

# JVC

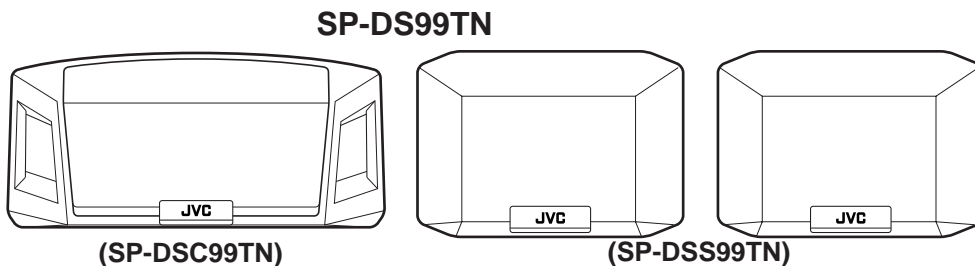
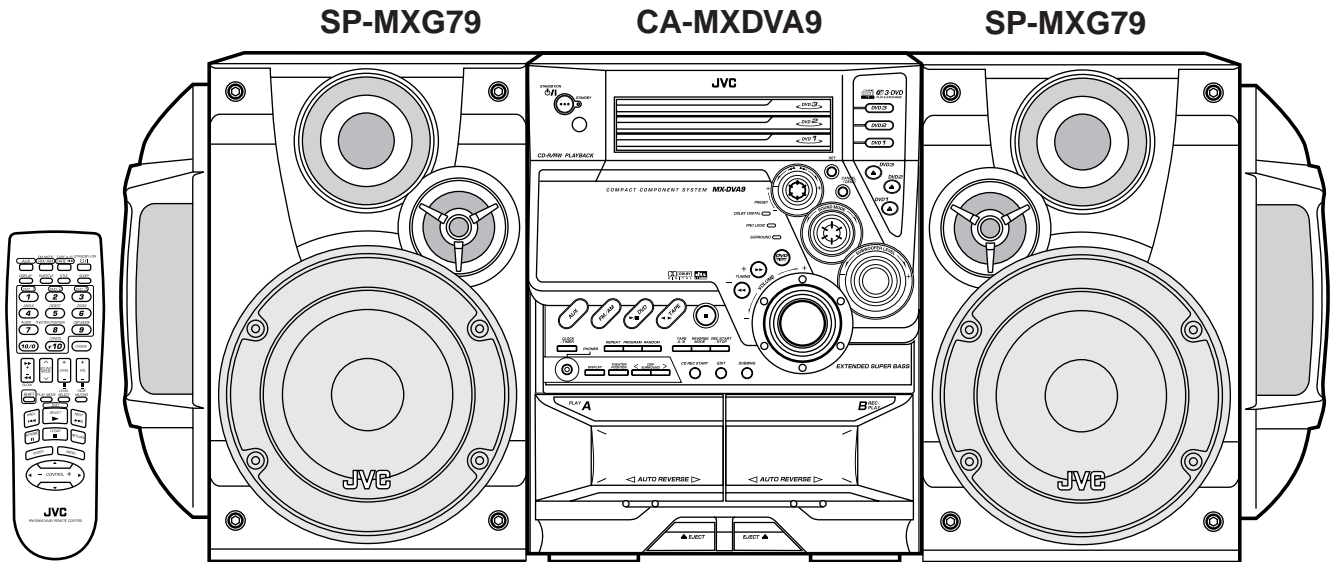


## COMPACT COMPONENT SYSTEM

SYSTEME DE COMPOSANTS COMPACT

# MX-DVA9

- Consists of CA-MXDVA9, SP-MXG79, and SP-DS99TN (SP-DSC99TN and SP-DSS99TN)
- Composé du CA-MXDVA9, SP-MXG79 et SP-DS99TN (SP-DSC99TN et SP-DSS99TN)



## INSTRUCTIONS MANUEL D'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. \_\_\_\_\_

GVT0057-001A  
[J,C]

# Warnings, Cautions and Others

## Mises en garde, précautions et indications diverses



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.

### 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

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

**ATTENTION:** POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

### 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 NUMERIQUE RESPECTE LES LIMITES DE BRUITS RADIOELECTRIQUES APPLICABLES AUX APPAREILS NUMERIQUES DE CLASSE B PRESCRITES DANS LA NORME SUR LE MATERIEL BROUILLEUR: "APPAREILS NUMERIQUES", NMB-003 EDICTEE PAR LE MINISTRE DES COMMUNICATIONS.

### 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.

**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 — STANDBY/ON button!

Disconnect the mains plug to shut the power off completely. The STANDBY/ON  button in any position does not disconnect the mains line. The power can be remote controlled.

### Attention — Commutateur STANDBY/ON !

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

### IMPORTANT FOR LASER PRODUCTS

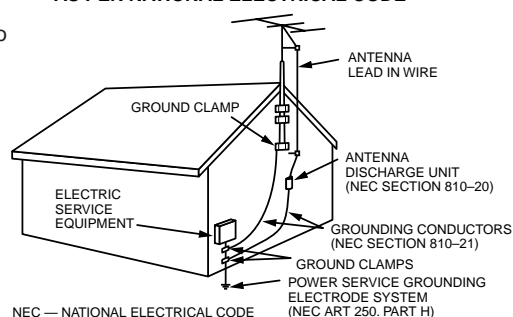
1. CLASS 1 LASER PRODUCT
  2. **DANGER:** Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
  3. **CAUTION:** Do not open the top cover. There are no user serviceable parts inside the Unit; leave all servicing to qualified service personnel.
- 
1. PRODUIT LASER CLASSE 1
  2. **ATTENTION:** Radiation laser invisible quand l'appareil est ouvert ou que le verrouillage est en panne ou désactivé. Eviter une exposition directe au rayon.
  3. **ATTENTION:** Ne pas ouvrir le couvercle du dessus. Il n'y a aucune pièce utilisable à l'intérieur. Laisser à un personnel qualifié le soin de réparer votre appareil.

# IMPORTANT PRODUCTS SAFETY INSTRUCTION

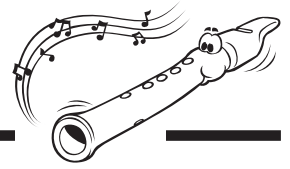
(Statement in accordance with the UL standards)

- 1) Read Instructions — Read carefully this instructions for your safe use before this product is installed, wire-connected, and operated.
- 2) Retain Instructions — For your future reference, retain this instruction.
- 3) Heed Warnings — Heed warnings on the product and in the operating instructions.
- 4) Follow Instructions — Follow and obey all warnings, cautions and instructions marked on this product and this instruction.
- 5) Cleaning — Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
- 6) Attachments — Do not use attachments not recommended by the manufacturer of this product as they may cause hazards.
- 7) Water and Moisture — Do not expose this product to rain, water and moisture, or operate it near water — for example near a bathtub, wash bowl, kitchen sink, laundry tub, in a wet basement or near a swimming pool, and the like.
- 8) Ventilation — Slots and openings in the cabinet are provided for ventilation. To ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered.
  - Do not block the openings by placing the product on a bed, sofa, rug or other similar surface.
  - Do not place the product in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
- 9) Power Sources — Operate your product only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. If your product is intended to operate from battery power, or other sources, refer to the operating instructions.
- 10) Grounding or Polarization  
Your product may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
- 11) Power Cord Protection — Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.
- 12) Outdoor Antenna Grounding — If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. Example of antenna grounding is illustrated in here.
- 13) Lightning — For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
- 14) Power Line — An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
- 15) Overloading — Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.
- 16) Object and Liquid Entry — Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
- 17) Servicing — Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- 18) Damage Requiring Service — Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - a) When the power-supply cord or plug is damaged.
  - b) If liquid has been spilled, or objects have fallen into the product.
  - c) If the product has been exposed to rain or water.
  - d) If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
  - e) If the product has been dropped or damaged in any way.
  - f) When the product exhibits a distinct change in performance — this indicates a need for service.
- 19) Replacement Parts — When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
- 20) Safety Check — Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
- 21) Heat — The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products(including amplifiers) that produce heat.

**EXAMPLE OF ANTENNA GROUNDING  
AS PER NATIONAL ELECTRICAL CODE**



# Introduction



We would like to thank you for purchasing one of our JVC products. Before operating this unit, read this manual carefully and thoroughly to obtain the best possible performance from your unit, and retain this manual for future reference.

## About This Manual

This manual is organized as follows:

- The manual mainly explains operations using the buttons and controls on the unit. You can also use the buttons on the remote control if they have the same or similar names (or marks) as those on the unit. If operation using the remote control is different from that using the unit, it is then explained.
- Basic and common information that is the same for many functions is grouped in one place, and is not repeated in each procedure. For instance, we do not repeat the information about turning on/off the unit, setting the volume, changing the sound effects, and others, which are explained in the section “Common Operations” on pages 10 to 12.
- The following marks are used in this manual:



Gives you warnings and cautions to prevent from damage or risk of fire/electric shock. Also gives you information which is not good for obtaining the best possible performance from the unit.



Gives you information and hints you had better know.

## Precautions

### Installation

- Install in a place which is level, dry and neither too hot nor too cold—between 5°C (41°F) and 35°C (95°F).
- Install the unit in a location with adequate ventilation to prevent internal heat buildup in the unit.
- Leave sufficient distance between the unit and the TV.
- Keep the speakers away from the TV to avoid interference with TV.



DO NOT install the unit in a location near heat sources, or in a place subject to direct sunlight, excessive dust or vibration.

### Power sources

- When unplugging from the wall outlet, always pull the plug, not the AC power cord.



DO NOT handle the AC power cord with wet hands.

### Moisture condensation

Moisture may condense on the lens inside the unit in the following cases:

- After starting heating in the room
- In a damp room
- If the unit is brought directly from a cold to a warm place should this occur, the unit may malfunction. In this case, leave the unit turned on for a few hours until the moisture evaporates, unplug the AC power cord, and then plug it in again.

### Others

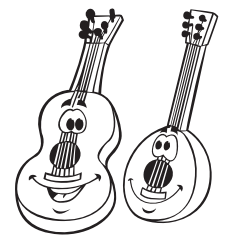
- Should any metallic object or liquid fall into the unit, unplug the AC power cord and consult your dealer before operating any further.
- If you are not going to operate the unit for an extended period of time, unplug the AC power cord from the wall outlet.



DO NOT disassemble the unit since there are no user serviceable parts inside.

If anything goes wrong, unplug the AC power cord and consult your dealer.

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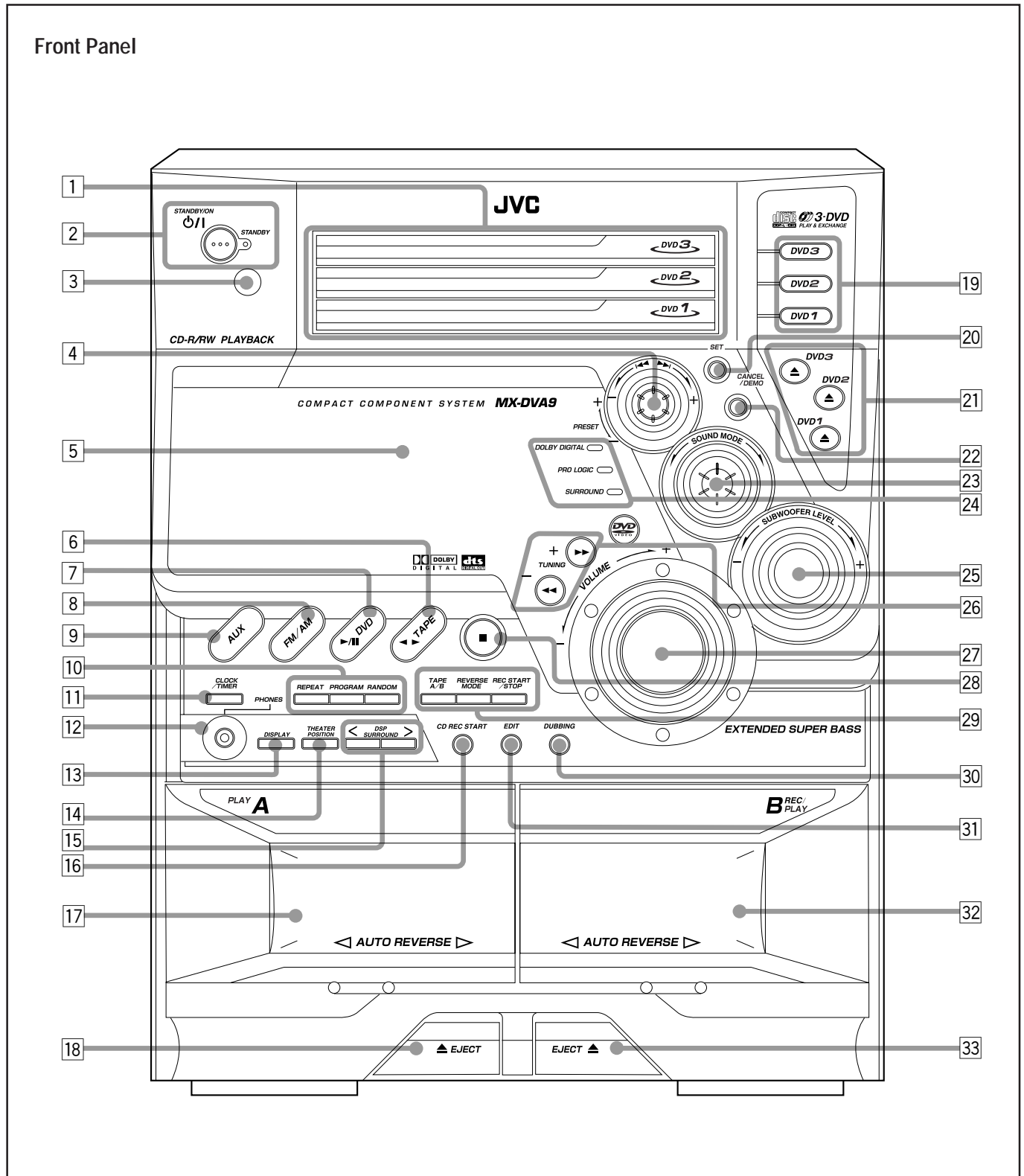
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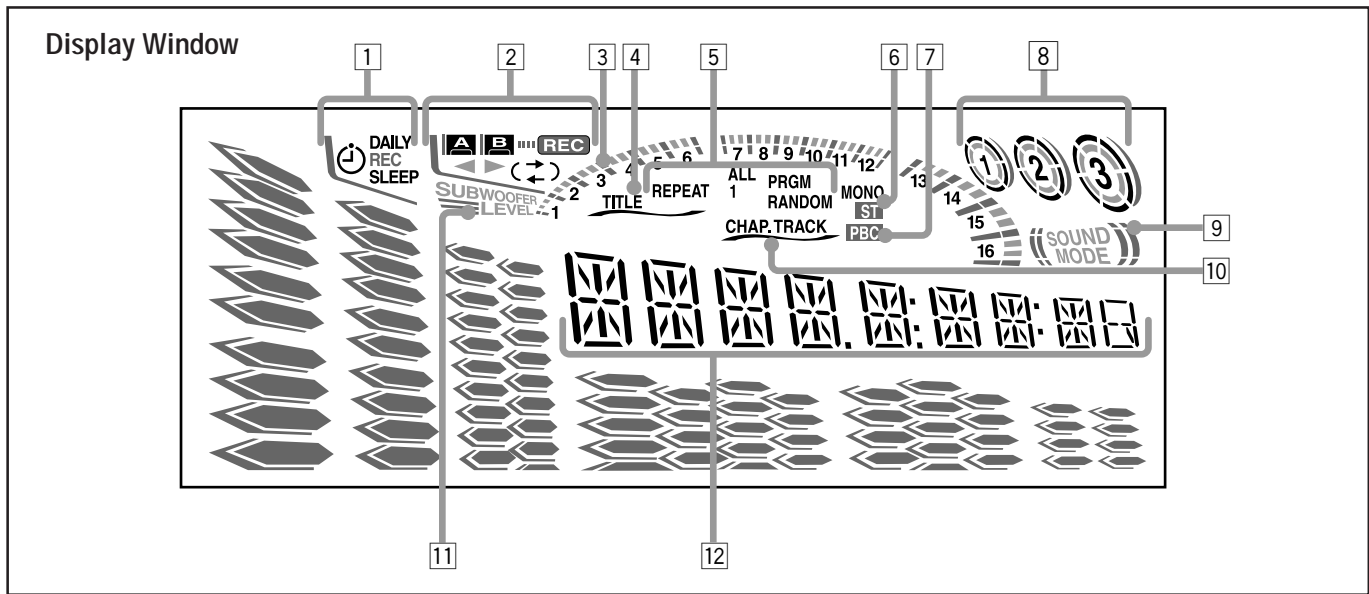


# Location of the Buttons and Controls

Become familiar with the buttons and controls on your unit.


## Front Panel





See pages in the parentheses for details.

**Front Panel**

- 1 Disc trays
- 2 STANDBY/ON  button and STANDBY lamp (10, 39, 40)
- 3 Remote sensor
- 4 PRESET + / - control (13)  
◀◀ / ▶▶ (reverse search/forward search) control (10, 12, 17, 18, 21, 23, 31, 38 - 40)
- 5 Display window
- 6 TAPE ◀▶ button and lamp (10, 27, 29, 30)  
*Pressing this button also turns on the unit.*
- 7 DVD ▶/|| (play/pause) button and lamp (10, 16 - 18, 21, 23)  
*Pressing this button also turns on the unit.*
- 8 FM/AM button and lamp (10, 13)  
*Pressing this button also turns on the unit.*
- 9 AUX button and lamp (10)  
*Pressing this button also turns on the unit.*
- 10 Disc play mode buttons
  - REPEAT button (24)
  - PROGRAM button (21)
  - RANDOM button (23)
- 11 CLOCK/TIMER button (10, 38 - 41)
- 12 PHONES jack (11)
- 13 DISPLAY button (15, 17, 19)
- 14 THEATER POSITION button (26)
- 15 DSP SURROUND < / > buttons (28)
- 16 CD REC START button (30, 31)
- 17 Deck A cassette holder (27)
- 18 ▲ EJECT button for deck A (27)
- 19 Disc number buttons and lamps (DVD1, DVD2, and DVD3) (16, 18, 21, 23, 30, 31)  
*Pressing one of these buttons also turns on the unit.*
- 20 SET button (10, 12, 13, 21, 31, 38 - 41)
- 21 ▲ (Disc tray open/close) buttons (DVD1, DVD2, and DVD3) (16 - 19)  
*Pressing one of these buttons also turns on the unit.*
- 22 CANCEL/DEMO button (9, 10, 21, 31, 38 - 41)

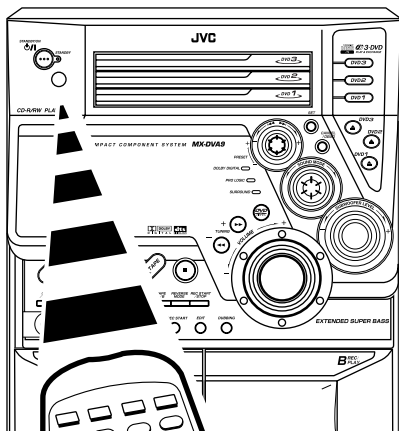
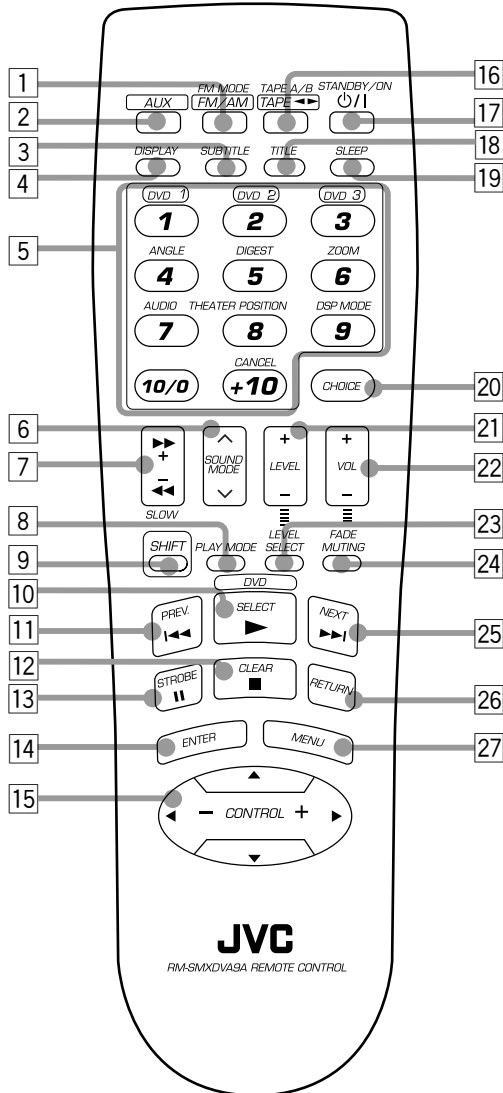
- 23 SOUND MODE control (11)
- 24 DOLBY DIGITAL lamp (14, 17)  
PRO LOGIC lamp (33)  
SURROUND lamp (14, 17, 28)
- 25 SUBWOOFER LEVEL + / - control (11)
- 26 TUNING + / - buttons (13)  
◀◀ / ▶▶ (fast reverse/fast forward) buttons (12, 19, 27)
- 27 VOLUME + / - control (11)
- 28 ■ (stop) button (17 - 23, 27, 29 - 31, 40)
- 29 Tape operation buttons
  - TAPE A/B button (27)
  - REVERSE MODE button (27, 29 - 31)
  - REC START/STOP button (29, 30, 31, 40)
- 30 DUBBING button (30)
- 31 EDIT button (31)
- 32 Deck B cassette holder (27, 29)
- 33 EJECT ▲ button for deck B (27, 29)

**Display Window**

- 1 Timer indicators
  - ⌚ (Timer), DAILY (Daily Timer), REC (Recording Timer), and SLEEP (Sleep Timer) indicators
- 2 Tape operation indicators
  - A/B (operating deck), **REC** (recording), ◀▶ (tape direction), and ⏮ (reverse mode) indicators
- 3 Title and track number (1 - 16) indicators
- 4 TITLE indicator
- 5 Disc play mode indicators
  - REPEAT (ALL/1), PRGM (program), and RANDOM indicators
- 6 Tuner operation indicators
  - MONO and ST (stereo) indicators
- 7 PBC indicator
- 8 Disc indicators
- 9 SOUND MODE indicator
- 10 CHAP. (chapter) and TRACK indicators
- 11 SUBWOOFER LEVEL indicator
- 12 Main display
  - Shows the source name, frequency, etc.



## Remote Control



When using the remote control, point it at the remote sensor on the front panel.

## Remote Control

- 1 FM/AM button (10, 13)  
*Pressing this button also turns on the unit.*  
FM MODE button\* (13)
- 2 AUX button (10)  
*Pressing this button also turns on the unit.*
- 3 SUBTITLE button (15)
- 4 DISPLAY button (15, 17, 19)
- 5 Number buttons (13, 17 – 19, 22, 37)  
Disc number buttons\* (DVD 1, DVD 2, and DVD 3)  
(16, 18, 22, 23, 26)  
ANGLE button\* (15)  
DIGEST button\* (26)  
ZOOM button\* (25)  
AUDIO button\* (15)  
THEATER POSITION button\* (26)  
DSP MODE button\* (28)  
CANCEL button\* (22)
- 6 SOUND MODE  $\wedge$  /  $\vee$  button (11)
- 7  $\lll$  /  $\ggg$  (fast reverse/fast forward) button (19, 27)  
+ / – button (11, 13)  
SLOW + / – button (25)
- 8 PLAY MODE button (17 – 19, 22 – 24)
- 9 SHIFT button
- 10 DVD  $\blacktriangleright$  (play) button (10, 16 – 19, 22, 25)  
SELECT button (20, 26)  
*Pressing this button also turns on the unit.*
- 11  $\lll$  (reverse search) button (17, 18, 23)  
PREV. (preview) button (26)
- 12  $\blacksquare$  (stop) button (17, 18, 20 – 23, 26, 27, 37)  
CLEAR button (22)
- 13  $\parallel$  (pause) button (16, 25)  
STROBE button (25)
- 14 ENTER button (15, 17 – 19, 22 – 24, 26, 32 – 37)
- 15 Cursor ( $\blacktriangle$  /  $\blacktriangledown$  /  $\blacktriangleright$  /  $\blacktriangleleft$ ) button (20, 25, 26, 32 – 37)  
CONTROL + / – button (15, 17 – 19, 22 – 24)
- 16 TAPE  $\blacktriangleleft$  /  $\blacktriangleright$  button (10, 27)  
*Pressing this button also turns on the unit.*  
TAPE A/B button\* (27)
- 17 STANDBY/ON  $\text{O/I}$  button (10)
- 18 TITLE button (20)
- 19 SLEEP button (41)
- 20 CHOICE button (32)
- 21 LEVEL + / – button (11, 28)
- 22 VOL (volume) + / – button (11)
- 23 LEVEL SELECT button (11, 28)
- 24 FADE MUTING button (11)
- 25  $\ggg$  (forward search) button (17, 18, 22, 23)  
NEXT button (26)
- 26 RETURN button (20)
- 27 MENU button (20)

\* These buttons function while pressing with SHIFT.



## Supplied Accessories

Make sure that you have all the following items. The number in the parentheses indicates the quantity of the pieces supplied.

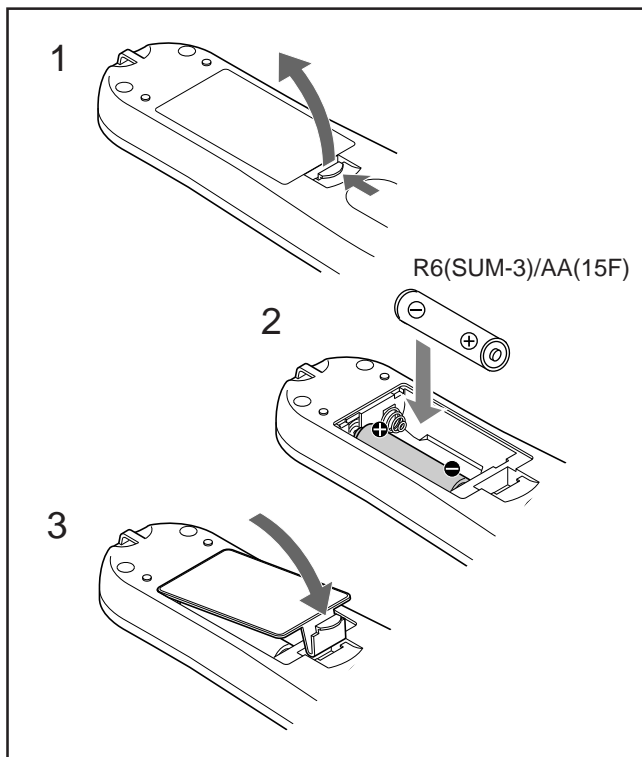
- AM loop antenna (1)
- FM antenna (1)
- Remote control (1)
- Batteries (2)
- Composite video cord (1)

If anything is missing, consult your dealer immediately.

## Putting the Batteries into the Remote Control

Insert the batteries—R6(SUM-3)/AA(15F)—into the remote control, by matching the polarity (+ and –) on the batteries with the + and – markings on the battery compartment.

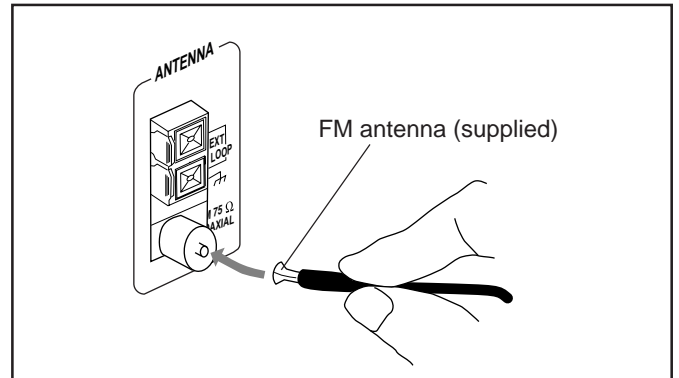
When the remote control can no longer operate the unit, replace both batteries at the same time.



- DO NOT use an old battery together with a new one.
- DO NOT use different types of batteries together.
- DO NOT expose batteries to heat or flame.
- DO NOT leave the batteries in the battery compartment when you are not going to use the remote control for an extended period of time. Otherwise, it will be damaged from battery leakage.

## Connecting Antennas

### FM antenna



- 1 Attach the FM antenna to the FM 75 Ω COAXIAL terminal.
- 2 Extend the FM antenna.
- 3 Fasten it up in the position which gives you the best reception, then fix it on the wall, etc.

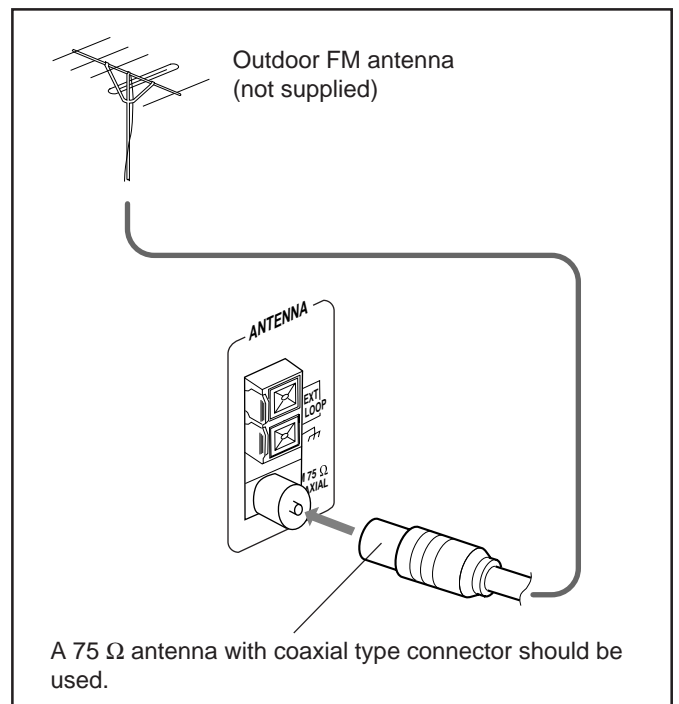


### About the supplied FM antenna

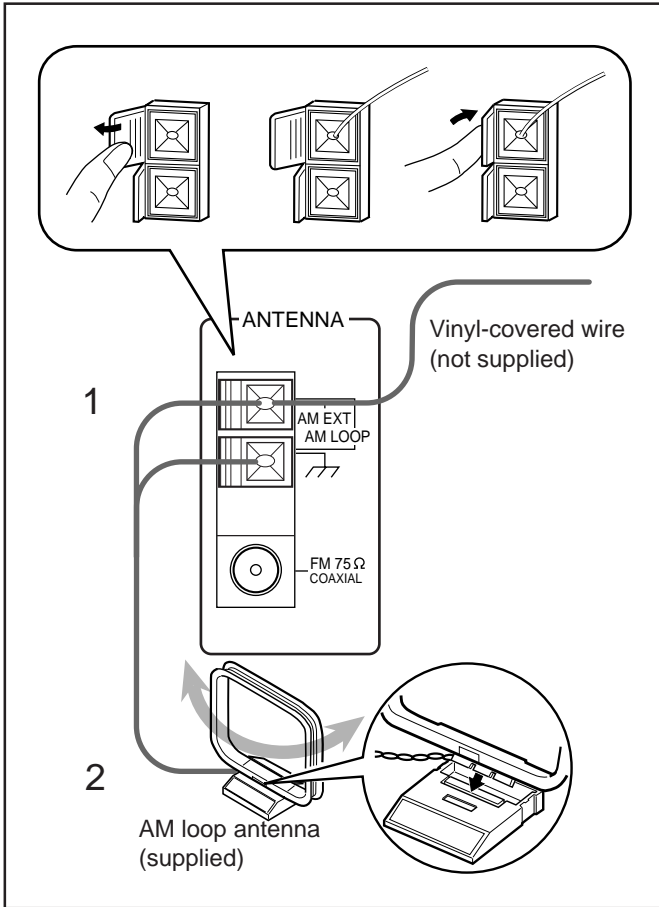
The FM antenna supplied with this unit can be used as temporary measure. If reception is poor, you can connect an outdoor FM antenna.

### To connect an outdoor FM antenna

Before connecting it, disconnect the supplied FM antenna.



## AM antenna



### 1 Connect the AM loop antenna to the AM LOOP terminals as illustrated.

- If the AM loop antenna wire is covered with vinyl, remove the vinyl by twisting it as shown in the diagram.



### 2 Turn the AM loop antenna until you have the best reception.

#### To connect an outdoor AM antenna

When reception is poor, connect a single vinyl-covered wire to the AM EXT terminal and extend it horizontally. The AM loop antenna must remain connected.



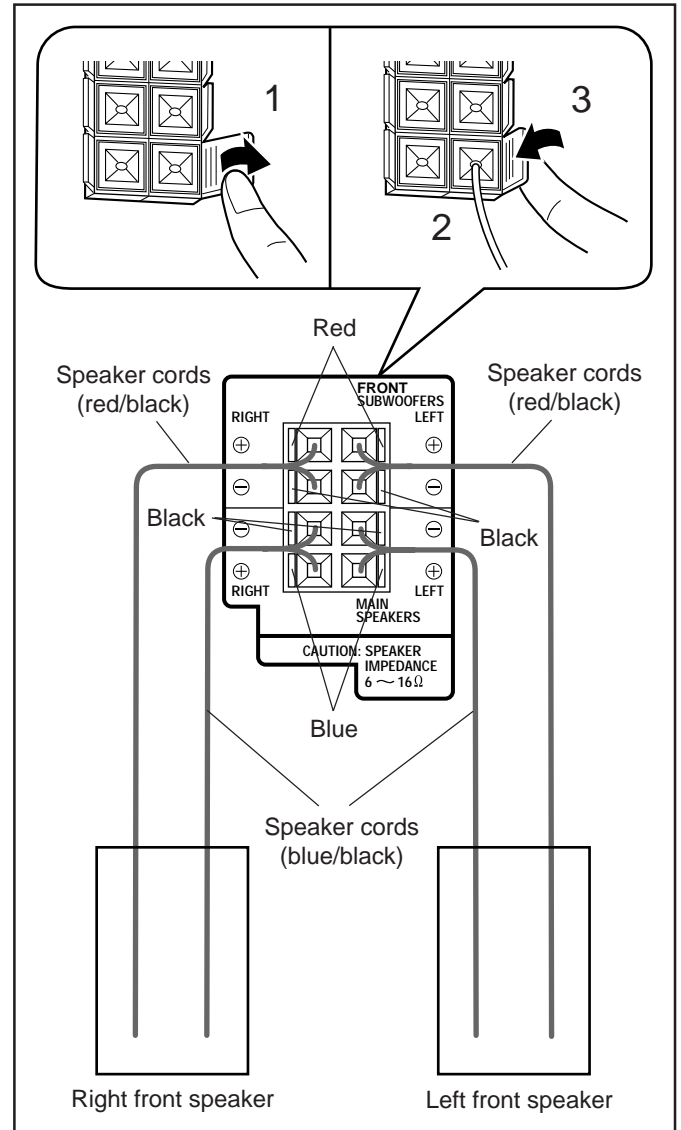
#### For better reception of both FM and AM

- Make sure the antenna conductors do not touch any other terminals and connecting cords.
- Keep the antennas away from metallic parts of the unit, connecting cords, and the AC power cord.

## Connecting Speakers

**IMPORTANT:** Use only speakers with the same speaker impedance as indicated by the speaker terminals on the rear of the unit.

### To connect front speakers



### 1 Open the speaker terminal.

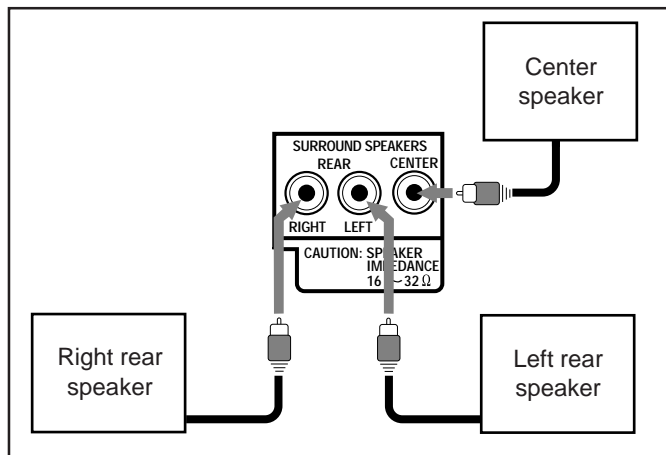
### 2 Insert the end of the speaker cord into the terminal.

Match the polarity (colors) of the speaker terminals: Red (+) to red (+) and black (-) to black (-); Blue (+) to blue (+) and black (-) to black (-).

### 3 Close the speaker terminal.

### To connect a center speaker and rear speakers

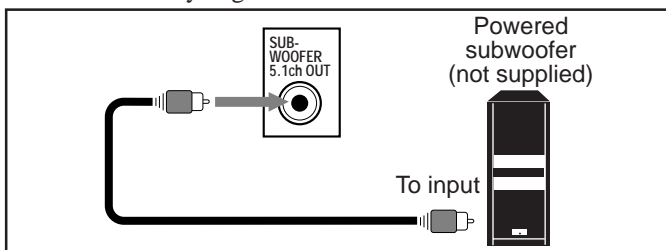
By connecting a center speaker and rear speakers to the SURROUND SPEAKERS jacks, you can enjoy Dolby Digital multichannel sound and the DSP Surround modes (see page 28).



- Connect the right rear speaker to the REAR RIGHT jack.
- Connect the left rear speaker to the REAR LEFT jack.
- Connect the center speaker to the CENTER jack.

### To connect a subwoofer

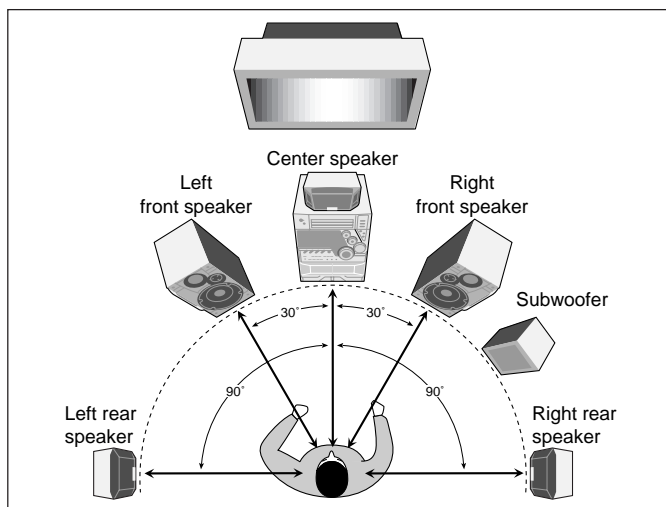
By connecting a subwoofer, you can reproduce the LFE signals recorded in Dolby Digital 5.1ch multichannel software.



Connect the input jack of a powered subwoofer to the SUB-WOOFER 5.1ch OUT jack, using a monaural audio cord (not supplied).

### Ideal Speaker Layout

To enjoy Dolby Digital 5.1 ch multichannel sound, locate speakers as follows. If you cannot locate them like this, adjust the speaker setting by using the on-screen menu. (See page 34.)



## Connecting Other Equipment

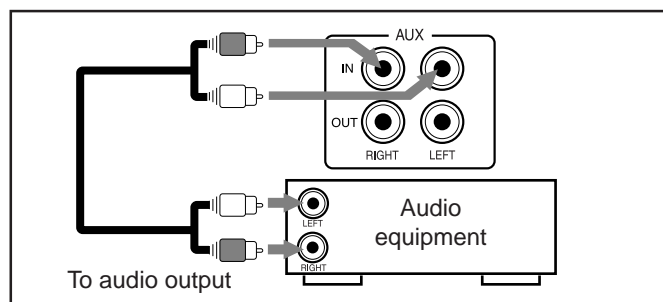
You can connect both analog and digital equipment.



- DO NOT connect any equipment while the unit is on.
- DO NOT plug in any equipment until all connections are complete.

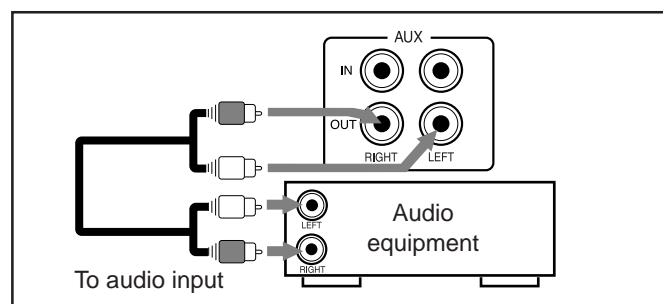
### To connect an analog component

Be sure that the plugs of the audio cords are colored: White plugs and jacks are for left audio signals, and red ones for right audio signals.



### For playing the other equipment through this unit,

connect between the audio output jacks on the other equipment and the AUX IN jacks by using audio cords (not supplied).



### For recording sounds through this unit on the other

equipment, connect between the audio input jacks on the other equipment and the AUX OUT jacks by using an audio cord (not supplied).

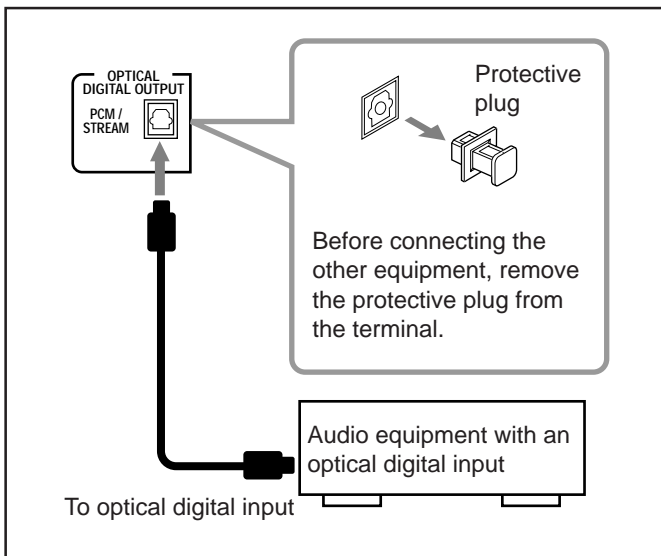
- See “About sounds output through the rear terminals” on the next page.



## To connect audio equipment with an optical digital input terminal—such as digital decoder

You can connect a digital decoder such as an MD recorder or a CD recorder by using an optical digital cord (not supplied).

- See “About sounds output through the rear terminals” below.

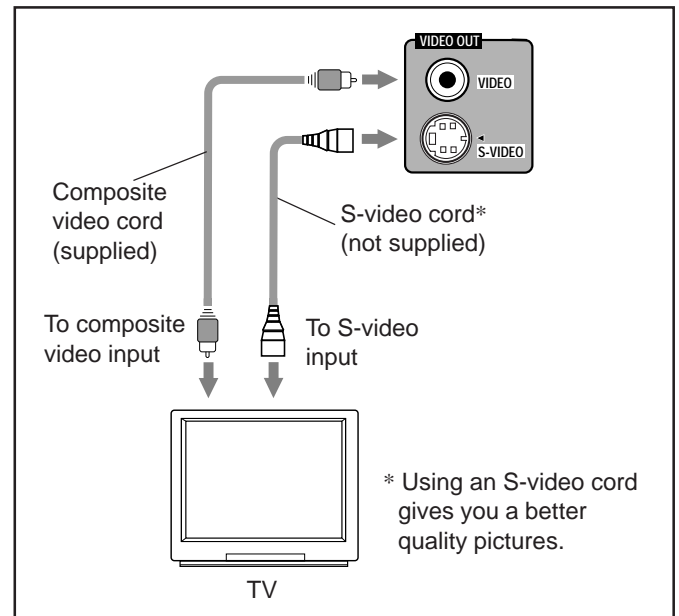


Connect an optical digital cord (not supplied) between the optical digital input terminal on the other equipment and the OPTICAL DIGITAL OUTPUT terminal.

## To connect a TV

Connect your TV and this unit using the composite video cord (supplied) or an S-video cord (not supplied).

- You can also use JVC’s AV COMPU LINK control system. For details, see page 42.



## About sounds output through the rear terminals

### • Through the AUX OUT (RIGHT/LEFT) jacks:

Analog stereo signals are output.

When playing a source encoded with Dolby Digital\* (DOLBY DIGITAL), multichannel signals are mixed to the right and left front channel signals, then output. You also need to set “DOWN MIX” setting correctly. (See page 33.)

– You cannot reproduce the sound encoded with DTS Surround\*\* (DTS SURROUND).

### • Through the OPTICAL DIGITAL OUTPUT terminal:

Digital signals (Linear PCM, Dolby Digital\*, DTS Surround\*\*) are output.

To reproduce the multichannel sounds such as Dolby Digital and DTS Surround, connect an amplifier or a decoder compatible with these multichannel sources to this terminal, and set “DIGITAL AUDIO OUTPUT” setting correctly. (See page 33.)

\* Manufactured under license from Dolby Laboratories. “Dolby” and the double-D symbol are trademarks of Dolby Laboratories. Confidential Unpublished Works. ©1992–1997 Dolby Laboratories. 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 a registered trademarks of Digital Theater Systems, Inc. Copyright 1996, 2000 Digital Theater Systems, Inc. All Rights Reserved.

## Now, you can plug the AC power cord.

When connecting the AC power cord into a wall outlet, the unit automatically starts display demonstration.

**IMPORTANT:** Be sure to check all connections to be done before plugging the AC power cord into a wall outlet.

## Canceling the Display Demonstration

### On the unit ONLY:

To cancel the display demonstration, press CANCEL/DEMO until “DEMO OFF” appears on the display.




### When you press other buttons

The display demonstration stops temporarily. It will start automatically again (if no operation is done for 2 minutes) unless you cancel it by pressing CANCEL/DEMO.

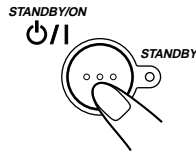
### To start the display demonstration manually


Press and hold CANCEL/DEMO for more than 1 second.

## Turning On or Off the Power

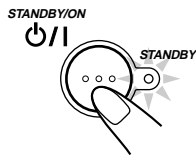
To turn on the unit, press STANDBY/ON  so that the STANDBY lamp goes off.

WELCOME



To turn off the unit (on standby), press STANDBY/ON  again so that the STANDBY lamp lights up.

GOODBYE



- A little power is always consumed even while the unit is on standby.

To switch off the power supply completely, unplug the AC power cord from a wall outlet.



**When you unplug the AC power cord or if a power failure occurs**

The clock is reset to “AM 12:00” right away, while the tuner preset stations (see page 13) will be erased in a few days.

## Setting the Clock

Before operating the unit any further, first set the clock built in this unit. You can set the clock whether the unit is on or off.

### On the unit ONLY:

#### 1 Press CLOCK/TIMER.

The hour digits start flashing on the display.

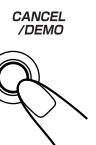
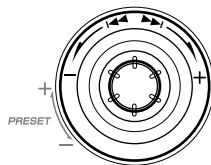
AM 12:00



#### 2 Turn to adjust the hour, then press SET.

The minute digits start flashing on the display.

PM 5:30



- If you want to correct the hour after pressing SET, press CANCEL/DEMO. The hour digits start flashing again.

#### 3 Turn to adjust the minute, then press SET.

CLOCK OK

#### To check the clock time

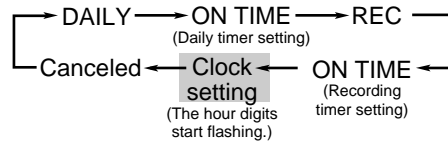
Press and hold SET while playing any source.

- Pressing SET, the source indication appears again.

#### To adjust the clock again

If you have adjusted the clock before, you need to press CLOCK/TIMER repeatedly until the clock setting mode is selected.

- Each time you press the button, the clock/timer setting modes change as follows:



**When you unplug the AC power cord or if a power failure occurs**

The clock is reset to “AM 12:00” right away. If this happens, set the clock again.

## Selecting the Sources

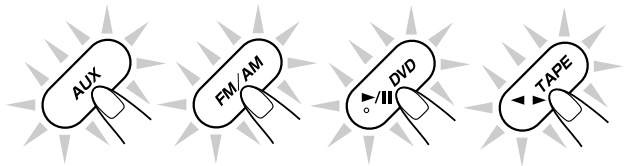
To listen to the FM/AM broadcasts, press FM/AM.






(See page 13.)

To playback discs, press DVD  /  (or DVD  on the remote control). (See pages 14 – 26.)

To playback tapes, press TAPE  . (See page 27.)

To select the external equipment as the source, press AUX.



When you press the play button for a particular source (FM/AM, DVD  /  (or DVD  on the remote control), TAPE  , and AUX), the unit turns on (and the unit starts playing the source if it is ready).

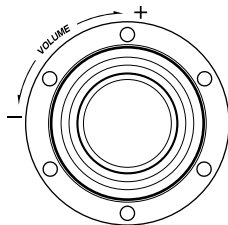


## Adjusting the Volume

You can adjust the volume level only while the unit is turned on. The volume level can be adjusted in 32 steps (VOL MIN, VOL 01—VOL 30, and VOL MAX).

Turn **VOLUME + / -** clockwise (+) to increase the volume or counterclockwise (-) to decrease it.

VOL 15



When using the remote control, press VOL + to increase the volume or press VOL - to decrease it.



### For private listening

Connect a pair of headphones to the PHONES jack. No sound comes out of the speakers. Be sure to turn down the volume before connecting or putting on headphones.



**DO NOT** turn off (on standby) the unit with the volume set to an extremely high level; otherwise, a sudden blast of sound can damage your hearing, speakers and/or headphones when you turn on the unit or start playing any source next time. REMEMBER you cannot adjust the volume level while the unit is off (on standby).

### To turn down the volume level temporarily

Press **FADE MUTING** on the remote control. The volume level gradually decreases to “VOL MIN.”



To restore the sound, press the button again.

## 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.

### On the remote control ONLY:

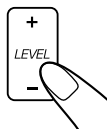
**1** Press **LEVEL SELECT** until “L” and “R” appear on the display.



L --- \* --- R

**2** Press **LEVEL +** or **-** to adjust the front speaker output balance.

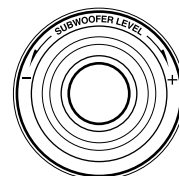
- Press LEVEL + to increase the right channel output.
- Press LEVEL - to increase the left channel output.



## Reinforcing the Bass Sound

You can select one of the 4 subwoofer levels. This function only affects the playback sound, but does not affect your recording. The subwoofer level can be adjusted in 4 steps—LEVEL 1, LEVEL 2, LEVEL 3, and LEVEL 4 (MAX LEVEL).

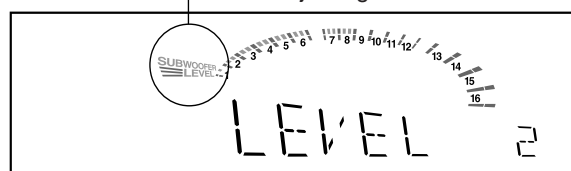
Turn **SUBWOOFER LEVEL + / -** clockwise (+) to increase the subwoofer level or counterclockwise (-) to decrease it.



When using the remote control, press **LEVEL SELECT** until “LEVEL” appears.

- Press LEVEL + to increase the subwoofer level.
- Press LEVEL - to decrease the subwoofer level.

SUBWOOFER indicator flashes when adjusting subwoofer level.

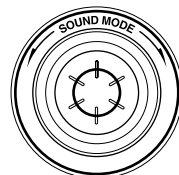


## Selecting the Sound Modes

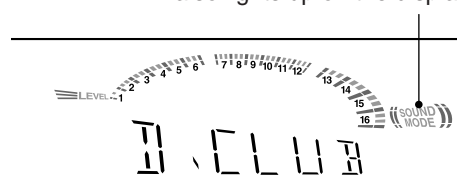
You can select one of the 6 preset sound modes. This function only affects the playback sound, but does not affect your recording.

To select the sound modes, turn **SOUND MODE** until the sound mode you want appears on the display.

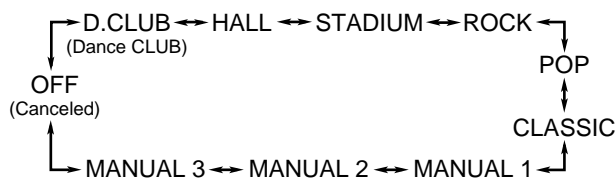
When using the remote control, press **SOUND MODE ^** or **v**.

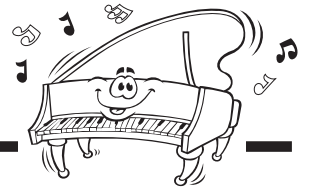


The SOUND MODE indicator also lights up on the display.



- The sound modes change as follows:





**D.CLUB\***: Increases resonance and bass.  
**HALL\***: Adds depth and brilliance to the sound.  
**STADIUM\***: Adds clarity and spreads the sound, like in an outdoor stadium.

**SEA (Sound Effect Amplifier) modes:**

**ROCK:** Boosts low and high frequency. Good for acoustic music.  
**POP:** Good for vocal music.  
**CLASSIC:** Good for classical music.

**Manual modes:**

**MANUAL 1/2/3:** Your individual mode stored in memory. See “Creating Your Own Sound Modes—Manual Mode.”

**OFF:** The sound mode is canceled. The SOUND MODE indicator goes off.

\* Surround elements are added to the SEA element to create a being-there feeling in your room. When one of these modes is selected, the SOUND MODE indicator lights up as — ((SOUND MODE))

While one of the SEA modes (including manual modes) without surround elements is selected, the SOUND MODE indicator lights up as — SOUND MODE

**Creating Your Own Sound Modes —Manual Mode**

You can create SEA patterns to suit your preference. These changed settings can be stored in the MANUAL 1, MANUAL 2, and MANUAL 3 modes.

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

**On the unit ONLY:**

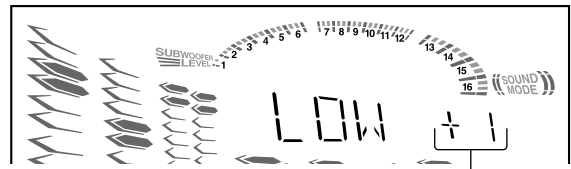
**1 Select one of the preset sound modes.**

- If you want to add the surround elements in your SEA pattern, select one of the sound modes (D.CLUB, HALL, or STADIUM) before starting the procedure below. (See “Selecting the Sound Modes” on page 11.)

**2 Press and hold SET until “SEA CONT” appears on the display.**



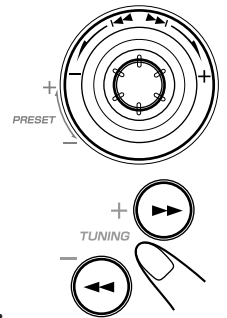
Ex.: When “D.CLUB” is selected as the sound mode.



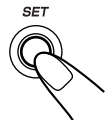
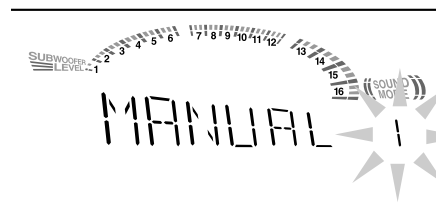
Current level appears.

**3 Adjust the SEA pattern.**

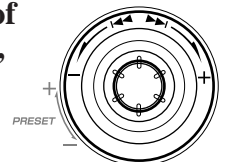
- 1) Turn |◀◀ / ▶▶| to select the frequency range to adjust (LOW, MID or HIGH).
- 2) Press ▶▶ or ◀◀ to adjust the level (-3 to +3) of the selected frequency range.
- 3) Repeat steps 1) and 2) to adjust the level of the other frequency ranges.



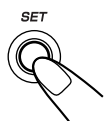
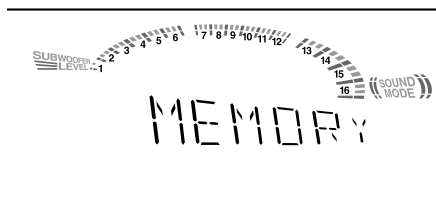
**4 Press SET again.**



**5 Turn |◀◀ / ▶▶| to select one of the MANUAL 1, MANUAL 2, and MANUAL 3 modes into which you want to store the SEA pattern.**



**6 Press SET.**



The SEA pattern you have created is stored into the MANUAL mode selected in step 5.

**To use your own sound mode**

Select MANUAL 1, MANUAL 2, or MANUAL 3 mode. See “Selecting the Sound Modes” on page 11.



**When you unplug the AC power cord or if a power failure occurs**

The setting will be erased in a few days. If this happens, set the manual sound modes again.

# Listening to FM and AM Broadcasts



## Tuning into a Station

### 1 Press FM/AM.

The unit automatically turns on and tunes into the previously received station (either FM or AM).

- Each time you press the button, the band alternates between FM and AM.



### 2 Start searching for stations.

**On the unit:**

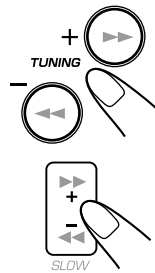
Press and hold TUNING + or - for more than 1 second.

**On the remote control:**

Press and hold + (▶▶) or - (◀◀) for more than 1 second.

The unit starts searching for stations and stops when a station of sufficient signal strength is tuned in.

- If a program is broadcast in stereo, the ST (stereo) indicator lights up.



**To stop searching,** press TUNING + or - (+ (▶▶) or - (◀◀) on the remote control).



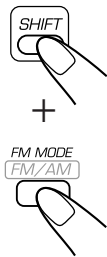
**When you press TUNING + or - (+ (▶▶) or - (◀◀) on the remote control) briefly and repeatedly**

The frequency changes step by step.

### To change the FM reception mode

When an FM stereo broadcast is hard to receive or noisy, press FM MODE while holding down SHIFT on the remote control so that the MONO indicator lights up on the display. Reception improves.

**To restore the stereo effect,** press FM MODE again while holding down SHIFT so that the MONO indicator goes off from the display. In stereo mode, you can hear stereo sounds when a program is broadcast.



## Presetting Stations

**You can preset 30 FM and 15 AM stations.**

In some cases, test frequencies have been already memorized for the tuner since the factory examined the tuner preset function before shipment. This is not a malfunction. You can preset the stations you want into memory by following the presetting method.

- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 2 again.

### On the unit ONLY:

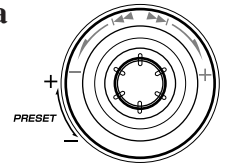
#### 1 Tune into the station you want to preset.

- See “Tuning into a Station.”

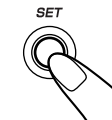
#### 2 Press SET.



#### 3 Turn PRESET + / - to select a preset number.



#### 4 Press SET.



The tuned station in step 1 is stored in the preset number selected in step 3.

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



**When you unplug the AC power cord or if a power failure occurs**

The preset stations will be erased in a few days. If this happens, preset the stations again.

## Tuning into a Preset Station

### 1 Press FM/AM.

The unit automatically turns on and tunes into the previously received station (either FM or AM).

- Each time you press the button, the band alternates between FM and AM.



### 2 Select a preset number.

**On the unit:**

Turn PRESET + / -.

**On the remote control:**

Press the number buttons.

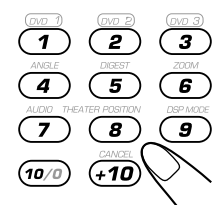
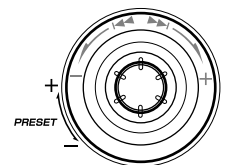
Ex.: For preset number 5, press 5.

For preset number 15, press +10, then 5.

For preset number 20, press +10, then 10.







For preset number 25, press +10, +10, then 5.

For preset number 30, press +10, +10, then 10.



## Discs you can play

This unit has been designed to playback discs having the marks listed below.

Disc Type	Mark (Logo)	Video Format	Region Code Number*
DVD Video		NTSC	1 ALL
			
Video CD		_____	_____
Audio CD		_____	_____
CD-R**		_____	_____
CD-RW**		_____	_____

- On some discs, their actual operations may be different from what is explained in this manual.
- The following discs cannot be played back; DVD-AUDIO, DVD-ROM, DVD-RAM, DVD-R, DVD-RW, S-VIDEO CD, CD-ROM, CD-I (CD-I Ready), Photo CD, etc.  
Playing back these discs will generate noise and damage the speakers.
- Continued use of irregular shape discs (heart-shape, octagonal, etc.) can damage the unit.

### \* Note on Region Code

DVD players and DVD Video discs have their own Region Code numbers. This unit only can play back DVD discs recorded with the color system of NTSC whose Region Code numbers include “1.”



### \*\* Note on CD-R and CD-RW

User-edited CD-Rs (CD-Recordable) and CD-RWs (CD-Rewritable) can be played back only if they are already “finalized.”

- You can play back your original CD-Rs or CD-RWs recorded in music CD format. (However, they may not be played back depending on their characteristics or recording conditions.)
- Before playing back CD-Rs or CD-RWs, read their instructions or cautions carefully.
- Some CD-Rs or CD-RWs may not be played back on this unit because of their disc characteristics, damage or stain on them, or if the player’s lens is dirty.
- CD-RWs may require a longer readout time. This is caused by the fact that the reflectance of CD-RWs is lower than for regular CDs.

## IMPORTANT:

Before performing any operations for DVD and VCD, make sure of the following.

- Check the connection with the TV.
- Turn on the TV and select the correct input on the TV to view the pictures or on-screen menus/indications on the TV screen.

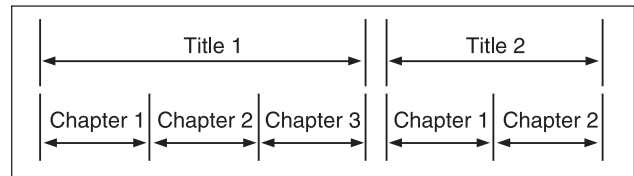
If “⊘” appears on the screen when pressing a button, the disc cannot accept an operation you have tried to do.

## Disc Structure

### DVD

A DVD disc consists of **Titles**, and each title may be divided into some **Chapters**.

For example, if a DVD disc contains some movies, each movie may have its own title number, and it may be further divided into some chapters.



### How sounds are recorded on DVD

The digital audio format used for DVD differs among discs and it is written on the package or disc itself.

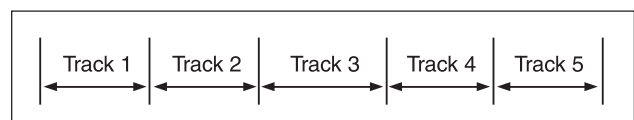
This unit can only reproduce the sound recorded in the following audio formats:

- **Linear PCM**—This is the same format used for Audio CDs and Video CDs.
- **Dolby Digital**—This is an encoding method for audio signals. By compressing audio signals, it can record up to 5.1 multichannel signals—the right front channel, left front channel, center channel, and right rear channel, left rear channel and LFE signals.
  - While playing back a disc encoded with Dolby Digital on this unit, the DOLBY DIGITAL lamp on the front panel lights up. (If it has multichannel signals—5.1ch, Surround mode is automatically activated, and the SURROUND lamp also lights up. See page 17.)

### VCD and CD

A VCD or CD disc consists of **Tracks**.

In general, each song has its own track number. (On some discs, each track may also be divided by Indexes.)






When playing back a VCD with the Playback Control (PBC\*) function, you can select what to view using the menu shown on the TV screen. While operating a VCD using the menu, some of the functions such as Time Search may not work.

\* A VCD recorded with the PBC function has its own menus, such as a list of the songs of the disc.

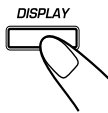
## DVD Features

Some DVDs contain several multi-angle views, audio languages and subtitles.

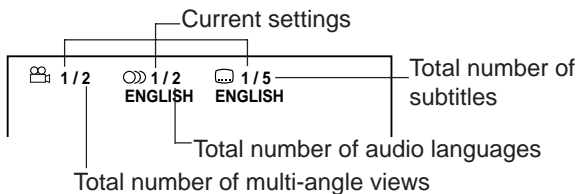
When you find the following marks on the DVD or its package, you can select these elements recorded on the DVD.

	Multi-angle views are recorded on the disc. The number inside the mark indicates the total number of the recorded multi-angle views.
	Several audio languages are recorded on the disc. The number inside the mark indicates the total number of the recorded audio languages.
	Subtitles are recorded on the disc. The number inside the mark indicates the total number of the recorded subtitles.

**To check the current settings,** press DISPLAY once while playing back a disc. Current settings appear on the TV screen as follows. And also the current channel information appears on the display by pressing DISPLAY on the unit (see page 45).



- If you press the button twice, the disc playing information appears (see page 17).



**To erase the on-screen indication,** press DISPLAY repeatedly until the indications disappear from the TV screen or press ENTER.

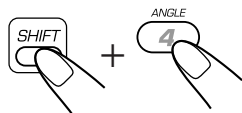
## Selecting the Multi-Angle View

While playing a disc containing multi-angle views, you can view the same scene at different angles.

### On the remote control ONLY:

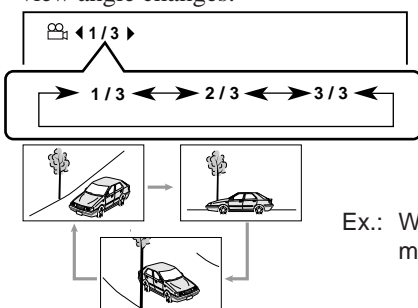
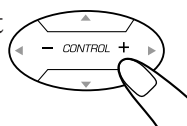
#### 1 Press ANGLE while holding down SHIFT.

The on-screen indication appears on the TV.



#### 2 Press CONTROL + or - to select a desired multi-angle view.

- Each time you press the button, the view angle changes.



Ex.: When the disc has 3 multi-angle views.

## Selecting the Audio Language

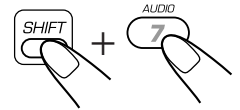
While playing a disc containing audio languages (sound tracks), you can also select the language (sound) to listen to.

- You can set your favorite audio language as the initial audio language (see page 33).

### On the remote control ONLY:

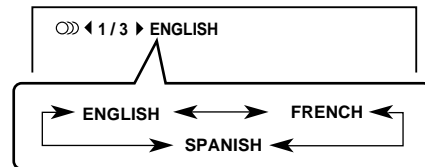
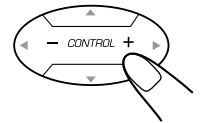
#### 1 Press AUDIO while holding down SHIFT.

The on-screen indication appears on the TV.



#### 2 Press CONTROL + or - to select a desired audio language.

- Each time you press the button, the audio language changes.



Ex.: When the disc has 3 selections—English, French, and Spanish.



### If you press AUDIO while holding SHIFT when playing back a VCD

The on-screen indication changes to “STEREO,” “L” and “R” each time you press the button.

## Selecting the Subtitle

While playing a disc containing subtitles in different languages, you can select the subtitle to be displayed on the TV screen.

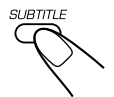
- You can set your favorite subtitle language as the initial subtitle language shown on the screen (see page 33).

### On the remote control ONLY:

#### 1 Press SUBTITLE.

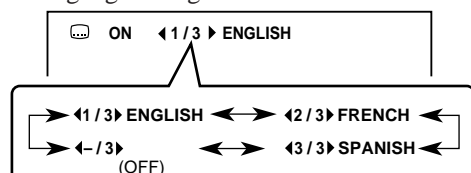
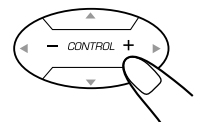
The on-screen indication appears on the TV.

- Each time you press the button, the subtitle setting turns on and off.



#### 2 Press CONTROL + or - to select a desired subtitle language.

- Each time you press the button, the subtitle language changes.



Ex.: When the disc has 3 selections—English, French, Spanish and no subtitle (OFF).


**To not show subtitle** select “-.”



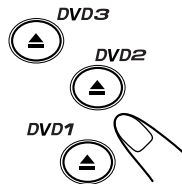
This unit cannot accept any disc operations while reading disc contents.

## Loading Discs

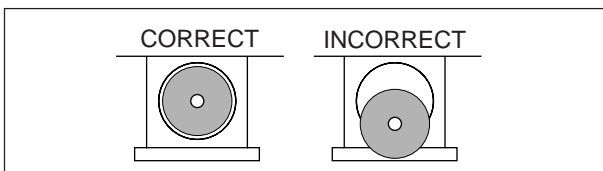
### On the unit ONLY:

**1 Press  for the disc tray (DVD1, DVD2, or DVD3) you want to load a disc onto.**

The unit automatically turns on and the disc tray comes out.



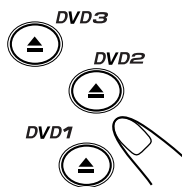
**2 Place a disc correctly on the circle of the disc tray, with its label side up.**



• When using a single disc (8 cm), place it on the inner circle of the disc tray.

**3 Press the same  you have pressed in step 1.**


The disc tray closes, and the corresponding disc number lamp and disc indicator light up on the display.



**4 Repeat steps 1 to 3 to place other discs.**



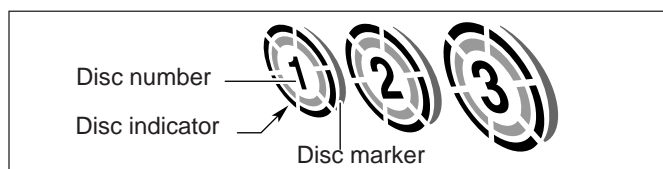
#### When loading more than one disc continuously

When you press  for the next tray you want to place another disc onto, the first disc tray automatically closes and then the next tray comes out.



#### About the disc indicators

Each disc indicator corresponds to the disc tray of the same number.



- The disc marker lights up for the disc number you have selected.
- The disc indicator rotates while the corresponding disc is being played.
- The disc indicator goes off when the unit has detected that there is no disc on the corresponding disc tray.



#### VCD/CD playback sequence during Continuous play


When 3 VCDs or CDs are loaded on the disc trays, they are played in one of the following sequences.

- When DVD1 is pressed : DVD1 ⇒ DVD2 ⇒ DVD3 (then stops)
- When DVD2 is pressed : DVD2 ⇒ DVD3 ⇒ DVD1 (then stops)
- When DVD3 is pressed : DVD3 ⇒ DVD1 ⇒ DVD2 (then stops)
- \* When only 2 VCDs or CDs are loaded, they are played in the same order, but the disc tray without a disc is skipped.
- \* This function cannot be used for VCD with the PBC function and DVD.

## Common Basic Disc Operations

While playing a disc, you can do the following operations.

### To exchange discs during playback of another

Press  corresponding to a disc, not playing or selected currently, to eject and exchange the disc.

If you exchange discs during play, the current play will not stop.

### To stop play for a moment

Press DVD /|| (or || on the remote control).

While pausing, the elapsed playing time flashes on the display.

**To resume playing**, press DVD /|| again (or press DVD  on the remote control).

## DVD Playback

- To play back a VCD or CD see page 18.
- Playback will stop when a disc menu appears on the TV screen. **If a menu appears while playing, see “Menu-Driven Playback—DVD/VCD with PBC Function” on page 20.**

**1 Load discs.**

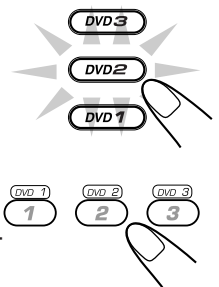
**2 Select the disc number button you want to play.**

#### On the unit:

Press one of the disc number buttons (DVD1, DVD2, or DVD3)

#### On the remote control:

Press one of the disc number buttons (DVD 1, DVD 2, or DVD 3) while holding down SHIFT.



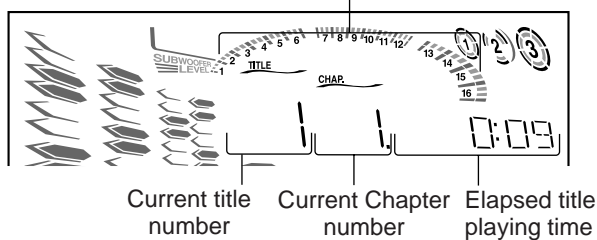
The unit starts reading the disc contents and “DVD” is shown on the display. Then the total title number appears.

- Playback starts from the first chapter of the first title and the disc number lamp starts flashing.

**While playing back a disc encoded with Dolby Digital,** the DOLBY DIGITAL lamp on the front panel lights up. You can also confirm the current channel setting by pressing DISPLAY on the unit (see page 45 for details).

- If it has multichannel signals—5.1 ch, Surround mode is automatically activated, and the SURROUND lamp also lights up.
- Using the on-screen menus, you can adjust the speaker settings for 5.1ch Surround mode depending on your room situation. (See page 34.)

Title numbers of the currently playing disc.  
(Numbers exceeding 16 are not displayed.)



#### To stop playing, press ■.

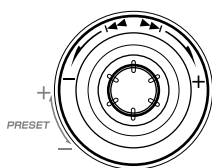
- This unit can memorize the stop point of DVD, and when you start playback again by pressing DVD ►/|| (or DVD ► on the remote control), playback starts from the beginning of a chapter previously stopped—Resume play. To use Resume play, you need to turn on the Resume function (see page 36).
- To stop completely, press ■ twice.

**To remove the disc,** press ▲ for the corresponding disc tray.

#### To go to another chapter

Turn ◀◀ / ▶▶ during playback (or press ◀◀ or ▶▶ on the remote control).

- ◀◀: Goes back to the beginning of the current or previous chapters.
- ▶▶: Skips to the beginning of the next or succeeding chapters.



#### To go to a particular title or chapter directly using the number buttons on the remote control

- Pressing the number buttons before playback allows you to start playing from the title number you want.
- Pressing the number buttons during playback allows you to start playing from the chapter number of the currently playing title you want.
  - To select number 5, press 5.
  - To select number 10, press 10.
  - To select number 20, press +10 then 10.
  - To select number 23, press +10, +10 then 3.

#### To use Time Search and Chapter Search on the TV screen

- You cannot use this function while using Random play.

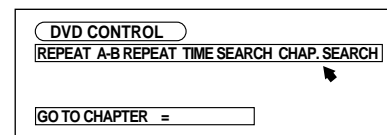
#### On the remote control ONLY:

##### 1 Press PLAY MODE during play.

The play mode screen appears.

##### 2 Press CONTROL + or - to move to "TIME SEARCH" or "CHAP. SEARCH," then press ENTER.

"GO TO \_: \_:\_:" for Time Search or "GO TO CHAPTER = " for Chapter Search appears on the TV screen.

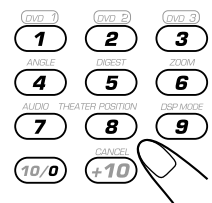


Ex.: When "CHAP. SEARCH" is selected.

##### 3 Enter desired playing time or chapter number by pressing the number buttons.

- You can only use Time Search within a currently playing title.
- To enter the time of "0:23:45," press 0, 2, 3, 4, 5. (Always enter all 5 digits.)

- To enter chapter number 23, press 2, 3.
- To enter chapter number 3, press 3.



**To cancel mis-entry for Time Search,** press CONTROL -. Each time you press the button the last number you entry is erased. (You cannot erase a chapter number.)

##### 4 Press ENTER.

The unit starts playback of the selected point.

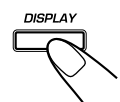
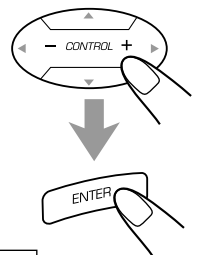
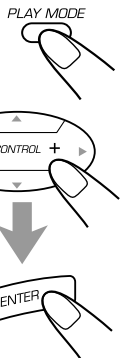
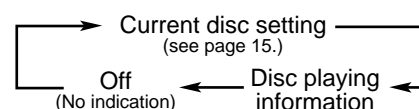
**To erase the on-screen indication,** press PLAY MODE again.

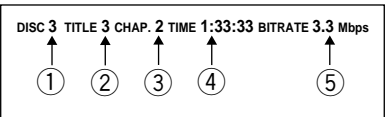
#### To show the on-screen indication

You can show the following information on the TV screen while playing back a disc.

**To show the on-screen indication,** press DISPLAY while playing a disc.

- Each time you press the button, the indication on the TV screen changes as follows:



				
①	: Current disc number			
②	: Current title number			
③	: Current chapter number			
④	: Elapsed playing time of the current title			
⑤	: Transmission rate			

## VCD/CD Playback

- To play back a DVD see page 16.
- While playing a VCD with the PBC function loaded on the disc trays, the playback will stop when a disc menu appears. **If a menu appears while playing a VCD with PBC function, see “Menu-Driven Playback—DVD/VCD with PBC Function” on page 20.**

### 1 Load discs.

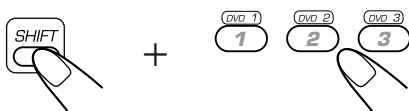
### 2 Select the disc number button you want to play.

#### On the unit:

Press one of the disc number buttons (DVD1, DVD2, or DVD3)

#### On the remote control:

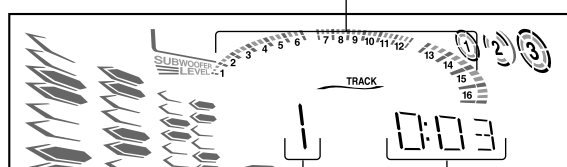
Press one of the disc number buttons (DVD 1, DVD 2, or DVD 3) while holding down SHIFT.



The unit starts reading the disc contents and “VCD” or “CD” is shown on the display. Then the total playing time appears. (When VCD with the PBC function is loaded, only “PBC” appears.)

Playback starts from the first track of the selected disc and the disc number lamp starts flashing.

Track numbers of the currently playing disc.  
(Numbers exceeding 16 are not displayed.)



Current track number      Elapsed track playing time

To stop playing, press ■.

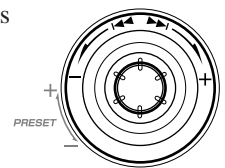
- This unit can memorize the stop point of VCD, and when you start VCD playback again by pressing DVD ►/|| (or DVD ► on the remote control), playback starts from where it has been stopped—Resume play. When using Resume play on VCD with the PBC function, the playback starts from the earlier point you stop. To use Resume play, you need to turn on the Resume function (see page 36).
- To stop completely, press ■ twice.

To remove the disc, press ▲ for the corresponding disc tray.

### To go to another track

Turn |◀◀ / ▶▶| during playback (or press |◀◀ or ▶▶| on the remote control).

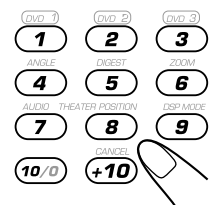
- |◀◀|: Goes back to the beginning of the current or previous tracks.
- |▶▶|: Skips to the beginning of the next or succeeding tracks.



### To go to a particular track directly using the number buttons on the remote control

Pressing the number buttons before or during play allows you to start playing from the track number you want.

- To select number 5, press 5.
- To select number 10, press +10 then 10.
- To select number 23, press +10, +10 then 3.



### To use Time Search on the TV screen

- You cannot use this function while a VCD with the PBC function is played back.
- You cannot use this function while using Random play.

#### On the remote control ONLY:

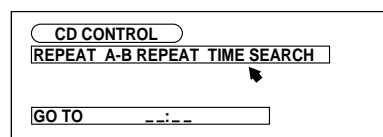
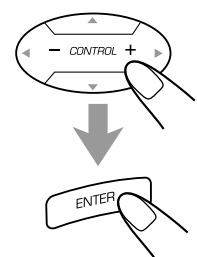
### 1 Press PLAY MODE during play.

The play mode screen appears.



### 2 Press CONTROL + or - to move ▶ to “TIME SEARCH,” then press ENTER.

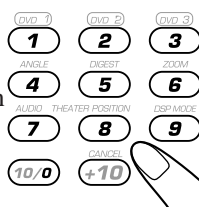
“GO TO \_: \_: \_” appears on the TV screen.



Ex.: When CD is a playing source.

### 3 Enter desired playing time by pressing the number buttons.

- You can only use Time Search within a currently playing track.
- To enter the time of "03:45," press 0, 3, 4, 5. (Always enter all 4 digits.)



To cancel mis-entry for Time Search, press CONTROL -. Each time you press the button the last number you entry is erased.

### 4 Press ENTER.

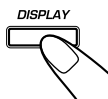
The unit starts playback from the selected point.



To erase the on-screen indication, press PLAY MODE again.

### To show the on-screen indication

You can show the following information on the TV screen while playing back a disc.



To show the on-screen indication, press DISPLAY while playing a disc.

DISC 3 TRACK 3 TIME 3:33 PBC  
 ↑     ↑     ↑     ↑  
 ①    ②    ③    ④

Ex.: When VCD with the PBC function is a playing source.

①: Current disc number
②: Current track number
③: Elapsed playing time of the current track
④: • "PBC" is shown when a VCD with the PBC function is played. • "EACH" is shown when a VCD without the PBC function or a CD is played.

To erase the on-screen indication, press DISPLAY again.

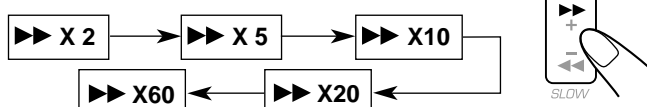
## Searching for a Particular Point

You can search for a particular portion while playing a disc — Forward/Reverse Search.

### Forward Search

To fast-forward the chapter or track, press ►► while playing a disc.

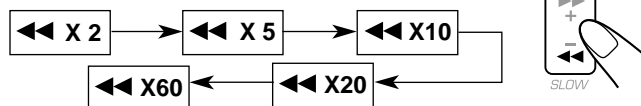
- Each time you press the button, the search speed changes as follows:



### Reverse Search

To fast-reverse the chapter or track, press ◀◀ while playing a disc.

Each time you press the button, the search speed changes as follows:



To go back to normal play, press DVD ►/|| (or DVD ► on the remote control).

No sound comes out during Forward/Reverse Search.

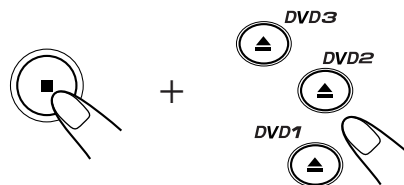
## Prohibiting Disc Ejection—Tray Lock

You can prohibit disc ejection from the unit and can lock discs.

- This operation is possible only when the source is the DVD/VCD/CD player.

### On the unit ONLY:

To prohibit disc ejection, press ▲ for any disc tray while holding down ■. (If there is any disc tray opened, close it first.)



"LOCKED" appears for a while, and the loaded discs are locked.

To cancel the prohibition and unlock the discs, press ▲ for any disc tray while holding down ■.

"UNLOCKED" appears for a while, and the loaded discs are unlocked.



If you try to eject discs

"LOCKED" appears to inform you that the Tray Lock is in use.

# Menu-Driven Playback—DVD/VCD with PBC Function

## Menu Operations

Menu-driven playback is possible while playing back a DVD with menu-driven features or a VCD with the Playback Control (PBC) function.

### ■ When playing a DVD

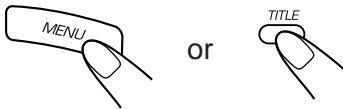
DVD discs generally have their own menus or title lists. A menu usually contains various information about the disc and playback selections. On the other hand, a title list usually contains titles of movies and of songs recorded.

### On the remote control ONLY:

#### 1 Press MENU or TITLE.

A menu or title list appears on the TV screen.

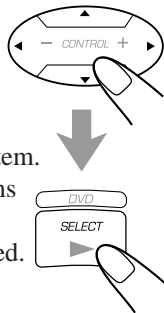
- On some discs, a menu or title list will automatically appear without pressing MENU or TITLE.



#### 2 Press Cursor (▲ / ▼ / ► / ◀) to select a desired item on the menu or on the title list, then press SELECT.

The unit starts playback of the selected item.

- On some discs, you can also select items by pressing the number buttons corresponding to the item numbers listed.



### To erase the menu or title list

Press MENU or TITLE.

- If “⊘” appears on the screen when pressing MENU or TITLE in step 1, the disc does not have a menu or title list.

### ■ When playing a VCD

When a VCD with the Playback Control function (PBC) is detected, the PBC indicator lights up on the display. The PBC function allows you to operate the VCD using menus.

When you start playback, a menu automatically appears on the TV screen.

- A menu may be a list of items, divided screens, or some moving pictures. (See “PBC operation concept” on the right.)

### To return to the previous menu

Press RETURN.

### To cancel the PBC function

Press ■ to stop playback, then press MENU.

Each time you press MENU, the PBC function turns on and off alternately.

**To restore the PBC function**, press REPEAT repeatedly until the REPEAT indicator goes off from the display. Then press DVD 1, DVD 2 or DVD 3 to play a VCD with the PBC function.

- If you press DVD ►/|| on the unit or SELECT button on the remote control when the PBC indicator on the display is turned off and a VCD disc stops playing, the VCD will be played back with the PBC function off.

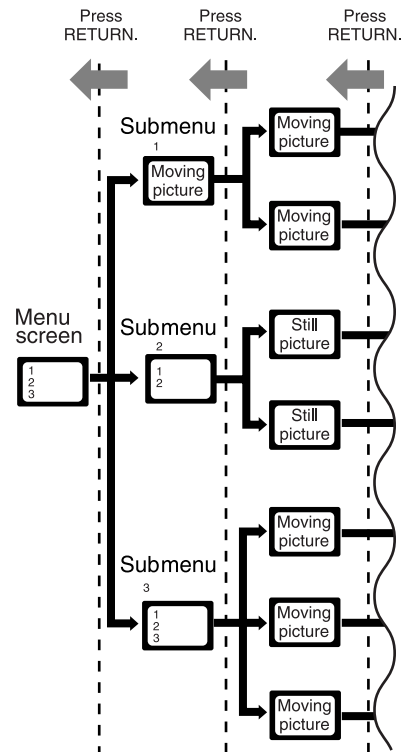


**While playing back a VCD with the PBC function** A-B Repeat is only usable as the playing back mode.



**Even though you turn on the PBC function while a VCD is played back.** The PBC function remains off.

### PBC operation concept





# Selecting Playback Modes

This unit cannot accept any disc operations while reading disc contents.

## Programming the Playing Order of the Titles and Tracks—Program Play

You can arrange the order in which the titles (for DVD) and tracks (for VCD and CD) play before you start playing. **You can program up to 18 steps.**

- When you use Program play for a VCD with the PBC function activated, the PBC function is turned off.
- Program play cannot be used on some DVD discs.

### On the unit:

- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 2 again.

### 1 Load discs.

- If the current playing source is not the DVD/VCD/CD player press DVD ►/II, then ■ before going to the next step.

### 2 Press PROGRAM so that “PROGRAM” appears on the display.

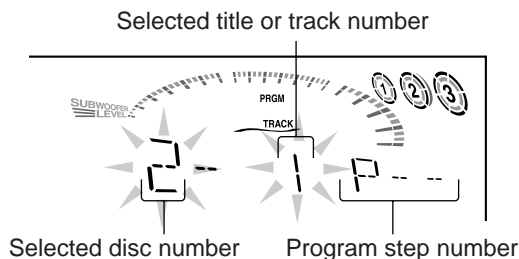


The PRGM (program) indicator also lights up on the display.



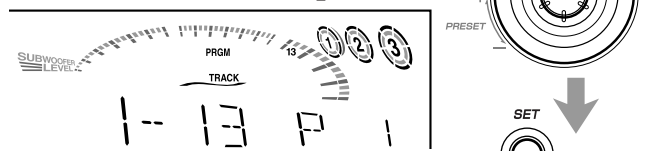
- If a program has been stored in memory, the program is called up.

### 3 Press one of the disc number buttons (DVD1, DVD2 or DVD3) you want to program.



Ex.: When VCD or CD is a source disc.

### 4 Turn ◀◀ / ▶▶ to select a title or track number, then press SET.



Ex.: When VCD or CD is a source disc.

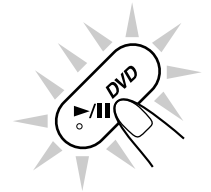
### 5 To program another title or track from the same disc, repeat step 4.

### To program another title or track from a different disc, repeat steps 3 and 4.

Each time you select a title or track, the program item is added up to 18 steps.

### 6 Press DVD ►/II.

The titles and tracks are played in the order you have programmed.



To stop playing, press ■.

To go to the next track, turn ◀◀ / ▶▶ to the right.



Even if you turn ◀◀ / ▶▶ to the left

It just goes back to the beginning of the current title or track, but cannot go back to the previous titles or tracks.

### To modify the program

You can modify the program before or after playing.

### To erase the last steps, press CANCEL/DEMO.

- Each time you press the button, the last programmed step is erased from the program.

CANCEL/DEMO



### To add steps in the program before playing,

simply select the disc number and title/track numbers you want to add by following steps 3 to 5 of the programming procedure.

### To erase program completely, press ■ when the playback is stopped.

The program you have made will be also erased,

- when you eject all the discs.
- when you unplug the AC power cord.
- when a power failure occurs.

### To exit from Program play mode, press PROGRAM after playing.

The PRGM (program) indicator goes off. The program you have made is memorized.

### To check the programmed contents

Press PLAY MODE on the remote control. The programmed contents appear on the TV screen.

To erase the play mode screen, press PLAY MODE again.

**On the remote control:****1 Load discs.**

- If the current playing source is not the DVD/VCD/CD player press DVD ►, then ■ before going to the next step.

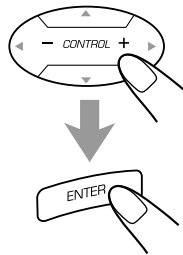
**2 Press PLAY MODE.**

The play mode screen appears on the TV.

**3 Press CONTROL + or - to move ► to "PROGRAM," then press ENTER.**

The program screen appears.

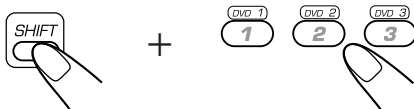
- If a program has been stored in memory, the program is called up.
- You cannot select "PROGRAM" during Random play,



REPEAT	PROGRAM	RANDOM			
1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18

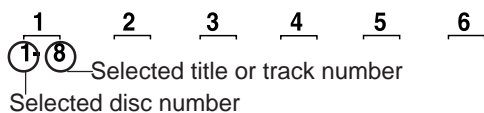
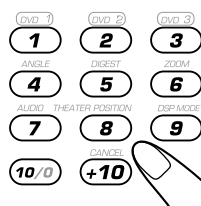
**4 Press one of the disc number buttons (DVD 1, DVD 2 or DVD 3) you want to program while holding down SHIFT .**

The selected disc number is shown on the TV screen.

**5 Press the number buttons to enter a title or track number you want to program.**

The selected title or track number is shown on the TV screen.

- To select number 5, press 5.
- To select number 10, press 10.
- To select number 20, press 10, then 10.
- To select number 23, press +10, +10 then 3.

**6 To program another title or track from the same disc, repeat step 5.****To program another title or track from a different disc, repeat steps 4 and 5.**

Each time you select a title or track, the program item is added up to 18 steps.

REPEAT	PROGRAM	RANDOM			
1	2	3	4	5	6
1-18	2-17	3-16	4-15	5-14	6-13
7	8	9	10	11	12
1-12	2-11	3-10	4-9	5-8	6-7
13	14	15	16	17	18
1-6	2-5	3-4	4-3	5-2	6-1

**7 Press DVD ►.**

The titles and tracks are played in the order you have programmed.



To stop playing, press ■.

To go to the next track, press ►►.



**notes** Even if you press ◀◀

It just goes back to the beginning of the current title or track, but cannot go back to the previous titles or tracks.

**To modify the program**

You can modify the program before or after playing.

**To erase the last steps,** press CANCEL while holding down SHIFT.

- Each time you press the button, the last programmed step is erased from the program.

**To add steps in the program before playing,** simply select the disc and title/track numbers you want to add by following steps 4 to 6 of the programming procedure.

**To erase program completely,** press CLEAR when the playback is stopped.

The program you have made will be also erased,

- when you eject all the discs.
- when you unplug the AC power cord.
- when a power failure occurs.

**To exit from Program play mode,** press PROGRAM on the unit after playing. The PRGM (program) indicator goes off. The program you have made is memorized.

**To check the programmed contents**

Press PLAY MODE. The programmed contents appear on the TV screen.

**To erase the play mode screen,** press PLAY MODE. The program you have made is memorized.

## Playing at Random—Random Play

The titles and tracks of all loaded discs are played at random.

- When you use Random play for a VCD with the PBC function activated, the PBC function is turned off.
- Random Play cannot be used on some DVD discs.

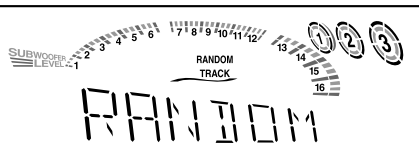
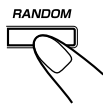
### On the unit:

#### 1 Load discs.

- If the current playing source is not the DVD/VCD/CD player, press DVD ►/■, then ■ before going to the next step.

#### 2 Press RANDOM so that “RANDOM” appears on the display.

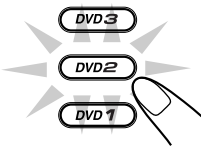
The RANDOM indicator also lights up on the display.



#### 3 Press one of the disc number buttons (DVD1, DVD2 or DVD3) you want to play first.

The titles and tracks are played from the selected disc at random.

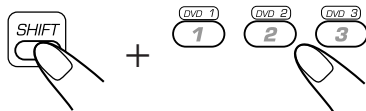
Random play ends when all the titles and tracks on the all loaded discs are played once.



### On the remote control:

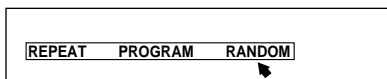
#### 1 Load discs.

#### 2 Press one of the disc number buttons (DVD 1, DVD 2 or DVD 3) while holding down SHIFT to select the disc you want to play, then ■.



#### 3 Press PLAY MODE.

The play mode screen appears on the TV.

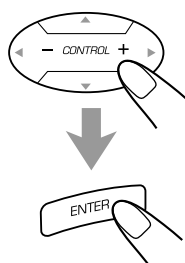


#### 4 Press CONTROL + or - to move ► to “RANDOM,” then press ENTER.

The titles and tracks are played from the selected disc at random.

Random play ends when all the titles and tracks on the all loaded discs are played once.

- You cannot select “RANDOM” during Program play.



To stop playing, press ■.

- Random play also stops when the disc tray currently played is opened.

To exit from Random play mode when finished, press RANDOM on the unit. Or perform steps 3 and 4 on the remote control. Each time you press ENTER, the Random play turns on and off.

To skip the currently playing title or track, turn ◀◀ / ▶▶ to the right (or press ▶▶ on the remote control).



Even if you turn ◀◀ / ▶▶ to the left or press ◀◀ on the remote control

It just goes back to the beginning of the current title or track, but cannot go back to the previous titles or tracks.

To erase the play mode screen, press PLAY MODE.

## Repeating Playback

### Repeat Play

You can repeat a title, chapter or track.

- For DVD, to use Repeat play with Program play or Random play, select Repeat play after starting Program play or Random play .
- Repeat play cannot be used on some DVD discs.
- You can only use Repeat play on VCD with the PBC function deactivated. When you turn on the PBC function after Repeat play, press REPEAT repeatedly until the REPEAT indicators go off from the display.

### On the remote control:

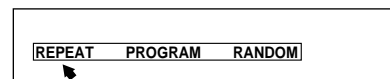
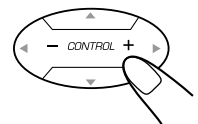
#### 1 Press PLAY MODE before or during play.

The play mode screen appears on the TV.



#### 2 Press CONTROL + or - to move ► to “REPEAT.”

- When DVD is a playing source, “REPEAT” cannot be selected while playing.



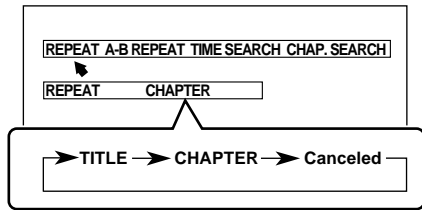
Ex.: When the playback is stopped.

#### 3 Press ENTER repeatedly to select Repeat play mode you want.

- Each time you press the button, the Repeat play mode indication on the TV screen changes as follows:

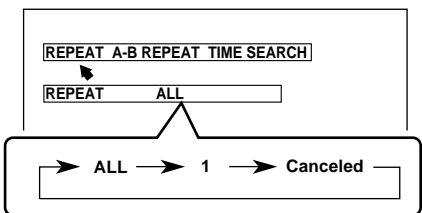


### When a DVD is a played back.



- TITLE: Current title will be repeated.
- CHAPTER: Current chapter will be repeated.

### When a CD or VCD disc is played back.



- ALL: All tracks on all discs will be repeated.
- 1: Current track will be repeated.

To cancel Repeat play, perform steps 1 and 2, then press ENTER repeatedly until the REPEAT indications disappear from the TV screen.

To erase the play mode screen, press PLAY MODE.

### On the unit:

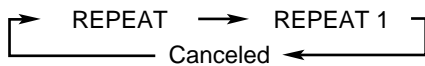
#### Press REPEAT before or during play.

The REPEAT indicators also light up on the display.



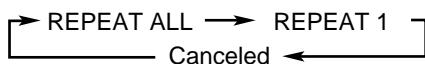
- Each time you press the button, Repeat play mode changes as follows:

For DVD



- REPEAT: Current chapter will be repeated.
- REPEAT 1: Current title will be repeated.

For VCD and CD



- REPEAT ALL: All tracks on all discs will be repeated.
- REPEAT 1: Current track will be repeated.

To cancel Repeat play, press REPEAT repeatedly until the REPEAT indicators go off from the display.

## A-B Repeat

While playing, you can also select a portion you want to repeat.

- During Program play, Random play or Repeat play A-B Repeat play cannot be selected.
- A-B Repeat is not performed between different chapters or different titles on a DVD.

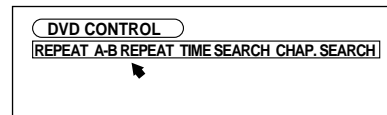
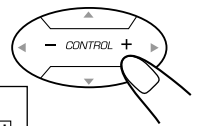
### On the remote control ONLY:

#### 1 Press PLAY MODE during play.

The play mode screen appears on the TV.

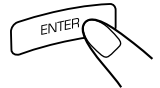


#### 2 Press CONTROL + or - to move to "A-B REPEAT."



Ex.: When DVD is a playing source.

#### 3 Press ENTER at the starting point you want to repeat (point A).



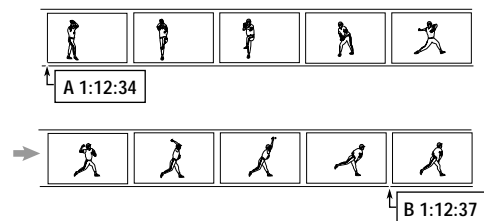
The A-B Repeat indication appears on the TV screen.



#### 4 Press ENTER again at the end point you want to repeat (point B).

A-B Repeat begins.

The unit automatically locates point A and starts repeated playback of the portion between points A and B.



To cancel A-B Repeat play, press ENTER. A-B Repeat play is canceled and normal playback starts.

To erase the play mode screen, press PLAY MODE.

# DVD/VCD Special Effect Playback

## Still Picture/Frame-by-Frame Playback

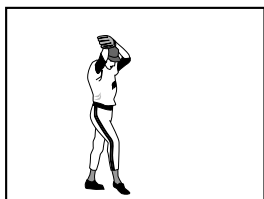
You can still a picture and advance the still picture frame by frame.

### Still picture

#### On the remote control ONLY:

Press **II** once during play.

A still picture appears on the TV screen.



### Frame-by-frame playback

#### On the remote control ONLY:

Press **II** repeatedly during play to advance the picture frame by frame.

- Each time you press the button, the picture advances frame by frame.



To go back to normal play, press DVD ►.

## Viewing Continuous Still Pictures—Strobe

You can view 9 continuous still pictures.

#### On the remote control ONLY:

1 Press **II** during play at the point you want to view continuous still pictures.

A still picture appears on the TV screen.



2 Press and hold **STROBE** for more than 1 second.

9 continuous still pictures appear on the TV screen.

- Pressing **STROBE** again, next 9 still pictures appear.



To cancel strobe play, press and hold **STROBE**. A still picture appears. Then press DVD ► to go back to normal play.



If you press and hold **STROBE** for more than 1 second during normal playback

9 pictures also appear but advance at normal speed.

## Slow Motion Playback—Slow

You can enjoy slow motion playback.

- Reverse slow motion playback cannot be used on some VCDs.

#### On the remote control ONLY:

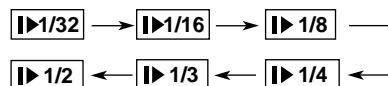
1 Press **II** once during play.

A still picture appears on the TV screen.

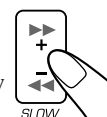
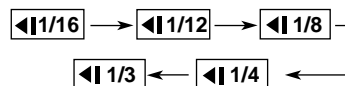


2 Press **SLOW +** or **-** to start slow motion playback

- Each time you press **SLOW +**, forward slow motion speed changes as follows:



- Each time you press **SLOW -**, reverse slow motion speed changes as follows:



No sound is heard during slow motion playback.

To go back to normal play, press DVD ►.

## Zoom in the Picture—Zoom

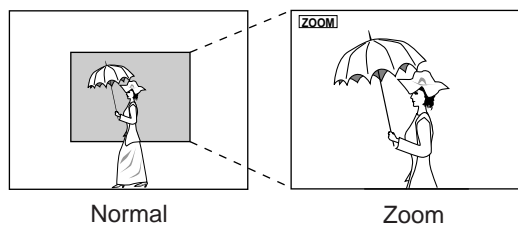
You can zoom a picture by 2 times.

#### On the remote control ONLY:

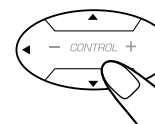
1 Press **ZOOM** while holding down **SHIFT** during play.

“ZOOM” appears on the TV screen.

- Each time you press **ZOOM** while holding down **SHIFT**, the picture is zoomed in and out alternately.



2 Press **Cursor** (▲ / ▼ / ► / ◀) to select the position you want to zoom in.



To go back to normal play, press **ZOOM** while holding down **SHIFT**.





## Viewing the Desired Chapters/Tracks—Digest

You can view 9 opening scenes of chapters or tracks at a time and select desired scene from those displayed on the TV screen directly.

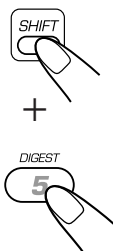
- You can not use this function on VCD with the PBC function.

### On the remote control ONLY:

#### 1 Press DIGEST while holding down SHIFT when stopped playing or during playback.

The opening scene appears in sequence (up to 9 pictures at a time) on the TV screen.

- When DVD is a source disc and stopped, the opening scene of each title appears.
- When DVD is a source disc and played back, the opening scene of each chapter in the current title appears.
- When VCD without the PBC function is loaded, the opening scene of each track appears.



## Selecting the Picture Brightness —Theater Position

You can select picture brightness from among three options according to the source program, lighting condition of the room and/or personal preference.

### On the unit:

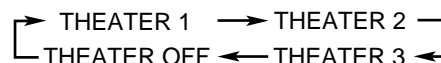
Press THEATER POSITION during play.

### On the remote control:

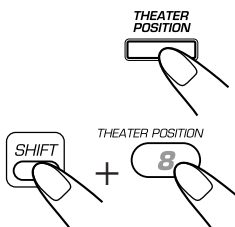
Press THEATER POSITION while holding down SHIFT during play.

The theater position indication appears on the TV screen.

- Each time you press THEATER POSITION, the theater position changes as follows. The picture brightness becomes darker as the number increases.

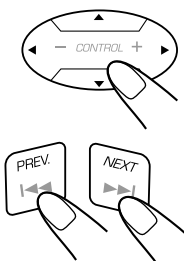


To cancel the function, select “THEATER OFF.”



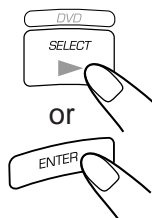
#### 2 Press Cursor (▲ / ▼ / ► / ◀) to move to a scene you want to start playback.

- If there are more than 9 scenes, you can see next 9 scenes. To go to the next screen press NEXT, and to go back to the previous screen press PREV..



#### 3 Press SELECT or ENTER.

Playback starts from the selected scene.



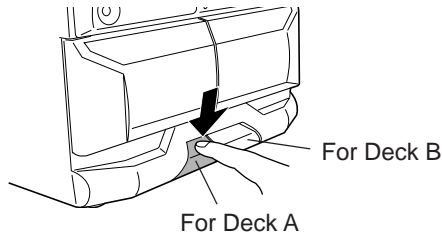
# Playing Back Tapes



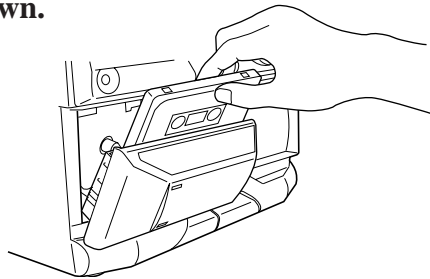
You can play back type I, type II, and type IV tapes without changing any settings.

## Playing Back a Tape

**1 Press EJECT (▲) for the deck you want to use.**



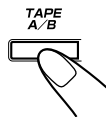
**2 Put a cassette in with the exposed part of the tape down.**



**3 Close the cassette holder gently.**

If you put cassettes in both decks A and B, the last deck you have closed is selected.

**To operate the other deck,** press TAPE A/B (or press TAPE A/B while holding SHIFT on the remote control).



**4 Press TAPE ◀▶.**

The tape play starts and the tape direction indicator (▶ or ◀) on the display starts flashing slowly to indicate the tape running direction.

- Each time you press the button, the tape direction changes.
  - ▶ : plays the front side.
  - ◀ : plays the reverse side.
- If no cassette is inserted, “NO TAPE” appears on the display.



When the tape plays to the end, the deck automatically stops if the Reverse Mode is off. (See “To play both sides repeatedly—Reverse Mode.”)

**To stop playing,** press ■.

**To fast-wind to the right or to the left,** press ▶▶ or ◀◀ while the tape is not running.

The tape direction indicator (▶ or ◀) starts flashing quickly on the display.

**To remove the cassette,** press ▲ EJECT for deck A or EJECT ▲ for deck B.

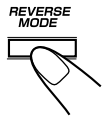
**To play both sides repeatedly—Reverse Mode**

Reverse Mode works for both decks at the same time.

When it is in use, the tape automatically reverses at the end of a side and the unit starts playing for the other side of the tape, and repeats the same process.

**To use Reverse Mode,** press REVERSE MODE so that the Reverse Mode indicator on the display lights up like—(↔).

**To cancel Reverse Mode,** press the button again so that the Reverse Mode indicator on the display lights up like—↔.



**When Reverse Mode is on with cassettes in both decks A and B**

After the reverse (◀) side of the tape finishes playing, the tape in the other deck starts playing.

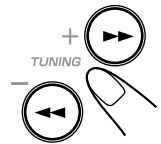
## Locating the Beginning of a Song—Music Scan

You can use Music Scan to locate the beginning of a song. Music Scan searches for blank portions that usually separate recorded songs, then plays the next song.

**To find the beginning of the current song**

During play, press ▶▶ or ◀◀ in the **opposite direction** to the tape play.

The tape direction indicator of the opposite direction to the tape play starts flashing slowly.

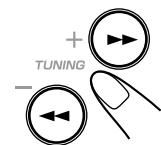


Searching stops automatically at the beginning of the current song, and the current song starts automatically.

**To find the beginning of the next song**

During play, press ▶▶ or ◀◀ in the **same direction** as the tape play.

The tape direction indicator of the same direction as the tape play starts flashing slowly and quickly alternately.



Searching stops automatically at the beginning of the next song, and the next song starts automatically.



**Music Scan works by detecting a 4-second long blank between each song, so it will not work well in the following cases**

- No blank at the beginning of a song.
- Noise (often caused by much use or poor quality dubbing) which fills the blank.
- Long, very soft passages or pauses in a song.



The use of the C-120 or thinner tape is not recommended, since characteristic deterioration may occur and this tape easily jams in the pinch-rollers and the capstans.

# Using DSP Surround Mode



In order to reproduce a more acoustic sound field in your listening room while playing any source, you can use following DSP Surround modes.

- DSP Surround mode can be also used for a disc encoded with Dolby Digital 5.1ch.

You can select one of the following DSP Surround modes according to your preference.

<b>S (Small) THEATER:</b>	Reproduces the sound field of a small theater (where the seating capacity about 300).
<b>L (Large) THEATER:</b>	Reproduces the sound field of a large theater (where the seating capacity about 1,000).
<b>LIVECLUB:</b>	Gives the feeling of a live music club with a low ceiling.
<b>PAVILION:</b>	Gives the spacious feeling of a pavilion with a high ceiling.
<b>CHURCH:</b>	Gives the spacious feeling of a majestic church with a high ceiling.

## Activating and Adjusting the DSP Surround Mode

You can use the DSP Surround mode for any source you like.

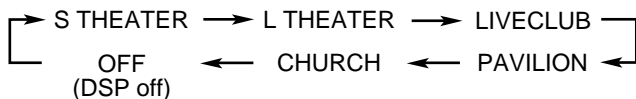
### On the remote control:

Only when using the remote control, you can adjust the delay time of the surround speakers.

### 1 Press DSP MODE, while holding down SHIFT, to select a desired DSP Surround mode.



- Each time you press the button, the DSP Surround mode changes as follows:

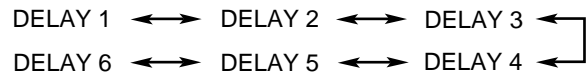


- When one of the DSP Surround modes is activated, the SURROUND lamp on the unit lights up.

### 2 Press LEVEL SELECT repeatedly until “DELAY” appears on the display.

### 3 Press LEVEL + / - to adjust the delay time.

- Each time you press the button, the delay time changes as follows.



As the number increases, the delay time increases so that you can obtain much larger sound field.

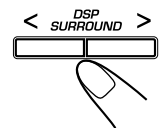
- This setting does not affect the delay time setting of the “SPEAKER SETTING” (see page 34.)

To cancel the DSP Surround mode, select “OFF” in step 1 so that the SURROUND lamp goes off if you do not playback a disc encoded with Dolby Digital 5.1ch.

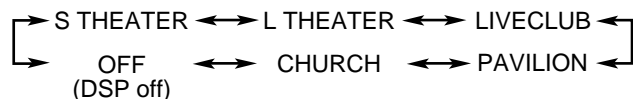
### On the unit:

When using the buttons on the unit, you can activate the DSP Surround modes, but cannot make delay time adjustment.

### Press DSP SURROUND > or < to select a desired DSP Surround mode.



- Each time you press the button, the DSP Surround mode changes as follows:



- When one of the DSP Surround modes is activated, the SURROUND lamp on the unit lights up.

To cancel the DSP Surround mode, select “OFF” so that the SURROUND lamp goes off if you do not playback a disc encoded with Dolby Digital 5.1ch.



### When you use one of sound modes with surround elements—D.CLUB, HALL, STADIUM (see page 11)

You can set these sound modes together with the DSP Surround modes, but the surround elements of these sound modes are changed to the DSP Surround mode.

# Recording

## IMPORTANT:

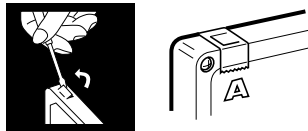
- It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable programme and in any literary, dramatic, musical, or artistic embodied therein.
- The recording level is automatically set correctly, so it is not affected by the VOLUME, the SUBWOOFER LEVEL, the SOUND MODE, and DSP Surround controls. Thus, during recording you can adjust the sound you are actually listening to without affecting the recording level.
- If recordings you have made have excessive noise or static, the unit may be too close to a TV. Increase the distance between the TV and the unit.
- You can use type I tape for recording.

## To protect your recording

Cassettes have two small tabs on the top to protect from unexpected erasure or re-recording.

To protect your recording, remove these tabs.

To re-record on a protected tape, cover the holes with adhesive tape.



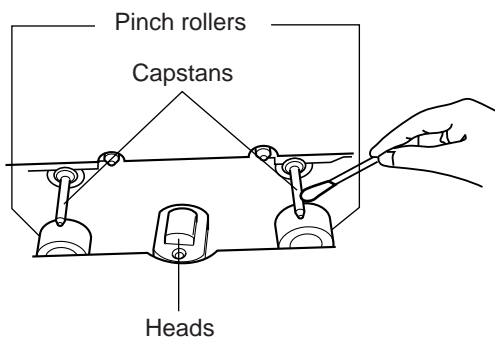
## To keep the best recording and playback sound quality

If the heads, capstans, and pinch rollers of the cassette decks become dirty, the following will occur:

- Impaired sound quality
- Discontinuous sound
- Fading
- Incomplete erasure
- Difficulty in recording

## To clean the heads, capstans, and pinch rollers

Use a cotton swab moistened with alcohol.



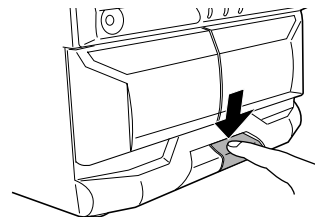
## To demagnetize the heads

Turn off the unit, and use a head demagnetizer (available at electronics and audio shops).

## Recording a Tape on Deck B

### On the unit ONLY:

#### 1 Press EJECT ▲ for the deck B.



#### 2 Put a recordable cassette into deck B.

#### 3 Close the cassette holder gently.

#### 4 Start playing the source — FM, AM, DVD/VCD/CD player, deck A, or auxiliary equipment connected to AUX jacks.

- When the source is VCD or CD, you can also use VCD/CD Direct Recording (see page 30) and Auto Edit Recording (see page 31).
- When the source is deck A, you can also use the dubbing method. (See “Dubbing Tapes” on page 30.)

#### 5 Check the tape direction of deck B.

- If the tape direction is not correct, press TAPE ◀▶ twice then ■ to change the tape direction.

#### 6 Press REC START/STOP.

The REC (recording) indicator lights up on the display and recording starts.

- If no cassette is inserted, “NO TAPE” appears on the display. If a protected tape is inserted, “NO REC” appears on the display.



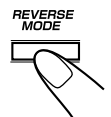
To stop recording immediately, press ■.

To remove the cassette, press EJECT ▲ for deck B.

#### To record on both sides—Reverse Mode

Press REVERSE MODE so that the Reverse Mode indicator lights up like—(↔).

- When using the Reverse Mode for recording, start recording in the forward (▶) direction first. Otherwise, recording will stop when recording is done only on one side (reverse) of the tape.



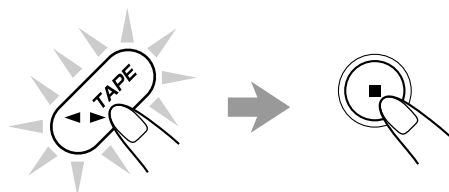
To cancel Reverse Mode, press the button again so that the Reverse Mode indicator lights up like—↔.

## Dubbing Tapes

You can record from one tape to another.

### On the unit ONLY:

**1** Press **TAPE** ◀▶, then ■.



**2** Put the source cassette in deck A, and a recordable cassette in deck B.

- Put the cassettes in both decks so that the tapes will run in the forward (▶) direction.

**3** Press **DUBBING**.

The **REC** (recording) indicator lights up on the display and dubbing starts.



**To stop dubbing**, press ■ so that both decks (A and B) stop.

### To record on both sides—Reverse Mode

Press **REVERSE MODE** so that the Reverse Mode indicator lights up like—(↔).



**To cancel Reverse Mode**, press the button again so that the Reverse Mode indicator lights up like—↔.

## VCD/CD Direct Recording

You can easily record sound of a VCD without the PBC function or CD onto a tape.

- You can also record the tracks in order you have made the program.
- This function cannot be used for recording DVDs.

### On the unit ONLY:

**1** Put a recordable cassette into deck B.

**2** Load discs with its label side up.

**3** Press one of the disc number buttons (**DVD1**, **DVD2**, or **DVD3**) to select the disc, then ■.



**4** Press **CD REC START**.

“CD REC” appears, and the **REC** (recording) indicator lights up on the display.

Deck B starts recording and the DVD/VCD/CD player starts playing.

When the recording is done, “CD REC FINISHED” appears on the display, and the DVD/VCD/CD player and deck B stop.

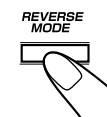


**To stop recording**, press **REC START/STOP** or ■. So that a 4-second blank portion is created on the recording tape. (Remember a 4-second blank is important when using Music Scan—see page 27.)



### To record on both sides—Reverse Mode

Press **REVERSE MODE** so that the Reverse Mode indicator lights up like—(↔).



- When using the Reverse Mode for VCD/CD Direct Recording, start recording in the forward (▶) direction first. When the tape reaches its end while recording a song in the forward direction (▶), the last song will be re-recorded at the beginning of the reverse side (◀).

If you start recording on the reverse side (◀), recording will stop when recording is done only on one side (reverse) of the tape.

**To cancel Reverse Mode**, press the button again so that the Reverse Mode indicator lights up like—↔.





## Auto Edit Recording

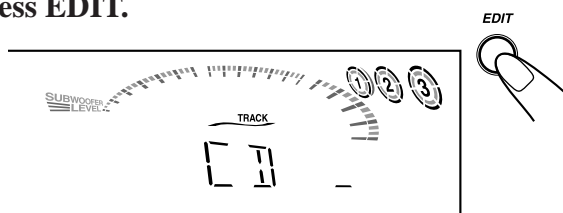
By using Auto Edit Recording, you can record disc tracks to fit the tape. Auto Edit Recording makes a program by selecting disc tracks in numerical order. However, to prevent the end of the last track on the front side from being cut off, the last track is selected so as to fit on the remaining tape length.

- This function cannot be used for recording DVD.

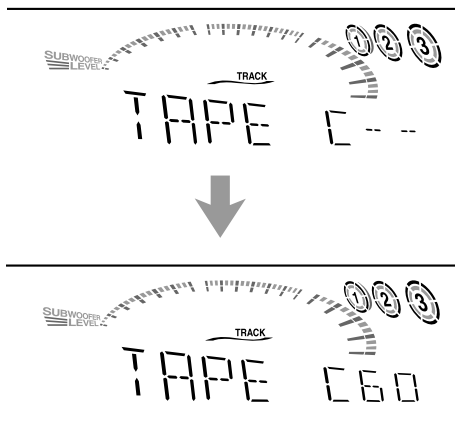
### On the unit ONLY:

**1 Load discs with its label side up.**

**2 Press EDIT.**



**3 Press the disc number button (DVD1, DVD2, or DVD3) for the disc you want to record from.**



The optimum tape length for the disc appears.

#### To change the tape length manually

If the tape length selected is not satisfactory, you can change the tape length by turning **◀◀ / ▶▶**.

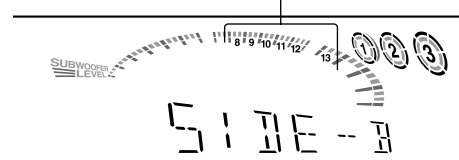
You can select the tape length among the following — 40, 46, 50, 54, 60, 64, 70, 74, 80, 84, and 90.

**4 Press SET.**

- Each time you press the button, the tracks to be recorded on the front side (“SIDE-A”) and on the reverse side (“SIDE-B”) alternate.



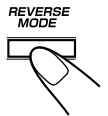
Tracks to be recorded on the reverse side (SIDE-B) appear.



**5 Put a recordable cassette of appropriate length into deck B.**

**6 Press REVERSE MODE so that the Reverse Mode indicator lights up like (↔).**

- Without turning on the Reverse Mode (↔), recording will stop when the front side of the tape is recorded.



**7 Press CD REC START.**

“TAPE SIDE-A STAND-BY” appears, and the **REC** (recording) indicator lights up on the display.

Deck B starts recording then, about 10 seconds later, the DVD/VCD/CD player starts playing.

When the recording is done, “CD REC FINISHED” appears on the display, and the DVD/VCD/CD player and deck B stop.

- If a tape has not been rewound, deck B will rewind the tape before it starts recording.
- A 10-second blank portion is automatically created at the beginning of each side of the tape.



**To stop recording,** press REC START/STOP or **■**. So that a 4-second blank portion is created on the recording tape. (Remember a 4-second blank is important when using Music Scan—see page 27.)


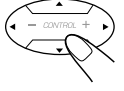

#### To cancel Auto Edit Recording

Press CANCEL/DEMO or **■** before or after recording.

Using the on-screen menus, you can store the initial selection for subtitle languages and audio languages (sound) for DVD playback as well as other settings.

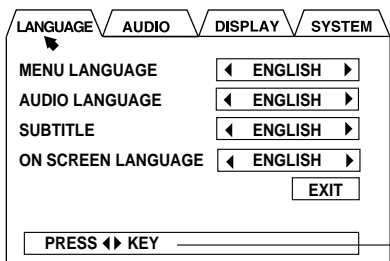
- The on-screen menu disappears if no operation is done for five minutes.

## Buttons you use to operate on-screen menus (on the remote control)

	<ul style="list-style-type: none"> <li>• Press to show or erase the on-screen menu.</li> </ul>
	<ul style="list-style-type: none"> <li>• Press to select the item.</li> </ul>
	<ul style="list-style-type: none"> <li>• Press to enter into sub-menu.</li> <li>• Press to enter your selection.</li> </ul>

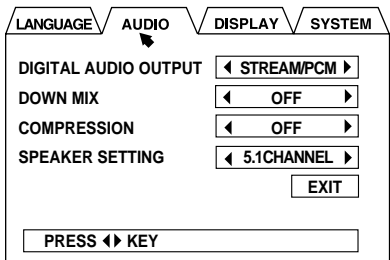
## On-screen menus

- **LANGUAGE menu** (see page 33)

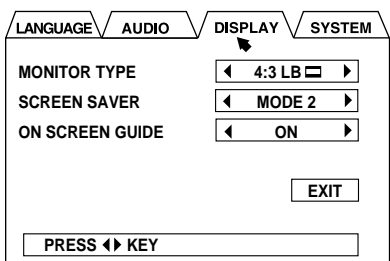


Usable buttons

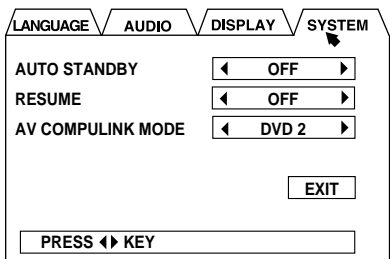
- **AUDIO menu** (see page 33)



- **DISPLAY menu** (see page 35)



- **SYSTEM menu** (see page 36)



## Basic Procedure

The on-screen menu appears only when the selected source is DVD or VCD on the DVD/VCD/CD player and the disc is not played back.

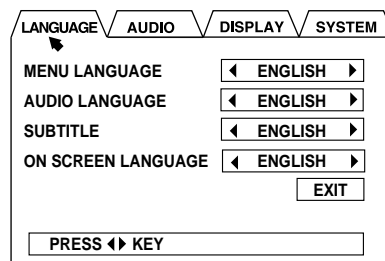
### On the remote control ONLY:

#### 1 Press CHOICE.

LANGUAGE menu appears.

#### 2 Press Cursor ▶ or ◀ to move to the menu you want—LANGUAGE, AUDIO, DISPLAY, or SYSTEM.

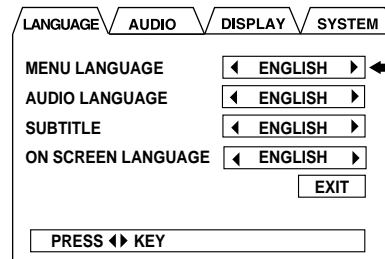
Selected item changes its color to green.



Ex.: When selecting LANGUAGE menu.

#### 3 Press Cursor ▼ or ▲ to move to an item you want to set.

Selected item changes its color to green.



Ex.: When selecting "MENU LANGUAGE."

#### 4 Press Cursor ▶ or ◀ to select a proper setting you want.

- When selecting "EXPERT" for "SPEAKER SETTING" on AUDIO menu, press ENTER. (For details, see page 34.)

#### 5 To set the other items on the same menu, repeat steps 3 and 4.

To set the other items on the different menus, repeat steps 2 to 4.

#### 6 When finished, press Cursor ▼ to move to "EXIT," then press ENTER.

The on-screen menu disappears.

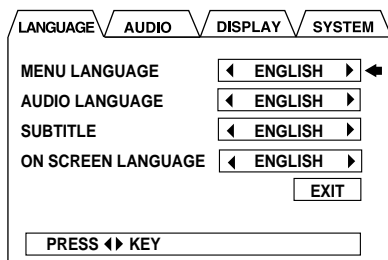
To exit from the on-screen menu any time during the above procedure, press CHOICE. The settings you have done by that time will be stored.

---

## Changing the Initial Language Settings

---

On LANGUAGE menu, you can select the following initial languages.



- 
- **MENU LANGUAGE** : Select the DVD menu language.  
Selectable languages—ENGLISH, SPANISH, FRENCH, CHINESE, GERMAN, ITALIAN, JAPANESE, AA – ZU.  
(Language code: see page 46.)
  - **AUDIO LANGUAGE** : Select the initial language for audio sound language.  
Selectable languages—ENGLISH, SPANISH, FRENCH, CHINESE, GERMAN, ITALIAN, JAPANESE, AA – ZU.  
(Language code: see page 46.)
  - **SUBTITLE** : Select the initial language for subtitles.  
Selectable languages—ENGLISH, SPANISH, FRENCH, CHINESE, GERMAN, ITALIAN, JAPANESE, AA – ZU.  
(Language code: see page 46.)
  - **ON SCREEN LANGUAGE** :  
Select the language for the on-screen menus and indications.  
Selectable languages—ENGLISH, ESPAÑOL (Spanish), FRANCAIS (French)
- 

**NOTICE:** The original language will be selected as the initial language regardless of your setting in the following cases.

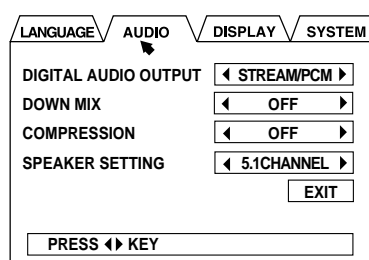
- If the language you have selected is not recorded on the disc.
- If the disc is programmed to be played back in the original language.

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## Changing the Various Audio Settings

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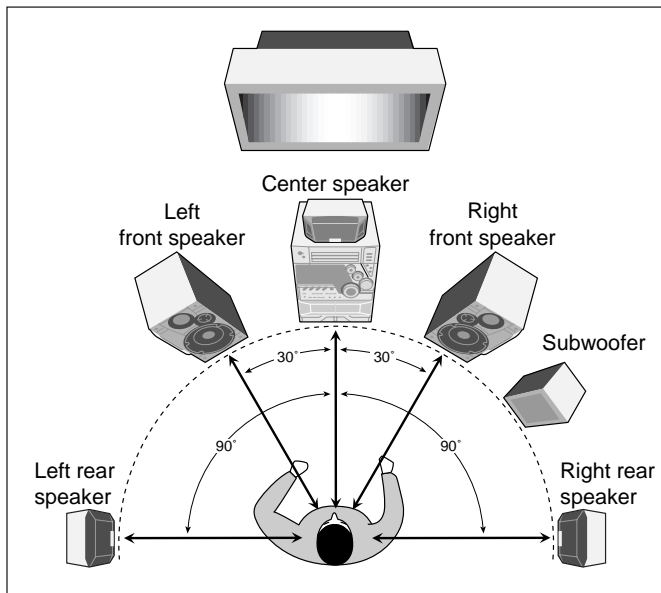
On AUDIO menu, you can change the following sound settings.



- 
- **DIGITAL AUDIO OUTPUT** :  
Set the output signal type through the OPTICAL DIGITAL OUTPUT terminal. (For the output signal types, see page 45.)
    - Select “**STREAM/PCM**” when connecting an amplifier or a decoder compatible with DTS and Dolby Digital.
    - Select “**PCM ONLY**” when connecting a digital recording device such as an MD recorder, DAT deck, etc.
    - Select “**DOLBY DIGITAL/PCM**” when connecting an amplifier or a decoder compatible only with Dolby Digital.
  - **DOWN MIX** :  
Set the output signal type through the AUX OUT jacks while playing Dolby Digital 5.1ch software.
    - Select “**L0/R0**” to output left front and right front channels (2ch) without mixing.
    - Select “**Lt/Rt**” to mix multichannel signals into left front and right front channels (surround signals are added to left/right front channels), then output.
      - The PRO LOGIC lamp lights up while down-mix signals are output through the AUX OUT jacks.
    - Select “**OFF**” not to mix but to output original signals.
  - **COMPRESSION** :  
Compress the dynamic range (difference between the maximum and minimum sound levels) while playing a source encoded with Dolby Digital. This is useful when listening at a low volume level.
    - Select “**ON**” to apply dynamic compression.
    - Select “**OFF**” not to apply dynamic compression (full dynamic range recorded on the original disc.)
  - **SPEAKER SETTING** :  
Set the speaker’s output level and delay time according to your speaker setting in your listening room. (See the next page.)
    - Select “**5.1CHANNEL**” if all the speakers are located at the same distance from the listening position.
    - Select “**EXPERT**” if you cannot locate all the speakers at the same distance from the listening position. Select “**EXPERT**” to enter EXPERT SPEAKER SETTING menu, then press ENTER.
-

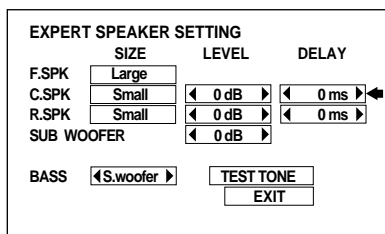
## More about "SPEAKER SETTING"

The following example shows the ideal speaker locations for surround reproduction in your listening room.



If you can locate the speakers as the above example, you can select "5.1CHANNEL" for your speaker setting.

If you can NOT do as above, select "EXPERT," then press ENTER. EXPERT SPEAKER SETTING menu appears and you can adjust the output level and delay time for the center and rear speakers.



- You cannot adjust the speaker size (SIZE) settings.

On EXPERT SPEAKER SETTING menu, you can set the following:

- C.SPK-LEVEL:** Adjust the output level for the center speaker. (See page 35.)
- R.SPK-LEVEL:** Adjust the output level for the rear speakers. (See page 35.)
- SUB WOOFER-LEVEL:** Adjust the output level for the subwoofer. (See page 35.)
- C.SPK-DELAY:** Adjust the delay time for the center speaker. (See the right.)
- R.SPK-DELAY:** Adjust the delay time for the rear speakers. (See the right.)
- BASS:** Select the speaker for bass output. (See page 35.)

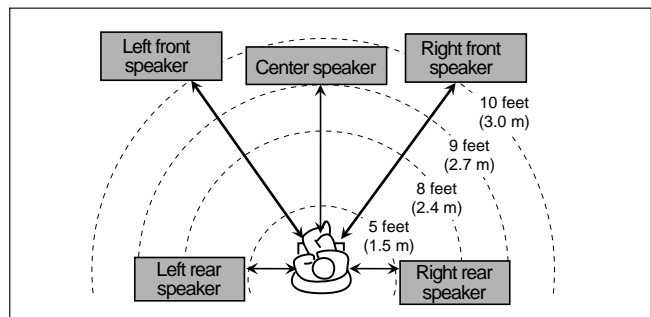
## "EXPERT" adjustment procedure

### ■ Adjusting the delay time for the center and rear speakers

You can adjust the delay time of the sounds from the center speaker and from the rear speakers, comparing to that of the sound from the front speakers.

If the distance to the center speaker and/or rear speakers from your listening position is almost the same as that to the front speakers, select "0 ms" (the default setting for "5.1CHANNEL" settings).

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



Ex.: In this case, set "C.SPK-DELAY" to "-1 ms" and the "R.SPK-DELAY" to "-5 ms."

### 1 Display EXPERT SPEAKER SETTING menu.

- See page 32.

### 2 Press Cursor (▲ / ▼ / ► / ◀) to move ◀ to "C.SPK-DELAY," then press ENTER.

### 3 Press Cursor ► or ◀ to select "-1 ms," then press ENTER.

- Adjustable range for the center speaker delay time is from "-5 ms" to "0 ms."

### 4 Press Cursor ▼ or ▲ to move ◀ to "R.SPK-DELAY," then press ENTER.

### 5 Press Cursor ► or ◀ to select "-5 ms," then press ENTER.

- Adjustable delay time for rear speakers is "-5 ms," "-10 ms" and "-15 ms."

Now you can also adjust the speaker output level and select the speaker for the bass output (see next page).

### 6 When finished, press Cursor (▲ / ▼ / ► / ◀) to move ◀ to "EXIT," then press ENTER.

EXPERT SPEAKER SETTING menu disappears.

### ■ Adjusting the center and rear speaker output levels

You can adjust the speaker output level for the center speaker and rear speakers.

You can adjust the output level while listening to the test tone.

- Make adjustments so that the sound level of the selected speaker is set at the same level as that of the front speakers.
- To output test tone properly, turn off the sound mode and the DSP Surround mode before entering on-screen menu.

#### 1 Display EXPERT SPEAKER SETTING menu.

- See page 32.

#### 2 Press Cursor (▼ / ▲ / ► / ◀) to select “TEST TONE,” then press ENTER.

“TEST TONE” changes its color to green and test tone comes out of in the following sequence—left front speaker, center speaker, right front speaker, right rear speaker, and left rear speaker.

- Test tone is output only when the tray loaded a DVD is selected.

#### 3 Press Cursor (▼ / ▲ / ► / ◀) to move ◀ to “C.SPK-LEVEL” or “R.SPK-LEVEL,” then press ENTER.

#### 4 Press Cursor ► or ◀ to adjust the output level, then press ENTER.

- You can adjust the output level from “-6 dB” to “+6 dB.”

#### 5 Repeat steps 3 and 4 to adjust the other speaker output level.

#### 6 Press Cursor (▲ / ▼ / ► / ◀) to select “TEST TONE,” then press ENTER.

Test tone stops.

#### 7 When finished, press Cursor (▲ / ▼ / ► / ◀) to move ◀ to “EXIT,” then press ENTER.

EXPERT SPEAKER SETTING menu disappears.

### ■ Selecting the speaker for bass output

You can select the speaker for bass output according to your preference.

#### 1 Display EXPERT SPEAKER SETTING menu.

- See page 32.

#### 2 Press Cursor (▲ / ▼ / ► / ◀) to move ◀ to “BASS,” then press ENTER.

#### 3 Press Cursor ► or ◀ to select your desired setting.

- **L/R** : to output the bass signals through the subwoofers built-in the supplied front speakers.
- **S.woofer** : to output the bass signals through the subwoofer connected to the SUB-WOOFER 5.1 ch OUT jack.

#### 4 When finished, press Cursor (▲ / ▼ / ► / ◀) to move ◀ to “EXIT,” then press ENTER.

EXPERT SPEAKER SETTING menu disappears.

### ■ Adjusting the subwoofer output levels

You can adjust the output level according to your preference.

#### 1 Display EXPERT SPEAKER SETTING menu.

- See page 32.

#### 2 Press Cursor (▼ / ▲ / ► / ◀) to move ◀ to “SUB WOOFER,” then press ENTER.

- You can adjust the output level from “-6 dB” to “+6 dB.”

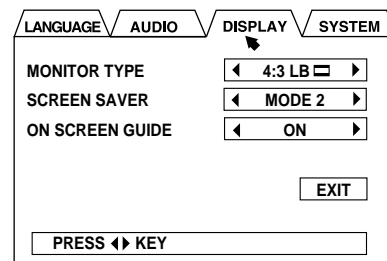
#### 3 Press Cursor ► or ◀ to adjust the output level, then press ENTER.

#### 4 When finished, press Cursor (▼ / ▲ / ► / ◀) to move ◀ to “EXIT,” then press ENTER.

EXPERT SPEAKER SETTING menu disappears.

## Changing the Display Settings

On DISPLAY menu, you can change the following display settings.



#### • MONITOR TYPE :

Set the monitor type to use while playing back a DVD recorded with 16:9 wide screen video signal.

Selectable types—4:3 LB , 16:9 WIDE, 4:3 PS .

#### • SCREEN SAVER :

Select the screen saver to prevent a TV monitor from burning out.

- Select “**MODE 1**” to activate the screen saver by making the TV screen dark.
- Select “**MODE 2**” to activate the screen saver by showing the original screen-saver.
- Select “**OFF**” to deactivate this function.

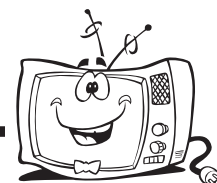
When “MODE 1” or “MODE 2” is selected, screen saver functions if still (static) picture is shown for more than 5 minutes.

#### • ON SCREEN GUIDE :

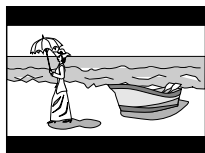
By watching the on-screen indications shown on the TV screen, you can confirm what you are doing while operating the DVD/VCD/CD player.

- Select “**ON**” to show the on-screen indications.
- Select “**OFF**” to deactivate this function.

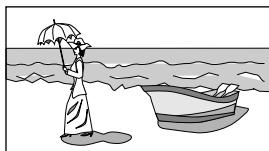




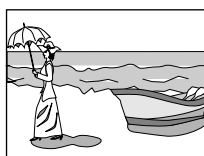
## ■ Monitor types



- **4:3 LB (Letter Box)** : Select this when viewing on TV whose aspect ratio is 4:3. While viewing a wide screen picture, the black bars appear on the top and the bottom of the screen.



- **16:9 WIDE**: Select this when viewing on TV whose aspect ratio is 16:9.

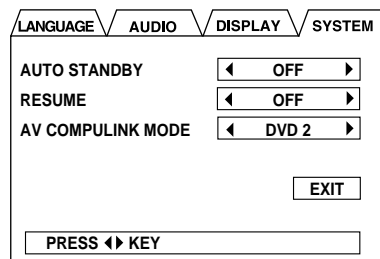


- **4:3 PS (Pan Scan)** : Select this when viewing on TV whose aspect ratio is 4:3. While viewing a wide screen picture, the black bars do not appear, however, the left and right edge sides of the pictures will not be shown on the screen.

- Even if “4:3 PS ” is selected, the screen size may become “4:3 LB ” while playing some DVDs. This depends on how the DVD is programed and recorded.
- If a disc (or some portions of the disc) is recorded with the video signals of 4:3 aspect ratio, this setting does not take effect. The pictures are displayed with full 4:3 aspect ratio or with 4:3 Letter Box.

## Changing the System Settings

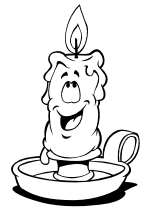
On SYSTEM menu, you can change the following settings.



- **AUTO STANDBY** : You can turn off (into standby) the unit automatically.
  - Select “**30**” to turn off the unit automatically if no operation is done for 30 minutes.
  - Select “**60**” to turn off the unit automatically if no operation is done for 60 minutes.
  - Select “**OFF**” to deactivate this function.
- **RESUME** : This unit can memorize the stop-point where DVD or VCD playback stops. When the playback is selected again, it starts from where it has been stopped—Resume play.
  - Select “**ON**” to activate Resume play.
  - Select “**OFF**” to deactivate Resume play. Playback always starts from the beginning.
- **AV COMPULINK MODE** : When connecting this unit to a JVC’s TV with the AV COMPULINK remote control system, select the proper setting.
  - Select “**DVD 1**” when connecting this unit to the COMPONENT VIDEO or INPUT-2 terminals on a TV.
  - Select “**DVD 2**” when connecting this unit to the INPUT-1 terminals on a TV.
  - Select “**DVD 3**” when connecting this unit to the INPUT-2 terminals on a TV.

\* For AV COMPU LINK control system, see page 42.

# Using the Parental Lock



## Setting the Parental Lock Level

Using this function, you can restrict playback of DVD containing violent scenes (and those not suitable for your family members).

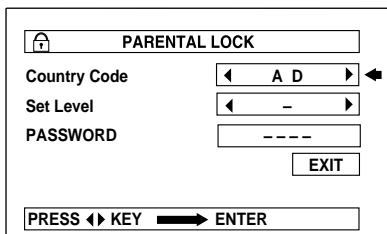
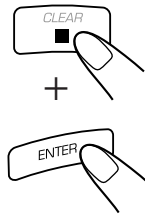
- This function is only possible for the DVDs containing such rating level information (Level 1 to Level 8).

### On the remote control ONLY:

#### 1 Press ENTER while holding down ■.

PARENTAL LOCK screen appears.

- When you set the parental lock for the first time, ◀ points “Country Code.” (Go to step 3.)
- When you change the parental lock settings, ◀ points “PASSWORD.”



Initial PARENTAL LOCK screen

#### 2 Press the number buttons (0 – 9) to enter the current password (4 digits), then press ENTER.

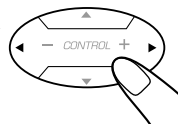
◀ moves to “Country Code.”

- If you enter a wrong password, “WRONG! RETRY...” appears. Enter correct password again.

#### 3 Press Cursor ▶ or ◀ to select a proper country code, then press ENTER.

◀ moves to “Set Level.”

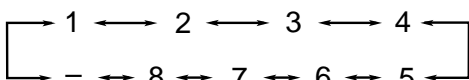
- For each country code, see pages 47 and 48.



#### 4 Press Cursor ▶ or ◀ to select a parental lock level, then press ENTER.

◀ moves to “PASSWORD.”

- Each time you press the button, the parental lock level changes as follows. Discs rated higher than the selected level are restricted.



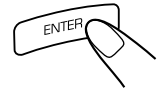
- If you do not want to make any restriction, select “-.”

#### 5 Press the number buttons (0 – 9) to enter new password (4 digits).

◀ moves to “EXIT.”

#### 6 Press ENTER.

The parental lock level is set and PARENTAL LOCK screen disappears from the TV.



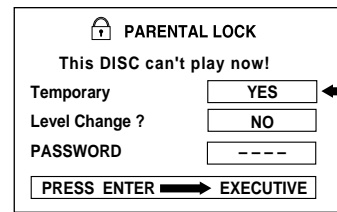
To exit from PARENTAL LOCK screen any time during the above procedure, press ENTER while holding down ■.



If you do not enter new password The setting you have done is not stored.

## Unlocking the Parental Lock Temporarily

Some discs cannot be played back at all when the parental lock is set. If you insert such a disc and try to play, the following PARENTAL LOCK screen appears on the TV. You can unlock the parental lock setting temporarily on this screen.

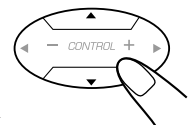


### On the remote control ONLY:

#### 1 Press Cursor ▲ or ▼ to select “YES,” then press ENTER.

◀ moves to “PASSWORD.”

- If you do not unlock the parental lock (do not see the loaded DVD), move ◀ to “NO” for “Level Change ?.” PARENTAL LOCK screen disappears.



#### 2 Press the number buttons (0 – 9) to enter the current password (4 digits).

- If you enter a wrong password, “WRONG! RETRY...” appears. Enter correct password again.

#### 3 Press ENTER.

The parental lock is temporarily unlocked and PARENTAL LOCK screen disappears.



If you enter wrong password 3 times, “WRONG! CAN’T CHANGE!” appears on the screen. ◀ moves to “EXIT” and Cursor ▲ and ▼ do not work. When you forget your password, enter “8888.”

There are three timers available — Daily Timer, Recording Timer, and Sleep Timer.

Before using the timers, you need to set the clock built in the unit. (See page 10.)

## Using Daily Timer

With Daily Timer, you can wake to your favorite music or radio program. You can set the timer whether the unit is on or off (on standby).

### How Daily Timer actually works

The unit automatically turns on, set the volume level to the preset level, and starts playing the specified source when the on-time comes (the ☀ indicator continues flashing while the timer is operating). Then, when the off-time comes (“OFF” flashes just before the off-time), the unit automatically turns off (on standby).

The Daily timer works everyday automatically. If you do not want to use the Daily timer, turn off the Daily timer. (See “To turn on or off Daily Timer after its setting is done” on the next page.) The timer setting remains in memory until you change it.

- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.
- You cannot use Daily Timer on DVD discs.
- To correct a mis-entry while setting the timer, press CANCEL/DEMO.

#### Before you start...

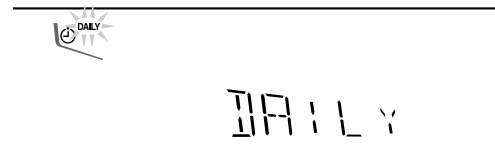
- *When using a VCD as the source to play —*
  - Make sure that a TV is set to turn on at the setting time and the correct input mode is selected.
  - Make sure there is a disc on the selected disc number tray.
- *When using an Audio CD as the source to play —*
  - Make sure there is a disc on the selected disc number tray.
- *When using a tape as the source to play —*
  - Make sure that a tape is in the deck whose deck indicator (A or B) is lit on the display.
  - Make sure that the tape direction is correct.
- *When using tuner as the source to play —*
  - Set the preset stations.
- *When using the external component as the source to play —*
  - Set the timer equipped on the external component at the same time.

### On the unit ONLY:

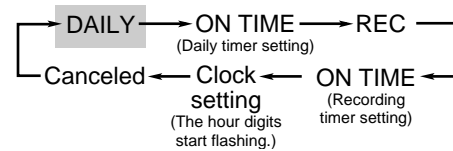
**1 Press CLOCK/TIMER repeatedly until “DAILY” appears on the display.**



☀ indicator lights up and DAILY (Daily Timer) indicator also starts flashing on the display.

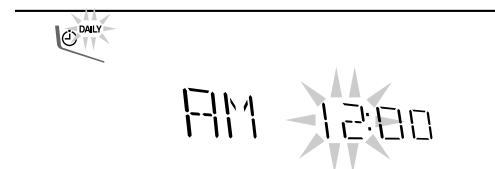


- Each time you press the button, the timer setting modes change as follows:



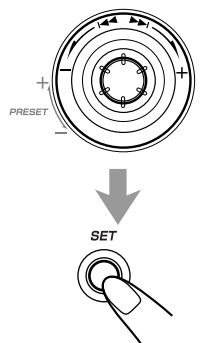
**2 Press CLOCK/TIMER again.**

“ON TIME” appears for 2 seconds on the display, then the unit enters on-time setting mode.



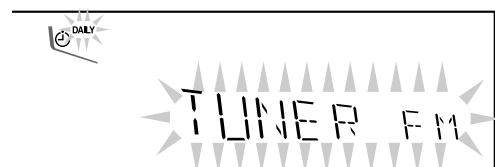
**3 Set the on-time you want the unit to turn on at.**

- 1) Turn ◀◀ / ▶▶ to set the hour, then press SET.
  - 2) Turn ◀◀ / ▶▶ to set the minute, then press SET.
- “OFF TIME” appears for 2 seconds on the display, then the unit enters off-time setting mode.



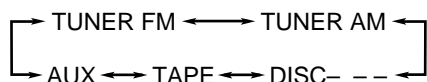
**4 Set the off-time you want the unit to turn off (on standby) at.**

- 1) Turn ◀◀ / ▶▶ to set the hour, then press SET.
  - 2) Turn ◀◀ / ▶▶ to set the minute, then press SET.
- The unit enters source selecting mode.



## 5 Turn **◀◀ / ▶▶** to select the source to play, then press **SET**.

- The source changes as follows:



TUNER FM: tunes into a specified preset FM station.

→ **Go to step 6.**

TUNER AM: tunes into a specified preset AM station.

→ **Go to step 6.**

DISC- - -: plays a disc from a specified title or track of a specified disc. → **Go to step 6.**

TAPE: plays a tape in deck A or B.

→ **Go to step 7.**

AUX: plays an external source. → **Go to step 7.**

## 6 When selecting “TUNER FM” or “TUNER AM”

Turn **◀◀ / ▶▶** to select the preset station number, then press **SET**.

The unit enters volume setting mode.

### When selecting “DISC- - -”

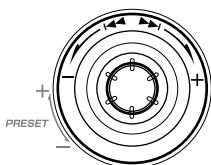
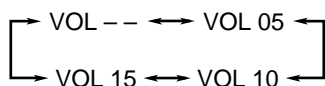
1) Turn **◀◀ / ▶▶** to select the disc number, then press **SET**.

2) Turn **◀◀ / ▶▶** to set the title or track number, then press **SET**.

The unit enters volume setting mode.

## 7 Turn **◀◀ / ▶▶** to set the volume level.

- The volume level changes as follows:



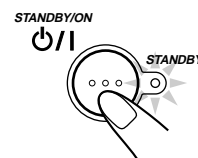
- If you select “VOL - -,” the volume is set to the last level when the unit has been turned off.

## 8 Press **SET** to complete the Daily Timer setting.

The DAILY (Daily Timer) indicator stops flashing and remains lit. The settings you have done are shown on the display in sequence.



## 9 Press **STANDBY/ON** **⏻/⏻** to turn off the unit (on standby) if you have set the Daily Timer with the unit turned on.



**notes** If the unit is turned on when the on-time comes Daily Timer does not work.



**notes** If you select a disc tray loaded a DVD The unit turns on when on-time for Daily Timer comes, but the DVD are not played back.



**notes** Even if you unplug the AC power cord or if a power failure occurs

Once you set the timer, the timer setting may remain stored in memory in a few days. In this case, check whether the timer setting still remains or not.

### To turn off or on Daily Timer after its setting is done

1 Press **CLOCK/TIMER** repeatedly until “DAILY” appears on the display.



2 To turn off the Daily Timer, press **CANCEL/DEMO**.

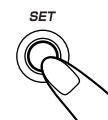
⏻ indicator and the DAILY (Daily Timer) indicator go off from the display (“OFF” appears for a while).



The Daily Timer is canceled, but the setting for the Daily Timer remains in memory.

To turn on the Daily Timer, press **SET**.


⏻ indicator and the DAILY (Daily Timer) indicator light up on the display. The settings you have done are shown on the display in sequence for your confirmation.



## Using Recording Timer

With Recording Timer, you can make a tape of a radio broadcast automatically. You can set the timer whether the system is on or off.

### How Recording Timer actually works

The unit automatically turns on, tunes into the specified station, sets the volume level to "VOL MIN," and starts recording when the on-time comes (the  indicator continues flashing while the timer is operating). Then, when the off-time comes ("OFF" flashes just before the off-time), the unit automatically turns off (on standby).


The timer setting remains in memory until you change it.

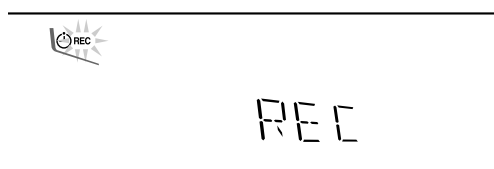
- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 2 again.
- To correct a mis-entry while setting the timer, press CANCEL/DEMO.

### On the unit ONLY:

#### 1 Put a recordable cassette into deck B.

#### 2 Press CLOCK/TIMER repeatedly until "REC" appears on the display.

 indicator lights up and the REC (Recording Timer) indicator also starts flashing on the display.

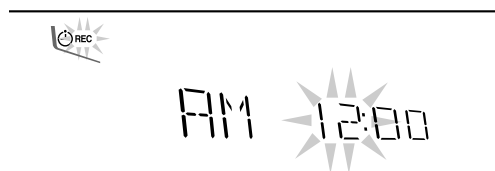


- Each time you press the button, the timer setting modes change as follows:







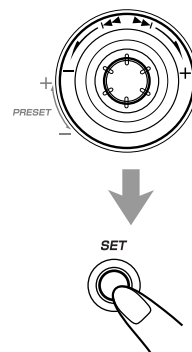
#### 3 Press CLOCK/TIMER again.

"ON TIME" appears for 2 seconds on the display, then the unit enters on-time setting mode.







#### 4 Set the on-time you want the unit to turn on at.





- 1) Turn  /  to set the hour, then press SET.
  - 2) Turn  /  to set the minute, then press SET.
- "OFF TIME" appears for 2 seconds on the display, then the unit enters off-time setting mode.



#### 5 Set the off-time you want the unit to turn off (on standby) at.

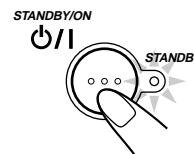
- 1) Turn  /  to set the hour, then press SET.
  - 2) Turn  /  to set the minute, then press SET.
- The unit enters preset station selecting mode.


#### 6 Select the preset station.

- 1) Turn  /  to select the band ("TUNER FM" or "TUNER AM"), then press SET.
- 2) Turn  /  to select a preset channel number, then press SET.

The REC (Recording Timer) indicator stops flashing and remains lit. The settings you have done are shown on the display in sequence.

#### 7 Press STANDBY/ON to turn off the unit (on standby) if necessary.



**If you want to listen to another source while recording**  
Press REC START/STOP or  to stop recording. Without stopping it, you cannot change the source.



**Even if you unplug the AC power cord or if a power failure occurs**

Once you set the timer, the timer setting may remain stored in memory in a few days. In this case, check whether the timer setting still remains or not.





To turn off or on Recording Timer after its setting is done

1 Press **CLOCK/TIMER** repeatedly until “REC” appears on the display.



2 To turn off the Recording Timer, press **CANCEL/DEMO**.

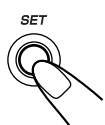


⊖ indicator and the REC (Recording Timer) indicator go off from the display (“OFF” appears for a while).



The Recording Timer is canceled, but the setting for the Recording Timer remains in memory.

To turn on the Recording Timer, press **SET**.



⊖ indicator and the REC (Recording Timer) indicator light up on the display. The settings you have done are shown on the display in sequence for your confirmation.

## Using Sleep Timer

With Sleep Timer, you can fall asleep to sound. You can set Sleep Timer only while the unit is turned on.

### How Sleep Timer actually works

The unit automatically turns off after the specified time length passes.

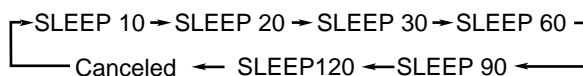
### On the remote control ONLY:

1 Press **SLEEP**.

The time length until the shut-off time appears and the SLEEP indicator starts flashing on the display.



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



2 Wait for about 5 seconds after specifying the time length.

The SLEEP indicator stops flashing and remains lit.

To check the remaining time until the shut-off time, press SLEEP once so that the remaining time until the shut-off time appears for about 5 seconds.

To change the shut-off time, press SLEEP repeatedly until the desired time length appears on the display.

To cancel the setting, press SLEEP repeatedly so that the SLEEP indicator goes off.

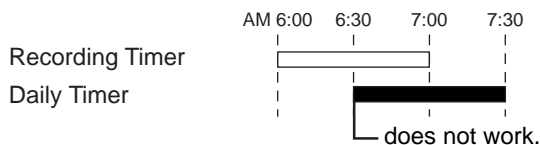
- Sleep Timer is also canceled when you turn off the unit.

## Timer Priority

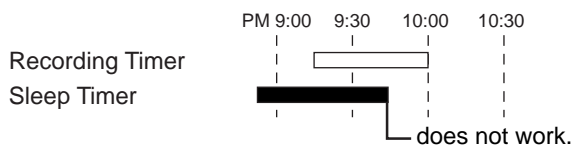
Since each timer can be set separately, you may wonder what happens if the setting for these timers overlaps. Here are examples.

### Recording Timer has priority over Daily Timer and Sleep Timer.

- If Daily Timer is set to come on while Recording Timer is operating, Daily Timer will not come on at all.



- If Recording Timer is set to come on while Sleep Timer is operating, Sleep Timer will not work (the SLEEP indicator does not go off).



# Using AV COMPU LINK Control System



The AV COMPU LINK control system allows you to use JVC's TV with simple operations.

To use AV COMPU LINK control system, you need to connect this unit and a TV through the AV COMPU LINK terminals.

- You can connect a TV that have AV COMPU LINK II or AV COMPU LINK EX terminals.

## AV COMPU LINK Connection

Connect a TV by using a video cord (see page 9) then also connect it by using a cord with monaural mini-plugs (not supplied).

- You need to set "AV COMPULINK MODE" correctly to use AV COMPU LINK control system (see page 36).

## Available operations

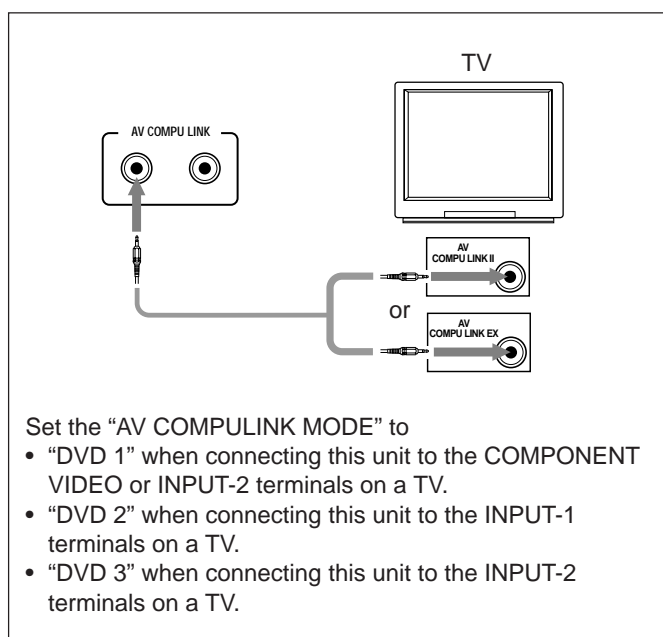
You can use following functions by using AV COMPU LINK control system.

### Automatic power on/off

The connected TV turns on and off along with this unit. When you turn on the unit the connected TV automatically turns on and changes the input mode to the appropriate position. Also when you turn off the unit, the connected TV automatically turns off.

### One-touch disc play

Simply by inserting or playing back a disc, you can enjoy the playback view on the TV without setting other switches manually.



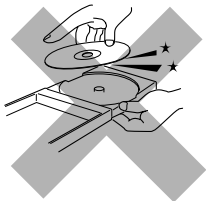
# Appendix A—Maintenance

To get the best performance of the unit, keep your discs, tapes, and mechanism clean.

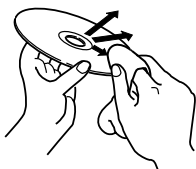
## Handling discs



- Remove the disc from its case by holding it at the edge while pressing the center hole lightly.
- Do not touch the shiny surface of the disc, or bend the disc.
- Put the disc back in its case after use to prevent warping.



- Be careful not to scratch the surface of the disc when placing it back in its case.
- Avoid exposure to direct sunlight, temperature extremes, and moisture.



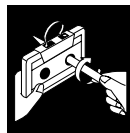
### To clean the disc

Wipe the disc with a soft cloth in a straight line from center to edge.



DO NOT use any solvent — such as conventional record cleaner, spray, thinner, or benzine — to clean the disc.

## Handling cassette tapes



- If the tape is loose in its cassette, take up the slack by inserting a pencil in one of the reels and rotating.
- If the tape is loose, it may get stretched, cut, or caught in the cassette.



- Be careful not to touch the tape surface.



- Avoid the following places to store the tape:
  - In dusty places
  - In direct sunlight or heat
  - In moist areas
  - Near a magnet

## Cleaning the unit

### • Stains on the unit

Should be wiped off with a soft cloth. If the unit is heavily stained, wipe it with a cloth soaked in water diluted neutral detergent and wrung well, then wipe clean with a dry cloth.

### • Since the unit may deteriorate in quality, become damaged or get its paint peeled off, be careful about the followings.

- DO NOT wipe it with a hard cloth.
- DO NOT wipe it strong.
- DO NOT wipe it with thinner or benzine.
- DO NOT apply any volatile substance such as insecticides to it.
- DO NOT allow any rubber or plastic to remain in contact with it for a long time.

# Appendix B—Troubleshooting

If you are having a problem with your unit, check this list for a possible solution before calling for service.

If you cannot solve the problem from the hints given here, or the unit has been physically damaged, call a qualified person, such as your dealer, for service.

Symptom	Cause	Action
Unable to cancel the display demonstration.	Other buttons are pressed to cancel the display demonstration.	Press CANCEL/DEMO on the unit. (See page 9.)
No sound is heard.	<ul style="list-style-type: none"> <li>• Connections are incorrect or loose.</li> <li>• You are playing a disc encoded with DTS Digital Surround.</li> </ul>	<ul style="list-style-type: none"> <li>• Check all connections and make corrections. (See pages 6 to 9.)</li> <li>• This unit cannot output DTS sound without connecting a decoder compatible with DTS Digital Surround (with “DIGITAL AUDIO OUTPUT” to “STREAM/PCM”—See page 33.)</li> </ul>
Hard to listen to broadcasts because of noise.	<ul style="list-style-type: none"> <li>• Antennas are disconnected.</li> <li>• The AM loop antenna is too close to the unit.</li> <li>• The FM antenna is not properly extended and positioned.</li> </ul>	<ul style="list-style-type: none"> <li>• Reconnect the antennas correctly and securely.</li> <li>• Change the position and direction of the AM loop antenna.</li> <li>• Extend the FM antenna at the best position.</li> </ul>
The disc sound is discontinuous.	The disc is scratched or dirty.	Clean or replace the disc. (See page 43.)
The disc tray does not open or close.	<ul style="list-style-type: none"> <li>• The AC power cord is not plugged in.</li> <li>• Trays are locked.</li> </ul>	<ul style="list-style-type: none"> <li>• Plug the AC power cord.</li> <li>• Unlock the trays. (See page 19.)</li> </ul>
The disc does not play.	The disc is placed upside down.	Place the disc with the label side up.
No picture appears on the screen.	<ul style="list-style-type: none"> <li>• The video cord is not connected correctly.</li> <li>• An incorrect input has been selected on the TV or monitor.</li> <li>• Incorrect output mode is selected.</li> </ul>	<ul style="list-style-type: none"> <li>• Connect the video cord correctly.</li> <li>• Select the correct input on the TV or monitor.</li> <li>• Press and hold <b>■</b> until “SOUT” appears on the display.</li> </ul>
DVD does not playback.	Parental lock is in used.	Unlock the parental lock. (See page 37.)
The left and right edges of the picture are missing on the screen.	“4:3 PS <input type="checkbox"/> ” is selected when viewing on a conventional TV (aspect ratio 4:3).	Select “4:3 LB <input type="checkbox"/> .
No subtitle appears on the display though you have selected the initial subtitle language.	_____	Some DVDs are programed to always display no subtitle initially. If this happens, press SUBTITLE on the remote control after starting play. (See page 33.)
Audio language is different from the one you have selected as the initial audio language.	_____	Some DVDs are programed to always use the original language initially. If this happens, press AUDIO while holding down SHIFT on the remote control after starting play. (See page 33.)
Impossible to record.	Small tabs on the top of the cassette are removed.	Cover the holes with adhesive tape.
Operations are disabled.	The built-in microprocessor may malfunction due to external electrical interference.	Unplug the AC power cord and then plug it back in.
Unable to operate the unit from the remote control.	<ul style="list-style-type: none"> <li>• The path between the remote control and the remote sensor on the unit is blocked.</li> <li>• The batteries are exhausted.</li> </ul>	<ul style="list-style-type: none"> <li>• Remove the obstruction.</li> <li>• Replace the batteries.</li> </ul>

# Appendix C—Output Signals Through the OPTICAL DIGITAL OUTPUT Terminal

They differ according to the “DIGITAL AUDIO OUTPUT” setting (see page 33).

DIGITAL AUDIO OUT Playback disc	Output Signals		
	STREAM/PCM	DOLBY DIGITAL/PCM	PCM ONLY
DVD with 48 kHz, Linear PCM	48 kHz, Linear PCM	48 kHz, Linear PCM	48 kHz, Linear PCM
with 96 kHz, Linear PCM	48 kHz, Linear PCM	48 kHz, Linear PCM	48 kHz, Linear PCM
with Dolby Digital	Dolby Digital bitstream	Dolby Digital bitstream	48 kHz, Linear PCM
with DTS Digital Surround	DTS bitstream	48 kHz, Linear PCM	48 kHz, Linear PCM
Video CD, Audio CD	44.1 kHz, 16 bit Linear PCM	44.1 kHz, 16 bit Linear PCM	44.1 kHz, 16 bit Linear PCM
Audio CD with DTS	DTS bitstream	44.1 kHz, 16 bit Linear PCM	44.1 kHz, 16 bit Linear PCM

# Appendix D—Channel Display

Current outputting channel appears on the display when you press DISPLAY on the unit (see page 15).

## DOLBY AC-3

Display	LFE	Channel
1/0 CH		C ONLY
1/0.1 CH	ON	C ONLY
2/0 CH		L/R
2/0.1 CH	ON	L/R
2/0 CH		L/R (L0/R0) down-mix
2/0.1 CH	ON	L/R (L0/R0) down-mix
2/0 CH		L/R/S (Lt/Rt) down-mix
2/0.1 CH	ON	L/R/S (Lt/Rt) down-mix
3/0 CH		L/C/R
3/0.1 CH	ON	L/C/R
2/1 CH		L/R/S
2/1.1 CH	ON	L/R/S
3/1 CH		L/C/R/S
3/1.1 CH	ON	L/C/R/S
2/2 CH		L/R/LS/RS
2/2.1 CH	ON	L/R/LS/RS
3/2 CH		LCR/LS/RS
3/2.1 CH	ON	LCR/LS/RS

## Linear PCM and DTS

Display	Channel
1 CH	Monoral
2 CH	2 ch stereo
3 CH	3 ch
4 CH	4 ch
5 CH	5 ch
6 CH	6 ch
7 CH	7 ch
8 CH	8 ch



# Appendix E—Language Code for On-Screen Menu

This code list is used when you select a language of on-screen menus (see page 33).

Code	Language	Code	Language	Code	Language
AA	Afar	IK	Inupiak	RN	Kirundi
AB	Abkhazian	IN	Indonesian	RO	Rumanian
AF	Afrikaans	IS	Icelandic	RU	Russian
AM	Ameharic	IW	Hebrew	RW	Kinyarwanda
AR	Arabic	JI	Yiddish	SA	Sanskrit
AS	Assamese	JW	Javanese	SD	Sindhi
AY	Aymara	KA	Georgian	SG	Sangho
AZ	Azerbaijani	KK	Kazakh	SH	Serbo-Croatian
BA	Bashkir	KL	Greenlandic	SI	Singhalese
BE	Byelorussian	KM	Cambodian	SK	Slovak
BG	Bulgarian	KN	Kannada	SL	Slovenian
BH	Bihari	KO	Korean (KOR)	SM	Samoan
BI	Bislama	KS	Kashmiri	SN	Shona
BN	Bengali, Bangla	KU	Kurdish	SO	Somali
BO	Tibetan	KY	Kirghiz	SQ	Albanian
BR	Breton	LA	Latin	SR	Serbian
CA	Catalan	LN	Lingala	SS	Siswati
CO	Corsican	LO	Laothian	ST	Sesotho
CS	Czech	LT	Lithuanian	SU	Sundanese
CY	Welsh	LV	Latvian, Lettish	SV	Swedish
DA	Danish	MG	Malagasy	SW	Swahili
DZ	Bhutani	MI	Maori	TA	Tamil
EL	Greek	MK	Macedonian	TE	Telugu
EO	Esperanto	ML	Malayalam	TG	Tajik
ET	Estonian	MN	Mongolian	TH	Thai
EU	Basque	MO	Moldavian	TI	Tigrinya
FA	Persian	MR	Marathi	TK	Turkmen
FI	Finnish	MS	Malay (MAY)	TL	Tagalog
FJ	Fiji	MT	Maltese	TN	Setswana
FO	Faroese	MY	Burmese	TO	Tonga
FY	Frisian	NA	Nauru	TR	Turkish
GA	Irish	NE	Nepali	TS	Tsonga
GD	Scots Gaelic	NL	Dutch	TT	Tatar
GL	Galician	NO	Norwegian	TW	Twi
GN	Guarani	OC	Occitan	UK	Ukrainian
GU	Gujarati	OM	(Afan) Oromo	UR	Urdu
HA	Hausa	OR	Oriya	UZ	Uzbek
HI	Hindi	PA	Panjabi	VI	Vietnamese
HR	Croatian	PL	Polish	VO	Volapuk
HU	Hungarian	PS	Pashto, Pushto	WO	Wolof
HY	Armenian	PT	Portuguese	XH	Xhosa
IA	Interlingua	QU	Quechua	YO	Yoruba
IE	Interlingue	RM	Rhaeto-Romance	ZU	Zulu

# Appendix F—Country Code for Parental Lock

This code list is used when you set a country code for parental lock (see page 37).

Code	Language	Code	Language	Code	Language
AD	Andorra	CM	Cameroon	GR	Greece
AE	United Arab Emirates	CN	China	GS	South Georgia and the South Sandwich Islands
AF	Afghanistan	CO	Colombia	GT	Guatemala
AG	Antigua and Barbuda	CR	Costa Rica	GU	Guam
AI	Anguilla	CU	Cuba	GW	Guinea-Bissau
AL	Albania	CV	Cape Verde	GY	Guyana
AM	Armenia	CX	Christmas Island	HK	Hong Kong
AN	Netherlands Antilles	CY	Cyprus	HM	Heard Island and McDonald Islands
AO	Angola	CZ	Czech Republic	HN	Honduras
AQ	Antarctica	DE	Germany	HR	Croatia
AR	Argentina	DJ	Djibouti	HT	Haiti
AS	American Samoa	DK	Denmark	HU	Hungary
AT	Austria	DM	Dominica	ID	Indonesia
AU	Australia	DO	Dominican Republic	IE	Ireland
AW	Aruba	DZ	Algeria	IL	Israel
AZ	Azerbaijan	EC	Ecuador	IN	India
BA	Bosnia and Herzegovina	EE	Estonia	IO	British Indian Ocean Territory
BB	Barbados	EG	Egypt	IQ	Iraq
BD	Bangladesh	EH	Western Sahara	IR	Iran (Islamic Republic of)
BE	Belgium	ER	Eritrea	IS	Iceland
BF	Burkina Faso	ES	Spain	IT	Italy
BG	Bulgaria	ET	Ethiopia	JM	Jamaica
BH	Bahrain	FI	Finland	JO	Jordan
BI	Burundi	FJ	Fiji	JP	Japan
BJ	Benin	FK	Falkland Islands (Malvinas)	KE	Kenya
BM	Bermuda	FM	Micronesia (Federated States of)	KG	Kyrgyzstan
BN	Brunei Darussalam	FO	Faroe Islands	KH	Cambodia
BO	Bolivia	FR	France	KI	Kiribati
BR	Brazil	FX	France, Metropolitan	KM	Comoros
BS	Bahamas	GA	Gabon	KN	Saint Kitts and Nevis
BT	Bhutan	GB	United Kingdom	KP	Korea, Democratic People's Republic of
BV	Bouvet Island	GD	Grenada	KR	Korea, Republic of
BW	Botswana	GE	Georgia	KW	Kuwait
BY	Belarus	GF	French Guiana	KY	Cayman Islands
BZ	Belize	GH	Ghana	KZ	Kazakhstan
CA	Canada	GI	Gibraltar	LA	Lao People's Democratic Republic
CC	Cocos (Keeling) Islands	GL	Greenland	LB	Lebanon
CF	Central African Republic	GM	Gambia	LC	Saint Lucia
CG	Congo	GN	Guinea		
CH	Switzerland	GP	Guadeloupe		
CI	Côte d'Ivoire	GQ	Equatorial Guinea		
CK	Cook Islands				
CL	Chile				

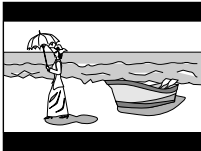
Code	Language	Code	Language	Code	Language
LI	Liechtenstein	PE	Peru	TJ	Tajikistan
LK	Sri Lanka	PF	French Polynesia	TK	Tokelau
LR	Liberia	PG	Papua New Guinea	TM	Turkmenistan
LS	Lesotho	PH	Philippines	TN	Tunisia
LT	Lithuania	PK	Pakistan	TO	Tonga
LU	Luxembourg	PL	Poland	TP	East Timor
LV	Latvia	PM	Saint Pierre and Miquelon	TR	Turkey
LY	Libyan Arab Jamahiriya			TT	Trinidad and Tobago
MA	Morocco	PN	Pitcairn	TV	Tuvalu
MC	Monaco	PR	Puerto Rico	TW	Taiwan, Province of China
MD	Moldova, Republic of	PT	Portugal		
MG	Madagascar	PW	Palau	TZ	Tanzania, United Republic of
MH	Marshall Islands	PY	Paraguay		
ML	Mali	QA	Qatar	UA	Ukraine
MM	Myanmar	RE	Réunion	UG	Uganda
MN	Mongolia	RO	Romania	UM	United States Minor Outlying Islands
MO	Macau	RU	Russian Federation		
MP	Northern Mariana Islands	RW	Rwanda	US	United States
		SA	Saudi Arabia	UY	Uruguay
MQ	Martinique	SB	Solomon Islands	UZ	Uzbekistan
MR	Mauritania	SC	Seychelles	VA	Vatican City State (Holy See)
MS	Montserrat	SD	Sudan		
MT	Malta	SE	Sweden	VC	Saint Vincent and the Grenadines
MU	Mauritius	SG	Singapore		
MV	Maldives	SH	Saint Helena	VE	Venezuela
MW	Malawi	SI	Slovenia	VG	Virgin Islands (British)
MX	Mexico	SJ	Svalbard and Jan Mayen	VI	Virgin Islands (U.S.)
MY	Malaysia	SK	Slovakia	VN	Viet Nam
MZ	Mozambique	SL	Sierra Leone	VU	Vanuatu
NA	Namibia	SM	San Marino	WF	Wallis and Futuna Islands
NC	New Caledonia	SN	Senegal		
NE	Niger	SO	Somalia	WS	Samoa
NF	Norfolk Island	SR	Suriname	YE	Yemen
NG	Nigeria	ST	Sao Tome and Principe	YT	Mayotte
NI	Nicaragua	SV	El Salvador	YU	Yugoslavia
NL	Netherlands	SY	Syrian Arab Republic	ZA	South Africa
NO	Norway	SZ	Swaziland	ZM	Zambia
NP	Nepal	TC	Turks and Caicos Islands	ZR	Zaire
NR	Nauru	TD	Chad	ZW	Zimbabwe
NU	Niue	TF	French Southern Territories		
NZ	New Zealand				
OM	Oman	TG	Togo		
PA	Panama	TH	Thailand		

# Appendix G—Glossary

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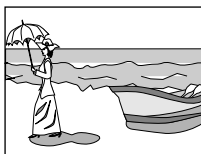
## 4:3 Letter Box screen

This is one method for displaying a wide screen picture on a conventional sized (4:3) TV. While viewing a wide screen picture, the black bars appear on the top and the bottom of the screen.



## 4:3 Pan-Scan screen

This is one method for displaying a wide screen picture on a conventional sized (4:3) TV. While viewing a wide screen picture, the left and right edges of the pictures will not be shown on the screen.



## Dolby Digital

This is a digital audio compression technology that was developed by Dolby Laboratories. Dolby Digital encoding method (so-called discrete 5.1 channel digital audio format) records and compresses the left front channel, right front channel, center channel, left rear channel, right rear channel, and LFE channel (total 6 channels, but LFE channel is counted as 0.1 channel, therefore called 5.1 channels) signals digitally. Each channel is completely independent from other channel signals to avoid interference, therefore, you can obtain much better sound quality with stereo and surround effects. To reproduce these original surround signals, you need to connect an amplifier or a decoder compatible with Dolby Digital.

## DTS Digital Surround

Another discrete 5.1 channel digital audio format, available on CD, LD, and DVD software, developed by Digital Theater Systems, Inc. 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.

To reproduce these surround signals, you need to connect an amplifier or a decoder compatible with DTS Digital Surround.

## Linear PCM

This is a digital recording format that is used for audio CDs.

## Playback Control (VCD)

When a VCD has the PBC (Playback Control) function, you can enjoy menu-driven operations and high-resolution still pictures.

## Sampling Frequency, Quantization Bits

When analog signals are converted into digital signals, they are divided into many points and digitized. This dividing method is called “sampling.” The sampling frequency indicates how many points one second is divided into – for example, for CD sound, one second is divided into 44100 points since its sampling frequency is 44.1 kHz. On the other hand, the number of quantization bits indicates the volume size used to memorize each divided point. The larger this number is, the clearer the sound can be reproduced.

## Titles and Chapters (DVD)

A DVD is divided into several titles (large divisions), and each title is divided into chapters (smaller divisions). These divisions are assigned their particular numbers, so that they are easily accessed.

## Tracks (VCD, CD)

VCDs and CDs are divided into tracks. Each track has its own number so that it is easily accessed.

# Specifications

Design and specifications are subject to change without notice.

## MX-DVA9

### Amplifier section — CA-MXDVA9

#### Output Power

##### FRONT SUBWOOFERS:

100 W per channel, min. RMS, driven into 6  $\Omega$  at 63 Hz with no more than 10% total harmonic distortion.

##### MAIN SPEAKERS:

55 W per channel, min. RMS, driven into 6  $\Omega$  at 1 kHz with no more than 10% total harmonic distortion.

##### SURROUND (REAR and CENTER) SPEAKERS:

30 W per channel, min. RMS, driven into 16  $\Omega$  at 1 kHz with no more than 10% total harmonic distortion.

#### Audio input sensitivity/Impedance

(Measured at 1 kHz, with tape recording signal 300 mV)

AUX: 410 mV/50 k $\Omega$

#### Audio output level

AUX: 290 mV

#### Dolby Digital 5.1ch subwoofer (LFE) output level

(measured when playing Dolby Digital 5.1ch track with LFE of 30 Hz at 0 dBFS)

SUB-WOOFER 5.1ch OUT: 205 mV

#### Digital output: OPTICAL DIGITAL OUTPUT

Signal wave length: 660 nm

Output level: -15 dBm to -12 dBm

#### VIDEO OUT

VIDEO: 1 V(p-p)/75  $\Omega$

##### S-VIDEO:

Y (luminance) 1 V(p-p)/75  $\Omega$

C (chrominance, burst) 0.286 V(p-p)/75  $\Omega$

#### Speakers/Impedance

FRONT SUBWOOFERS: 6  $\Omega$  – 16  $\Omega$

MAIN SPEAKERS: 6  $\Omega$  – 16  $\Omega$

SURROUND SPEAKERS: 16  $\Omega$  – 32  $\Omega$

### Tuner

FM tuning range: 87.5 MHz – 108.0 MHz

AM tuning range: 530 kHz – 1 710 kHz

### DVD player

Disc capacity: 3 discs

Readable disc: DVD Video, Video CD, Audio CD, CD-R, CD-RW

Video format: NTSC

#### Frequency response

DVD, fs=48 kHz: 16 Hz to 22 000 Hz

DVD, fs=96 kHz: 16 Hz to 44 000 Hz

CD, VCD: 16 Hz to 20 000 Hz

Dynamic range: 85 dB

Signal-to-noise ratio: 90 dB

Wow and flutter: Immeasurable

### Cassette deck

#### Frequency response

Normal (type I): 50 Hz – 14 000 Hz

Wow and flutter: 0.15% (WRMS)

### General

Power requirement: AC 120 V  $\sim$ , 60 Hz

Power consumption: 210 W/250 VA (at operation)

33 W (on standby)

Dimensions (approx.): 265 mm x 335 mm x 401 mm (W/H/D)

(10<sup>7</sup>/<sub>16</sub> in. x 13<sup>1</sup>/<sub>4</sub> in. x 15<sup>13</sup>/<sub>16</sub> in.)

Mass (approx.): 10.3 kg (22.8 lbs)

### Supplied accessories

See page 6.

### Speaker section

#### Front speakers: SP-MXG79

Type: 3-Way 3-Speaker Bass-Reflex type  
Twin Hyper Power-Drive Subwoofer  
(Magnetically-shielded type)

Speaker units: Subwoofer: 14 cm (5<sup>9</sup>/<sub>16</sub> in.) cone x1  
Woofers: 16 cm (6<sup>5</sup>/<sub>16</sub> in.) cone x1  
Tweeter: 5 cm (2 in.) dome x1

#### Power handling capacity:

Subwoofer: 110 W

Main speaker: 55 W

Impedance: Subwoofer: 6  $\Omega$

Main speaker: 6  $\Omega$

Frequency range: Subwoofer: 29 Hz – 310 Hz

Main speaker: 70 Hz – 32 000 Hz

Sound pressure level: Subwoofer: 76 dB/W•m

Main speaker: 87 dB/W•m

Dimensions (approx.): 286 mm x 335 mm x 365 mm (W/H/D)  
(11<sup>5</sup>/<sub>16</sub> in. x 13<sup>1</sup>/<sub>4</sub> in. x 14<sup>3</sup>/<sub>8</sub> in.)

Mass (approx.): 6.3 kg (13.9 lbs) each

#### Center speaker: SP-DSC99TN

Type: Full Range Bass-Reflex type  
(Magnetically-shielded type)

Speaker unit: 8 cm (3<sup>3</sup>/<sub>16</sub> in.) cone x1

Power handling capacity: 30 W

Impedance: 16  $\Omega$

Frequency range: 70 Hz – 25 000 Hz

Sound pressure level: 84 dB/W•m

Dimensions (approx.): 245 mm x 110 mm x 145 mm (W/H/D)  
(9<sup>11</sup>/<sub>16</sub> in. x 4<sup>3</sup>/<sub>8</sub> in. x 5<sup>3</sup>/<sub>4</sub> in.)

Mass (approx.): 0.8 kg (1.8 lbs)

#### Rear speakers: SP-DSS99TN

Type: Full Range Bass-Reflex type

Speaker unit: 8 cm (3<sup>3</sup>/<sub>16</sub> in.) cone x1

Power handling capacity: 30 W

Impedance: 16  $\Omega$

Frequency range: 85 Hz – 20 000 Hz

Sound pressure level: 82 dB/W•m

Dimensions (approx.): 160 mm x 110 mm x 136 mm (W/H/D)  
(6<sup>5</sup>/<sub>16</sub> in. x 4<sup>3</sup>/<sub>8</sub> in. x 5<sup>3</sup>/<sub>8</sub> in.)

Mass (approx.): 0.55 kg (1.3 lbs) each

# Authorized Service Centers ---

QUALITY **JVC**<sup>®</sup> SERVICE

*HOW TO LOCATE YOUR JVC SERVICE CENTER*

**TOLL FREE: 1 (800) 537-5722**

**<http://www.jvc.com>**

Dear Customer,

In order to receive the most satisfaction from your purchase, please read the instruction booklet before operating the unit. In the event that repairs are necessary, please call 1 (800)537-5722 for your nearest authorized servicer or visit our website at **[www.JVC.com](http://www.JVC.com)**

Remember to retain your Bill of Sale for Warranty Service.

---

**Do not service the television yourself**

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## **Caution**

To prevent electrical shock, do not open the cabinet. There are no user serviceable parts inside. Please refer to qualified service personnel for repairs.

## **Accessories**

To purchase accessories for your JVC product, please call toll free: 1 (800)882-2345 or on the web at **[www.JVC.com](http://www.JVC.com)**

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# LIMITED WARRANTY

AUDIO-1

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 MATERIALS AND WORKMANSHIP from the date of original retail purchase for the period as shown below. ("The Warranty Period")

PARTS	<b>1 YR</b>	LABOR	<b>1 YR</b>
-------	-------------	-------	-------------

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 a 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 that 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 lasts, 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.

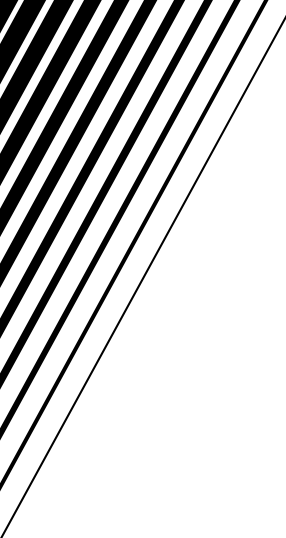
JVC COMPANY OF AMERICA                      1700 Valley Road  
 DIVISION OF JVC AMERICAS CORP.            Wayne, NJ 07470

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. which is located either on the rear, bottom or side of the cabinet. Retain this information for future reference.

Model No. : \_\_\_\_\_ Serial No. : \_\_\_\_\_  
 Purchase data : \_\_\_\_\_ Name of dealer : \_\_\_\_\_



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