

# KENWOOD

MICRO HI-FI COMPONENT SYSTEM

## HM-DV6MD

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### INSTRUCTION MANUAL

KENWOOD CORPORATION



MDLP



B60-5060-00 00 © (M) AP 0105

## 2 Before applying power






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

Units are designed for operation as follows.

..... AC 110 – 240 V

### Safety precautions

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

  	CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
	THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.
	THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

### The marking of products using lasers (For countries other than U.S.A., U.S.-Military and Canada)

**CLASS 1  
LASER PRODUCT**

The marking this product has been classified as Class 1. It means that there is no danger of hazardous radiation outside the product.  
Location: Back panel

**CAUTION  
VISIBLE LASER RADIATION  
WHEN OPEN. DO NOT  
STARE INTO BEAM.**

Inside this laser product, a laser diode classified as Class 2 laser radiation is contained as alerted by the internal caution label shown above. Do not stare into beam.  
Location: DVD laser pick-up unit cover inside this product

**CAUTION  
VISIBLE LASER  
RADIATION WHEN OPEN.  
AVOID EXPOSURE TO BEAM.**

Inside this laser product, a laser diode classified as Class 3B laser radiation is contained as alerted by the internal caution label shown above. Avoid exposure to laser beams.  
Location: MD laser pick-up unit cover inside this product

## Special features

### Micro-component system featuring DVD VIDEO and MD

A DVD VIDEO player and MD recorder are provided as standard. This combination can be used for example for playing DVD music software and record its audio output on an MD. (Note that it is only the analog audio that can be recorded when recording DVD Video, VCD or MP3 file playback on MD.)

### MP3 playback

Music files recorded in the MP3 audio compression format can be played back.

### MD Long Play modes

With the long-hour recording/playback modes (LP2, LP4) based on ATRAC3 (MDLP), digital long-hour recording/playback for twice (about 160 minutes\*) or 4 times (about 320 minutes\*) the normal recording/playback time is now available. (\* Data using a 80-minute disc.)

### CD → MD high-speed dubbing

This convenient feature enables simple, quick dubbing from a CD to an MD. (Note that recording of discs other than CD on MD is possible only in the normal speed because it is only their analog audio output that can be recorded on MD.)

### Convenient recording features

Versatile recording features are provided, allowing the user to select desired one for each purpose.

- **One-touch recording :**

Pressing a single key starts recording of all tracks or a single track in a disc.

- **Program recording :**

Your favorite tracks can be recorded in any desired order. (Program recording is not available with DVD-VIDEO and MP3 files.)

### Versatile timer features

- **Sleep timer :**

The unit is turned OFF automatically after the specified period has elapsed. It is convenient for example for falling asleep while listening to music in the night time, etc.

- **O.T.T. :**

This timer setting is executed only for an hour (and for once) when the set start time comes.

- **Timer playback, timer recording :**

Two timer programs (PROG.1, PROG.2) are available for timer playback (AI timer playback) or timer recording. (With the AI timer playback, the playback volume increases gradually after the start of timer playback.)

This document classifies the applications of each feature using the following icons.

**DVD** : Description of a feature that can be used with DVD VIDEO.

**VCD** : Description of a feature that can be used with VIDEO CD.

**CD** : Description of a feature that can be used with CD (CD-R/RW).

**MP3** : Description of a feature that can be used with MP3.

## Unpacking

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

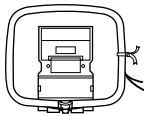
If any accessories are missing, or if the unit is damaged or fails to operate, notify your dealer immediately. If the unit was shipped to you directly, notify your shipper immediately. Kenwood recommends that you retain the original carton and packing materials in case you need to move or ship the unit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

Keep this manual handy for future reference.

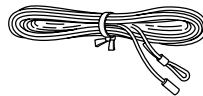
### Accessories

Please confirm that the following accessories are present.

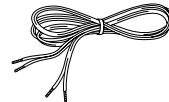
AM loop antenna (1)



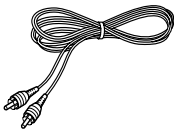
FM indoor antenna (1)



Speaker cord (2)



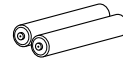
Video cord (1)



Remote control unit (1)

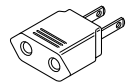


Batteries (R6/AA) (2)



AC plug adaptor (1)

Use to adapt the plug on the power cord to the shape of the wall outlet.  
(Accessory only for regions where use is necessary.)



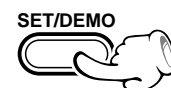
### In regard to demonstration

This unit is equipped with a demonstration function (only display). The demonstration consists of sequential change of display and indicators showing the operations, but the audio itself does not change. The demonstration function can be cancelled as follows.

- This operates automatically when a power failure has occurred or the plug of the power cable has been pulled while the power was ON.

#### "DEMO OFF" (To cancel demonstration):

Press the **SET/DEMO** key during demonstration.





#### "DEMO ON" (To execute demonstration):

After turning power ON, press and hold the **SET/DEMO** key (for more than 2 seconds).

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## Malfunction of microcomputer

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

## Connection of the System Accessories

Connect the antenna as shown in the figure.

Do not plug the power cord into a wall AC outlet until the connection has been completed.

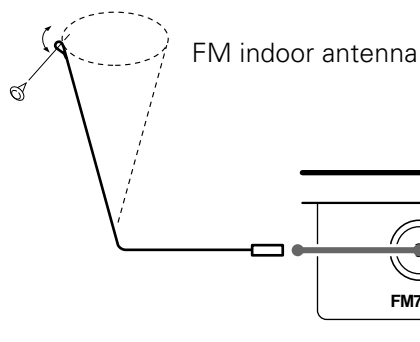
### Connection of the Accessory Antenna

#### FM indoor antenna

The accessory antenna is for temporary indoor use only. For stable signal reception we recommend using an outdoor antenna.

Remove the indoor antenna if you connect one outdoors.

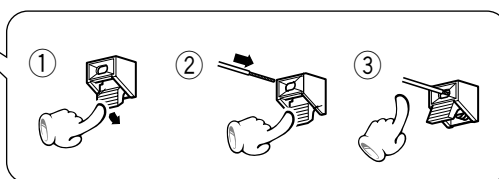
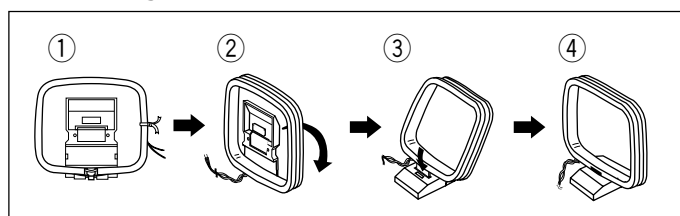
- ① Connect the antenna to the antenna terminal.
- ② Locate the position providing good reception condition.
- ③ Fix the antenna.



#### AM loop antenna

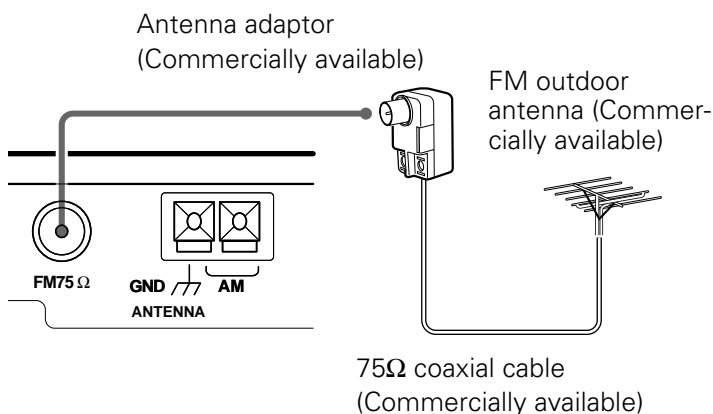
The supplied antenna is for indoor use. Place it as far as possible from the main system, TV set, speaker cords and power cord, and set it to a direction which provides the best reception.

#### Assembling the antenna



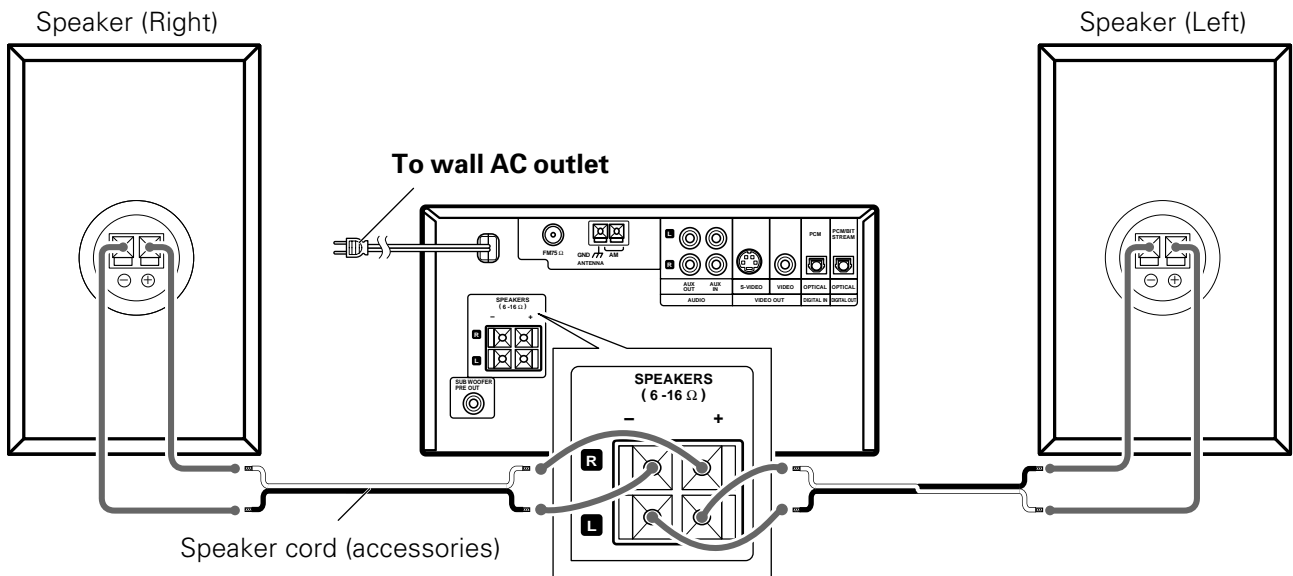
#### FM outdoor antenna (Commercially available)

Lead the 75Ω coaxial cable connected to the FM outdoor antenna into the room and connect it to the **FM 75Ω** terminal. Please remove the indoor antenna after an outdoor antenna has been installed.

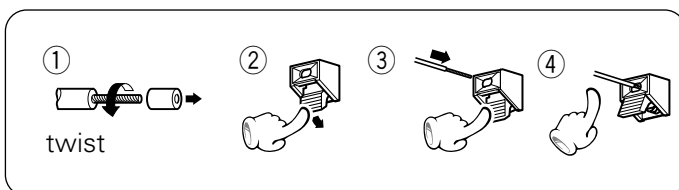


## Connection of speakers

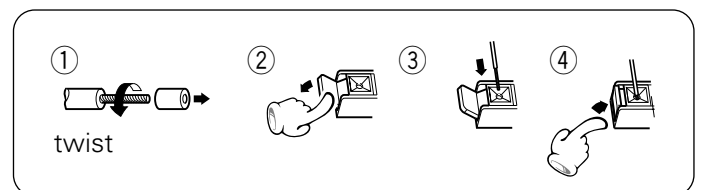
- Never short-circuit the "+" and "-" speaker cords. The protection circuit will operate and no sound will be put out.
- The "+" and "-" polarity are inverted, the sound will be unnatural with unclear localization of musical instruments.



### Speaker rear panel



### Main unit



## Installation of speakers and positioning of TV

1. Color irregularities on the TV screen may also be produced depending on the method how the speakers are installed. When color irregularities are observed after the speaker installation, first turn the TV off, wait for 15 to 30 minutes and turn it on again: The interference may be improved by the self-demagnetizing function of the TV. If the color irregularities still remain, install the speakers more apart from the TV.
2. If a source of magnetism such as a magnet is located near the speakers, its interaction with the speakers may cause color irregularities on the TV screen. Also take care of this point when installing the speakers.
3. Due to induction by the electromagnetic waves produced by a TV, the speakers may produce sound even when the stereo unit is turned off. In this case also, install the speakers more apart from the TV.

## CAUTION

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

- Leave some space around the unit (from the largest outside dimension including projection) equal to or greater than, shown below.

**Back panel : 10 cm**



1. Be sure to insert all connection cords securely. If their connections are imperfect, the sound may not be produced or noise may interfere.
2. Before plugging or unplugging a connection cord, be sure to unplug the power cord from the wall AC outlet. If connection cords are plugged or unplugged with the power cord left plugged in, malfunction or damage may result.

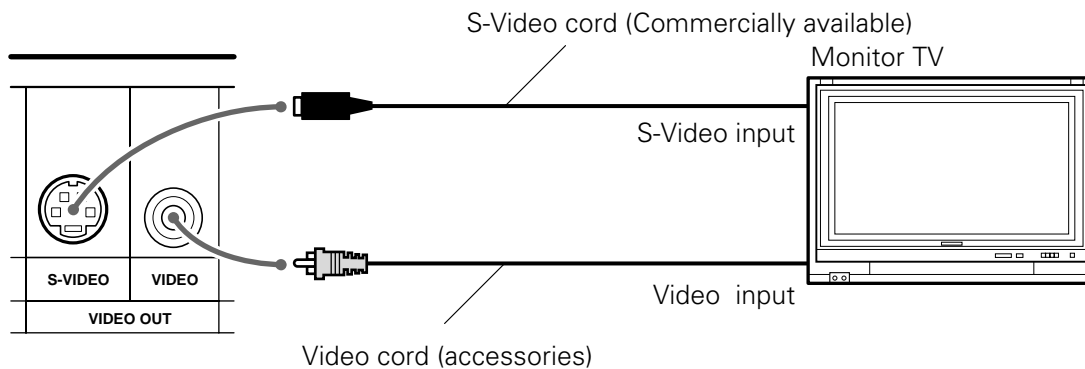
## Connection of Other Accessories (Commercially Available Parts)

When connections are to be made, make sure that the power plug is not plugged into a wall AC outlet. Connect the equipment as shown in the figures.

### To Connect a TV

Set initial setup **"TV Aspect"** according to the aspect ratio (4:3 or 16:9) of your TV. → 48

If the TV has an S Video input connector, connect the **VIDEO OUT S-VIDEO** connector of the player to it using the provided S Video cord.

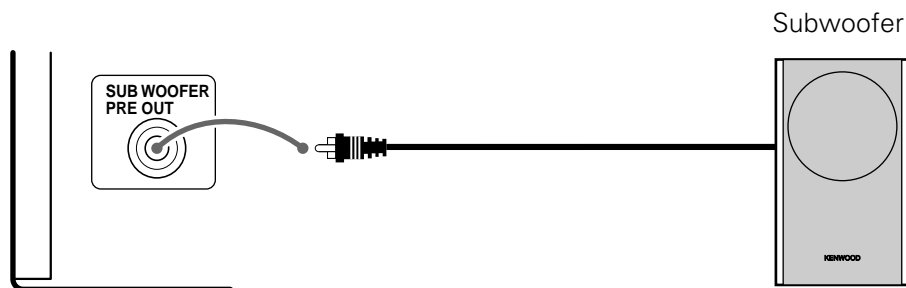


Select the video connection method according to the TV in use. (When S-Video cable is connected, the ordinary video connection is not necessary.)

 **The video output from the player should be connected directly to the TV. If the video output is connected through a VCR, the picture displayed on the TV may be disturbed due to the copy protect function.**

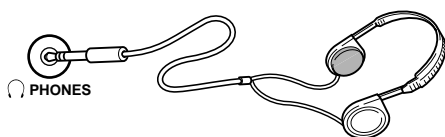
### Connection of Subwoofer (optional)

Extremely low frequency sound is played back powerfully.




### Using Headphones

**1** Insert the headphone plug into the PHONES jack.



- Headphones with a stereo mini plug can be connected.
- The sounds from all speakers are cut off.

**2** Adjust the volume with the **VOLUME/MULTI CONTROL** knob.

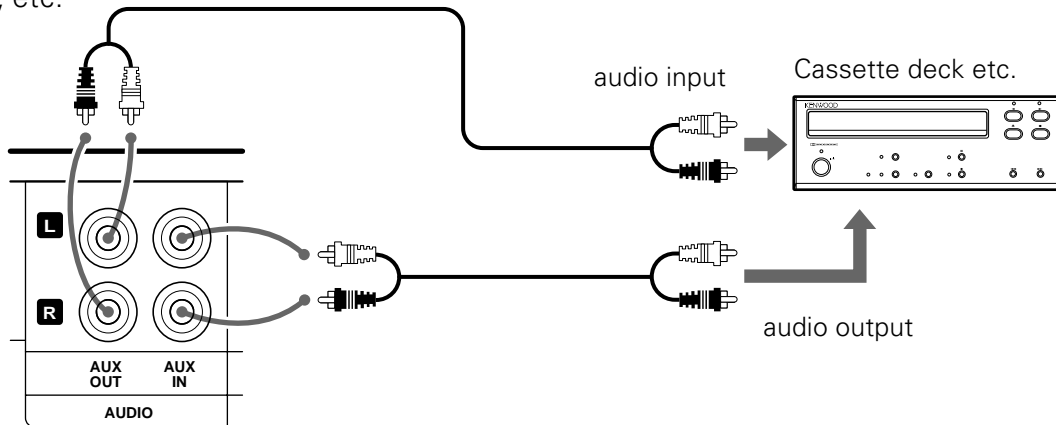
 **When a DTS-encoded disc (CDs, LDs, DVDs) is played, noise may interfere with the headphone output. To enjoy DTS digital surround playback through headphones, connect an external 5.1-channel DTS digital surround decoder system to the digital output of the DVD player and use the headphones jack of your amplifier or receiver.**



## Connection of external source component

### Analog signal connection

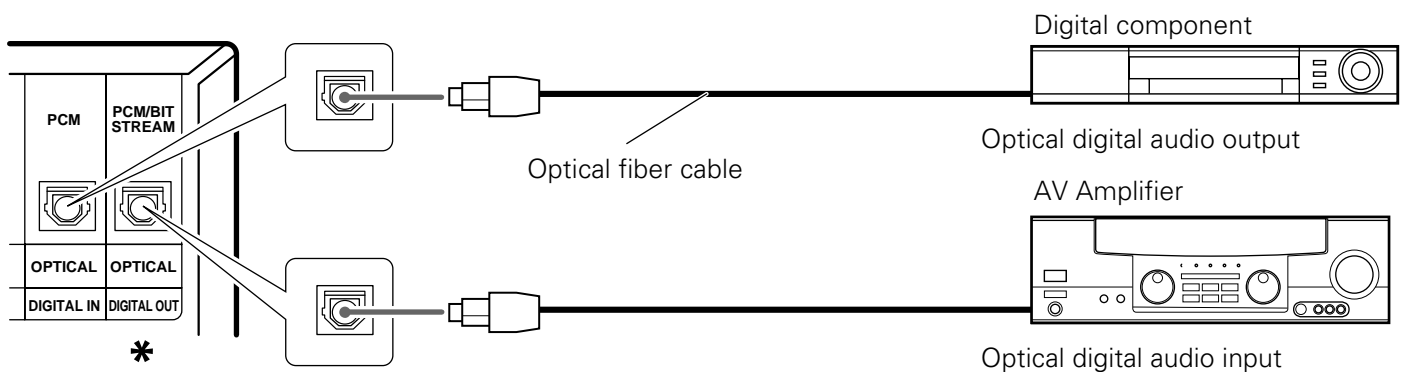
The **AUDIO AUX IN (AUDIO AUX OUT)** input jacks on the rear panel can be used to connect a cassette deck, etc.



### Digital signal connection

The **OPTICAL** digital input jack on the rear panel can be used to connect a digital component.

The recommended setup for "**Digital Audio**" is variable depending on the equipment connected to the digital audio output. → 55



\* Digital outputs are available only from DVD, VCD and CD.

### DTS disclaimer clause

When playing DTS-encoded (CDs, LDs, DVDs), excessive noise will be exhibited from the analog stereo outputs. To avoid possible damage to the audio system, the consumer should take proper precautions when the analog stereo outputs of the DVD player is connected to an amplification system. To enjoy DTS Digital Surround™ playback, an external 5.1 channel DTS Digital Surround™ decoder system must be connected to the digital output (S/P DIF, AES/EBU, or TosLink) of the DVD player.



1. This unit always down-mixes multi-channel surround audio into 2-channel audio and outputs it from the **AUDIO AUX OUT, DIGITAL OUT OPTICAL** and **PHONES** jacks. However, with certain discs, this unit outputs only the Front (L/R) channel signals in place of the down-mixed 2-channel signals.
2. In case an associated system component is connected, also read the instruction manual of the component.
3. Insert the optical-fiber cable straight into the connector until it clicks.
4. Never bend or bundle the optical-fiber cable.

## Channel space setting

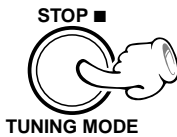
The space between radio channels has been set to the one that prevails in the area to which the system is shipped. However, if the current channel space setting does not match the setting in the area where the system is to be used, for instance when you move from area 1 or area 2 shown in the following table or vice versa, proper reception of AM/FM broadcasts cannot be expected. In this case, change the channel space setting in accordance with your area by referring to the following table.

Main unit only

- ① Select the "TUNER" input.



- ② Press the STOP ■ / TUNING MODE key. (for more than 5 seconds)



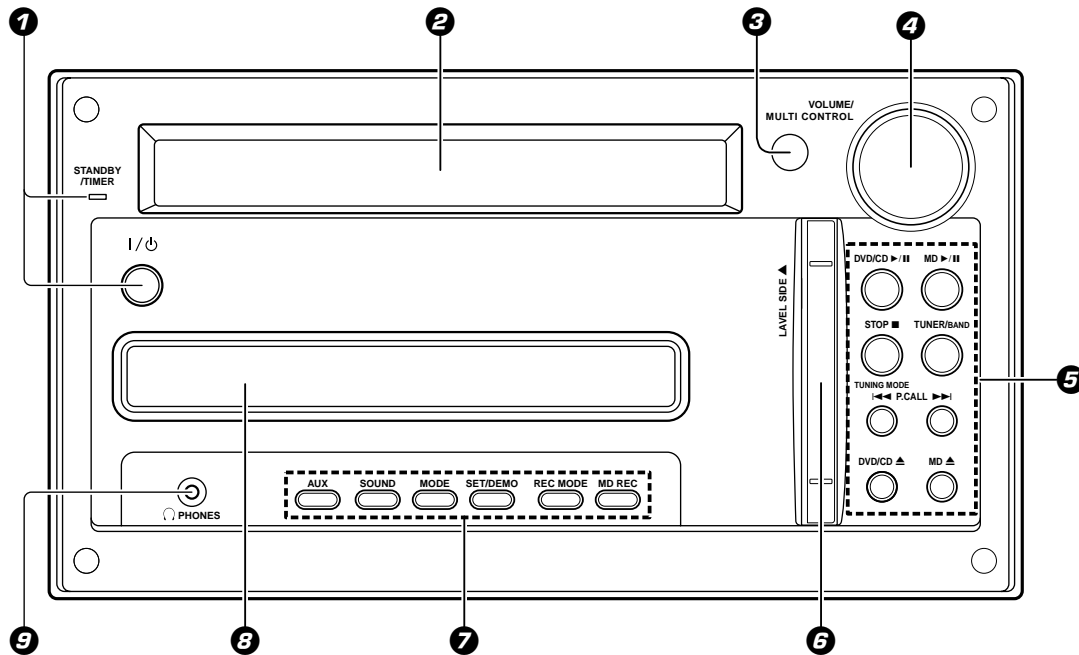
Each press switches the space frequency alternately.

- ① FM 50 kHz, AM 9 kHz  
② FM 100 kHz, AM 10 kHz

	Area	CHANNEL Space Frequency
①	USA, Canada and South American countries	FM: 100 kHz AM: 10 kHz
②	Other countries	FM: 50 kHz AM: 9 kHz



## Main unit



### 1 I/⏻ key

Press to set the unit to ON or STANDBY.

→ 22 → 89 → 92

#### STANDBY/TIMER indicator

When power is ON : Goes off.

When power is OFF (standby) : Lights in red → 13

During timer standby : Lights in amber. → 89 → 92

### 2 Display

### 3 Remote sensor (remote)

### 4 VOLUME/MULTI CONTROL knob

This knob is usually used to adjust the listening volume but can also be used in setting selection, timer reservation and clock adjustment operations.

→ 13 → 17 → 22

### 5 DVD/CD ►/|| key

#### When power is ON:

Press to select the "DVD/CD" input. → 24

#### When power is OFF (standby):

Press to turn the system power ON and start DVD (VCD, CD, MP3) playback. → 22

#### When "DVD/CD" input is selected:

Press to start playback or let it pause. → 24

### MD ►/|| key

#### When power is ON:

Press to select the "MD" input. → 31

#### When power is OFF (standby):

Press to turn the system power ON and start MD playback. → 22

#### When "MD" input is selected:

Press to start playback or let it pause. → 31

### TUNER/BAND key

#### When power is ON:

Press to select the tuner input. → 34

#### When power is OFF (standby):

Press to turn the system power ON and start radio reception on the tuner. → 22

#### During tuner reception:

Press to switch the radio band. → 34

### STOP■/TUNING MODE key

#### When power is OFF (standby):

Press to display the time of the day for 5 seconds. → 17

#### During DVD (VCD, CD, MP3), MD playback :

Press to stop playback.

#### During MD recording :

Press to stop recording.

#### During tuner reception:

Press to switch the tuning mode of the tuner.

**◀◀ P.CALL ▶▶ keys**

**During DVD (VCD, CD, MP3), MD playback :**  
 Press to skip in the forward or backward direction. → 26 → 32

**During tuner reception:**  
 Press to receive a preset station. → 34

**DVD/CD ▲ key**  
 This key is pressed to remove DVD (VCD, CD, MP3).

**MD ▲ key**  
 This key is pressed to remove MD.

**6 MD insertion slot**

**7 AUX key**  
 Press when playing or recording the input source connected to the **AUDIO AUX IN** (analog) input jacks. → 38 → 87  
 Press when playing or recording the input source connected to the **DIGITAL IN OPTICAL** jacks. → 38 → 87

**SOUND key**  
 Press to adjust the tone. → 23

**MODE key**  
 Press to switch the function of the **VOLUME/MULTI CONTROL** knob to the menu select mode. → 13  
 This key is also used when setting the time of the day. → 17

**SET/DEMO key**  
 Press to set or enter an item selected with the **VOLUME/MULTI CONTROL** knob. → 17 → 41  
 This key is also used for switching demonstration on/off. → 4

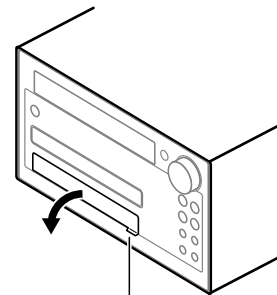
**REC MODE key**  
 Press to switch the MD recording mode.

**MD REC key**  
 Press to start MD recording. → 39

**8 DVD/CD tray**

**9 PHONES jack**  
 Plug headphones with a stereo mini-plug (optional). → 8

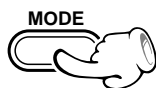
- Open the door to use 7 and 9.



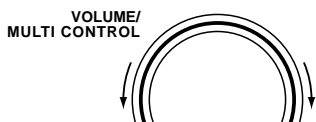
Lower this part to open the door.

**Operation in menu mode**

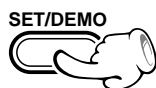
**1 Press the MODE key.**



**2 Select the item to be set.**



**3 Press the SET/ DEMO key.**



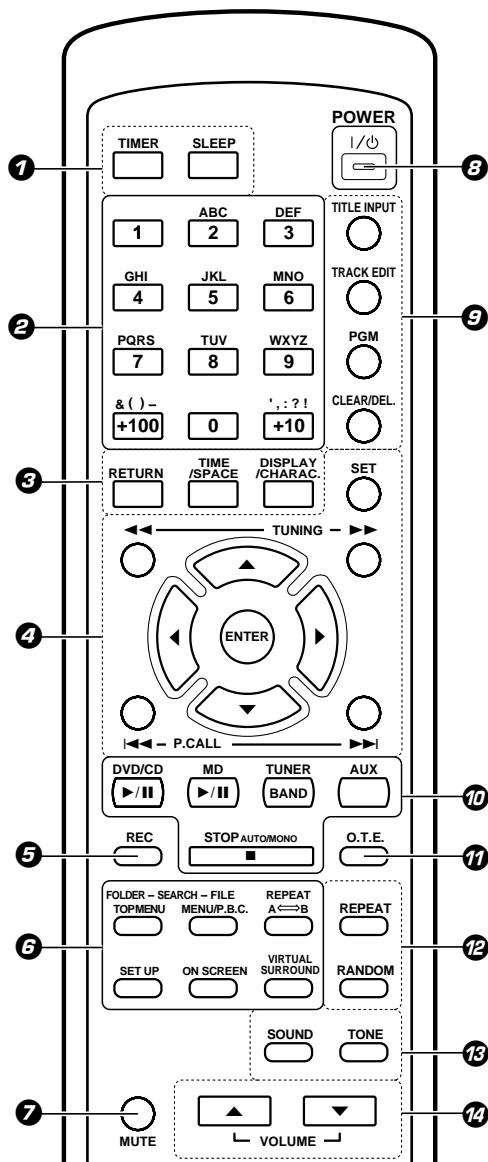
Each turn changes the displayed item.

- "O.T.E. MODE" → 65 → 67 → 69
- "TRACK MARK" → 42  
(Only when REC INPUT is set to "ANALOG")
- "REC INPUT" → 40  
(Only when the DVD/CD input is selected)
- "REC LEVEL" → 40
- "TIMER SET" → 89 → 90
- "A.P.S." → 16
- "INPUT LEVEL" → 87  
(Only when the AUX input is selected)
- "BALANCE" → 23
- "TIME ADJUST " → 17
- "AUTO PRESET " → 35  
(Only when the TUNER input is selected)
- "DIMMER" → 16

**Standby mode**

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

## Operation of remote control unit



Infrared ray system  
Model : RC-M0513

### 1 TIMER key

Press to execute or cancel a timer program. → 92

### SLEEP key

Press to set the sleep timer. → 88

### 2 Character/numeric keys

**When "DVD/CD" or "MD" input is selected:**

Press to enter numbers. → 27 → 32

**During tuner reception :**

Press when recalling a preset radio station. → 34 → 36

**When MD title input operation :**

Used to enter alphanumeric and symbol characters. → 81

### 3 RETURN key

When a setting menu is displayed, press to return to the previous display page. → 45 → 48

### TIME/SPACE key

**When "DVD/CD" or "MD" input is selected:**

Press to switch the time information displayed during DVD (VCD, CD) or MD playback. → 30 → 33

Press to enter a space during MD title entry. → 81

### DISPLAY/CHARAC. key

**When "DVD/CD" or "MD" input is selected:**

Press to switch the display mode of the display panel. → 30 → 33

Press to switch the character types in MD title input operation. → 81

### 4 SET key

Press to set or enter a program. → 58 → 72

### ◀◀ TUNING ▶▶ keys

**During DVD (VCD, CD, MP3) or MD playback :**

Press to search in the forward or backward direction. → 26 → 32

**During tuner reception:**

Press to select radio stations. → 36

### Cursor keys (◀ ▶ ▲ ▼)

Press one of these keys to select an item in the initial setup or other menu.

### ENTER key

**When "MD" input is selected:**

This is used to execute an MD editing operation or to enter an input title. → 25 → 44 → 73

**During tuner reception:**

Press to enter a manual preset station. → 36

### ◀◀ P.CALL ▶▶ keys

**During DVD (VCD, CD, MP3) or MD playback :**

Press to skip in the forward or backward direction. → 26 → 32

**During tuner reception:**

Press to receive a preset station. → 34

### 5 REC key

### 6 TOP MENU/FOLDER SEARCH key

With a DVD VIDEO disc, press to display the top menu. → 25 → 44

With an MP3 disc, press to select a folder containing the file to be played. → 47

### MENU/P.B.C./FILE SEARCH key

With a DVD VIDEO disc, press to display a menu. → 25 → 44

With P.B.C.-compatible VCD disc, press to switch the P.B.C. on and off. → 45

With an MP3 disc, press to select the MP3 file to be played. → 47

### REPEAT A B key

Press to repeat playback of the designated section on a disc. → 61

### SET UP key

Press to change the initial setup of the DVD player. → 48 → 51 → 54

**ON SCREEN key**

Press to display the OSD information on the connected TV screen. → 28

**VIRTUAL SURROUND key**

Press to switch Virtual Surround on and off. → 27

**7 MUTE key**

Press to mute sound temporarily. → 23

**8 POWER (I / ⏻) key**

**9 TITLE INPUT key**

This is used in MD title input operation. → 80

**TRACK EDIT key**

This is used in MD editing for reordering tracks, deleting tracks, etc. → 72

**PGM key**

Used in programming CD (VCD) or MD tracks in the desired sequence. → 58

**CLEAR/DEL. key**

This key is used to clear the program. During title input, it is used to delete a character. → 59 → 81 → 82

**10 DVD/CD ►/⏸ key**

→ 22 → 24

**MD ►/⏸ key**

→ 31

**TUNER/BAND key**

→ 34

**AUX key**

→ 38 → 87

**STOP■/AUTO/MONO key**

**11 O.T.E. key**

→ 65 → 67 → 69

**12 REPEAT key**

Press for repeat playback of a DVD (VCD, CD, MP3) or MD. → 60

**RANDOM key**

Press to play the tracks in a CD (VCD) or MD in a random order. → 62

**13 SOUND key**

**TONE key**

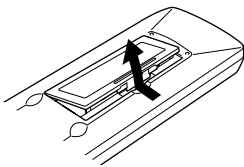
Press to adjust the highest and lowest frequencies. → 23

**14 VOLUME key**

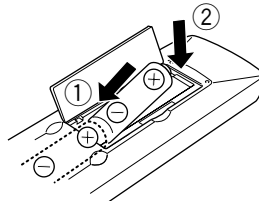
Press to adjust the listening volume or tone. → 22 → 23

**Loading batteries**

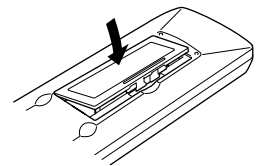
**1 Remove the cover.**



**2 Insert batteries.**



**3 Close the cover.**



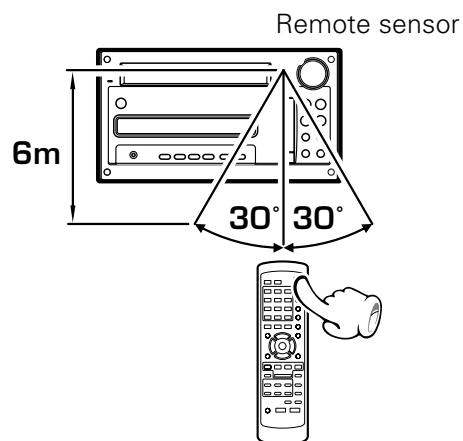
● Insert two R6 ("AA"-size) batteries following the polarity indications.

**Operation**

Plug the power cord into a power outlet and press the **POWER (I / ⏻) key** on the remote control unit to switch the power ON. Then press the key of the function you want to control.

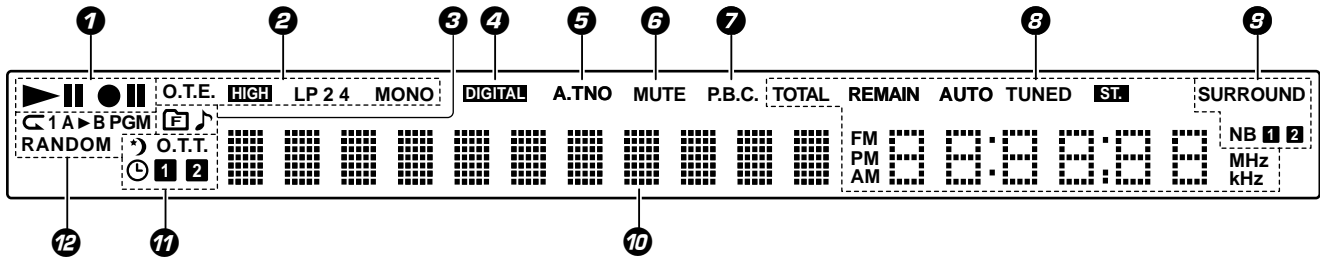
● When pressing more than one remote control keys successively, press the keys securely by leaving an interval of 1 second or more between keys.

**Operating range (approx.)**



1. The provided batteries are intended for use in operation checking, and their service life may be short.
2. When the remote controllable distance becomes short, replace both of the batteries with new ones.
3. If direct sunlight or the light of a high-frequency fluorescent lamp (inverter type, etc.) is incident to the remote sensor, malfunction may occur. In such a case, change the installation position to avoid malfunction.

## Display



- ① Play(▶)/Pause(⏸) indicator  
MD rec(●)/Pause(⏸) indicator
- ② REC MODE indicator  
(O.T.E., HIGH, LP2, LP4, MONO)
- ③ MP3 indicator  
[F].... Folder  
🎵 .... File
- ④ DIGITAL indicator
- ⑤ A. TNO indicator
- ⑥ MUTE indicator
- ⑦ P.B.C. indicator
- ⑧ Playback/Clock display/Tuning indicators  
(Play time, Clock display, Frequency display, etc.)
- ⑨ Tone related indicators  
(SURROUND, NB1, NB2)
- ⑩ Character information display
- ⑪ TIMER-related display
- ⑫ Special playback related indicators

### Switching the Display Brightness

- ① Press the MODE key.
- ② Turn the VOLUME/MULTI CONTROL knob to select "DIMMER", then press the SET/DEMO key.
- ③ Turn the VOLUME/MULTI CONTROL knob to select "LOW" or "HIGH", then press the SET/DEMO key.

DIMMER

LOW

### Auto Power Save (A.P.S.)

When the power has been left ON for more than 30 minutes while the unit has been doing neither recording or playback in this period, the A.P.S. function switches the power OFF (standby) automatically. Whether the A.P.S. function is to be used or not can be set with the following steps.

- ① Press the MODE key.
- ② Turn the VOLUME/MULTI CONTROL knob to select "A.P.S.", then press the SET/DEMO key.
- ③ Turn the VOLUME/MULTI CONTROL knob to select "ON" or "OFF", then press the SET/DEMO key.

A . P . S .

A . P . S . OFF

- With the TUNER and AUX input, A.P.S. functions only when the volume is set to zero.



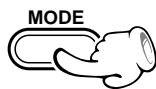
This unit incorporates a clock function. Be sure to adjust the correct time before using the timer function.

If there is a power failure or the power cord is unplugged then plugged in again while the power set to off (STANDBY mode) after a timer is activated, the STANDBY/TIMER indicator blinks in amber. In this case, adjust the clock again.

## Switching the power ON

### 1 Activate the clock adjustment mode.

- 1 Press the MODE key.



- 2 Turn the VOLUME/MULTI CONTROL knob to select "TIME ADJUST", then press the SET/ DEMO key.

- 3 Turn the VOLUME/MULTI CONTROL knob to select "12 HOUR" or "24 HOUR", then press the SET/DEMO key.

TIME ADJUST



Blinks

Select the time display mode.

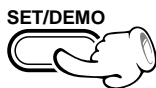
- The time of the day is represented in 12-hour or 24-hour method.

### 2 Enter the figure of hour.

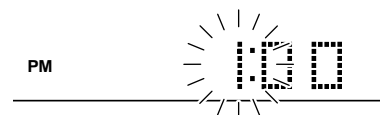
- 1 Adjust the figure of hour by turning the VOLUME/MULTI CONTROL knob.



- 2 Set it.



Example for adjusting at 1:30PM



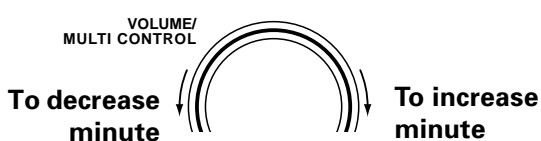
PM

Blinks

- The time display starts to blink.
- Press the **SET/DEMO** key. The hour is entered and the minute display starts to blink.

### 3 Enter the figure of minute.

- 1 Adjust the figure of minute by turning the VOLUME/MULTI CONTROL knob.



- 2 Set it.



Example for adjusting at 1:30PM



PM

Blinks

- If you pressed the **SET/DEMO** key by mistake, press the **MODE** key and restart from the beginning.
- To adjust correct time, press the **SET/DEMO** key at the same moment as a time announcement.
- When the **STOP/TUNING MODE** key is pressed while the power is in the standby mode, the time of the day will be displayed for 5 seconds.

**DVD** **VCD**

The TV picture display and disc signal systems can be divided roughly into two TV formats (NTSC and PAL). They are variable depending on countries and areas.

This unit reproduces NTSC discs in NTSC format and PAL discs in PAL format. If the video formats of the disc and TV do not match, the disc cannot be reproduced correctly. It is therefore required to select the disc according to the TV set in use (country and area).

TV formats in major countries :

TV Format	Major Countries & Areas
NTSC	Japan, Taiwan, Korea, USA, Canada, Mexico, Philippines, Chile, etc.
PAL	China, U.K., Germany, Australia, New Zealand, Kuwait, Singapore, etc.

**Checking the Video Format**

Check the video format of the VCD and DVD discs to be played on the player as described below.

❶ Check if the video formats of the TV to be used and disc to be played match each other.

- For details, refer to the instructions provided with the TV and disc.

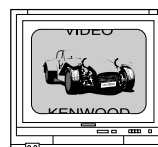
❷ When the TV is switchable between NTSC and PAL, set the TV format according to the disc format.

TV Format	Playable Disc Format
NTSC only	NTSC
PAL only	PAL
NTSC/PAL switchable	NTSC/PAL

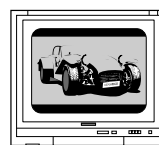
- Correct video cannot be reproduced if the video formats of the TV and disc do not match.

When the video formats are different :

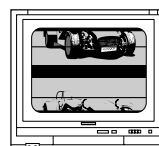
Try playing the disc. If the video formats of the disc and TV do not match, the played video may be black and white or become as shown below.



Top and bottom edges are not displayed.



Top and bottom areas are dark.



Picture turbulence due to sync unmatching.

Preparation section

## Operation restriction according to the disc or player status DVD VCD

Operations of some DVDs and VCDs are restricted by the intention of the software producers. Operations may also be restricted due to the status of the player.

As this player plays discs in accordance with the intentions of software producers, some functions may not work as intended by the user. Be sure to read the manual provided with the disc to be played.

When an inhibition icon is displayed on the connected TV screen during operation, it indicates that the player is in the operation restricted status.



## Systems and Types of Playable Discs

Playable Disc	DVD VIDEO	VCD	CD, CD-R/RW
Logo mark			

## Unplayable Discs

**Never attempt to play a Photo CD disc on this unit.**

**Other discs which cannot be played on this unit :**

- SACD, DVD AUDIO, DVD-ROM, DVD-R/RAM, DVD-RW, CD-R/RW which has not been processed by session closing or finalization, CD-ROM, DTS-CD, SVCD, VSD, CDV\*, CD-G\*, CD-EG\*, CD-EXTRA\* , etc.  
\* Only the audio part can be reproduced.
- A DVD VIDEO disc with a region code which does not match this unit or without a region code. For details, see "Region Codes of This Player". → [20](#)
- When the video format of a disc differs from that of the TV in use, the disc cannot be played normally. For details, see "Video Formats". → [18](#)
- This unit may also be incapable of playing certain CD-R/RW discs depending on their properties, recording conditions, etc.

## Icons Inscribed on DVD Discs DVD



Indicates the playable region code.



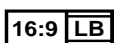
Indicates the number of languages in the audio. The figure in the icon shows the number (max. 8 languages).



Indicates the number of available subtitle languages. The figure in the icon shows the number (max. 32 subtitle languages).










Indicates the number of viewing angles which can be viewed with the angle function. The figure in the icon shows the number (max. 9 angles).



Indicates the number of available aspect ratios. LB stands for Letter Box and PS stands for Pan & Scan. (The example shown means that the 16:9 video can be converted into letterbox.)

**Region Codes of This Player** 

A region code defined for each country or area is assigned for each DVD VIDEO player, so it cannot play a DVD VIDEO disc if its region code do not match that of this unit. Also, a disc which does not contain any region code may sometimes be unable to be played on the player. When purchasing a DVD VIDEO disc, make sure that it has a region code which can be played on your player.

Region Code of Player	Usable Country or Area	
	Canada, United States, American Samoa, Bermuda, Johnston Island, Midway Islands, Puerto Rico, St. Pierre and Miquelon, United States Virgin, Wake Island	
	Albania, Andorra, Austria, Bahrain, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech, Denmark, Egypt, Finland, France, Germany, Greece, Hungary, Iceland, Iran, Iraq, Ireland, Israel, Italy, Japan, Jordan, Kuwait, Lebanon, Lesotho, Liechtenstein, Luxembourg, Macedonia, Malta, Monaco, Netherlands, Norway, Oman, Poland, Portugal, Qatar, Romania, San Marino, Saudi Arabia, Slovakia, Slovenia, South Africa, Spain, Swaziland, Sweden, Switzerland, Syrian Arab Republic, Turkey, United Arab Emirates, United Kingdom, Vatican City State, Yemen, Yugoslavia, Channel Islands, Faeroe Islands, Gibraltar, Greenland, Isle of Man, Svalbard and Jan Mayen Islands	
	Brunei Darussalam, Cambodia, Indonesia, Korea, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam, East Timor, Hong Kong, Macau, Taiwan	
	Antigua and Barbuda, Argentina, Australia, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Fiji, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Kiribati, Marshall Islands, Mexico, Micronesia, Nauru, New Zealand, Nicaragua, Palau, Panama, Papua New Guinea, Paraguay, Peru, Saint Christopher and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Samoa, Solomon Islands, Suriname, Tonga, Trinidad and Tobago, Tuvalu, Uruguay, Vanuatu, Venezuela, Anguilla, British Virgin Islands, Cayman Islands, Christmas Island, Cocos Islands, Cook Islands, Falkland Islands, French Guiana, French Polynesia, Guadeloupe, Guam, Martinique, Montserrat, Netherlands Antilles, New Caledonia, Niue, Norfolk Island, Northern Mariana Islands, Pitcairn, Tokelau, Turks and Caicos Islands, Wallis and Futuna Islands	
	Afghanistan, Algeria, Angola, Armenia, Azerbaijan, Bangladesh, Belarus, Benin, Bhutan, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central Africa, Chad, Comoros, Congo, Cote d'Ivoire, Djibouti, Equatorial Guinea, Eritrea, Estonia, Ethiopia, Gabon, Gambia, Georgia, Ghana, Guinea, Guinea-Bissau, India, Kazakhstan, Kenya, Kyrgyz Republic, Latvia, Liberia, Libya, Lithuania, Madagascar, Malawi, Maldives, Mali, Mauritania, Mauritius, Moldova, Mongolia, Morocco, Mozambique, Namibia, Nepal, Niger, Nigeria, North Korea, Pakistan, Russia, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, Sri Lanka, Sudan, Tadjikistan, Tanzania, Togo, Tunisia, Turkmenistan, Uganda, Ukraine, Uzbekistan, Zaire, Zambia, Zimbabwe, British Indian Territory, Jammu and Kashmir, Mayotte, Reunion, St. Helena ex. dep., Western Sahara	
	China	 Professional use (Air Line cabin service)

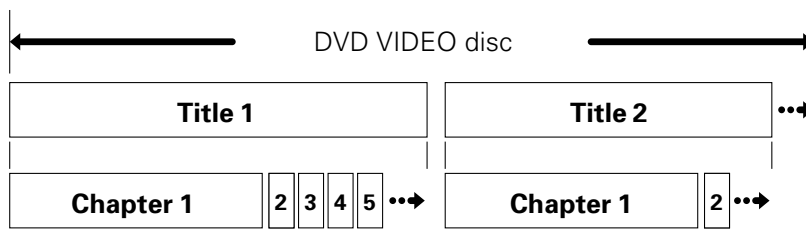
**Region codes of the DVD VIDEO discs that can be played with this player** 

This player can play back a DVD VIDEO disc which carries the corresponding code to the region code of the player shown in the table above, a marking containing the region code of the player or the "ALL" marking shown below. Even when a DVD VIDEO disc does not carry any indication of the region code, it may sometimes unable to be played on this player due to certain restrictions.



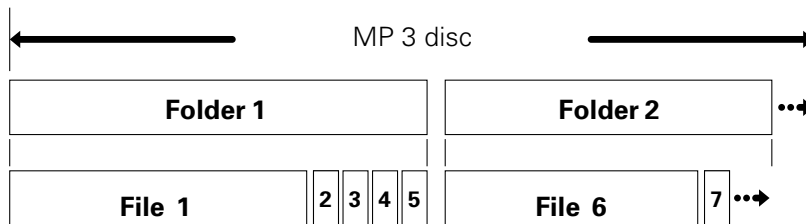
**Configuration of Discs** [DVD] [VCD] [CD] [MP3] [MD]

**DVD VIDEO disc configuration**



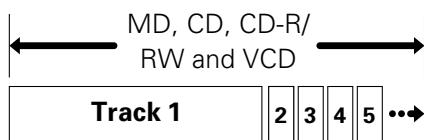
The title is the largest unit composing the music and/or pictures in an DVD VIDEO disc. Each title is composed of multiple chapters.

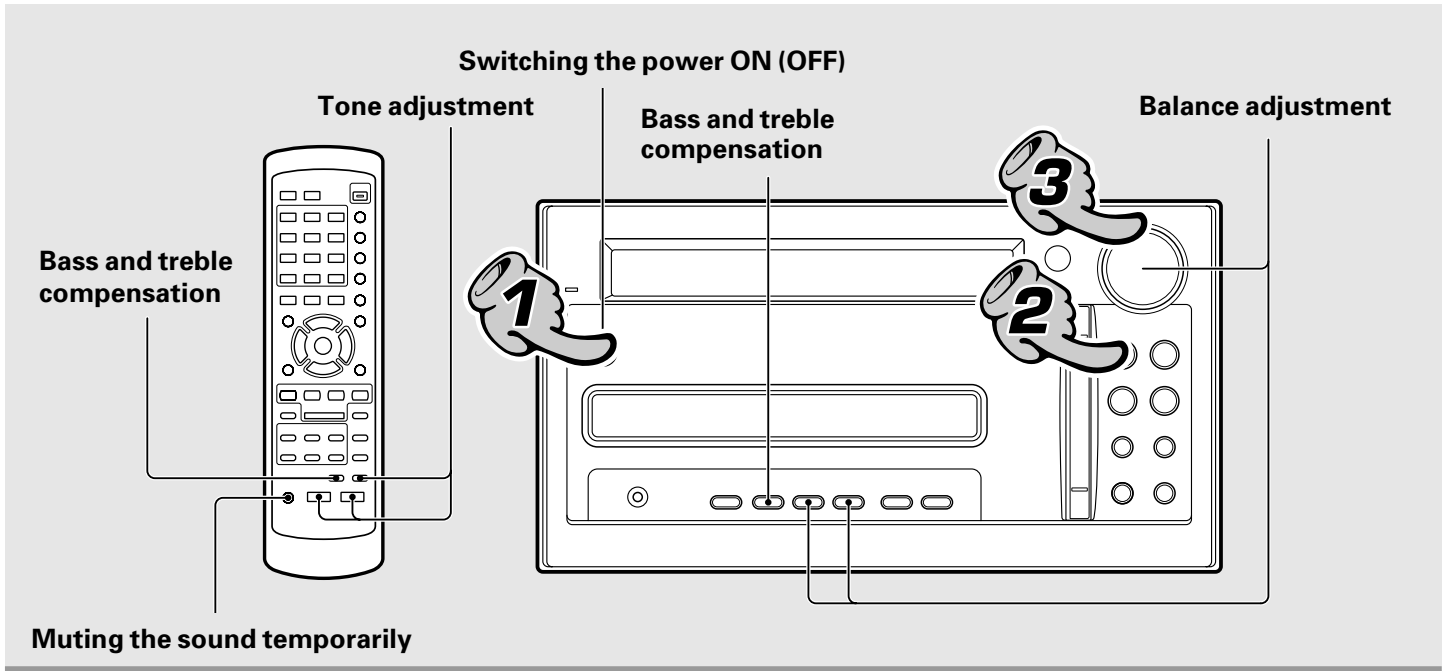
**MP3 disc configuration**



The folder is the storage unit at the highest level in the disc. Sometimes a single folder contains more than one file, or sometimes files are recorded directly in the disc in place of being included in a folder. Some discs also have a hierarchical structure in which a folder includes sub-folders. Note that the file numbers are not assigned on a per-folder basis but they are assigned consecutively for all the files in the whole disc.

**MD, CD, CD-R/RW and VCD disc configuration**





### 1. Switching the power ON (OFF).

Pressing the **I / ⏻** key when the unit is ON turns it off (Standby mode of power).

- Pressing the **DVD/CD ▶/⏻**, **MD ▶/⏻**, **TUNER/BAND** or **AUX** key also turns power on and starts playback (reception) of the corresponding input. (One-touch operation)

Basic section

**Example:**  
To select the DVD/CD input



### 2. Selecting the desired output.

**DVD/CD (DVD, MP3, VCD, CD)** → 24

**MD** → 31

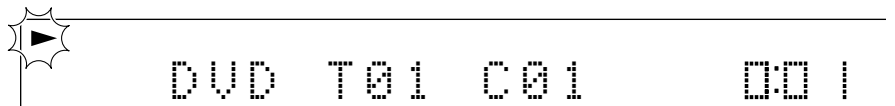
**TUNER (Broadcasts)** → 34

**AUX (Analog)** [Adjusting the AUX Input Level → 87]

Press the **AUX** key repeatedly until "AUX" is displayed.

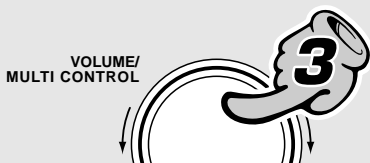
**DIGITAL AUX (Digital)** → 87

Press the **AUX** key repeatedly until "DIGITAL AUX" is displayed.



When DVD has been selected.

- When **DVD/CD ▶/⏻** or **MD ▶/⏻** is selected, playback will start when a disc already has been inserted.



The volume decreases

The volume increases

### 3. Volume adjustment.

- The same function is also available using the **VOLUME** keys on the remote control unit.



## Muting the sound temporarily

Remote control unit only



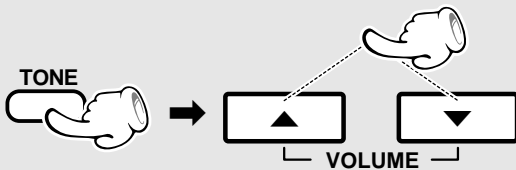
- Press again to resume the original volume.
- This is also cancelled when the volume is changed.

## Tone adjustment

Remote control unit only

The responses of the lowest frequencies (**BASS**) and highest frequencies (**TREBLE**) can be adjusted as desired. After this adjustment, the N.B. effect will be disabled.

- 1 Press the **TONE** key to select "**BASS**".  
Adjust the level of lowest frequencies as desired using the **VOLUME** keys.



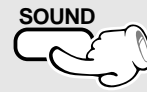
- 2 Press the **TONE** key again while "**BASS**" is displayed to select "**TREBLE**".  
Adjust the level of the highest frequencies using the **VOLUME** keys.

TREBLE +4

- 3 Press the **TONE** key.

- The "**BASS**" and "**TREBLE**" can be adjusted independently in the range from "- 8" to "+ 8".

## Bass and treble compensation (NB : Natural Bass circuit)



Each press switch the modes as follows.

- 1 "**NB 1**" (Only the lowest frequencies are enhanced.)
- 2 "**NB 2**" (The lowest and highest frequencies are enhanced according to the current volume level.)
- 3 "**NB OFF**" (The source signal is processed by the tone control circuitry before being output from the main unit.)

## Balance adjustment

The balance of volumes from the left and right speakers can be adjusted as follows.

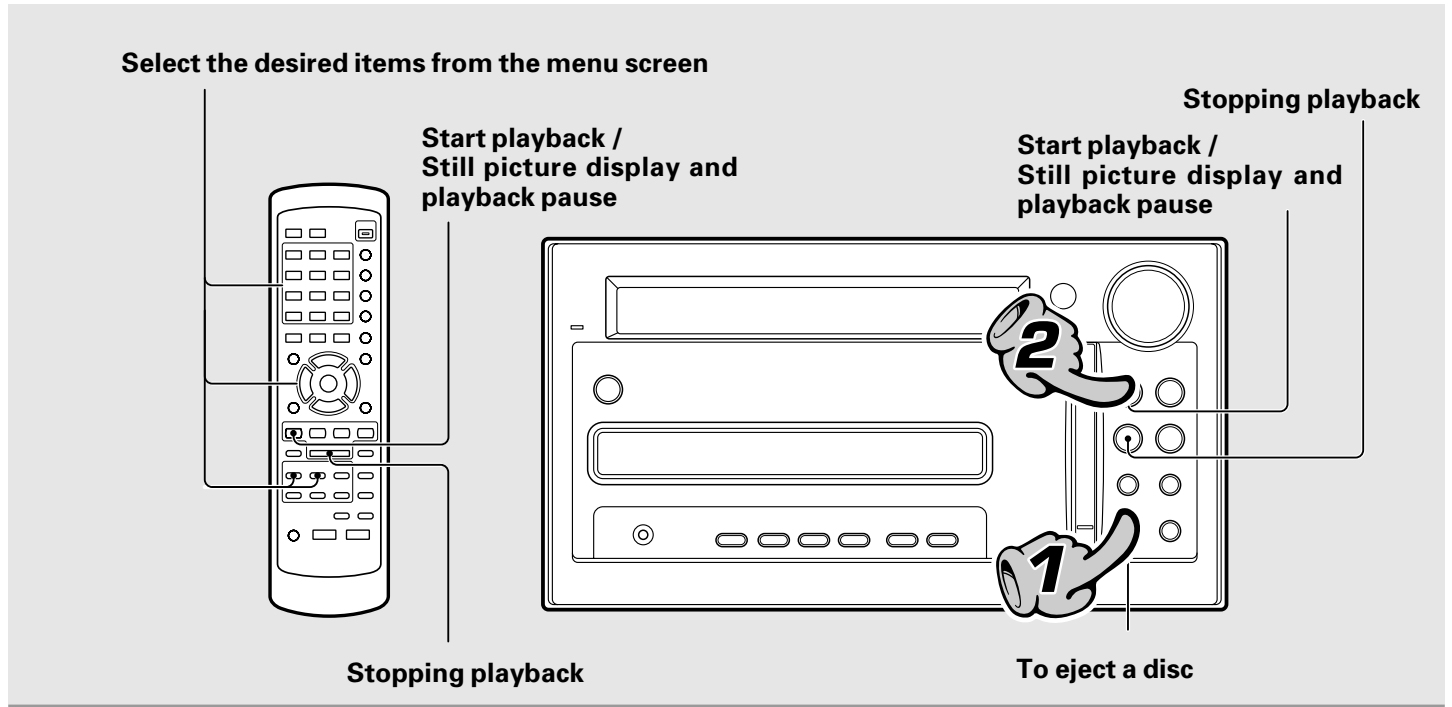
- 1 Press the **MODE** key.
- 2 Turn the **VOLUME/MULTI CONTROL** knob to select "**BALANCE**", then press the **SET/DEMO** key.
- 3 Adjust the left and right speaker balance by turning the **VOLUME/MULTI CONTROL** knob.



- 4 Press the **SET/DEMO** key.

The following procedure shows how to play a disc, such as a CD, VCD or DVD, from the beginning. When playing a VCD with P.B.C. (Play-Back Control) capability, please read "Menu playback of P.B.C.-compatible VCD". → 45

For details on the MP3 discs containing MP3 files, see "MP3 that can be played back with this equipment". → 46

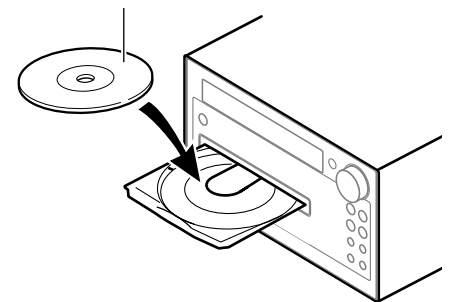


### 1. Load a disc.

- ❶ Press the DVD/CD ▲ key.
- ❷ Place a disc.
- ❸ Press the DVD/CD ▲ key.

- Do not touch the played side of disc.
- Be sure to place a disc horizontally. Placing it with an inclination will result in malfunction.

The label side must be on top.

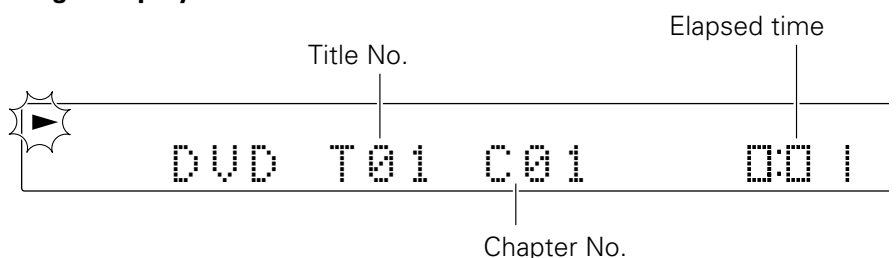


With certain discs, playback starts now. If a menu screen appears on the TV screen, select the desired items as described in steps 3.-❷ and ❸ before playing the disc.

### 2. Start playback.



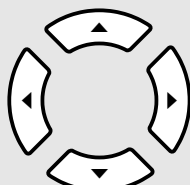
During DVD playback :



Basic section



FOLDER – SEARCH – FILE  
TOP MENU MENU/P.B.C.



### 3. Select the desired items from the menu screen.

When a DVD VIDEO containing the recording of the top menu or menu is played, the top menu or menu is displayed. These menus allow you to select the position you want to play easily based on an interactive method.

The following operation procedure is the basic procedure. As the operation procedure may vary depending on the played software, be sure to read the manual provided with the software.

- ❶ Press the TOP MENU/FOLDER SEARCH key
- ❷ Press a cursor key (◀ ▶ ▲ ▼) or numeric keys to select the scene to be played.
- ❸ Press the ENTER key to start playback

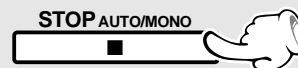
- When the TOP MENU/FOLDER SEARCH key is pressed again while the top menu is displayed during playback, the played position returns to the position where the key was pressed for the first time and playback restarts from there.
- When the MENU/P.B.C./ FILE SEARCH key is pressed, the menu is displayed. The operation is the same as that of the top menu.

### Start playback / Still picture display and playback pause



- The TV screen shows "Pause" or "Still".
- When the "IPB Display" is set to On, the TV screen shows "Still (I)", "Still (P)" or "Still (B)" with every still picture of DVD VIDEO. → 48
- Press the DVD/CD ▶/|| key to resume normal playback.

### Stopping playback



- Pressing the STOP ■ /AUTO/MONO key in the middle of playback activates the resume function.
- When the resume function is activated, the playback stop position is stored in memory before stopping, so the playback can be resumed from the stop position when the DVD/CD ▶/|| key is pressed later. (This function cannot be activated in playback of CD or random playback.)

### To eject a disc

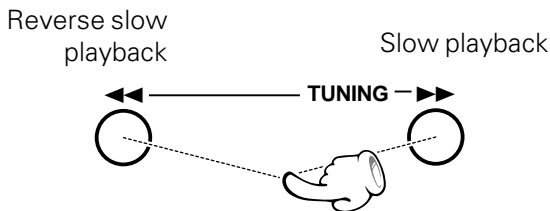
Main unit only



## Slow playback and reverse slow playback DVD VCD

Press the ◀◀ key or ▶▶ key in still mode to select one of 5 available speeds.

Remote control unit only

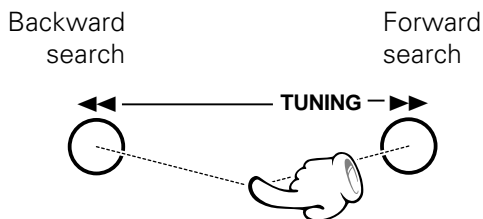


- When OSD is displayed, pressing the **ON SCREEN** button turns it off and shows the speed in place.
- Audio is not output during slow playback or reverse slow playback.
- Reverse slow playback is not available with VCD.
- Press the **DVD/CD ▶/||** key to resume normal playback.

## Forward search and reverse search DVD VCD CD MP3

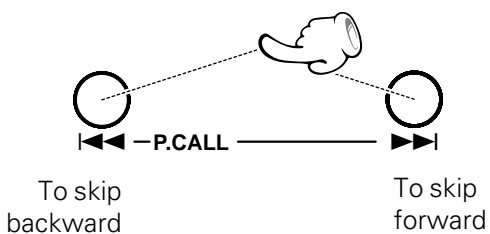
Press once during playback to initiate forward or reverse search at a low speed.

Remote control unit only



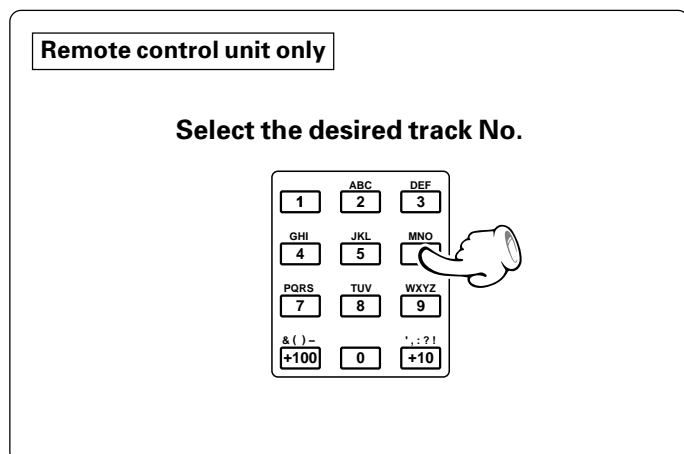
- The search speed can be selected from 5 speed steps. (With a MP3 disc, forward search and reverse search are possible only in a single speed.)
- When OSD is displayed, pressing the **ON SCREEN** key turns it off and shows the speed in place.
- Video may be disturbed during forward search or reverse search.
- Press the **DVD/CD ▶/||** key to resume normal playback.

## Skipping a track, chapter, or file DVD VCD CD MP3



- A track is skipped and playback starts from the beginning of the skip destination track, chapter or file. (With DVD VIDEO, this operation is available only in the middle of play mode.)
- When the ◀◀ key is pressed once during playback, playback restarts from the beginning of the current track, chapter or file.
- With a VCD and P.B.C. is on, these buttons function as the ◀◀ (**Previous**) and ▶▶ (**Next**) key. → 45

**Playing discs by selecting the title, chapter, track, folder or file** DVD VCD CD MP3



**Press the numeric keys as shown below....**

**To select track 23**

..... +10, +10, 3

**To select track 40**

..... +10, +10, +10, +10, 0

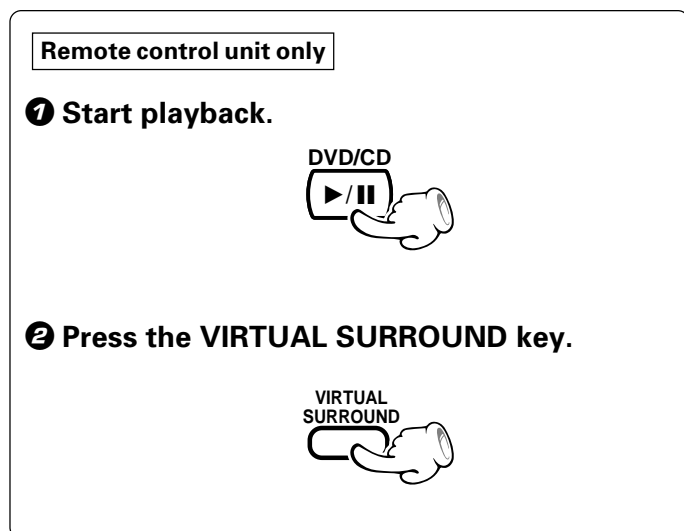
**To select track 311 (MP3 disc only)**

..... +100, +100, +100, +10, 1

- With a DVD VIDEO, when a number is input during playback, playback of the chapter having the same number as the input number in the same title starts. When a number is input in stop mode, playback the first chapter in the title having the same number as the input number starts.
- With a MP3 disc, playback starts with the beginning of the file having the same number as the input number.
- With a CD or VCD (when P.B.C. is off), playback starts with the beginning of the track having the same number as the input number.

**Virtual Surround function** DVD

When playing a DVD VIDEO recorded with Dolby Digital Surround audio (with 2 or more channels), powerful sound can be reproduced even when you use only two speakers.



**Each press switch the modes as follows.**

- ① "VIRTUAL Surr. OFF" (Cancel)
- ② "VIRTUAL Surr. 1"
- ③ "VIRTUAL Surr. 2"

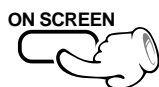
## Basic OSD Operation DVD VCD CD MP3

Various operations can be performed by selecting the OSD icons on the TV screen using the cursor key (◀▶▲▼) on the remote.

The OSD cannot be displayed when DVD VIDEO, VCD is played by menu playback. It may also be unavailable with certain discs.


Select the "DVD/CD" input. →  24

### 1 Press the ON SCREEN key.



The OSD screen appears.



If the on-screen message or OSD is displayed outside the TV screen when using a widescreen TV or similar monitoring device, set the "OSD Position" setting to "Cinema". →  48

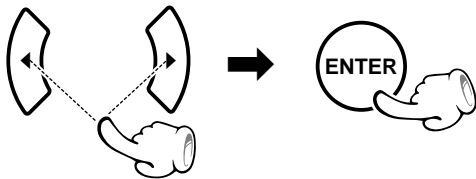
### "MAIN" OSD :



- Only the "MAIN" OSD can be displayed when the button is pressed in stop mode. (The up and down arrows shown in the above figure are not displayed.)
- The "SOUND" OSD and "VISUAL" OSD can be displayed only in a play mode.
- When the key is pressed in a play mode, the OSD can be changed by pressing the cursor up/down (▲ ▼) key.

### 2 Select the item to be changed.

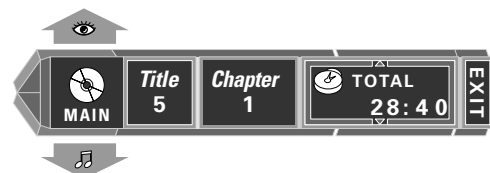
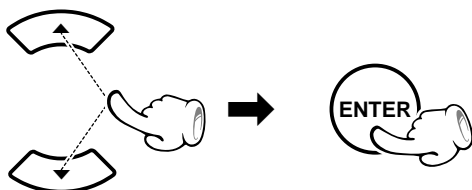
Press either cursor key (◀▶) to select an icon, then press the ENTER key.



- Press the cursor (◀▶) key to move the cursor. (But the cursor cannot be moved to the icons of currently unavailable functions.)
- The OSD includes icons with a variety of functions. The displayed icons are variable depending on the player status and played disc.
- When the cursor is located on the left or right end, if you attempt to move the cursor toward the outside, the cursor will move to the opposite end.
- To clear the OSD display, move the cursor to the **EXIT** icon and press the **ENTER** key. (The same effect can also be obtained by pressing the **ON SCREEN** key.)

### 3 Change the content of the selected item.

Press either cursor key (▲▼) to select a content, then press the ENTER key.

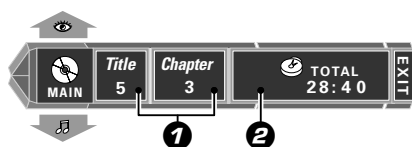


## Icons on the TV screen DVD VCD CD MP3

Information related to the disc (title, chapter, time, voice language, subtitle language, angle, etc.) or the player (repeat mode, video quality, etc.) can be displayed and changed as required. The icons displayed on the TV screen are as shown below.

### During DVD VIDEO playback

#### "MAIN" OSD :



**1 Title icon**

Shows the title number in DVD VIDEO disc.

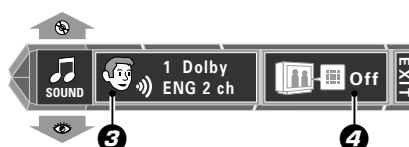
**Chapter icon**

Shows the chapter number in DVD VIDEO disc.

**2 Time display icon**

Shows the disc time. Select to perform time search or change the time display. —

#### "SOUND" OSD :



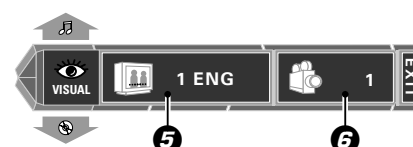
**3 Audio icon**

Shows the stream number, audio signal, audio language and number of audio channels. Select to switch the audio language.

**4 Cinema voice icon**

Shows the on/off status of Cinema Voice. Select to switch Cinema Voice on or off.

#### "VISUAL" OSD :



**5 Subtitle icon**

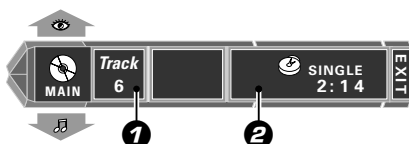
Shows the language used in subtitles. Select to change the subtitle language.

**6 Angle icon**

Shows the angle number. Select to change the viewing angle.

### During CD, VCD (when P.B.C. is off) playback

#### "MAIN" OSD :



**1 Track icon**

**2 Time display icon**

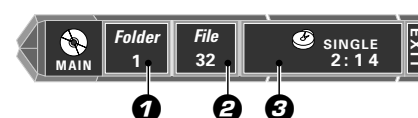
#### "SOUND" OSD :



**3 Audio icon**

### During MP3 playback

#### "MAIN" OSD :



**1 Folder icon**

**2 File icon**

**3 Time display icon**

## Time display for DVD/CD player DVD VCD CD MP3

Use the following procedure to switch the type of information shown by the time display shown in the OSD or player display. Time search is also available for specifying the position to start playback by inputting the time information.

The time display information type can also be changed using the TIME/SPACE key.

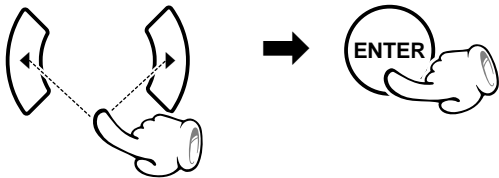
However, time search is not possible.

Remote control unit only

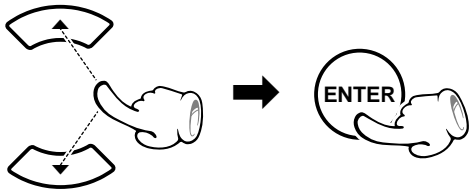
### ① Press the ON SCREEN key during playback



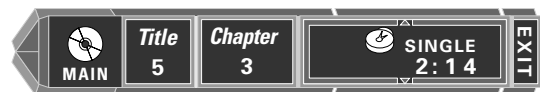
### ② Press either cursor key (◀ ▶) to select the time display icon, then press the ENTER key.



### ③ Press either cursor key (▲ ▼) to select the time display content, then press the ENTER key.



To perform time search, place the cursor in the time search time input field, enter the playing time with numeric keys and press the ENTER key.



- ① Elapsed play time of track or chapter.
- ② Remaining play time of track or chapter.
- ③ Elapsed play time of disc or title.
- ④ Remaining play time of disc or title.
- ⑤ "--:--:--" : The time search target time can be input. ("--:--:--" is displayed with a CD or VCD.)

- Only information ① can be displayed with MP3 files.
- Only information ① or ② can be displayed in the program and random modes.
- Time search is not available in stop mode, during menu playback of a DVD VIDEO, VCD or with a DVD VIDEO which does not provide the time display. Time search is not available in the program and random modes.
- If P.B.C. is On, be sure to set it to Off. → 45

## In regard to CD-TEXT CD

When a CD-TEXT compatible disc is played on this unit, the disc and track titles recorded in the disc are displayed automatically provided that they use alphanumeric characters.

When a title is too long to be accommodated in the display, press the DISPLAY key to scroll the displayed title so that the previously hidden characters be viewed.

Remote control unit only

(Press twice)



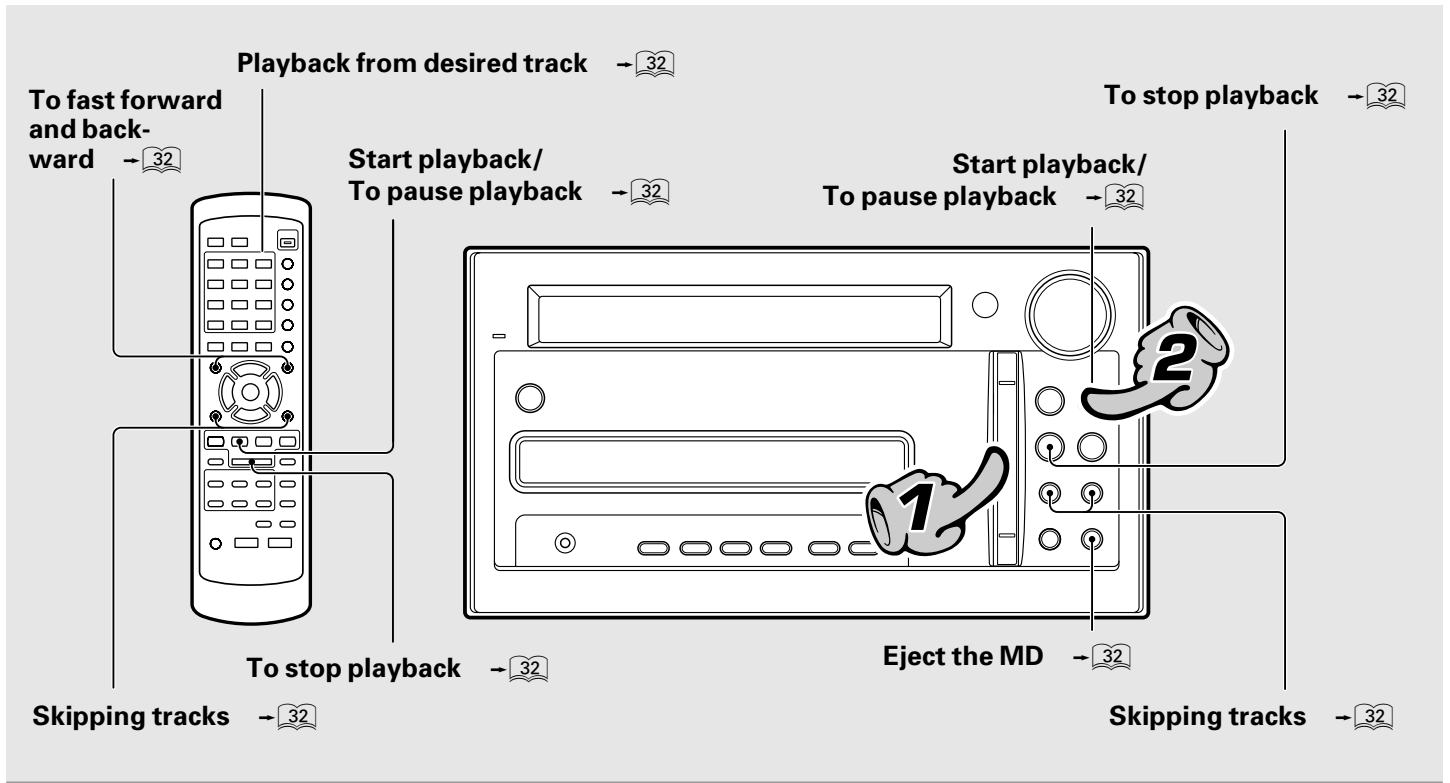
(When pressed during stop)

Scrolled disc title display

(When pressed during play)

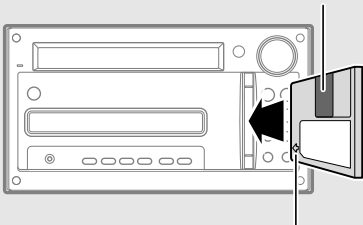
Scrolled track title display

When a disc is placed into the MD recorder in advance, the unit will be switched on automatically by pressing the MD ►/|| key, and playback will start. Tracks in MD are played according to the record mode used in recording (MDLP2 recording, etc.)



## 1. Load a MD.

Insert with the shutter facing upward



In the direction of the arrow

Insert the MD correctly into the slot of this unit.

- When a title has been recorded for the disc, the title is displayed.

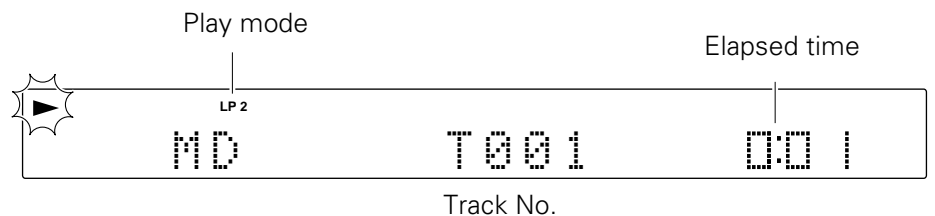
The display changes.



The MD cannot be loaded or ejected while the unit is in standby mode. Do not force load a MD in standby mode, otherwise malfunction will result.

## 2. Start playback.

- If the MD being played contains recording of track titles, the track title is displayed at the beginning of each track during playback.

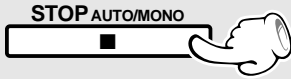


## Start playback/ To pause playback



- Each press pauses and plays the MD alternately.

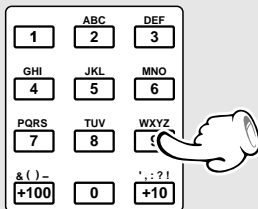
## To stop playback



## Playback from desired track

Remote control unit only

Select the desired track No.



Press the numeric keys as shown below....

To select track No. 23

..... +10, +10, 3

To select track No. 40

..... +10, +10, +10, +10, 0

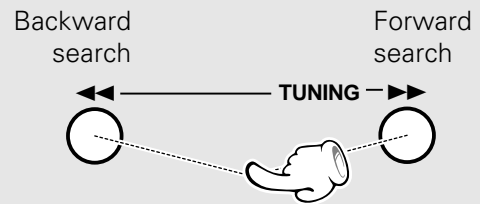
To select track No. 213

..... +100, +100, +10, 3

- When a track number which does not exist in the disc is selected while "READING" is blinking, the last track in the disc will be played back.

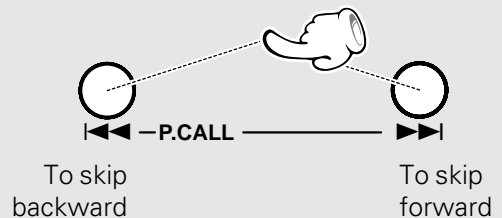
## To fast forward and backward

Remote control unit only



- Press and hold one of the keys during playback. Normal playback resumes at the point where the key is released.

## Skipping tracks



- The track in the direction of the key pressed is skipped, and the selected track will be played from the beginning.
- When the I◀◀ key is pressed once during playback, the track being played will be played from the beginning. To skip further to a track located before the current track, press the I◀◀ key quickly.
- Tracks can be skipped by pressing the I◀◀ or ▶▶I key even when the MD is in stop mode. In this case, playback starts automatically from the point reached by skipping.

## Eject the MD

Main unit only



## MDLP modes

MD media recorded with an MD recorder incorporating the stereo 2x-length (or 4x-length) recording/playback function based on ATRAC3, which is a new audio compression method in compliance with the MD standard, or MD media recorded using ATRAC3 (playback-only MD) carry the MDLP logo on them.



### Time display for MD recorder

Each press of the TIME/SPACE key changes the displayed contents.

Remote control unit only



- Only time information ①, ② and ⑤ can be displayed during single-track repeated playback or random playback.
- In the program mode, display ③ shows the elapsed time of the entire program and display ④ shows the remaining time of the entire program.
- When the displayed time is 324 minutes or more, the display shows "-- : --".

- ① Elapsed time of track being played  
T001 1:30
- ② Remaining time of track being played  
T001 - 12:30
- ③ Elapsed time of entire disc  
("TOTAL" lights up)  
TOTAL  
T001 28:50
- ④ Remaining time on entire disc  
("TOTAL" lights up)  
TOTAL  
T001 - 45:50
- ⑤ Remaining recording time of MD.  
("REMAIN" lights up)  
REMAIN  
T001 28:10

### Title display of MD recorder

When a title is too long to be accommodated in the display, press the DISPLAY/CHARAC. key to scroll the displayed title so that the previously hidden characters be viewed.

Remote control unit only

(Press twice)



(When pressed during stop or play)

- ① Title display  
BACH:Vivine
- ② Track No. display  
MD T007

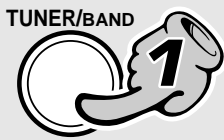
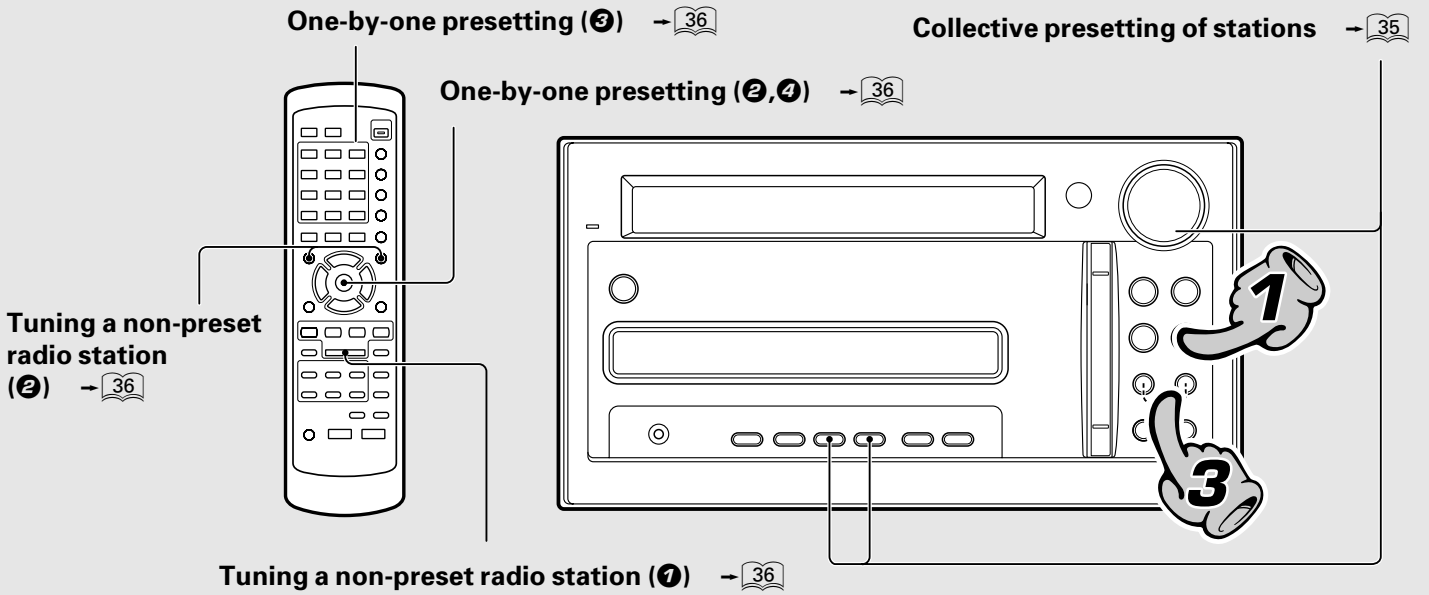
(When pressed during recording onto MD)

- ① Display of input source being recorded.  
CD T01 001
- ② Remaining recording time of MD.  
("REMAIN" lights up)  
REMAIN  
MD REC T001 180:15
- ③ Remaining recording time of MD and elapsed time of track being played of CD  
<MD>180:15R 001



The remaining recording time display is variable depending on the MD recording mode setting.

- When no track name (track title) and no disc name (disc title) has been recorded, "NO TITLE" is displayed.
- "BLANK DISC" is displayed when not even one track has been recorded.



### 1. Select the tuner input.

Each press of the TUNER/BAND key switches the band as follows.

- ▣ FM
- ▣ AM

### 2. Preset a radio station in memory.

**Collective presetting of stations** → 35

Follow the procedure in "Collective presetting of stations" to preset automatically the tunable radio stations in your area.

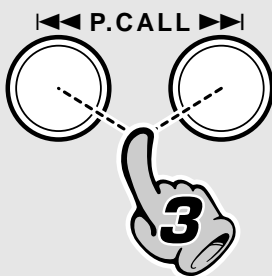
- Once stations are stored by auto presetting, the present procedure is not required from the next time, unless you move of house or re-execute presetting of all tunable stations.

**One-by-one presetting (Manual preset)** → 36

A station can also be tuned even when it is not preset. For details, read "Tuning a non-preset radio station (Auto tuning, Manual tuning)".

### 3. Tuning (Preset Call)

- If radio stations have already been stored with auto presetting or manual presetting, select a station using the ◀◀, ▶▶ key. Each press of the same key switches the preset stations in sequence.

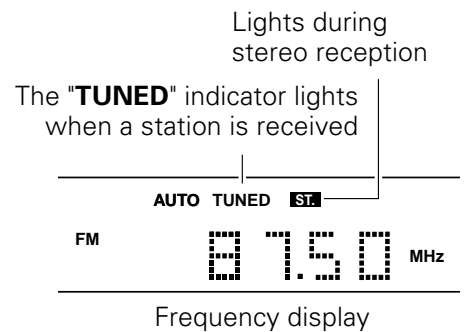


**When ▶▶ is pressed :**

1 → 2 → 3 ..... 38 → 39 → 40 → 1 .....

**When ◀◀ is pressed :**

40 → 39 → 38 ..... 3 → 2 → 1 → 40 .....



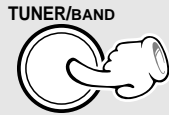
- To select a preset station from the remote, use the ◀◀, ▶▶ key or numeric keys.

Basic section

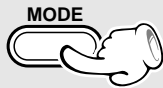
## Collective presetting of stations

Main unit only

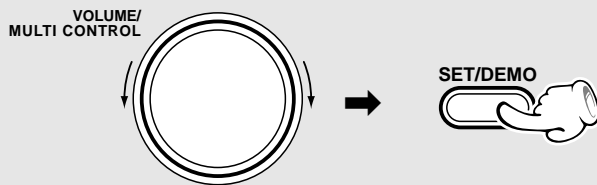
### ① Receive a broadcast.



### ② Press of the MODE key.



### ③ Turn the VOLUME/MULTI CONTROL knob to select "AUTO PRESET", then press the SET/DEMO key.



### Up to 40 stations can be memorized.

- The previously preset frequencies are overwritten.
- When there are many stations and the intended station has not been preset, please also use "**One-by-one presetting (Manual preset)**". → [36](#)

AUTO PRESET

### Tuning a non-preset radio station (Auto tuning, Manual tuning)

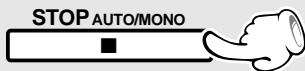
Select the tuning mode according to the radio wave receiving condition.

When the receiving condition is good: **AUTO mode**

When it is poor due to weak radio waves: **MANUAL mode**

Remote control unit only

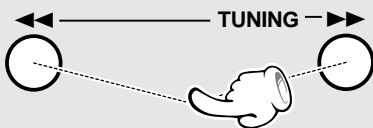
1 Select the AUTO or MANUAL mode.



2 Tune a station.

To decrease frequency

To increase frequency



- In MANUAL mode, FM stations are received in monaural.

Each press alternates the mode.

- ① "AUTO" : "AUTO" lit
- ② "MANUAL" : "AUTO" not lit

- Normally, use the **AUTO** (Auto tuning, stereo reception) mode.

**Auto tuning mode :**

Each press receives a new station.

**Manual tuning mode :**

Press repeatedly until the desired station is received.

### One-by-one presetting (Manual preset)

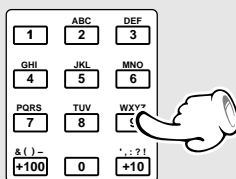
Remote control unit only

1 Perform the procedure in "Tuning a non-preset radio station (Auto tuning, Manual tuning)" to receive the station to be preset.

2 Press the ENTER key during reception.



3 Select the desired preset number between 1 and 40 using the numeric keys on the remote control unit.



4 Press the ENTER key again.



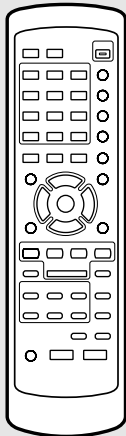
Press the numeric keys as shown below....

- 12..... +10, 2
- 20..... +10, +10, 0

- Repeat steps 1~4 to preset other stations.
- If several stations are preset under the same number, the previous memory is replaced with the latest memory contents.

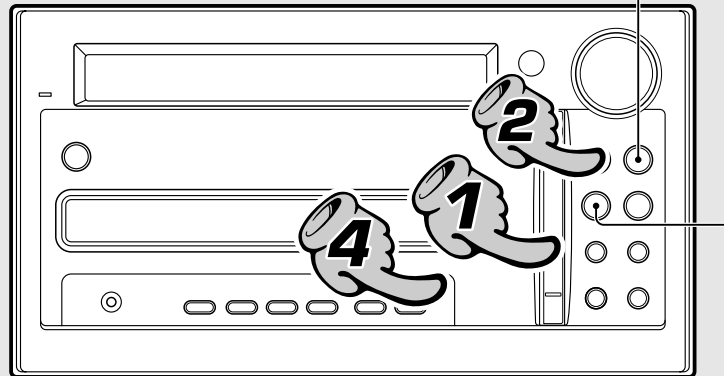
Basic section



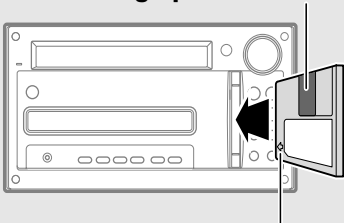


Pause the recording

Stop the recording



Insert with the shutter  
facing upward



In the direction of the arrow

## 1. Make the preparations for recording.

- ❶ Open the write protect tab of the MD to make it recordable.  
→ 95
- ❷ Load the MD.

The MD cannot be loaded or ejected while the unit is in standby mode. Do not force load a MD in standby mode, otherwise malfunction will result.

Select an input source other  
than "MD"

**Example:**  
To select the DVD/CD input



## 2. Select the source to be recorded.

**DVD (MP3, VCD, CD) :** Press the **DVD/CD ►/||** key.

**TUNER (Broadcasts) :** Press the **TUNER/BAND** key.

**AUX (Analog) :**

Press the **AUX** key repeatedly until "AUX" is displayed.

**DIGITAL AUX (Digital) :**

Press the **AUX** key repeatedly until "DIGITAL AUX" is displayed.

CD T 0 1

The character information display shows the recording input source.

- When **DVD/CD ►/||** or **MD ►/||** is selected, playback will start when a disc already has been inserted. Press the **STOP■/TUNING MODE** key to stop it.
- Recording of digital audio is possible only when the "CD" or "DIGITAL AUX" source is selected. Also, even with these sources, the digital audio output may be unable to be recorded due to the restriction by SCMS. (It is only the analog audio that can be recorded when recording DVD Video, VCD or MP3 file playback on MD.) → 103

**Even when the CD contains the recording of CD-TEXT data, the data is not copied onto the MD.**

### 3. Prepare the recording source.

**DVD (MP3, VCD, CD)** : Put the CD player in record-pause mode at the beginning of the track to be recorded.

**TUNER (Broadcasts)** : Receive a station.

**AUX (Analog)** : Make the source component ready for reception or playback.

**DIGITAL AUX (Digital)** : Make the source component ready for reception or playback.

- The LP recording modes enable long-hour recording for up to 4 times the standard recording time of each MD. Select the recording mode as required. (**REC MODE**) → [41](#)
- The recording format can be selected according to the input source as required. (**REC INPUT**) → [40](#)
- The input level of an external input source can be selected as required. (**REC LEVEL**) (**AUX INPUT**) → [40](#) → [87](#)
- When recording an MD, the track number assignment can be selected as required. (**TRACK MARK**) → [42](#)

### 4. Start recording.



- 1 Press the MD REC key (the unit enters record-pause mode).
- 2 When the preparation is complete, press the MD REC key again.

- When the input source is a DVD VIDEO, MP 3, VCD or CD, the MD recording starts at the same time as the **DVD/CD ►/||** key is pressed. (Synchronized recording)

- 3 Start playback of the source.

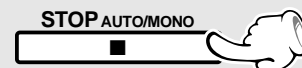
- When recording from a CD or MD, digital recording of certain discs may be inhibited by the SCMS. With such a disc, record the ANALOG input signal. → [40](#) → [103](#)

#### Pause the recording



- Press the key again to resume recording. At this time, the track number is incremented by "1".
- Recording can also be started by pressing the **MD REC** key.

#### Stop the recording



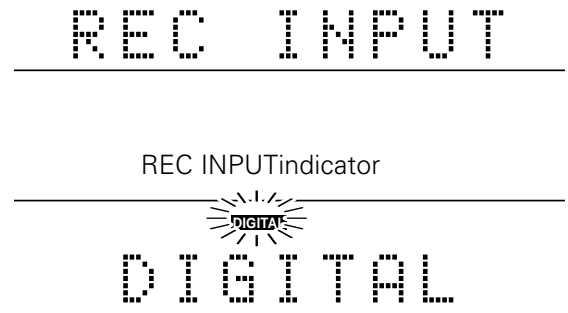
- When the key is pressed during recording of CD, the CD player is also stopped. When the key is pressed during recording of tape, the tape deck is also stopped. (Sync function)

**Do not turn power off or apply shock or impact while "WRITING" is displayed. If the power cord is unplugged before "WRITING" disappears, the recorded or edited data will be lost.**

### Selecting the recording input signal (REC INPUT)

With recording of CD playback, either the digital output or analog output can be recorded as required. (In recording of a disc source other than CD on MD, the recording source is set automatically to the "ANALOG" audio.)

- ❶ Press the DVD/CD ►/|| key
- ❷ Press the MODE key
- ❸ Turn the VOLUME/MULTI CONTROL knob to select "REC INPUT", then press the SET/DEMO key.
- ❹ Turn the VOLUME/MULTI CONTROL knob to select "DIGITAL" or "ANALOG", then press the SET/DEMO key.

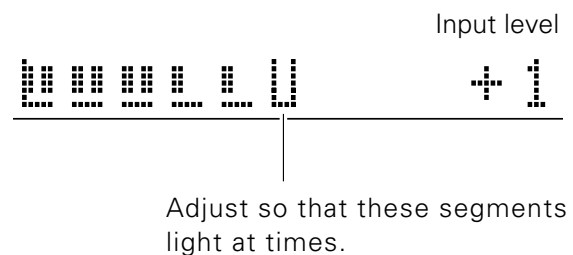


### Adjust the recording level (REC LEVEL)

The level for recording the digital input signal from an auxiliary source component such as a satellite tuner or MD recorder can be adjusted.

(The recording level of the audio selected in "Selecting the recording input signal (REC INPUT)" can be adjusted.)

- ❶ Press the MODE key
- ❷ Turn the VOLUME/MULTI CONTROL knob to select "REC LEVEL", then press the SET/DEMO key.
- ❸ Adjust the recording level (-∞~ +12) by rotating the VOLUME/MULTI CONTROL knob.
- ❹ Press the SET/DEMO key to set the selection.



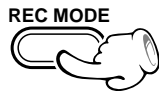


## Long-hour recording modes (REC MODE)

MD can be recorded in the desired recording modes (REC MODE) as required. (In stop mode only)

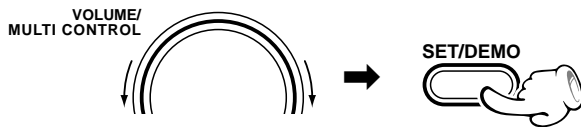
- ① Select the "MD" input.
- ② If the "PGM" indicator is lit, turn it off by pressing the PGM key in stop mode to cancel the program mode.

- ③ Press the REC MODE key.



- ④ When "LP2" or "LP4" is selected in step ③, press the SET/DEMO key.

- ⑤ Turn the VOLUME/MULTI CONTROL knob to select "LP : STAMP on" or "LP : STAMPOff", then press the SET/ DEMO key.



Each press switch the modes as follows.

- ① "STEREO" : Stereo recording mode
- ② "LP2" : Stereo LP2 recording mode
- ③ "LP4" : Stereo LP4 recording mode
- ④ "MONO" : Monaural recording mode



REC MODE indicator

Turning the knob switches the display contents.

- ① "LP: STAMP on" : Characters "LP:" are input at the beginning of each track title.
- ② "LP: STAMPOff" : Characters "LP:" are not input at the beginning of each track title.

REC MODE (Recording mode)	STEREO (Stereo recording mode)	MONO (Monaural recording mode)	LP2 (Stereo LP2 recording mode)	LP4 (Stereo LP4 recording mode)
REC MODE indicator	Goes off	MONO	LP2	LP4

\* In stop and record modes, one of the REC MODE indicators lights to show the set recording mode. In play mode, the indicator showing the recording mode of the track being played lights.

**Stereo LP modes (LP2, LP4) :** The stereo LP modes enables long hours of recording by adopting higher digital audio compression rates than the stereo and monaural recording modes. The LP4 mode features even longer recording time by adopting even higher compression rate than the LP2 mode.

**If an MD recorded in the LP2 or LP4 mode is played back on a recorder/player incompatible with LP2/LP4 :** When a track recorded in stereo LP2 or LP4 mode is played back on an MDLP-incompatible recorder/player, the disc can be played but no audio will be reproduced. When an MD containing tracks recorded in stereo LP2 and LP4 modes and those recorded in the STEREO and MONO modes is played back, audio will be reproduced only with the tracks recorded in STEREO and MONO modes. When playing such an MD, be careful not to increase the volume setting during playback with no audio reproduction. Otherwise, a very high volume will be reproduced when playback of a track recorded in the STEREO or MONO mode starts.

**Stamping (STAMP) :** This unit has the stamping function, which attaches stamp characters "LP:" at the beginning of each track title to facilitate identification of tracks recorded in the LP2 or LP4 mode. "LP:" can be displayed as a part of each track title only when the stamping function is set to on.

Note that "LP:" is displayed as a part of track title only when a track is recorded in stereo LP2 or LP4 mode is played on an MDLP-incompatible recorder/player.

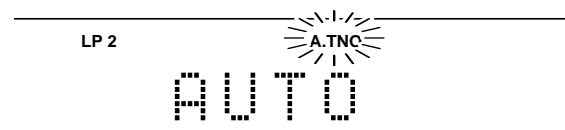
This unit allows you to select the STAMP function on ("LP:" attached to the title) or off ("LP:" not attached to the title).audio reproduction. Otherwise, a very high volume will be reproduced when playback of a track recorded in the STEREO or MONO mode starts.

### Track number marking in MD recording (TRACK MARK)

When you press the set key while "TRACK MARK" is displayed, a menu for selecting whether the track numbers are to be marked automatically during recording (AUTO) or marked manually by yourself during or after recording (MANUAL). Select either option with the volume/multi-control knob and press the set key. The initial setting is "AUTO". The track numbers are used when playing back the recording, searching for a track or programming tracks.

- ① Press the MODE key.
- ② Turn the VOLUME/MULTI CONTROL knob to select "TRACK MARK", then press the SET/DEMO key.
- ③ Turn the VOLUME/MULTI CONTROL knob to select "AUTO" or "MANUAL", then press the SET/DEMO key.

TRACK MARK



TRACK MARK indicator

#### AUTO :

Usually, use this position for recording.

When recording audio from a DVD (MP3 or VCD) or recording analog audio from a CD, the MD track number increments as the CD track changes. When an external input is recorded, the MD track also increments by "1" at the moment the input signal which has been below a certain level for more than 2 seconds increases above the level. (When tuner reception is recorded, the track number may sometimes fail to increment due to signal noise, etc.). When recording music containing a continuous section with a very low level, for example when recording classic music, the track number may be incremented by "1" after such a section. In this case, cancel the track number later. It is recommended to use the MANUAL mode when recording such a kind of music. (by executing the COMBINE operation → 76).

During digital recording of CD, the track number is incremented automatically by "1" according to the data contained in the digital information. The no-sound blank is not detected.

When the CD track number is increased during manual search of a CD, the track number recorded on the MD may sometimes fail to be incremented.

A no sound track may sometimes created at the moment the played disc stops.

#### MANUAL:

With this setting, the MD track number is not incremented automatically during recording. Track numbers can be marked either during editing (by pressing the TRACK EDIT key) or after recording (by executing the DIVIDE operation → 74).

This setting is convenient when recording a CD which has been recorded in live or which contains very low-level sound such as a classical music CD.



### ***Sampling frequency***

Three types of digital signals are usually used according to the sampling frequencies. The sampling frequencies vary depending on the types of digital equipment as shown below.

32 kHz : A mode broadcasting of BS tuner, etc.

44.1 kHz : CD, MD, etc.

48 kHz : CS tuner, B mode broadcasting of BS tuner, etc.

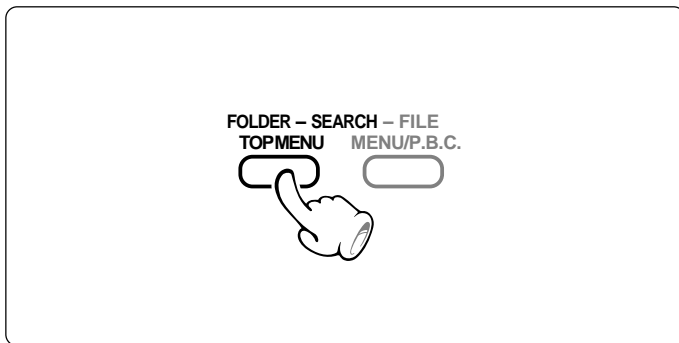
In general, high-quality recording based on digital signal transmission is not possible unless the source and recorder components use the same sampling frequency. As this unit has a built-in sampling rate converter, digital signals with 32 kHz and 48 kHz can be recorded by conversion to the MD sampling frequency (44.1 kHz).

**Menu playback of DVD** DVD

When a DVD containing the recording of the top menu or menu is played, the top menu or menu is displayed.

These menus allow you to select the position you want to play easily based on an interactive method. The following operation procedure is the basic procedure. The functions vary depending on certain softwares.

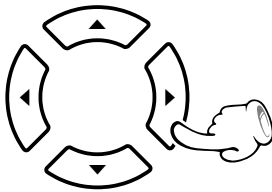
Select the "DVD/CD" input. → 24

**1** Press the **TOP MENU/FOLDER SEARCH** key.

- When the **TOP MENU/FOLDER SEARCH** key is pressed again while the top menu is displayed during playback, the played position returns to the position where the key was pressed for the first time and playback restarts from there.
- When the **MENU/P.B.C./FILE SEARCH** key is pressed, the menu is displayed. The operation is the same as that of the top menu.

**2** Select the desired item from the menu screen.

**1** Press a cursor key (◀ ▶ ▲ ▼) or numeric keys to select the scene to be played.



**2** Press the **ENTER** key to start playback.



To display other menus, perform steps **1** and **2** above.



- Step **2** - **2** is not required if numeric keys are used to select the item.
- When the menu has a hierarchical structure, the menu at the lower level appears.

## Menu playback of P.B.C.-compatible VCD VCD

When a P.B.C. (PlayBack Control) capable VCD is played with P.B.C. on, the menu is displayed. Perform operation according to the procedure indicated by the menu. (For details on the operation method and control keys, refer to the manual provided with the played software.)

### Main control keys used in VCD playback, and examples of indications

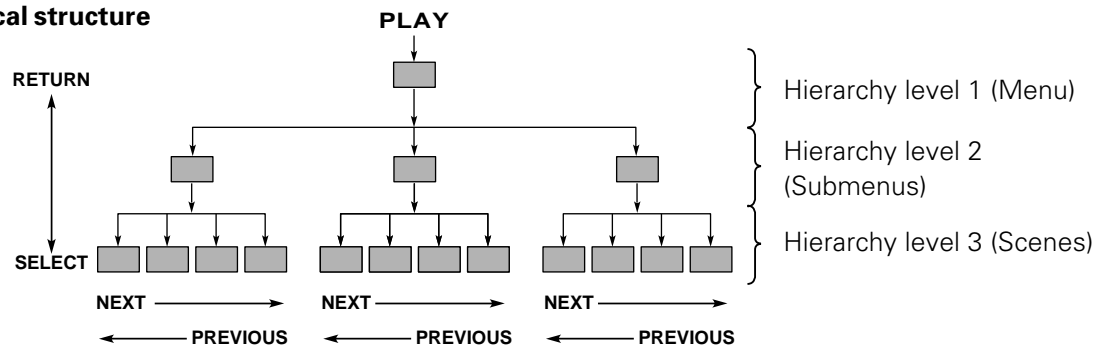
Indication on software jacket	ENTER	RETURN	◀◀	▶▶
Control key on the player	▶ (Select)	⌂ (Return)	◀◀ (Previous)	▶▶ (Next)

- The indication on the jacket is variable depending on the software.

### Hierarchical structure of VCD menus :

When a P.B.C.-compatible VCD containing menu is played and an item is selected in the displayed menu, a menu with more detailed items may sometimes be displayed. Such a structure in which multiple menus are distributed in different levels and interconnected is referred to as the hierarchical structure. In this structure, the target scene can be reached by repeatedly selecting items in multiple menus.

#### Example of hierarchical structure



#### To advance in the hierarchy :

When an item is selected in the menu using the ENTER (Select) key or numeric keys, you can advance to the menu at the level immediately below the current level. When the selected item is a [scene], the scene will be played back.

- When there are multiple menus (scenes) in a hierarchy level, they can be switched over by pressing the ◀◀ (Previous) key or ▶▶ (Next) key.

#### To return in the hierarchy :

You can return to the level immediately above the current level every time you press the RETURN key.

### Switching P.B.C. On and Off

- ➊ Insert the desired VCD in the DVD/CD player.
- ➋ Select the "DVD/CD" input.
- ➌ If the DVD/CD player is playing a disc, stop it.
- ➍ Press the MENU/P.B.C./FILE SEARCH key.



#### Each press switch the modes as follows.

**P.B.C. on:** The TV screen shows "P.B.C. On" and the P.B.C.-compatible VCD is played according to P.B.C.

**P.B.C. off:** The TV screen shows "P.B.C. Off" and the P.B.C.-compatible VCD is played in normal playback without P.B.C.

## ***MP3 that can be played back with this equipment***

**This unit is capable of playing back the music files recorded in the MP3 audio compression format on CD-R/RW discs. This unit may also be incapable of playing certain CD-R/RW discs depending on their properties, recording conditions, etc.**

- Please set up the transfer bit rate setting for the compression software when compressing MP3 files as follows:

**MP3 file: 128kbps recommended (32 kbps-320 kbps)**

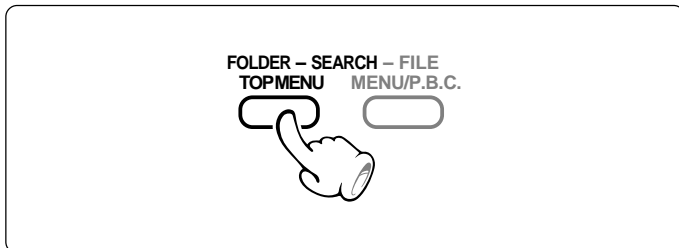
- This unit is compatible with 32kHz, 44.1kHz (recommended) and 48 kHz sampling frequencies.
- A maximum of 999 folders or a maximum of 999 files can be stored on a single media.
- There are cases where it is not possible to save folders in the desired sequence depending on the software being used.
- Usable formats : ISO 9660 level 1 (excluding expanded formats)
- This unit can play back only the closed sessions.
- This unit is compatible with multi-session discs.

## Searching a desired folder/file by its title MP3

MP3 files can be searched based on the title of the file or the folder containing the file.

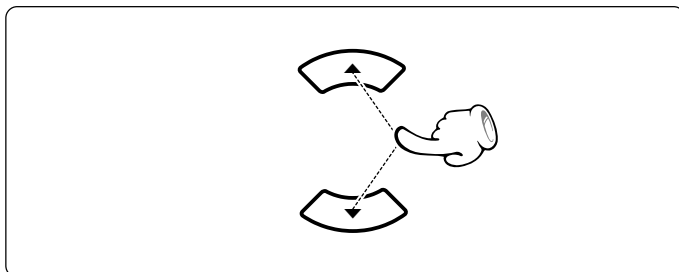
Select the "DVD/CD" input →  24

### 1 Press the TOP MENU/FOLDER SEARCH key.



- If file search is required, press the **MENU/P.B.C./FILE SEARCH** key instead.

### 2 Press the cursor up/down key (▲ ▼) to select the title of the desired folder or file.

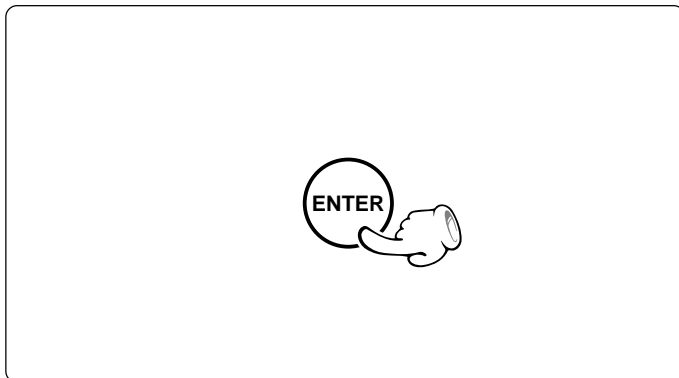


BITTERPI



 To abort operation, press the TOP MENU/FOLDER SEARCH key again.

### 3 Start playback.



- In folder search, playback begins with the file with the minimum file number in the searched folder.
- In file search, playback begins with the searched file.

## "MAIN" Setting

The setups according to the connected TV, viewing restriction, OSD position, on-screen messages and IPB display can be set.

### When "MAIN" is selected in "SET UP MENU":

#### "Rating" Setting

Sets the viewing restriction of DVD VIDEO. (This functions only with DVD VIDEO discs compatible with viewing restriction.)

#### "TV Aspect" Setting

Sets the picture aspect ratio according to that of the connected TV.

#### "TV Mode" Setting

This setting is required when the aspect ratio of the connected TV is 4:3.

#### "OSD Position" Setting

Sets the position of the OSD (On-Screen Display).

#### "On Screen Message" Setting

Switches the on-screen message on/off.

#### "IPB Display" Setting

Switches the IPB display on/off.

Select the "DVD/CD" input. → 24

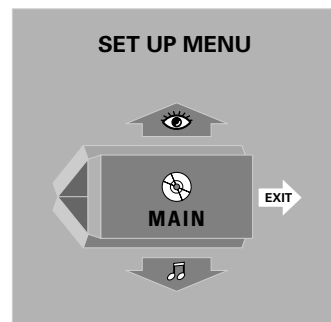
### 1 Select "SET UP MENU MAIN".

Press in stop mode

#### 1 Press the SET UP key.



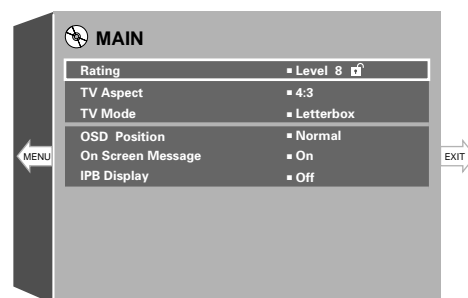
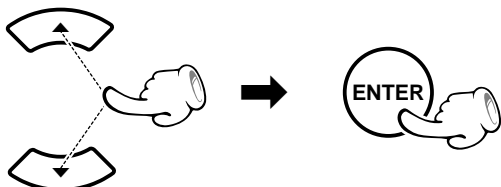
#### 2 Press the ENTER key.



- Press the **RETURN** key or cursor (▶) key while the "SET UP MENU" menu is displayed to exit from the setup mode.
- If the resume function is active, pressing the **SET UP** key cancels it.

### 2 Select the item to be set.

Press either cursor (▲ ▼) key to select the item to be set, then press the ENTER key.

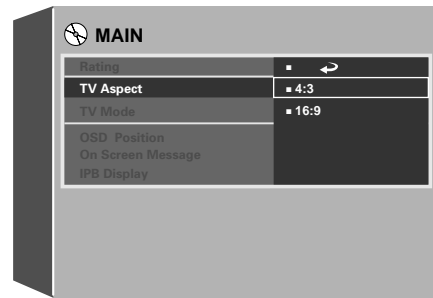
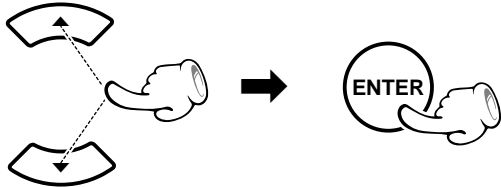


- Press the cursor (▶) key while a setting menu is displayed to exit from the setup mode. (Pressing the **RETURN** key or cursor (◀) key returns to the "SET UP MENU".



### 3 Change the content of the selected item.

Press either cursor key (▲ ▼) to change the setting, then press the ENTER key.



- Select "↩" and press the **ENTER** key to return to the setting menu. (Pressing the **RETURN** key or cursor (◀) key also returns to the previous setting menu.)

Function items	Setting items
<p><b>"Rating"</b>                      (When you attempt to change the rating level, the password input screen will be displayed. → 50)</p>	<p><b>"8 No Limit"</b> : Select to enable playback of any DVD discs whether their targets are adults, general public or children.</p> <p><b>"7" to "1"</b> : When DVD software containing the recording of restriction level (an adult-oriented disc or a disc including violence), playback is restricted in accordance with the restriction level.</p> <p><b>"0 Lock All"</b> : Select to inhibit any DVD. Use this setting for example when you want to inhibit playback of an adult-oriented DVD which does not contain the restriction information.</p> <p><b>"Change Password"</b> : Select to change the viewing restriction password which has been registered before. (This item cannot be selected unless a password has already been registered.)</p> <p><b>"Temporary Unlocked"</b> : Select to disable temporarily the viewing restriction which has been set previously. (This item cannot be selected unless a password has been set previously.)</p>
<p><b>"TV Aspect"</b></p>	<p><b>"4 : 3"</b> : Select when the connected TV uses the conventional aspect ratio of 4:3.</p> <p><b>"16 : 9"</b> : Select when the connected TV uses the wide-screen aspect ratio of 16:9. Widescreen video will be reproduced in full screen. (Set the screen mode of the TV to the full mode.)</p>
<p><b>"TV Mode"</b></p>	<p><b>"Pan &amp; Scan"</b> : Select to play widescreen software with pan &amp; scan specification on a pan &amp; scan screen (screen with the left and/or right edges cut off). When widescreen software without pan &amp; scan specification is played with this setting, it will be reproduced in the Letterbox screen mode.</p> <p><b>"Letterbox"</b> : Widescreen software without pan &amp; scan specification is reproduced in the Letterbox screen (screen with black bands on the top and bottom).</p>
<p><b>"OSD Position"</b></p>	<p><b>"Normal"</b> : Select to display the OSD and messages on the top of the TV screen. Usually select this setting.</p> <p><b>"Cinema"</b> : Select to display the OSD and messages on the lower part of the TV screen. Select this setting when the OSD or messages are deviated outside the TV screen.</p>

Continued on next page

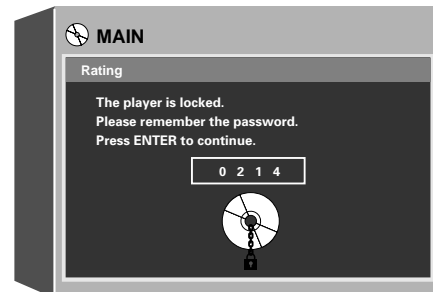
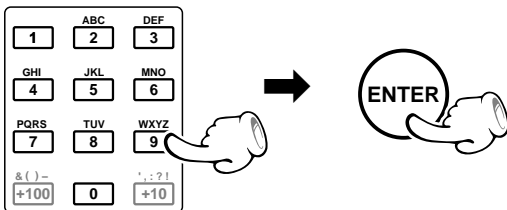
Function items	Setting items
"On Screen Message"	"On" : Select to display on-screen messages. "Off" : Select to not to display on-screen messages.
"IPB Display"	"On" : Select to view the IPB display. "Off" : Select to not to view the IPB display.

If the power is turned off while the setup screen remains displayed after setting changes, the changes will be invalid. Be sure to close the setup screen before turning power off.

## Input of Password

When no password has been set previously :

- Input the desired password with numeric keys, then press the ENTER key.

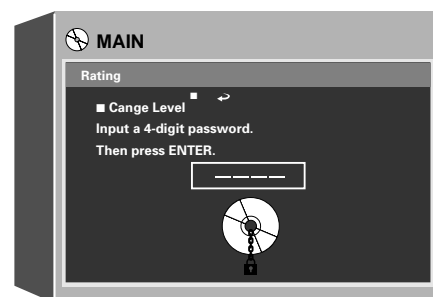
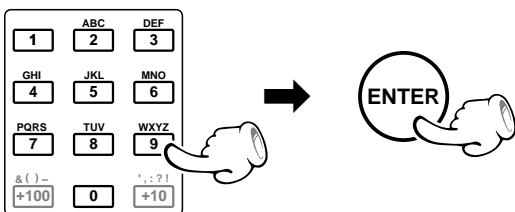


- Note the password in a memo and retain it in a safe place before pressing the ENTER key.

- The password input screen changes to the confirmation screen, and the input password is shown on the TV screen.
- The password is required when setting the viewing restriction.

When a password has already been set :

Input the desired password with numeric keys, then press the ENTER key.



If you select "Change Password", the screen for input of the new password will open. Input the new password using the numeric keys and press the ENTER key. When the password confirmation screen appears, note the password in a memo and retain it in a safe place then pressing the ENTER key.

## "SOUND" Setting

"SOUND" is to be selected when you want to set the audio output method when system components are connected using the digital audio output connector of the player. Also select "SOUND" to set audio output during DVD or VCD search and dynamic range control function.

### When "SOUND" is selected in "SET UP MENU":

#### "Digital Audio PCM Down Conversion" Setting

Switches on/off the down-sampling conversion for the digital signal output with a high sampling rate.

#### "Digital Audio Dolby Digital" Setting

Sets the Dolby Digital output.

#### "Digital Audio DTS" Setting

Sets the DTS output.

#### "Digital Audio MPEG" Setting

Sets the MPEG output.

#### "Audio During Search" Setting

Switches on/off the audio during search.

#### "Dynamic Range Control" Setting

Switches the dynamic range control function.

Select the "DVD/CD" input. → 24

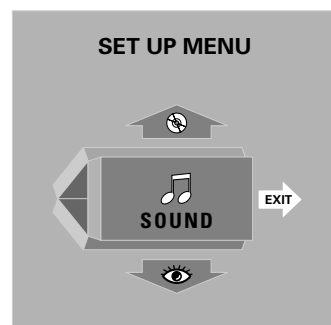
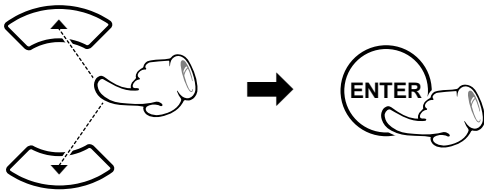
### 1 Select "SET UP MENU SOUND".

Press in stop mode

#### 1 Press the SET UP key.



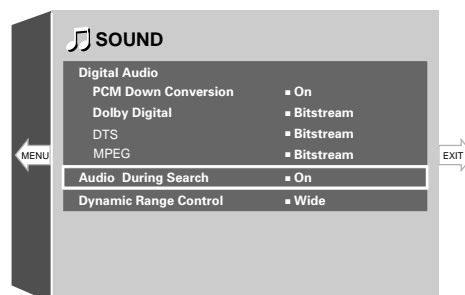
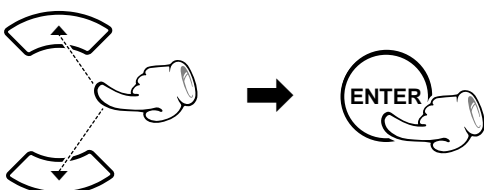
#### 2 Press either cursor (▲ ▼) key to select "SET UP MENU SOUND", then press the ENTER key.



- Press the **RETURN** key or cursor (▶) key while the "SET UP MENU" menu is displayed to exit from the setup mode.

### 2 Select the item to be set.

Press either cursor (▲ ▼) key to select the item to be set, then press the ENTER key.

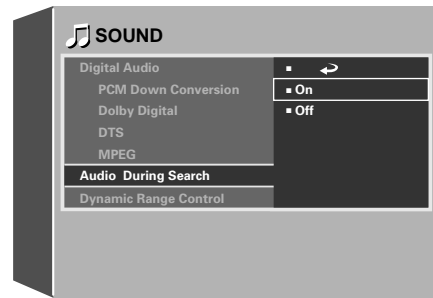
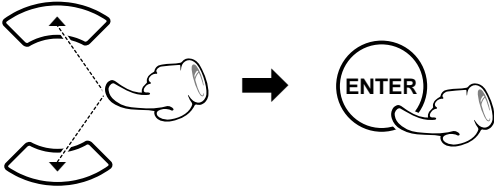


- Press the cursor (▶) key while a setting menu is displayed to exit from the setup mode. (Pressing the **RETURN** key or cursor (◀) key returns to the "SET UP MENU".

*Continued on next page*

### 3 Change the content of the selected item.

Press either cursor key (▲ ▼) to change the setting, then press the ENTER key.



- Select "↩" and press the **ENTER** key to return to the setting menu. (Pressing the **RETURN** key or cursor (◀) key also returns to the previous setting menu.)

Function items	Setting items
"Digital Audio PCM Down Conversion"	<p>"On" : Select to down-convert the signal to 44.1 kHz/16-bit PCM signal. Select this setting when the connected AV amplifier is incompatible with 96 kHz digital input.</p> <ul style="list-style-type: none"> <li>● The analog output signals are also converted accordingly.</li> </ul> <p>"Off" : Select to skip down conversion. Select this setting when the connected AV amplifier is compatible with 96 kHz digital input. However, if the disc inhibits the 96 kHz digital output, the signal is down-converted even when this setting is selected.</p>
"Digital Audio Dolby Digital" *1	<p>"Bitstream" : The signal is output as a bitstream. Select when connecting a component containing Dolby Digital decoder.</p> <p>"PCM" : The signal is converted onto 48 kHz (2ch.) PCM signal before being output. Select when connecting a component without Dolby Digital decoder.</p>
"Digital Audio DTS" *2	<p>"Bitstream" : The signal is output as a bitstream. Select when connecting a component containing DTS decoder.</p> <p>"Off" : No digital signal is output.</p>
"Digital Audio MPEG"	<p>"Bitstream" : The signal is output as a bitstream. Select when connecting a component containing MPEG decoder.</p> <p>"PCM" : The signal is converted onto 48 kHz (2ch.) PCM signal before being output. Select when connecting a component without MPEG decoder.</p>

**No digital signal is output when an MP3 file is played back.**

\*1 Set to "**PCM**" when connecting the equipment other than a Dolby Digital decoder. If this item is set to "**Bitstream**", loud noise may be produced and speakers may be damaged.

\*2 Noise may interfere with the speaker output if the player is connected to a piece of equipment which does not incorporate an DTS decoder. Never connect the player to equipment without a built-in DTS decoder.

Function items	Setting items
<b>"Audio During Search"</b>	<b>"On"</b> : Select to output audio during search. <b>"Off"</b> : Select to mute audio during search.
<b>"Dynamic Range Control"</b>	<b>"Wide"</b> : Select to reproduced the audio at the level recorded in the disc. <b>"Normal"</b> : Select to reduce the difference between the maximum and minimum volume levels. <b>"Midnight"</b> : Select to further reduce the difference between the maximum and minimum volume levels. This setting is suitable for low-level listening in late at night, etc.

**If the power is turned off while the setup screen remains displayed after setting changes, the changes will be invalid. Be sure to close the setup screen before turning power off.**

## "VISUAL" Setting

Select "VISUAL" when you want to change the language used to display the menu screens, language use in menus on the disc, audio language, subtitle language, etc. (If the selected language is not used in a specific disc, the language specified as the priority language for the disc will be used.) Also select "VISUAL" to set the still mode and video format conversion system.

### When "VISUAL" is selected in "SET UP MENU":

#### "Player Menu Language" Setting

Sets the language used to display the menu screens of the player.

#### "Disc Menu Language" Setting

Sets the language used to display the menu screens of the disc.

#### "Audio Language" Setting

Sets the language of the disc audio.

#### "Subtitle Language" Setting

Sets the language of the disc subtitles.

#### "Still Mode" Setting

Reduces blur in still images.

#### "NTSC → PAL" Setting

Switches if the signal from an NTSC format disc is to be converted into PAL or not.

Select the "DVD/CD" input. → 

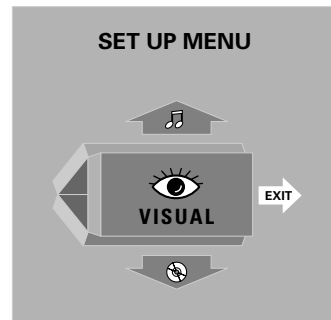
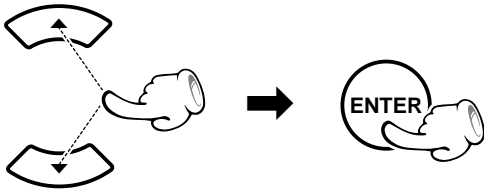
### 1 Select "SET UP MENU VISUAL".

Press in stop mode

#### ① Press the SET UP key.



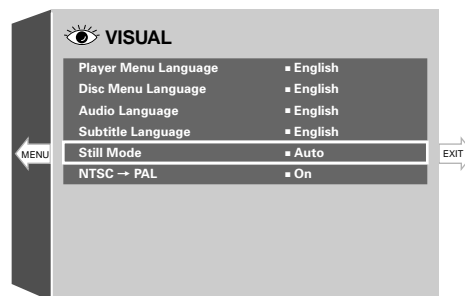
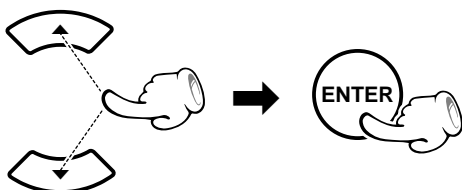
#### ② Press either cursor (▲ ▼) key to select "SET UP MENU VISUAL", then press the ENTER key.



- Press the **RETURN** key or cursor (▶) key while the "SET UP MENU" menu is displayed to exit from the setup mode.

### 2 Select the item to be set.

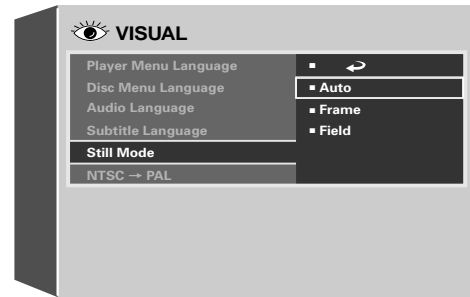
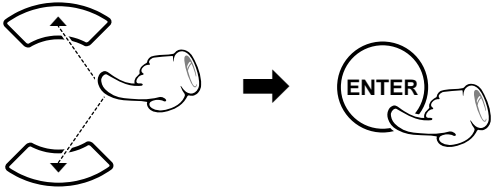
Press either cursor (▲ ▼) key to select the item to be set, then press the ENTER key.





- Press the cursor (▶) key while a setting menu is displayed to exit from the setup mode. (Pressing the **RETURN** key or cursor (◀) key returns to the "SET UP MENU".

### 3 Change the content of the selected item.


Press either cursor key (▲ ▼) to change the setting, then press the ENTER key.



- Select "↩" and press the **ENTER** key to return to the setting menu. (Pressing the **RETURN** key or cursor (◀) key also returns to the previous setting menu.)
- When "**Other** \_ \_ \_ \_" is selected, enter the code number with the numeric keys then press the **ENTER** key.

Function items	Setting items
"Player Menu Language"	<p>"English" : Select to display menus in English.</p> <p>"French" : Select to display menus in French.</p> <p>"Spanish" : Select to display menus in Spanish.</p> <p>"German" : Select to display menus in German.</p> <p>"Italian" : Select to display menus in Italian.</p> <p>"Japanese" : Select to display menus in Japanese.</p> <p>"Chinese" : Select to display menus in Chinese.</p> <p>"Taiwanese" : Select to display menus in traditional Chinese letters.</p>
"Disc Menu Language" (The languages displayed with this setting item are variable depending on country and area.)	<p>"English" : Select to display menus in English.</p> <p>"French" : Select to display menus in French.</p> <p>"Spanish" : Select to display menus in Spanish.</p> <p>"German" : Select to display menus in German.</p> <p>"Italian" : Select to display menus in Italian.</p> <p>"Chinese" : Select to display menus in Chinese.</p> <p>"Other - - - -" : Select to specify the language using a code No. listed in the "<b>Disc Language Code Table</b>". → </p>
"Audio Language" (The languages displayed with this setting item are variable depending on country and area.)	<p>"Original" : Select to reproduce audio in the language specified as the priority language by the disc.</p> <p>"English" : Select to reproduce audio in English.</p> <p>"French" : Select to reproduce audio in French.</p> <p>"Spanish" : Select to reproduce audio in Spanish.</p> <p>"German" : Select to reproduce audio in German.</p> <p>"Italian" : Select to reproduce audio in Italian.</p> <p>"Chinese" : Select to reproduce audio in Chinese.</p> <p>"Other - - - -" : Select to specify the language using a code No. listed in the "<b>Disc Language Code Table</b>". → </p>

Continued on next page

Function items	Setting items
<p><b>"Subtitle Language"</b> (The languages displayed with this setting item are variable depending on country and area.)</p>	<p><b>"Auto"</b> : The subtitle language is selected automatically according to the <b>"Audio language"</b> setting.</p> <p><b>Case in which subtitles are not displayed:</b> When the voices are reproduced in the language selected with <b>"Audio language"</b>, the subtitles are not displayed.</p> <p><b>Case in which subtitles are displayed:</b> When the voices cannot be reproduced in the language selected with <b>"Audio language"</b>, subtitles are displayed in the language selected with <b>"Audio language"</b>.</p> <p><b>"English"</b> : Select to display menus in English.  <b>"French"</b> : Select to display menus in French.  <b>"Spanish"</b> : Select to display menus in Spanish.  <b>"German"</b> : Select to display menus in German.  <b>"Italian"</b> : Select to display menus in Italian.  <b>"Chinese"</b> : Select to display menus in Chinese.  <b>"Other - - -"</b> : Select to specify the language using a code No. listed in the <b>"Disc Language Code Table"</b>. →  57</p>
<p><b>"Still Mode"</b></p>	<p><b>"Auto"</b> : Frame still and field still pictures are switched automatically. Usually select this setting.</p> <p><b>"Frame"</b> : Select to display still pictures in a higher picture quality. (As the field and still pictures are displayed alternately, the picture may blur accordingly.)</p> <p><b>"Field"</b> : Select to display still pictures without blur. (As the video information is halved compared to the frame pictures, the picture quality deteriorates accordingly.)</p>
<p><b>"NTSC → PAL"</b></p>	<p><b>"On"</b> : Select to enable conversion from NTSC to PAL.  <b>"Off"</b> : Select to disable conversion from NTSC to PAL.</p>

**If the power is turned off while the setup screen remains displayed after setting changes, the changes will be invalid. Be sure to close the setup screen before turning power off.**



**Disc Language Code Table**

Cord No.	Language
<b>6565</b>	Afar
<b>6566</b>	Abkhazian
<b>6570</b>	Afrikaans
<b>6577</b>	Amharic
<b>6582</b>	Arabic
<b>6583</b>	Assamese
<b>6588</b>	Aymara
<b>6590</b>	Azerbaijani
<b>6665</b>	Bashkir
<b>6669</b>	Byelorussian
<b>6671</b>	Bulgarian
<b>6672</b>	Bihari
<b>6678</b>	Bengali; Bangla
<b>6679</b>	Tibetan
<b>6682</b>	Breton
<b>6765</b>	Catalan
<b>6779</b>	Corsican
<b>6783</b>	Czech
<b>6789</b>	Welsh
<b>6865</b>	Danish
<b>6869</b>	German
<b>6890</b>	Bhutani
<b>6976</b>	Greek
<b>6978</b>	English
<b>6979</b>	Esperanto
<b>6983</b>	Spanish
<b>6984</b>	Estonian
<b>6985</b>	Basque
<b>7065</b>	Persian
<b>7073</b>	Finnish
<b>7074</b>	Fiji
<b>7079</b>	Faroese
<b>7082</b>	French
<b>7089</b>	Frisian
<b>7165</b>	Irish
<b>7168</b>	Scots Gaelic
<b>7176</b>	Galician
<b>7178</b>	Guarani
<b>7185</b>	Gujarati
<b>7265</b>	Hausa
<b>7273</b>	Hindi
<b>7282</b>	Croatian
<b>7285</b>	Hungarian
<b>7289</b>	Armenian
<b>7365</b>	Interlingua
<b>7378</b>	Indonesian
<b>7383</b>	Icelandic
<b>7384</b>	Italian
<b>7387</b>	Hebrew

Cord No.	Language
<b>7465</b>	Japanese
<b>7473</b>	Yiddish
<b>7487</b>	Javanese
<b>7565</b>	Geogian
<b>7575</b>	Kazakh
<b>7576</b>	Greenlandic
<b>7577</b>	Cambodian
<b>7578</b>	Kannada
<b>7579</b>	Korean
<b>7583</b>	Kashmiri
<b>7585</b>	Kurdish
<b>7589</b>	Kirghiz
<b>7665</b>	Latin
<b>7678</b>	Lingala
<b>7679</b>	Laothian
<b>7684</b>	Lithuanian
<b>7686</b>	Latvian; Lettish
<b>7771</b>	Malagasy
<b>7773</b>	Maori
<b>7775</b>	Macedonian
<b>7776</b>	Malayalam
<b>7778</b>	Mongolian
<b>7779</b>	Moldavian
<b>7782</b>	Marathi
<b>7783</b>	Malay
<b>7784</b>	Maltese
<b>7789</b>	Burmese
<b>7865</b>	Nauru
<b>7869</b>	Nepali
<b>7876</b>	Dutch
<b>7879</b>	Nowegian
<b>7982</b>	Oriya
<b>8065</b>	Punjabi
<b>8076</b>	Polish
<b>8083</b>	Pashto; Pushto
<b>8084</b>	Portuguese
<b>8185</b>	Quechua
<b>8277</b>	Rhaeto-Romance
<b>8279</b>	Romanian
<b>8285</b>	Russian
<b>8365</b>	Sanskrit
<b>8368</b>	Sindhi
<b>8372</b>	Serbo-Croatian
<b>8373</b>	Singhalese
<b>8375</b>	Slovak
<b>8376</b>	Slovenian
<b>8377</b>	Samoan
<b>8378</b>	Shona
<b>8379</b>	Somali

Cord No.	Language
<b>8381</b>	Albanian
<b>8382</b>	Serbian
<b>8385</b>	Sundanese
<b>8386</b>	Swedish
<b>8387</b>	Swahili
<b>8465</b>	Tamil
<b>8469</b>	Telugu
<b>8471</b>	Tajik
<b>8472</b>	Thai
<b>8473</b>	Tigrinya
<b>8475</b>	Turkmen
<b>8476</b>	Tagalog
<b>8479</b>	Tonga
<b>8482</b>	Turkish
<b>8484</b>	Tatar
<b>8487</b>	Twì
<b>8575</b>	Ukrainian
<b>8582</b>	Urdu
<b>8590</b>	Uzbek
<b>8673</b>	Vietnamese
<b>8679</b>	Volapük
<b>8779</b>	Wolof
<b>8872</b>	Xhosa
<b>8979</b>	Yoruda
<b>9072</b>	Chinese
<b>9085</b>	Zulu

## Listening to the desired sequence (program playback)

VCD CD MD

Desired tracks in a disc can be programmed in the desired order and played back.  
(Program playback is not available with DVD VIDEO.)

Select the "DVD/CD" or "MD" input. → 24 → 31

### 1 Check that the unit is in the stop mode.

If is in play mode

Press the STOP ■/AUTO/MONO key.



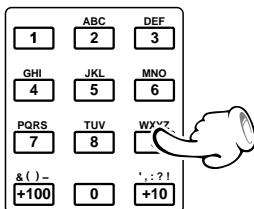
- If P.B.C. is On, be sure to set it to Off. → 45

### 2 Light the "PGM" indicator.



### 3 Enter track Nos. in the order you want to play them.

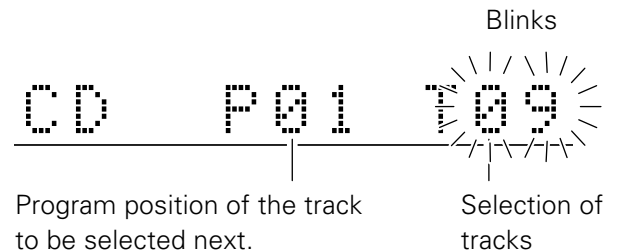
① Select a track number using numeric keys.



② Press the SET key.



③ Repeat steps ① and ②.



Program position of the track to be selected next.

Selection of tracks

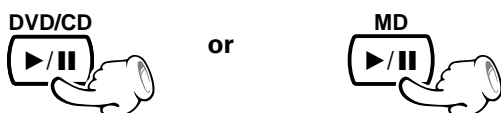
Press the numeric keys as shown below....

To enter track No. 12 ... +10, 2

To enter track No. 20 ... +10, +10, 0

- Up to 32 tracks can be programmed. When "PGM FULL" is displayed, no more tracks can be programmed.
- If you do not press the **SET** key before the track number display stops blinking, the track number entry is canceled.

### 4 Start playback.

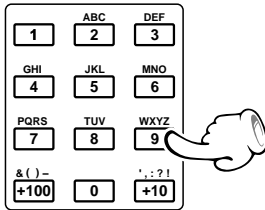


- Tracks will be played in the order they were programmed (following the program numbers).
- When the ◀▶ key is pressed during play, the program will jump to the preceding or the following track respectively.
- When the ◀◀ key is pressed once during playback, the play position returns to the beginning of the current track being played.

**To add a track to an existing program**

- 1 Select the track number to be added with the numeric keys.

Press in stop mode



- 2 Press the SET key.



Press the numeric keys as shown below....

To enter track No. 12 ... +10, 2

To enter track No. 40 ... +10, +10, +10, +10, 0

- Up to 32 tracks can be programmed. When "PGM FULL" is displayed, no more tracks can be programmed.
- When a track No. is entered, the track will be added to the end of the existing program.

**To clear a programmed track**

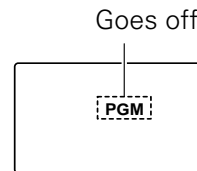
Press in stop mode



- Each time the key is pressed, the last track in the program is cleared.

**To clear the entire program**

Press in stop mode



- It is not permitted to program CD and MD tracks together.
- The program mode is cancelled when the unit is turned off or the programmed disc is ejected. The set program is cleared entirely at this time.

## Repeated playback

Repeat playback allows you to play the desired audio or video repeatedly.

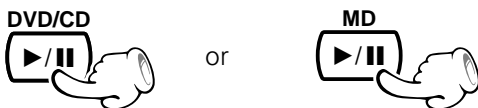
With some DVDs and VCDs, the partitions in the recording are not related with the track number assignment. As a result, repeat playback may not be available with such software. (Repeat playback may also be unavailable during playback of DVD or P.B.C. playback of VCD.)

Select the "DVD/CD" or "MD" input. → 24 → 31

To repeat a disc DVD VCD CD MP3 MD

① If the "PGM" indicator is lit, turn it off by pressing the PGM key in stop mode to cancel the program mode.

② Start playback.



③ Press the REPEAT key repeatedly until "⏮" is displayed.



- Title repeat occurs with a DVD disc.

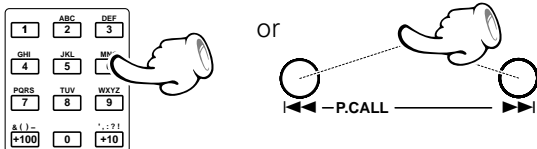
### To stop repeated playback

Press the REPEAT key repeatedly until any repeat-related indicator disappears or press the STOP/TUNING MODE key. (Except for MD)

To repeat a single track DVD VCD CD MP3 MD

① If the "PGM" indicator is lit, turn it off by pressing the PGM key in stop mode to cancel the program mode.

② Select the track number to be repeated using the numeric keys or the ◀◀ or ▶▶ key. The CD or MD playback of the selected track will start.



③ During playback, press the REPEAT key repeatedly until "⏮1" is displayed.



- Chapter repeat occurs with a DVD disc.

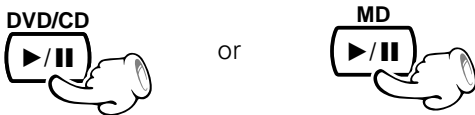
### To stop repeated playback

Press the REPEAT key repeatedly until any repeat-related indicator disappears or press the STOP/TUNING MODE key. (Except for MD)

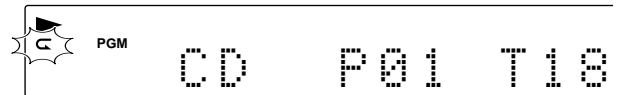
**To repeat selected tracks** [VCD] [CD] [MD]

① Program the desired tracks by performing the procedure in "Listening to the desired sequence (program playback)" until step ②. → 58

② Start playback.



③ Press the REPEAT key to select "C".



**To stop repeated playback**

Press the REPEAT key repeatedly until any repeat-related indicator disappears or press the STOP/TUNING MODE key. (Except for MD)

**A-B repeat playback** [DVD] [VCD] [CD]

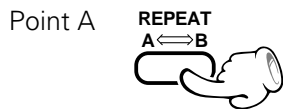
A-B repeat playback allows you to play a specified section repeatedly. (A-B repeat playback may sometimes be unavailable during P.B.C. playback of DVD or VCD.)

*If the "PGM" indicator is lit, turn it off by pressing the PGM key in stop mode to cancel the program mode.*

① Start playback.

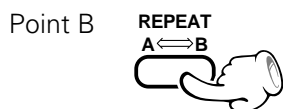


② Press the key at the point you want to start repeating.

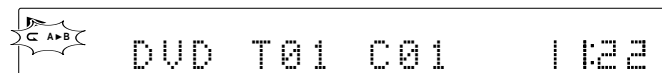
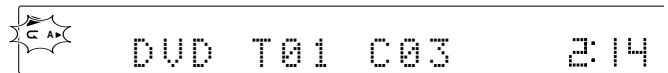


Start point A is specified.

③ Press the key again at the point you want to end repeating.



End point B is specified and repeated playback of the section between A and B starts.



**To stop repeat playback**

Press the REPEAT A B key again.

## Playing tracks in a random order (random playback) VCD CD MD

As the titles each time are selected randomly, the music can be enjoyed without getting tired of it.

Select the "DVD/CD" or "MD" input. → 24 → 31

- 1 If the "PGM" indicator is lit, turn it off by pressing the PGM key in stop mode to cancel the program mode.



- 2 Start random playback.



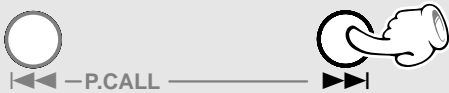
- If P.B.C. is On, be sure to set it to Off. → 45



- Playback stops after each title has been played once.
- The random playback can also be repeated by pressing the **REPEAT** key.

### To select another track in the middle of playing one

Press the **▶▶|** key.



- Pressing the **◀◀|** key returns the playback position to the beginning of the track being played.

### To cancel random playback

Press the **RANDOM** or **STOP ■/AUTO/MONO** key during random playback.



- Pressing the **RANDOM** key continues playback of tracks in the order they are recorded, while pressing the **STOP ■/AUTO/MONO** key stops playback.

This unit provides the following recording features in addition to normal recording. Select the appropriate method according to the purpose of recording.

Long play recording based on ATRAC3 (MDLP) is available with any of the following MD recording functions.

## One-touch edit high-speed recording

Records a CD onto an MD in a short period. All tracks in a CD can be recorded onto an MD in half the normal playback period. Note that recording of discs other than CD on MD is possible only in the normal speed because it is only their analog audio output that can be recorded on MD. → [64](#)

*All-track high-speed recording*



CD → MD

*All-track recording*



CD VCD MP3 → MD

## One-touch edit normal-speed recording

Records a CD onto an MD in a short period. Records only one CD track being played onto an MD in half the normal playback period. Note that recording of discs other than CD on MD is possible only in the normal speed because it is only their analog audio output that can be recorded on MD. → [66](#)

*Single-track high-speed recording*



CD → MD

*Single-track recording*



CD DVD VCD MP3 → MD

## Program recording

Records the programmed CD tracks in the programmed order onto an MD at twice the normal playback speed. Note that recording of discs other than CD on MD is possible only in the normal speed because it is only their analog audio output that can be recorded on MD. → [68](#)

*Program high-speed recording*



CD → MD

*Program recording*



CD VCD → MD

## Synchronized recording

Convenient for recording all chapters in a title in a DVD VIDEO disc. → [38](#) → [39](#)

*Synchronized recording*



DVD → MD

## One-touch edit high-speed recording CD VCD MP3 → MD

Records a CD onto an MD in a short period. All tracks in a CD can be recorded onto an MD in half the normal playback period.

Note that recording of discs other than CD on MD is possible only in the normal speed because it is only their analog audio output that can be recorded on MD.

### Be sure to put the MD recorder in stop mode

With recording of CD playback, either the digital output or analog output can be recorded as required. → [40](#)

MD can be recorded in the desired recording modes (REC MODE) as required. → [41](#)

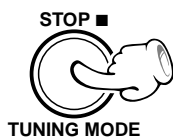
- For high-speed recording, set the CD recording signal format to "DIGITAL".
- When recording from a CD or MD, digital recording of certain discs may be inhibited by the SCMS. → [103](#)

## 1 Make preparation for recording.

- 1 Insert a recordable MD in the MD recorder.
- 2 Ensure that the "RANDOM" indicators are not lit.
- 3 Insert the desired CD (MP3, VCD) in the DVD/CD player.

- If the "RANDOM" indicator is lit, turn it off by pressing the **RANDOM** key to cancel the random play mode.

## 2 If the DVD/CD player is playing a disc, stop it.



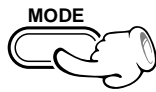
- If P.B.C. is On, be sure to set it to Off. → [45](#)

When recording of an MP3 disc onto MD is started in stop mode (i.e. when the ► indicator is not lit), all MP3 files in the disc will be recorded. When the recording is started during folder search (i.e. when the **F** indicator is blinking), all MP3 files in the folder will be recorded.



### 3 Start recording.

- 1 Press the MODE key.



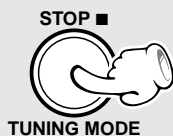
- 2 Turn the VOLUME/MULTI CONTROL knob to select "O.T.E. MODE", then press the SET/DEMO key.

- 3 Turn the VOLUME/MULTI CONTROL knob to select "NORMAL SP" or "HIGH SP", then press the SET/DEMO key.

If you are operating the remote, press the O.T.E. key. (Only "NORMAL SP" recording is available from the remote control unit.)

The recorded audio may skip, noise may be recorded on the MD or unnecessary tracks may be created depending on the condition of the CD. In such a case, restart recording at the normal speed.

#### To interrupt a recording



(Recording and playback will be stopped)

#### Turning the knob switches the display contents.

- ① "NORMAL SP": Normal-speed recording
- ② "HIGH SP": High-speed recording

- After the track has been recorded, the MD recorder stops and the DVD/CD player enters pause mode.
- When either the playback of CD (MP3, VCD) or recording of MD is stopped, the other operation is stopped automatically.

With certain tracks, when a track has been recorded in high-speed recording, the recording mechanism prohibits to start high-speed recording of the same track or high-speed recording of the disc containing the track in less than 74 minutes after the start of previous recording. In this case, the unit displays the time required till the high-speed recording can be restarted.

Wait 74min.

If you want to record the same track immediately after its high-speed recording, record it in normal-speed recording.

Do not turn power off or apply shock or impact while "WRITING" is displayed. If the power cord is unplugged before "WRITING" disappears, the recorded or edited data will be lost.

## One-touch edit normal-speed recording CD DVD VCD MP3 → MD

Records a CD onto an MD in a short period. Records only one CD track being played onto an MD in half the normal playback period.

Note that recording of discs other than CD on MD is possible only in the normal speed because it is only their analog audio output that can be recorded on MD.

**Be sure to put the MD recorder in stop mode**

With recording of CD playback, either the digital output or analog output can be recorded as required. → [40](#)

MD can be recorded in the desired recording modes (REC MODE) as required. → [41](#)

- For high-speed recording, set the CD recording signal format to "DIGITAL".
- When recording from a CD or MD, digital recording of certain discs may be inhibited by the SCMS. → [103](#)

### 1 Make preparation for recording.

- 1 Insert a recordable MD in the MD recorder.
- 2 Ensure that the "RANDOM" indicators are not lit.
- 3 Insert the desired DVD (MP3, VCD, CD) in the DVD/CD player.

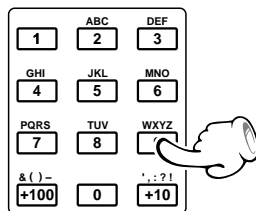
- If the "RANDOM" indicator is lit, turn it off by pressing the **RANDOM** key to cancel the random play mode.

### 2 Select the desired track number.

- 1 Press the DVD/CD ►/|| key.



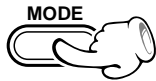
- 2 Select the desired track number.



- If P.B.C. is On, be sure to set it to Off. → [45](#)

### 3 Start recording.

- ① Press the MODE key.



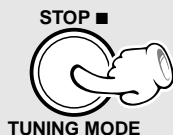
- ② Turn the VOLUME/MULTI CONTROL knob to select "O.T.E. MODE", then press the SET/DEMO key.

- ③ Turn the VOLUME/MULTI CONTROL knob to select "NORMAL SP" or "HIGH SP", then press the SET/DEMO key.

If you are operating the remote, press the O.T.E. key. (Only "NORMAL SP" recording is available from the remote control unit.)

The recorded audio may skip, noise may be recorded on the MD or unnecessary tracks may be created depending on the condition of the CD. In such a case, restart recording at the normal speed.

#### To interrupt a recording



(Recording and playback will be stopped)

#### Turning the knob switches the display contents.

- ① "NORMAL SP" : Normal-speed recording
- ② "HIGH SP" : High-speed recording

- When step ③ is performed in the middle of DVD(MP3, VCD,CD) playback, the current track will be recorded from the beginning.
- After the track has been recorded, the MD recorder stops and the DVD/CD player enters pause mode.(Except for DVD VIDEO disc)
- When either DVD(MP3, VCD,CD) playback or MD recording stops, the other operation also stops.

With certain tracks, when a track has been recorded in high-speed recording, the recording mechanism prohibits to start high-speed recording of the same track or high-speed recording of the disc containing the track in less than 74 minutes after the start of previous recording. In this case, the unit displays the time required till the high-speed recording can be restarted.

Wait 74min.

If you want to record the same track immediately after its high-speed recording, record it in normal-speed recording.

Do not turn power off or apply shock or impact while "WRITING" is displayed. If the power cord is unplugged before "WRITING" disappears, the recorded or edited data will be lost.

## Program recording CD VCD → MD

Records the programmed CD tracks in the programmed order onto an MD at twice the normal playback speed.

Note that recording of discs other than CD on MD is possible only in the normal speed because it is only their analog audio output that can be recorded on MD.

### Be sure to put the MD recorder in stop mode

With recording of CD playback, either the digital output or analog output can be recorded as required. → [40](#)

MD can be recorded in the desired recording modes (REC MODE) as required. → [41](#)

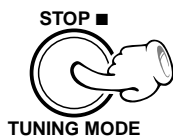
- For high-speed recording, set the CD recording signal format to "DIGITAL".
- When recording from a CD or MD, digital recording of certain discs may be inhibited by the SCMS. → [103](#)

## 1 Make preparation for recording.

- 1 Insert a recordable MD in the MD recorder.
- 2 Ensure that the "RANDOM" indicators are not lit.
- 3 Insert the desired CD (VCD) in the DVD/CD player.

- If the "RANDOM" indicator is lit, turn it off by pressing the **RANDOM** key to cancel the random play mode.

## 2 If the DVD/CD player is playing a disc, stop it.



- If P.B.C. is On, be sure to set it to Off. → [45](#)

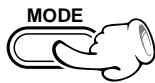
## 3 Program the desired sequence of CD tracks.

Perform steps 2 and 3 of the procedure in "Listening to the desired sequence (Program playback)". → [58](#)

- If the same track is programmed twice or more, "HIGH SP" cannot be selected in step 4 - 3.

## 4 Start recording.

- 1 Press the MODE key.



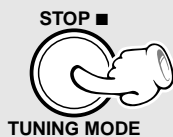
- 2 Turn the VOLUME/MULTI CONTROL knob to select "O.T.E. MODE", then press the SET/DEMO key.

- 3 Turn the VOLUME/MULTI CONTROL knob to select "NORMAL SP" or "HIGH SP", then press the SET/DEMO key.

If you are operating the remote, press the O.T.E. key. (Only "NORMAL SP" recording is available from the remote control unit.)

The recorded audio may skip, noise may be recorded on the MD or unnecessary tracks may be created depending on the condition of the CD. In such a case, restart recording at the normal speed.

### To interrupt a recording



(Recording and playback will be stopped)

### Turning the knob switches the display contents.

- ① "NORMAL SP": Normal-speed recording
- ② "HIGH SP": High-speed recording

- Recording begins from the first track in the program and completes when the entire program has been recorded.
- When either the playback of CD (VCD) or recording of MD is stopped, the other operation is stopped automatically.

With certain tracks, when a track has been recorded in high-speed recording, the recording mechanism prohibits to start high-speed recording of the same track or high-speed recording of the disc containing the track in less than 74 minutes after the start of previous recording. In this case, the unit displays the time required till the high-speed recording can be restarted.

Wait 74min.

If you want to record the same track immediately after its high-speed recording, record it in normal-speed recording.

Do not turn power off or apply shock or impact while "WRITING" is displayed. If the power cord is unplugged before "WRITING" disappears, the recorded or edited data will be lost.



When a commercially available MD fabricated for user recording is used, various editing operations can be applied after recording.

Note that editing is not possible with commercially available prerecorded MD software designed for playback only.

- For editing, set the write protect tab of the MD to "Write enable" side. → 95

## Function Limitations because of the MD Standard

Some of the functions are limited because of the MD standard. Please check this before assuming a malfunction. → 101

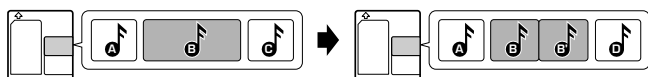
### Reordering tracks by moving them

Moving a single track (MOVE) → 72

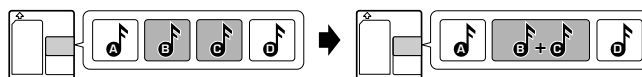


### Dividing a track, combining two tracks

Dividing a track (DIVIDE) → 74

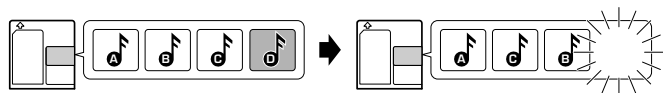


Combining two tracks (COMBINE) → 76

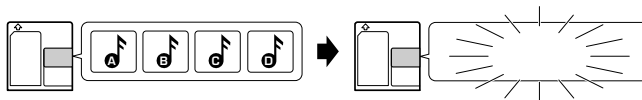


### Erasing track(s)

Erasing a single track (ERASE) → 78



Erasing all tracks in disc (ALL ERASE) → 79



Assigning a title to a disc or track → 80

Copying titles in title memos for use as titles of other MDs or tracks (TITLE COPY) (TITLE MEMO) → 84

Title input is possible simply by selecting one character after another from the characters shown on the display. As the entered title is compatible between models, it will be displayed also when the disc is set into a different MD recorder (player).

(The title compatibility is limited partly according to the character types which can be displayed, the number of characters, etc.)

## Moving a single track (MOVE)

The following procedure shows you how to select a single tracks (track number) and move (insert) it at the desired destination position in the series of track numbers. After the tracks have been moved, the track numbers before and after them will be adjusted automatically. By repeating this operation, you can reorder the tracks in the desired order.

Before starting MD editing, be sure to cancel the program mode by pressing the PGM key in stop mode.

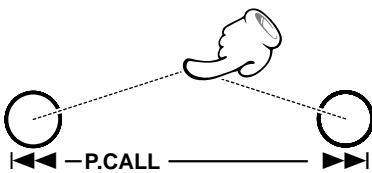
Select the "MD" input  31

### 1 Select "MOVE".

① Press the TRACK EDIT key.



② Select "MOVE".





③ Set it.



(To initiate TRACK MOVE during playback, go to step ③.)

- Pressing the key in the middle of playback initiates pause.
- To cancel the operation in the middle, press the TRACK EDIT key any time before step ④.

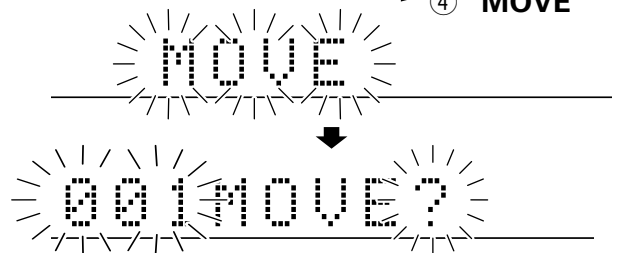
Each press of the  or  keys switches the operation.

When pressed in stop mode

- ① "MOVE"
- ② "COMBINE"
- ③ "ERASE"

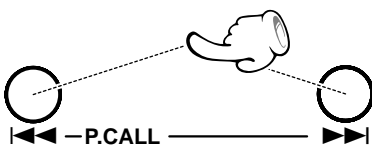
When pressed in play mode

- ① "DIVIDE"
- ② "COMBINE"
- ③ "ERASE"
- ④ "MOVE"



### 2 Select the track to be moved.

① Select a track number.



To decrease track No.

To increase track No.

② Set it.

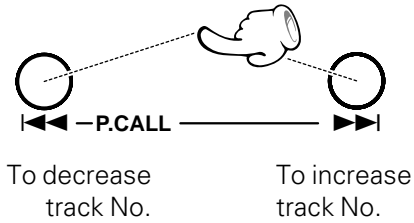


Track to be moved



### 3 Select the moving destination track.

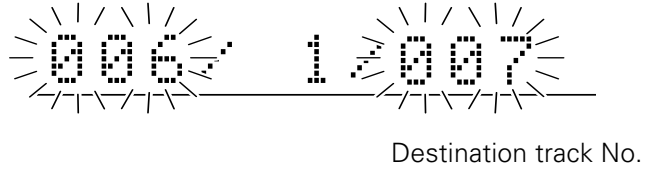
1 Select a track number.



2 Set it.



Example for moving between tracks No. 6 and No. 7



### 4 Execute track move.



Display after execution

"EDIT NOW" → "COMPLETE"

(When editing is completed successfully)

"EDIT NOW" → "CAN' T EDIT"

(When editing is impossible)

### 5 After editing, eject and remove the MD.



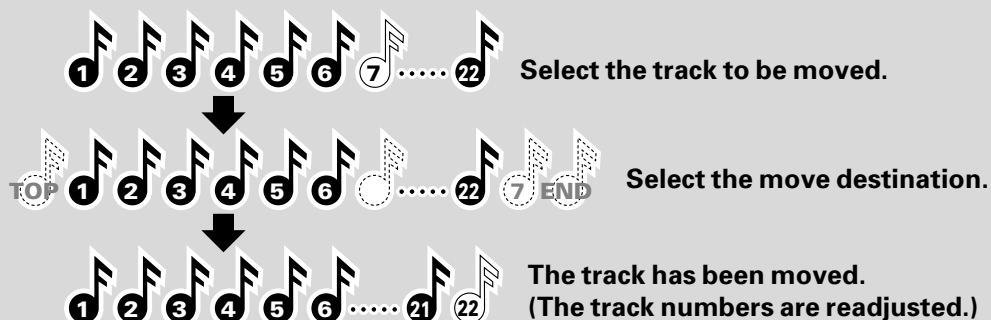
Information is being written.

MD has been ejected.

- The MD editing is established finally at the moment the MD disc is ejected.

**Do not turn power off or apply shock or impact while "WRITING" is displayed. If the power cord is unplugged before "WRITING" disappears, the recorded or edited data will be lost.**

### Image of track reordering by Move



## Dividing a track (DIVIDE)

The following procedure shows how to divide a track by assigning a track number in the desired position in the track. For example, by inserting an additional track number before the passage you are specially fond of, it is easy to skip to there when you play the disc later. After the track number has been divided, the track numbers after it will be adjusted automatically.

Before starting MD editing, be sure to cancel the program mode by pressing the PGM key in stop mode.

Select the "MD" input →  31

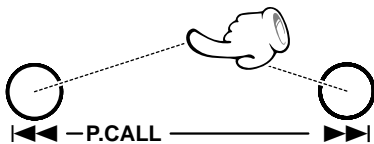
**1** Play the track to be divided.

**2** Press the TRACK EDIT key at the desired position.

**1** Press the TRACK EDIT key.



**2** Select "DIVIDE".



**3** Set it



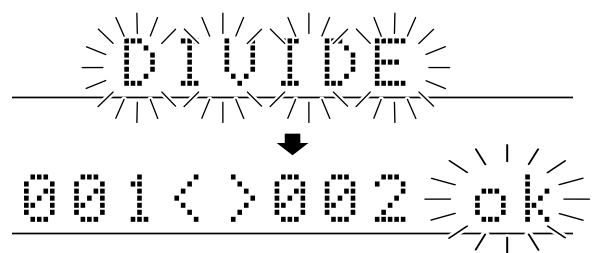
**3** After editing, eject and remove the MD.



- When dividing a track, set the dividing point at more than 2 seconds after the beginning of the track. A track may not be able to be divided if one of the divide tracks would become shorter than about 2 seconds.
- Pressing the key in the middle of playback initiates pause.
- To cancel the operation in the middle, press the TRACK EDIT key any time before step **3**.

Each press of the  or  keys switches the operation.

- ① "DIVIDE"
- ② "COMBINE"
- ③ "ERASE"
- ④ "MOVE"



Display after execution

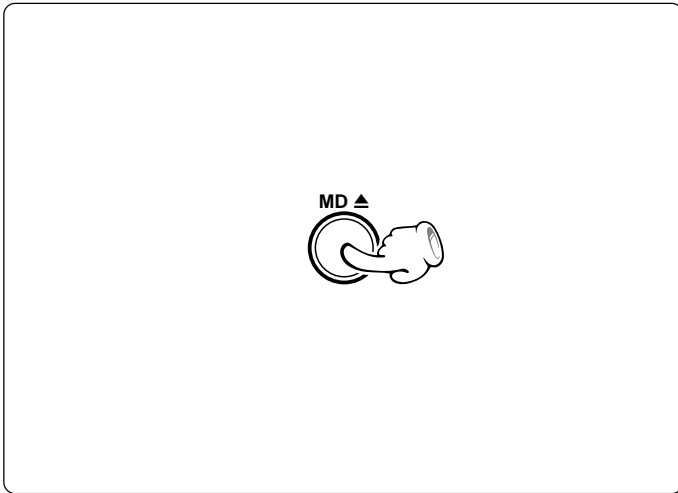
"EDIT NOW" → "COMPLETE"  
(When editing is completed successfully)

"EDIT NOW" → "CAN' T EDIT"  
(When editing is impossible)

- There is no blank space left between the two tracks.
- Track division may sometimes be impossible due to the limitations of the MD standard.
- The MD recorder enters pause mode at the beginning of the track newly created by division.

 Up to 255 track numbers can be inserted additionally by repeating **1** to **3** for each of them.

**4** After editing, eject and remove the MD.



Information is being written.

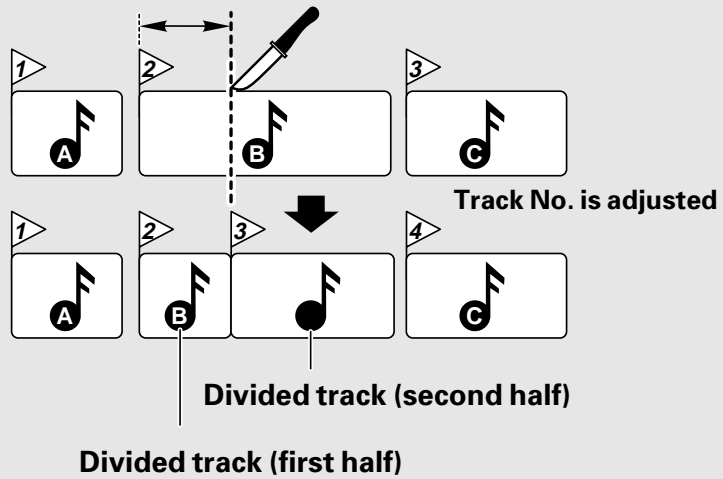
MD has been ejected.

- The MD editing is established finally at the moment the MD disc is ejected.

**Do not turn power off or apply shock or impact while "WRITING" is displayed. If the power cord is unplugged before "WRITING" disappears, the recorded or edited data will be lost.**

**Image of divide**

Should be approx. 2 sec. or longer.



# Combining two tracks (COMBINE)

Combines two adjacent tracks into a single track. After this operation, the track numbers of tracks located after the combined tracks are decreased automatically.

Before starting MD editing, be sure to cancel the program mode by pressing the PGM key in stop mode.

It is not permitted to combine two tracks which are recorded in different recording modes.

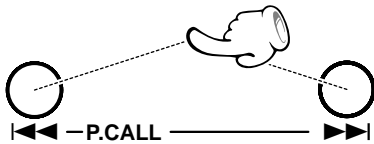
Select the "MD" input → 31

## 1 Select "COMBINE".

1 Press the TRACK EDIT key.



2 Select "COMBINE".



3 Set it.



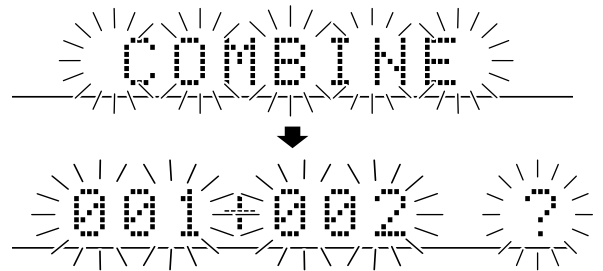
(If you combine tracks during playback, go to step 2.)

- To combine two tracks during playback, press the **TRACK EDIT** key while the second track is being played.
- To cancel the operation in the middle, press the **TRACK EDIT** key any time before step 3.

Each press of the ◀◀ or ▶▶ keys switches the operation.

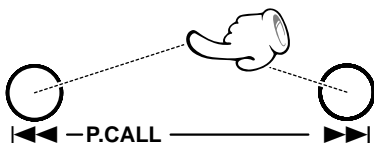
When pressed in stop mode	When pressed in play mode
① "MOVE"	① "DIVIDE"
② "COMBINE"	② "COMBINE"
③ "ERASE"	③ "ERASE"
	④ "MOVE"

- "COMBINE" cannot be selected if the track being played is the first track on the disc.



## 2 Select the track to be combined.

1 Select a track number.



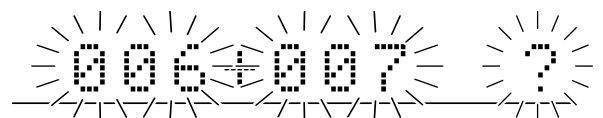
To decrease track No.

To increase track No.

2 Set it.

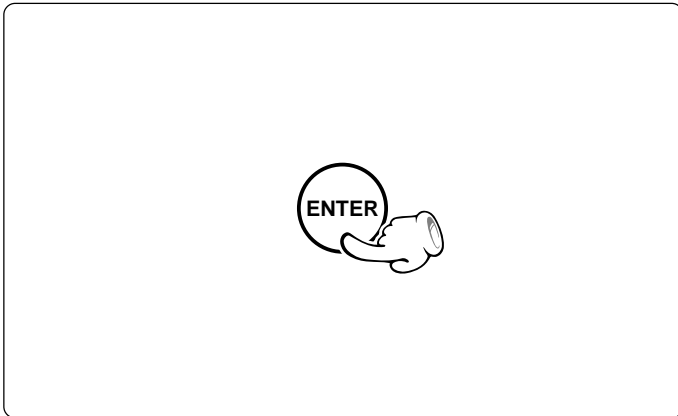


Connecting tracks 6 and 7.



Application section

**3** Execute the track combine operation.



**Display after execution**

"EDIT NOW" → "COMPLETE"

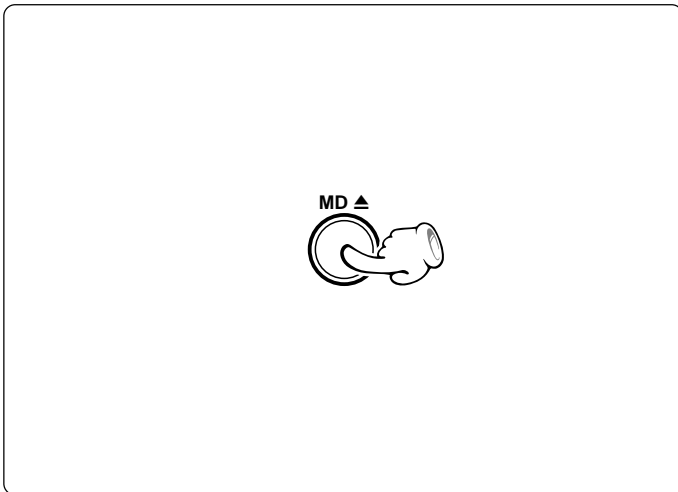
(When editing is completed successfully)

"EDIT NOW" → "CAN' T EDIT"

(When editing is impossible)

- Track combining may sometimes be impossible due to the limitations of the MD standard.
- The MD recorder enters pause mode at the beginning of the track newly created by combination.

**4** After editing, eject and remove the MD.



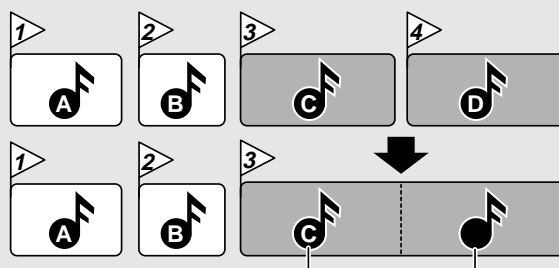
Information is being written.

MD has been ejected.

- The MD editing is established finally at the moment the MD disc is ejected.

**Do not turn power off or apply shock or impact while "WRITING" is displayed. If the power cord is unplugged before "WRITING" disappears, the recorded or edited data will be lost.**

**Image of track combination**



Track No. and title of the first track are left.

Track No. and title of the second track are cleared.

## Erasing a single track (ERASE)

During playback, it is possible to erase only the track being played. The track numbers of the tracks after the erased track will be adjusted.

Before starting MD editing, be sure to cancel the program mode by pressing the PGM key in stop mode.

Select the "MD" input → 

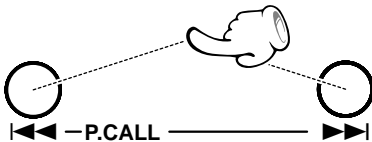
**1** Play the track to be erased.

**2** Select "ERASE".

**1** Press the TRACK EDIT key.



**2** Select "ERASE".



**3** Set it.



**3** Execute the track erasure operation.



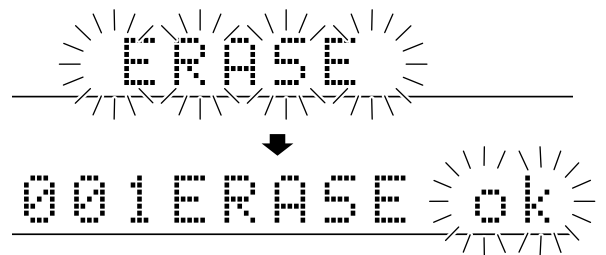
**4** After editing, eject and remove the MD.



- To cancel the operation in the middle, press the TRACK EDIT key any time before step **3**.

Each press of the **◀◀** or **▶▶** keys switches the operation.

- ① "DIVIDE"
- ② "COMBINE"
- ③ "ERASE"
- ④ "MOVE"



Display after execution

"EDIT NOW" → "COMPLETE"

(When editing is completed successfully)

"EDIT NOW" → "CAN'T EDIT"

(When editing is impossible)



Information is being written.

MD has been ejected.

- The MD editing is established finally at the moment the MD disc is ejected.

**Do not turn power off or apply shock or impact while "WRITING" is displayed. If the power cord is unplugged before "WRITING" disappears, the recorded or edited data will be lost.**

# Erasing all tracks in disc (ALL ERASE)


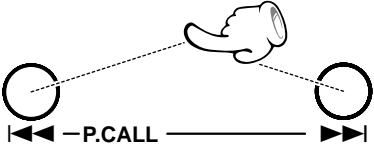


During stop, all tracks can be erased. Be careful in using this operation because the tracks cannot be recovered once the entire minidisc has been erased.

Before starting MD editing, be sure to cancel the program mode by pressing the PGM key in stop mode.

Select the "MD" input → 31

## 1 Select "all ERASE".

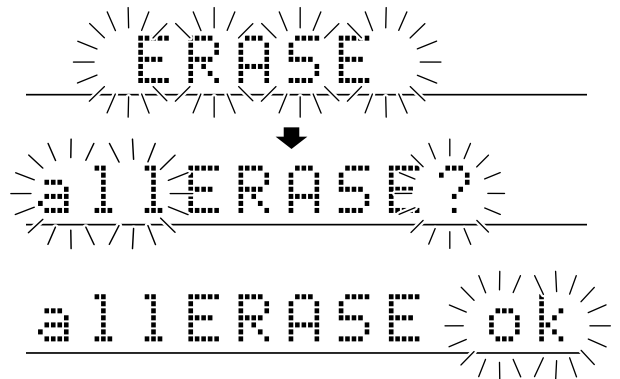
Press in stop mode

- 1 Press the TRACK EDIT key.
 
- 2 Select "ERASE".
 
- 3 Set it.
 
- 4 Set it.
 


- To cancel the operation in the middle, press the TRACK EDIT key any time before step 2.

Each press of the ◀◀ or ▶▶ keys switches the operation.

- ① "MOVE"
- ② "COMBINE"
- ③ "ERASE"



## 2 Execute the track erasure operation.




Display after execution

"EDIT NOW" → "COMPLETE"  
(When editing is completed successfully)

"EDIT NOW" → "CAN' T EDIT"  
(When editing is impossible)

## 3 After editing, eject and remove the MD.




Information is being written.

MD has been ejected.

- The MD editing is established finally at the moment the MD disc is ejected.

**Do not turn power off or apply shock or impact while "WRITING" is displayed. If the power cord is unplugged before "WRITING" disappears, the recorded or edited data will be lost.**

## Assigning a title to a disc or track

When titles are input in discs and tracks, the titles can be displayed when they are played back. The following procedure can also be used to modify or erase input titles.

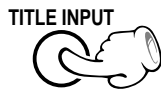
Before starting MD editing, be sure to cancel the program mode by pressing the PGM key in stop mode.

Select the "MD" input → 

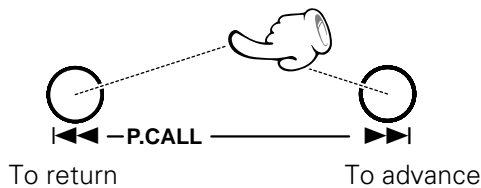
### 1 Activate the title input mode.

Press in stop mode

① Press the TITLE INPUT key.



② Select the title to be edited.




③ Set the title to be edited.



To abort operation, press the TITLE INPUT key again.




With an MD track recorded in the "LP2" or "LP4" recording mode using the stamping function, "LP:" will be input at the beginning of the track title. → 

List of registered symbols (ASCII codes):

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

### Total number of title characters

Up to 1792 characters can be input per disc and up to 80 characters can be input per track. (In case of alphanumeric and symbol characters)

A space (blank character) also required the same amount of data as alphanumeric characters. When deleting a title, it is not recommended to overwrite spaces on previous characters but use the (CLEAR/DELETE) function. → 

Disc titles can be assigned in stop mode. When the MD▶/|| key pressed before step ①-③ while assigning a title to a track, the title can be entered while listening to that track.

Each press of the ◀◀ or ▶▶ keys switches the operation.

- ① "DISC" : Disc title \*1
- ② "001", "002" ..... : Track title \*2
- ③ "ALL ERASE" : Complete erasure of disc and track titles
- ④ "[1]", "[2]", "[3]": Title Memo \*3

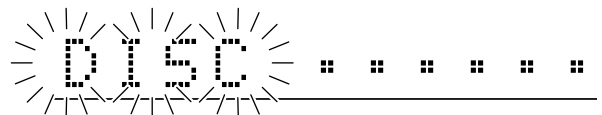
\*1 When step ①-① is performed in stop mode, the display starts with the disc title.

\*2 Each press of the ◀◀ or ▶▶ key displays a track title in sequence from "001", "002" .... When all track titles have been displayed, ③ then ④ will be displayed.

\*3 Each press of the ◀◀ or ▶▶ key causes the selected title memo number to blink, after which ① then ② will be displayed.

In case of disc title :

Select "DISC"



In case of track title :

Select the desired track No. (The track can also be selected using the numeric keys.)



● With a track without a title, the display shows ".....".



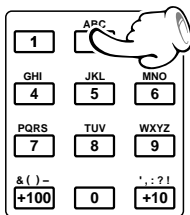
## 2 Input the title.

To enter a title :

### 1 Select a character group.



### 2 Select a character.



When the same key is pressed repeatedly, the characters will change.

(Example : When **2** is pressed, the characters will change in the order of **A→B→C→a→b→c.**)

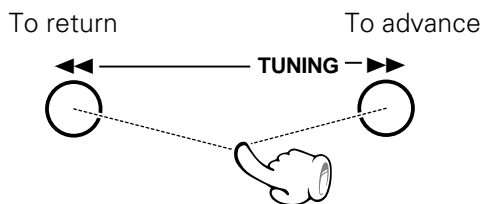
### 3 Set the selected character.



### 4 Repeat steps 1 to 3 above.

To change or clear a title :

### 1 Move the character to the desired character (to be changed).



### 2 Delete the character.



### 3 Perform steps 1 to 4 of "To enter a title".

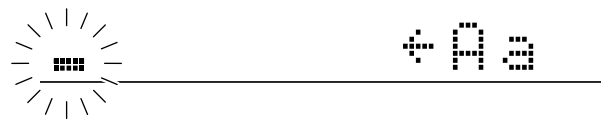
Press the **DISPLAY/CHARAC.** key for the required number of times to select one of the character groups below.

#### "Aa" group :

A~Z, symbols, Title Memo ([ 1 ], [ 2 ], [ 3 ])

#### "12" group :

0 to 9 and symbols



Input place

- If you made a mistake, press the **CLEAR/DEL.** key.
- Use the **◀◀** or **▶▶** key to move the input position cursor to the left or right.
- To enter a space character, press the **TIME/SPACE** key.



The cursor moves and waits for input of the next character.

- The character can be set also by pressing another numeric key, **▶▶** key or the **DISPLAY/CHARAC.** key.

- If you want to insert a character without deleting any (step 2), place the cursor on the character immediately after the position you want to insert a character.

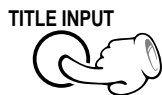
Continued on next page

### 3 Execute title change or deletion.

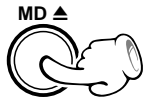
- ① Enter the title in memory.



- ② Complete the operation.



### 4 After editing, eject and remove the MD.



Do not turn power off or apply shock or impact while "WRITING" is displayed. If the power cord is unplugged before "WRITING" disappears, the recorded or edited data will be lost.

STORE . .

002 KENWO

The title is scrolled automatically.

- To continue editing of another title, repeat the above procedure from step ①-②.



Information is being written.

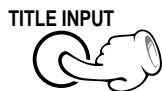
MD has been ejected.

- The MD editing is established finally at the moment the MD disc is ejected.

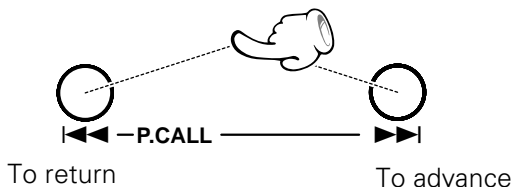
### Erasing all titles

Press in stop mode

- ① Press the TITLE INPUT key.



- ② Select "ALL ERASE".



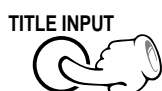
- ③ Set it.



- ④ Press the ENTER key.



- ⑤ Complete the operation.



Each press of the ◀◀ or ▶▶ keys switches the operation.

- "DISC" : Disc title
- "001", "002"..... : Track title
- "ALL ERASE" : Complete erasure of disc and track titles
- "[1]", "[2]", "[3]": Title Memo

#### In regard to key function

##### ◀◀ or ▶▶ key

Moves the cursor position.

##### CLEAR /DEL. key

Deletes the character on the cursor position and shifts the subsequent characters leftward by one column. An entire title can be deleted easily by pressing the key repeatedly (or holding it depressed).

**Title editing character list**

Key	Group	"Aa"	"12"
1		space [1] [2] [3]	1
2	ABC	ABCabc	2
3	DEF	DEFdef	3
4	GHI	GHghi	4
5	JKL	JKLjkl	5
6	MNO	MNOmno	6
7	PQRS	PQRSpqrs	7
8	TUV	TUVtuv	8
9	WXYZ	WXYZwxyz	9
0			0
+10	',,:'	',,:? ! ; . " _ ` \$ space	
+100	& ( ) -	& ( ) - / + * = < > # % @	

- The first alphabet which appears when a character input key is pressed may sometimes be an uppercase or sometimes a lowercase letter depending on each occasion.

# Copying titles in title memos for use as titles of other MDs or tracks (TITLE COPY) (TITLE MEMO)

To make character entry simpler, disc titles, track titles and/or performer names can be saved in title memos ([1] to [3]) and copied them with another disc or track. The title memos can save up to three sets of titles and/or input character sets.

Before starting MD editing, be sure to cancel the program mode by pressing the PGM key in stop mode.

Select the "MD" input → 31

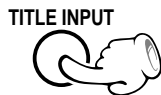
## Copying a disc or track title in a title memo (TITLE COPY)

Example: To save track title "A. Songs" recorded and registered in track NO. 7 of an MD in memory No. [1].

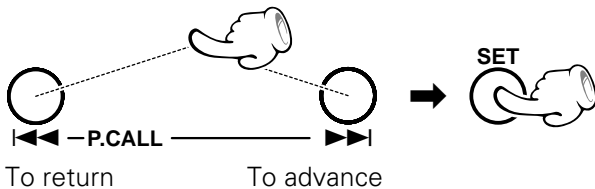
### 1 Select the save destination title memo number

Press in stop mode

1 Press the TITLE INPUT key.



2 From the save destination memory numbers ([1] to [3]), select No. [1] and set the selection.



To abort operation, press the TITLE INPUT key again.

Each press of the ◀◀ or ▶▶ keys switches the operation.

- ① "DISC" : Disc title
- ② "001", "002"..... : Track title
- ③ "ALL ERASE" : Complete erasure of disc and track titles
- ④ "[1]", "[2]", "[3]": Title Memo



### 2 Select the title group([123]) containing the copy source title.

1 Select "Aa".



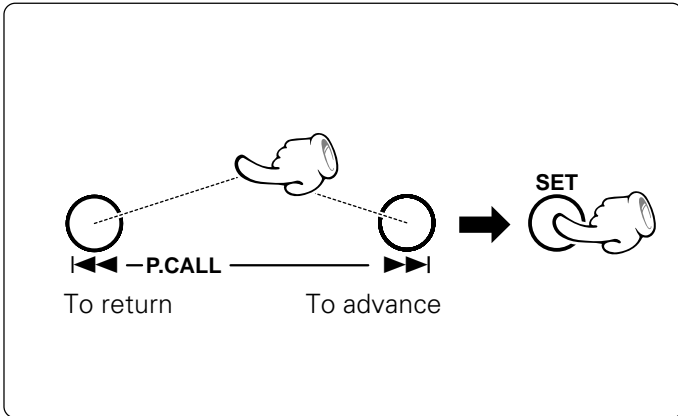
2 Press the 1 key.

(Press twice)

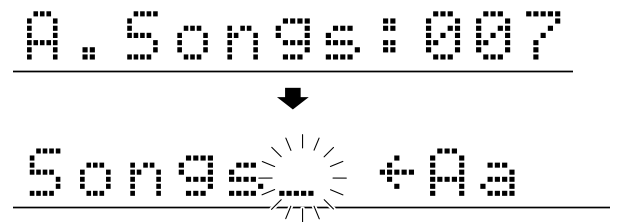


Application section

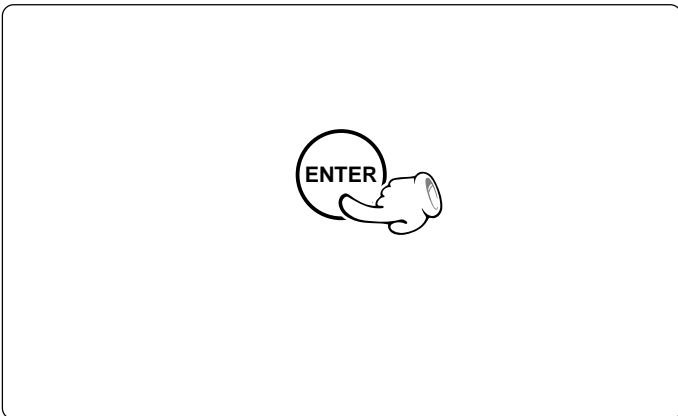
**3** Select the track title to be copied.



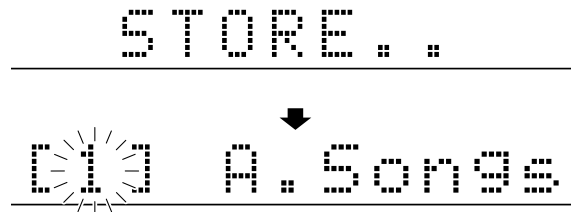
Select track No. 7 "A. Songs".



**4** Save it in the save destination title memo.

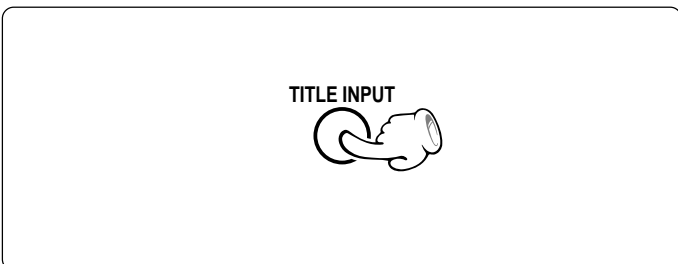


It is also possible to copy additional titles to the same title memo by repeating steps 1-2 to 3.



- "A. Songs" is memorized in title memo No. [1] which was selected in step 1.

**5** Press the TITLE INPUT key to complete editing.



**Copying title memo contents as the title of another disc or track**

This editing operation is available by exchanging the parties (copy destination and copy source) in the procedure of "Copying a disc or track title in a title memo (TITLE COPY)".

After performing steps 1 to 5 in the procedure on page 84, change steps 1-2 and 3 as shown below. The input can be repeated by simply performing these two steps.

Step 1 - 2: Select a disc or track title as the destination in place of the title memo.

Step 3 : Select a title memo ([1] to [3]) as the copy source.

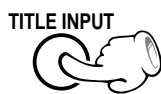
## Entering characters in title memo (TITLE MEMO)

Example: To save characters "TREASURE" in title memo No. [2]

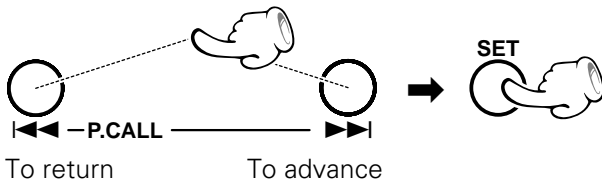
### Select the save destination title memo number


Press in stop mode

① Press the TITLE INPUT key.



② From the save destination memory numbers ([ 1 ] to [ 3 ]), select No. [ 2 ] and set the selection.

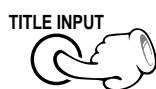


③ Input characters "TREASURE" by performing steps ②-① to ②-④ in "Assigning a title to a disc or track". 

④ Press the ENTER key to copy the characters in the title memo.



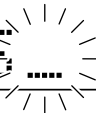
⑤ Press the TITLE INPUT key to complete editing.



To abort operation, press the TITLE INPUT key again.

Each press of the ◀◀ or ▶▶ keys switches the operation.

- ① "DISC" : Disc title
- ② "001", "002"..... : Track title
- ③ "ALL ERASE" : Complete erasure of disc and track titles
- ④ "[1]", "[2]", "[3]": Title Memo

TREAS...  + Aa

- "TREASURE" is memorized in title memo No. [2] which was selected in step ②.
- If required, character input to other title memo can be continued by repeating steps ① to ④.

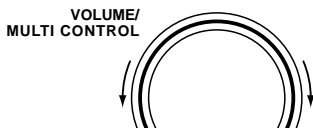
Connect the related equipment under reference to "Connection of external source component" → 

**1 Press the AUX key.**



**2 Play the connected equipment.**

**3 Adjust the volume.**



Each press switch the modes as follows.

- ① "AUX" (Analog)
- ② "DIGITAL AUX" (Digital)

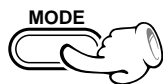
## Adjusting the AUX Input Level

This adjusts the input level for the external equipment (video deck etc.) connected to the AUDIO AUX IN terminal. Adjust so that the volume of the AUX input source sounds at an equivalent level to the CD or MD. (Main unit operation only)

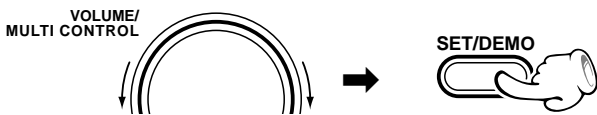
**1 Press the AUX key.(Select the "AUX" input)**



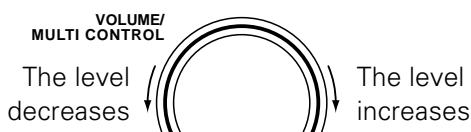
**2 Press the MODE key.**



**3 Turn the VOLUME/MULTI CONTROL knob to select "INPUT LEVEL", then press the SET/ DEMO key.**



**4 Adjust the input level.**



**5 Set it.**



Each press switch the modes as follows.

- ① "AUX" (Analog)
- ② "DIGITAL AUX" (Digital)

INPUT LEVEL

AUX INPUT+1

Input level

- Adjustment is possible over the range from - 4 to + 3.
- Adjusting the input level control also varies the recording level from the input source connected to the AUX input jacks.

The timer makes it possible to play a CD or MD, receive radio or record CD or radio automatically in the specified time zone. The O.T.T. timer works only once when it is activated, the SLEEP timer switches power off (Standby mode) automatically even after you fall asleep, and the PROG. timer provides two timer programs which work every day once they are activated.

## Sleep timer (SLEEP)

The unit is turned OFF automatically after the specified period has elapsed.

### Setting the O.T.T. timer →

Playback of the selected input source starts at the specified time, and the unit is switched off after one hour. This timer operates only once directly after setting.

### Timer playback, timer recording (PROG.1, PROG.2) →

Playback of the selected input source or recording of the TUNER or AUX input starts at the specified time.

### AI timer playback (PROG.1, PROG.2) →

When timer playback starts, the volume level increases gradually until a certain level is reached.

## Sleep timer (SLEEP)

Set the number of minutes after which the unit is to be turned OFF.

Connect the related equipment under reference to "System connection" →  ~ → 

Press the SLEEP key during CD or MD playback or during radio reception.



- Each press increases the set time by 10 minutes. The sleep timer can be set up to about 90 minutes.

10 → 20 → 30 ..... 70 → 80 → 90 → Cancel



Lights



Duration for sleep timer

- The unit is turned OFF automatically after the set time has elapsed.
- Press the **SLEEP** key while the sleep timer is activated to check the remaining time.

### To cancel

Turn the unit OFF or press the SLEEP key until the sleep time is cancelled.

The system has been set up so that the display is dimmed automatically while the sleep timer is activated.



## Setting the O.T.T. timer

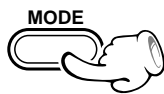
Timer playback which occurs only once and only for an hour can be programmed by simply setting the start time. The timer playback reproduces the source selected at the last time the unit is turned off at the last set volume.

It is not recommended to play a DVD VIDEO or VCD disc using the timer function, for expected playback may sometimes be unavailable with these discs.

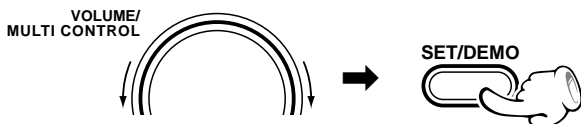
Adjust the clock before setting the timer →  17

❶ Select the desired source.

❷ Press the MODE key.

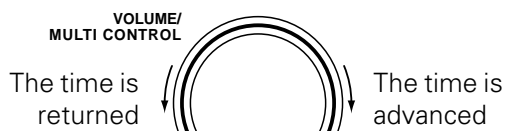


❸ Turn the VOLUME/MULTI CONTROL knob to select "TIMER SET", then press the SET/ DEMO key.



❹ Turn the VOLUME/MULTI CONTROL knob to select "O.T.T. SET ?", then press the SET/ DEMO key.


❺ Set the timer ON time by turning the VOLUME/MULTI CONTROL knob.



❻ Press the SET/ DEMO key.

❼ Turn the VOLUME/MULTI CONTROL knob to select "ON", then press the SET/ DEMO key.

❽ Adjust the volume.

❾ Press the  key to switch the power OFF (standby).  
(When the unit enters the Standby mode, the STANDBY/TIMER indicator lights in amber.)

The program timer does not operate during playback by the O.T.T. timer.

TIMER SET

- When a timer setting has already been made in the selected timer, the setting will be overwritten by the new setting.
- If you make a mistake, press the **MODE** key and restart from step ❷.

7:00am

- The ON time can be set in steps of 5 minutes.

O.T.T. > ON

- If there is a power failure or the power cord is unplugged after the timer reservation has been activated, the **STANDBY/TIMER** indicator blinks in amber. In this case, the clock setting should be restarted from the beginning.



To check or modify the reservation contents, restart the timer reservation from the beginning.

After setting the timer, make sure that the power is set to OFF (Standby).

## Setting an everyday timer program

Two timer programs (PROG.1, PROG.2) are available. Both of them are 24-hour timer programs which can be executed every day. In each of PROG.1 and PROG.2, the timer data including the operating period and played contents can be set and selected to be activated or not as required.

- It is possible to execute both timer reservation programs **PROG.1** and **PROG.2** simultaneously.
- The time zones of **PROG.1** and **PROG.2** should be set by reserving an interval of 1 minute or more so that they are not overlapped.

It is not recommended to play a DVD VIDEO or VCD disc using the timer function, for expected playback may sometimes be unavailable with these discs.

Adjust the clock before setting the timer → 17

### 1 Make preparations for the play (recording).

#### To listen to CD, MP3

Insert a disc. (Program playback is not possible.) → 24

#### To listen to MD

Load a disc. (Program playback is not possible.) → 31

#### To listen to radio

The station should be preset prior. → 34

#### Recording or playing the AUX source component

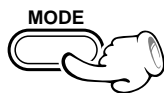
For timer playback or timer recording of a source component connected to the AUDIO AUX IN jacks, connect it properly by referring to "Connection of Other Accessories". → 9 → 87

#### For recording

Make preparations for recording. → 38

### 2 Select the timer number.

- 1 Press the MODE key.



- 2 Turn the VOLUME/MULTI CONTROL knob to select "TIMER SET", then press the SET/ DEMO key.

- 3 Turn the VOLUME/MULTI CONTROL knob to select "PROG.1 SET ?", then press the SET/ DEMO key.

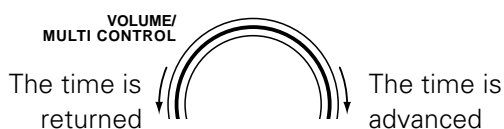
Example for playing radio broadcast from 10:30am to 11:30am using PROG.1

TIMER SET

- If you make a mistake, press the **MODE** key and restart from step 2.
- When a timer setting has already been made in the selected timer, the setting will be overwritten by the new setting.

### 3 Set the ON time then the OFF time.

- 1 Adjust the time.



- 2 Set it.



ON 10 30 am  
OFF 11 30 am

- For each of the ON time and OFF time, enter the figure of "hour" by performing steps 1 and 2 then enter the figure of "minute" in the same manner.
- If you make a mistake, press the **MODE** key and restart from step 2.

## 4 Make the desired reservation.

### For timer playback or AI timer playback

#### 1 Select the mode.

(1) Select "PLAY" or "AI PLAY".

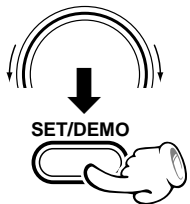


- ① "PLAY"  
(Timer play)
- ② "REC"
- ③ "AI PLAY"  
(Timer play with gradually increasing volume)

(2) Set it.

#### 2 Select the input source.

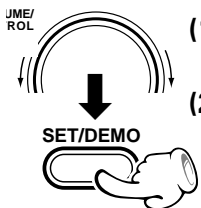
(1) Select the source to be played.



- ① "TUNER" (Broadcasts)
- ② "DVD/CD"
- ③ "MD"
- ④ "AUX" (Analog)
- ⑤ "DIGITAL AUX" (Digital)

(2) Set it.

#### 3 Select the broadcast station (only when TUNER is selected above).



(1) Select the preset station No.

(2) Set it.

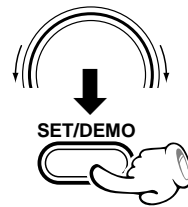
*Continued on next page*

- When "PLAY" is selected, the timer playback will start at the volume setting used at the moment the unit is set to the Standby mode.
- The sound is muted during timer recording. If you want to monitor the recorded sound, turn the **VOLUME/MULTI CONTROL** knob (or press the **VOLUME** key on the remote) to adjust the volume.

### For timer recording

#### 1 Select the mode.

(1) Select "REC".

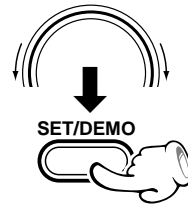


- ① "PLAY"
- ② "REC"
- ③ "AI PLAY"

(2) Set it.

#### 2 Select the input source.

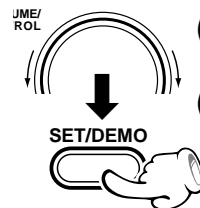
(1) Select the source to be recorded.



- ① "TUNER" (Broadcasts)
- ② "AUX" (Analog)
- ③ "DIGITAL AUX" (Digital)

(2) Set it.

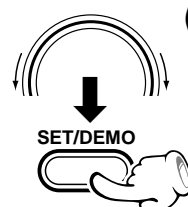
#### 3 Select the broadcast station (only when TUNER is selected above).



(1) Select the preset station No.

(2) Set it.

#### 4 Set the recording mode.



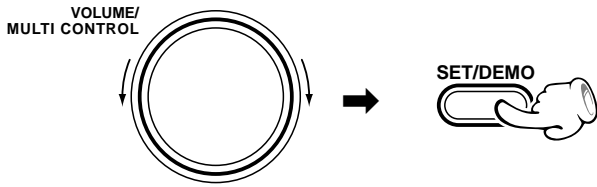
- (1)
  - ① "STEREO" (Stereo recording mode)
  - ② "LP2" (Stereo LP2 recording mode)
  - ③ "LP4" (Stereo LP4 recording mode)
  - ④ "MONO" (Monaural recording mode)

(2) Set it.

*Continued on next page*

## 5 Reserve the timer operation.

Turn the VOLUME/MULTI CONTROL knob to select "ON", then press the SET/ DEMO key.

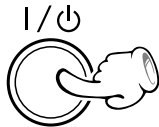


PROG. 1 > ON

- When the timer setting is completed by pressing the **SET/DEMO** key, "**COMPLETE**" is displayed.
- Use the same procedure as above when you want to reserve a program timer operation in PROG.2.

## 6 Adjust the volume.

## 7 Put the unit in standby mode.



(When the unit enters the Standby mode, the **STANDBY/TIMER** indicator lights in amber.)

- If there is a power failure or the power cord is unplugged after the timer reservation has been activated, the **STANDBY/TIMER** indicator blinks in amber. In this case, the clock setting should be restarted from the beginning.

**After setting the timer, make sure that the power is set to OFF (Standby).**

### When timer operation is not required

When power is ON, press the **TIMER** key to turn off the timer-related indicators completely.

Each press switches the timer as follows.



- ① O.T.T.
- ② ⌚ 1
- ③ ⌚ 2
- ④ ⌚ 1 2
- ⑤ Extinguished

- The reservation contents are held in memory.

### To set the same timer program again

When power is ON, press the **TIMER** key to turn on the timer-related indicators completely.

Each press switches the timer as follows.



- ① O.T.T.
- ② ⌚ 1
- ③ ⌚ 2
- ④ ⌚ 1 2
- ⑤ Extinguished

- Be sure to load a disc and adjust the listening volume.

 To check or modify the reservation contents, restart the timer reservation from the beginning.

## Maintenance

### Maintenance of the unit

When the front panel or case becomes dirty, wipe with a soft, dry cloth. Do not use thinner, benzine, alcohol, etc. for these agents may cause discoloration.

### In regard to contact cleaner

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

## Reference

### Caution on condensation

Condensation (of dew) may occur inside the unit when there is a great difference in temperature between this unit and the outside.

This unit may not function properly if condensation occurs. In this case, leave the unit for a few hours and restart the operation after the condensation has dried up. Be specially cautious against condensation in the following circumstances:

When this unit is carried from one place to another across a large difference in temperature, when the humidity in the room where this unit is installed increases, etc.

### Note related to transportation and movement

Before transporting or moving this unit, carry out the following operations.

- 1 Remove the DVD (MP3, VCD, CD) or MD from the unit.
- 2 Press the MD ►/II key.

MD NO DISC

- 3 Press the DVD/CD ►/II key.

- 4 Wait for some time and verify that the display becomes as shown in the figure.

NO DISC

- 5 Wait a few seconds and turn the unit OFF.

### Memory backup function

#### Stored contents which are cleared immediately when power plug is unplugged from power outlet

Clock display

#### Stored contents which are cleared in at least a day after power plug is unplugged from power outlet :

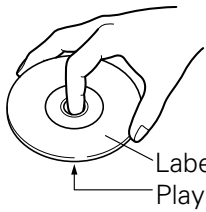
##### Amplifier section

"on/standby" status (ON or STANDBY), Input selection, Volume control value, Tone control levels, AUX input level, Setting auto power save, Setting dimmer

##### Tuner section

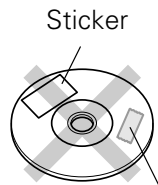
Receiving band, Frequency, Preset stations, Auto/mono setting, Timer setting contents

## Disc handling precautions



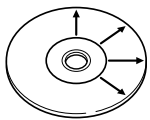
### Handling

Hold the disc so that you do not touch the playing surface.



Sticky paste

Do not attach paper or tape to either the playing side or the label side of the disc.



### Cleaning

If there are fingerprint marks or foreign matter found on the disc, lightly wipe the disc with a soft cotton cloth (or similar) from the center of the disc outwards in a radial manner.

### Storage

When a disc is not to be played for a long period of time, remove it from the player and store it in its case.

## Never play a cracked or warped disc

During playback, the disc rotates at high speed in the player. Therefore, to avoid danger, never use a cracked or deformed disc or a disc repaired with tape or adhesive agent. Please do not use discs which are not round because they may cause malfunction.

## Disc accessories

The disc accessories (stabilizer, protection sheet, protection ring, etc.) which are marketed for improving the sound quality or protecting discs as well as the disc cleaner should not be used with this system because they may cause malfunction.

Apparatus Claims of U.S. Patent Nos. 4,631,603, 4,577,216, 4,819,098, and 4,907,093 licensed for limited viewing uses only.

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.

"DTS" and "DTS Digital Out" are trademarks of Digital Theater Systems, Inc.



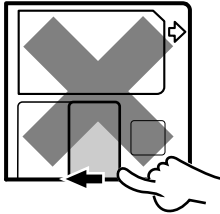
Manufactured under license from Dolby Laboratories. "DOLBY" and the double-D symbol are trademarks of Dolby Laboratories.

## Handling of MD

As the MD is accommodated inside a cartridge, it can be handled without caring about dust or fingerprint. However, stained or soiled cartridge may cause malfunction. To enjoy beautiful sound for extended period of time, take care on the following points.

### Do not touch the disc directly.

Do not touch the disc by opening the shutter with your hand. The cartridge will be damaged if it is forced open.



### Storage position

Do not leave MDs in places where the temperature and/or humidity are extremely high (for example, in places subjected to direct sunlight).

### Dust countermeasure

The shutter of the disc cartridge is permanently open while the disc is loaded in the set. Therefore, to prevent dust from penetrating inside the disc, take the disc out of the unit immediately after completion of recording or playback.

### Care

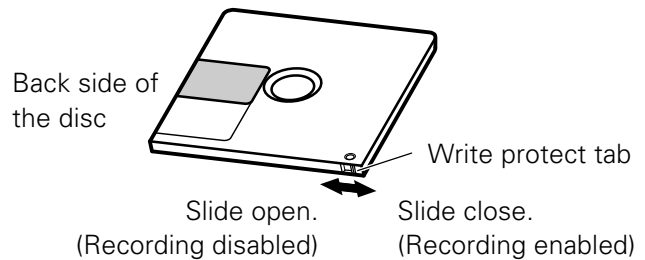
Periodically wipe off dust and dirt on the cartridge with a dry cloth.

### Note on disc accessories

Do not use lens cleaner for this may lead to malfunction of the unit.

### Write protect tab

To protect recorded contents against accidental erasure, set the write protect tab of the disc open. Return the tab to the original position when you want to record signals on the disc.



### Note on the cartridge labels

Apply each label firmly to every corner so that it will not peel off.

## Caution on MD-Clip data

Do not attempt to record or edit a disc in which MD-Clip data (still images, etc.) have been recorded. Otherwise, the Clip data may be lost.

US and foreign patents licensed from Dolby Laboratories.

## Glossary

**DVD (Digital Versatile Disc) :** DVD VIDEO is a disc featuring high video/audio quality, made possible by large recording capacity of video and audio signals of movie software, etc. and by digital signal processing.

**VIDEO CD (VCD) :** This is a CD containing moving picture. By compressing video data to about 1/120 and audio data to about 1/6, a 12 cm disc with the same size as ordinary music CD can store moving pictures and audio for up to about 74 minutes.

The VCD includes the P.B.C.-incompatible discs with only the playback capability (Version 1.1) and P.B.C.-compatible discs with the menu playback and special playback capabilities (Version 2.0)

**MPEG (Moving Picture Expert Group) (DVD, VCD) :**

A digital video and audio compression and decompression system which is standardized as an international standard.

**Decoder:** A device for restoring standard audio signal from audio data recorded based on coding into DVD data, etc. This processing is referred to as decoding.

**Downmixing:** Conversion of multichannel audio signals of DVD into 2-channel stereo signals.

**Sampling rate :** Sampling refers to converting an analog signal into digital signal by slicing the analog signal into fine parts at a certain time interval and digitizing every sliced part. The sampling rate is the count of slicing per second. The original sound can be reproduced more faithfully when the sampling rate is higher.

**Quantization bit :** The quantization bit count refers to the number used in digitizing the sliced parts obtained by slicing the analog signal as described above. The quantization bit count is the number of bits used in digitization per second. The original sound can be reproduced more faithfully when the quantization bit count is larger.

**Linear PCM (Pulse Code Modulation):** Audio signal format without using compression. In the DVD which has a very large disc capacity, the linear PCM signal using high sampling rate can be recorded.

**Bitstream (DVD):** This is the generic name given for the flow of data based on a standard such as Dolby Digital, DTS, MPEG, etc.

**Dolby Digital :** A digital audio compression technology developed by Dolby Laboratories, Inc.

**DTS :** Digital surround system developed by Digital Theater Systems, Inc.

**Title/ Title No. (DVD VIDEO):** The title is the largest unit of video or audio recorded in DVD VIDEO. Usually, a title corresponding to a movie product with video software or an album (or a piece of music) with music software. The numbers assigned to the titles are referred to as title numbers.

**Chapter/Chapter No. (DVD VIDEO):** The chapter is a partition of video or audio that is smaller than the title. A title is composed of multiple chapters. The numbers assigned to the chapters are referred to as chapter numbers.



**Track/Track No. ( VCD, CD):** A track is also a section of video and audio recorded in a disc. The numbers assigned to individual tracks are referred to as the track numbers. With most of music CDs, a track is assigned to a piece of music. However, with a VCD, the sections of the contents do not always correspond to the assigned tracks. As (special) playback functions such as skipping and programming of ordinary CDs are based on track number data, such playback functions are sometimes impossible with some VCDs.

**Cinema Voice function (DVD) :** This function to be used when words are hard to be distinguished during playback of DVD recorded with Dolby Digital Surround.

**Subtitle language (DVD):** Some DVDs contain the recording of multiple subtitle languages.

**Angle (DVD) :** Some DVDs contain the recording of multiple viewing angles.

**Audio language (DVD) :** Some DVDs contain the recording of multiple audio languages.

**Aspect ratio:** The ratio between the horizontal and vertical sizes of picture displayed on a TV screen. The aspect ratio of ordinary TV is 4:3, and that of widescreen TV is 16:9.

**Pan & scan (DVD):** Method of displaying a horizontally-long picture recorded in 16:9 aspect ratio on a 4:3 TV screen by trimming part of picture.

In general, the trimming positions for pan & scan are determined uniformly by the reproducing device. However, the pan & scan of DVD allows the software producer to specify the trimming positions to be used in playback.

**Letterbox (DVD):** Method of displaying a horizontally-long picture recorded in 16:9 aspect ratio on a 4:3 TV screen by attaching bands at the top and bottom of the screen and displaying the horizontally-long picture at the center of screen.

**Frame (DVD, VCD):** Each frame of a moving picture, that is displayed 30 times a second with NTSC and 25 times a second with PAL. These TV formats reproduce moving pictures by displaying still pictures sequentially.

**Field (DVD, VCD):** Part of a frame obtained by dividing the video data of each frame by two. Each frame of ordinary TV is constituted by displaying the fields alternately.

**Frame still/Field still (DVD, VCD):** Types of still pictures obtained by temporarily stopping a moving picture. The frame still picture may produce blur in the picture because it displays two specific fields alternately, but the picture quality is higher. The field still picture has lower picture quality because it uses half the picture information of frame still, but is not accompanied with picture blur.

**IPB display (DVD):** With the MPEG2 which is one of the video display methods of DVD, each picture is divided into the following three picture types before being coded in digital signal.

**I-picture (Intra coded) :** This is the standard video and can constitute a picture by itself. As the highest picture quality can be obtained, the still image of I-picture is most suitable for use when adjusting the picture quality.

**P-picture (Predictive coded):** Picture calculated based on past pictures (I-picture or P-picture).

**B-picture (Bidirectionally predictive coded):**

Picture calculated by comparing the previous and next pictures (I-pictures or P-pictures). This picture type contains least amount of video information.

**P.B.C. (PlayBack Control) (VCD):** VIDEO CDs carrying messages such as "Playback Control Capable" can be played interactively by selecting the desired play position or information in hierarchical structures while watching the menus displayed on the TV screen.

**OSD (On-Screen Display):** OSD is a method of interactive operations using the menus and icons displayed on the TV screen.

**On-Screen Message :** Message displayed on the TV screen when an operation is performed.

What seems to be a malfunction is not always so. Before calling for service, check the following table according to the symptom of your trouble.

### Operation to reset

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

**Unplug the power cord from the power outlet then, while holding the STOP ■ /TUNING MODE key depressed, plug the power cord again.**

- Please note that resetting the microcomputer clears the contents stored in and it returns to condition when it left the factory.












### Amplifier section/Speakers


Symptom	Remedy
Sound is not produced.	<ul style="list-style-type: none"> <li>● The input selection of the TV and/or AV amplifier is incorrect or these devices are not turned on.</li> <li>● Connect properly referring to "<b>System connection</b>". →  → </li> <li>● Adjust to an required volume.</li> <li>● Switch MUTE OFF. → </li> <li>● Unplug the headphone plug.</li> <li>● When a DTS-compatible disc is played on this unit, the speakers do not output sound. In this case, set the audio by referring to the instruction manual of the software.</li> </ul>
The STANDBY/TIMER indicator blinks in red and no sound is put out.	<ul style="list-style-type: none"> <li>● A speaker cord is short-circuited. Turn power off and re-connect the speaker cord.</li> </ul>
The STANDBY/TIMER indicator blinks in amber.	<ul style="list-style-type: none"> <li>● Adjust the present time again. → </li> </ul>
No sound from the headphones.	<ul style="list-style-type: none"> <li>● Insert correctly. → </li> <li>● Adjust to an required volume. → </li> </ul>
Sound is not produced from the left or right speakers.	<ul style="list-style-type: none"> <li>● Connect properly referring to "<b>System connection</b>". → </li> </ul>
The clock display blinks without changing the figures.	<ul style="list-style-type: none"> <li>● Adjust the present time again. → </li> </ul>
Timer operation is not possible.	<ul style="list-style-type: none"> <li>● Adjust the present time referring to "<b>Clock adjustment</b>". → </li> <li>● Set the timer ON time and OFF time. → </li> <li>● Press the <b>TIMER</b> key to set up the execution. →  → </li> </ul>

### Tuner section

Symptom	Remedy
Radio stations cannot be received.	<ul style="list-style-type: none"> <li>● Connect antennas. → </li> <li>● Select a band. → </li> <li>● Tune to the frequency of the desired station. → </li> </ul>
Noise interferes.	<ul style="list-style-type: none"> <li>● Install the outdoor antenna in an apart position from the road.</li> <li>● Switch the suspected electric appliance OFF.</li> <li>● Install the TV or the system at an increased distance between them.</li> </ul>
A station has been preset but it cannot be received by pressing the P.CALL key.	<ul style="list-style-type: none"> <li>● Preset stations with tunable frequencies. → </li> <li>● Preset stations again. →  → </li> </ul>

**DVD/CD player section**

Symptom	Remedy
<b>Playback starts but the video is not output.</b>	<ul style="list-style-type: none"> <li>● The input selection of the TV and/or AV amplifier is incorrect or these devices are not turned on.</li> <li>● Connection cords are connected improperly. →  8</li> </ul>
<b>The picture is disturbed during forward search or reverse search.</b>	<ul style="list-style-type: none"> <li>● The picture disturbance during forward search or reverse is normal. This is not a malfunction.</li> </ul>
<b>The picture is not neat or the video or audio quality is poor.</b>	<ul style="list-style-type: none"> <li>● Connection cords are connected improperly. →  8</li> <li>● A device generating noise is installed near the signal path.</li> <li>● The disc is dirty or damaged. To prevent this, remove dirt and handle discs carefully so as not to damage them. →  94</li> <li>● There may be condensation of dew on the optical lenses. In this case, leave the player with power ON for a few hours to dry up the condensation, then retry operation. →  93</li> </ul>
<b>It takes long time before playback starts.</b>	<ul style="list-style-type: none"> <li>● The disc type should be detected and motor rotation stabilized before starting playback. This is normal and not a malfunction.</li> </ul>
<b>A warning is displayed on the TV screen and playback is not possible.</b>	<ul style="list-style-type: none"> <li>● The reproduced video may be disturbed or audio may be skipped when the disc surface is stained with fingerprints or dirt. Clean the disc surface by wiping it in the radial directions using a soft cloth. →  94</li> <li>● If the disc is placed obliquely or on another disc, place the disc correctly. →  24</li> <li>● Playback may be unavailable due to viewing restriction or region code problem. →  20</li> </ul>
<b>The top and bottom edges of the picture are cut off.</b>	<ul style="list-style-type: none"> <li>● The video format of the played disc does not match that of the connected TV. →  18</li> </ul>
<b>VCD cannot be played with menu playback.</b>	<ul style="list-style-type: none"> <li>● Menu playback is not available when P.B.C. is Off. →  45</li> <li>● Menu playback is possible only with P.B.C.-compatible VCDs.</li> </ul>
<b>Subtitles are not displayed.</b>	<ul style="list-style-type: none"> <li>● Subtitles are not displayed when the played DVD does not contain the recording of subtitles.</li> <li>● The subtitle language is set to "Off". →  29</li> </ul>
<b>Audio (or subtitle) language cannot be changed.</b>	<ul style="list-style-type: none"> <li>● The language cannot be switched when the played DVD does not contain the recording of multiple audio (or subtitle) languages.</li> </ul>
<b>Viewing angle cannot be changed.</b>	<ul style="list-style-type: none"> <li>● The viewing angle cannot be switched when the played DVD does not contain the recording of multiple angles. The viewing angle can neither be switched in part where no angle is recorded.</li> </ul>
<b>The viewing restriction (Rating) cannot be changed.</b>	<ul style="list-style-type: none"> <li>● If you have forgotten the password, reset the initial settings you made till now to the factory setting. →  99</li> </ul>
<b>The selected audio or subtitle languages is not played.</b>	<ul style="list-style-type: none"> <li>● If the played DVD does not contain the default language set by the user, the priority language specified for the disc will be selected.</li> </ul>

Symptom	Remedy
The TV screen does not show any message when a button is pressed.	● If "On Screen Message" is set to "Off", switch it "On". →  48
The messages in the menus are not displayed in the selected language.	● If the played DVD does not contain the recording of the default language set by the user, the priority language specified for the disc will be selected.
An inhibition icon is displayed and no operation is accepted.	● The operations of certain DVDs and VCDs are restricted by the intention of the software producers. Such discs should be operated in accordance with the software. Operations may also be restricted depending on the player status.

### Symptoms related to MD standard





Symptom	Cause
"DISC FULL" is displayed while the disc still has a remaining recordable time.	● More than 255 tracks (track No. 256 or more) cannot be recorded. (There may be also cases in which recording is impossible while the track number is less than 256.) In such a case, the REMAIN time display shows "0:00".
The possible recording time does not increase even when a short track is erased.	● When the remaining time of the entire disc is less than 12 sec, the remaining time indication on the display becomes "0:00". When the total time of the deleted tracks exceeds 12 sec, the display changes to the recordable time.*1 ● When a short track is deleted on a repeatedly edited disc, the remaining time may not increase.
Tracks can not be connected.	● Connection of the track resulting from edit processing may not be possible. ● It is not permitted to combine two tracks which are recorded in different recording modes.*2
The total of the recorded time and remaining recording time does not match the total recording time of the MD (60, 74 or 80 minutes).	● As the MD is recorded based on minimum recording units of 2 seconds, the consumed disc space may not coincide with the displayed time information.*3
When search is performed in a track which has been compiled by editing, the sound is sometimes interrupted.	● This derives from the restriction in the MD system standard and not a malfunction.
The track numbers are not assigned correctly.	● Depending on the contents of the recorded source (CD etc.), the track numbers may not be assigned correctly.
"READING" is displayed for an abnormally long time.	● When a new recordable MD (with nothing recorded) is inserted, "READING" is displayed longer than usual.
The time display becomes inaccurate with a monaurally recorded disc.	● Monaural recording and stereo recording are executed according to different formats. This is not a malfunction.
Input of 1792 title characters is not possible.	● The title recording area is used in units of 7 characters, so that input of 1792 characters may not be possible.

\*1 When the recording mode is STEREO (24 sec. when it is LP2 or MONO, 48 sec. when it is LP4).



\*2 STEREO, LP2, LP4 and MONO modes.

\*3 When the recording mode is STEREO (4 sec. when it is LP2 or MONO, 8 sec. when it is LP4).






**MD recorder section (other symptoms)**

Symptom	Remedy
Sound is not output even when the play key is pressed.	<ul style="list-style-type: none"> <li>● Load a prerecorded disc or playback-only disc.</li> </ul>
Recording is not possible	<ul style="list-style-type: none"> <li>● Change the position of the write protect tab to the write position or use a recordable disc. →  95</li> <li>● Set the input selector to the source to be recorded. →  38</li> </ul>
Recording level is too low. Sound is distorted. (when the "AUX" or "DIGITAL AUX" input is recorded).	<ul style="list-style-type: none"> <li>● The recording level is not set properly. Adjust the AUX input level. →  40 →  87</li> </ul>
Noise is noticeable.	<ul style="list-style-type: none"> <li>● Install the unit at a position apart from an electric appliance or TV set.</li> </ul>

**Remote control unit**

Symptom	Remedy
Remote control operation is not possible.	<ul style="list-style-type: none"> <li>● Replace with new batteries. →  15</li> <li>● Operate the unit inside the remote controllable range. →  15</li> </ul>

## Displayed messages and actions to be taken against them

Displayed Message	Meaning
<b>BLANK DISC</b>	<ul style="list-style-type: none"> <li>The MD contains no recording at all.</li> </ul>
<b>BUFFER OVER</b>	<ul style="list-style-type: none"> <li>An attempt is made to record more than 100 CD tracks within 74 minutes with high-speed recording.</li> </ul>
<b>CAN'T EDIT</b>	<ul style="list-style-type: none"> <li>An attempt is made to edit a track which is too short.</li> </ul>
<b>UTOC ERROR</b>	<ul style="list-style-type: none"> <li>The contents of UTOC* is abnormal. Perform "ALL ERASE". →  79 If this is impossible, use another MD.</li> </ul>
<b>DISC FULL</b>	<ul style="list-style-type: none"> <li>The disc does not have a recordable space any more or an attempt is made to record a 256th track. Use another MD. Note that it is not permitted to record more than 255 tracks in a disc.</li> </ul>
<b>WRITING</b>	<ul style="list-style-type: none"> <li>The data related to editing or recording is being written in the MD.</li> </ul>
<b>NO TRACKS</b>	<ul style="list-style-type: none"> <li>The MD does not contain any tracks and has only the disc title.</li> </ul>
<b>PGM FULL</b>	<ul style="list-style-type: none"> <li>An attempt is made to select a 33rd track in programming of CD or MD. →  58</li> </ul>
<b>PGM Mode</b>	<ul style="list-style-type: none"> <li>An attempt is made to start random playback or MD editing in the program mode. Exit from the program mode before these operations. →  59</li> </ul>
<b>PLAY ONLY</b>	<ul style="list-style-type: none"> <li>An attempt is made to record signals in a playback-only MD. Use a recordable MD.</li> </ul>
<b>PROTECTED</b>	<ul style="list-style-type: none"> <li>The MD in use is protected against recording. Enable recording. →  95</li> </ul>
<b>RANDOM Mode</b>	<ul style="list-style-type: none"> <li>An attempt is made to perform O.T.E. recording while the unit is in the CD random play mode. Exit from the random play mode. →  62</li> </ul>
<b>READING</b>	<ul style="list-style-type: none"> <li>The TOC* data is being read out.</li> </ul>
<b>CAN'T COPY</b>	<ul style="list-style-type: none"> <li>An attempt is made to record the digital signal from a source subjected to digital copy prohibition by SCMS. The digital output from this source cannot be recorded.</li> </ul>
<b>TEXT FULL</b>	<ul style="list-style-type: none"> <li>An attempt is made to display the text data of a CD-TEXT disc containing more than 3 kB of text data.</li> </ul>
<b>TITLE FULL</b>	<ul style="list-style-type: none"> <li>An attempt is made to input a title by exceeding the restriction of the maximum number of characters. The maximum number of input characters is 1792 characters per disc and 80 characters per track (including "LP:").</li> </ul>
<b>Blinking "?"</b>	<ul style="list-style-type: none"> <li>Confirmation message asking if a setting or MD editing can be executed.</li> </ul>

\* Every MD contains data named TOC (Table Of Contents) in addition to audio data. The TOC corresponds to the table of contents of a book and includes non-rewritable data among information on the number of tracks, their playing time, character information, etc.

In addition to the TOC, every recordable MD also contains specific data called UTOC. The UTOC includes non-rewritable data among information on the number of tracks, their playing time, character information, etc.

**Main unit****[Amplifier section]**

Effective output power (P.S.A. on, one channel driven)  
(1 kHz, 10% T.H.D., at 6 Ω) ..... 20 W + 20 W

**[Tuner section]****FM tuner section**

Tuning frequency range ..... 87.5 MHz ~ 108 MHz

**MW (AM) tuner section**

Tuning frequency range

9 kHz step ..... 531 kHz ~ 1,602 kHz

10 kHz step ..... 530 kHz ~ 1,610 kHz

**[MD recorder section]**

Laser ..... Semiconductor laser

Laser wave length ..... 770 to 800 nm

Laser power class ..... Class 3B (IEC)

**Recording method**

..... Field modulation overwrite method

Audio compression ..... ATRAC, ATRAC 3

D/A Conversion ..... 1 Bit

**[DVD/CD player section]**

Laser ..... Semiconductor laser

Laser wave length ..... 643 to 683 nm

Laser power class ..... Class 2 (IEC)

D/A Conversion ..... 1 Bit

Video output format ..... NTSC/PAL

**[General]**

Power consumption ..... 75 W

Dimensions ..... W : 240 mm (9-7/16 ")

H : 139 mm (5-1/2 ")

D : 360 mm (14-3/16 ")

Weight (net) ..... 6.1 kg (13.4 lb)

**Speakers**

Enclosure ..... Bass-reflex type

**Speaker configuration**

Woofer ..... 120 mm (4-3/4"), cone type

Tweeter ..... 25 mm (1"), dome type

Impedance ..... 6 Ω

Maximum input level ..... 30 W

Dimensions ..... W: 150 mm (5-7/8")

H : 285 mm (11-1/4")

D : 228 mm (9")

Weight (net) ..... 3.1 kg (6.8 lb) (1 piece)



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

- Sufficient performance may not be exhibited at extremely cold locations (where water freezes).

# KENWOOD

**For your records**

Record the serial number, found on the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for information or service on this product.

Model \_\_\_\_\_ Serial Number \_\_\_\_\_



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