

JVC

English

中文

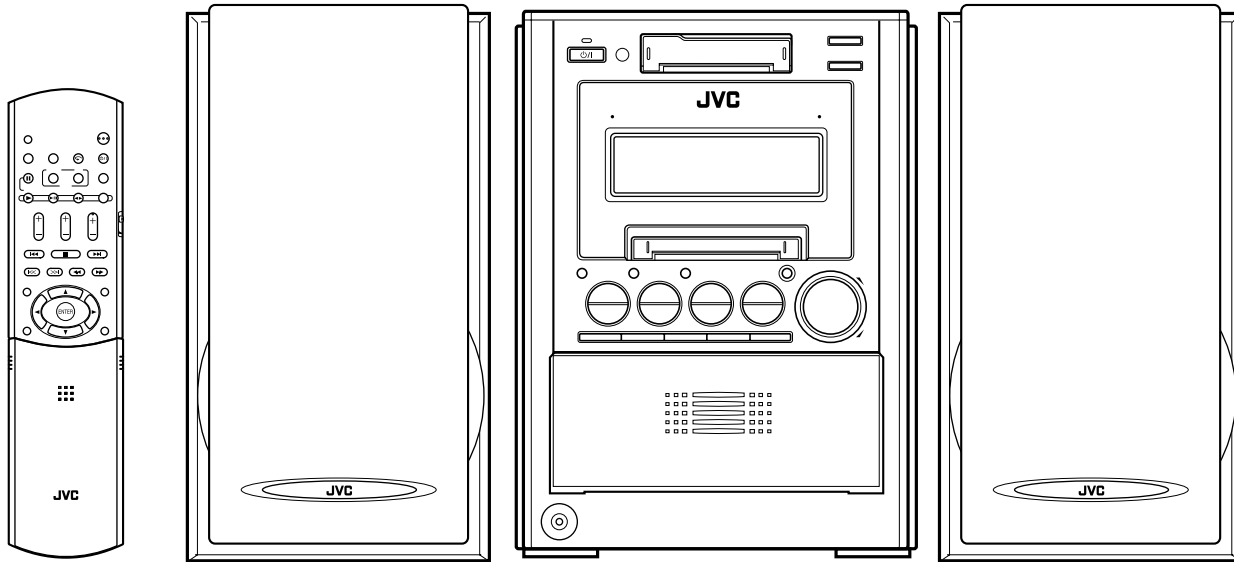
MICRO COMPONENT MD SYSTEM

MD 微型组合音响

UX-J99DVD

—Consists of CA-UXJ99DVD and SP-UXJ99DVD

—由 **CA-UXJ99DVD** 及 **SP-UXJ99DVD** 组成



MDLP



Digital Direct Progressive Scan


INSTRUCTIONS

使用说明书

Warnings, Cautions and Others

警告，注意及其他须知事项


CAUTION— button!

Disconnect the mains plug to shut the power off completely (the STANDBY/ON lamp goes off). The  button in any position does not disconnect the mains line.

- When the unit is on standby, the STANDBY/ON lamp lights red.
- When the unit is turned on, the STANDBY/ON lamp lights green.

The power can be remote controlled.

注意— 开关！

无论  开关在任何位置，电源线的电源还是没有被切断，若要将电源完全关闭，应把电源插头拔离插座（STANDBY/ON 灯熄灭）。

- 当主机正处于备用状态，STANDBY/ON 灯为红色。
- 当主机开启后，STANDBY/ON 灯为绿色。

电源开关可用遥控器控制。

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.

注意

为了减少触电，火灾等危险：

1. 请勿擅自卸下螺丝钉，盖子或机壳。
2. 请勿让本机受雨淋或置潮湿环境中。

CAUTION

- Do not block the ventilation openings or holes. (If the ventilation openings or holes are blocked by a newspaper or cloth, etc., the heat may not be able to get out.)
- Do not place any naked flame sources, such as lighted candles, on the apparatus.
- When discarding batteries, environmental problems must be considered and local rules or laws governing the disposal of these batteries must be followed strictly.
- Do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

注意

- 请勿堵塞通风口或通风孔。
(如果通风口或通风孔被报纸或布等堵塞，热量将无法散出。)
- 请勿在本设备上放置任何裸露的火源，如点燃的蜡烛。
- 处理废弃电池时，必须考虑环境问题，并严格遵守当地关于处理废弃电池的有关法律或规定。
- 切勿将本装置暴露于雨水所及、潮湿、滴水或易于溅起水花的地方，亦不要将任何装满液体的物件（如花瓶）放置在本装置上。

Caution: Proper Ventilation

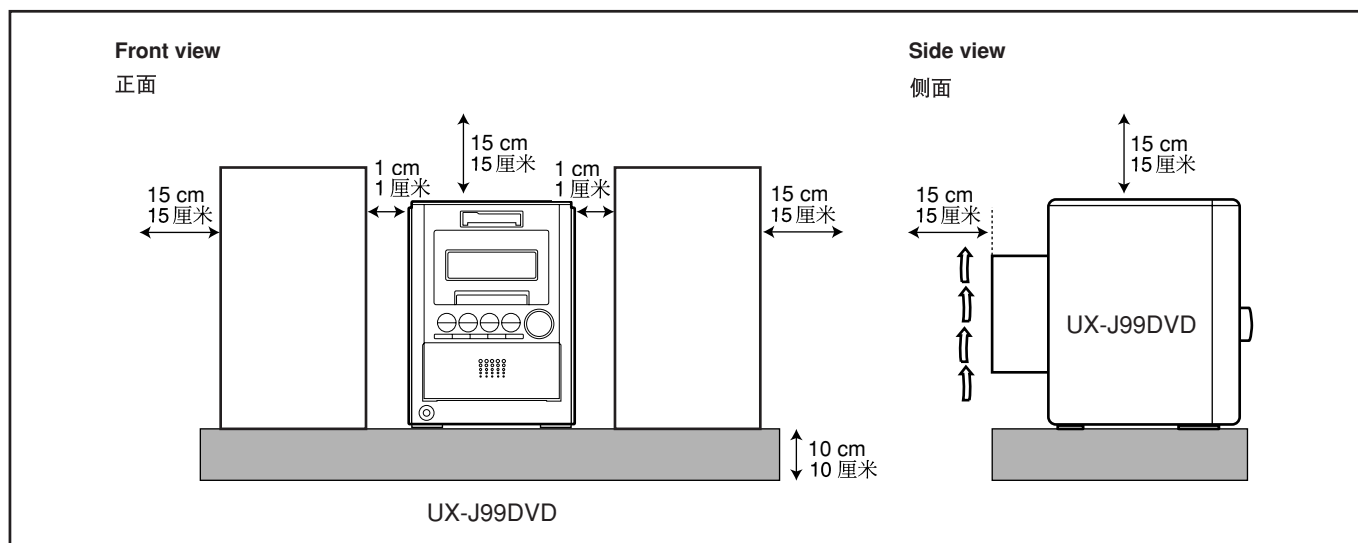
To avoid risk of electric shock and fire, and to prevent damage, locate the apparatus as follows:

- 1 Front: No obstructions and open spacing.
- 2 Sides/ Top/ Back: No obstructions should be placed in the areas shown by the dimensions below.
- 3 Bottom: Place on the level surface. Maintain an adequate air path for ventilation by placing on a stand with a height of 10 cm or more.

注意：正确通风

为免发生触电和火警的危险，及防止本机受损，请将本机如下放置：

1. 前面： 没有障碍物及地方开阔。
2. 侧面/顶面/背面： 在图中所示范围中，不应放置任何障碍物。
3. 底部： 放置在水平面上。放置在一个高 10 厘米或以上的台上，以保持足够的通风道。



IMPORTANT FOR LASER PRODUCTS

1. CLASS 1 LASER PRODUCT
2. **CAUTION:** Do not open the top cover. There are no user serviceable parts inside the unit; leave all servicing to qualified service personnel.
3. **CAUTION:** Visible and invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
4. REPRODUCTION OF LABEL: CAUTION LABEL, PLACED INSIDE THE UNIT.

镭射产品的重要说明

1. 一级镭射产品。
2. **注意：**请勿打开顶盖板，本机内部没有用户可自行维修的部件；所有维修工作应由有资格的人员完成。
3. **注意：**当内部锁定装置失效或者损坏后，打开盖板可能会产生可见或不可见的镭射辐射。应避免受到镭射光束的直接照射。
4. 标签的复制标示：注意标签位于机内。

CAUTION: Visible and invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (e)

WARNING: Synlig och osynlig laserstrålning när den öppnas och spärren är urkopplad. Beträkta ej strålen. (s)

ADVASEL: Synlig og usynlig laserstrålning når maskinen er åben eller interlocken fejler. Undgå direkte eksponering til stråling. (d)

VARO: Avattaessa ja suojalukitus ohitettuna tai viallisenä olet alltiina näkyvälle ja näkymättömälle lasersäteilylle. Vältä säteen kohdistumista suoraan itseesi. (f)

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:

- This manual mainly explains operations using the buttons on the remote control. You can use the buttons both on the remote control and on the unit for the same operations if they have the same or similar names (or marks), unless mentioned otherwise.
- Basic and common information that is the same for many functions is grouped in one place, and is not repeated for 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 “Basic and Common Operations” on pages 10 to 12.
- The following symbols are used in this manual:



Gives you warning and caution to prevent damage or risk of fire/electric shock.

In addition, we put information here about conditions which will prevent getting the best possible performance from the unit.



Gives you information and hints you need to know.

Precautions

Installation

- Install in a place which is level, dry and neither too hot nor too cold—between 5°C and 35°C.
- Install the unit in a location with adequate ventilation to prevent internal heat buildup.
- 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 the unit from the wall outlet, always pull on the plug, not the AC power cord.



DO NOT handle the AC power cord with wet hands.

Moisture condensation

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

- After starting to heat 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, 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.

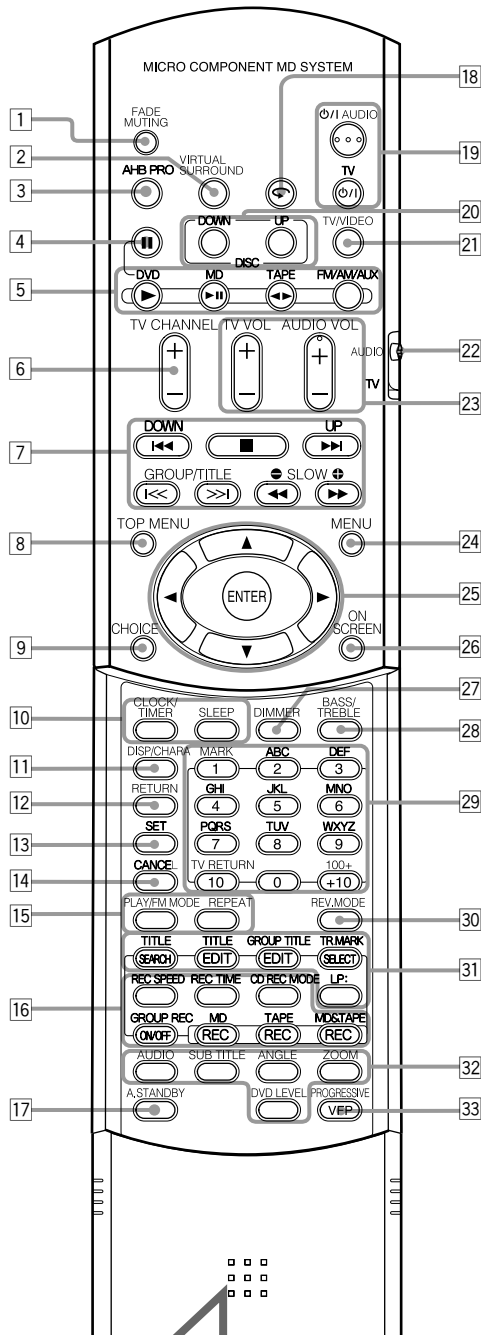
If anything goes wrong, unplug the AC power cord and consult your dealer.

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Location of the Buttons and Controls

Become familiar with the buttons and controls on your unit.

Remote Control



To open the cover of the remote control, push here, then slide downward.

Remote Control

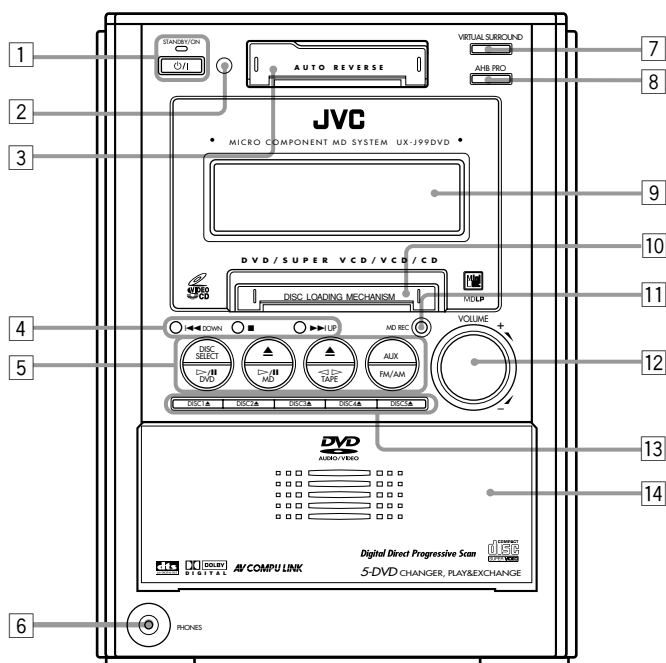
See pages in parentheses for details.

- 1 FADE MUTING button (11)
- 2 VIRTUAL SURROUND button (31)
- 3 AHB PRO (Active Hyper Bass Pro) button (11)
- 4 DVD (pause) button (17, 32, 35, 52)
- 5 Source selection buttons
 - DVD (play) button (10, 17, 18, 20 – 22, 32, 35, 36, 47, 51 – 53)
 - MD (play/pause) button (10, 37, 39 – 41, 51, 52)
 - TAPE (play/direction) button (10, 43)
 - FM/AM/AUX button (10, 13, 14, 44, 48)

Pressing one of these buttons also turns on the unit.
- 6 TV CHANNEL + / – button (83)
- 7 Multi operation buttons
 - UP , DOWN
 - (stop)
 - GROUP/TITLE , GROUP/TITLE
 - SLOW , SLOW
 - ,
- 8 TOP MENU button (20)
- 9 CHOICE button (76, 77, 80, 81)
- 10 Timer operation buttons
 - CLOCK/TIMER button (10, 71 – 74)
 - SLEEP button (75)
- 11 DISP/CHARA (display/character) button (10, 19, 38, 41, 44, 48, 49, 52, 53, 69)
- 12 RETURN button (20)
- 13 SET button
- 14 CANCEL button
- 15 Play mode buttons
 - PLAY/FM MODE button (13, 21, 22, 23, 39 – 41)
 - REPEAT button (23, 36, 40, 41)
- 16 Recording mode setting buttons
 - REC SPEED button (47)
 - REC TIME button (46)
 - CD REC MODE button (47, 52)
 - GROUP REC ON/OFF button (46, 54)
 - MD REC button (47 – 49)
 - TAPE REC button (51, 52)
 - MD&TAPE REC button (53)
- 17 A. (auto) STANDBY button (11)
- 18 (one touch replay) button (32)
- 19 Power buttons
 - AUDIO button (10, 72, 74)
 - TV button (83)
- 20 Disc tray selection buttons (17, 18, 23, 35, 47, 51 – 53)
 - DISC UP, DISC DOWN
- 21 TV/VIDEO button (83)
- 22 AUDIO-TV switch (6, 83)
- 23 Volume + / – buttons
 - TV VOL (volume) + / – button (83)
 - AUDIO VOL (volume) + / – button (11, 12)

- 24 MENU button (20)
- 25 Multi control buttons
 - Cursor (◀/▶/▲/▼) (10, 22, 26 – 33, 36)
 - ENTER button
- 26 ON SCREEN button (24 – 28, 30)
- 27 DIMMER button (12)
- 28 BASS/TREBLE button (12)
- 29 Number buttons
 - 1 – 10, 0 and +10 buttons
 - 100+ button (83)
 - MARK button (42, 69)
 - Character entry buttons (A – Z, 0 – 9) (42, 69)
 - TV RETURN button (83)
- 30 REV.MODE (reverse mode) button (43, 48, 51)
- 31 MD editing buttons
 - TITLE SEARCH button (41)
 - TITLE EDIT button (64 – 68)
 - GROUP TITLE EDIT button (56 – 62, 68)
 - TR. (track) MARK SELECT button (49)
 - LP: button (46)
- 32 DVD operation buttons
 - AUDIO button (29)
 - SUB TITLE button (29)
 - ANGLE button (30)
 - ZOOM button (32)
 - DVD LEVEL button (19)
- 33 PROGRESSIVE button (12)
 - VFP button (33)

Front Panel



Front panel

See pages in parentheses for details.

- 1 \mathcal{O}/I (standby/on) button and STANDBY/ON lamp (10)
- 2 Remote sensor (5)
- 3 Cassette loading slot (43)
- 4 Multi operation buttons
 - ▶▶▶ UP (fast-forward)/◀◀◀ DOWN(reverse), ■ (stop)
- 5
 - ▶/|| (play/pause) DVD button
 - ▲ (MD eject) button
 - ▶/|| (play/pause) MD button
 - ▲ (TAPE eject) button
 - ◀▶ (play/direction) TAPE button
 - AUX button
 - FM/AM button

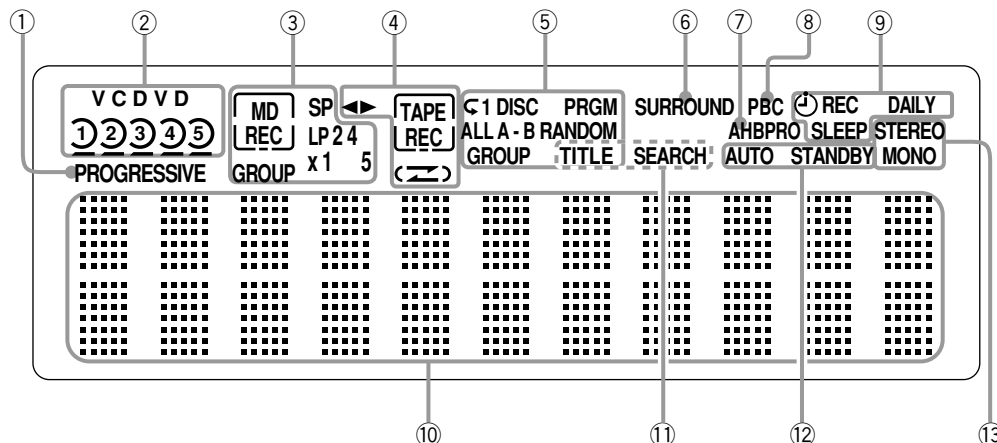
Pressing one of these buttons also turns on the unit if the disc or the cassette is unlocked.

 - DISC SELECT button (17, 18, 35)
- 6 PHONES jack (11)
- 7 VIRTUAL SURROUND button (31)
- 8 AHB PRO (Active Hyper Bass Pro) button (11)
- 9 Display window (5)
- 10 MD loading slot (37)
- 11 MD REC (recording) button (47 – 49)
- 12 VOLUME + / – control (11, 12, 44)
- 13 Disc eject buttons (10, 17, 18, 23)
 - DISC1▲, DISC2▲, DISC3▲, DISC4▲, and DISC5▲

Pressing one of these buttons also turns on the unit and opens the corresponding disc tray if the disc trays are unlocked.
- 14 Disc trays compartment—5-DVD changer

Location of the Buttons and Controls (Continued)

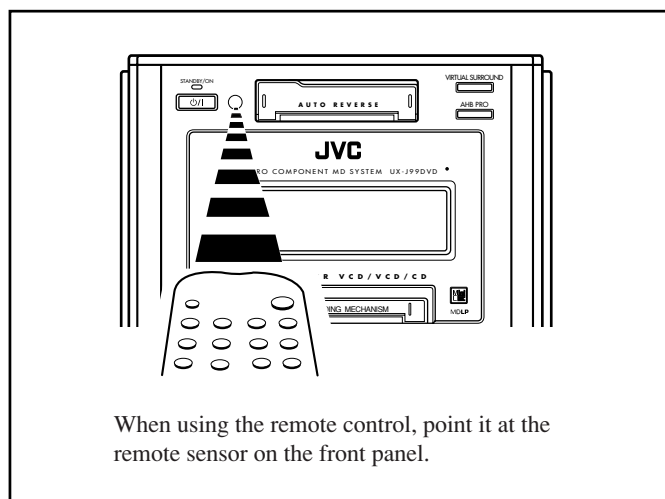
Display window on the front panel



Display window

See pages in parentheses for details.

- ① PROGRESSIVE indicator (12)
- ② Disc operation indicators (17)
 - Disc type indicator
VCD, CD, DVD
 - Disc tray indicators
- ③ MD operation indicators (37, 40, 46 – 49, 53, 56 – 62, 64 – 67, 69, 70, 72)
 - MD indicator
 - REC (MD recording) indicator
 - GROUP indicator
 - Recording length mode indicators
SP, LP2, and LP4
 - Recording speed indicators
x1 and x5
- ④ Tape operation indicators (43, 51 – 53)
 - ◀▶ (tape direction) indicator
 - TAPE indicator
 - REC (tape recording) indicator
 - ⏮ (reverse mode) indicator
- ⑤ Play mode indicators (21 – 23, 27, 36, 39 – 41)
 - Repeat mode indicators
↺ 1, ↺ DISC, ↺ ALL, ↺ GROUP, ↺ TITLE, ↺ A - B
 - GROUP indicator
 - TITLE indicator
 - PRGM (program) indicator
 - RANDOM indicator
- ⑥ SURROUND indicator (31)
- ⑦ AHBPRO (Active Hyper Bass Pro) indicator (11)
- ⑧ PBC indicator
- ⑨ Timer indicators (71 – 75)
 - ⌚ (timer), REC (recording timer), SLEEP, DAILY
- ⑩ Main display
 - Shows the source name and other information.
- ⑪ TITLE SEARCH indicator (41, 42)
- ⑫ AUTO STANDBY indicator (11)
- ⑬ FM mode indicators (13)
 - STEREO
 - MONO



Getting Started

Unpacking

After unpacking, be sure that you have all the following items. The number in parentheses indicates the quantity of each piece supplied.

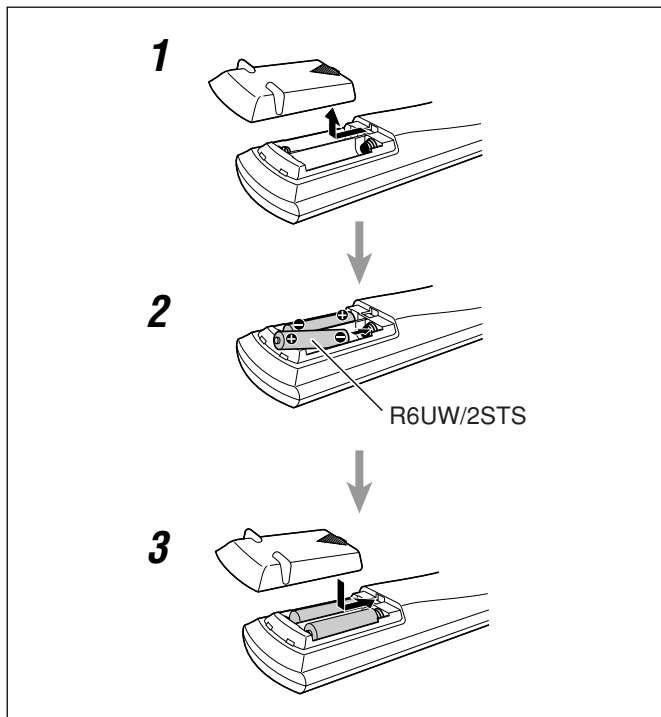
- FM antenna (1)
- AM loop antenna (1)
- Speaker cords (2)
- Composite video cord (1)
- Remote control (1)
- Batteries (2)

If any item is missing, consult your dealer immediately.

Putting the Batteries into the Remote Control

Insert the batteries—R6UW/2STS—into the remote control by matching the polarity (+ and –) on the batteries with the + and – marking on the battery compartment.

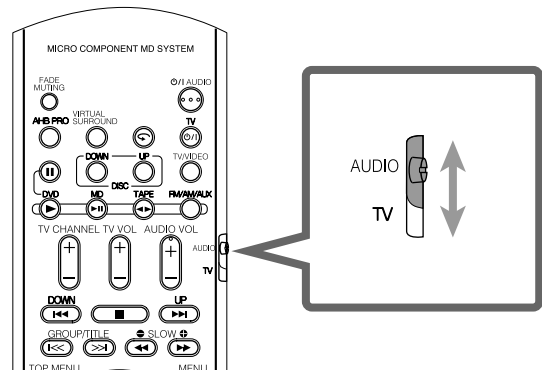
When the remote control can no longer operate the unit, replace both batteries at the same time.



- 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, the remote control will be damaged from battery leakage.

About the AUDIO-TV switch

With the remote control supplied with this unit, you can also operate a JVC or other manufacturer's TV.



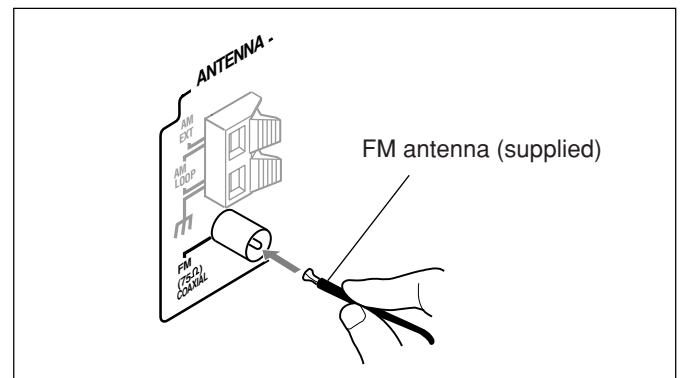
To operate this unit, set the AUDIO-TV switch to "AUDIO."

To operate a TV, set the AUDIO-TV switch to "TV."

To operate another manufacturer's TV, you need to set the appropriate manufacturer's code on the remote control (see page 83 for details).

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 a position which gives you the best reception, then attach it to the wall.



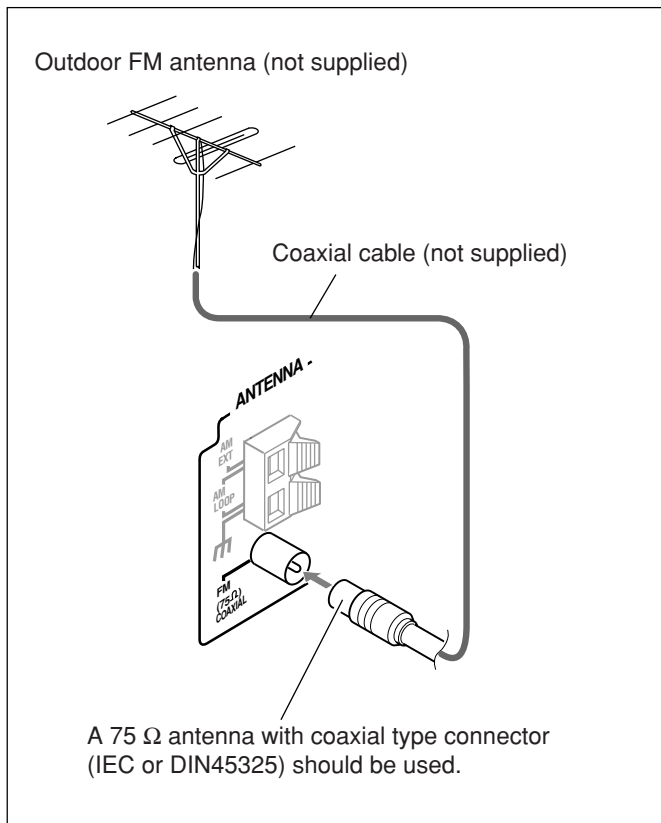
About the supplied FM antenna

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

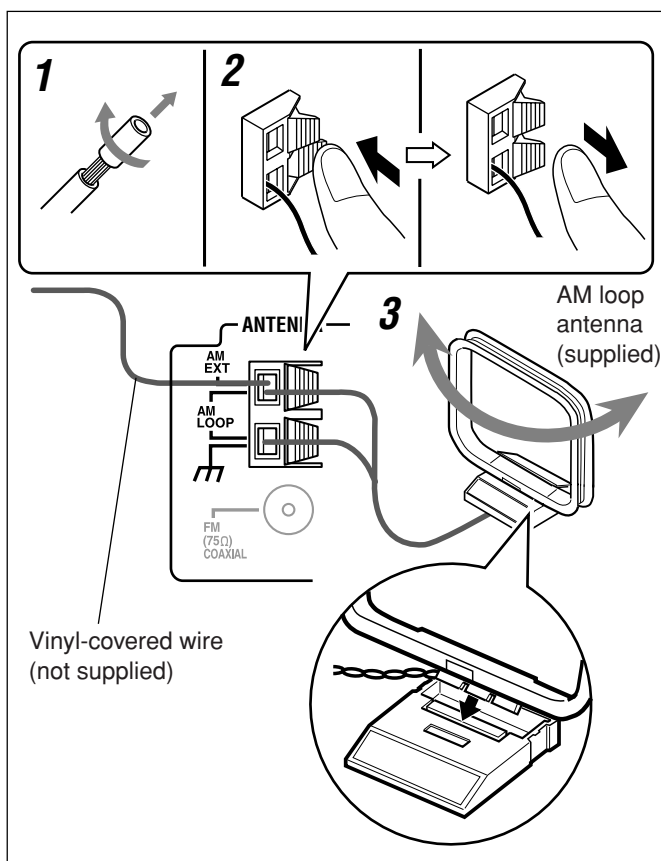
Getting Started (Continued)

To connect an outdoor FM antenna

Before connecting it, disconnect the supplied FM antenna.



AM antenna



1 If the cords are covered with insulation, remove a short section of insulation at the end of each cord by twisting and pulling it off.

2 Connect the AM loop antenna to the AM LOOP terminals as illustrated.

3 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.



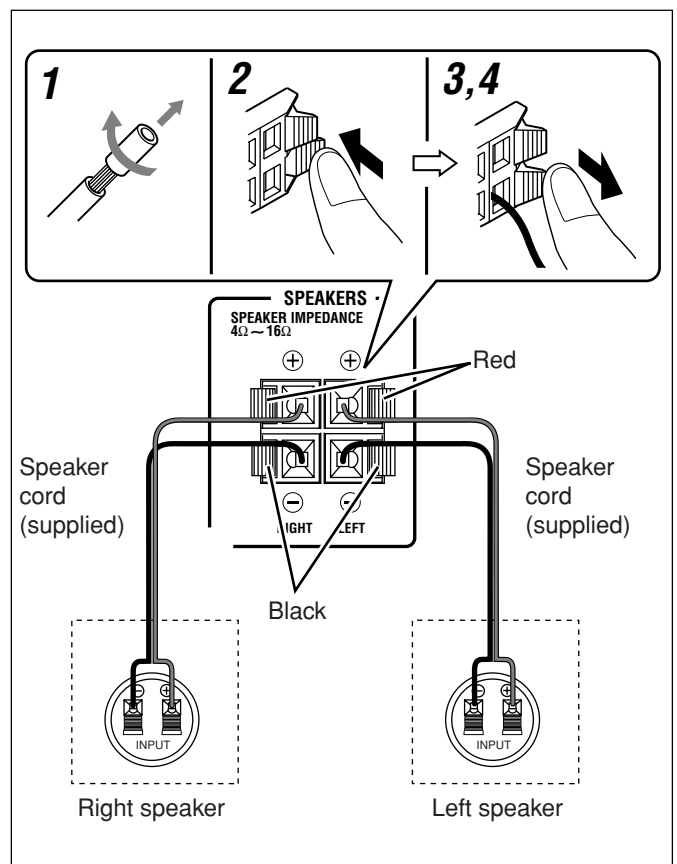
For better reception of both FM and AM

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

Connecting Speakers

To connect speakers

You can connect the speakers using the speaker cords (supplied).



1 If the cords are covered with insulation, remove a short section of insulation at the end of each cord by twisting and pulling it off.

2 Hold the clamp of the speaker terminal.

3 Insert the end of the speaker cord into the terminal.

Match the polarity of the speaker terminals: Red cord to red terminal \oplus and black cord to black terminal \ominus .

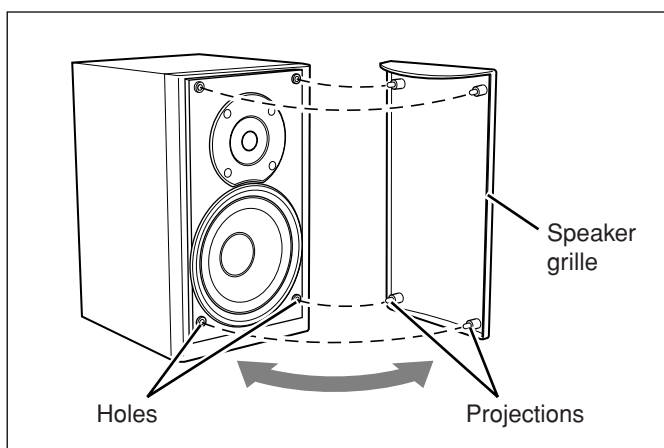
4 Release your finger from the clamp.

IMPORTANT:

- Use only speakers with the same speaker impedance as indicated by the speaker terminals on the rear of the unit.
- DO NOT connect more than one speaker to one speaker terminal.

To remove the speaker grilles

The speaker grilles are removable as the illustration below.



To remove the speaker grille, insert your fingers around the projection at the top of the speaker grille, then pull gently towards you while holding the side.

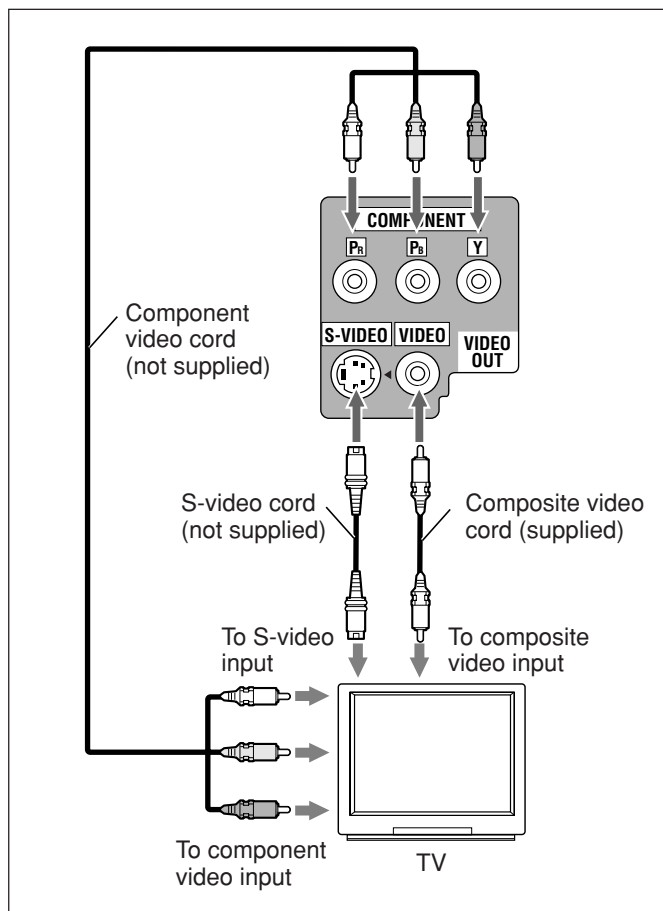
Do the same for the rest of projections one at a time.

To attach the speaker grille, put the projections of the speaker grille into the holes of the speaker.

Connecting a TV

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

- You can also connect a JVC's TV through the AV COMPU LINK control system. (See page 84.)



On video connection

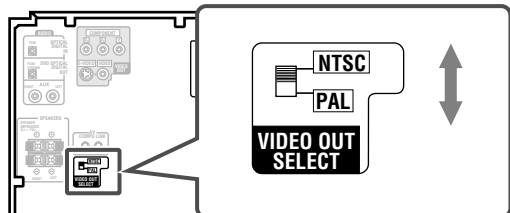
- By using S-video or component video cord, you can get a better picture quality—in the order: composite < S-video < component.
- To enjoy the progressive video picture, connect the TV compatible with the progressive video input using component video cord, then change the scanning mode correctly (see “Changing the Scanning Mode” on page 12). You can enjoy the progressive scanning mode only when the color system of your TV is NTSC (see also “To select the color system” on page 9).

Getting Started (Continued)

To select the color system

You need to select the color system setting of this unit to match to your TV.

Set the NTSC/PAL switch on the rear correctly while in standby mode by referring to the table below.



Color system of TV	Color system setting
Multi-color system	PAL or NTSC*
PAL	PAL
NTSC	NTSC

* Set the color system of the unit and TV to match the system of the playback disc.

- Before playing back a disc, it is also required to select the correct “MONITOR TYPE” in the PICTURE menu according to the aspect ratio of your TV. (See page 78.)



If you play back an NTSC disc with this setting set to “PAL”

You can watch the playback pictures (the disc will be reproduced using “PAL 60” format), but the TV screen may roll upward and downward rapidly.



If you play back a PAL disc with this setting set to “NTSC”

You can watch the playback, but the following symptoms may occur:

- The items on the disc menu will be blurred, and be shown slightly shifted when highlighted.
- The aspect ratio of the picture may differ from the original aspect ratio.
- The picture movement is not smooth.

Connecting Other Equipment

You can connect other equipment such as a digital decoder to reproduce multi-channel sounds or audio equipment which can be used as a playback device.

When you connect and use such equipment, refer also to its manual.

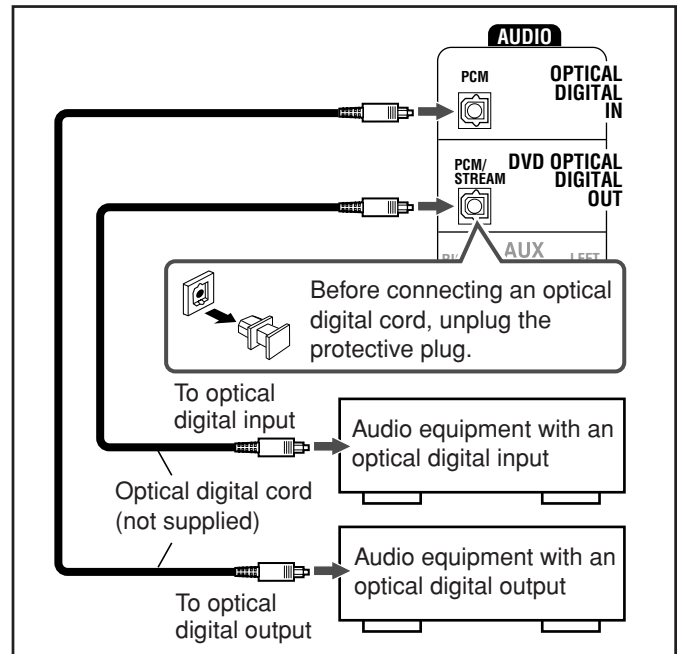


- DO NOT connect other equipment while the power is on.
- DO NOT plug in any equipment until all connections are complete.

To connect audio equipment with an optical digital input/output terminal—such as portable MD recorder

By using an optical digital cord (not supplied), you can connect audio equipment with an optical digital input/output terminal.

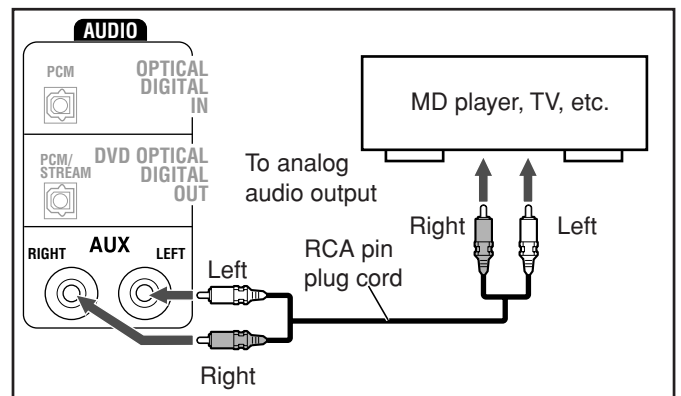
- Before playing back a disc, select “DIGITAL AUDIO OUTPUT” in the “AUDIO” menu according to audio equipment connected to the DVD OPTICAL DIGITAL OUT terminal. (See page 79.)



To connect analog audio equipment

By using an RCA pin plug cord (not supplied), you can connect equipment with analog audio output jacks such as an MD player, a TV, etc.

- Be sure that the plugs of the audio cords and the jacks on the rear of the unit are color-coded: White plugs and jacks are for left audio signals, and red ones for right audio signals.



To listen to or to record the sound from analog audio equipment connected to the AUX jacks, select “AUX” as the source to play. (See page 44.)

NOW you are ready to plug in the unit and any other connected equipment.

IMPORTANT:

Be sure to check that all connections have been made before plugging in the power cord.

Basic and Common Operations

Setting the Clock

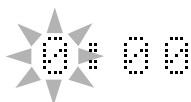
Before operating the unit any further, first set the built-in clock. When you plug in the power cord, "0:00" starts flashing on the display.

You can set the clock when the unit is either turned on or on standby (off). You cannot set the clock if the unit is on Power Save mode (see the right column).

On the remote control ONLY:

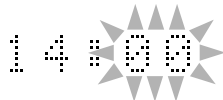
1 Press CLOCK/TIMER.

The hour digit starts flashing on the display.

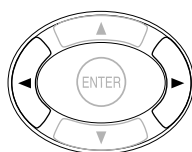


2 Press cursor ► or ◀ repeatedly to adjust the hour, then press SET.

The minute digits start flashing on the display.



- Each time you press ► or ◀, the hour digit(s) change(s) continuously.
- If you want to correct the hour again, press CANCEL. The hour digit(s) start(s) flashing again.

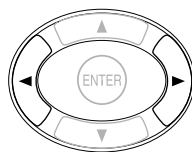


3 Press cursor ► or ◀ to adjust the minute, then press SET.

The built-in clock starts.



- Each time you press cursor ► or ◀, the minute digits change continuously.



- **When you unplug the power cord or if a power failure occurs**
The clock is reset to "0:00" right away. If this happens, set the clock again.
- **The clock may gain or lose 1 to 2 minutes per month**
If this happens, reset the clock.

To change the clock again

On the remote control ONLY:

Press CLOCK/TIMER repeatedly until the clock setting screen appears on the display.



The hour digit starts flashing. Then, perform steps 2 and 3 in "Setting the Clock" again.

To turn off the clock indication (Power Save)

On the remote control ONLY:

Press DISP/CHARA while the unit is on standby (off).



"DISPLAY OFF" appears on the display for a while, then the clock indication goes off.

To turn on the clock indication, press DISP/CHARA again while the unit is on standby (off).

"DISPLAY ON" appears on the display for a while.

Turning On the Power and Starting Playback

To turn on the unit, press ◻/I AUDIO or ◻/I on the unit. The STANDBY/ON lamp on the unit lights green.



(On the remote control)



(On the unit)

When you press one of the source selection buttons, the unit automatically turns on (and starts playback if the source is ready).



(On the remote control)



(On the unit)

- Pressing one of the disc eject buttons on the unit—DISC1▲ to DISC5▲, ▲ (MD eject) and ▲ (TAPE eject)—also turns on the unit if the disc trays, MD, and cassette are unlocked.
- Press FM/AM/AUX repeatedly (or AUX on the unit) to select "AUX" or "AUX-DIGITAL" to operate the external equipment, see page 44 and the manuals supplied with it.

To turn off the unit (on standby), press ◻/I AUDIO or ◻/I on the unit again.

The STANDBY/ON lamp on the unit lights red.

- The clock time appears on the display if you have set the built-in clock.
"0:00" will flash on the display if you have not set the built-in clock.
To set the built-in clock, see "Setting the Clock" on the left column.
- A little power is always consumed even while the unit is on standby (off).

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



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

The clock is reset to "0:00" right away, while the tuner preset stations will be erased in a few days.

Basic and Common Operations (Continued)

To turn off the unit automatically (Auto Standby)

Using Auto Standby, the unit automatically turns itself off (on standby) if no operation is done for about 3 minutes except when playing back and when FM or AM is selected as the source. If an operation is done within this 3-minute period, Auto Standby is canceled temporarily even though no sound comes in.

- You can also turn off the unit automatically by using the Sleep Timer. (See page 75.)

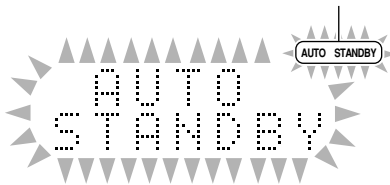
On the remote control ONLY:

To activate Auto Standby, press A.STANDBY. "A.STANDBY ON" and the **AUTO STANDBY** indicator appear on the display.



- When no sound comes in, the **AUTO STANDBY** indicator starts flashing on the display. About 5 seconds before the unit turns itself off (on standby), "AUTO STANDBY" starts flashing on the display.

AUTO STANDBY indicator



To deactivate Auto Standby, press A.STANDBY again. "A.STANDBY OFF" appears on the display for a while and the **AUTO STANDBY** indicator goes off.

Adjusting the Volume Level

You can adjust the volume level only while the unit is turned on.

The volume level can be adjusted between "VOLUME MIN," "VOLUME 1"–"VOLUME 40," and "VOLUME MAX."

- The volume level has no effect on recording.

On the remote control:

To increase the volume level, press AUDIO VOL +.

To decrease the volume level, press AUDIO VOL –.

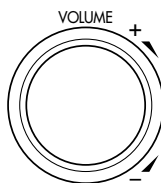
- When you press and hold either button, you can change the volume level continuously.



On the unit:

To increase the volume level, turn the VOLUME + / – control clockwise.

To decrease the volume level, turn the VOLUME + / – control counterclockwise.



VOLUME 10



- If "CANNOT LISTEN" appears on the display

During high-speed recording, you cannot listen to any source, and therefore, cannot adjust the volume level.

- 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 level before connecting or putting on the headphones.



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

To turn down the volume level temporarily

On the remote control ONLY:

Press FADE MUTING.



The volume level gradually decreases to "VOLUME MIN."

To restore the sound, press FADE MUTING again.

- Pressing AUDIO VOL + or turning VOLUME + / – control clockwise (to +) on the front panel also restores the sound.

Reinforcing the Bass Sound

The richness and fullness of the bass sound is clearly maintained regardless of how low you set the volume level —Active Hyper Bass Pro (AHB PRO).

- This function only affects the playback sound, and does not affect your recording.
- This function also affects the sound from headphones.

To get the effect, press AHB PRO.



(On the remote control)



(On the unit)

The **AHBPRO** indicator also lights up on the display.

AHBPRO indicator

AHB PRO ON

- Each time you press the button, the Active Hyper Bass Pro effect turns on and off.

To cancel the effect, press AHB PRO repeatedly until "AHB PRO OFF" appears on the display.

The **AHBPRO** indicator goes off.

Adjusting the Tone

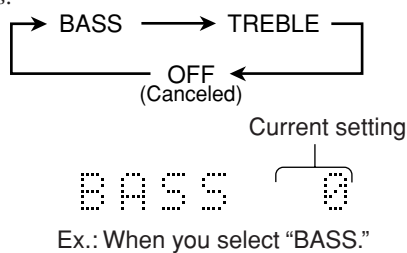
You can adjust the bass level (low frequency range) and the treble level (high frequency range) within a range of “-5” to “+5” only while the unit is turned on.

- This function only affects the playback sound, and does not affect your recording.
- This function also affects the sound from headphones.
- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

1 Press BASS/TREBLE on the remote control to adjust the bass or treble level.



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



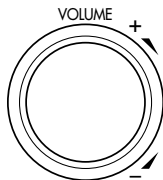
2 On the remote control:

Press **AUDIO VOL +** to increase the level or press **AUDIO VOL -** to decrease the level.



On the unit:

Turn **VOLUME + / -** control clockwise to increase the level or counterclockwise to decrease the level.



BASS +2

Changing the Display Brightness

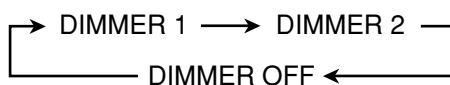
You can change the display brightness only while the unit is turned on.

On the remote control ONLY:

Press **DIMMER** while the unit is turned on.



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



- DIMMER 1:** The display illumination and the blue illumination dim.
- DIMMER 2:** The display illumination dims and the blue illumination on the display disappears.
- DIMMER OFF:** The display and blue illumination resume.



When you turn off (on standby) the unit

The display brightness sets back to “DIMMER OFF.”

Changing the Scanning Mode

This unit supports the NTSC progressive scanning system (525p*) as well as the conventional interlaced scanning system (480i*). If your TV has component video jacks and supports progressive scanning system, you can enjoy a high quality picture from the built-in DVD player.

- Refer also to the instruction manuals supplied with your TV.
- You can change the scanning mode only when “NTSC” is selected for the color system of this unit. (See page 9.)
- You cannot select the progressive scanning mode for the PAL system TVs.



Do not change the progressive scanning mode in the following cases:

- When your TV does not support the progressive video input.
- When you have not connected your TV to the unit using a component video cord.

You can change the scanning mode only when “DISC” is selected as the source to play.

On the remote control ONLY:

Press and hold **PROGRESSIVE** more than 2 seconds.



The **PROGRESSIVE** indicator lights up on the display.



- Each time you press the button, the scanning mode changes between progressive and interlace (the **PROGRESSIVE** indicator goes off) alternately.

- Some progressive TVs and High-Definition TVs are not fully compatible with this system. When an incompatible picture is played back, turn off the progressive scanning mode. To check the compatibility of your TV, contact your dealer. All JVC progressive TVs and High-Definition TVs are fully compatible with this system.

* 525p and 480i indicate the number of scanning lines and scanning format of an image signal.

- 525p indicates 525 scanning lines with progressive format.
- 480i indicates 480 scanning lines with interlaced format.

Listening to FM and AM Broadcasts

Setting the AM Tuner Interval Spacing



Some countries AM channel intervals are set to 9 kHz apart, and some countries use 10 kHz apart. When shipped, the built-in AM tuner is set to 9 kHz spacing. You can change the channel interval to 9 kHz or 10 kHz spacing.

- The last selected source must be "AM" in order to perform the following operation.

Be sure that the unit is turned off (on standby), but is plugged into a wall outlet.

On the unit ONLY:

1 Select the AM channel intervals.

- To set the AM tuner to the 10 kHz spacing, press  (standby/on) while holding  UP.



- To set the AM tuner to the 9 kHz spacing, press  (standby/on) while holding  DOWN.



2 Press .

The unit tunes in to 530 kHz (or 531 kHz).



When you change the AM channel interval spacing

The preset stations you have set (both FM and AM) will be erased. In this case, preset stations again. See "Presetting Stations" on page 14.

Tuning in to a Station

1 Press FM/AM/AUX (or FM/AM on the unit) to select either "FM" or "AM."



(On the remote control)



(On the unit)

The unit automatically turns on and tunes in to the previously received station—either FM or AM.

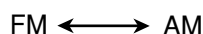
- Each time you press the button, the band changes as follows:

On the remote control:



* For operating the external equipment, see page 44 and the manuals supplied with it.

On the unit:





2 Press and hold UP or DOWN for more than 1 second.



(On the remote control)





(On the unit)

- UP : Increases the frequencies.
- DOWN : Decreases the frequencies.

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

- If an FM program is broadcast in stereo, the **STEREO** indicator lights up on the display (only when the reception is good).

To stop during searching, press UP  or DOWN .



When you press UP  or DOWN  repeatedly
The frequency changes step by step.

To change the FM reception mode

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

On the remote control ONLY:

Press **PLAY/FM MODE**.

The **MONO** indicator lights up on the display.



To restore the stereo effect, press **PLAY/FM MODE** again so that the **MONO** indicator goes off. In stereo mode, you can hear stereo sound when a stereo program is broadcast.

- The **STEREO** indicator lights up only when the reception is sufficient.

Presetting Stations

You can preset 30 FM and 15 AM stations manually.

In some cases, test frequencies have been already stored 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 remote control ONLY:

1 Tune in to the station you want to preset.

- See “Tuning in to a Station” on page 13.

2 Press SET.

“SET” starts flashing on the display.



FM 87.50 MHz

Ex.: When you select an FM station in step **1**.

3 Press the number buttons to select a preset number.

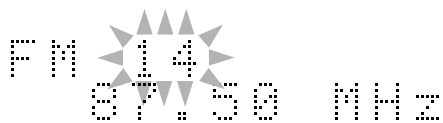
The selected preset number is flashing on the display.

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 30, press +10, +10, then 10.



FM 87.50 MHz

Ex.: When you select preset number 14.

4 Press SET again.

“STORED” appears on the display for a while.



STORED

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

- Storing a new station on an already assigned number erases the previously stored one.



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

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

Tuning in to a Preset Station

On the remote control ONLY:

1 Press FM/AM/AUX to select either “FM” or “AM.”

FM/AM/AUX



The unit automatically turns on and tunes in to the previously received station—either FM or AM.

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



* For operating the external equipment, see page 44 and the manuals supplied with it.

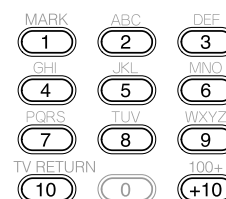
2 Press the number buttons to select the preset number you want.

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 30, press +10, +10, then 10.



Playing Back Discs on the 5-DVD Changer



indicates types of disc available for the operation. (Unavailable disc types are shown in halftone color.)

- For MP3 and JPEG disc playback, see pages 35 and 36. (For how to make a program using MP3 discs is explained in this section.)

Disc Information

Playable disc types

This unit has been designed to play back the following discs: DVD VIDEO*, DVD AUDIO*, Video CD (VCD)*, Super Video CD (SVCD)*, Audio CD*, CD-R, and CD-RW.

* This instruction refers to the following: DVD VIDEO and DVD AUDIO as “DVD,” Video CD as “VCD,” Super Video CD as “SVCD,” and audio CD as “CD.”

Disc Type	Mark (Logo)	Color System
DVD VIDEO		NTSC or PAL
Video CD (VCD)		
Super Video CD (SVCD)		
DVD AUDIO		—
Audio CD (CD)		—
CD-R		—
CD-RW		—

In addition to the above discs, this unit can play back audio data recorded on CD Text, CD-G (CD Graphic), CD Extra and Mix-Mode CD.

- The following discs cannot be played back: DVD-ROM, DVD-RAM, CD-ROM, CD-I (CD-I Ready), Photo CD, SACD, VR format DVD-RW, etc. Playing back these discs will generate noise and damage the speakers.
- This unit can also play back MP3 and JPEG (still picture) files recorded on CD-R and CD-RW. For details about MP3 and JPEG disc operations, see “MP3/JPEG Disc Playback” on pages 35 and 36.
- On some DVD VIDEO, DVD AUDIO, SVCD or VCD, their actual operations may be different from what is explained in this manual. This is due to the disc programming and disc structure, but not a malfunction of this unit.
- You can play back DVD-R or DVD-RW recorded with the DVD VIDEO format, but some may not be played back because of the disc characteristics or recording conditions.



About Region Code

DVD players and DVD VIDEO have their own Region Code numbers. This unit can play back only DVD VIDEO recorded with the color system of NTSC/PAL whose Region Code is “3.”

Region 3



If a DVD VIDEO with the wrong Region Code number is loaded, “REGION CODE ERROR” appears on the display and playback cannot start.



On CD-R and CD-RW

- User-edited CD-R (Recordable) and CD-RW (ReWritable) can be played back only if they are already “finalized.”
- The unit can play back CD-R or CD-RW recorded on a personal computer if they have been recorded in the CD format or in ISO 9660 format.
- Before playing back CD-R or CD-RW, read their instructions or cautions carefully.
- CD-RW may require a longer readout time. It is caused by the fact that the reflectance of CD-RW is lower than for regular CD.
- The unit can also play back CD-R or CD-RW if MP3 files or JPEG files are recorded on them. However, they may not be played back because of their disc characteristics, recording conditions, or damage or stain on them. Especially, the configuration and characteristics of an MP3 disc or a JPEG disc is determined by the writing (encoding) software and hardware used for recording. Therefore, due to the software and hardware used, the following symptoms may occur:
 - Some discs may not be played back.
 - Some tracks on an MP3 or JPEG disc are skipped and may not be played back normally.
 - Some files on a JPEG disc may be played back distortedly.

About copy protection

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

- The Macrovision’s copy protection system is applied to this unit. If you make a copy on your VCR from a disc that is recorded this copy protection signal, the copy cannot be played back normally.

IMPORTANT: Before playing a disc, make sure of the following....

- Check the connection with the TV.
- Turn on the TV and select the correct input mode on the TV to view the pictures or on-screen indications on the TV screen.
- For disc playback, you can change the initial setting to your preference. (See pages 76 to 81.)

If “⊗” appears on the TV screen when you press a button, the disc cannot accept the operation you have tried to do, or data required for that operation is not recorded on the disc.

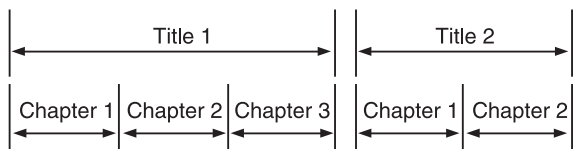
NOTICE: In some cases, without showing “⊗,” operations will not be accepted.

To change the color system of this unit, see page 9.

Disc structure

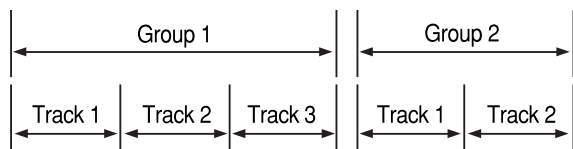
DVD VIDEO consists of “titles,” and each title may be divided into some “chapters.”

For example, if a DVD VIDEO contains some movies, each movie may have its own **title** number and it may be further divided into some **chapters**. In a DVD VIDEO Karaoke, each song may have its own **title** number, but it may not be further divided into **chapters**.



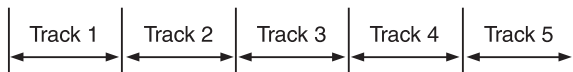
DVD AUDIO consists of “groups,” and each group may be divided into some “tracks.”

Some DVD AUDIOS also contain a “bonus group” that can be played back by entering the “key number” (a kind of password). Usually the contents of “bonus group” are not open to the public. Note that most DVD AUDIOS include much information in addition to audio, such as still pictures, movies, and text.



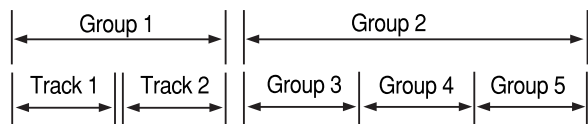
SVCD, VCD, and CD consist of “tracks.”

In general, each track has its own track number. (On some discs, each track may also be divided by indexes. This unit is not compatible with Index function.)



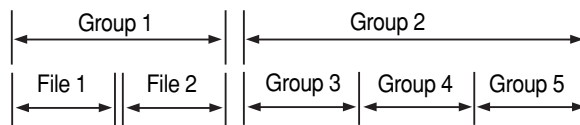
On an **MP3 disc**, each song is recorded as a file. Files are usually grouped into a folder. Folders can also include other folders, creating hierarchical folder layers.

This unit simplifies the hierarchical construction of a disc and manages files and folders by “tracks” and “groups.”



On a **JPEG disc**, each still picture is recorded as a file. Files are usually grouped into a folder. Folders can also include other folders, creating hierarchical folder layers.

This unit simplifies the hierarchical construction of a disc and manages folders by “groups.”



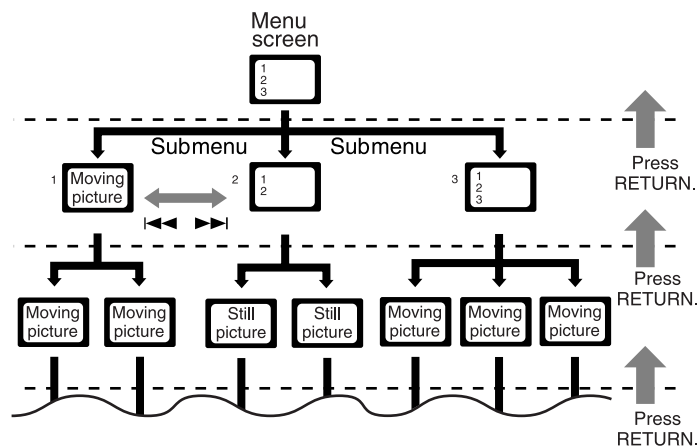
Playback Control function (PBC)—SVCD and VCD only

The Playback Control function enables menu-driven operation.

Menu-driven playback

A selection menu is displayed when you start playing a SVCD and VCD with the Playback Control feature. The selection menu shows a list of numbers for selection. Some discs may show moving pictures or a divided screen. You can interact with the screen using a menu display to select and play an entry.

See the example illustration below about basic feature of menu-driven playback (for details about the operation through the disc menu, see also page 20).



While operating a SVCD or VCD using the menu

Some of the functions such as Repeat Play may not work.

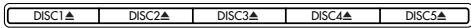
Playing Back Discs on the 5-DVD Changer (Continued)

Loading Discs

On the unit ONLY:

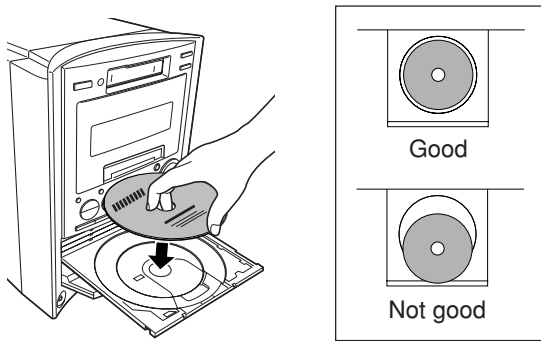
- 1 Press one of the disc eject buttons (DISC1▲ – DISC5▲) for the disc tray you want to load a disc onto.

The unit automatically turns on and the selected disc tray comes out if it is unlocked. For details, see “Prohibiting Disc Ejection—Disc Lock” on page 23.



- Disc tray is counted from bottom to top. The bottom tray is disc tray 1 and the top tray is disc tray 5.

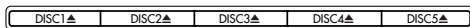
- 2 Place a disc correctly on the circle of the disc tray, with its label side up.



- When using a CD single (8 cm), place it on the inner circle of the disc tray.
- When using a two-sided disc, usually place it with side-A facing up.

- 3 Press the same disc eject button (DISC1▲ – DISC5▲) you have pressed in step 1.

The disc tray closes.



When loading more than one disc at a time

Press the disc eject button (DISC1▲ – DISC5▲) for the next tray you want to place a disc onto. The first disc tray automatically closes and the next disc tray comes out.

Playing Back All the Discs—Continuous Play

You can play discs continuously.



- 1 Load discs into the 5-DVD changer.

- See “Loading Discs.”

- 2 Press DISC UP or DISC DOWN (or DISC SELECT on the unit) repeatedly to select the disc you want.



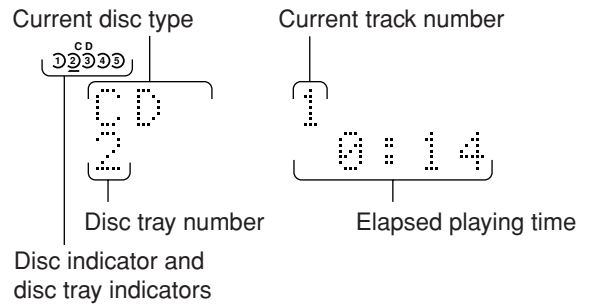
(On the remote control)



(On the unit)

Playback starts from the first track of the selected disc.

Ex.: When CD is a playing source.



- You can also select a disc and start continuous play while a source other than “DISC” is selected (see page 18).
- You can also select and start playback a desired track of the selected disc (see “To go to another title or group,” “To go to another chapter” on page 18 and “To go to a particular title, group, chapter or track directly using the number buttons” on page 19).
- Without selecting the disc number, pressing DVD ► (or ▷/■ DVD on the unit) starts playing back the currently selected disc.

To pause playback, press DVD ■ (or ▷/■ DVD on the unit). While pausing, the elapsed playing time flashes on the display.

- To start playback again, press DVD ► (or ▷/■ DVD on the unit).

To stop playing, press ■.

- This unit can store the stop point, and when you start playback again by pressing DVD ► (or ▷/■ DVD on the unit), playback starts from the position where you have stopped—Resume Play. (“RESUME” appears on the display.)

To use Resume Play, you need to turn on the Resume function. (See page 79.)

- The Resume function does not work for CDs, MP3 and JPEG discs.
- When using the Resume function on SVCD or VCD with PBC, the playback might start on a position slightly different from where you have stopped.
- To stop completely when you use the Resume function, press ■ twice.



When you select another disc tray

The stored position where you have stopped will be erased.

To resume play, press DVD ► (or ▷/|| DVD on the unit) again.

To stop during play, press ■.

To remove discs, press the corresponding disc eject buttons (DISC1▲ – DISC5▲) on the unit.



- **Disc playback sequence in the 5-DVD changer**
When 5 discs are loaded on the disc trays*, they are played in the following sequence (when Repeat Play is not activated):
Ex.: When playback starts from the DISC2 tray:
DISC2 ⇒ DISC3 ⇒ DISC4 ⇒ DISC5 ⇒ DISC1 (then stops)
* If no disc is on the disc tray, the tray is skipped.
- **Continuous playback does not work for SVCD/VCD with the PBC function and some DVDs**
When you play these discs, press ENTER or DVD ►.
- **When a disc menu appears on the TV screen**
See “Playing Back by Using the Disc Menu” on page 20.

Start Continuous Play while a source other than “DISC” is selected



1 Press **DISC UP** or **DISC DOWN** (or **DISC SELECT** on the unit) repeatedly to select a disc while listening to a source other than “DISC.”

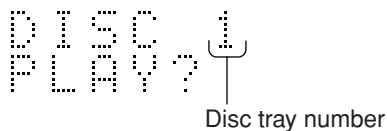


(On the remote control)

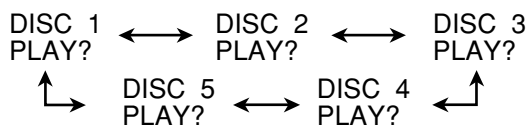


(On the unit)

The following indication appears on the display.



- Each time you press the button, the disc tray number changes as follows*:



* When you press DISC SELECT repeatedly on the unit, the disc tray number changes only clockwise in the above sequence.

2 Press **DVD ►** (or ▷/|| DVD on the unit) while the indication in step 1 still remains on the display.

Now the source is changed to “DISC” and Continuous Play starts from the selected disc.



(On the remote control)



(On the unit)

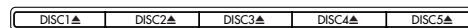
Basic Disc Operations

To change a disc during playback of another disc



On the unit ONLY:

Press one of the disc eject buttons (DISC1▲ – DISC5▲) to eject one of the disc trays which is not playing currently.



If discs are changed during play, playback will stop after playing all the newly inserted discs.

To start playing a disc during playback of another disc



Press **DISC UP** or **DISC DOWN** (or **DISC SELECT** on the unit) repeatedly to select the disc you want.



(On the remote control)



(On the unit)

Each time you press the button, the next (or previous) disc is selected. The selected disc starts playing.

To go to another title or group



On the remote control ONLY:

Press **GROUP/TITLE >>|** or **GROUP/TITLE |<<** during playback.



- **GROUP/TITLE >>|:**
Skips to the beginning of the next or succeeding titles (for DVD VIDEO) or groups (for DVD AUDIO).
- **GROUP/TITLE |<<:**
Goes back to the beginning of the current or previous titles (for DVD VIDEO) or groups (for DVD AUDIO).



For DVD AUDIO

When you select the bonus group, the key number entry indication appears (see page 34).

To go to another chapter



Press **▶▶|** or **|<<<** during playback.



(On the remote control)



(On the unit)

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



If you cannot skip chapters

Some DVDs or some scenes on DVD will not accept this operation.

Playing Back Discs on the 5-DVD Changer (Continued)

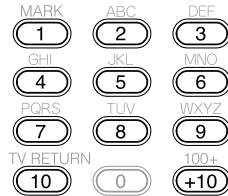
To go to a particular title, group, chapter or track directly using the number buttons



On the remote control ONLY:

For DVD VIDEO

- Pressing the number buttons **before playback** allows you to start playing with the title number you want.
- Pressing the number buttons **during playback** allows you to start playing with the chapter number of the currently playing title you want.



Ex.: For chapter number 5, press 5.

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

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

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

For DVD AUDIO/SVCD/VCD/CD

Pressing the number button(s) (see above) allows you to start playing the track number on the current disc.



If a menu is shown on the TV while playing a DVD, SVCD or VCD

Number buttons may be used for selecting an item in the menu.

To locate a particular point in a chapter or track during play



On the remote control ONLY:

Press **▶▶** or **◀◀**.

- ▶▶**: Fast-forwards the chapters or tracks.
- ◀◀**: Fast-reverses the chapters or tracks.
- Each time you press the button (**▶▶** or **◀◀**), the setting and its indicator change and appear on the display as follows:

x2 ↔ x5 ↔ x10 ↔ x20 ↔ x60



To return to normal playback, press DVD **▶**.



During playback with this function

No sound will be reproduced.

To go to another track



Press **▶▶** or **◀◀** repeatedly.



(On the remote control)



(On the unit)

- ▶▶**: Skips to the beginning of the next or succeeding tracks.
 - You can also skip to tracks on the next disc.
- ◀◀**: Goes back to the beginning of the current or previous tracks.
 - You cannot skip back to tracks on the previous disc.

To change the information shown on the display



On the remote control ONLY:

Press **DISP/CHARA**.



Each time you press the button, the information on the display alternates between the source indication and the clock indication.

To increase the sound level for DVD VIDEO playback automatically

The DVD VIDEO's audio sound is sometimes recorded at a lower level than for other discs such as VCDs or CDs.



If you have adjusted the volume level for a DVD VIDEO, the output sound may be unexpectedly loud when you start playing back a disc other than DVD VIDEO.

To avoid this inconvenience, this unit is preset to increase the sound level for DVD VIDEO playback automatically—the initial setting is “DVD LEVEL NORMAL” (off).

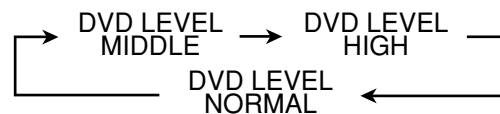
- This function only works for software containing more than 3-channel surround.
- This function does not affect any discs other than DVD VIDEO.
- This function does not affect the audio output level through the OPTICAL DIGITAL OUTPUT terminal.

On the remote control ONLY:

To turn on and off the function, press DVD LEVEL



- Each time you press the button, the setting and its indicator change and appear on the display as follows:



- DVD LEVEL MIDDLE:** Increases the sound output level a little.
- DVD LEVEL HIGH:** Increases the sound output level even more than “DVD LEVEL MIDDLE.”
- DVD LEVEL NORMAL:** Original sound output level recorded on DVD VIDEO.

Turning off (on standby) the unit or changing the source to play also turns off the function.

Playing Back by Using the Disc Menu

Some DVDs are recorded with their own menus which show their contents. SVCDs or VCDs with the Playback Control (PBC) function also have their own menus, such as lists of songs. You can play back the discs by using these menus.

■ When playing a DVD



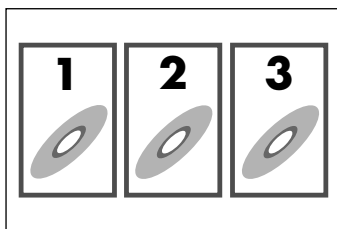
DVD discs generally have their own menus which show the disc contents. These menus contain various items such as titles of movies, names of songs, or artist information, and display them on the TV.

On the remote control ONLY:

1 Press TOP MENU or MENU.

The menu appears on the TV.

Ex.:



TOP MENU



MENU



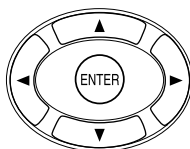
DVD normally has a "top" menu when it contains more than one title/group. In this case, press TOP MENU to show the title menu. Some DVDs may also have a different menu which is shown by pressing the MENU button.

See the instructions of each DVD for its particular menu.

2 Use cursor ◀/▶/▲/▼ to select a desired item, then press ENTER.

Playback of the selected item starts.

- With some discs, you can also select items by entering the corresponding number using the number buttons.
- You can press DVD ▶ instead of ENTER.



■ When playing a SVCD or VCD



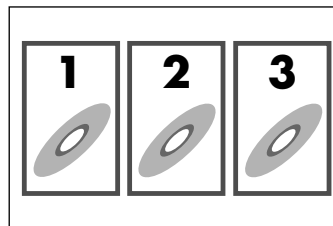
The Playback Control function (PBC) allows you to operate the SVCD or VCD by using menus.

When a SVCD or VCD with the PBC is detected, "VCD - - PBC" appears on the display.

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 "Playback Control function (PBC)—SVCD and VCD only" on page 16.)
- See also the instructions of each disc for its particular menu.

Ex.:



On the remote control ONLY:

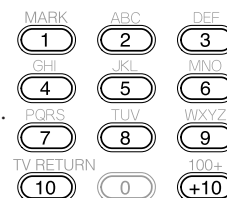
To select the number of the desired item, press the number buttons.

Ex.: For track number 5, press 5.

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

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

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



Playback of the selected item starts.

To return to the previous menu, press RETURN.

When "NEXT" or "PREVIOUS" is shown on the menu:

You can go to other pages of the menu.

- To go to the next page, press UP ▶▶▶.
- To return to the previous page, press DOWN ◀◀◀.

To cancel the PBC function

1 Press ■ during playback.

Playback stops. ("RESUME" appears on the display when the resume function is activated.)

2 Press the number buttons to select the track number you want to play.

Playback starts from the selected track without the PBC function.

To activate the PBC function again, press ■ twice to show "VCD - - PBC" on the display, then press DVD ▶.

Playing Back Discs on the 5-DVD Changer (Continued)

Programming the Track Playing Order —Program Play

You can arrange the order in which the chapters or tracks play before you start playing. You can program up to 99 steps.

- Program Play may not be able to use with JPEG discs and some DVDs.
- To use Repeat Play (see page 23) with Program Play, press REPEAT after starting Program Play.
- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 3 again.



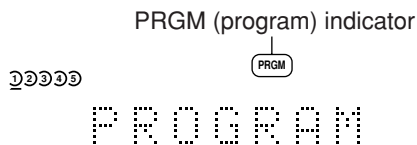
1 Load discs into the 5-DVD changer.

- If the current playing source is not "DISC," press DVD ► (or ▷/|| DVD on the unit), then ■ before going to the next step.

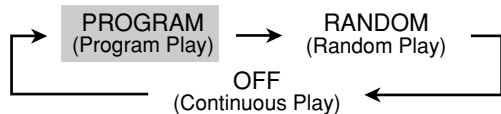
On the remote control ONLY:

2 Press PLAY/FM MODE repeatedly until "PROGRAM" appears on the display.

The PRGM indicator also lights up on the display.

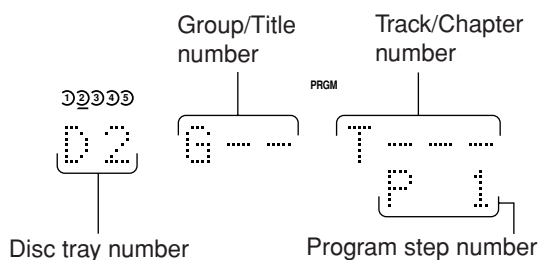


- Each time you press the button, the play mode changes as follows:



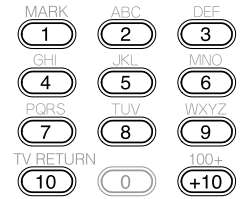
If a program has been stored in memory, the program is called up.

3 Press the number buttons to select a disc tray.



4 For DVD VIDEO/AUDIO and MP3 disc:

- Press the number buttons to select a title (for DVD VIDEO) or a group (for DVD AUDIO and MP3) from the selected disc in step 3.

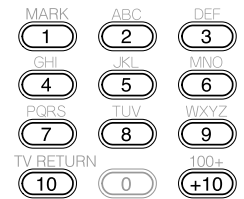


- After entering a title or group number, track/chapter number area will flash.
- For how to use the number buttons, see "To go to a particular title, group, chapter or track directly using the number buttons" on page 19.

- Repeat step (1) to select a chapter (for DVD VIDEO) or track (for DVD AUDIO and MP3).

For SVCD, VCD, or CD:

- Press the number buttons to select a track from the selected disc in step 3.



- When you program a track from an SVCD, VCD, or CD which is not currently selected, you can skip the group/title number by pressing ENTER.
- For how to use the number buttons, see "To go to a particular title, group, chapter or track directly using the number buttons" on page 19.

5 Program other tracks you want.

- To program tracks from the same disc, repeat step 3.
- To program tracks from a different disc, repeat steps 3 and 4.

6 Press DVD ►.

The tracks are played in the order you have programmed. Program Play ends when all the programmed tracks are played once (when Repeat Play is not activated).

To stop playing, press ■.

Playback stops, but Program Play is still activated.

- To exit from Program Play, see "To exit from Program Play" on the next page.

To go to the next step, press ►►.



When the PRGM indicator lights in the display You cannot change the disc tray currently selected.

To check the programmed contents

On the TV screen:

□ **Before or after playback**

Press **PLAY/FM MODE**.



□ **During playback**

Press **■**.



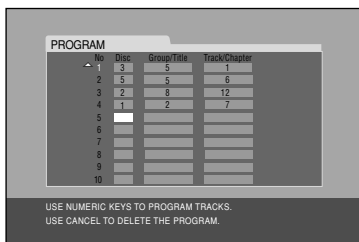
(On the remote control)



(On the unit)

The programmed contents appear on the TV.

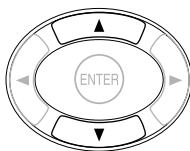
To erase the play mode screen, press **PLAY/FM MODE** again.



On the display:

Press cursor **▲/▼** while Program Play is stopped.

- **▼**: Shows the programmed tracks in the programmed order.
- **▲**: Shows them in the reverse order.



To modify the program

You can modify the program before or after playing.

To erase the last step, press **CANCEL**.

- Each time you press **CANCEL**, the last programmed step is erased.



To add steps in the program before play, simply select the numbers you want to add by pressing the number buttons.

To erase the entire program, press **■** before or after playback.

- Turning off the unit will also erase the program.



(On the remote control)



(On the unit)



• During Program Play

You cannot select disc by using **DISC UP** or **DISC DOWN** (or **DISC SELECT** on the unit).

• If you try to program the 100th step

“MEMORY FULL” will appear on the display.

• If your entry is ignored

You are trying to program a track from an empty tray, or a chapter/title/track/group number that does not exist on the disc (for example, selecting track 14 on a disc that only has 12 tracks). Such entries are ignored, and are erased from the program.

• If the total playing time is 100 minutes or more

The total playing time on the display will not be shown. “-- : --” will appear.

To exit from Program Play

Before or after play, press **PLAY/FM MODE** once or twice so that the unit enters another play mode (Random Play or Continuous Play).

The **PRGM** indicator goes off.

- Turning off the unit also cancels Program Play and changes play mode to Continuous Play. The program you have made will be erased (see the left column).

Playing at Random—Random Play

The tracks of all loaded discs will be played at random.

- Random Play cannot be used on some DVDs.
- If a JPEG disc is loaded, it is not played back during Random Play.
- To use Repeat Play (see page 23) with Random Play, press **REPEAT** after starting Random Play.



1 Load discs into the 5-DVD changer.

- If the current playing source is not “DISC,” press **DVD ►** (or **▷/|| DVD** on the unit), then **■** before going to the next step.

On the remote control ONLY:

2 Press **PLAY/FM MODE** repeatedly until “RANDOM” appears on the display.



The **RANDOM** indicator also lights up on the display.



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



3 Press **DVD ►**.



The tracks are played at random.

Random Play ends when all the tracks are played once (when Repeat Play is not activated).

To stop during play, press **■**.

Playback stops, but Random Play is still activated.

To skip the current playing track, press **▶▶**.

- You cannot go back to the previous tracks.

Playing Back Discs on the 5-DVD Changer (Continued)

To exit from Random Play

On the remote control ONLY:

Before or after play, press PLAY/FM MODE once or twice so that the unit enters another play mode (Continuous Play or Program Play).



The **RANDOM** indicator goes off.

- Turning off the unit also cancels Random Play and changes play mode to Continuous Play.



During Random Play

You cannot select disc by using DISC UP or DISC DOWN (or DISC SELECT on the unit).

Repeating Playback—Repeat Play

You can repeat playback of the current title, chapter (for DVD VIDEO), group (for DVD AUDIO), or track.

- You can also select Repeat Play using on-screen bar. (See page 26.)



- For DVD VIDEO/SVCD/VCD:

During playback

For DVD AUDIO/CD: **During playback or while stopped**

On the remote control ONLY:

Press **REPEAT**.



— Repeat mode indicator

REPEAT
TRACK

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

For DVD VIDEO:

CHAP (chapter) ⇒ **TITLE** ⇒ **ALL** ⇒ **OFF** ⇒ (back to the beginning)

For DVD AUDIO:

TRACK ⇒ **GROUP** ⇒ **ALL** ⇒ **OFF** ⇒ (back to the beginning)

For SVCD/VCD (with PBC function on):

ALL ⇒ **OFF** ⇒ (back to the beginning)

For SVCD/VCD (with PBC function off)/CD:

TRACK ⇒ **DISC** ⇒ **ALL** ⇒ **OFF** ⇒ (back to the beginning)

CHAP (chapter)	Repeats the current chapter (the indicator lights up on the display).
GROUP	Repeats the current group (the GROUP indicator lights up on the display).
TRACK (STEP*)	Repeats the current track (the indicator lights up on the display). * “STEP” appears on the TV screen during Program Play or Random Play.
TITLE	Repeats the current title (the TITLE indicator lights up on the display).
DISC	Repeats all tracks on the current disc (the DISC indicator lights up on the display).
ALL	Repeats all the discs loaded on the disc trays or of the program (the ALL indicator lights up on the display).
OFF	Selects to cancel Repeat Play mode.

To stop playing, press .

To cancel Repeat Play, press REPEAT repeatedly until Repeat mode indicators are turned off on the display.

- Turning off the unit will also cancel the Repeat Play.

Prohibiting Disc Ejection—Disc Lock

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

You can lock or unlock discs when the unit is turned on or off (on standby).

On the unit ONLY:

Press DISC1 while holding to lock the disc.



“LOCKED” appears on the display for a while, and the disc trays are locked.

- The loaded MD or cassette is also locked. (See pages 42 and 43.)

LOCKED

If you try to eject a disc, “LOCKED” appears to inform you that the Disc Lock is in use.


To cancel the prohibition and unlock the disc, repeat the above procedure.


“UNLOCKED” appears on the display for a while, the disc trays, MD, and cassette are unlocked.

Advanced Disc Operations

This section explains advanced disc operations by using the remote control.

For MP3 and JPEG playback, see pages 35 and 36.

- See also “Basic Disc Operations” on pages 18 and 19.
-  indicates types of disc available for the operation.
- Turn on your TV and select the correct input mode on the TV.

If “” appears on the TV when you press a button, the disc cannot accept an operation you have tried to do, or data required for that operation is not recorded on the disc.

About the On-screen Bar

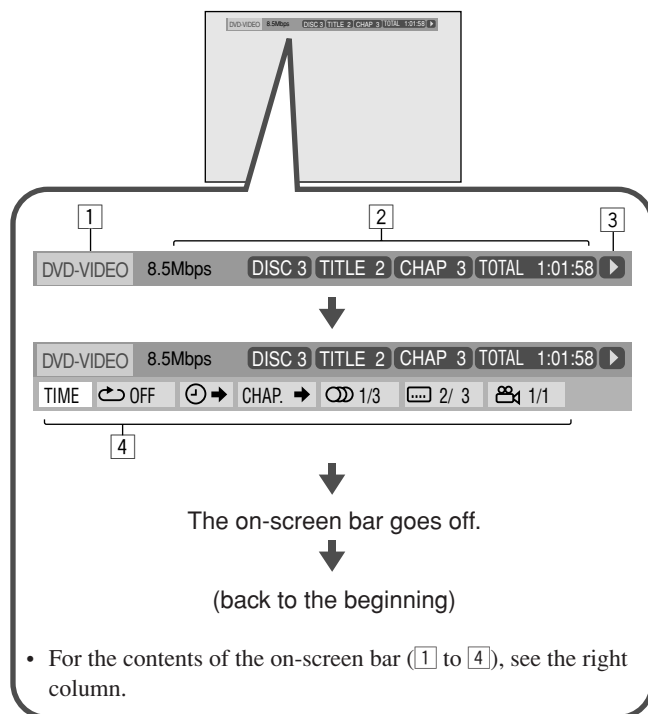
You can check the information on discs while the discs are loaded and use some functions through the on-screen bar.

 Whenever discs are loaded with the DVD player selected as the source

Press ON SCREEN.















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

Ex.: While playing a DVD VIDEO.








1 Disc type






















2 Playback information

Indication	Meanings	Available discs
Mbps	shows the current transfer rate (Megabits per second).	
	shows the the current disc number.	all discs
	shows the current title.	
	shows the current chapter.	
	shows the current group.	
	shows the current track.	   
	shows the time indications.	all discs

3 Playback conditions

Indication	Meanings
	Playback
	Forward/Reverse Search
	Forward/Reverse slow-motion
	Pause
	Stop

4 Operation icons (on the pull-down menu)


Indication	Meanings	Available discs
	Select to change the time indication. See page 25.	all discs
	Select to repeat playback. See page 26 and 27.	all discs
	Select for time search. See page 27.	all discs
	Select for chapter search. See page 28.	
	Select for track search. See page 28.	
	Select to change the audio language or channel. See page 29.	   
	Select to change subtitle language. See page 29.	  
	Select to change the view angle. See page 30.	 
	Select to change the page. See page 30.	


Advanced Disc Operations (Continued)

On-screen guide icons

- During disc playback, the following guide icons may appear for a while on the TV:

 appears at the beginning of a scene containing multi-angle views.

 appears at the beginning of a scene containing multi-audio languages.

 appears at the beginning of a scene containing multi-subtitle languages.

- “▶” (Play), “||” (Pause), “▶▶” (Forward Search), “◀◀” (Reverse Search), “▶▶▶” (Forward slow-motion), “◀◀◀” (Reverse slow-motion): appears when you perform each operation.
- If you do not want the on-screen guide icons, see page 79.

Operation through the On-screen Bar

■ Changing the Time Indication

You can change the time information in the on-screen bar and the display window on the front panel.



□ During playback

1 Press ON SCREEN twice.

The on-screen bar with pull-down menu appears on the TV.



2 Press ENTER.

- Each time you press ENTER, the time indication in the on-screen bar changes as follows:



Ex.: When playing a DVD VIDEO

TOTAL 1:25:58 ⇒ T.REM 0:45:41 ⇒ TIME 0:25:58 ⇒
REM 0:18:14 ⇒ (back to the beginning)

TOTAL	Elapsed disc time
T. (total) REM	Remaining disc time
TIME	Elapsed playing time of the current chapter/track
REM	Remaining time of the current chapter/track

- The indication on the display window also changes.

To turn off the on-screen bar

Press ON SCREEN.

■ Repeating Playback

You can repeat playback of the current title or chapter (for DVD VIDEO), group or track (for DVD AUDIO) or track (for SVCD/VCD/CD).

- You can also repeat playback of a desired portion (A-B Repeat).

To repeat a current title, group, chapter, or all tracks



- For DVD VIDEO: **During playback**
 For SVCD/VCD: **While stopped or during playback without PBC**

For DVD AUDIO/CD: **While stopped or during playback**

1 Press ON SCREEN twice.

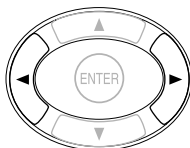
The on-screen bar with pull-down menu appears on the TV.



Ex.: When playing a DVD VIDEO.



2 Press cursor ►/◀ repeatedly to select (highlight) **OFF** on the pull-down menu.



3 Press ENTER.

The pop-up window appears under the pull-down menu.



4 Press cursor ▼/▲ repeatedly to select Repeat Play mode.

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

For DVD VIDEO:

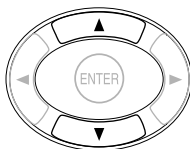
ALL ⇄ **A-B** ⇄ **TITLE** ⇄ **CHAPTER** ⇄ **OFF** ⇄
 (back to the beginning)

For DVD AUDIO:

ALL ⇄ **A-B** ⇄ **GROUP** ⇄ **TRACK** ⇄ **OFF** ⇄
 (back to the beginning)

For SVCD/VCD/CD:

ALL ⇄ **A-B** ⇄ **DISC** ⇄ **TRACK** ⇄ **OFF** ⇄
 (back to the beginning)



ALL	Repeats all the discs loaded on the disc trays or of the program (the ↺ ALL indicator lights up on the display).
A-B	Repeats a desired portion (the ↺ A-B indicator lights up on the display) (see page 27).
TITLE	Repeats the current title (the ↺ TITLE indicator lights up on the display).
GROUP	Repeats the current group (the ↺ GROUP indicator lights up on the display).
DISC	Repeats all tracks on the current disc (the ↺ DISC indicator lights up on the display).
CHAPTER	Repeats the current chapter (the ↺ 1 indicator lights up on the display).
TRACK	Repeats the current track (the ↺ 1 indicator lights up on the display).
OFF	Selects to cancel Repeat Play mode.

5 Press ENTER.

The setting changes and the pop-up window goes off.



- If you select “ALL” during Random Play, the all tracks of the disc are played repeatedly in random order.
- “A-B” cannot be selected during Program and Random Play or while a disc is not playing.

To turn off the on-screen bar

Press ON SCREEN.

To cancel the repeat playback

Select “OFF” in step 4, then press ENTER.

You can directly change Repeat Play mode (except A-B) by pressing REPEAT on the remote control. See pages 23 and 36.

Advanced Disc Operations (Continued)

To repeat a desired portion—A-B Repeat

You can repeat playback of a desired portion by specifying the beginning (point A) and the ending (point B).

- A-B Repeat cannot be used on some DVDs.
- You cannot use A-B Repeat during Program and Random Play or while a disc is not playing.

DVD VIDEO **DVD AUDIO** **VIDEO CD** **SUPER VCD** **AUDIO CD** □ During playback

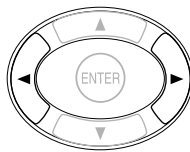
1 Press ON SCREEN twice.

The on-screen bar with pull-down menu appears on the TV.

Ex.: When playing a DVD VIDEO.



2 Press cursor ►/◀ repeatedly to select (highlight) on the pull-down menu.

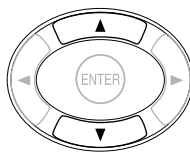


3 Press ENTER.


The pop-up window appears under the pull-down menu.



4 Press cursor ▼/▲ repeatedly to select "A-B."



5 Press ENTER at the beginning of the portion you want to repeat (point A).

" A -" appears in the pull-down menu.



- The  A-B indicator also lights up on the display.

6 Press ENTER at the end of the portion you want to repeat (point B).

A-B repeat playback starts. The selected part (between point A and B) is played repeatedly.



To turn off the on-screen bar
Press ON SCREEN.

To cancel the A-B Repeat playback

Select "OFF" in step 4, then press ENTER.

- Pressing ,  or  also cancels the A-B Repeat playback.



While playing back a DVD

A-B Repeat is possible only within the same title.

■ Locating a desired position—Time Search

You can start playing at your desired position by specifying the elapsed playing time from the beginning of the current title up to "9:59:59" (for DVD), or from the beginning of the disc up to "99:59" (for VCD/SVCD/CD).

DVD VIDEO **DVD AUDIO** **VIDEO CD** **SUPER VCD** **AUDIO CD**

- For DVD VIDEO: **During playback**
- For SVCD/VCD: **While stopped or during playback without PBC**

For DVD AUDIO/CD: **While stopped or during playback**

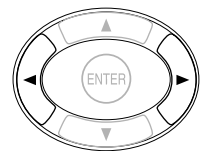
1 Press ON SCREEN twice.

The on-screen bar with pull-down menu appears on the TV.

Ex.: When playing a DVD VIDEO.



2 Press cursor ►/◀ repeatedly to select (highlight) on the pull-down menu.



3 Press ENTER.

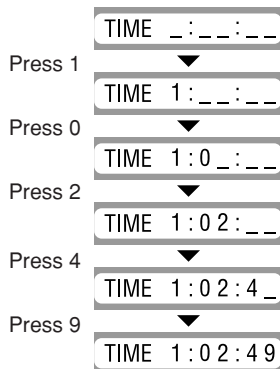
The pop-up window appears under the pull-down menu.



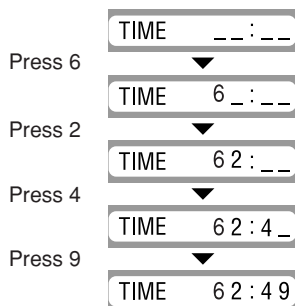
4 Use the number buttons (0 – 9) to enter the time.

You can specify the time in hours/minutes/seconds for DVD VIDEO/DVD AUDIO, and in minutes/seconds for SVCD/VCD/CD.

Ex.: To play back from a point of 1 (hours): 02 (minutes): 49 (seconds) from the beginning for DVD VIDEO/DVD AUDIO.



Ex.: To play back from a point of 62 (minutes): 49 (seconds) from the beginning for SVCD, VCD or CD.



To correct a misentry

Pressing cursor ◀ erases the last entry.

Press cursor ◀ repeatedly until the wrong number is erased, then press the number buttons to enter the correct number(s) again.

5 Press ENTER.

The unit starts playback from the specified time.



To turn off the on-screen bar

Press ON SCREEN.

Locating a desired chapter/track

When playing back a disc, you can search for the chapter (DVD VIDEO)/track (DVD AUDIO) number to play.



1 Press ON SCREEN twice.

The on-screen bar with pull-down menu appears on the TV.



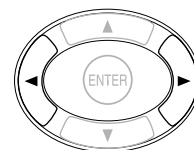
Ex.: When playing a DVD VIDEO.



Ex.: When playing a DVD AUDIO.



2 Press cursor ▶/◀ repeatedly to select (highlight) CHAP. → or TRACK → on the pull-down menu.



3 Press ENTER.

The pop-up window appears under the pull-down menu.



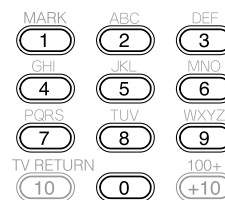
4 Press the number buttons (0 – 9) to enter the desired chapter/track number.

You can select up to the 99th chapter/track.

Ex.: To select chapter/track number 8, press 8.

To select chapter/track number 10, press 1, then 0.

To select chapter/track number 37, press 3, then 7.



To correct a misentry

Press the number buttons until the desired number shown in the pop-up window.

5 Press ENTER.

The unit starts playback from the selected chapter.




To turn off the on-screen bar

Press ON SCREEN.

Advanced Disc Operations (Continued)

Selecting the Audio Language

When a DVD contains audio languages (sound track), you can select the language (sound track) to listen to.

The  icon appears at the beginning of playback when the current scene has plural audio languages.

- You can also select the audio language using the on-screen bar. See page 24 for details.

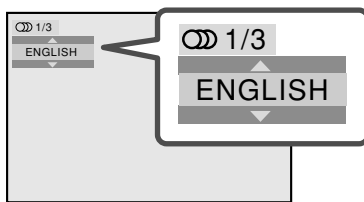


1 Press AUDIO.



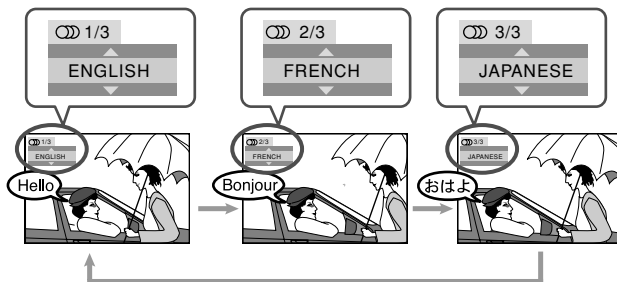
The following pop-up window appears on the TV.

Ex.: When "ENGLISH" is selected out of 3 audio languages recorded.



2 Press AUDIO repeatedly to select the desired audio language.

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




You can also use cursor / to select the desired audio language.

To erase the pop-up window

Perform one of the following:

- Press ENTER.
- Leave the unit for about 5 seconds without any operation.

Selecting the Subtitle Language

While playing back a DVD containing subtitles in different languages, you can select the subtitle language to display on the TV. The  icon appears at the beginning of playback when the current scene has plural subtitles.

- Though you can do the following procedure for an SVCD which contains no subtitle, it is not effective.
- You can also select the subtitle language using the on-screen bar. See page 24 for details.

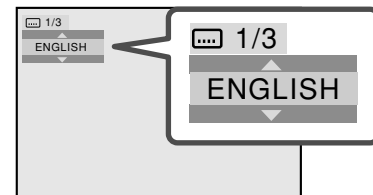


1 Press SUB TITLE.



The following pop-up window appears on the TV.

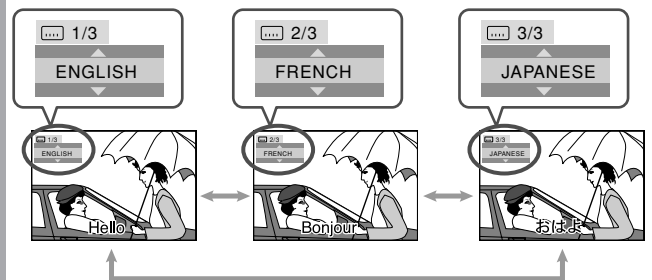
Ex.: When "ENGLISH" is selected out of 3 subtitle languages recorded.



- For DVD:** Some subtitle languages may be abbreviated in the pop-up window. See "Language Code List" on page 88.

2 Press / repeatedly to select the desired subtitle language.

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



- For SVCD:** Pressing SUB TITLE repeatedly also changes the subtitles.

The pop-up window goes off if no operation is done for about 5 seconds.

To turn off the subtitle

- For DVD:** Press SUB TITLE to select "OFF" while the pop-up window appears on the TV.
- For SVCD:** Press SUB TITLE repeatedly until "OFF" appears on the pop-up window.

Selecting a View Angle

While playing back a DVD containing multi-view angles, you can view the same scene from different angles.

The  icon appears at the beginning of playback when the current scene has multi-view angles.

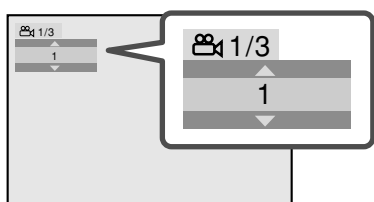
- You can also select the angle using the on-screen bar. See page 24 for details.



1 Press ANGLE.

The following pop-up window appears on the TV.

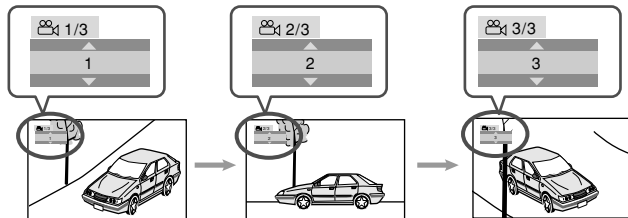
Ex.: When the first view angle is selected out of 3 view angles recorded.





2 Press ANGLE repeatedly to select the desired view angle.

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

Ex.: 1/3 ⇒ 2/3 ⇒ 3/3 ⇒ (back to the beginning)



You can also use cursor / to select the desired view angle.

To erase the pop-up window

Perform one of the following:

- Press ENTER.
- Leave the unit for about 5 seconds without any operation.

Selecting Browseable Still Pictures recorded on DVD AUDIO

Most DVD AUDIOS include browsable still pictures, which usually appear in turn automatically during playback according to the playback sequence.

You can change the picture (turn the page) manually when the current still picture has selectable pages.



1 Press ON SCREEN twice.

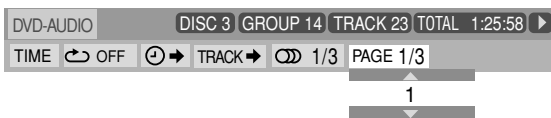
The on-screen bar with pull-down menu appears on the TV.

2 Press cursor / repeatedly to select (highlight) PAGE on the pull-down menu.



3 Press ENTER.

The pop-up window appears under the pull-down menu.



4 Press cursor / repeatedly to select the desired page, then press ENTER.

To turn off the on-screen bar

Press ON SCREEN.

Advanced Disc Operations (Continued)

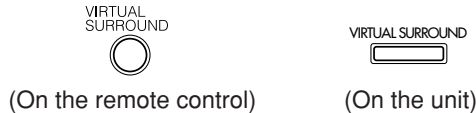
Creating a Realistic Sound Field

With supplied two speakers, you can enjoy multi-channel surround sound.

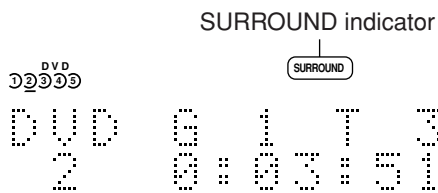
- This function only works for software containing more than 3-channel surround.



Press **VIRTUAL SURROUND**.

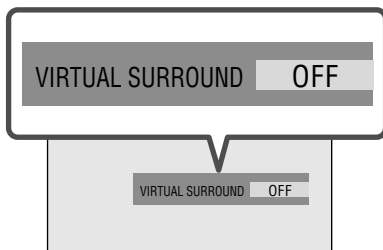


The **SURROUND** indicator lights up on the display.



- Each time you press the button, the VIRTUAL SURROUND setting alternates between on and off on the TV screen.

Ex.: When VIRTUAL SURROUND is set to "OFF."



- Virtual surround does not apply fully when using headphones.
- Virtual surround does not take effect for some Karaoke discs.

Selecting the Audio Channel

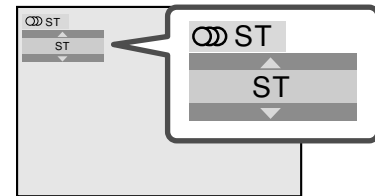
When playing back some Karaoke SVCDs or VCDs, you can enjoy Karaoke by selecting the audio channel to play.

- You can also select the audio channel using the on-screen bar. See page 24 for details.



1 Press **AUDIO**.

The following pop-up window appears on the TV.
Ex.: "ST" (stereo) is selected when playing a VCD.



2 Press **AUDIO** repeatedly to select the desired audio channel.

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

For SVCD:

Ex.: **ST 1** ⇒ **ST 2** ⇒ **L 1** ⇒ **R 1** ⇒ **L 2** ⇒ **R 2** ⇒
(back to the beginning)

ST 1/ST 2 To listen to normal stereo (2-channel) playback of ST 1 or ST 2 channels.

L 1/L 2 To listen to the L (left) 1 or L 2 audio channel of either ST 1 or ST 2.

R 1/R 2 To listen to the R (right) 1 or R 2 audio channel of either ST 1 or ST 2.

For VCD:

Ex.: **ST** ⇒ **L** ⇒ **R** ⇒ (back to the beginning)

ST To listen to normal stereo (2-channel) playback.

L To listen to the L (left) audio channel.

R To listen to the R (right) audio channel.

You can also use cursor ▼/▲ to select the desired audio channel.

To erase the pop-up window

Perform one of the following:

- Press ENTER.
- Leave the unit for about 5 seconds without any operation.

Special Picture Playback

This unit provides special picture playback functions including still picture, frame-by-frame, slow-motion, and zoom.

■ Still picture and frame-by-frame playback

 □ During playback

1 Press **II** once.

Still picture appears—Still picture playback.



2 Press **II** repeatedly.

- Each time you press the button, the still picture advances frame by frame—Frame-by-frame playback.

To return to normal playback

Press DVD ►.

■ Playing back in slow motion—Slow-motion playback

 □ During playback



1 Press **II** at the point where you want to start playback in slow motion.

Still picture appears.



2 Press **SLOW** or **SLOW** .



To play back in forward slow-motion, press **SLOW** . To play back in reverse slow-motion (for DVD VIDEO only), press **SLOW** .

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

Forward:

 ⇒  ⇒  ⇒ 
⇒ 

Reverse (for DVD VIDEO only):

 ⇒  ⇒  ⇒ 
⇒ 

To pause slow-motion playback

Press **II**.

To return to normal playback

Press DVD ►.



During slow-motion playback

No sound will be reproduced.

■ To replay the previous scenes (One touch replay function)

 □ During playback

Press .

The playback position moves back 10 seconds before the current position.



- This function works only within the same title, though it works between chapters.
- This function may not work with some DVD VIDEO discs.

■ Zooming in

 □ During playback or while paused

Press **ZOOM**.

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

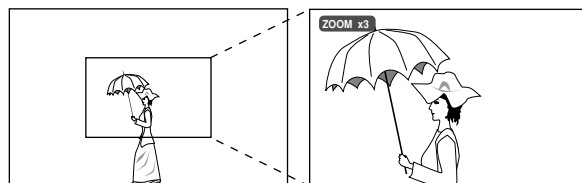


For DVD:

x 1.8 ⇒ **x 3** ⇒ **x 1** (normal size) ⇒ (back to the beginning)



For SVCD/VCD:

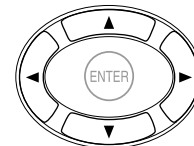
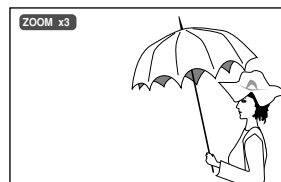
x 1 (normal size) ⇒ **x 1.5** ⇒ (back to the beginning)



Ex.: When "ZOOM x3" is selected.

To move the zoomed-in position

Press cursor ///.



To return to normal playback

Press **ZOOM** repeatedly until "ZOOM x1" appears on the TV.



While zoomed in

The picture may look coarse.

Advanced Disc Operations (Continued)

Changing the VFP Setting

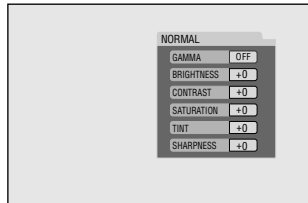
The VFP (Video Fine Processor) function enables you to adjust the picture based on the picture tone, or personal preference.

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

DVD VIDEO **DVD AUDIO** **VIDEO CD** **SUPER VCD** **AUDIO CD** During playback

1 Press VFP.

The current VFP setting screen appears on the TV.



Ex.: When "NORMAL" is selected.

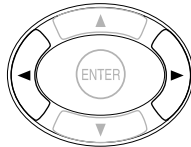


2 Press cursor ►/◄ repeatedly to select the VFP mode.

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

NORMAL ⇄ **CINEMA** ⇄ **USER1** ⇄ **USER2** ⇄ (back to the beginning)

NORMAL	Normally select this.
CINEMA	Suitable for a movie source.
USER1/USER2	You can adjust parameters that affect the appearance of picture and can store the settings (see below).



To turn off the VFP setting screen

Press VFP.



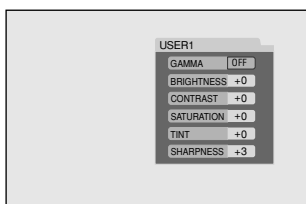
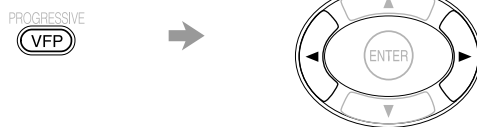
If no operations are done for about 10 seconds

The VFP setting screen disappears.

To adjust the appearance of the picture

You can adjust the appearance of picture and store in "USER1" and "USER2."

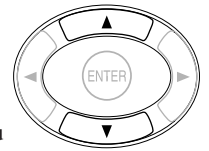
1 Press VFP, then press cursor ►/◄ repeatedly to select "USER1" or "USER2."



Ex.: When "USER1" is selected.

2 Press cursor ▼/▲ repeatedly to select a parameter you want to adjust.

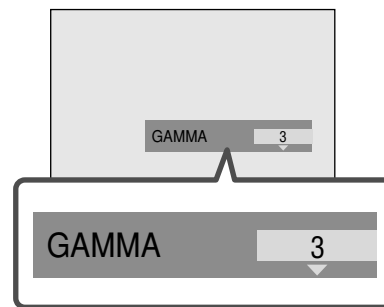
Adjust the parameters so that the picture you are viewing appears as you prefer.



GAMMA	Adjust if the neutral color is bright or dark. The brightness of dark and bright portions is maintained. Available range: OFF, 1 (darkest) to 3 (brightest)
BRIGHTNESS	Adjust if the picture is bright or dark as a whole. Available range: -8 (darkest) to +8 (brightest)
CONTRAST	Adjust if the far and near position is unnatural. Available range: -7 to +7
SATURATION	Adjust if the picture is whitish or blackish. Available range: -7 (most blackish) to +7 (whitest)
TINT	Adjust if the human skin color is unnatural. Available range: -7 to +7
SHARPNESS	Adjust if the picture is indistinct. Available range: -8 to +8

3 Press ENTER.

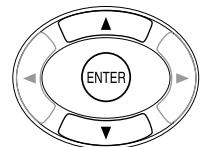
VFP parameters list disappears, and the following pop-up window for the selected item appears on the TV.



Ex.: When "GAMMA" is selected.

4 Press cursor ▼/▲ repeatedly to select the value, then press ENTER.

Your adjustment is stored and the current VFP parameter list appears again.



5 Repeat steps 2 to 4 to adjust other parameters.

To turn off the VFP setting screen

Press VFP.

To activate your setting

Press VFP, then press cursor ►/◄ repeatedly to select "USER1" or "USER2."



If no operation is done for about 10 seconds

The VFP setting screen disappears.

Playing Back a Bonus Group

Some DVD AUDIOS have a special group called “bonus group” whose contents are not open to the public. The bonus group is always assigned to the last group of a disc (for example, if a disc contains 4 groups including a bonus group, “group 4” is the bonus group).

To play back a bonus group, you have to enter the specific “key number” (a kind of password) for the bonus group. The way of getting the key number depends on the disc.

After getting the key number, you can play back the bonus group using the following procedure.

     While the key number entry indication appears

1 Select a bonus group.

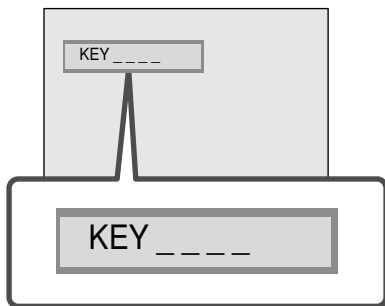
For how to select the group, see “To go to another title or group” on page 18.

The key number entry indication appears as follows:

On the display

KEY _ _ _ _

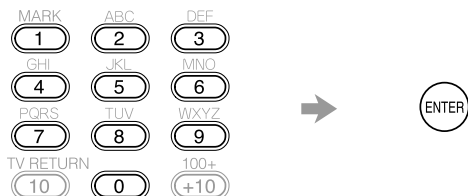
On the TV screen



2 Enter the key number using the number buttons (0 – 9), then press ENTER.

When you enter the correct key number, the unit starts playing back the bonus group.

- If you enter the wrong number, enter the number again.



To turn off the key number entry indication

Perform one of the following:

- Press ■,
- Open the disc tray, or
- Turn off the unit.

Opening the disc tray, selecting another disc tray or selecting another playing source (MD, TAPE, FM/AM or AUX/AUX-DIGITAL) erases the memory of the key number.



- You cannot select a track in the bonus group for the program playback.
- In the Random Play, tracks in the bonus group are played back.

Advanced Disc Operations (Continued)

MP3/JPEG Disc Playback

This unit can play back MP3/JPEG files on a CD-R or CD-RW. We call a disc containing MP3 files "MP3 disc" and a disc containing JPEG files "JPEG disc" in this instruction.

- For details about other discs (DVD, SVCD, VCD, CD) playback, see pages 17 to 34.
- In this instruction, "file" is also referred to as "track."
- Turn on your TV and select the correct input mode on the TV.

If "⊘" appears on the TV when you press a button, the disc cannot accept an operation you have tried to do.

Notes for MP3/JPEG discs

- MP3/JPEG discs (either CD-R or CD-RW) require a longer readout time than normal discs. (It depends on the complexity of the folder/file configuration.)
- When making an MP3/JPEG disc, select ISO 9660 Level 1 or Level 2 as the disc format.
- This unit supports "multi-session" discs (up to 5 sessions).
- This unit cannot play "packet write" discs.
- Some MP3/JPEG discs may not be played back because of their disc characteristics or recording conditions.
- If both MP3 files and JPEG files are recorded on a disc, change the MP3/JPEG setting in the PICTURE menu to play the desired files (see page 78).

Notes for MP3 files

- This unit can play MP3 files only with the following file extensions: ".MP3", ".Mp3", ".mp3" and ".mp3".
- ID3* tags cannot be shown on the display.
 - * An MP3 file can contain file information called an "ID3 Tag" where its album name, performer, track title, etc. are recorded.
- It is recommended that you make each MP3 file at a sampling rate of 44.1 kHz and at bit rate of 128 kbps. The unit cannot play back files made at bit rate of less than 64 kbps.

Notes for JPEG files

- The unit can play JPEG files only with the following file extensions: ".JPEG", ".JPG", ".jpeg", ".jpg" and any uppercase and lowercase combinations (such as ".Jpg").
- It is recommended that you record a file at 640 x 480 resolution. (If a file has been recorded at a resolution of more than 640 x 480, it will take a longer time to be shown.)
- This system can play only baseline JPEG files*. Progressive JPEG files** or lossless JPEG files*** cannot be played.
 - * Baseline JPEG format: Used for digital cameras, web, etc.
 - ** Progressive JPEG format: Used for web.
 - *** Lossless JPEG format: An old type and rarely used now.
- This unit may not play back JPEG files properly which are recorded by the devices other than digital still camera.



Some tracks on an MP3/JPEG disc are skipped and may not be played back normally

This is not malfunction. It may result from their recording processes and conditions.



About Program Play and Random Play

You cannot use Program Play and Random Play for JPEG disc, but for MP3 disc.

Basic MP3/JPEG Disc Operations

To start playback

Load an MP3/JPEG disc, then select the disc.

On the remote control:

Press **DISC UP** or **DISC DOWN** repeatedly to select the disc you want.



On the unit:

Press **DISC SELECT** repeatedly to select the disc you want.



Playback starts.

- When loading a MP3 disc, the MP3 CONTROL screen appears on the TV.
- When loading a JPEG disc, Slide-show playback starts. Each file (still picture) is shown on the TV for about 3 seconds, then changed to the next file, one after another.
- When all files in a group have been played, the unit plays files in the next group.

To pause playback

Press **DVD II** (or **▷/II DVD** on the unit).



To start playback again, press **DVD ▶** (or **▷/II DVD** on the unit).

To select a file directly

On the remote control ONLY:

Press the number buttons (1 – 10, +10) to enter the file number.

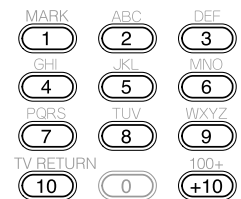
Playback begins from the selected file.

Ex.: To select the file number 3, press 3.

To select the file number 14, press +10 then 4.

To select the file number 24, press +10, +10, then 4.

To select the file number 110, press +10 ten times, then 10.



To select groups

On the remote control ONLY:

Press **GROUP/TITLE >>|** or **GROUP/TITLE |<<** repeatedly as many times as required.



To skip forward or backward to other files

Press **▶▶|** / **|<<<** repeatedly as many times as required.



- To skip back to the beginning of the current file, press **|<<<** once.

To stop playback completely

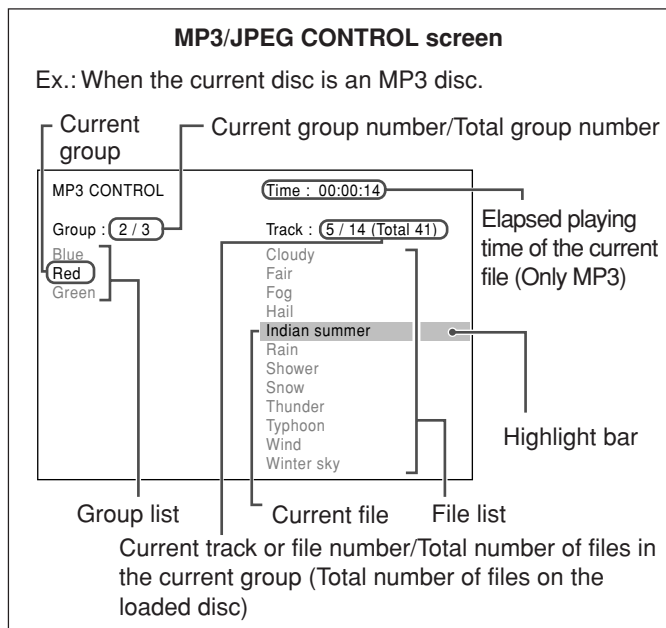
Press **■**.

For JPEG discs: JPEG CONTROL screen appears on the TV.



Operations through the MP3/JPEG CONTROL Screens

You can search for and play the desired files in a group through the MP3/JPEG CONTROL screens shown on TV.



About the MP3/JPEG CONTROL screens

- Some group and file names may not be displayed correctly because of their recording conditions.
- The order of groups and files on an MP3/JPEG disc may be displayed differently from the order displayed on your personal computer.
- Up to 12 groups and files are displayed on the TV at a time. Pressing cursor ▲/▼/▶/◀ repeatedly shows the succeeding groups and files one by one.

Basic MP3/JPEG CONTROL Operations

On the remote control ONLY:

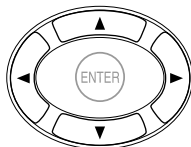
1 Press cursor ◀ to move the highlight bar to the group list.

2 Press cursor ▼/▲ repeatedly to select a group.

- When you select a group, the file list of the selected group is shown on the right.

3 Press cursor ▶ to move the highlight bar to the right file list.

4 Press cursor ▼/▲ repeatedly to select a file.



5 For MP3:

Press DVD ▶ (or ENTER).

Playback starts from the selected file.



For JPEG:

Press DVD ▶.

Slide-show starts from the selected file.

- Press ENTER to show only the selected file.
- While a JPEG file is played back, the JPEG CONTROL screen disappears.

To stop playback, press ■.

For JPEG discs: JPEG CONTROL screen appears on the TV.



If a black screen continuously appears in Slide-show

The file currently played may be non-baseline JPEG file. In this case, select a playable file (a baseline JPEG file) again (e.g., pressing ■ or MENU to show the JPEG CONTROL screen, etc.). Note that it may take a long time to select another file.

Repeating Playback—Repeat Play

You can repeat playback.

On the remote control ONLY:

Press REPEAT during or before play.



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

For MP3:

REPEAT TRACK ⇔ REPEAT GROUP ⇔ REPEAT DISC
⇔ REPEAT ALL ⇔ REPEAT OFF (canceled) ⇔ (back to the beginning)

For JPEG:

REPEAT GROUP ⇔ REPEAT DISC ⇔ REPEAT ALL ⇔
REPEAT OFF (canceled) ⇔ (back to the beginning)

REPEAT TRACK	Repeats the current track (the ↺ 1 indicator lights up on the display).
REPEAT GROUP	Repeats the current group (the ↺ GROUP indicator lights up on the display).
REPEAT DISC	Repeats all tracks on the current disc (the ↺ DISC indicator lights up on the display).
REPEAT ALL	Repeats all the discs loaded on the disc trays or all steps of the program (the ↺ ALL indicator lights up on the display).
REPEAT OFF	Cancels Repeat Play (continuous play).

To stop playing, press ■.

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

- Turning off the unit will also cancel Repeat Play.

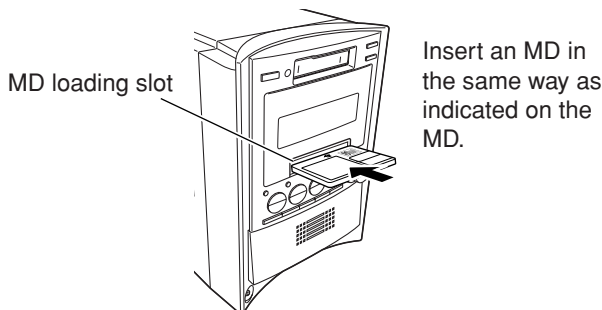
Playing Back an MD

Playing Back the Entire MD —Normal Play

1 Insert an MD into the MD loading slot.

The MD is pulled in automatically.

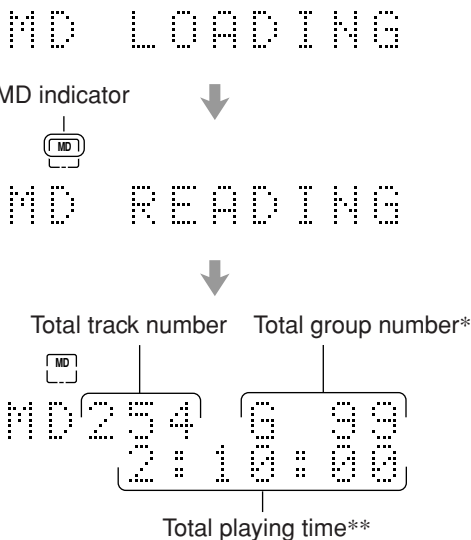
- If the current playing source is not “MD,” press MD ►||, then ■ before going to the next step.



CAUTION:

During Power Save (see page 10), do not insert an MD. Before inserting an MD, cancel Power Save or turn on the unit first.

- The following indications appear when the current source is “MD”:



* When the loaded MD has no group, the total group number will be indicated by “- -.”

- To make or edit groups, see pages 54 to 62.

** Disc title appears/scrolls before the total playing time if the loaded MD has a title.

2 Press MD ►||.



(On the remote control)



(On the unit)

MD playback starts from the first track.

The recording length mode (SP/LP2/LP4) appears on the display.

- Track title appears/scrolls before the recording length mode if the track has a title.

MD playback stops automatically after playing all the tracks on the MD.

To stop during play, press ■.

To remove the disc, press ▲ (MD eject) on the unit.



- Pressing ▲ (MD eject) button also turns on the unit if the MD is unlocked.

• If the MD has a disc/performer name or track has a title

The title will be shown at the lower part of the display for a while. (If a title is long and cannot be shown at a time, the unit scrolls the title to show the entire title.)

• About recording length mode

MDs are played back in the same recording length mode as they were recorded. When an MD starts playing, the recording length mode of the currently playing track appears on the display.

SP: Indicates the tracks recorded in standard stereo recording mode on this unit or those recorded on an MD recorder incompatible with MDLP (see below).

LP 2: Indicates the tracks recorded in 2 times long-hour stereo recording mode.

LP 4: Indicates the tracks recorded in 4 times long-hour stereo recording mode.

For more details, see page 46.

MDLP features a new sound compression method (ATRAC3, see page 87) and enables a 2 times (or 4 times) long-hour stereo recording and playing function.

The MDLP logo is marked on the MD recorders and players compatible with MDLP. It is also marked on MDs pre-recorded in ATRAC3 (excluding recordable MDs).

Basic MD Operations

While playing an MD, you can do the following operations.

To pause playback

Press MD ►||.



(On the remote control)



(On the unit)

The elapsed playing time starts flashing on the display.

To resume playback, press MD ►|| again.

To locate a particular point in a track during play

On the remote control ONLY:

Press and hold ►► or ◀◀.

- ►►: Fast-forwards the track.

- ◀◀: Fast-reverses the track.



To go to another track

Press **▶▶** or **◀◀** repeatedly.



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

To go to another track directly using the number buttons

On the remote control ONLY:

Pressing the number button(s) allows you to start playing the track number you want.

- Ex.: For track number 5, press 5.
 For track number 15, press +10, then 5.
 For track number 20, press +10, then 10.
 For track number 32, press +10, +10, +10, then 2.



To change the information shown on the display

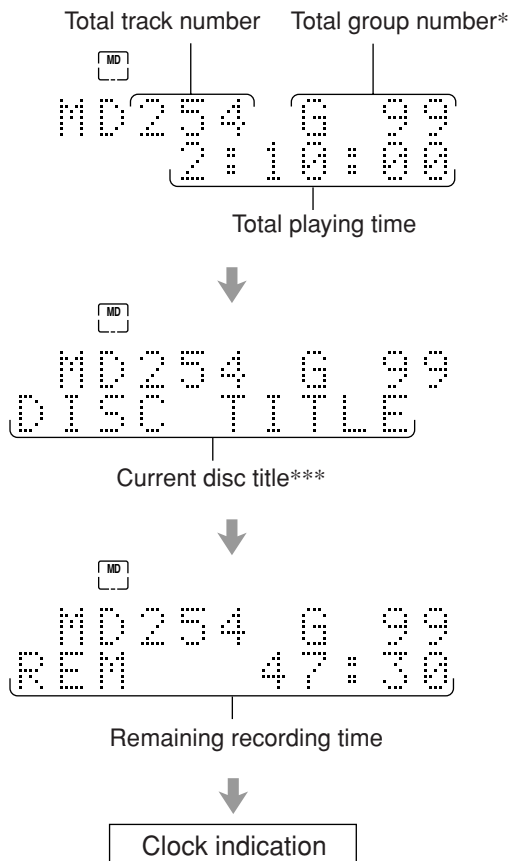
On the remote control ONLY:

Press **DISP/CHARA.**

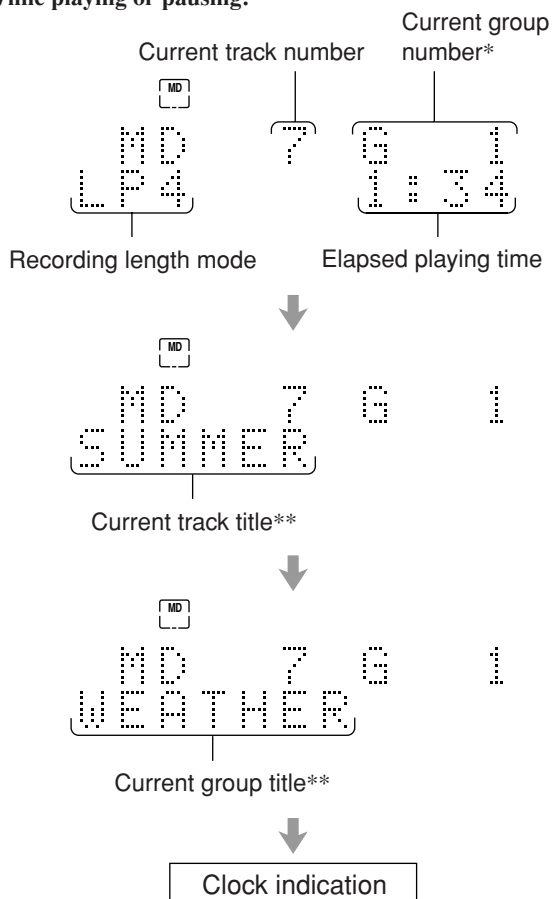
Each time you press the button, the information on the display changes as on the right column:



Before playback:



While playing or pausing:



- * When the current track does not belong to any group or when the disc has no group, “-” will appear on the display.
- ** When the track/group has no title, “NO TR TITLE” or “NO GR TITLE” appears on the display.
- When the current track does not belong to any group, “UNGROUP TRK” appears on the display.
- ***When the selected disc has no title, “NO TITLE” will appear on the display.

Playing Back an MD (Continued)

Programming the Track Playing Order —Program Play

You can arrange the order in which the tracks play before you start playing. You can program up to 32 tracks.

- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step **3** again.

1 Load an MD.

- If the current playing source is not “MD,” press MD ►||, then ■ before going to the next step.

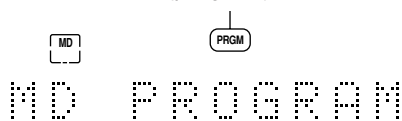
On the remote control ONLY:

2 Press PLAY/FM MODE repeatedly until “PROGRAM” appears on the display.

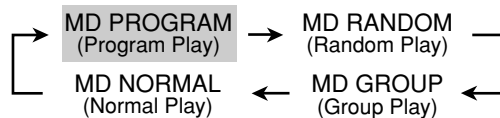


The PRGM indicator lights up on the display.

PRGM (program) indicator



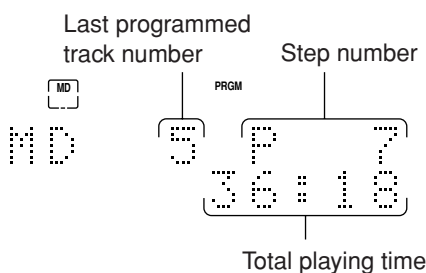
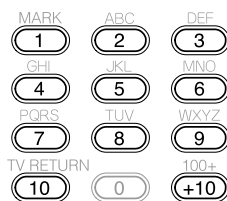
- Each time you press the button, play mode changes as follows:



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

3 Press the number buttons to select the tracks.

- Ex.: For track number 5, press 5.
For track number 15, press +10, then 5.
For track number 20, press +10, then 10.
For track number 30, press +10, +10, then 10.



4 Repeat step 3 to program other tracks you want.

5 Press MD ►||.



The tracks are played in the order you have programmed. Program Play ends when all the programmed tracks are played once (when Repeat Play is not activated).

To stop during play, press ■.

The program you have made is still stored in the memory.

To exit from Program Play, before or after play, press PLAY/FM MODE repeatedly so that the unit enters another play mode (Random Play, Group Play, or Normal Play).

The PRGM indicator goes off.

- Turning off the unit or ejecting MD also cancels Program Play and changes the play mode to Normal Play. The program you have made will be erased.

To check the program contents

Before playing, you can check the program contents by pressing ►►| or |◀◀.



(On the remote control)

(On the unit)

- ►►|: Shows the programmed tracks in the programmed order.
- |◀◀: Shows them in the reverse order.

To modify the program

On the remote control ONLY:

Before playing, you can erase the last programmed track by pressing CANCEL.



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

To add tracks in the program before playing, simply select the track numbers you want to add by following step **3** in Program Play.

To erase the entire program, press ▲ (MD eject) on the unit to eject the MD.

- The program will be erased when you turn off the power, unplug the AC power cord or a power failure occurs.



- If you try to program a 33rd track “MEMORY FULL” will appear on the display.
- If your entry is ignored You are trying to program a track that does not exist on the MD (for example, selecting track 14 on an MD that only has 12 tracks).
- If the total playing time is 2 hours 30 minutes or more The total playing time on the display will not be shown. “--:--” will appear.

Playing at Random—Random Play

The tracks of the loaded MD will be played at random.

- Random Play ends when all the tracks are played once (when Repeat Play is not activated).
- To use Repeat Play (see page 41) with Random Play, press REPEAT during or before Random Play.

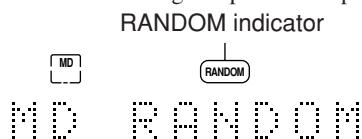
1 Load an MD.

- If the current playing source is not “MD,” press MD ►II, then ■ before going to the next step.

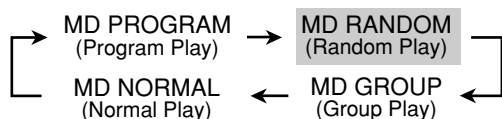
On the remote control ONLY:

2 Press PLAY/FM MODE repeatedly until “MD RANDOM” appears on the display.

The **RANDOM** indicator lights up on the display.



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



3 Press MD ►II.

The tracks are played at random.

Random Play ends when all the tracks are played once (when Repeat Play is not activated).

To stop during play, press ■.

Playback stops, but Random Play is still activated.

To skip the current playing track, press ►►I.

To skip back to the beginning of the current track, press I◀◀.

- You cannot go back to the previous tracks.

To exit from Random Play, before or after play, press PLAY/FM MODE repeatedly so that the unit enters another play mode (Group Play, Normal Play, or Program Play).

The **RANDOM** indicator goes off.

- Turning off the unit or ejecting MD also cancels Random Play and changes the playback mode to Normal Play.

Playing Tracks in a Group—Group Play

You can play back tracks in a group.

- To make or edit groups, see pages 54 to 62.
- To use Repeat Play (see page 41) with Group Play, press REPEAT after starting Group Play.

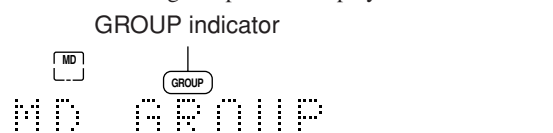
1 Load an MD including groups.

- If the current playing source is not “MD,” press MD ►II, then ■ before going to the next step.

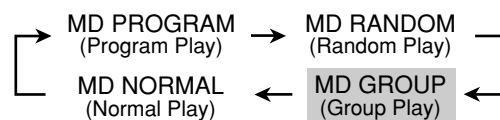
On the remote control ONLY:

2 Press PLAY/FM MODE repeatedly until “MD GROUP” appears on the display.

The **GROUP** indicator lights up on the display.

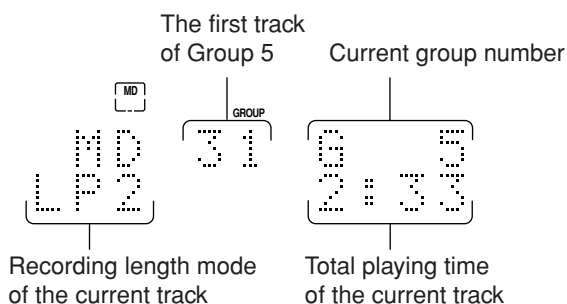


- Each time you press the button, play mode changes as follows:



3 Press GROUP/TITLE >>I or GROUP/TITLE I◀◀ to select a group.

- **GROUP/TITLE >>I:**
Selects group numbers in the increasing order.
- **GROUP/TITLE I◀◀:**
Selects group numbers in the decreasing order.



4 Press MD ►II.

The tracks in the selected group starts playing.

- When the loaded MD has no groups, all the tracks on the MD are played back in the same way as Normal play.
- Group Play ends when all the tracks in the selected group are played once (when Repeat Play is not activated).

Playing Back an MD (Continued)

To go to another track in the same group, press ►►| or |◄◄ repeatedly.

- ►►|: Skips to the beginning of the next or succeeding tracks in the same group.
- |◄◄: Goes back to the beginning of the current or previous tracks in the same group.

To go to another group, press GROUP/TITLE >>| or GROUP/TITLE |<< during Group Play.

- **GROUP/TITLE >>|:**
Skips to the first track in the next or succeeding groups.
- **GROUP/TITLE |<<:**
Goes back to the first track in the current or previous groups.

To stop during play, press ■.

To exit from Group Play, before or after play, press PLAY/FM MODE repeatedly so that the unit enters another play mode (Normal Play, Program Play, or Random Play).

- Turning off the unit or ejecting MD also cancels Group Play and changes the playback mode to Normal Play.

Repeating Tracks—Repeat Play

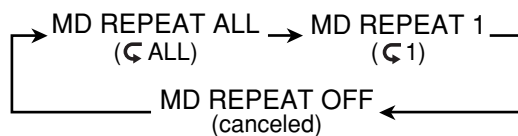
You can have all the tracks, the program, the individual track or group currently playing repeat as many times as you like.

On the remote control ONLY:

Press **REPEAT** repeatedly during or before play.



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



- **MD REPEAT ALL:**
For Normal Play or Random Play: Repeats all the tracks on the MD.
For Group Play: Repeats all the tracks in a group.
For Program Play: Repeats all the tracks in the program.
- **MD REPEAT 1:** Repeats one track.
- **MD REPEAT OFF:** Cancels Repeat Play.
Ejecting the MD or turning off the unit will also cancel the Repeat Play.

To go to another track, press ►►| or |◄◄ repeatedly.

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

You can also use the number buttons to select the track number.

To stop during play, press ■.

To exit from Repeat play, press REPEAT repeatedly to select “MD REPEAT OFF.”

Searching for Tracks to Play —MD Title Search

You can search for the tracks by their titles and play them back. For details on assigning a title, see pages 68 to 70.

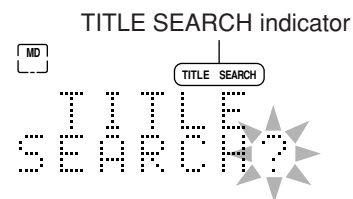
1 Load an MD.

- If the current playing source is not “MD,” press MD ►|, then ■ before going to the next step.

On the remote control ONLY:

2 Press TITLE SEARCH.

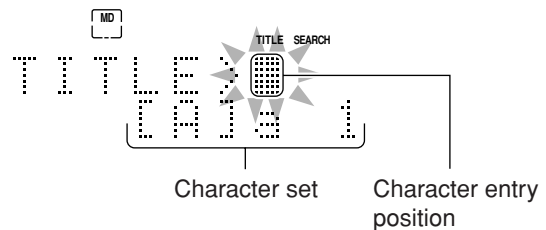
“TITLE SEARCH” appears and the **TITLE SEARCH** indicator lights up on the display. Play mode changes to Normal Play.



- When you press TITLE SEARCH during playback, the playback stops.

3 Press SET.

“TITLE” appears on the display and the character entry position flashes.



4 Enter the character(s) to search for the track title.

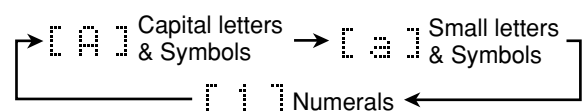
You can enter up to 5 characters. The unit will search for the tracks which have the entered characters at the beginning of their titles.

- You can also search for the tracks without a title. In this case, go to step 4 without entering any character.

(1) Press **DISP/CHARA** to select the character set you want.



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



(2) Press the character entry button for a character you want to enter.

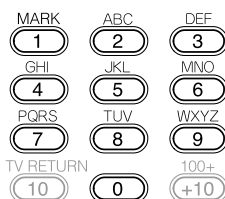
Ex.:

- To enter an "A" or "a," press ABC once.

To enter a "B" or "b," press ABC twice.

To enter a "C" or "c," press ABC three times.

- To enter a symbol, press MARK repeatedly until the mark you want appears. For available symbols, see the right column.
- To enter a numeral, press 0 – 9.
- To enter a space while entering a title, press ►► twice.
- To move the character entry position while entering a title, press ►►| or |◄◄.
- If you have entered an incorrect character, press ►►| or |◄◄ to select the character you want to correct, then press CANCEL to delete it.



(3) Repeat steps 4 – (1) and 4 – (2) to enter other characters.

- If the character you want to enter next is assigned to the same button you have just pressed in step 4 – (2), press ►►| once to move the character entry position to the right.

5 Press ENTER.

"SEARCH •••" flashes on the display. The unit starts searching for the track.



- When the track with the desired title is found, the unit plays back the track. (After the track is played, the unit starts searching for the next matching track.)
- If no track with the desired title is found, "NOT FOUND" appears on the display and the Title Search is canceled.

To skip the current playback and search for the next track, press ►►|.

To cancel title searching, press TITLE SEARCH or ■. When you press the button during playback or search, "SEARCH END" appears and the **TITLE SEARCH** indicator goes off.



During MD Title Search

Repeat Play is canceled.

Available symbols are as follows:

(Blank)	!	"	#	\$	%	&	'	()
*	+	,	-	.	/	:	;	< =
>	?	@	_	\				

To prohibit MD ejection—MD Lock

You can prohibit MD, disc, and cassette ejection from the unit, and lock the MD.

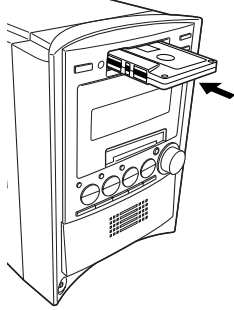
See "Prohibiting Disc Ejection—Disc Lock" on page 23 for details.

Playing Back a Tape

Playing Back a Tape

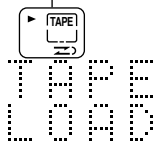
You can play back type I tapes.

1 Insert a cassette into the cassette loading slot with the exposed part of the tape facing left.



- When the unit is turned on, the **TAPE** indicator appears on the display.
- If you insert the cassette when the unit is in tape mode, "TAPE LOAD" appears on the display.

Tape operation indicators



2 Press TAPE ◀▶.

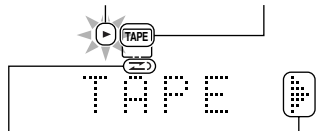
Playback starts (if the unit has been on standby, the unit automatically turns on).

To change the tape direction, press the button again.

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

- ▶ : Plays the front side.
- ◀ : Plays the reverse side.

Tape direction indicator TAPE indicator



Reverse Mode indicator Tape direction

When the tape plays to the end, the deck automatically stops if Reverse Mode is set to $\overleftarrow{\text{Z}}$ or $\overleftrightarrow{\text{Z}}$. (See "To play both sides—Reverse Mode" on the right column.)

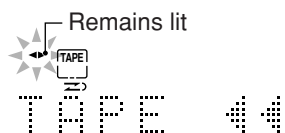
To stop during play, press ■.

To fast-wind the tape forward or reverse, press ▶▶ or ◀◀.

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



Ex.: Fast-winds the tape forward.



Ex.: Fast-winds the tape reverse.

To remove the cassette, press ▲ (TAPE eject) on the unit. Tape operation indicators go off.



Pressing ▲ (TAPE eject) button also turns on the unit if the cassette is unlocked.



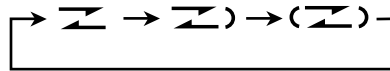
DO NOT press ▲ (TAPE eject) during tape play.

To play both sides—Reverse Mode

You can set the deck to play just one side or both sides of a tape once, or both sides continuously.

Press REV.MODE.

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



- $\overrightarrow{\text{Z}}$: Plays back only one side (front or reverse).
- $\overleftarrow{\text{Z}}$: Plays back the front and reverse sides once.
- $\overleftrightarrow{\text{Z}}$: Plays back both front and reverse sides continuously.



When you eject the cassette, Reverse Mode changes to $\overleftrightarrow{\text{Z}}$ automatically.

To change the information shown on the display

On the remote control ONLY:

Press DISP/CHARA.

Each time you press the button, the information on the display alternates between the source indication and the clock indication.



- The use of C-120 or longer tape is not recommended, since characteristic deterioration may occur and this tape easily jams in the pinch rollers and the capstans.
- You can also play back type II and type IV tapes; however, the sound quality (tone) may not be reproduced properly.

To prohibit cassette ejection—Cassette Lock

You can prohibit cassette, disc, and MD ejection from the unit, and lock the cassette.

See "Prohibiting Disc Ejection—Disc Lock" on page 23 for details.

Listening to External Equipment

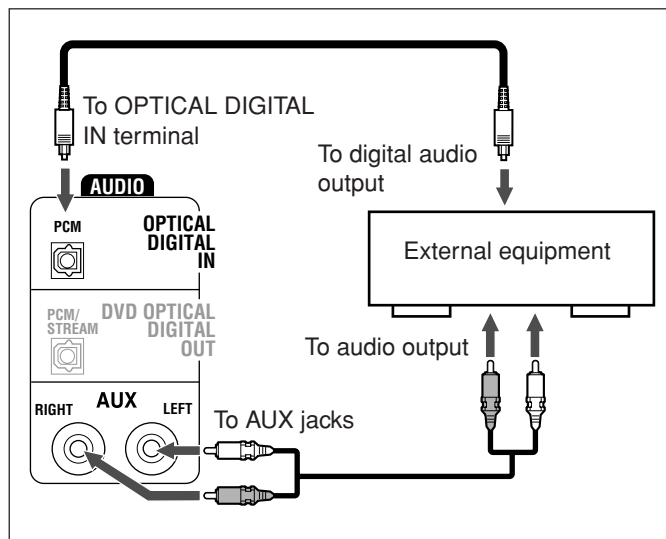
Listening to External Equipment

You can listen to external equipment connected to the AUX jacks and OPTICAL DIGITAL IN terminal on the rear of the unit.

- First make sure that the external equipment is properly connected as follows (see also “Connecting Other Equipment” on page 9):



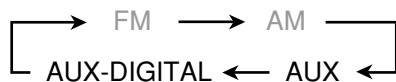
DO NOT connect other equipment while the power is on.



1 On the remote control:

Press FM/AM/AUX repeatedly until “AUX” (for AUX jacks) or “AUX-DIGITAL” (for OPTICAL DIGITAL IN terminal) appears on the display.

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



On the unit:

Press AUX.

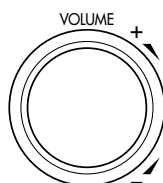
- Each time you press the button, the source alternates between “AUX” and “AUX-DIGITAL” on the display.



2 Turn down the volume level to “VOLUME MIN.”



(On the remote control)



(On the unit)

3 Start playing the external equipment.

- For operation of the external equipment, refer to the manuals supplied with it.

4 Adjust the volume level to your desired listening level.

5 Apply sound effects, if you wish.

- For how to apply sound effects, see pages 11 and 12.

To adjust the Audio Input Level

If the sound from the component connected to the AUX jacks is too loud or is not loud enough when changing from another source to “AUX,” you can change the audio input level through the AUX jacks (without changing the volume level).

On the remote control ONLY:

Press and hold SET for more than 2 seconds while the source is “AUX.”



- Each time you press and hold the button, the audio input level alternates between “LEVEL 1” and “LEVEL 2.”

LEVEL 1
LEVEL 2

LEVEL 1: Select this when the sound is too loud (initial setting).

LEVEL 2: Select this when the sound is not loud enough.

To change the information shown on the display

On the remote control ONLY:

Press DISP/CHARA.



Each time you press the button, the information on the display alternates between the source indication and the clock indication.

Recording on an MD

Before You Start Recording on an MD

- **It may be unlawful to record or play back copyrighted material without the consent of the copyright owner.**
- When you record onto partially recorded MD, its contents are not erased or overwritten. The recording starts from the point following the last recorded track of the MD.
If you want to record on such an MD from the beginning, you have to erase its contents first (see “Erasing All Tracks —ALL ERASE” on page 67).
- When an MD is fully recorded, recording will stop automatically.
- The recording level is automatically set correctly, so it is not affected by the volume level. Thus, during recording you can adjust the sound you are actually listening to without affecting the recording level.
- While recording, you can hear sound mode effect and/or the AHB PRO (Active Hyper Bass PRO) effect through the speakers or headphones. However, the sound is recorded without these effects (see pages 11 and 12).
- When selecting DISC or AUX-DIGITAL as the source, you can make a digital to digital recording.
When recording from a digital-copied CD-R/RW on an MD, see pages 47 and 88.
- You cannot record more than 254 tracks onto an MD, even if there is still enough recording time remaining on it.

About the track marks

When playing an MD, you can move among the tracks. You can do this because there is a mark recorded at the beginning of each track enabling you to locate the track. This mark is called a “track mark” and the portion between two adjacent track marks is called a “track.”

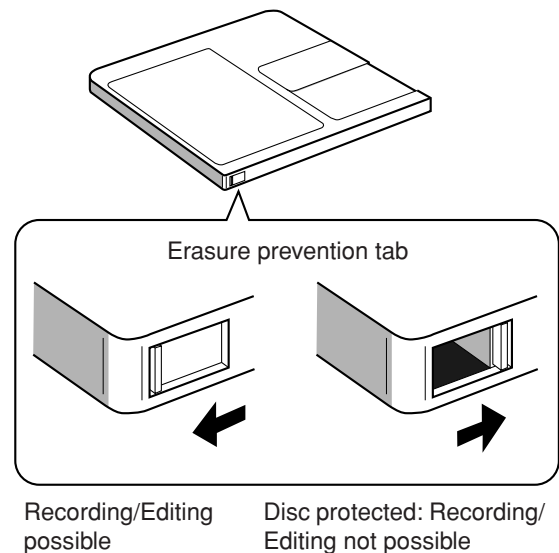
- **When using disc synchronized recording**, a track mark is recorded at the beginning of each track. You cannot put a track mark manually.
- **When recording from an analog source such as FM, AM, TAPE, or AUX**, you can select “MANUAL MARK,” “TIME AUTO MARK,” and “AUTO TRK MARK” by pressing SET (see page 49).

To add a track mark after recording is over, you can use the DIVIDE function (see page 64).

To avoid erasing important recordings

The recordable MD has an erasure prevention tab so that important recordings are not accidentally erased. When you finish recording or editing, slide to open the erasure prevention tab on the cartridge side surface. New recording or editing is now no longer possible. (If you try to do, “DISC PROTECTED” appears on the display.)

To do re-recording or editing, return the tab to the closed position.



If “PLAY BACK DISC” appears on the display when you try to record on an MD

The MD is only for playback use, not for recording (see page 90).

Stereo Long-Hour Recording (MDLP)

This unit allows for 2 times or 4 times long-hour recording without losing stereo sound.

With this feature, songs (tracks) can be recorded on a single MD using different recording length modes—SP: Standard Play, LP2: 2 Times Long Play, LP4: 4 Times Long Play.

- SP:** Signifies standard-hour stereo recording. The amount of time usable for recording is the same as shown on the package of the MD.
- LP2:** Signifies 2 times long-hour stereo recording. The amount of time usable for recording is twice as long as shown on the package of the MD.
- LP4:** Signifies 4 times long-hour stereo recording. The amount of time usable for recording is 4 times as long as shown on the package of the MD.

To check the remaining recording time

Press DISP/CHARA repeatedly while recording until “REC REMAIN” and the remaining time based on the current recording mode appear on the display.

Precautions for performing long-hour stereo recording

After having made long-hour stereo recordings on this unit, pay attention to the following:

- Songs (tracks) recorded in 2 times or 4 times long-hour recording mode can only be played back on the equipment provided with MDLP, compatible with a long-hour stereo recording function; otherwise, “LP:” is displayed before a title and playback proceeds without sounds.
- When editing songs (tracks) on an MD, you cannot join (JOIN) songs (tracks) recorded in different recording length modes (SP/LP2/LP4).



More about MDLP

- You cannot make a long-hour monaural recording using this unit.
- Sound quality will decrease as the recording length mode changes to LP2 (little) and LP4 (much). To obtain the best sound quality, it is recommended to use the SP mode when recording.

Setting MD Recording Modes

Before recording on MDs, set the recording length mode (SP/LP2/LP4), “LP:”-prefix addition mode, and the group recording mode.

To set the recording length mode

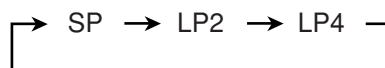
On the remote control ONLY:

The recording length mode can be set and stored for each source.

(1) **Select the source (FM, AM, CD, TAPE, AUX or AUX-DIGITAL) to record.**

(2) **Press REC TIME.**

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



SP Records using standard-hour stereo recording. The **SP** indicator lights up on the display.

LP2 Records using 2 times long-hour stereo recording. The **LP2** indicator lights up on the display.

LP4 Records using 4 times long-hour stereo recording. The **LP4** indicator lights up on the display.

To set “LP:”-prefix addition mode

You can select whether or not to add “LP:” to the beginning of the title for the tracks recorded using the stereo long-hour recording mode (LP2 or LP4).

On the remote control ONLY:

Press LP:.

- Each time you press these buttons, the “LP:”-prefix addition mode alternates between on and off.



(LP:) ON ↔ (LP:) OFF

(LP:) ON Adds “LP:” to the beginning of the track title. The total number of characters you can enter for an MD is reduced (for details, see pages 68).

(LP:) OFF Does not add “LP:” to the beginning of the track title.

To set group recording mode

You can form a new group (up to 99 groups) easily while recording using group recording mode.

On the remote control ONLY:

Press GROUP REC ON/OFF.

- Each time you press the button, group recording mode turns on and off.



MD GROUP ON ↔ MD GROUP OFF

MD GROUP ON All the tracks recorded at a time will form a new group. The **GROUP** indicator lights up on the display.

MD GROUP OFF Cancels group recording function. The **GROUP** indicator goes off from the display.

Recording on an MD (Continued)

Recording discs onto an MD —Disc-MD Synchronized Recording

Using the disc synchronized recording method, you can start and stop disc play and MD recording at the same time.

1 Load discs into the 5-DVD changer.

- If the current playing source is not "DISC," press DVD ► (or ▷/|| DVD on the unit), then ■ before going to the next step.
- You can make a program (see page 21) or select Random Play (see page 22) if you want. → Go to step 3.

On the remote control ONLY:

2 Press DISC UP or DISC DOWN to select the disc you want to record, then ■ before going to the next step.



3 Insert a recordable MD into the MD loading slot.

- Set the MD recording length mode, "LP:"-prefix addition mode, and group recording mode (see pages 45 and 46).

4 Press REC SPEED to select the recording speed you want.

- Each time you press the button, recording speed alternates between "x1" and "x5."

x1 ←————→ x5
(Normal speed) (5 times normal speed)

- If you have selected Program Play or Random Play, go to step 6.

5 Press CD REC MODE to select the recording mode.

- Each time you press the button, recording mode changes as follow:



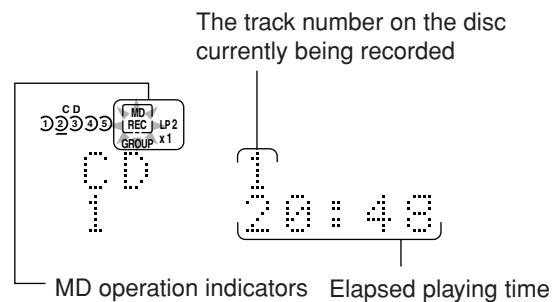
DISC REC 1 DISC	Records one selected disc. The recording stops when the disc playback stops.
DISC REC ALL DISC	Records all discs loaded on the disc tray. The recording starts from the selected disc tray, and it stops when all of the loaded discs are recorded.
DISC REC BEST HIT	Records the first track of loaded discs. The recording starts from the selected disc tray, and it stops when the first tracks of all the loaded discs are recorded.

6 Press MD REC when the selected recording mode in step 5 is still shown on the display.



The recording starts and the REC (MD recording) indicator starts flashing on the display.

- When you have selected a track by pressing ►► or ◀◀ before pressing CD REC MODE in step 5, recording starts from the selected track (except when Program Play mode is selected).
- If you do not select the recording mode in step 5, the current disc will be recorded entirely.
- When you have selected Program Play or Random Play mode, you cannot record using x5 speed recording ("CANNOT REC x1 ONLY" will appear).



Ex.: Track 1 of CD2 is now recorded on an MD using LP2 and Group recording at normal speed (x1).

When the DVD player stops, the MD recorder also stops automatically.

To stop recording, press ■.
"WRITING" flashes on the display.



- **When using "DISC REC ALL DISC" or "DISC REC BEST HIT"**
We recommend that you record onto the same kind of discs, otherwise some disc might be skipped, or the recording may stop altogether.
- **While Disc-MD Synchronized Recording**
You cannot change or select the recording mode.

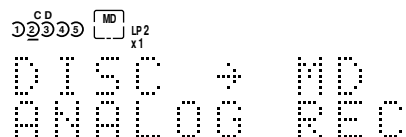
When recording from a CD-R/RW

You cannot make a digital recording from a digital-copied CD-R/RW on an MD. "SCMS CANNOT COPY" appears on the display (see page 88).

To record such discs, follow the procedure below to make an analog recording.

- You cannot record MD and tape at a same time.

- 1 Change the recording speed to "x1" (normal speed).
- 2 Press MD REC button for more than 4 seconds.



While recording

You cannot exchange or eject discs.

To record a single track during play or pause

While playing back or pausing a track you want to record, press MD REC.



The playback of the track is stopped, and the same track starts playing from the beginning again. This time, the MD recorder starts recording the track. The **REC** (MD recording) indicator flashes on the display.

- After the track is recorded, both the disc player and the MD recorder stop automatically.
- “WRITING” flashes on the display.



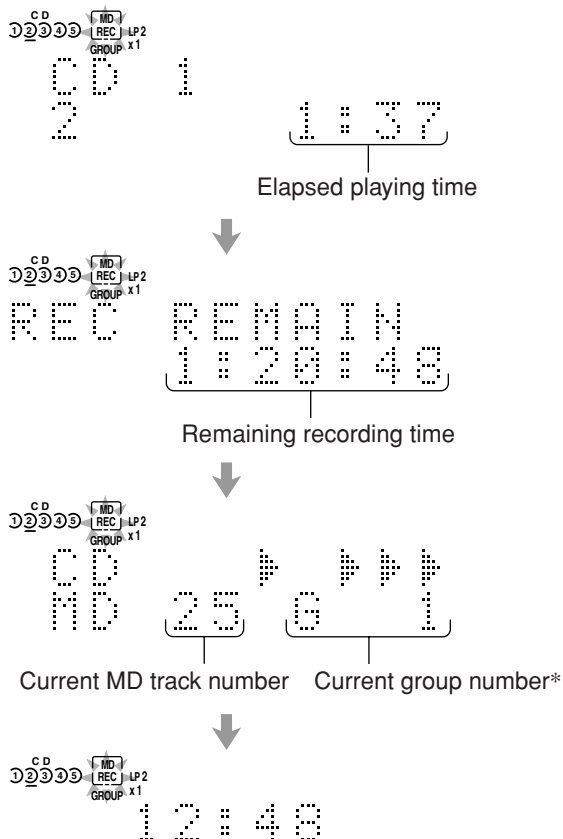
- **When recording a chapter on DVD VIDEO**
The playback of the chapter does not start playing from the beginning again. The recording starts from the point when you press MD REC.
- **When you press MD REC while pausing a track**
Recording starts from that point.
- **To record from the desired track**
Select the track before playback, then press MD REC.

To change the information shown on the display

On the remote control ONLY:

Press DISP/CHARA.

- Each time you press the button, the recording indications, the current track numbers of both the disc and the MD, and the clock indication appear in sequence on the display.



* If the loaded MD does not contain any group or more than 99 groups, “G –” will appear on the display.

Recording Other Sources onto an MD

1 Prepare the source to record from.

To record from FM/AM broadcasts:

- (1) Press **FM/AM/AUX** (or **FM/AM** on the unit) to select either “FM” or “AM.”



(On the remote control)



(On the unit)

- (2) Tune in to a preset station you want (see page 14).

To record from a tape:

- (1) Insert a cassette into the cassette loading slot.
 - If the current playing source is not “TAPE,” press TAPE ◀▶, then ■ before going to the next step.

- (2) Press **REV.MODE** to select Reverse Mode (see page 43).



To record from external equipment:

Press FM/AM/AUX (or AUX on the unit) to select “AUX” or “AUX-DIGITAL” and prepare the external equipment to play.



(On the remote control)



(On the unit)

- Adjust the audio input level if necessary (see page 44).
- For operation of the external equipment, see the manuals supplied with it.

2 Insert a recordable MD into the MD loading slot.

- Set the MD recording length mode, “LP:”-prefix addition mode, and group recording mode (see “Setting MD Recording Modes” on page 46).

Recording on an MD (Continued)

On the remote control ONLY:

3 Press TR. MARK SELECT to select track mark entry mode.



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



MANUAL MARK* Separates tracks manually by adding track marks at the places where you want.

- Press SET to add a track mark while recording.

TIME AUTO MARK* The unit automatically separates and put a track mark every 5 minutes.

- By pressing SET, you can also enter a track mark manually.

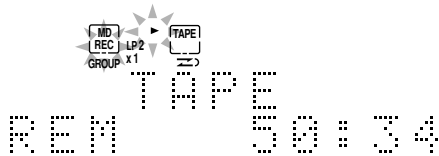
AUTO MARK* The unit automatically separates and put a track mark if there is a silence of 3 seconds or more between tracks.

- By pressing SET, you can also enter a track mark manually.

* See "About the track marks" on page 45 for details.

4 Press MD REC.

The **REC** (MD recording) indicator starts flashing on the display.



Ex.: When recording a tape using LP2 and Group recording.

When the source is "FM" or "AM," recording starts.

When the source is "TAPE," playback and recording start—Synchronized Recording.

When the cassette player stops, recording also stops automatically.

When the source is "AUX" or "AUX-DIGITAL," playback starts after "AUX → MD" (for AUX) or "AUX-D → MD" (for AUX-DIGITAL) appears on the display.

To stop recording, press ■.

"WRITING" flashes on the display.

Important:

While "WRITING" is flashing on the display, do not give any shock to the unit. Otherwise, the MD might not be able to play back anymore.



- When recording from an external equipment ("AUX" or "AUX-DIGITAL")

Recording starts automatically when the source sound comes into the unit, and stops automatically if no sound comes into the unit for about 30 seconds (Sound Synchronized Recording).

When no sound comes into the unit, "STANDBY" will flash on the display.

- When making a digital recording from an external equipment ("AUX-DIGITAL")

You cannot make a digital recording from a digital-copied CD-R/RW on an MD. "SCMS CANNOT COPY" appears on the display (see page 88).

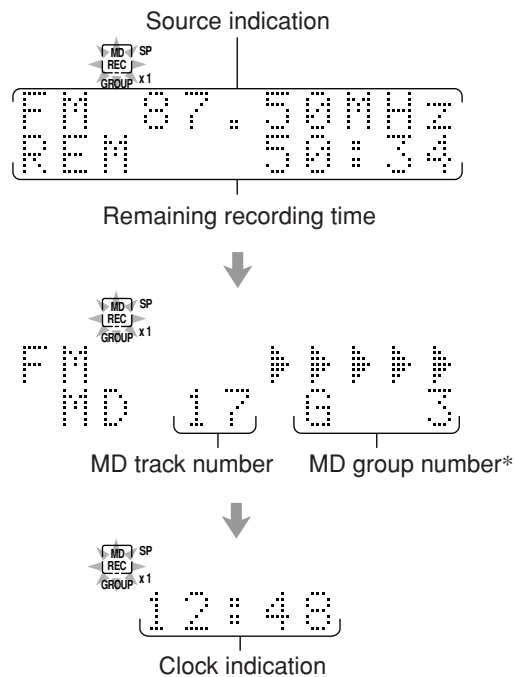
To change the information shown on the display

On the remote control ONLY:

Press DISP/CHARA.



- Each time you press the button, the information on the display changes as follows:



Ex.: When you record an FM broadcast.

* When group recording is not activated, "--" will appear on the display.

Recording on a Tape

Before You Start Recording on a Tape

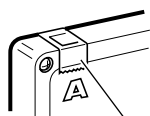
- **It may be unlawful to record or play back copyrighted material without the consent of the copyright owner.**
- The recording level is automatically set correctly, so it is not affected by the volume level. Thus, during recording you can adjust the sound you are actually listening to without affecting the recording level.
- While recording, you can hear sound mode effect and/or the AHB PRO (Active Hyper Bass PRO) effect through the speakers or headphones. However, the sound is recorded without these effects (see pages 11 and 12).
- If recordings you have made have excessive noise or static, the unit may be too close to a TV. Place the unit away from the TV.
- You can use only type I tapes for recording.

To protect your recordings

Cassettes have two small tabs on the back to protect unexpected erasure or recording.

To protect your recording, remove these tabs.

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



Adhesive tape

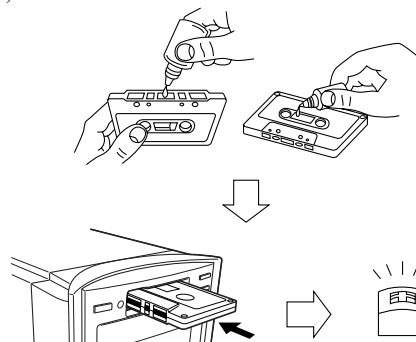


The use of the C-120 or longer tape is not recommended, since characteristic deterioration may occur and this tape easily jams in the pinch rollers and the capstans.

To keep the best recording and playback sound quality

You need to clean the heads.

- Clean the heads after every 10 hours of use with a wet-type head cleaning tape (available at electronic and audio shops).



When the head becomes dirty, the following symptoms will occur:

- Sound quality is reduced.
- Sound level decreases.
- Sound drops out.
- Do not play dirty or dusty tapes.
- Do not touch the highly-polished head with any metallic or magnetic tools.

To demagnetize the head

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



At the start and end of cassette tapes

There is leader tape which cannot be recorded onto. Thus, when recording discs, MDs, or radio broadcasts, wind the leader tape first to ensure that the recording will be made without any music part lost.

Recording on a Tape (Continued)

Recording onto a Tape

You can use only type I tapes for recording.

1 Prepare the source to record from.

To record from a disc:

(1) Load discs into the 5-DVD changer.

- If the current playing source is not "DISC," press DVD ► (or ▷/■ DVD on the unit), then ■ before going to the next step.
- You can make a program (see page 21) or select Random Play (see page 22) if you want. → Go to step 2.

(2) Press DISC UP or DISC DOWN to select a disc to record, then ■ before going to the next step.



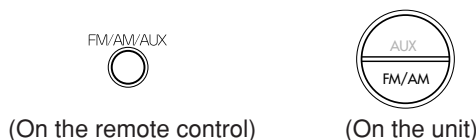
To record from an MD:

Insert an MD into the MD loading slot.

- If the current playing source is not "MD," press MD ►■, then ■ before going to the next step.
- You can make a program (see page 39), select Random Play (see page 40) or Group Play (see page 40) if you want.

To record from FM/AM broadcasts:

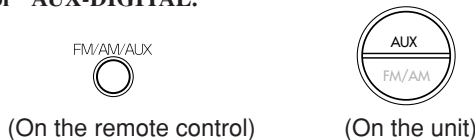
(1) Press FM/AM/AUX (or FM/AM on the unit) to select either "FM" or "AM."



(2) Tune in to a preset station you want (see page 14).

To record from external equipment:

(1) Press FM/AM/AUX (or AUX on the unit) to select "AUX" or "AUX-DIGITAL."



(2) Prepare the external equipment to play.

- Adjust the audio input level if necessary (see page 44).
- For operation of the external equipment, see the manuals supplied with it.

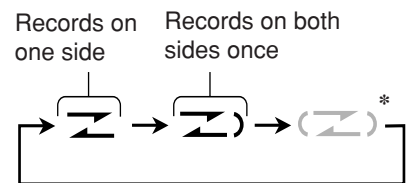
2 Put a recordable cassette into the cassette loading slot.

On the remote control ONLY:

3 Press REV.MODE to select Reverse Mode.



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



* (Z) will be shown during recording when you select (Z).

4 Press TAPE REC.



The REC (tape recording) and tape direction indicators start flashing on the display.



Ex.: When you record an FM broadcast.

When the source is "FM" or "AM," recording starts.

When the source is "DISC" or "MD," playback and recording start—Synchronized Recording.

When the disc or MD player stops, recording also stops automatically.

- You cannot use ►► or ◀◀ while recording.

When the source is "AUX" or "AUX-DIGITAL," playback starts after "AUX → TAPE" (for AUX) or "AUX-D → TAPE" (for AUX-DIGITAL) appears on the display.

- When you select a track by pressing ►► or ◀◀ before pressing TAPE REC, recording starts from the selected track (except when Program Play is selected).
- When recording from an external equipment, start playback after "AUX → TAPE" (or "AUX-DIGITAL") appears on the display.

To stop recording, press ■.

To record a single track of a disc (DVD AUDIO/SVCD/VCD/MP3/CD)/MD during play

On the remote control ONLY:

While playing back a track of a disc or MD you want to record, press TAPE REC.



The playback of the track is stopped, and the same track starts playing from the beginning again. This time, the cassette deck starts recording the track.

- After the track is recorded, both playback and recording stop automatically.



To record from the desired track

Select the track before playback, then press TAPE REC.

To change the information shown on the display

On the remote control ONLY:

Press DISP/CHARA.



- Each time you press the button, the information on the display alternates between the recording indication and the clock indication.



When recording a disc or an MD

- A 4-second blank is automatically made on the tape before each track. To record without the blank, press DVD ► then DVD II, or MD ►► twice in step 1, then press TAPE REC.
- When the front side of the tape ends in the middle of a track, the recording on the reverse side starts from the beginning of that track (if the reverse mode is set to Z Z).

Recording Disc onto a Tape —Disc-Tape Synchronized Recording

1 Load discs into the 5-DVD changer.

- If the current playing source is not “DISC,” press DVD ► (or ▷/II DVD on the unit) then ■ before going to the next step.
- You can make a program (see page 21) or select Random Play (see page 22) if you want. → Go to step 3.

On the remote control ONLY:

2 Press DISC UP or DISC DOWN to select the disc you want to record, then ■ before going to the next step.

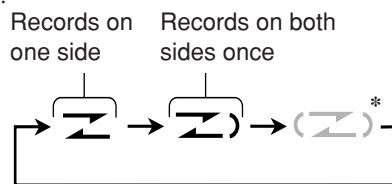


3 Put a recordable cassette into the cassette loading slot.

4 Press REV.MODE to select a reverse mode.



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



* Z Z) will be shown during recording when you select (Z Z).

- If you have selected Program Play or Random Play, go to step 6.

5 Press CD REC MODE to select the recording mode.



- Each time you press the button, recording mode changes as follow:



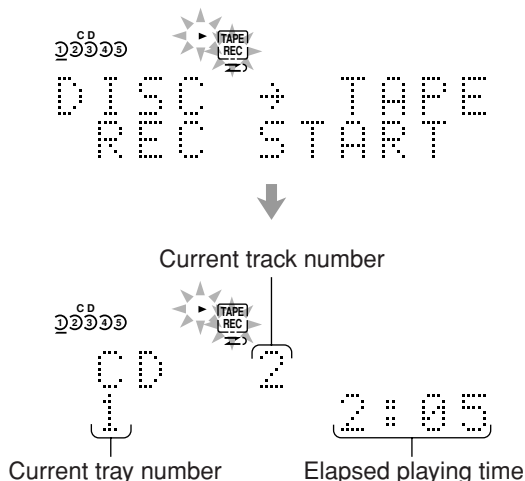
DISC REC 1 DISC	Records one selected disc. The recording stops when the disc playback stops.
DISC REC ALL DISC	Records all discs loaded on the disc tray. The recording starts from the selected disc tray, and it stops when all of the loaded discs are recorded.
DISC REC BEST HIT	Records the first track of loaded discs. The recording starts from the selected disc tray, and it stops when the first tracks of all the loaded discs are recorded.

6 Press TAPE REC.



- When you select the recording mode in step 5, press the button while the selected recording mode is still shown on the display.

The recording starts and the REC (tape recording) and tape direction indicators start flashing on the display.



Recording on a Tape (Continued)

Recording Discs onto an MD and a Tape —Disc Synchronized Recording

With this recording method, you can start and stop disc play, MD and tape recordings at the same time.

1 Load discs into the 5-DVD changer.

- If the current playing source is not “DVD,” press DVD ► (or ►/|| DVD on the unit), then ■ before going to the next step.
- You can make a program (see page 21) or select Random Play (see page 22) if you want. → Go to step 3.

On the remote control ONLY:

2 Press DISC UP or DISC DOWN to select the disc you want to record, then ■ before going to the next step.



3 Insert a recordable MD into the MD loading slot and put a recordable cassette into the cassette loading slot.

- When you select a track by pressing ►►1 or 1◀◀ before the disc playback, recording starts from the selected track (except when Program Play is selected).

For the MD:

Set the MD recording length mode, “LP:”-prefix addition mode, and group recording mode (see “Setting MD Recording Modes” on page 46).

- Set the MD recording speed to “x1” by pressing REC SPEED button. You cannot select “x5” to record on an MD and a TAPE at the same time.

For the cassette:

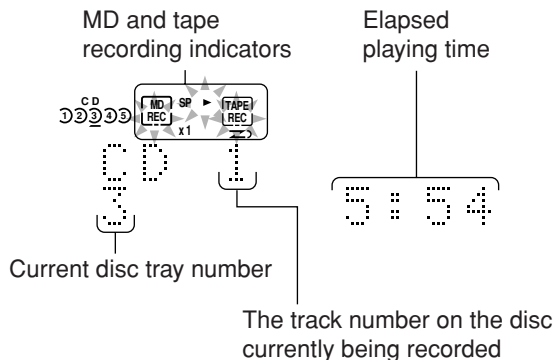
Press REV.MODE to select Reverse Mode as necessary.

4 Press MD&TAPE REC.

Disc play and recording start.

- When you press MD&TAPE REC before or after play, “DSC→MD&TAPE” appears on the display.
- When you press MD&TAPE REC during play, “1TR→MD&TAPE” appears on the display.

The **REC** (MD recording) and **REC** (tape recording) indicators start flashing on the display.



When disc player stops, MD recorder and the cassette deck stop automatically.

To stop recording, press ■.

“WRITING” flashes on the display for a while.

To eject the MD or tape, press ■ to stop the recording, then press the corresponding eject button.

To record a single track during play or pause

On the remote control ONLY:

While playing back or pausing a track you want to record, press MD&TAPE REC.



The playback of the track is stopped, and the same track starts playing from the beginning again. This time, the MD recorder and cassette deck start recording the track.

- After the track is recorded, both playback and recording stop automatically.



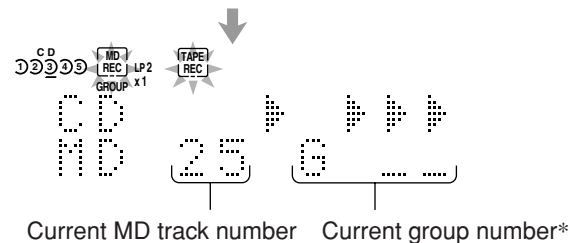
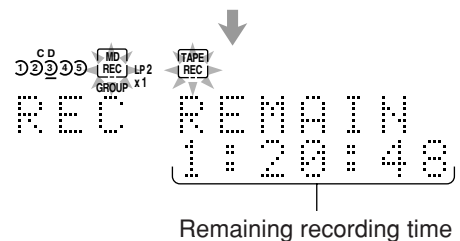
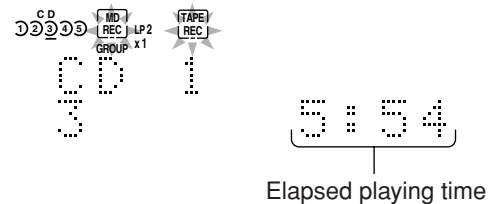
To record from the desired track

- Select the track before playback, then press TAPE&MD REC.
- When you made a program, you can select one of the programmed tracks during playback.

To change the information shown on the display

On the remote control ONLY:

Press DISP/CHARA.



- * If the loaded MD does not contain any group or more than 99 groups, “G - -” will appear on the display.



When recording on an MD and a tape at the same time
A 4-second blank before each track is not made on the tape.

Editing an MD

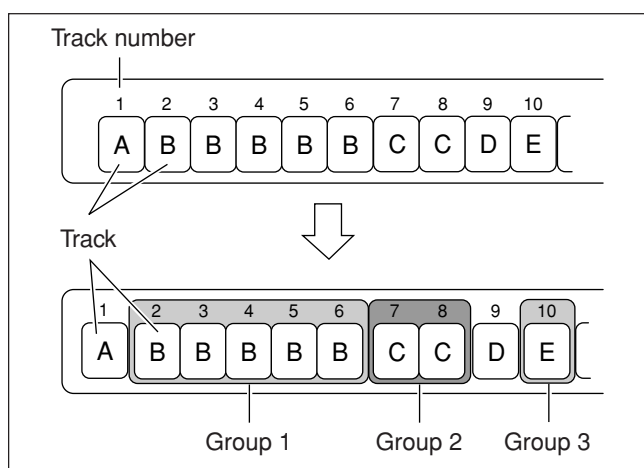
Guidance—MD Group Functions

To add to the conventional MD Editing functions (called the track editing functions in this manual), MD Group functions help you to classify the tracks by making groups on your MD.

Classifying the tracks on an MD

MDLP enables you to record more tracks on a single MD than usual. So, there are many tracks which have been recorded from the various sources—discs, FM, and so on—on your MD.

In that case, if you can classify the tracks by source, by album, or by artist, the playback of your favorite songs becomes much easier.



In the figure above, as an example, there are 5 different genres (from A to E) of tracks on the MD. Using MD Group functions, you can form a group by genre B tracks as Group 1, genre C tracks as Group 2, etc.

By forming groups on the MD, you can classify the tracks by each genre—the album title, the artist, etc. You can also assign a name to each group (see pages 68 to 70).

Using MD Groups as a separate item

You can enjoy playback, recording, and editing groups.

- **Playback (see page 40):**
You can play back and repeat the desired group without making a program: For example, you can play back repeatedly genre B tracks by selecting Group 1 in the left figure—Group Play.
- **Recording (see page 45):**
You can form a group while tracks are being recorded.
- **Editing:**
You can edit the groups using the following functions:
 - Forming a group (FORM GR)
 - Adding a track to a group (ENTRY GR)
 - Dividing a group (DIVIDE GR)
 - Joining two groups (JOIN GR)
 - Moving a group (MOVE GR)
 - Ungrouping tracks (UNGROUP)
 - Dissolving all groups (UNGR ALL)
 - Erasing tracks in a group (ERASE GR)

How to make up Groups

You can make up groups using two methods: Forming a group function and Group recording function.

- **Forming a group function—FORM GR:**
Select this when you want to make groups after recording (see page 56).
- **Group recording function:**
Press GROUP REC ON/OFF to record and group tracks at the same time (for details, see page 46).

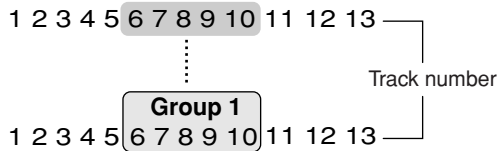
Editing an MD (Continued)

Introducing Group Editing Functions

The groups and tracks can be edited in many ways (Group editing functions and Track editing functions). From this page to page 62, the group editing functions are explained. For details on the track editing functions, see pages 63 to 67.

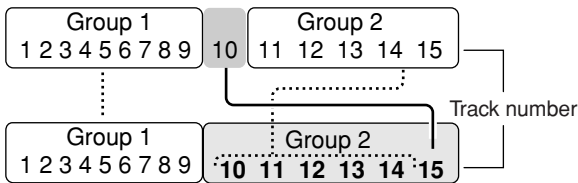
Forming a group (FORM GR): Page 56

This function forms a series of tracks or a single track into a new group.



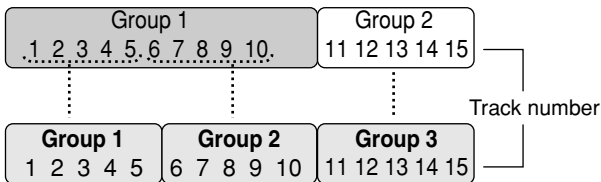
Adding a track to a group (ENTRY GR): Page 57

This function enters the selected track into a group.



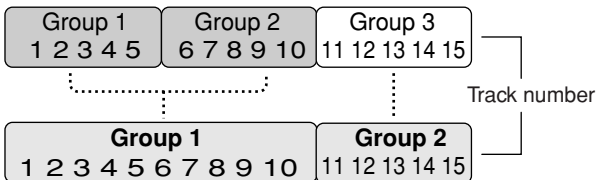
Dividing a group (DIVIDE GR): Page 58

This function divides a group containing plural tracks.



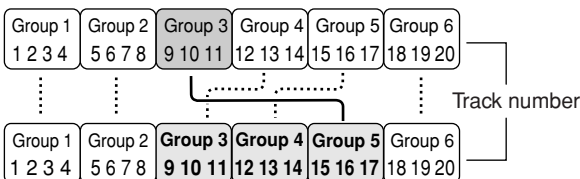
Joining two groups (JOIN GR): Page 59

This function joins two adjacent groups into a single group.



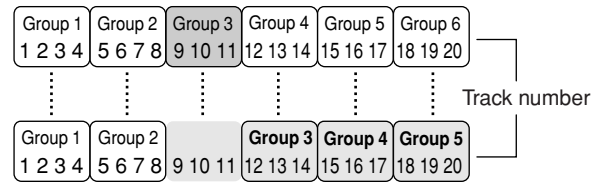
Moving a group (MOVE GR): Page 60

This function moves the selected group by reordering the group and track numbers.



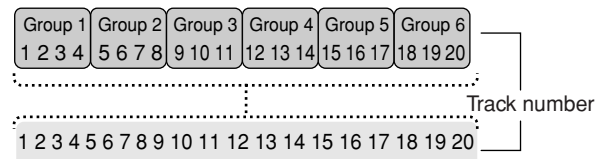
Ungrouping tracks (UNGROUP): Page 61

This function dissolves a group.



Dissolving all groups (UNGR ALL): Page 61

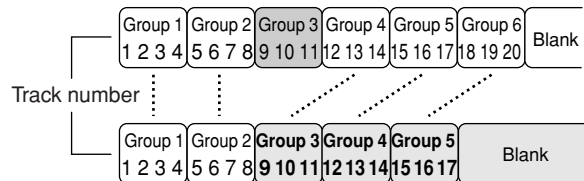
This function dissolves all the groups.



Erasing tracks in a group (ERASE GR): Page 62

This function erases all tracks in the selected group.

- Group numbers and track numbers are renumbered automatically.



Important:

When the editing is completed, "WRITING" starts flashing after "EDITING" appeared on the display to store the edited contents on the MD.

While "WRITING" is flashing on the display, do not give any shock to the unit. Otherwise, the MD might not be able to play back anymore.



- If "PLAY BACK DISC" or "DISC PROTECTED" appears when you try to edit an MD
You cannot edit such MDs. See page 45.
- During Program Play or Random Play
You can edit the MD as long as the playback is stopped except during Program/Random Play.

In the following examples of group editing, the process is explained from the very first—that is, inserting a disc. You can also edit an MD during playback (in Normal Play).

Forming a Group—FORM GR

This function allows you to form a group from a series of tracks which do not belong to the other groups. You can form a group from a single track.

Once a new group is formed, the other groups are renumbered.

- You can form up to 99 groups on a single MD.
- To stop any time during the editing process below before step 8, press GROUP TITLE EDIT.

1 Insert an MD you want to edit into the MD loading slot.

On the remote control ONLY:

2 Press GROUP TITLE EDIT repeatedly until “FORM GR ?” appears on the display.

FORM GR ?
YES? → SET

GROUP TITLE
EDIT

- If you want to stop this editing process, press CANCEL.

3 Press SET.

T 1 → I - - ?
OK? → SET

SET

- **During playback:**
The currently playing track number starts flashing.

4 Press UP ►► or DOWN ◄◄ to select the first track of a new group.

DOWN
UP

- You can also select the track using the number buttons. In this case, the selected track starts playback repeatedly.

T 3 → I - - ?
OK? → SET

Ex.: When track 3 is selected.

5 Press SET.

SET

- If the track selected as the first track belongs to another group, “GROUP TRACK” appears on the display.
Select another track again (repeat step 4).
- If you want to form a group from the selected track only, go to step 7.
- To cancel the setting, press CANCEL, then repeat from step 4.

6 Press UP ►► or DOWN ◄◄ to select the last track of the new group.

DOWN
UP

- You can also select the track using the number buttons. In this case, the selected track starts playback repeatedly.

T 3 → I - - ?
OK? → SET

Ex.: When track 5 is selected.

7 Press SET.

SET

<FORM GR>
YES? → ENTER

- If the last selected track belongs to another group, “GROUP TRACK” appears on the display.
Select another track again (repeat step 6).
- To cancel the setting, press CANCEL, then repeat from step 4.

8 Press ENTER.

ENTER

“EDITING” appears and the REC (MD recording) indicator flashes on the display. Then “WRITING” flashes while editing you have made is being recorded on the MD.

To dissolve the group, see the UNGROUP function on page 61.



When “CANNOT FORM!” appears on the display in step 7

You are trying to form a new group which includes another group between the first and the last track. In this case, dissolve the previous group and form a new one again.

Editing an MD (Continued)

Adding a Track to a Group—ENTRY GR

This function allows you to enter a track into a group. The track will be added as the last track in the selected group. The track numbers will be renumbered.

- To stop any time during the editing process below before step 8, press GROUP TITLE EDIT.

1 Insert an MD you want to edit into the MD loading slot.

On the remote control ONLY:

2 Press GROUP TITLE EDIT repeatedly until “ENTRY GR ?” appears on the display.

ENTRY GR ?
YES? → SET

GROUP TITLE
EDIT

- If you want to stop this editing process, press CANCEL.

3 Press SET.

TR ? → SET 1?

SET

- During playback:**
The currently playing track number starts flashing.

4 Press UP ►► or DOWN ◄◄ to select the track.

DOWN
UP

- You can also select the track using the number buttons. In this case, the selected track starts playback repeatedly.

TR ? → SET 13?

Ex.: When track 13 is selected.

5 Press SET.

GROUP ? → SET

SET

- If the loaded MD has no group, you cannot go to the following steps.
- When the selected track belongs to a group, its group number appears on the display.
- To cancel the setting, press CANCEL, then repeat from step 4.

6 Press GROUP/TITLE >> or GROUP/TITLE << to select the group.

GROUP 18?
OK? → SET

GROUP/TITLE
<< >>

Ex.: When group 18 is selected.

- The unit plays back all tracks in the selected group repeatedly.

7 Press SET.

< ENTRY GR >
YES? → ENTER

SET

- To cancel the setting, press CANCEL, then repeat from step 4.

8 Press ENTER.

“EDITING” appears and the REC (MD recording) indicator flashes on the display. Then “WRITING” flashes while editing you have made is being recorded on the MD.

ENTER



When “CANNOT ENTRY!” appears on the display in step 7

You are trying to enter the selected track into the same group again. Repeat procedure from step 6.

Dividing a Group—DIVIDE GR

This function allows you to divide one group into two separate groups.

You cannot divide the group containing only a single track. When the original group has a title, two separate groups are reassigned the same title as the original group.

Once a new group is divided, the other groups are renumbered.

- To stop any time during the editing process below before step 7, press GROUP TITLE EDIT.

1 Insert an MD you want to edit into the MD loading slot.

On the remote control ONLY:

2 Press GROUP TITLE EDIT repeatedly until “DIVIDE GR?” appears on the display.

DIVIDE GR?
YES?→SET

- If you want to stop this editing process, press CANCEL.

3 Press SET.

G 2 T SET 1
OK?→SET

- If the loaded MD has no group, you cannot go to the following steps.
- During playback:**
The current playing track number and its group number will appear. If the track does not belong to any group, the group number will be indicated as “--.”

4 Press GROUP/TITLE >>| or GROUP/TITLE |<< to select the group you want to divide.

The first track of the selected group

G 2 T SET 15
OK?→SET

Ex.: When group 2 is selected.

5 Press UP ►►| or DOWN |◄◄ to select the track as the dividing point.



The track selected in this step will be the first track in the divided group.

- You can also select the track using the number buttons. In this case, the selected track starts playback repeatedly.

G 2 T SET 18
OK?→SET

Ex.: When track 18 is selected.

- You cannot select the first track in a group or an ungrouped track as a dividing point.

6 Press SET.

<DIVIDE GR>
YES?→ENTER

- To cancel the setting, press CANCEL, then repeat from step 4.

7 Press ENTER.

“EDITING” appears and the **REC** (MD recording) indicator flashes on the display. Then “WRITING” flashes while editing you have made is being recorded on the MD.

To join the divided groups, see the JOIN GR function on page 59.

Editing an MD (Continued)

Joining Two Groups—JOIN GR

This function allows you to join two adjacent groups into a single group.

When the groups have their own titles, the title of the preceding group is reassigned to the newly joined group.

Once two groups are joined, the other groups are renumbered.

- To stop any time during the editing process below before step 6, press GROUP TITLE EDIT.

1 Insert an MD you want to edit into the MD loading slot.

On the remote control ONLY:

2 Press GROUP TITLE EDIT repeatedly until "JOIN GR ?" appears on the display.

GROUP TITLE
EDIT

JOIN GR ?
YES? → SET

- If you want to stop this editing process, press CANCEL.

3 Press SET.

SET

G ---+G 1?
OK? → SET

- If the loaded MD has only one or no group, you cannot go to the following steps.

During playback:

The group number of the currently playing track will appear on the right. If the track does not belong to any group, the group number will be indicated as "--."

4 Press GROUP/TITLE >>| or GROUP/TITLE |<< to select the two adjacent groups you want to join.

GROUP/TITLE
<< >>

G 7+G 8?
OK? → SET

Ex.: When groups 7 and 8 are selected.

5 Press SET.

SET

<JOIN GR>
YES? → ENTER

- To cancel the setting, press CANCEL, then repeat from step 4.

6 Press ENTER.

ENTER

"EDITING" appears and the REC (MD recording) indicator flashes on the display. Then "WRITING" flashes while editing you have made is being recorded on the MD.

To divide the group, see the DIVIDE GR function on page 58.



When "CANNOT JOIN" appears on the display in step 5

You are trying to join two groups which are separated by another track(s) in-between. In this case, you need to move either of the groups (see page 60) or the track(s) (see page 66).

Moving a Group—MOVE GR

This function allows you to move a group.
Once a group is moved, the tracks and the other groups are renumbered.

- To stop any time during the editing process below before step **8**, press GROUP TITLE EDIT.

1 Insert an MD you want to edit into the MD loading slot.

On the remote control ONLY:

2 Press GROUP TITLE EDIT repeatedly until “MOVE GR ?” appears on the display.



MOVE GR ?
YES? → SET

- If you want to stop this editing process, press CANCEL.

3 Press SET.



G -- +G 1?
OK? → SET

- If the loaded MD has only one or no group, you cannot go to the following steps.

- During playback:**

The group number of the currently playing track will appear.
If the track does not belong to any group, the group number will be indicated as “--.”

4 Press GROUP/TITLE >>| or GROUP/TITLE |<< to select the group you want to move.



G -- +G 3?
OK? → SET

Ex.: When group 3 is selected.

5 Press SET.



G -- +G 3?
OK? → SET

- To cancel the setting, press CANCEL, then repeat from step **4**.

6 Press GROUP/TITLE >>| or GROUP/TITLE |<< to select the position where you want to move the group to.



G 10 +G 3?
OK? → SET

Ex.: When group 3 is moved to group 10.

7 Press SET.



<MOVE GR>
YES? → ENTER

- To cancel the setting, press CANCEL, then repeat from step **4**.

8 Press ENTER.



“EDITING” appears and the **REC** (MD recording) indicator flashes on the display. Then “WRITING” flashes while editing you have made is being recorded on the MD.

Editing an MD (Continued)

Ungrouping Tracks—UNGROUP

This function allows you to dissolve a group.
You cannot erase the tracks using this function.
Once tracks are ungrouped, the other groups are renumbered.

- To stop any time during the editing process below before step 6, press GROUP TITLE EDIT.

1 Insert an MD you want to edit into the MD loading slot.

On the remote control ONLY:

2 Press GROUP TITLE EDIT repeatedly until “UNGROUP ?” appears on the display.

UNGROUP ?
YES? → SET

GROUP TITLE
EDIT

- If you want to stop this editing process, press CANCEL.

3 Press SET.

GROUP ?
YES? → SET

SET

- If the loaded MD has no group, you cannot go to the following steps.
- During playback:**
The group number of the currently playing track will appear.
If the track does not belong to any group, the group number will be indicated as “--.”

4 Press GROUP/TITLE >>| or GROUP/TITLE |<< to select the group you want to dissolve.

GROUP 3 ?
YES? → SET

GROUP/TITLE
|<< >>|

Ex.: When group 3 is selected.

5 Press SET.

<UNGROUP>
YES? → ENTER

SET

- To cancel the setting, press CANCEL, then repeat from step 4.

6 Press ENTER.

The REC (MD recording) indicator flashes on the display. Then “WRITING” also flashes while editing you have made is being recorded on the MD.

ENTER

Dissolving All Groups—UNGR ALL

This function allows you to dissolve all the groups.
You cannot erase the tracks using this function.

- To stop any time during the editing process below before step 4, press GROUP TITLE EDIT.

1 Insert an MD you want to edit into the MD loading slot.

On the remote control ONLY:

2 Press GROUP TITLE EDIT repeatedly until “UNGR. ALL ?” appears on the display.

UNGR. ALL ?
YES? → SET

GROUP TITLE
EDIT

- If you want to stop this editing process, press CANCEL.

3 Press SET.

<UNGR. ALL>
YES? → ENTER

SET

- To cancel the setting, press CANCEL.

4 Press ENTER.

“EDITING” appears and the REC (MD recording) indicator flashes on the display. Then “WRITING” also flashes while editing you have made is being recorded on the MD.

ENTER

Erasing Tracks in a Group—ERASE GR

This function allows you to erase a group together with tracks in the group.

You cannot resume the tracks in the erased group.

Once a group is erased, the other tracks and groups are renumbered.

- To stop any time during the editing process below before step 6, press GROUP TITLE EDIT.

1 Insert an MD you want to edit into the MD loading slot.

On the remote control ONLY:

2 Press GROUP TITLE EDIT repeatedly until “ERASE GR ?” appears on the display.

ERASE GR ?
YES?→SET

GROUP TITLE
EDIT

- If you want to stop this editing process, press CANCEL.

3 Press SET.

G 6 ERASE?
ERASE?→SET

SET

- If the loaded MD has no group, you cannot go to the following steps.

• During playback:

The group number of the currently playing track will appear. If the track does not belong to any group, the group number will be indicated as “--.”

4 Press GROUP/TITLE >>| or GROUP/TITLE |<< to select the group you want to erase.

GROUP/TITLE
|<< >>|

G 6 ERASE?
ERASE?→SET

Ex.: When group 6 is selected.

5 Press SET.

SET

<ERASE GR>
YES?→ENTER

- To cancel the setting, press CANCEL, then repeat from step 4.

6 Press ENTER.

ENTER

“EDITING” appears and the REC (MD recording) indicator flashes on the display. Then “WRITING” also flashes while editing you have made is being recorded on the MD.

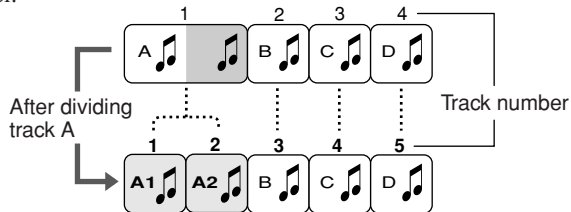
Editing an MD (Continued)

Introducing Track Editing Functions

The groups and tracks can be edited in many ways (Group editing functions and Track editing functions). From this page to page 67, the track editing functions are explained. For details on the group editing functions, see pages 55 to 62.

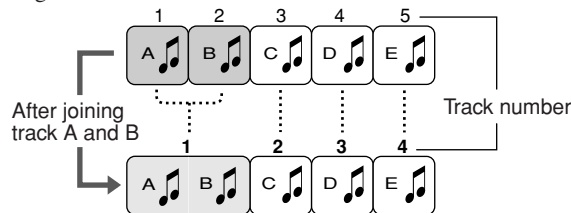
Dividing a track (DIVIDE): Page 64

This function divides a track by adding a track mark(s) in the middle of the desired point(s) in the middle or where you want to search for later.



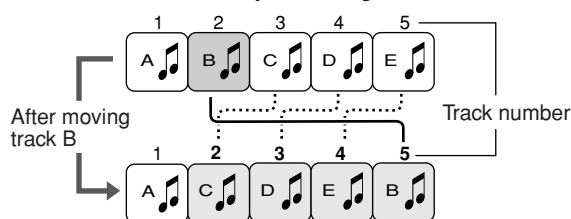
Joining two tracks (JOIN): Page 65

This function joins two adjacent tracks into a single track by deleting a track mark.



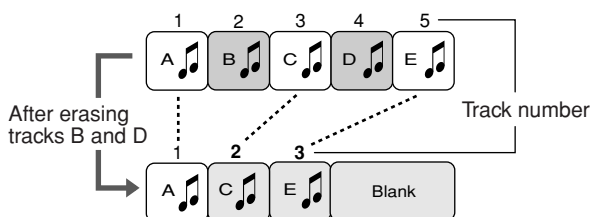
Moving a track (MOVE): Page 66

This function moves a track by reordering the track numbers.



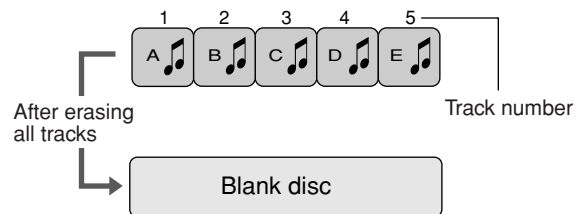
Erasing tracks (ERASE): Page 67

This function erases selected tracks. After the erasure, the subsequent tracks are justified and their track numbers are renumbered automatically. You can erase up to 15 tracks at a time.



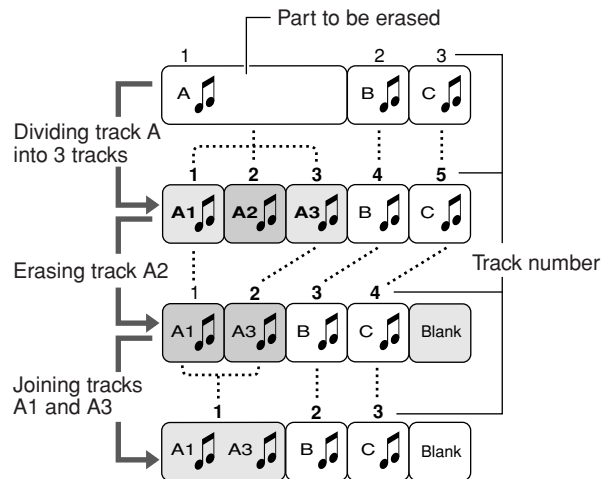
Erasing all tracks (ALL ERASE): Page 67

This function erases all data on a disc entirely.



Erasing a portion of a track

By combining "DIVIDE," "ERASE" and "JOIN," for example, it is possible to erase only a part of an existing track.



Important:

When the editing is completed, "WRITING" starts flashing after "EDITING" appeared on the display to store the edited contents on the MD.

While "WRITING" is flashing on the display, do not give any shock to the unit. Otherwise, the MD might not be able to play back anymore.



- If "PLAY BACK DISC" or "DISC PROTECTED" appears when you try to edit an MD
You cannot edit such MDs. See pages 45.
- **During Program Play or Random Play**
You can edit the MD as long as the playback is stopped except during Program/Random Play.

In the following examples of track editing, the process is explained from the very first—that is, inserting a disc. You can also edit an MD during playback (in Normal Play).

Dividing a Track—DIVIDE

This function allows you to divide one track into two separate tracks. It is useful, for example, when you want to add track marks at a certain point within a track or if you want to separate a recording.

When the original track has a title, two separate tracks are reassigned the same title as the original track in the same group (if the original track is belonged to a group).

Once a track is divided, the other tracks are renumbered.


- To stop any time during the editing process below before step 8, press TITLE EDIT.

1 Insert an MD you want to edit into the MD loading slot.

On the remote control ONLY:

2 Press TITLE EDIT repeatedly until “DIVIDE ?” appears on the display.

DIVIDE
YES? → SET




- If the loaded MD has no track, “DIVIDE ?” will not appear on the display.
- If you want to stop this editing process, press CANCEL.

3 Press SET.



The first track on the MD starts playback repeatedly.



4 Press UP or DOWN to select the track you want to divide.

- You can also select the tracks using the number buttons. In this case, the selected track starts playing repeatedly.

12 2:50
YES? → SET

Ex.: When track 12 is selected.

5 Press SET when you find the point where you want to divide the track.



“POSIT. (position) 0” appears on the display, and the unit repeats the selected point—a 3-second period following the dividing point.

POSIT. 0
OK? → SET

- If the loaded MD has 254 tracks, “DISC FULL” will appear (see “MD limitations” on page 88) and you cannot go to the following steps.
- If the dividing point is satisfactory, go to step 7. If not, go to the next step.
- To cancel the setting, press CANCEL, then repeat from step 4.

6 Press UP or DOWN to precisely adjust the dividing point.



When you stop pressing the button, the unit repeats the newly selected dividing point.

- You can shift the dividing point up to ± 128 . This range (± 128) corresponds to approximately ± 8 seconds* from the original point (position 0).

POSIT. -103
OK? → SET

Ex.: When adjusting the point by -103.

* When the recording length mode of the selected track is “SP:” For “LP2,” it is approximately ± 16 seconds, and for “LP4” approximately ± 32 seconds.

- When you find the correct position, go to the next step.
- To cancel the setting, press CANCEL, then repeat from step 4.

7 Press SET.



<DIVIDE>
YES? → ENTER

8 Press ENTER.



“EDITING” appears and the REC (MD recording) indicator flashes on the display. Then “WRITING” flashes while editing you have made is being recorded on the MD.

To join the divided tracks, see the JOIN function on page 65.

Editing an MD (Continued)

Joining Two Tracks—JOIN

This function allows you to join two adjacent tracks into one track. When the tracks have their own titles, the title of the preceding track is reassigned to the newly joined track.

Once two tracks are joined, the other tracks and/or the groups are renumbered.

- To stop any time during the editing process below before step 6, press TITLE EDIT.

1 Insert an MD you want to edit into the MD loading slot.

On the remote control ONLY:

2 Press TITLE EDIT repeatedly until “JOIN ?” appears on the display.



JOIN
YES? + SET

- If the loaded MD has no track, “JOIN ?” will not appear.
- If you want to stop this editing process, press CANCEL.

3 Press SET.



1?
YES? + SET

- If the loaded MD has only one track, you cannot go to the following steps.

4 Press UP or DOWN to select the two adjacent tracks you want to join.



- You can also select the tracks using the number buttons. In this case, the selected track starts playing repeatedly.

2? + 3?
YES? + SET

Ex.: When tracks 2 and 3 are selected.

5 Press SET.



<JOIN>
YES? + ENTER

- To cancel the setting, press CANCEL, then repeat from step 4.

6 Press ENTER.



“EDITING” appears and the REC (MD recording) indicator flashes on the display. Then “WRITING” also flashes while editing you have made is being recorded on the MD.

To divide the joined tracks, see the DIVIDE function on page 64.



• If “CANNOT JOIN” appears in step 5

You cannot join the following tracks.

- Tracks recorded with different recording length modes (SP, LP2, LP4). (See page 46.)
- Digital-recording tracks and analog-recording tracks.
- Tracks recorded using monaural long recording method (not possible on this unit) and stereo-recording tracks.

• When the track belongs to a group

If the preceding track of two tracks you want to join belongs to a group, the newly joined track will belong to that group. On the other hand, if the preceding track does not belong to any group, the newly joined track will not belong to any group even if the succeeding track belongs to a group.

Moving a Track—MOVE

This function allows you to move a track to the position you prefer. It is useful to change the order of the tracks as you like.

Once a track is moved, the tracks and/or the groups are renumbered.


- To stop any time during the editing process below before step **8**, press TITLE EDIT.

1 Insert an MD you want to edit into the MD loading slot.

On the remote control ONLY:

2 Press TITLE EDIT repeatedly until “MOVE ?” appears on the display.


MOVE
YES? → SET



- If the loaded MD has no track, “MOVE ?” will not appear on the display.
- If you want to stop this editing process, press CANCEL.

3 Press SET.

OK? → SET




- If the loaded MD has only one track, you cannot go to the following steps.

4 Press UP ►► or DOWN ◄◄ to select the track you want to move.

- You can also select the track using the number buttons. In this case, the selected track starts playing repeatedly.


OK? → SET



Ex.: When track 3 is selected.

5 Press SET.

OK? → SET




- To cancel the setting, press CANCEL, then repeat from step **4**.

6 Press UP ►► or DOWN ◄◄ to select the position where you want to move the track to.

- You can also select the track using the number buttons. In this case, the selected track starts playing repeatedly.

OK? → SET



Ex.: When track 3 is moved to track 8.

- If the track selected in this step belongs to a group, the track selected in step **4** will be entered into the same group with the current track after moving.

7 Press SET.


<MOVE>
YES? → ENTER



- To cancel the setting, press CANCEL, then repeat from step **4**.

8 Press ENTER.

“EDITING” appears and the **REC** (MD recording) indicator flashes on the display. Then “WRITING” also flashes while editing you have made is being recorded on the MD.



Editing an MD (Continued)

Erasing Tracks—ERASE

This function allows you to erase unwanted tracks.
You cannot resume the erased tracks.
Once tracks are erased, the other tracks and/or groups are renumbered.
You can erase up to 15 tracks at a time.

- To stop any time during the editing process below before step 8, press TITLE EDIT.

1 Insert an MD you want to edit into the MD loading slot.

On the remote control ONLY:

2 Press TITLE EDIT repeatedly until "ERASE?" appears on the display.



ERASE?
YES? → SET

- If the loaded MD has no track, "ERASE?" will not appear.
- If you want to stop this editing process, press CANCEL.

3 Press SET.



1 ERASE?
ERASE? → SET

4 Press UP ►► or DOWN ◄◄ to select the track you want to erase.



- You can also select the track using the number buttons. In this case, the selected track starts playing repeatedly.

5 Press SET.



"✓" appears on the display.
The track marked with "✓" will be erased.

✓ 5 ERASE?
NO? → CANCEL

Ex.: When track 5 is selected.

- When you do not want to erase the track, press CANCEL to remove "✓".

6 Repeat steps 4 and 5 to select all the tracks you want to erase.

- You can select up to 15 tracks.

7 Press ENTER.



<ERASE>
YES? → ENTER

8 Press ENTER.



"EDITING" appears and the REC (MD recording) indicator flashes on the display. Then "WRITING" also flashes while editing you have made is being recorded on the MD.

Erasing All Tracks—ALL ERASE

This function allows you to erase all the tracks on an MD.
You cannot resume the erased tracks.

1 Insert an MD you want to edit into the MD loading slot.

On the remote control ONLY:

2 Press TITLE EDIT repeatedly until "ALL ERASE?" appears on the display.



ALL ERASE?
YES? → SET

- If you want to stop this editing process, press CANCEL.

3 Press SET.



<ALL ERASE>
YES? → ENTER

- To cancel the setting, press CANCEL.

4 Press ENTER.



"EDITING" appears and the REC (MD recording) indicator flashes on the display. Then "WRITING" also flashes while editing you have made is being recorded on the MD.
"BLANK DISC" appears on the display.

Assigning Titles to an MD

You can assign a name to each MD, to each group and to each track using alphabetic characters (uppercase and lowercase), symbols and numerals. Once a title is assigned, it is displayed for your confirmation.

- You cannot edit titles composed of more than 61 characters.

To make the editing possible, slide to close the erasure prevention tab on the cartridge side surface. (See page 45 for details.)

About the number of characters entered for an MD

The total number of characters that you can enter for an MD is 1792. The maximum number that you can enter for a disc/track title is 61.

(However, the actual number you can enter may be slightly less than the maximum numbers due to the MD limitations—see page 88.)

- A space can be counted as one character.
- When the stereo long-hour recording (LP2 or LP4, see page 46) method is used for recording, the maximum number you can enter for a track title is automatically reduced since “LP:” and a space are automatically added to the beginning of the track title. Consequently this reduces the total number of characters you can enter for an MD.
Ex.: You can enter up to 10 characters for each track if an MD is composed of 120 tracks recorded using the stereo long-hour recording method.

In the following example, the process is explained from the very first—that is, inserting a disc. If you have already started recording or playing, start from step 2.

- You can edit titles during playback (in Normal Play).
- To exit from the title entry screen any time during the process, press TITLE EDIT or GROUP TITLE EDIT repeatedly.



During Program Play or Random Play

You can edit the MD as long as the playback is stopped except during Program/Random Play.

1 Insert an MD you want to edit into the MD loading slot.

On the remote control ONLY:

2 Enter the unit into the title entry mode.

For the disc and track title:

Press TITLE EDIT.



- During stop mode:
Disc title entry screen appears on the display.

DISC TITLE?
YES? → SET

- During play mode:
Track title entry screen appears on the display.

1 TITLE?
YES? → SET

For the group title:

Press GROUP TITLE EDIT.



Group title entry screen appears on the display.

GR 1 TITLE?
YES? → SET

- If the loaded MD has no group, you cannot go to the following steps.

3 For the disc and track title:

Press UP ►► or DOWN ◄◄ to change the title entry mode.



- Each time you press the button, the title entry mode changes as follows:

DISC TITLE? ↔ 1 TITLE? ←
••• ↔ 3 TITLE? ↔ 2 TITLE? ←

For the group title:

Press GROUP/TITLE >> or GROUP/TITLE ◄◄ to change the group entry mode.



- Each time you press the button, the title entry mode changes as follows:

GR 1 TITLE? ↔ GR 2 TITLE? ←
••• ↔ GR 3 TITLE? ←

4 Press SET to enter the unit into the selected title entry mode.



Character entry position

DISC [A] 1
[A] 1

Character set

Ex.: When the disc has no title.

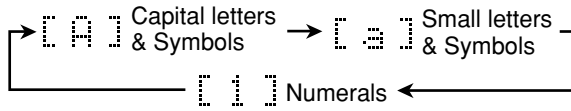
Editing an MD (Continued)

5 Enter characters.

- (1) Press **DISP/CHARA** to select the character set you want.



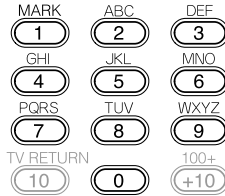
- Each time you press the button, the character set changes as follows:



- (2) Press the character entry button for a character you want to enter.

Ex.:

- To enter an "A" or "a," press ABC once.
- To enter a "B" or "b," press ABC twice.
- To enter a "C" or "c," press ABC three times.
- To enter a symbol, press MARK repeatedly until the mark you want appears. For available symbols, see below.
- To enter a numeral, press 0–9.
- To enter a space while entering a title, press UP ►► twice.
- To move the character entry position while entering a title, press UP ►►| or DOWN |◀◀*.
- If you have entered an incorrect character, press UP ►►| or DOWN |◀◀ to select the character you want to correct, then press CANCEL to delete it.



* If you press DOWN |◀◀ repeatedly during recording, the entered characters may be displayed incorrectly. In this case, press TITLE EDIT or GROUP TITLE EDIT, then repeat from step 3 again.

- (3) Repeat steps 5–(1) and 5–(2) to enter other characters.

- If the character you want to enter next is assigned to the same button you have just pressed in step 5–(2), press UP ►►| once to move the character entry position to the right.
- The display can only show 6 characters at a time. If you enter the 7th character, the first character disappears, and so on.

Available symbols are as follows:

(Blank)	!	"	#	\$	%	&	'	()	
*	+	,	-	.	/	:	;	<	=
>	?	@	_	\					

6 Press ENTER to finish the current title entry.



"EDITING" appears on the display for a while, then the next title entry screen appears.

- For the disc title:**

The track title entry screen for the track 1 appears.

- For the track title:**

The next track title entry screen appears (or the unit exits from the title entry screen if the current track is the last one on the disc).

- For the group title:**

The next group title entry screen appears (or the same screen still remains if the current group is the last one on the disc).

If you want to continue assigning a title, repeat steps 3 to 6.

7 Press CANCEL to exit from the title entry mode.



- While recording, do not go to the next step until the recording ends.

8 Press ▲ (MD eject) on the unit to eject the MD.



"WRITING" and the **REC** (MD recording) indicator flash while the editing you have made is being recorded on the MD.



You can assign titles during play or recording

- **During play:**

- **Entering a track title**

The MD recorder repeats playback of the current track until you press ENTER in step 6. When you press ENTER, the next track will be played.

- **Entering a disc title**

The MD recorder repeats playback of all tracks of the MD until you press ENTER in step 6. When you press ENTER, the MD recorder enters the track title entry mode.

- **Entering a group title**

The MD recorder repeats playback of the tracks in the group until you press ENTER in step 6. When you press ENTER, the MD recorder enters the next group title entry mode.

- **During recording:**

- **Entering a track title**

The MD recorder continues recording even after you press ENTER in step 6. When you press ENTER, a track title is assigned to the track where you have started the title entry. If you do not press ENTER before recording ends, the track title assigned will be canceled.

- **During Disc-MD or Disc-Tape Synchronized Recording (see pages 47, 48 and 52):**

You can assign the disc title, and 16 track titles one after another as recording goes on. The track titles you have entered are automatically assigned to the tracks recorded on the MD in sequential order. "EDITING" appears on the display for a while, then the next title entry screen appears. If you enter 17th track title or more, they are ignored.



When you unplug the AC power cord or if a power failure occurs before step 8

The editing you have made is not recorded on the MD.

To Change the Title

You can make a correction or change the title.

1 Follow steps 1 to 4 on page 68.

2 Select the character you want to correct, by pressing UP ►► or DOWN ◄◄.



- Make sure that the character you want to change is flashing.

3 Press CANCEL to delete the character you have selected in the above step.



4 Enter the correct character, referring to step 5 on page 69.

5 Repeat steps 2 to 4 of the current procedure to correct more characters.

6 Press ENTER to finish correcting the title.



"EDITING" appears on the display for a while, then the next title entry screen appears.

- If you want to correct another title, select another title entry mode by pressing UP ►► or DOWN ◄◄, press SET, then repeat from step 2 above.
- If you want to finish the correction, go to the next step.

7 Press ▲ (MD eject) on the unit to eject the MD.



"WRITING" and the REC (MD recording) indicator flash while the editing you have made is being recorded on the MD.

To erase all the characters, press CANCEL repeatedly in step 3 above to erase all the characters, then go to step 6.

Using the Timers

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

- Before using these timers, make sure the built-in clock is set correctly (see page 10).
- When using the tuner as the source, preset stations in advance (see page 14).

Using Recording Timer

With Recording Timer, you can make an unattended recording.

- You can set Recording Timer whether the unit is turned on or off (on standby).
- To correct a mis-entry any time during the setting process, press CANCEL.
- To exit from the timer setting during the process, press CLOCK/TIMER repeatedly until the source indication appears.


How Recording Timer actually works

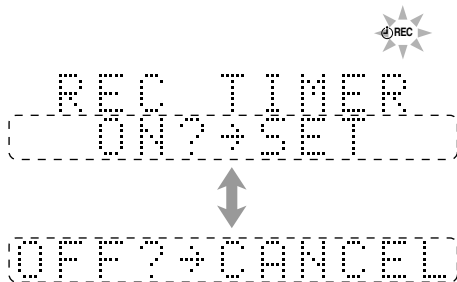
The unit automatically turns on, muting the volume, and starts recording on the MD or on the tape when the start time comes. Then, when the shut-off time comes, the unit automatically turns off (on standby).

Recording Timer works only once, but the timer settings remain stored in memory until you reset them or unplug the AC power cord.

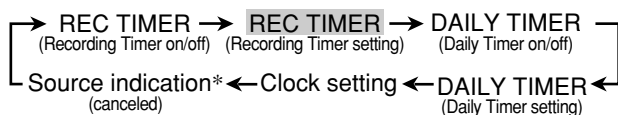
On the remote control ONLY:

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

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





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

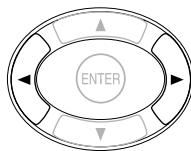


* Source indication appears only when the unit is turned on.

The hour digits of the start time start flashing.

2 Set the start time.



- (1) Press cursor  /  repeatedly to adjust the hour.

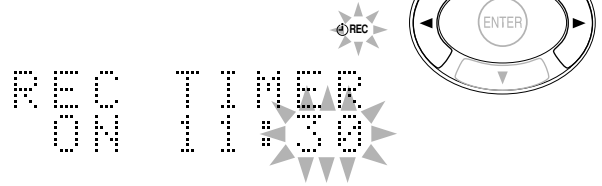


- (2) Press SET.

The minute digits start flashing.



- (3) Press cursor  /  repeatedly to adjust the minute.





Ex.: When you set start time to 11:30.

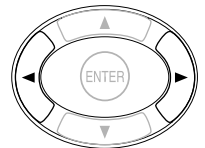
- (4) Press SET.

The hour digits of the shut-off time start flashing.



3 Set the shut-off time.



- (1) Press cursor  /  repeatedly to adjust the hour.

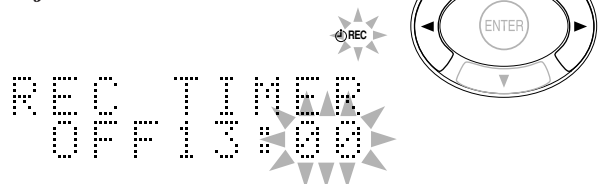


- (2) Press SET.

The minute digits start flashing.



- (3) Press cursor  /  repeatedly to adjust the minute.



Ex.: When you set shut-off time to 13:00.

- (4) Press SET.

The source name flashes on the display.





4 Select the source to record from.

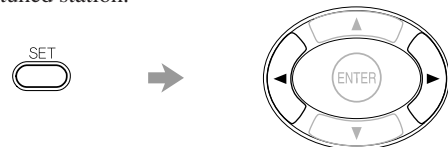
- (1) Press cursor  /  repeatedly to select the source.

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



- (2) When you select “FM” or “AM,” press SET, then select a preset number by pressing cursor  / .

- If you select “FM --” or “AM --,” the station is set to the last tuned station.



When you select “AUX” or “AUX-DIGITAL,” set the timer function of the external component as well.

- (3) Press SET.

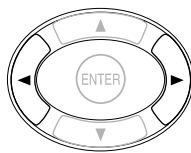
A device to record onto flashes on the display.



5 Select the device to record onto.

- (1) Press cursor $\blacktriangleright/\blacktriangleleft$ repeatedly to select the device.

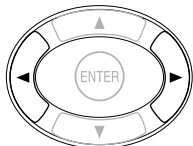
MD REC \longleftrightarrow TAPE REC



- (2) Press SET.



- (3) When you select "MD REC," select the recording length mode (see page 46) by pressing cursor $\blacktriangleright/\blacktriangleleft$, then press SET again.



When you select "TAPE REC," select Reverse Mode (see page 43) by pressing REV.MODE when you prepare the device. When recording starts, reverse mode indicator changes to \curvearrowright automatically.

REV.MODE



The **REC** (recording timer) indicator stops flashing and remains lit. The contents of this setting appear on the display in sequence for your confirmation.

To turn off the Recording Timer after its setting is done

- 1 Press CLOCK/TIMER repeatedly until "REC TIMER" appears on the display.
- 2 Press CANCEL. The ⌚ (timer) and **REC** (recording timer) indicators go off from the display.

To turn on the Recording Timer again

- 1 Press CLOCK/TIMER repeatedly until "REC TIMER" appears on the display.
- 2 Press SET repeatedly until the settings are shown on the display for your confirmation. The ⌚ (timer) and **REC** (recording timer) indicators light up on the display.



- When you press \blacksquare while Recording Timer works
The recording stops but the timer is not canceled. The unit automatically turns off (on standby) when the shut-off time comes.
- If the unit is kept turned on when the start time comes
Recording Timer does not work at all.

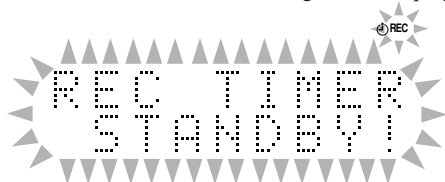
6 Press $\text{⌚}/\text{AUDIO}$ to turn off the unit if you have set the timer with the unit turned on.

$\text{⌚}/\text{AUDIO}$

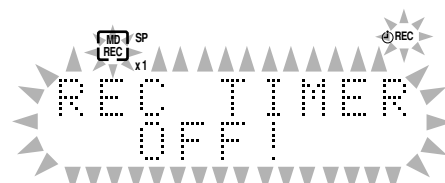


To record onto an MD using the Group recording, press GROUP REC ON/OFF to turn on the Group recording after setting the Recording Timer (before turning off the unit).

Before the start time, the **REC** (recording timer) indicator and "REC TIMER STANDBY!" start flashing on the display.



Before the shut-off time, the display changes as follows:



Clock indication

Using the Timers (continued)

Using Daily Timer

With Daily Timer, you can wake up to your favorite music or radio program.



- You can set Daily Timer whether the unit is turned on or off (on standby).
- To correct a mis-entry any time during the setting process, press CANCEL.
- To exit from the timer setting during the process, press CLOCK/TIMER repeatedly until the source indication appears.

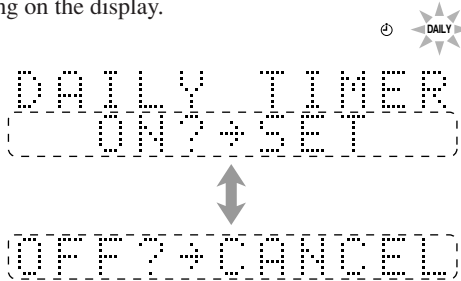
How Daily Timer actually works

The unit automatically turns on, and starts playing the specified source when the timer-on time comes. Then, when the timer-off time comes, the unit automatically turns off (on standby).

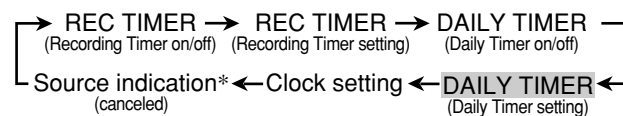
Daily Timer works every day, and the timer settings remain stored in memory until you reset them or unplug the AC power cord.

On the remote control ONLY:

- 1 Press CLOCK/TIMER repeatedly until “DAILY TIMER” appears on the display.** 
- The  (timer) indicator lights up and the **DAILY** indicator starts flashing on the display.



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

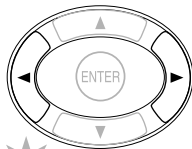
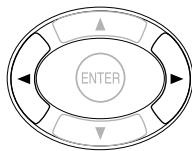


* Source indication appears only when the unit is turned on.

The hour digits of the start time start flashing.

2 Set the start time.

- Press cursor ►/◄ repeatedly to adjust the hour.**
- Press SET.**
The minute digits start flashing.
- Press cursor ►/◄ repeatedly to adjust the minute.**



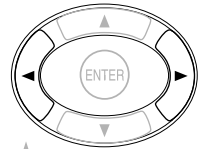
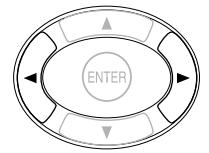
DAILY TIMER
ON 7:00

Ex.: When you set start time to 7:00.

- Press SET.** 
The hour digits of the shut-off time start flashing.

3 Set the shut-off time.

- Press cursor ►/◄ repeatedly to adjust the hour.**
- Press SET.**
The minute digits start flashing.
- Press cursor ►/◄ repeatedly to adjust the minute.**



DAILY TIMER
OFF 8:00

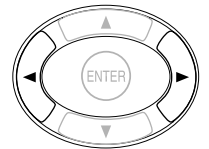
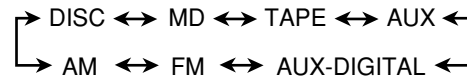
Ex.: When you set shut-off time to 8:00.

- Press SET.**
The source name flashes on the display.



4 Select the source to play back.

- Press cursor ►/◄ repeatedly to select the source.**
 - Each time you press the button, the source changes as follows:



When you select “DISC”

- Press SET.
- Select the disc number by pressing cursor ►/◄, then press SET again.
- Press cursor ►/◄ to select the group/title number, then select track/chapter number.
 - If you select a SVCD, VCD or CD, first press SET to skip the group/title number entry, then enter the track number.
 - If you select a DVD, you can select the title number and the chapter number. (However, for some DVDs, SVCDs and VCDs, this does not work properly.)

If there is no disc on the selected disc tray and if the selected track is the first track, the first track of next disc will be selected and starts playback when the on-time comes.

When you select “MD”

- Press SET.
- Press cursor ►/◄ to select the track number.

When you select “TAPE,” prepare it for playback.

When you select “FM” or “AM”

- Press SET.
- Select a preset number by pressing cursor ► or ◄.
 - If you select “FM --” or “AM --,” the station is set to the last tuned station.

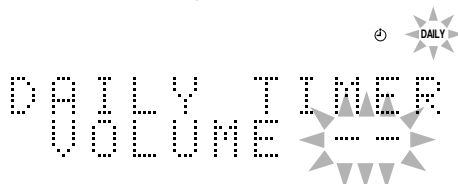
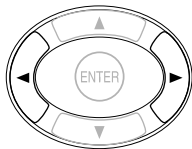
When you select “AUX” or “AUX-DIGITAL,” set the timer function of the external component as well.

- Press SET.** 
The volume setting appears on the display.

5 Adjust the volume level.

(1) Press cursor **▶/◀** repeatedly to adjust the volume level.

- You can adjust the volume level to “--” or within the range of 0 (silent) to 40 (maximum).
- When you select “VOLUME --,” the volume is set to the volume level when you turn off the unit.



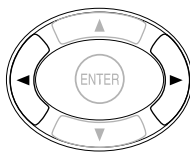
(2) Press **SET**.

The fade setting appears on the display.



6 Select the fade setting.

(1) Press cursor **▶/◀** repeatedly.



FADE The volume increases gradually to the level you have set on step 5 when the timer-on time comes.

NO FADE The volume comes out without fading with the level you have set on step 5 when the timer-on time comes.

(2) Press **SET**.

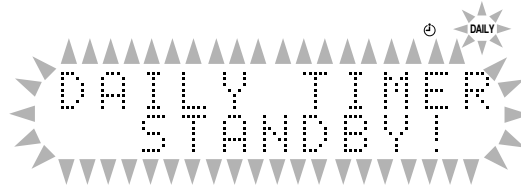
The **DAILY** indicator stops flashing and remains lit. The contents of this setting appear on the display for your confirmation.



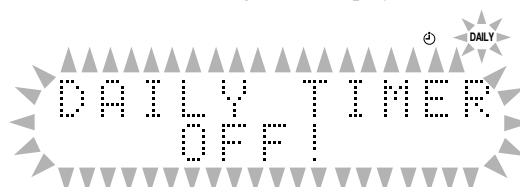
7 Press **⏻/⏮ AUDIO** to turn off the unit if you have set the timer with the unit turned on.



Before the start time, the **DAILY** indicator and “DAILY TIMER STANDBY!” start flashing on the display.



Before the shut-off time, the **DAILY** indicator and “DAILY TIMER OFF!” start flashing on the display.



Clock indication

To turn off the Daily Timer after its setting is done

- Press **CLOCK/TIMER** repeatedly until “DAILY TIMER” appears on the display.
- Press **CANCEL**.
The **⌚** (timer) and **DAILY** indicators go off from the display.

To turn on the Daily Timer again

- Press **CLOCK/TIMER** repeatedly until “DAILY TIMER” appears on the display.
- Press **SET**.
The settings are shown on the display for your confirmation. The **⌚** (timer) and **DAILY** indicators light up on the display.



- If the unit is kept turned on when the start time comes
Daily Timer does not work at all.
- Daily Timer will be canceled in the following cases:**
 - When you change the source while Daily Timer is working.
 - When you enter the MD editing or title entry mode while Daily Timer is working.
 - When you turn off the Daily Timer (see above).
- You cannot make **Program Play** or **Random Play** for Daily Timer.

Using the Timers (continued)

Using Sleep Timer

With Sleep Timer, you can fall asleep to your favorite music.

- You can set Sleep Timer only when 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:

Press SLEEP repeatedly.

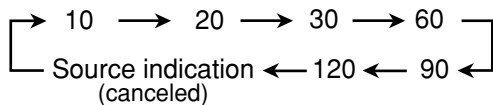
The ⏰ (timer) and the SLEEP indicators start flashing on the display.



“SLEEP 10” appears on the display for a while.



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



About 5 seconds later, the ⏰ (timer) and the SLEEP indicators stop flashing and remain lit.

When the Sleep Timer is activated, DIMMER 1 is automatically activated (see page 12).

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

To change the shut-off time, press SLEEP repeatedly until the time length you want appears.

To cancel the setting, press SLEEP repeatedly until the ⏰ (timer) and SLEEP indicators go off from the display.



Sleep Timer will be also canceled in the following cases:

- When you turn off the unit.
- When you operate other timer settings.
- When you adjust the clock.

To sleep with the Sleep Timer and wake up with the Daily Timer

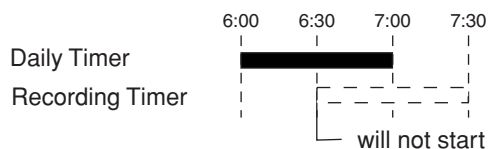
- Set the Daily Timer as explained on pages 73 and 74.
- Start playing back any source you want to listen to before sleep.
- Set the Sleep Timer.

Timer Priority

Since each timer can be set separately, you may wonder what happens if the setting for these timers overlaps. Below is the example of timer priority.

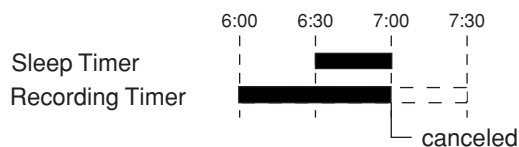
A timer with the earlier start time has priority.

If Recording Timer is set to come on while Daily Timer is operating, Recording Timer will not work.



Sleep Timer always has priority.

If Sleep Timer is set to come on while Recording Timer is operating, Recording Timer will be canceled when the shut-off time of Sleep Timer comes.



Sleep timer and Auto Standby (see page 11) can be used at the same time.

Initial Setting Using Choice Menu

You can adjust the initial settings through the choice menu on the TV.

You can use the choice menu only when the selected source is disc player and its playback is not started.

Before operating...

- Turn on your TV and select the correct input mode on the TV.
- You can use only the remote control for the choice menu operations.
- You can change the language used in the choice menu. See page 78.

Introducing the Choice Menus

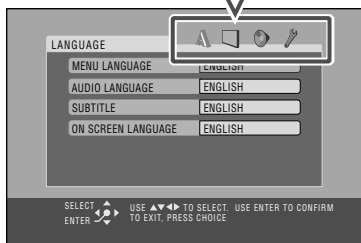
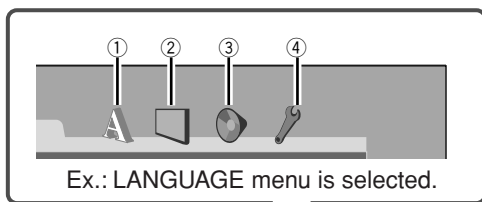
■ Operation buttons

On the remote control ONLY:

Button	To do
CHOICE	Display the choice menu on the TV. Each time you press the button, the choice menu is turned on and off alternately.
▶/◀	Change the choice menu.
▲/▼	Select an item on a choice menu or select an option for selected item.
ENTER	Move to the submenu of the selected item or confirm the setting.

About menu icons

The icon for the selected choice menu will be highlighted.



- ① LANGUAGE menu
- ② PICTURE menu
- ③ AUDIO menu
- ④ OTHERS menu

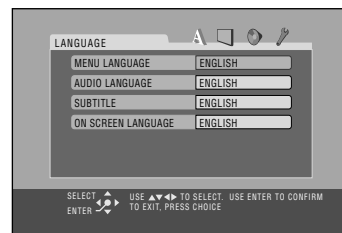
For details on each choice menu, see “Configuration of choice menus” on the right column.

■ Configuration of the choice menus

The choice menu has the following menus:

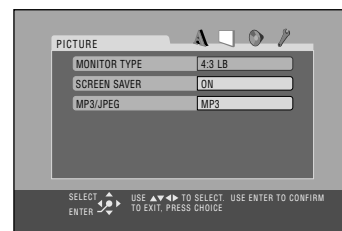
① LANGUAGE menu (see page 78)

You can select the initial language for the disc menu, audio, and subtitle. You can also select the language shown on the TV screen while operating this unit.



② PICTURE menu (see page 78)

You can select the desired options concerning a picture or monitor screen.



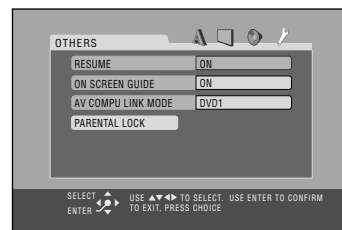
③ AUDIO menu (see page 79)

You can adjust the sound settings of this unit through this menu.



④ OTHERS menu (see page 79)

You can change the settings for some of the functions. To set Parental Lock, use this menu (see page 80).



Initial Setting Using Choice Menu (continued)

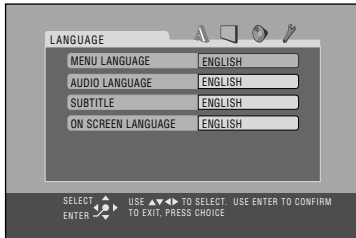
Operating Procedure

Make sure that the disc player is selected for the source.
Ex.: When setting MP3/JPEG.

On the remote control ONLY:

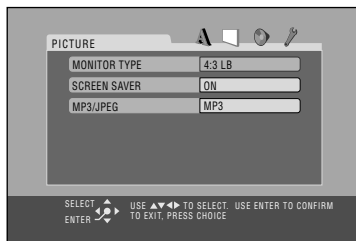
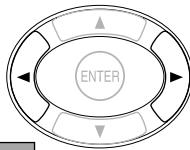
1 Press CHOICE.

The LANGUAGE menu appears on the TV.

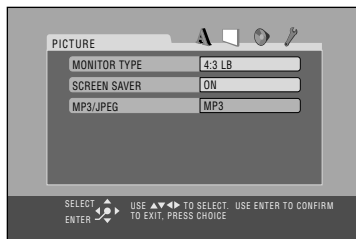
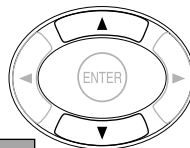


2 Press cursor ►/◄ repeatedly to display the PICTURE menu.

- Each time you press the button, the menu changes.

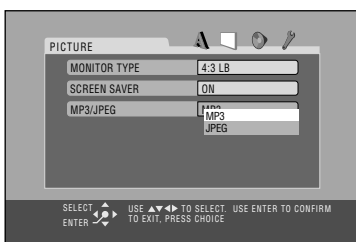


3 Press cursor ▼/▲ repeatedly to select (highlight) "MP3/JPEG."

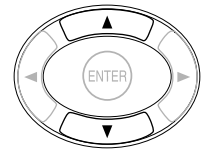


4 Press ENTER.

The pop-up window listing the selectable options appears.

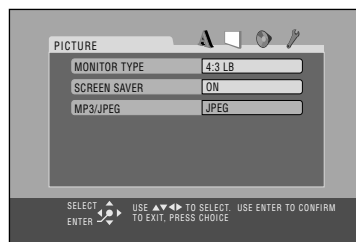


5 Press cursor ▼/▲ repeatedly to select (highlight) the desired option.



Ex.: When "JPEG" is selected.

6 Press ENTER to finish the setting.



To set other items on the same choice menu
Repeat steps 3 to 6.

To move to another choice menu

Press cursor ►/◄ repeatedly to select (highlight) a choice menu you want to set up.

To return to the normal screen

Press CHOICE.

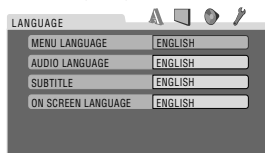
To enter submenus

Some items in the choice menu consist of submenus for setting up various options. Pressing ENTER shows the submenus for the selected item on the TV.

- You can set the items using cursor ▲/▼ and ENTER (as explained in steps 5 and 6 above).

 : shows the initial setting in the following tables.

■ Language selection menu—LANGUAGE



• MENU LANGUAGE

Some discs have multiple menu languages.

Select one of the languages or language codes from AA to ZU (see “Language Code List” on page 88).

• AUDIO LANGUAGE

Some discs have multiple audio languages.

Select one of the languages or language codes from AA to ZU (see “Language Code List” on page 88).

• SUBTITLE

Some discs have multiple subtitle languages.

Select one of the languages or language codes from AA to ZU (see “Language Code List” on page 88) or “OFF (no subtitle).”

• ON SCREEN LANGUAGE

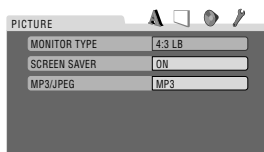
Select one of the languages shown on the TV. Selectable languages—ENGLISH, Chinese (中国語), and Spanish (ESPAÑOL).



When the language you have selected for MENU LANGUAGE, AUDIO LANGUAGE, or SUBTITLE is not recorded on a disc

The original language is used as the initial language.

■ Picture setting menu—PICTURE



• MONITOR TYPE

You can select the monitor type of your TV when you play DVD VIDEO recorded with aspect ratio of 16:9.

Select one of the following settings:

16:9 NORMAL (Wide television conversion)

Select when the aspect ratio of your TV is fixed to 16:9 (wide TV). The unit automatically adjusts the screen width of the output signal correctly when playing back a picture whose aspect ratio is 4:3.

16:9 AUTO (Wide television conversion)

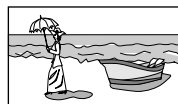
Select when the aspect ratio of your TV is 16:9 (wide TV) and when the TV has the screen size adjustment function.

4:3 LB (Letter Box conversion)

Select when the aspect ratio of your TV is 4:3 (conventional TV). While viewing a wide screen picture, the black bars appear on the top and the bottom of the screen.

4:3 PS (Pan Scan conversion)

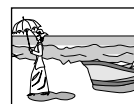
Select when the aspect ratio of your TV is 4:3 (conventional TV). While viewing a wide screen picture, the black bars do not appear; however, the left and right edges of the pictures will not be shown on the screen.



Ex.: 16:9



Ex.: 4:3 LB



Ex: 4:3 PS

- Even if “4:3 PS” is selected, the screen size may become 4:3 letter box with some DVD VIDEOS. This depends on how the discs are recorded.
- When you select “16:9 NORMAL” for a picture whose aspect ratio is 4:3, the picture slightly changes due to the process for converting the picture width.

• SCREEN SAVER

You can activate or deactivate the screen saver function while operating the disc player.

Select one of the following settings:

ON The picture on the TV becomes dark when no operation is done for 5 minutes.

OFF The screen saver function does not work.

• MP3/JPEG

If both MP3 files and JPEG files are recorded on a disc, you can select which files to play.

The setting will not take effect until you open and close the disc tray for the current disc or select another disc tray to play.

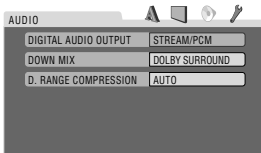
Select one of the following settings:

MP3 Select for playing MP3 files.

JPEG Select for playing JPEG files.

Initial Setting Using Choice Menu (continued)

■ Audio selection menu—AUDIO



• DIGITAL AUDIO OUTPUT

To connect the unit's digital output to an external device equipped with a digital input, this item must be set correctly. See "Output Signals through the DVD OPTICAL DIGITAL OUT Terminal" on page 89 for details about the relation between the setting and output signals.

Select one of the following settings:

PCM ONLY

Select when you connect to the linear PCM digital input terminal of other audio equipment.

DOLBY DIGITAL/PCM

Select when you connect to the digital input terminal of a Dolby Digital decoder or an amplifier with a built-in Dolby Digital decoder.

STREAM/PCM

Select when you connect the digital input terminal of an amplifier with a built-in MPEG Multichannel, DTS, Dolby Digital decoder, or the stand-alone unit of such a decoder.

• DOWN MIX

When playing a DVD whose audio sound is recorded with the multichannel surround, this unit properly converts the sound signals into 2-channels.

Set this item according to the external equipment connected to DVD OPTICAL DIGITAL OUT terminals.

Select one of the following settings:

DOLBY SURROUND

Select when connecting an amplifier with the Dolby Pro Logic decoder.

STEREO

Select when connecting a stereo amplifier/receiver, or television set to listen to conventional stereo sound. Also select when you want to record a DVD VIDEO to MD, cassette, etc.

• D. (dynamic) RANGE COMPRESSION

You can compress the dynamic range (the difference of the loudest sound to the softest sound) to enjoy a powerful sound even at a low volume level when listening to multi-channel Dolby Digital DVD VIDEO software. This is useful when enjoying the Surround sound at night.

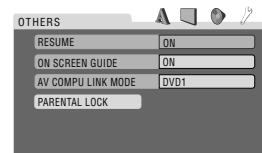
The effectiveness varies depends on a software.

Select one of the following settings:

AUTO Applies the compression effect to the down-mixed multi-channel sound.

ON Applies the compression effect. Select to always use this function for all Dolby digital software. Loud sound will become low and vice versa.

■ Other setting menu—OTHERS



• RESUME

You can activate or deactivate the resume play function of the built-in disc player. (See page 17.)

- You cannot use Resume Play for all CD/MP3/JPEG discs and some DVD/SVCD/VCD discs.
- Resume Play may not be able to use with some DVDs, SVCDs and VCDs.

Select one of the following settings:

ON Select to activate this function.

OFF Select to deactivate it.

• ON SCREEN GUIDE

You can activate or deactivate the on-screen guide icons (see page 24). The on-screen guide icons appear on the TV at the beginning of the playback with this function turned on.

When recording the picture on a VCR, select "OFF" to avoid recording the indications on your video tape.

- The choice menu and on-screen bar will be displayed (and recorded) even though this function is set to "OFF." Subtitles and the information for zooming in (see page 32) always appear on the display regardless of this setting.

Select one of the following settings:

ON Select to activate this function.

OFF Select to deactivate it.

• AV COMPU LINK MODE

When connecting this unit to a JVC's TV with the AV COMPU LINK remote control system, select the proper setting.

Select one of the following settings:

DVD1 Select when you connect this unit to the COMPONENT VIDEO (or VIDEO-3) terminals on a TV using a component video cord (not supplied).

DVD2 Select when you connect this unit to the VIDEO-1 terminals on a TV using an S-video cord (not supplied).

DVD3 Select when you connect this unit to the VIDEO-2 terminals on a TV using a composite video cord (supplied).

For AV COMPU LINK control system, see page 84.

• PARENTAL LOCK

You can restrict playback of DVD VIDEO containing violent scenes and those not suitable for your family members.

- You can select "PARENTAL LOCK" only before playback.

Select this to enter the PARENTAL LOCK submenu. (See pages 80 and 81.)

Restricting the Access Level—Parental Lock

You can restrict playback of DVD VIDEO containing violent scenes and those unsuitable for your family members. Nobody can play such a disc unless this function is canceled.

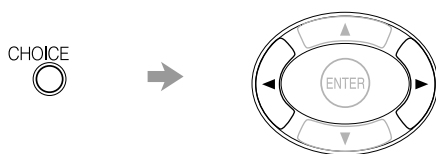
- You can set the Parental Lock only while a disc is not playing.
- This setting takes effect only for a DVD VIDEO containing Parental Lock level information—Level 1 (most restrictive) to Level 8 (least restrictive).

Playback of discs containing higher level than the selected level will be restricted. Some discs may not be played back at all, and others may be played back with higher level scenes skipped.

Ex.: When you select “4,” discs containing level 5, 6, 7, or 8 can be played back.

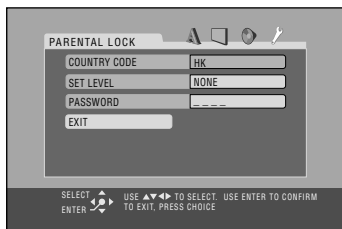
Setting Parental Lock

- 1 Press **CHOICE**, then press cursor **▶/◀** to display the **OTHERS** menu.



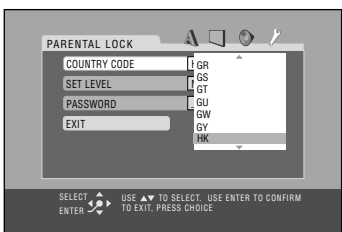
- 2 Press cursor **▼/▲** repeatedly to select (highlight) “**PARENTAL LOCK**,” then press **ENTER**.

The **PARENTAL LOCK** submenu appears on the TV.



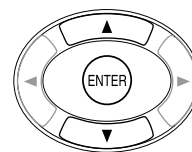
- 3 Press cursor **▼/▲** repeatedly to select (highlight) “**COUNTRY CODE**,” then press **ENTER**.

The pop-up window for setting the country code appears.



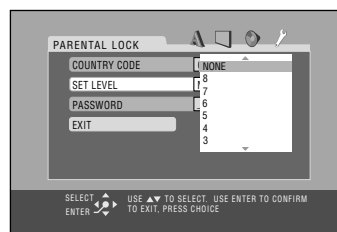
- See “Country/Area codes list for Parental Lock” on page 82.

- 4 Press cursor **▼/▲** repeatedly to select (highlight) the country code, then press **ENTER**.
“**SET LEVEL**” is now selected (highlighted).



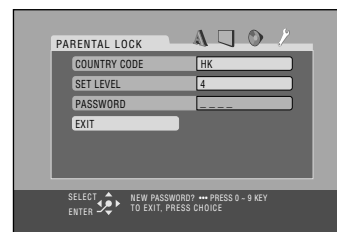
- 5 Press **ENTER**.

The pop-up window for level setting appears.



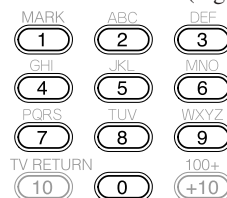
- 6 Press cursor **▼/▲** repeatedly to select (highlight) the level of restriction, then press **ENTER**.

- The smaller the value of level is, the more restrictive the Parental Lock level is.
- Select “**NONE**” to cancel this function.



- 7 Press the number buttons (**0 – 9**) to enter a four digit number for your password, then press **ENTER**.

“**EXIT**” is now selected (highlighted).



- 8 Press **ENTER**.

The **OTHERS** menu resumes.

To return to the normal screen
Press **CHOICE**.



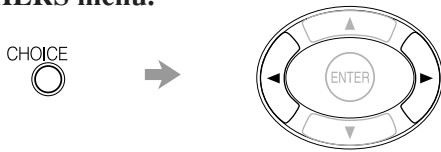
Remember your password or make a note of it

You need to enter your password to change the setting or release the lock. To change the setting, see page 81.

Initial Setting Using Choice Menu (continued)

■ Changing the Parental Lock setting

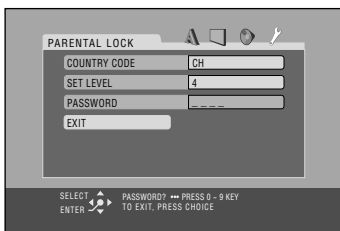
1 Press **CHOICE**, then press cursor **▶/◀** to display the **OTHERS** menu.



2 Press cursor **▼/▲** repeatedly to select (highlight) **"PARENTAL LOCK,"** then press **ENTER**.

The **PARENTAL LOCK** submenu appears on the TV.

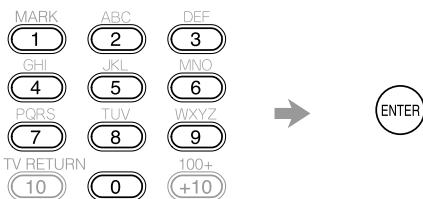
- You can only select "PASSWORD" or to "EXIT" before you enter your password.



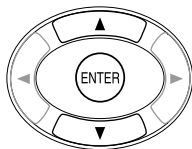
3 Press the number buttons (**0 – 9**) to enter your password, then press **ENTER**.

- If you enter a wrong password, "WRONG! RETRY... PRESS 0~9KEY" appears on the TV.

You cannot go to next steps before you enter the correct password.



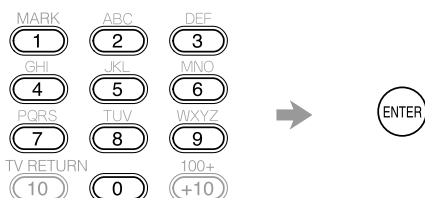
4 Press cursor **▼/▲** repeatedly to select (highlight) the item you want to change, then press **ENTER**.



5 Press cursor **▼/▲** repeatedly to change the setting, then press **ENTER**.

6 Press the number buttons (**0 – 9**) to enter a four digit number for your password, then press **ENTER**.

- When you want to change the password, enter the new password in this step.



7 Press **ENTER**.

The new setting is stored.



To return to OTHERS menu
Press **ENTER** again.

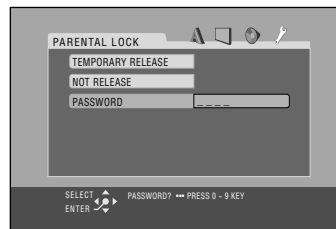
To return to the normal screen
Press **CHOICE**.



- You cannot change the Parental Lock before you enter your password.
- If you exit from the **PARENTAL LOCK** submenu before entering your password in step **6**, the new country code and parental level will not become effective, and the previous country code and parental level remain effective.
- When you enter wrong passwords three times, "EXIT" will be selected (highlight) automatically and cursor **▼/▲** do not work. Press **ENTER** to exit from the **PARENTAL LOCK** submenu, then start from step **1** again.
- If you forget your password, enter "8888."

■ Releasing Parental Lock temporarily

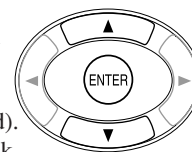
When you set a strict parental level, some discs may not be played back at all. When you load such a disc and try to play it, the following display appears on the TV. You can release Parental Lock temporarily.



1 Press cursor **▼/▲** repeatedly to select (highlight) **"TEMPORARY RELEASE,"** then press **ENTER**.

"PASSWORD" is now selected (highlighted).

- If you do not want to release Parental Lock temporarily, select "NOT RELEASE" by pressing cursor **▼/▲**, then press **ENTER**. To eject the disc, press **▲** for the disc tray.

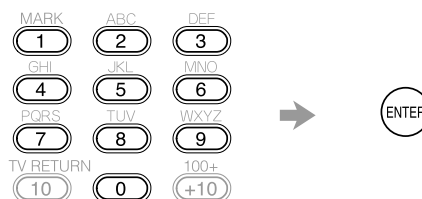


2 Press number buttons (**0 – 9**) to enter your password, then press **ENTER**.

Playback starts.

- If you enter a wrong password, "WRONG! RETRY... PRESS 0~9KEY" appears on the screen.

You cannot play the disc before you enter the correct password.



When you enter wrong password three times

"NOT RELEASE" will be selected (highlighted) automatically and cursor **▼/▲** does not work.

Press **▲** for the disc tray to remove the disc.

Country/Area codes list for Parental Lock

AD	Andorra	ER	Eritrea	LA	Lao People's Democratic Republic	RW	Rwanda
AE	United Arab Emirates	ES	Spain			SA	Saudi Arabia
AF	Afghanistan	ET	Ethiopia	LB	Lebanon	SB	Solomon Islands
AG	Antigua and Barbuda	FI	Finland	LC	Saint Lucia	SC	Seychelles
AI	Anguilla	FJ	Fiji	LI	Liechtenstein	SD	Sudan
AL	Albania	FK	Falkland Islands (Malvinas)	LK	Sri Lanka	SE	Sweden
AM	Armenia	FM	Micronesia (Federated States of)	LR	Liberia	SG	Singapore
AN	Netherlands Antilles			LS	Lesotho	SH	Saint Helena
AO	Angola	FO	Faroe Islands	LT	Lithuania	SI	Slovenia
AQ	Antarctica	FR	France	LU	Luxembourg	SJ	Svalbard and Jan Mayen
AR	Argentina	FX	France, Metropolitan	LV	Latvia	SK	Slovakia
AS	American Samoa	GA	Gabon	LY	Libyan Arab Jamahiriya	SL	Sierra Leone
AT	Austria	GB	United Kingdom	MA	Morocco	SM	San Marino
AU	Australia	GD	Grenada	MC	Monaco	SN	Senegal
AW	Aruba	GE	Georgia	MD	Moldova, Republic of	SO	Somalia
AZ	Azerbaijan	GF	French Guiana	MG	Madagascar	SR	Suriname
BA	Bosnia and Herzegovina	GH	Ghana	MH	Marshall Islands	ST	Sao Tome and Principe
BB	Barbados	GI	Gibraltar	ML	Mali	SV	El Salvador
BD	Bangladesh	GL	Greenland	MM	Myanmar	SY	Syrian Arab Republic
BE	Belgium	GM	Gambia	MN	Mongolia	SZ	Swaziland
BF	Burkina Faso	GN	Guinea	MO	Macau	TC	Turks and Caicos Islands
BG	Bulgaria	GP	Guadeloupe	MP	Northern Mariana Islands	TD	Chad
BH	Bahrain	GQ	Equatorial Guinea	MQ	Martinique	TF	French Southern Territories
BI	Burundi	GR	Greece	MR	Mauritania	TG	Togo
BJ	Benin	GS	South Georgia and the South Sandwich	MS	Montserrat	TH	Thailand
BM	Bermuda			MT	Malta	TJ	Tajikistan
BN	Brunei Darussalam	GT	Guatemala	MU	Mauritius	TK	Tokelau
BO	Bolivia	GU	Guam	MV	Maldives	TM	Turkmenistan
BR	Brazil	GW	Guinea-Bissau	MW	Malawi	TN	Tunisia
BS	Bahamas	GY	Guyana	MX	Mexico	TO	Tonga
BT	Bhutan	HK	Hong Kong	MY	Malaysia	TP	East Timor
BV	Bouvet Island	HM	Heard Island and McDonald Islands	MZ	Mozambique	TR	Turkey
BW	Botswana			NA	Namibia	TT	Trinidad and Tobago
BY	Belarus	HN	Honduras	NC	New Caledonia	TV	Tuvalu
BZ	Belize	HR	Croatia	NE	Niger	TW	Taiwan
CA	Canada	HT	Haiti	NF	Norfolk Island	TZ	Tanzania, United Republic of
CC	Cocos (Keeling) Islands	HU	Hungary	NG	Nigeria		
CF	Central African Republic	ID	Indonesia	NI	Nicaragua	UA	Ukraine
CG	Congo	IE	Ireland	NL	Netherlands	UG	Uganda
CH	Switzerland	IL	Israel	NO	Norway	UM	United States Minor Outlying Islands
CI	Côte d'Ivoire	IN	India	NP	Nepal		
CK	Cook Islands	IO	British Indian Ocean Territory	NR	Nauru	US	United States
CL	Chile			NU	Niue	UY	Uruguay
CM	Cameroon	IQ	Iraq	NZ	New Zealand	UZ	Uzbekistan
CN	China	IR	Iran (Islamic Republic of)	OM	Oman	VA	Vatican City State (Holy See)
CO	Colombia	IS	Iceland	PA	Panama		
CR	Costa Rica	IT	Italy	PE	Peru	VC	Saint Vincent and the Grenadines
CU	Cuba	JM	Jamaica	PF	French Polynesia		
CV	Cape Verde	JO	Jordan	PG	Papua New Guinea	VE	Venezuela
CX	Christmas Island	JP	Japan	PH	Philippines	VG	Virgin Islands (British)
CY	Cyprus	KE	Kenya	PK	Pakistan	VI	Virgin Islands (U.S.)
CZ	Czech Republic	KG	Kyrgyzstan	PL	Poland	VN	Vietnam
DE	Germany	KH	Cambodia	PM	Saint Pierre and Miquelon	VU	Vanuatu
DJ	Djibouti	KI	Kiribati	PN	Pitcairn	WF	Wallis and Futuna Islands
DK	Denmark	KM	Comoros	PR	Puerto Rico	WS	Samoa
DM	Dominica	KN	Saint Kitts and Nevis	PT	Portugal	YE	Yemen
DO	Dominican Republic	KP	Korea, Democratic	PW	Palau	YT	Mayotte
DZ	Algeria		People's Republic of	PY	Paraguay	YU	Yugoslavia
EC	Ecuador	KR	Korea, Republic of	QA	Qatar	ZA	South Africa
EE	Estonia	KW	Kuwait	RE	Réunion	ZM	Zambia
EG	Egypt	KY	Cayman Islands	RO	Romania	ZR	Zaire
EH	Western Sahara	KZ	Kazakhstan	RU	Russian Federation	ZW	Zimbabwe

Operating Other Manufacturers' TV

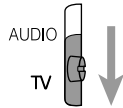
Changing the Preset Signal Codes

To operate JVC or other manufacturers' TV using this remote control:

- Aim the remote control directly at the remote sensor on each equipment.
- Refer also to the manuals supplied with your equipment.

To change the transmittable signals for operating other manufacturers' TV

1 Set the AUDIO-TV switch to "TV."



2 Press and hold TV $\phi/1$.

- You need to keep pressing until finishing step 5.

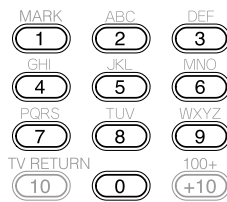


3 Press ENTER.



4 Enter the manufacturer's code using the number buttons (0 - 9).

See the table on the right to find the code.



5 Release TV $\phi/1$.



6 Press TV $\phi/1$ to operate your TV.

If your TV turns on or off, you have entered the correct code.

You can always perform the following operations with buttons listed below:

TV $\phi/1$	Turns on or off the TV.
TV VOL +/-	Adjusts the TV volume.
TV CHANNEL +/-	Changes the TV channels.
TV/VIDEO	Sets the input mode (either TV or VIDEO).

After setting the AUDIO-TV switch to "TV," you can perform the following operations on a TV with buttons below:

1 - 9, 0, 100+	<p>Selects the TV channels.</p> <p>For channel number 5, press 5.</p> <p>For channel number 10, press 1, then 0.</p> <p>For channel number 23, press 2, then 3.</p> <p>For channel number 135, press 100+, 3, then 5.</p> <ul style="list-style-type: none"> • TV RETURN will function as the ENTER button if your equipment requires pressing ENTER after selecting a channel number.
-----------------------	--

- Refer also to the manual supplied for your TV.
- Not all of the functions listed on the left may be assigned to specific buttons for some TVs.
- If you cannot change the channels of some TVs by pressing the number buttons, press CHANNEL + or - for changing the channels.



If there is more than one code listed for your brand of TV

Try each one of the manufacturer's code until the correct one is entered.

Manufacturer's code

Manufacturer	Codes
JVC	01*
Hitachi	10
Magnavox	02
Mitsubishi	03
Panasonic	04, 11
RCA	05
Samsung	12
Sanyo	13
Sharp	06
Sony	07
Toshiba	08
Zenith	09

* "01" is the initial code.

- Manufacturers' codes are subject to change without notice. If they are changed, this remote control cannot operate the equipment.

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 to a TV that has AV COMPU LINK II, AV COMPU LINK III or AV COMPU LINK EX terminals.

AV COMPU LINK connection

Connect a TV by using a video cord (see page 8) then also connect it by using a cord with monaural mini-plugs (not supplied).

- You need to set "AV COMPU LINK MODE" correctly to use AV COMPU LINK control system. (See page 79.)

Set the "AV COMPU LINK MODE" to

- "**DVD1**" when you connect this unit to the COMPONENT VIDEO (or VIDEO-3) terminals on a TV using a component video cord (not supplied).
- "**DVD2**" when you connect this unit to the VIDEO-1 terminals on a TV using an S-video cord (not supplied).
- "**DVD3**" when you connect this unit to the VIDEO-2 terminals on a TV using a composite video cord (supplied).

Available operations

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

One-touch DVD play

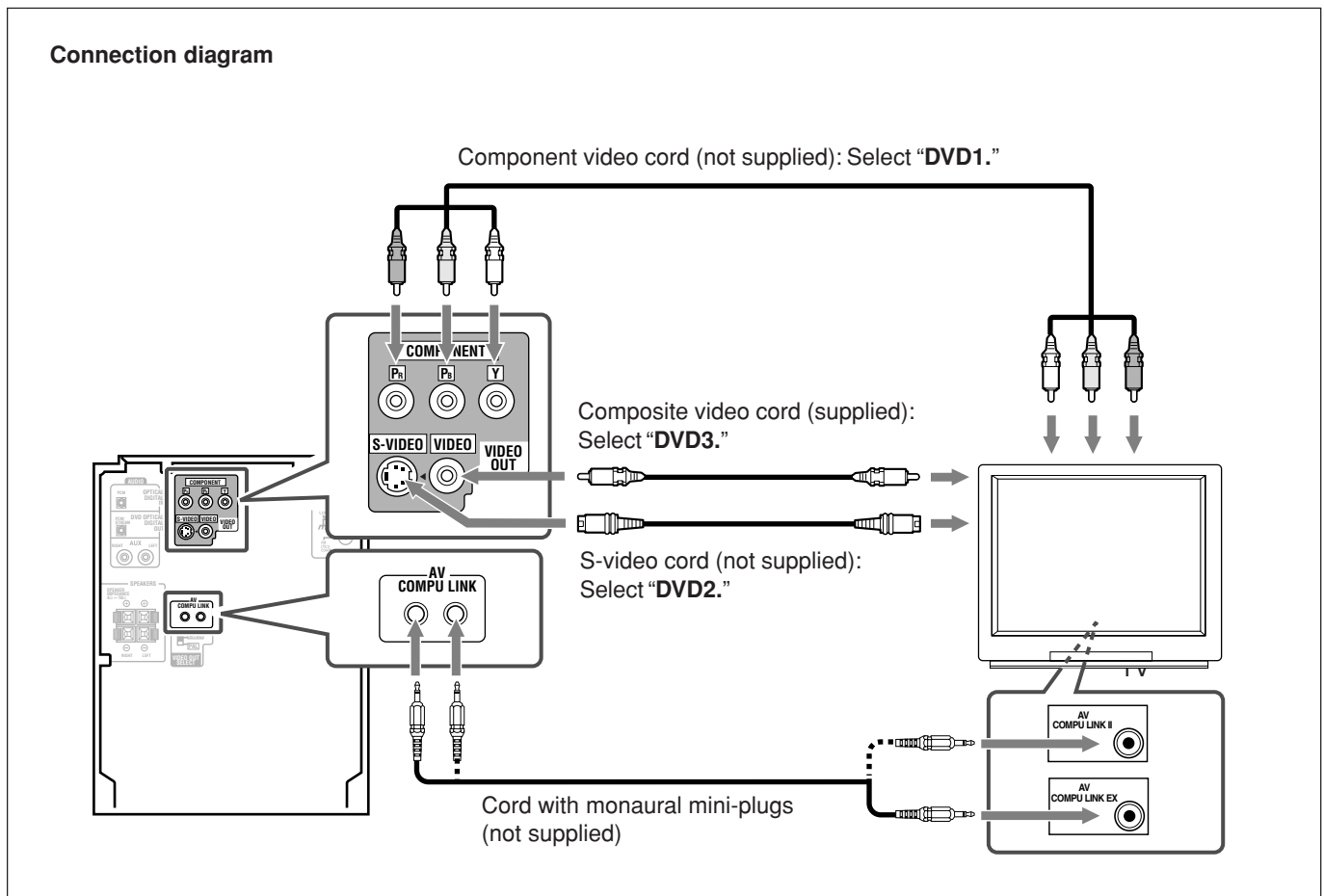
Simply start playing back the unit, the TV automatically turns on and changes the input mode to the appropriate position so that you can view the playback picture.

- The TV does not turn off automatically even if you turn off the unit.



When the main power of the TV is turned off or the power cord of the TV is unplugged

You cannot use the one-touch play.



Glossary

Aspect ratio

The ratio of horizontal and vertical sizes of a displayed image. The horizontal vs. vertical ratio of conventional TVs is 4:3 and that of wide-screen TVs is 16:9.

Component video signal

A video signal system where elements necessary for reproducing image signal comprised of the three primary colors of light are transmitted via separate signal lines. Types of signal, such as R/G/B, Y/P_B/P_R, etc., are available.

Composite video signal

A video signal comprised of three kinds of signals combined: an image signal made up of luminance and chrominance signals using the frequency multiplication technique, burst signal providing the basis for color reproduction, and synchronization signal.

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.

Dolby Pro Logic

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

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.

Interlaced scanning

In the conventional video system, a picture is shown on the display monitor in two halves. The Interlaced scanning system places lines of the second half of the picture in-between lines of the first half of the picture.

JPEG

A still-picture data compression system proposed by the Joint Photographic Expert Group, which features little distortion in image quality in spite of its high compression ratio.

Letter box

A method of displaying wide images like movies in on a 4:3 TV screen with no part of the image deleted by placing black bands on the top and bottom of the screen. This name has derived from the screen form looking literally like a letter box.

MP3

A file format with a sound data compression system. "MP3" is the abbreviation of Motion Picture Experts Group 1 (or MPEG-1) Audio Layer 3. By using MP3 format, one CD-R or CD-RW can contain about 10 times as much data volume as a regular CD can.

Multi-angle

By recording multiple scenes progressing at the same time in a single title, the user can select view angles. This feature is called the multi-angle function.

Multi-channel

DVD VIDEO has been designed to have each soundtrack constitute one sound field. Multi-channel refers to a structure of sound tracks having three or more channels.

Multi-language

When a title is created to cope with multiple languages, it is generally called a multilanguage title.

Playback control (PBC)

Refers to the signal recorded on SVCD/VCD for controlling reproduction. By using menu screens recorded on SVCD/VCD that supports PBC, you can enjoy interactive-type software as well as software having a search function.

Progressive scanning

By progressive scanning, all the horizontal lines of a picture are displayed at one time as a single frame on a TV compatible with NTSC color system. This system can convert the interlaced video from DVD VIDEO into progressive format for a progressive TV. It dramatically increases the vertical resolution.

Region code

A system for allowing discs to be played only in the regions designated beforehand. All the countries in the world are divided into six regions and each region is identified by a specified region code (or region number). If the region code of a disc matches to that of a player, the player can play back the disc.

Sampling frequency

Frequency of sampling data when analog data is converted to digital data. Sampling frequency numerically represents how many times the original analog signal is sampled per second.

Transfer rate

The rate of transferring digital data. Usually the measure is in bit per second (bps). The DVD system applies a variable transfer rate system for high efficiency.

Maintenance

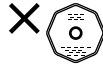
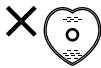
To get the best performance of the unit, keep your discs, tapes and mechanism clean.

General Notes

In general, you will have the best performance by keeping your discs, tapes and the mechanism clean.

- Store discs and tapes in their cases, and keep them in cabinets or on shelves.
- Keep the unit's disc trays closed when not in use.

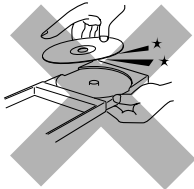
Continued use of irregular shape discs (heart-shape, octagonal, etc.) can damage the unit.



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.



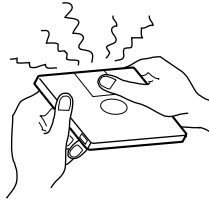
To clean the disc

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

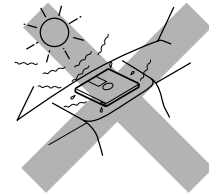


DO NOT use any solvent—such as conventional record cleaner, spray, thinner, or benzine—to clean the disc.

Handling MDs



- Do not open the shutter.
 - The shutter is locked so that it will not open. Trying to force it open will break the MD. If the shutter opens accidentally, close it again quickly without touching the MD inside.

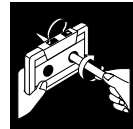


- Do not place MDs in the following places:
 - High temperature areas such as in direct sunlight or inside a car.
 - High humidity areas, e.g. in a bathroom.
 - On a beach or sandy area.

- Clean MDs regularly.

- If dust or dirt gets on cartridge, wipe it off with a soft dry cloth.

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 storing tapes in any of the following places:
 - In dusty places
 - In direct sunlight or heat
 - In moist areas
 - On a TV or speaker
 - 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 have its paint peel off, be careful about the following:**
 - DO NOT wipe it with a rough cloth.
 - DO NOT wipe it too vigorously.
 - DO NOT wipe it with thinner or benzine.
 - DO NOT apply any volatile substance such as an insecticide to it.
 - DO NOT allow any rubber or plastic to remain in contact with it for a long time.

Additional Information

MD Disc Types

There are two types of MDs: Premastered (prerecorded) and Recordable (blank).

Premastered MDs

Premastered MDs, which have been recorded at music studio, can be played back like regular CDs. On an MD of this type, data is recorded as the presence or absence of tiny pits. A laser beam focuses on the pits on the surface of the MD and reflects the detection back to the lens in the MD recorder. The MD recorder then decodes the signals and plays them back as music. This type of MD is called an "optical disc."

Recordable MDs

Recordable MDs, which use magneto-optical technology, can be recorded and played back repeatedly. The laser inside the MD recorder applies heat to the MD, demagnetizing the magnetic layer of the MD for recording and playback. This type of MD is called a "magneto-optical disc."

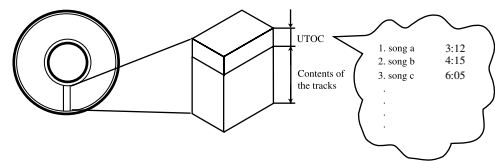
ATRAC (Adaptive Transform Acoustic Coding)/ATRAC3 (MDLP)

The MD provides 80 minute recording and playback time, much more than an audio CD, but in a diameter of only 64 mm. This ability to store such a large amount of data is the result of ATRAC, an audio compression technique developed for MD. This technology cuts out faint sounds that would not be heard by the human beings. This technology, based on human sensitivity to sounds, reduces recorded data volume up to about one-fifth of the original data volume.

Furthermore, this unit takes advantage of the latest ATRAC3 techniques, which can reduce the amount of data to record to one-10th or one-20th of the original data volume. This allows for 2 times or 4 times long-hour stereo recording on this unit.

UTOC (User Table Of Contents)

Found only on recordable MDs, this area contains sub-data (track number, recording data, etc.) which can be rewritten by the user. UTOC enables us to search for tracks quickly and edit tracks on the MD.

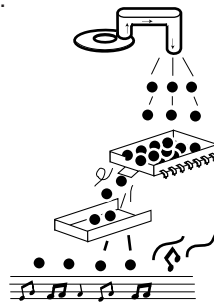


Sound Skip Guard Memory

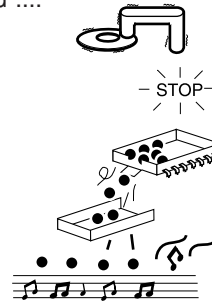
The biggest weakness of discs is their susceptibility to vibration. The "Sound Skip Guard Memory" has been developed to cope with this weakness.

With this function, a few seconds of signals read by the optical read head from the MD are first stored in memory before being reproduced as audio signals. Thus, even when vibration or shock interrupts signals being read, these stored signals can continue to reproduce sounds for that few seconds. Thus, the user will enjoy uninterrupted music.

Normally....

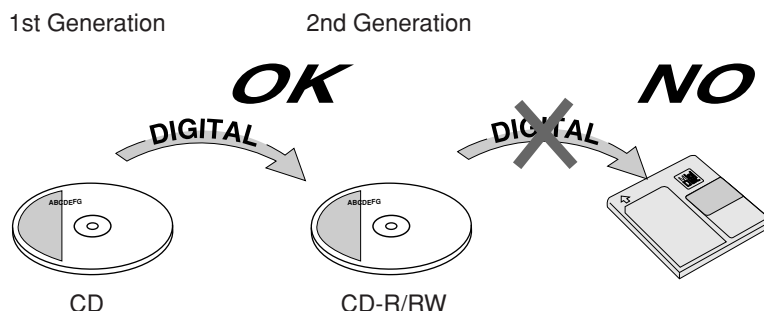


When "vibrated"....



SCMS (Serial Copy Management System)

The MD recorder integrated to this unit uses the Serial Copy Management System which allows only first-generation digital copies to be made of premastered software (like CDs or prerecorded MDs).



MD limitations

The MD records data in an original format that differs from that of conventional cassette tapes or DATs. Since there are some limitations with this recording format, the following types of symptoms may occur. These symptoms are not malfunctions.

Symptoms	Cause
“DISC FULL” appears, even though there is still enough remaining time on an MD.	There is a maximum number of tracks which can be recorded, regardless of recording time. More than 254 tracks cannot be recorded on an MD.
“DISC FULL” appears, even though the number of tracks and recording time do not reach the limit.	Repeating erasure and recording on the same MD creates many blank portions sparsely on the MD. When recording on such an MD, a track is recorded on these blank portions sparsely. If a track is divided and recorded into so many portions, “DISC FULL” appears.
<ul style="list-style-type: none"> The JOIN function sometimes does not work. The remaining time on the MD does not increase even when tracks are erased. 	If a divided portion of less than 8 seconds is made while a track is recorded on the MD, that track cannot be joined to another track using the JOIN function. Furthermore, if that track is erased, the remaining time of the MD may not increase exactly by the erased amount.
The sound drops out during fast forward or fast reverse.	If a track has been divided into many portions while being recorded on the MD, sounds will drop out while fast forwarding or reversing such an MD.
The amount of recorded time on the MD added to the amount of remaining time is shorter than the MD's total possible recording time.	You cannot record on a blank portion of less than 12 seconds (SP mode) on the MD. For this reason, the actual recording time of discs may become shorter.

Language Code List

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

Additional Information (Continued)

Output Signals through the DVD OPTICAL DIGITAL OUT Terminal

Output signals differ according to the “DIGITAL AUDIO OUTPUT” setting. (See page 79.)

DIGITAL AUDIO OUTPUT Playback disc	Output Signals		
	STREAM/PCM	DOLBY DIGITAL/PCM	PCM ONLY
DVD VIDEO			
with 48 kHz, 16/20/24 bit Linear PCM	48 kHz, 16 bit Linear PCM*		
with 96 kHz, Linear PCM	48 kHz, 16 bit Linear PCM		
with Dolby Digital	Dolby Digital bitstream		48 kHz, 16 bit Linear PCM
with DTS Digital Surround	DTS bitstream	48 kHz, 16 bit Linear PCM	
DVD AUDIO			
with 48/96/192 kHz, 16/20/24 bit Linear PCM	48 kHz, 16 bit Linear PCM*		
with 44.1/88.2/176.4 kHz, 16/20/24 bit Linear PCM	44.1 kHz, 16 bit Linear PCM*		
with Dolby Digital	Dolby Digital bitstream		48 kHz, 16 bit Linear PCM
with DTS Digital Surround	DTS bitstream	48 kHz, 16 bit Linear PCM	
SVCD, VCD, CD	44.1 kHz, 16 bit Linear PCM*/48 kHz, 16 bit Linear PCM*		
CD with DTS Digital Surround	DTS bitstream	48 kHz, 16 bit Linear PCM	
MP3 disc			

* While playing some DVDs, digital signals may be emitted at 20 bits or 24 bits (at their original bit rate) through the DVD OPTICAL DIGITAL OUT terminal if the discs are not copy-protected.

- No signal is emitted through the DVD OPTICAL DIGITAL OUT terminal while playing an MP3 disc.

Disc/MD Messages

For Disc:

Message	Signification	Solution
CANNOT PLAY	You are trying to play back an unplayable disc or a disc with scratches, etc.	Change the disc.
NO AUDIO	You cannot hear any sound. (The disc you are trying to play back could be an illegal copy.)	Consult with the dealer you purchased the disc from.
LR ONLY	You are trying to play back a disc contains multi-channel sound which down-mixing is prohibited on the disc, only signals of the front left and right channel are output.	This is not a malfunction.

For MD:

Message	Signification	Solution
BLANK DISC	The disc is blank.	Change the MD if you want to enjoy playback.
CANNOT ENTRY!	The track has already been in the selected group.	This is not a malfunction. (See “Adding a Track to a Group—ENTRY GR” on page 57.)
CANNOT FORM!	You are trying to form a new group including other groups.	This is not a malfunction. (See “Forming a Group—FORM GR” on page 56.)
CANNOT GROUP!	There is no more space for storing information concerning MD group.	You cannot form a group any more on the MD.
CANNOT JOIN	You are trying to join tracks (shorter than 8 seconds) or groups which cannot be joined.	This is not a malfunction. (See pages 59 and 65.)
CANNOT LISTEN	You are trying to listen to the sound during high-speed recording.	This is not a malfunction. You cannot listen to the sound during high-speed recording.
CANNOT REC PBC PLAY	You are trying to record a single track on a VCD or an SVCD with the PBC function turned on.	Cancel the PBC function (see page 16) and start playing back to record a single track. (See page 20.)
CANNOT REC x1 ONLY	You are trying to record a disc in Program Play or Random Play using x5 speed recording.	This is not a malfunction. Select other recording speeds. (See page 47.)
CANNOT TITLE	You are trying to enter the title on the MD which already has over 1792 characters in total.	This is not a malfunction. (See “Assigning Titles to an MD” on page 68.)
DISC FULL	There is no more space on the MD or there are over 254 tracks.	Use another recordable MD or erase some tracks.
DISC PROTECTED	MD is write-protected.	Unprotect the MD or use another. (See page 45.)
EMERGENCY STOP	A malfunction has occurred during recording.	Stop playback, and eject the MD and re-insert it.
GROUP FULL	You are trying to form over 99 groups.	This is not a malfunction. There can be up to 99 groups on an MD.
GROUP TRACK	You are trying to make a group by including a track which belongs to another group.	This is not a malfunction. (See “Forming a Group—FORM GR” on page 56.)
LOAD ERROR	MD is not loaded correctly.	Eject the MD and re-insert it.
MD NO DISC	There is no MD.	Put an MD.
NON AUDIO CAN NOT COPY	You are trying to copy a non-audio disc like a CD-ROM or MP3.	Stop recording.
PLAY BACK DISC	You are trying to edit or record on a playback-only MD.	Use a recordable MD.
READ ERROR	The UTOC fails to be read.	Turn off the unit, then turn on it again.
SCMS CANNOT COPY	Digital copy of the 2nd generation is prohibited.	You cannot make a digital recording from a duplicated CD-R/RW onto an MD. (See page 47 for details.)

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	Possible Cause	Action
Power does not come on.	The power cord is not connected to an AC outlet.	Insert the plug into the socket.
Operations are disabled.	The built-in microprocessor has malfunctioned due to external electrical interference.	Unplug the AC power cord then plug it back in.
No sound is heard.	<ul style="list-style-type: none"> • Connections are incorrect or loose. • A pair of headphones is connected. 	<ul style="list-style-type: none"> • Check all connections and make corrections. (See pages 6 to 9.) • Unplug the headphones from the PHONES jack.
Unable to operate the unit by the remote control.	<ul style="list-style-type: none"> • The path between the remote control and the remote sensor on the unit is blocked. • The batteries are exhausted. • You are using the remote control too far from the unit. 	<ul style="list-style-type: none"> • Remove the obstruction. • Replace the batteries. (See page 6.) • Signals cannot reach the remote sensor. Move closer to the unit.
Hard to listen to broadcasts because of noise.	<ul style="list-style-type: none"> • Antennas are disconnected. • The AM loop antenna is too close to the unit. • The FM antenna is not properly extended and positioned. 	<ul style="list-style-type: none"> • Reconnect the antenna correctly and securely. • Change the position and direction of the AM loop antenna. • Extend FM antenna and orient to the best reception position.
Loaded discs, MD, and cassette cannot be ejected.	<ul style="list-style-type: none"> • The AC power cord is not plugged in. • The Disc Lock function is in use. 	<ul style="list-style-type: none"> • Plug in the AC power cord. • Cancel the Disc Lock function. (See page 23.)
The disc does not play.	The disc is upside down.	Put the disc in with the label side up.
The disc sound is discontinuous.	The disc is scratched or dirty.	Clean or replace the disc. (See page 86.)
No picture appears on the screen.	<ul style="list-style-type: none"> • The video cord is not connected correctly. • Incorrect color system is selected. • An incorrect input has been selected on the TV or monitor. 	<ul style="list-style-type: none"> • Connect the video cord correctly. • Select correct color system (See page 9.) • Select the correct input on the TV or monitor.
No picture is displayed on the TV screen, the picture is blurred, or the picture is divided into two parts.	<ul style="list-style-type: none"> • The PROGRESSIVE indicator are flashing though the unit is connected to a TV which does not support progressive video input, such as a conventional TV. • The color system is not set correctly. 	<ul style="list-style-type: none"> • Press PROGRESSIVE until the PROGRESSIVE indicator turns off on the display. (See page 12.) • Change the color system. (See page 9.)
DVD does not play back.	Parental lock is in use.	Unlock the parental lock. (See page 81.)
The left and right edges of the picture are missing on the screen.	"4:3 PS" is selected when viewing on a conventional TV (aspect ratio 4:3).	Select "4:3 LB." (See pages 78.)
No subtitle appears on the display though you have selected the initial subtitle language.		Some DVDs are programmed to always display no subtitle initially. If this happens, press SUB TITLE after starting play. (See pages 29 and 78.)
Audio language is different from the one you have selected as the initial audio language.		Some DVDs are programmed to always use the original language initially. If this happens, press AUDIO after starting play. (See page 29.)
Unable to record on an MD.	<ul style="list-style-type: none"> • You are using a playback MD. • The MD is write-protected. 	<ul style="list-style-type: none"> • Change it with a recordable MD. • Unprotect the MD. (See page 45.)
Impossible to record on a tape.	Small tabs on the back 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.

Specifications

Design and specifications are subject to change without notice.

Amplifier Section—CA-UXJ99DVD

Output Power (IEC 268-3): 30 W (15 W + 15 W) at 4 Ω (10% THD)
40 W (20 W + 20 W) at 4 Ω (MAX)

Analog input:

AUX: Sensitivity/Impedance (at 1 kHz)
400 mV/47 k Ω (at "Input LEVEL 1")
200 mV/47 k Ω (at "Input LEVEL 2")

Digital input:*

OPTICAL DIGITAL IN:
-24 dBm to -15 dBm (660 nm \pm 30 nm)

* Corresponding to Linear PCM (with 32 kHz/44.1 kHz/48 kHz sampling frequency)

Digital output:

DVD OPTICAL DIGITAL OUT:
-21 dBm to -15 dBm (660 nm \pm 30 nm)

Others:

AV COMPU LINK x2 (ϕ 3.5)

VIDEO OUT:

Color system: NTSC/PAL selectable**

** NTSC can selectable interlace/progressive

Composite: 1 V(p-p)/75 Ω

S-VIDEO: Y (luminance) 1 V(p-p)/75 Ω
C (chrominance, burst)

0.286 V(p-p)/75 Ω

COMPONENT: (Y) 1 V(p-p)/75 Ω

(P_B/P_R) 0.7 V(p-p)/75 Ω

Speaker Terminals: 4 Ω - 16 Ω

Tuner Section

FM tuning range: 87.50 MHz—108.00 MHz

AM tuning range: 531 kHz—1 710 kHz
(at 9 kHz channel spacing)
530 kHz—1 710 kHz
(at 10 kHz channel spacing)

DVD player Section

DVD capacity: 5 DVDs

Readable disc: DVD VIDEO, DVD AUDIO, CD-R/CD-RW (Audio CD, Video CD, Super Video CD, MP3 format, JPEG format), DVD-R/DVD-RW (video format)

Dynamic range: 90 dB

Horizontal resolution: 500 lines

Wow and flutter: Immeasurable

MD recorder Section

Audio playing system: MiniDisc digital audio system

Recording system: Magneto-optical overwrite system

Reading system: Non-contact, semiconductor laser pickup (λ =780 nm)

Error correction system: CIRC (Cross Interleave Reed-Solomon Code)

Recording/Playback time (when using a 80-minute MD)

SP: 80 minutes

LP2: 160 minutes

LP4: 320 minutes

Sampling frequency: 44.1 kHz

Audio compression system:

ATRAC (Adaptive TRansform Acoustic Coding)/ATRAC3 (MDLP)

Cassette deck Section

Frequency response:

Normal (type I): 60 Hz—14 000 Hz

Wow and flutter: 0.15 % (WRMS)

General

Power requirement: AC 220 V \sim , 50 Hz

Power consumption: At operation: 70 W

On standby: 15 W

1.7 W (with deactivating the clock indication)

Dimensions (approx.): 175 mm x 239.5 mm x 378 mm (W/H/D)

Mass (approx.): 7.8 kg

Supplied accessories

See "Unpacking" on page 6.

Speaker Section—SP-UXJ99DVD

Type: 2-way bass-reflex magnetically shielded type

Speakers: Woofer 12 cm cone x1

Tweeter 2 cm dome x1

Impedance: 4 Ω

Frequency range: 55 Hz to 35 kHz

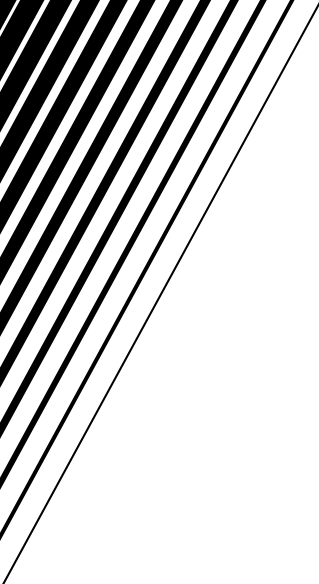
Sound pressure level: 84 dB/W•m

Dimensions (W/H/D) (approx.):

145 mm x 239.5 mm x 204 mm

Mass (approx.): 2.5 kg each

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