Effect level:	

• Analog/digital input:	ANALOG / DGTL AUTO
• Input Attenuator:	ON / NORMAL
• Bass Boost:	ON / OFF
• Tone adjustment	
Bass:	
Treble:	
• Subwoofer level	
• Balance	
• Surround mode/Theater Surround/DAP modes	
Mode:	SURROUND / THEATER LIVE CLUB DANCE CLUB / HALL PAVILION / STEREO
Center level :	
Left rear level:	
Right rear level :	
Effect level:	

• Analog/digital input:	ANALOG / DGTL AUTO
• Input Attenuator:	ON / NORMAL
• Bass Boost:	ON / OFF
• Tone adjustment	
Bass:	
Treble:	
• Subwoofer level	
• Balance	
• Surround mode/Theater Surround/DAP modes	
Mode:	SURROUND / THEATER LIVE CLUB DANCE CLUB / HALL PAVILION / STEREO
Center level :	
Left rear level:	
Right rear level :	
Effect level:	

HOW TO LOCATE YOUR JVC SERVICE CENTER

TOLL FREE : 1-800-537-5722

<http://www.jvcservice.com>

Dear customer:

In order to receive the most satisfaction from your purchase, read the instruction booklet before operating the unit. In the event that repair is necessary, or for the address nearest your location, please refer to the factory service center list below or within the Continental United States, Call 1-800-537-5722 for your authorized servicer. Remember to retain your Bill of Sale for Warranty Service.

—JVC

JVC SERVICE & ENGINEERING COMPANY OF AMERICA DIVISION OF JVC AMERICAS CORP.

FACTORY SERVICE CENTER LOCATIONS

10 New Maple Avenue
Pine Brook, NJ 07058-9641
(973) 396-1000

1500 Lakes Parkway
Lawrenceville, GA 30243-5857
(770) 339-2582

705 Enterprise Street
Aurora, IL 60504-8149
(630) 851-7855

5665 Corporate Avenue
Cypress, CA 90630-0024
(714) 229-8011

2969 Mapunapuna Place
Honolulu, HI 96819-2040
(808) 833-5828

10700 Hammerly, Suite 110
Houston, TX 77043
(713) 935-9331

13 Cummings Park
Woburn, MA 01801
(781) 376-9100

8192 State Road 84
Davie, FL 33324
(954) 472-1960

890 Dubuque Avenue
South San Francisco, CA 94080-1804
(650) 871-2666

Sophisticated electronic products may require occasional service. Just as quality is a keyword in the engineering and production of the wide array of JVC products, service is the key to maintaining the high level of performance for which JVC is world famous. The JVC service and engineering organization stands behind our products.

NATIONAL HEADQUARTERS
JVC SERVICE & ENGINEERING COMPANY OF AMERICA
DIVISION OF JVC AMERICAS CORP.
1700 Valley Road
Wayne, NJ 07470

If you ship the product •••

Pack your JVC unit in the original carton or one of equivalent size and strength. Enclose, with the unit, a letter stating the problem or symptom that exists and also a copy of the receipt or bill of sale you received when you purchased your JVC unit. Print your home return address on the outside and the inside of the carton. Send to the appropriate JVC Factory Service Center as listed above.

Don't service it yourself.

CAUTION

*To prevent electrical shock, do not open the cabinet. No user serviceable parts inside.
Refer servicing to qualified service personnel.*

ACCESSORIES

*To purchase accessories for your JVC product, you may contact your local JVC Dealer.
Or from the 48 Continental United States call toll free : 800-882-2345*



LIMITED WARRANTY AUDIO-2

JVC COMPANY OF AMERICA warrants this product and all parts thereof, except as set forth below ONLY TO THE ORIGINAL PURCHASER AT RETAIL to be FREE FROM DEFECTIVE MATERIAL AND WORKMANSHIP from the date of original retail purchase for the period as shown below. ("The Warranty Period.")

PARTS	LABOR
2YR	2YR

THIS LIMITED WARRANTY IS VALID ONLY IN THE FIFTY(50) UNITED STATES, THE DISTRICT OF COLUMBIA AND IN COMMONWEALTH OF PUERTO RICO.

WHAT WE WILL DO:

If this product is found to be defective, JVC will repair or replace defective parts at no charge to the original owner. Such repair and replacement services shall be rendered by JVC during normal business hours at JVC authorized service centers. Parts used for replacement are warranted only for the remainder of the Warranty Period. All products and parts thereof may be brought to a JVC authorized service center on a carry-in basis except for Television sets having a screen size 25 inches and above which are covered on an in-home basis.

WHAT YOU MUST DO FOR WARRANTY SERVICE:

Return your product to a JVC authorized service center with a copy of your bill of sale. For your nearest JVC authorized service center, please call toll free: (800)537-5722. If service is not available locally, box the product carefully, preferably in the original carton, and ship, insured, with a copy of your bill of sale plus and letter of explanation of the problem to the nearest JVC Factory Service Center, the name and location of which will be given to you by the toll-free number. If you have any questions concerning your JVC Product, please contact our Customer Relations Department.

WHAT IS NOT COVERED:

- This limited warranty provided by JVC does not cover:
1. Products which have been subject to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, or if repaired or serviced by anyone other than a service facility authorized by JVC to render such service, or if affixed to any attachment not provided with the products, or if the model number or serial number has been altered, tampered with, defaced or removed;
 2. Initial installation and installation and removal for repair;
 3. Operational adjustments covered in the Owner's Manual, normal maintenance, video and audio head cleaning;
 4. Damage that occurs in shipment, due to act of God, and cosmetic damage;
 5. Signal reception problems and failures due to line power surge;
 6. Video Pick-up Tubes/CCD Image Sensor, Cartridge, Stylus(Needle) are covered for 90 days from the date of purchase;
 7. Accessories;
 8. Batteries (except the Rechargeable Batteries are covered for 90 days from the date of purchase);

There are no express warranties except as listed above.

THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY, IS LIMITED TO THE DURATION OF THE EXPRESS WARRANTY HEREIN.

JVC SHALL NOT BE LIABLE FOR THE LOSS OF USE OF THE PRODUCT, INCONVENIENCE, LOSS OR ANY OTHER DAMAGES, WHETHER DIRECT, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, WITHOUT LIMITATION, DAMAGE TO TAPES, RECORDS OR DISCS) RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, ARE LIMITED TO THE WARRANTY PERIOD SET FORTH ABOVE.

Some states do not allow the exclusion of incidental or consequential damages or limitations on how long an implied warranty last, so these limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

JVC COMPANY OF AMERICA
DIVISION OF JVC AMERICAS CORP.

1700 Valley Road
Wayne, NJ 07470

REFURBISHED PRODUCTS CARRY A SEPARATE WARRANTY, THIS WARRANTY DOES NOT APPLY. FOR DETAILS OF REFURBISHED PRODUCT WARRANTY, PLEASE REFER TO THE REFURBISHED PRODUCT WARRANTY INFORMATION PACKAGED WITH EACH REFURBISHED PRODUCT.

For customer use:

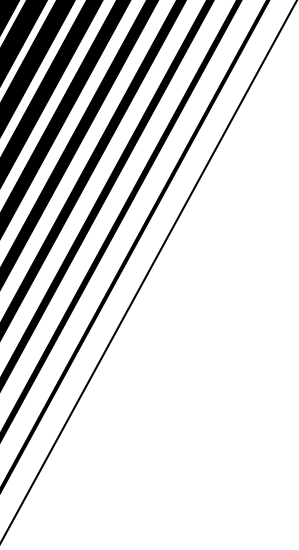
Enter below the Model No. and Serial No. which is located either on the rear, bottom or side of the cabinet. Retain this information for future reference.

Model No.: _____

Serial No.: _____

Purchase date: _____

Name of dealer: _____



JVC
VICTOR COMPANY OF JAPAN, LIMITED