

KENWOOD

MICRO HI-FI COMPONENT SYSTEM

HM-383MD

INSTRUCTION MANUAL

KENWOOD CORPORATION



MDLP

2 Before applying power

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

Units are designed for operation as follows.

Europe and U.K. AC 230 V only

Safety precautions

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

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

The marking of products using lasers (Except for some areas)

**CLASS 1
LASER PRODUCT**

CAUTION
INVISIBLE LASER RADIATION
WHEN OPEN. AVOID EXPOSURE
TO BEAM.

The marking is located on the rear panel and says this product has been classified as Class 1. It means that there is no danger of hazardous radiation outside the product

Inside this laser product, a laser diode(s) exceeding Class 1 laser radiation is/are contained as alerted by the internal caution label shown above. To avoid exposure to laser beams, do not open the cover.

Special features

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 (either single track or all tracks in a CD).

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 CD.
- **TWIN recording :**
Simultaneous recording of CD playback onto both MD and tape.
- **Program recording :**
Your favorite tracks can be recorded in any desired order.

Versatile timer features

- **O.T.T. (Operate easy To use Timer) :**
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.)
- **Sleep timer :**
This timer turns the unit off automatically when the set time has elapsed. It is convenient for example for falling asleep while listening to music in the night time, etc.

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.

"DEMO OFF" (To cancel demonstration):

Press the **set/demo** key during demonstration.

set / demo



"DEMO ON" (To execute demonstration):

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

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

Unpacking

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

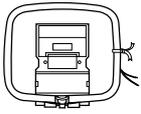
If any accessories are missing, or if the unit is damaged or fails to operate, notify your dealer immediately. If the unit was shipped to you directly, notify your shipper immediately. Kenwood recommends that you retain the original carton and packing materials in case you need to move or ship the unit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

Keep this manual handy for future reference.

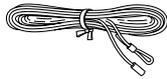
Accessories

Please confirm that the following accessories are present.

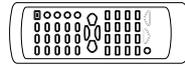
AM loop antenna (1)



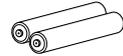
FM indoor antenna (1)



Remote control unit (1)



Batteries (R6/AA) (2)



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Connection of the System Accessories

This figure shows the method of connection between the main unit and provided accessories.

CAUTION Note on Connection

Connect the components as shown in the diagram.
Only plug the power cord into a power outlet once connections are completed.

Installation of speakers and positioning of TV

1. If a speaker is installed near a TV, color irregularities may be observed on the TV screen. To avoid this, install the speakers apart from a TV.
2. 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.
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

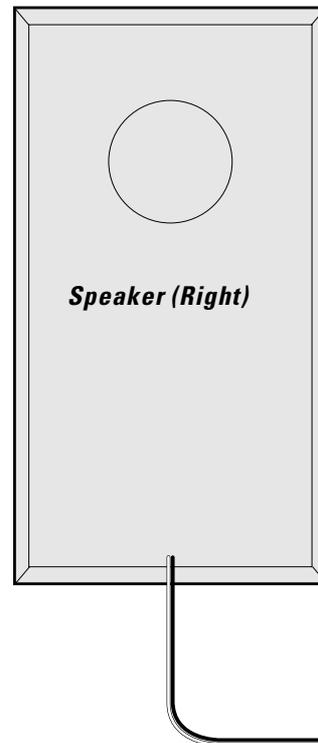
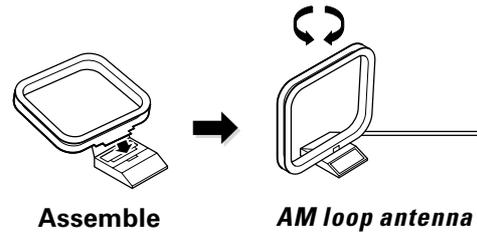
Be sure to adhere followings. Or proper ventilation will be blocked causing damage or fire hazard.

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

Top panel : 50 cm
Back panel : 10 cm

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.



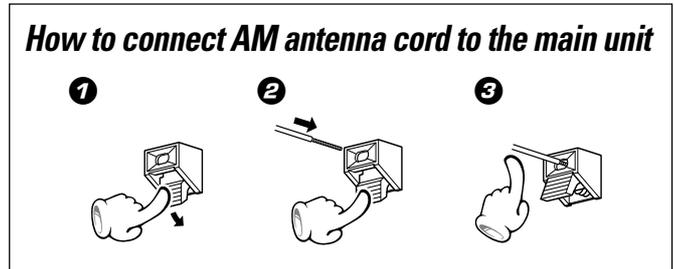
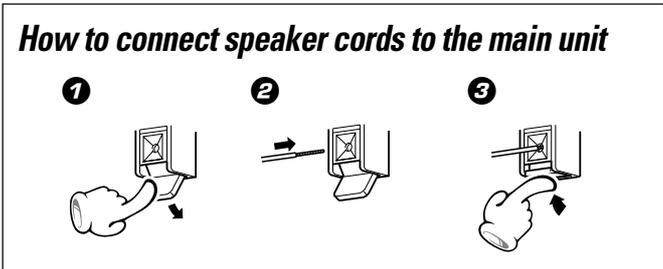
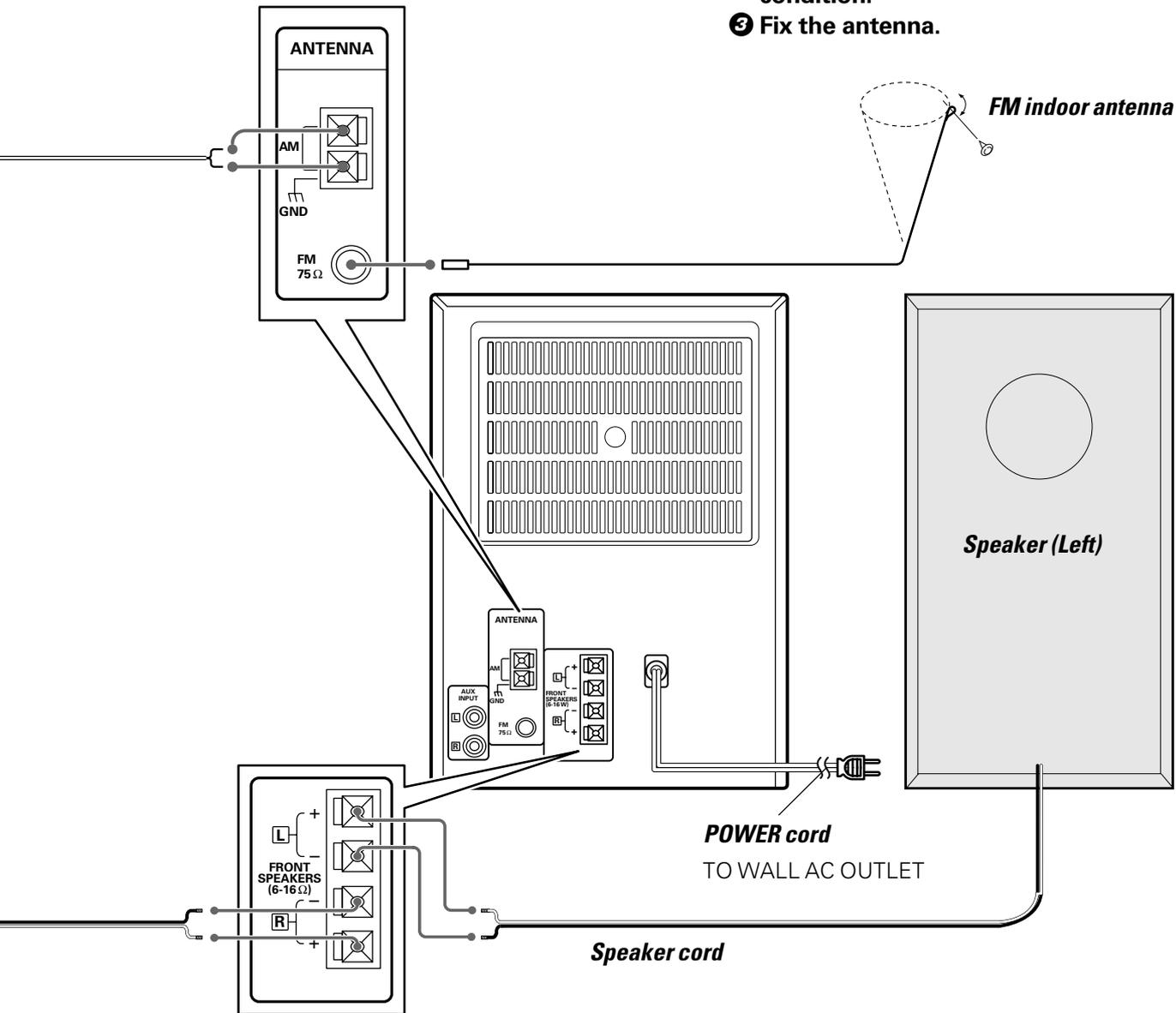
- Never short-circuit the "+" and "-" speaker cords.
- If the "+" and "-" polarity are inverted, the sound will be unnatural with unclear positioning of musical instruments, etc.
- Be sure to insert all connection cords securely. If their connections are imperfect, the sound may not be produced or noise may interfere.
- 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.

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". → 80

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.

- ❶ Connect the antenna to the antenna terminal.
- ❷ Locate the position providing good reception condition.
- ❸ Fix the antenna.



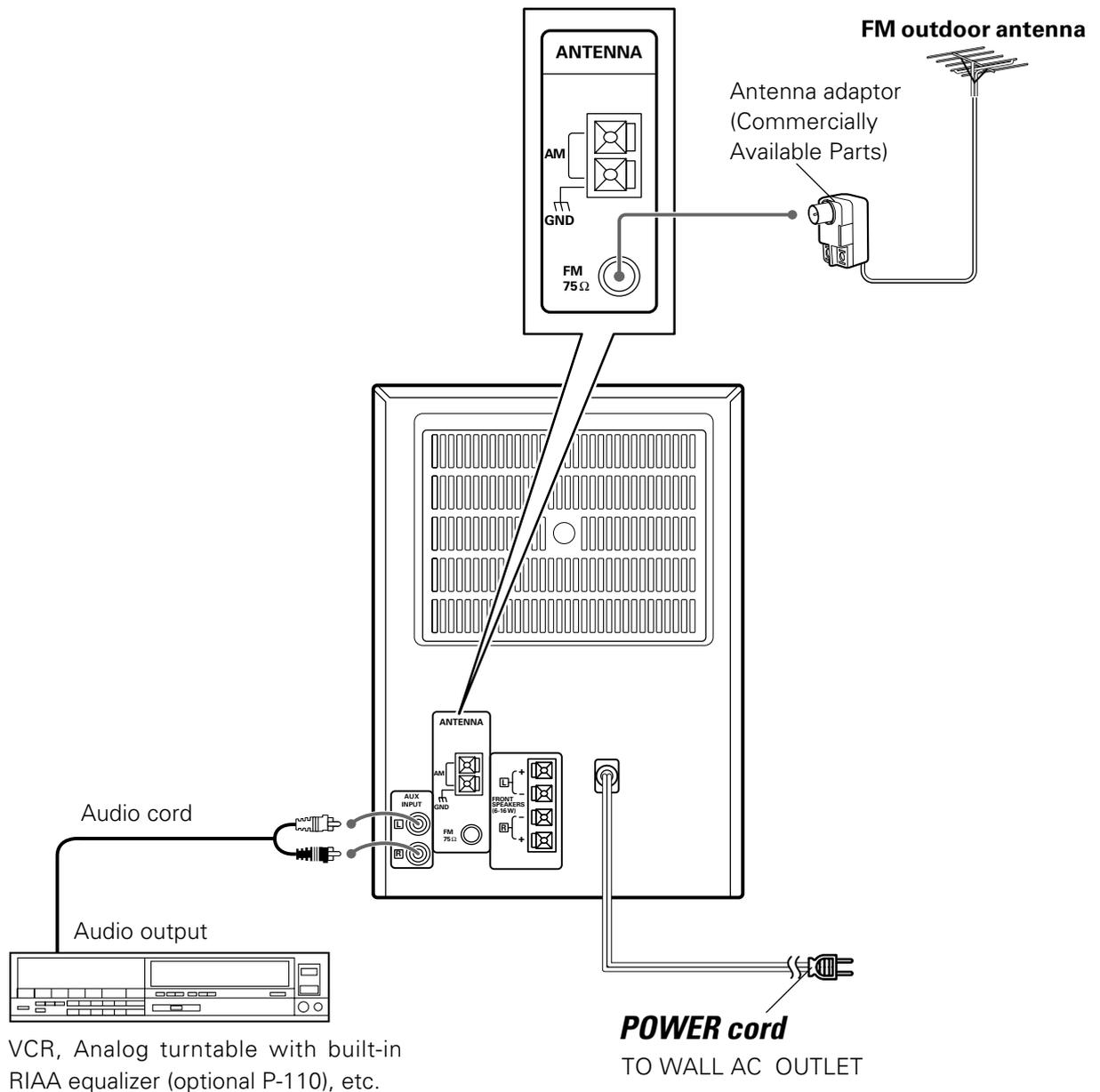
Connection of Other Accessories (Commercially Available Parts)

CAUTION Note on Connection

Connect the components as shown in the diagram. Only plug the power cord into a power outlet once connections are completed.

FM outdoor antenna

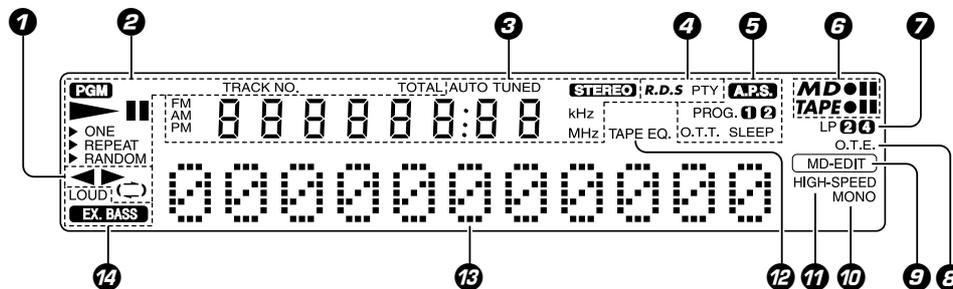
Lead the 75Ω coaxial cable connected to the FM outdoor antenna into the room and connect it to the FM 75Ω terminal. Please remove the indoor antenna after an outdoor antenna has been installed.



- In case an associated system component is connected, also read the instruction manual of the component.
- Be sure to insert all connection cords securely. If their connections are imperfect, the sound may not be produced or noise may interfere.
- 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.

Display

The displays given in this manual are approximations only. They may differ from what actually appears on the display.

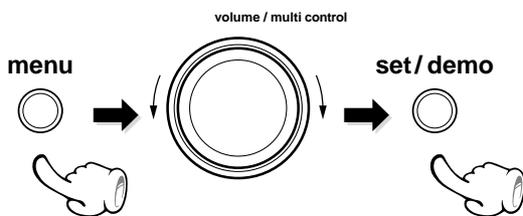


- ① Tape-related indicators
- ② CD and MD-related indicators
- ③ Character information display/tuner-related indicators
- ④ RDS-related indicators (For Europe and U.K.)
- ⑤ Timer-related indicators
- ⑥ MD/tape record/record-pause indicators
- ⑦ MD LP mode indicators
- ⑧ O.T.E. (One-Touch Edit) indicator
- ⑨ MD-EDIT indicator
- ⑩ MONO indicator
- ⑪ HIGH-SPEED indicator
- ⑫ TAPE EQ. indicator
- ⑬ Character information display (Dot display)
- ⑭ EX.BASS indicator, LOUD indicator

AUTO POWER SAVE function

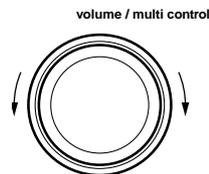
When the unit is ON and the unit is left for 30 minutes with CD, MD and TAPE not operating, the unit is switched off automatically by this function. This is convenient when you forgot to switch off the unit. This function can be activated or deactivated by the following operation.

① Select "A.P.S. SET?".



(Press the set/demo key while the "?" mark is blinking.)

② Select "A.P.S. ON" or "A.P.S. OFF".

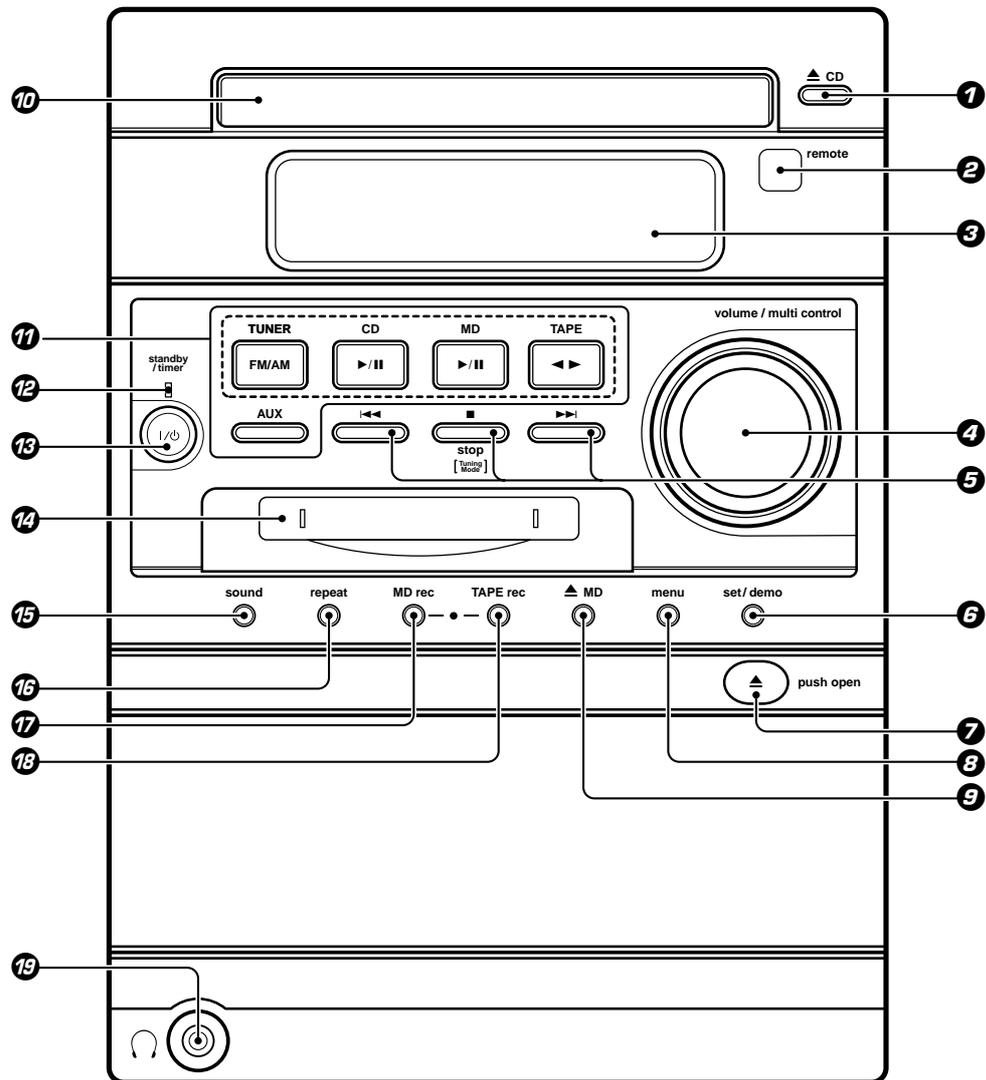


③ Set it.



- When the TUNER or AUX input is selected, APS operates only when the volume is set to zero or when MUTE is on.

Main unit



① ▲ CD key

Press to open or close the CD tray.

→ 16

② Remote sensor

→ 13

③ Display panel

* ④ volume/multi control knob

→ 11 → 14

Normally, this is used for volume adjustment.

⑤ ◀◀ and ▶▶ keys

CD, MD :

→ 17 → 20 → 64

Used to skip tracks as well as for MD editing, character selection, etc.

TAPE :

→ 23

Used to fast forward or rewind tape.

TUNER :

→ 24

Used to receive a preset radio station.

■ stop/ Tuning Mode key

CD, MD, TAPE:

→ 17 → 20 → 23

Press to stop a disc or tape operation.

TUNER:

→ 26

Press to switch between the AUTO (auto tuning, stereo reception) and MONO (manual tuning, manual reception) modes.

On STANDBY mode:

→ 70

Press to display the clock.

⑥ set/demo key

Press to set or enter an item selected with the **volume/multi control knob**.

This key is also used for switching demonstration on/off.

→ 3

About the one-touch operation function

This unit incorporates the one-touch operation function for the user's convenience.

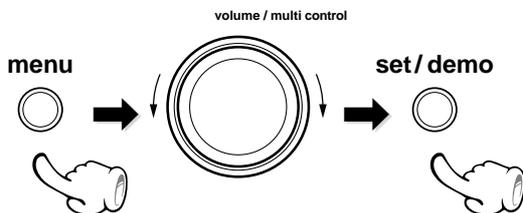
With this function, pressing any key enclosed in while the unit is in standby mode immediately start playback (or reception).

- 7 Cassette holder** → 22
To load or eject a cassette tape, press the area marked **▲ push open** on the cassette holder to open it.
- 8 menu key** → 11 → 70
Press to switch the function of the **volume/multi control** knob to the menu select mode.
This key is also used when setting the time of the day.
- 9 ▲ MD key** → 20
Press to eject the MD.
- 10 CD tray** → 16
Press the **▲ CD** key to open or close CD tray.
- 11 Basic operation keys**
- TUNER FM/AM key** → 24
Press to select the TUNER input.
This key is also used to select the received broadcast band.
- CD ►/|| key** → 16
Press to select the CD input and start playback. Pressing this key during CD playback initiates pause.
- MD ►/|| key** → 19
Press to select the MD input and start playback. Pressing this key during MD playback let it pause, and pressing it during MD recording initiates record-pause.
- TAPE ◀▶ key** → 22
Press to select the TAPE (cassette deck) input and start playback of a tape. Pressing this key during tape playback switches the tape transport direction.

- AUX key** → 69
Press to reproduce the external source component connected to the AUX (analog auxiliary input) jacks.
Pressing this key while the unit is off turns it on at the same time as selecting the AUX input.
- 12 standby/timer indicator**
Lights up when the unit is set to the Standby mode of power.
Red : Ordinary standby.
Green : Timer standby.
Off : The unit is ON.
- 13 I/⏻ key** → 14
Press to set the unit to On or Standby.
- 14 Mini Disc insertion slot**
- 15 sound key** → 15
Press to switch the sound effect to EX.BASS or LOUD.
- 16 repeat key (CD, MD)** → 39
Press for setting repeated playback.
- 17 MD rec key** → 31
Press to start MD recording.
- 18 TAPE rec key** → 35
Press to start tape recording. Pressing this key during recording initiates record-pause after leaving a no-sound blank of about 4 seconds.
- 19 Headphone jack** → 15
Connect headphones with a stereo mini-plug (optionally available).

*** About the volume/multi control knob**

After pressing the menu key to select the menu select mode, turn the volume/multi control knob to select the desired menu item.
To set or enter the setting of the menu item, press the set/demo key.



- The function of the control knob returns to the normal mode when it has not been operated for 20 seconds.
- "MD REC MODE" and "REC SPEED ?" are not displayed during MD recording.

Turning the knob switches the display contents.

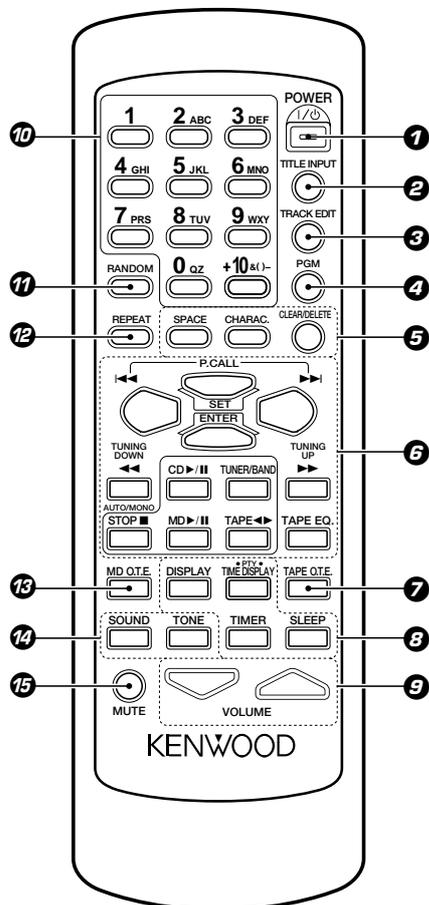
- "TAPE RVS. ?" → 23
- "MD REC MODE" → 31 → 33 → 42
- "REC SPEED ?" → 42
- "REC OPTIONS" → 42
- "AUTOPRESET" or "AUTOMEMORY" → 25
(Only when the TUNER input is selected)
- "AUX INPUT ?" → 69
(Only when the AUX input is selected)
- "TIMER SET ?" → 72 → 74
- "A.P.S. SET ?" → 9

Standby mode

While the standby indicator of the unit is lit, a small amount of current is flowing into the unit's internal circuitry to back up the memory. This condition is referred to as the standby mode of the unit. While the unit is in the standby mode, it can be turned ON from the remote control unit.

Operation of remote control unit

The keys on the remote control unit with the same names as on the main unit have the same function as the keys on the main unit.



Infrared ray system

Model : RC-M0303E (For U.K. and Europe)
: RC-M0303 (For other countries)

- ① POWER (I / ⏻) key** → 14
Press to set the unit to On or Standby.
- ② TITLE INPUT key** → 62
Used in MD title input operation.
- ③ TRACK EDIT key** → 52
Used in MD track editing operations such as track moving and track erasure.
- ④ PGM key (CD, MD)** → 37
Used in programming CD or MD tracks in the desired sequence.
- ⑤ SPACE key** → 63
Press to input a space in MD title input operation.
- CHARAC. key** → 63
Press to switch the character types in MD title input operation.
- CLEAR/DELETE key (CD, MD)** → 37 → 63
Press to clear a programmed track(s).
Pressing this key during MD title input operation deletes a character.

⑥ Basic operation keys

(Common keys shared by CD and MD function for CD or MD according to the input selection.)

◀◀ P.CALL ▶▶ keys

CD, MD : → 17 → 20

Used to skip tracks as well as for MD editing, character selection, etc.

TAPE :

Used to fast forward or rewind tape.

TUNER :

→ 24

Used to receive a preset radio station.

SET key

→ 52

Press to set an MD editing operation or to set or enter an item selected with the **volume/multi control knob**.

ENTER key

→ 26 → 53 → 65

Press to execute an MD editing operation or to enter an input title, etc.

This key is also used to enter a radio station in the preset memory of the tuner.

TUNING UP/ DOWN (◀◀, ▶▶) keys

CD, MD, TAPE : → 17 → 20 → 23 → 63

Used to fast forward or rewind tape or to fast forward or fast reverse a CD or MD.

This key is also used to move the cursor during MD title input.

TUNER :

→ 24

Used to select a radio station.

CD ▶/|| key

→ 16

TUNER/ BAND key

→ 24

STOP ■ / AUTO/MONO key

→ 17 → 26

MD ▶/|| key

→ 19

TAPE ◀▶ key

→ 22

TAPE EQ. key

→ 23

Press to turn the tape equalizer on.

⑦ TAPE O.T.E. key

→ 45

Press to start recording CD onto a tape with one-touch operation.

Pressing this key during CD playback records only the track being played onto tape. Pressing it during CD stop records all the CD tracks onto tape.

⑧ DISPLAY key

→ 18 → 21

Press to switch the display mode of the display panel.

PTY/ TIME DISPLAY key (For Europe and U.K.)

→ 18 → 21 → 23 → 28

Used at the time of program type detection.

Press to switch the displayed time information on CD or MD.

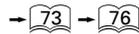
TIME DISPLAY key (For other countries)

→ 18 → 21 → 23

Press to switch the displayed time information on CD or MD.

TIMER key

Press to reserve the timer operation.



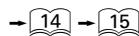
SLEEP key

Press to set the sleep timer.



9 VOLUME keys

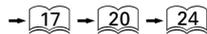
Press to adjust the volume.



These key are also used to adjust the tone.

10 Character/numeric keys

As the numeric keys, these are used to select a CD or MD track and as the preset call keys for the tuner.



During MD title input, these keys function as the character key for use in inputting alphabets, numeric and symbol characters.



11 RANDOM key (CD, MD)

Press for setting playback of tracks in a random order.



12 REPEAT key (CD, MD)

Press for setting repeated playback.



13 MD O.T.E. key

Press to start recording CD onto an MD with one-touch operation.



Pressing this key during CD playback records only the track being played onto MD. Pressing it during CD stop records all the CD tracks onto MD.

14 SOUND key

Press to switch the sound effect to EX.BASS or LOUD.



TONE key

Press to adjust the tone.



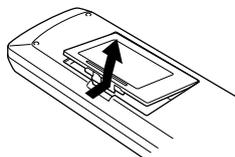
15 MUTE key

Press to mute the audio temporarily.

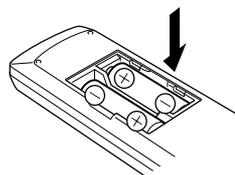


Loading batteries

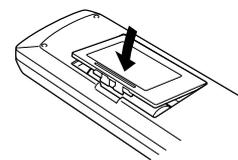
1 Remove the cover.



2 Insert batteries.



3 Close the cover.



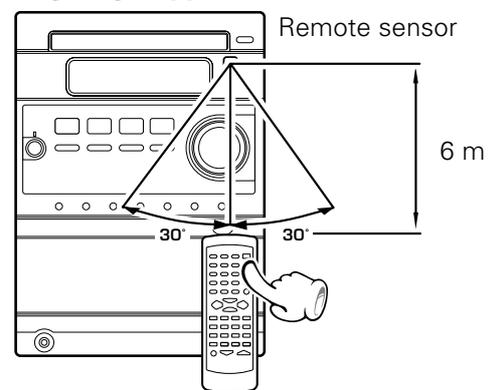
- Insert two R6 ("AA"-size) batteries following the polarity indications.

Operation

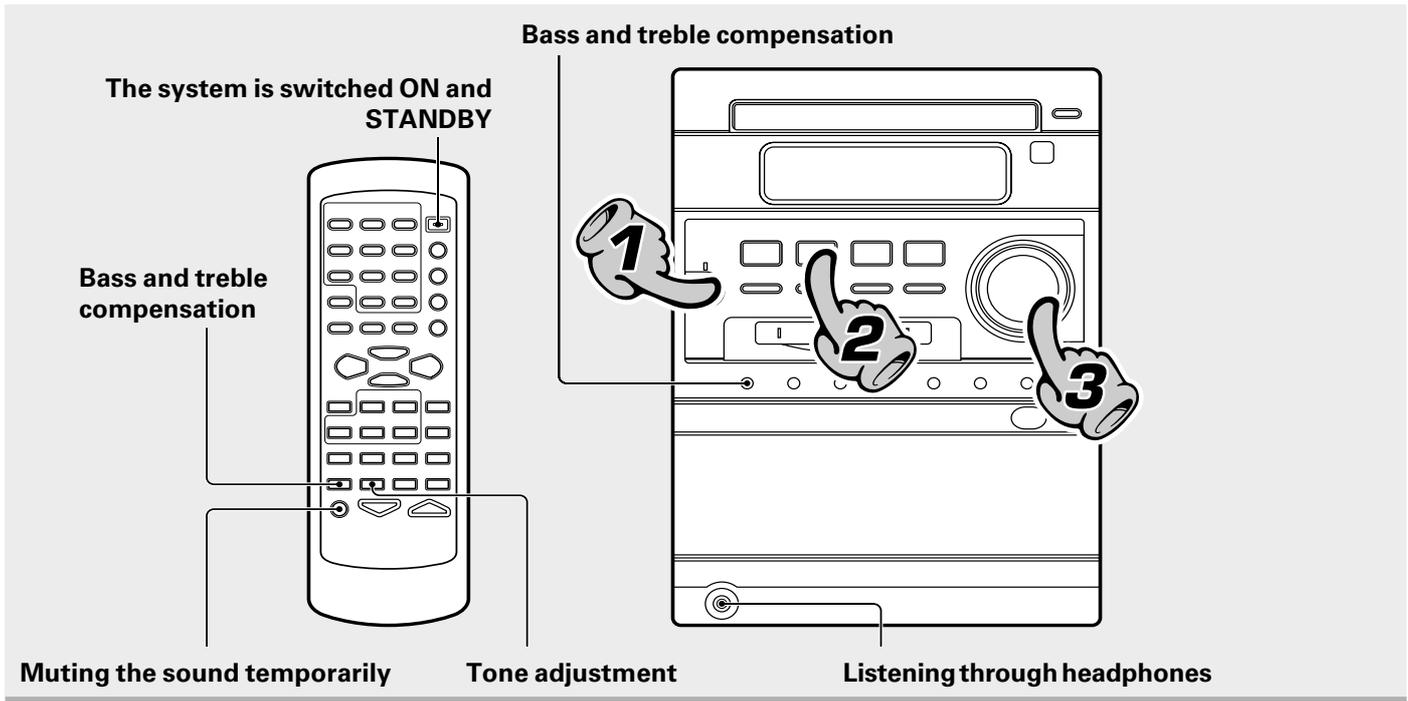
After plugging the power cord of this unit, press the **POWER** (I / ⏻) key of the remote control unit to turn the system ON. When the system is turned ON, press the key of the function to be operated.

- 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.)



- The provided batteries are intended for use in operation checking, and their service life may be short.
- When the remote controllable distance becomes short, replace both of the batteries with new ones.
- 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.



1. Set the I / ⏻ key to ON.

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

- Pressing the **TUNER FM/AM**, **CD ▶/||**, **MD ▶/||**, **TAPE ◀▶** or **AUX** key also turns power on and starts playback (reception) of the corresponding input. (One-touch operation)
- When the CD, MD or TAPE input is selected while the corresponding disc or tape has been loaded, it immediately starts to play.

Example:
To select the CD input

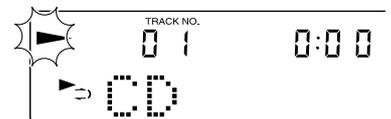


2. Selecting the desired output.

- CD → 16
- MD → 19
- TAPE → 22
- TUNER (Broadcasts) → 24

AUX (External input) [Adjusting the AUX input level → 69]

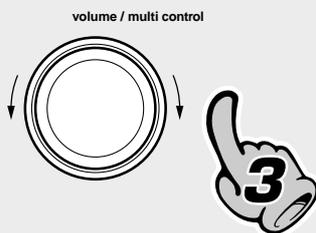
- Pressing the **TUNER FM/AM**, **CD ▶/||**, **MD ▶/||**, **TAPE ◀▶** or **AUX** key selects the corresponding input.



When CD has been selected.

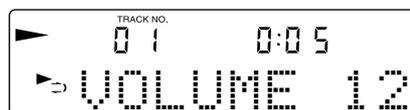
The volume decreases

The volume increases



3. Volume adjustment.

- The display shows a reference value.



Volume display

Listening through headphones

Insert the headphone plug into the headphone jack.



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

Muting the sound temporarily

Remote control unit only



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

Bass and treble compensation



Each press switches the modes as follows.

- ① **"EX.BASS" lights.**
The lowest and highest frequencies are enhanced regardless of the current volume level.
- ② **"LOUD" (Loudness) lights.**
The lowest and highest frequencies are enhanced according to the current volume level. (Effective during low-volume listening.)
- ③ **Both indicators off.**
Cancelled.

- Adjusting the tone while the **"LOUD"** or **"EX.BASS"** indicator is lit turns it off and cancels the sound enhancement mode.

Tone adjustment

Remote control unit only

The lowest and highest frequency bands can be adjusted independently.

- ① Select the frequency band.



Each press switches the operation.

- ① **"BASS" (low frequency) adjustment**

- ② **"TREBLE" (high frequency) adjustment**

- ③ **Normal mode**

(Go to step ② within 8 seconds.)

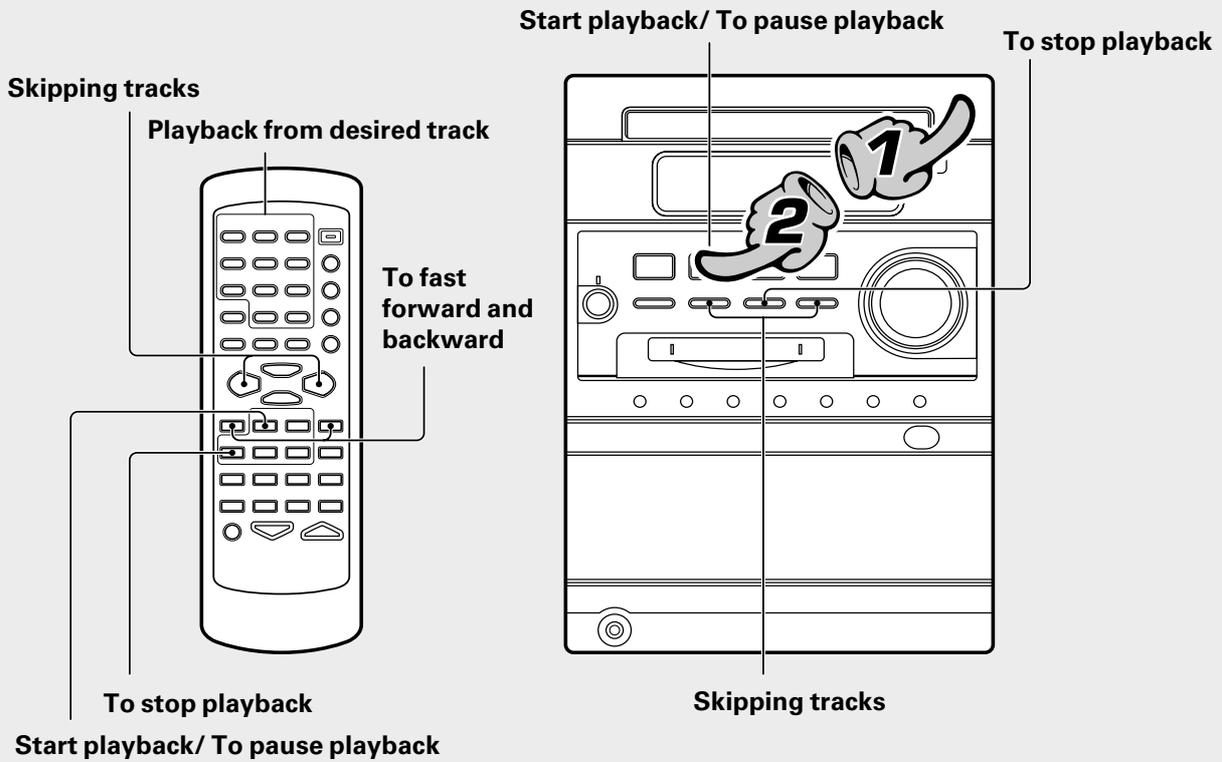
- ② Adjust.



(To adjust the other frequency band, repeat steps ① and ② for it.)

- The levels of both **"BASS"** and **"TREBLE"** can be adjusted in 2 steps in the range between -8 and +8.
- Adjusting the tone while the **"LOUD"** or **"EX.BASS"** indicator is lit turns it off and cancels the sound enhancement mode.

When a disc is placed into the CD player in advance, the unit will be switched on automatically by pressing the CD ►/|| key, and playback will start.



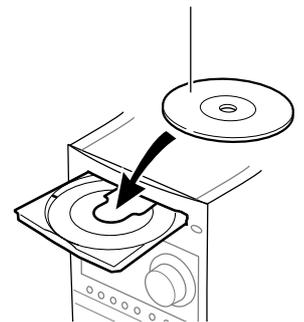
1. Load a disc.

- ① Press the ▲ CD key.
- ② Place a disc.
- ③ Press the ▲ CD key.

The label side must be on top.



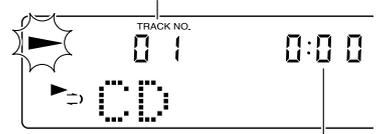
- Do not touch the played side of disc.
- Be sure to place a disc horizontally. Placing it with an inclination will result in malfunction.



2. Start playback.

- After a few seconds, play starts from track No.1.
- Titles are displayed for discs conforming to CD-TEXT.

Track No. being played



Elapsed time of track being played



Start playback/ To pause playback



- Each press pauses and plays the CD alternately.

To stop playback



Playback from desired track

Remote control unit only

Select the desired track No.

1	2 ABC	3 DEF
4 GHI	5 JKL	6 MNO
7 PRS	8 TUV	9 WXY
0 QZ	+10 st-1	



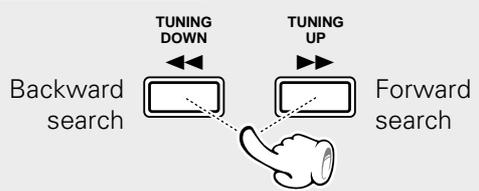
Press the numeric keys as shown below....

To select track No. 23 :+10 x 2, 3

To select track No. 40 :+10 x 4, 0

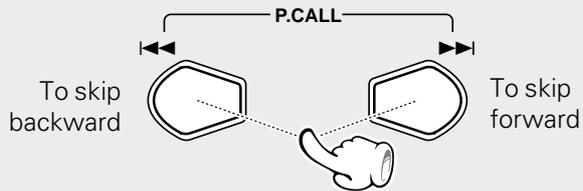
To fast forward and backward

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 CD is in stop mode. In this case, playback starts automatically from the point reached by skipping.

Eject the CD

Main unit only



- The CD tray will open. (Pressing the key again closes the CD tray.)

Time display on CD player

Each press of the TIME DISPLAY key changes the displayed contents.

Remote control unit only



or



(For U.K. and Europe)

(For other countries)

- Only time information ① and ② 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 256 minutes or more, the display shows "-- : --".

① Elapsed time of track being played

TRACK NO.	
01	1:23

② Remaining time of track being played

TRACK NO.	
01	- 2:34

③ Elapsed time of entire disc ("TOTAL" lights up)

TRACK NO.	TOTAL
01	23:45

④ Remaining time on entire disc ("TOTAL" lights up)

TRACK NO.	TOTAL
01	- 36:15

Title display with CD-TEXT compatible discs

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



- It may sometimes be unable to display the recorded characters even when the loaded disc is a CD-TEXT compatible disc. When the number of characters recorded in a disc is 1000 or more, the display will show "TEXT FULL".

(When pressed during stop)

Scrolled disc title display

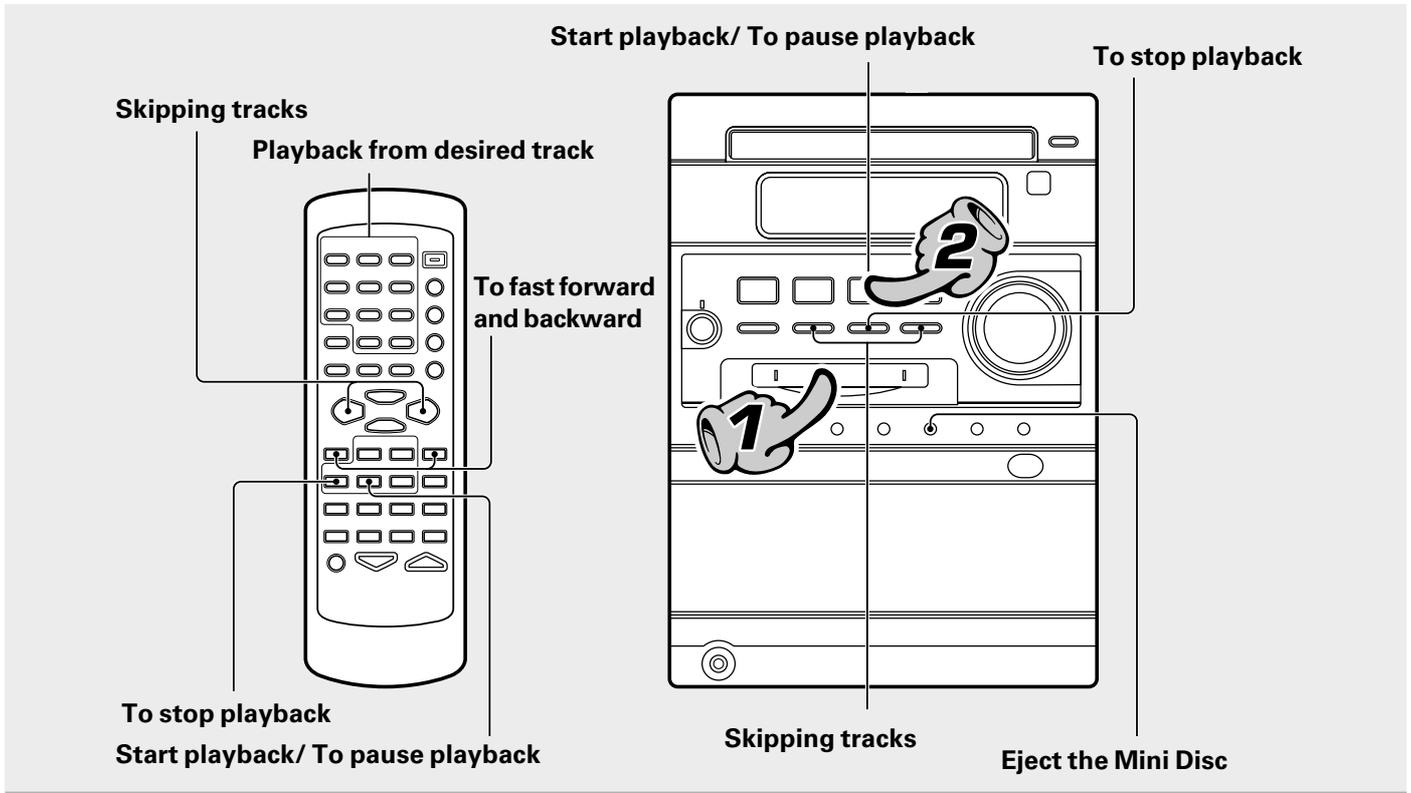
BACH: Solo U

(When pressed during play)

Scrolled track title display

BACH: Partit

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.)



Basic section

1. Load a Mini Disc.

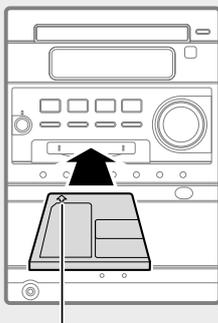
Insert the minidisc correctly into the slot of this unit.

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

The display changes.



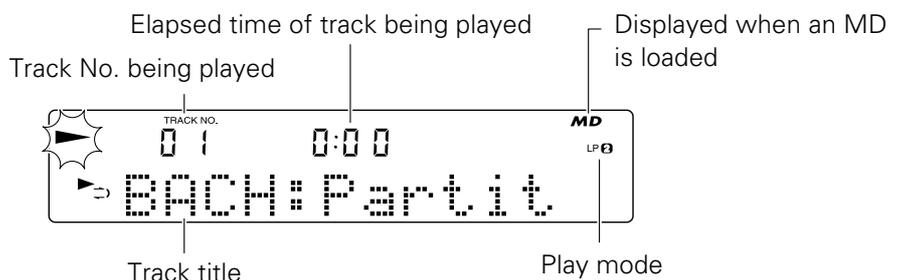
The MD cannot be loaded or ejected while the unit is in standby mode. Do not force load a MD in standby mode, otherwise malfunction will result.



In the direction of the arrow

2. Start playback.

- After a few seconds, play starts from track No.1.
- 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.

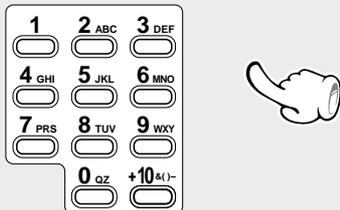
To stop playback



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 × 2, 3

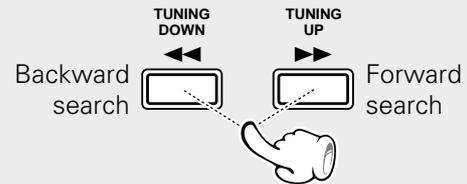
To select track No. 40 : +10 × 4, 0

To select track No. 102 : +10 × 10, 2

- Track No. 100 or more can be selected only with MD.
- 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.

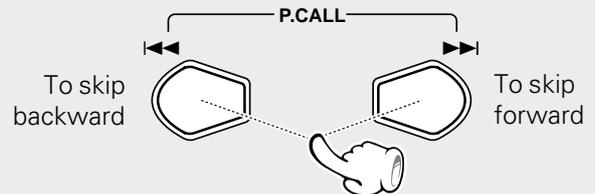
To fast forward and backward

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 Mini Disc

Main unit only



- Do not leave an ejected Mini Disc in the insertion slot.

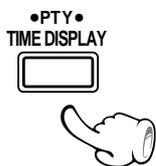
MDLP modes

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.

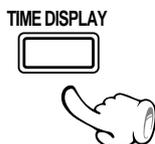
Time display on MD recorder

Each press of the TIME DISPLAY key changes the displayed contents.

Remote control unit only



or



(For U.K. and Europe)

(For other countries)

- Only time information ① and ② 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 1000 minutes or more, the display shows "— : — —".

① Elapsed time of track being played

TRACK NO. 01 1:23

② Remaining time of track being played

TRACK NO. 01 - 2:34

③ Elapsed time of entire disc
("TOTAL" lights up)

TRACK NO. 01 TOTAL 23:45

④ Remaining time on entire disc
("TOTAL" lights up)

TRACK NO. 01 TOTAL - 36:15

Title display of MD recorder

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



(When pressed during stop or play)

① Title display

BACH: Solo V

② Scrolled title display

Partita fo

(The display returns to condition ① after scrolling.)

③ Pressing the key during scrolled title display ② displays the remaining recording

001 R74:00

(The display returns to condition ① in 5 seconds.)

(When pressed during recording onto MD)

① Display of input source being recorded.
(When the source is a CD-TEXT compatible disc, its title is displayed.)

CD

② Remaining recording time of MD.

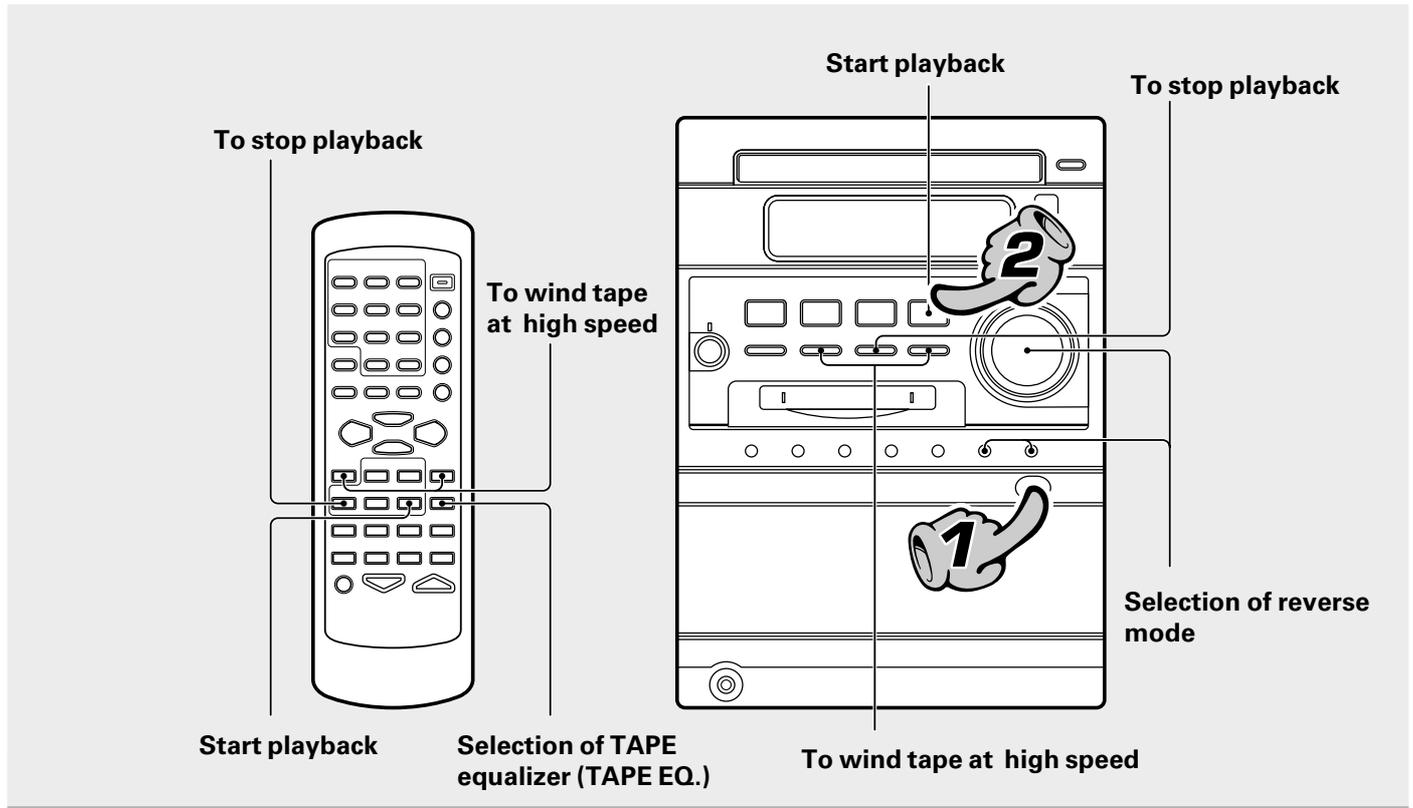
001 R74:00



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. (When there is a disc title, the disc title will be displayed.)

If you load a tape in the cassette deck in advance while the power is off, pressing the TAPE ◀▶ key turns power on automatically and starts the tape playback.



1. Load a cassette tape.

- ① Press the area marked ▲ push open to open the cassette holder.
- ② Insert a tape.
- ③ Press the area marked ▲ push open to close the cassette holder.

Do not use a cassette with more than 90-minute recording time, for the tape used with such a cassette is very thin and tends to cause troubles such as entanglement around the pinch roller or cutting of tape.

- The tape deck of the unit can play Normal (Type I), High (Type II) and Metal (Type IV) tapes.
- Remove tape slack before loading.



2. Start playback.

During playback, the tape running direction changes each time the key is pressed.



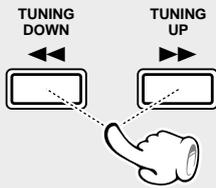
Transport direction indicators

Transport direction indicators:

Indicates the tape transport direction during playback or recording by lighting of ◀ or ▶. This direction is the direction stored in memory when the tape was last stopped.

To wind tape at high speed

To fast wind in direction ← To fast wind in direction →



- Press the **STOP** ■ key to stop fast winding.
- The same operation is also available with the ◀◀ and ▶▶ keys on the main unit.

Selection of TAPE equalizer (TAPE EQ.)

When playing a tape prerecorded with Noise Reduction system (such as the DOLBY NR) ON, be sure to set the "TAPE EQ." ON for playback.

Remote control unit only



Each press switches the modes as follows.

- ① "TAPE EQ." ON
(TAPE equalizer is used)
- ② "TAPE EQ." OFF
(TAPE equalizer is not used)

- Select the "TAPE EQ." ON mode according to the recording condition of the tape.

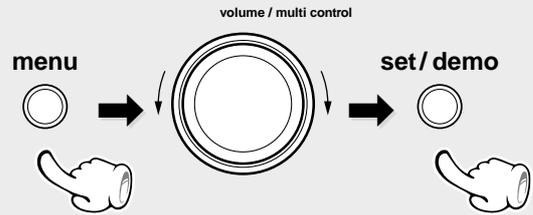
To stop playback



Selection of reverse mode

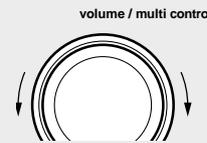
Main unit only

① Select "TAPE RVS. ?".



(Press the set/demo key while the "?" mark is blinking)

② Select.



① "⇐": (ONE-WAY)

Only one side is played back (recorded), and then the tape stops.

② "⇔": (REVERSE)

Both sides are played back (recorded), and then the tape stops.

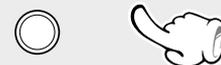
③ "↻": (ENDLESS)

Both sides are played back endlessly. (The tape stops after recording onto both sides.)

(The initial setting is "⇔"(REVERSE))

③ Set it.

set / demo



A tip for use of the tape counter

The tape counter is set to "0000" when a cassette tape is loaded. By writing down the counter reading in case you want to interrupt recording (playback) in the middle of the tape, the memo will be helpful as a reference for locating the same position when continuing the recording (playback) the next time. The tape counter figure decrements during recording or playback of the back side (while the ◀ tape transport indicator is lit). To set the tape counter to "0000", open the cassette holder once. Then the counter will be reset.

Tape counter display

The displayed information is switched every time the TIME DISPLAY key is pressed.

Remote control unit only

(For U.K. and Europe)



or

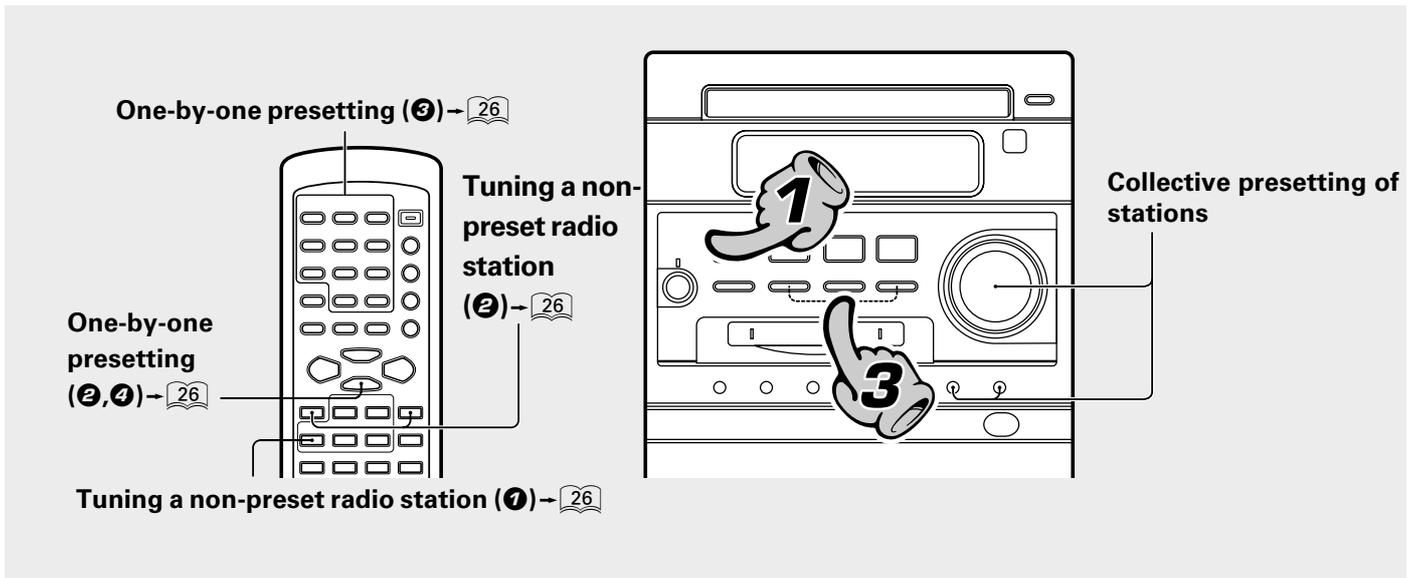
(For other countries)



① Clock display

② Tape counter

When the TUNER FM/AM key is pressed, the unit will automatically be switched on and reception status will be reached.



1. Select the tuner input.

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

- └ FM
- └ AM

2. Preset a radio station in memory.

Collective presetting of stations -> 25

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

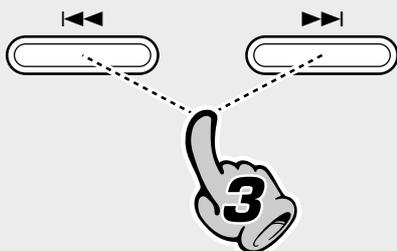
- Once stations are stored by auto presetting, the present procedure is not required from the next time, unless you move of house or re-execute presetting of all tunable stations.

One-by-one presetting (Manual preset) -> 26

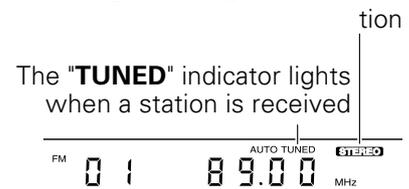
A station can also be tuned even when it is not preset. For details, read "**Tuning a non-preset radio station (Auto tuning, Manual tuning)**".

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.



Lights during stereo reception



The "TUNED" indicator lights when a station is received

Frequency display

When ▶▶ is pressed : 1→2→3 ... 28→29→30→1...

When ◀◀ is pressed : 30 → 29 → 28 3 → 2 → 1 → 30.....

- When a key is held depressed, preset stations will be skipped at an interval of about 0.5 second.
- To select a preset station from the remote, use the ◀◀ P.CALL ▶▶ key or numeric keys.

Collective presetting of stations

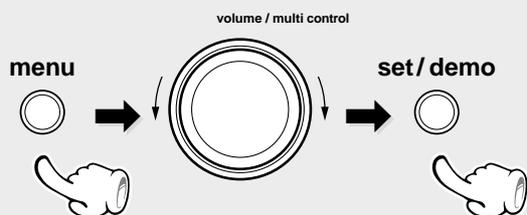
AUTO MEMORY For the U.K. and Europe
 AUTO PRESET For other countries

Main unit only

1 Receive a broadcast.



2 Select "AUTO MEMORY" (or "AUTO PRESET").



- A maximum of 30 stations of the band presently being received will be preset.
- When there are many stations and the intended station has not been preset, please also use "One-by-one pre-setting (Manual preset)".

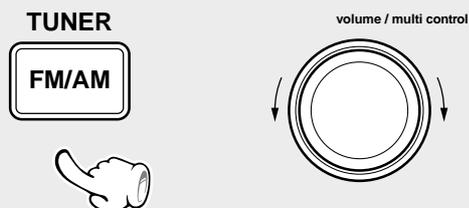
Channel space setting (Except for U.K., Europe, Malaysia and Australia)

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 Turn power on.

2 While holding TUNER FM/AM key pressed, turn the volume/multi control knob to select "FM 50/AM 9" or "FM100/AM10".



3 Set it.



Each press switches the space frequency alternately.

- ① FM 50 kHz, AM 9 kHz
FM 50/AM 9
- ② FM 100 kHz, AM 10 kHz
FM100/AM10

	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

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

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

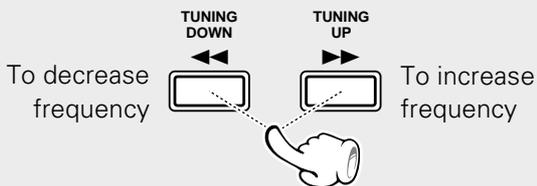
When the receiving condition is good: **AUTO mode**

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

① Select the AUTO or MANUAL mode.



② Tune a station.



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

Each press alternates the mode.

- ① "AUTO" : Stereo reception ("AUTO" lit)
- ② "MANUAL" : Monaural reception ("AUTO" not lit)

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

In AUTO mode:

The next preset station can be received automatically every time the **TUNING UP/DOWN** (◀◀ or ▶▶) key is pressed.

In MANUAL mode:

Press the **TUNING UP/DOWN** (◀◀ or ▶▶) key repeatedly until the desired station is received. The desired station can also be received by holding the **TUNING UP/DOWN** (◀◀ or ▶▶) key depressed until its frequency is displayed.

One-by-one presetting (Manual preset)

Remote control unit only

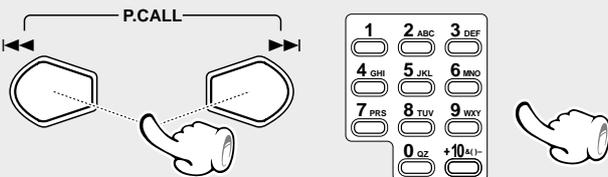
① Perform the procedure in "Tuning a non-preset radio station (Auto tuning, Manual tuning)" to receive the station to be preset.

② Press the ENTER key during reception.



(Proceed to step ③ while "MEMORY" is lit.)

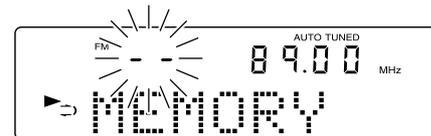
③ Select one of the preset numbers from 1 to 30.



④ Press the ENTER key again.

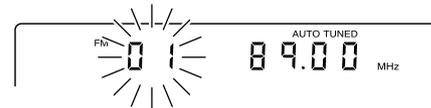


(Repeat steps ①, ②, ③ and ④ to preset other stations)



"MEMORY" lights (for approx. 20 sec.)

- A maximum of 30 stations of the band presently being received will be preset.



- If several stations are preset under the same number, the previous memory is replaced with the latest memory contents.

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

This unit is equipped with the following functions utilizing RDS data :

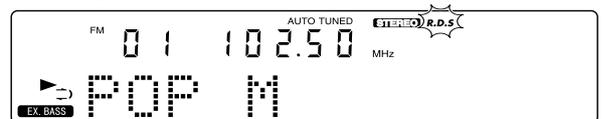
PTY (Program Type Identification) Search : → 28

The tuner automatically searches for a station which is currently broadcasting a specified program type (genre).

PS (Program Service Name) Display :

When an RDS broadcast is received, the station name is automatically displayed.

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



- Some functions may not be provided or be given different names depending on countries or areas.

Before using RDS

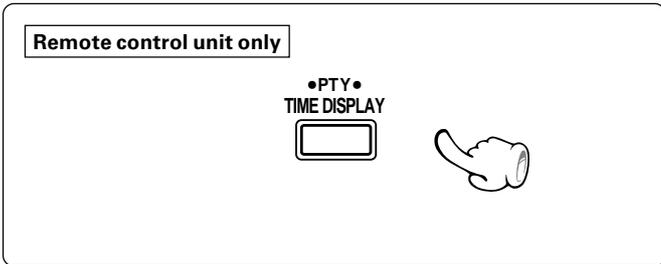
For reception of RDS stations, the auto memory function must be used to preset the stations. With the auto memory function, RDS stations are preset with priority. "No Data" will be flashed when a station is not preset by auto memory.

Searching for a desired program type (PTY search)

By specifying the type of program (genre) you want to listen to, the tuner automatically searches for a station which is currently broadcasting a program of the specified type.

Set the reception band to FM. Preset RDS stations with the auto memory function. → 25

1 Select the PTY search mode.

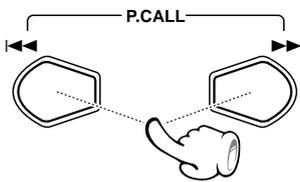


When an RDS broadcast is received, the program type is shown on the display. If no PTY data is available, or if the station is not an RDS station, "None" is displayed.

2 Select the desired program type.

Use program type table on the right for your convenience.

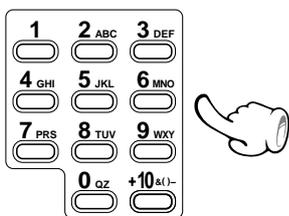
A Selection with the ◀◀ or ▶▶ key



Select while "PTY" is lit.

The desired program type can be selected with the ◀◀ or ▶▶ key from 29 types. Press the key and release it when the desired type is displayed.

B Selection with the numeric keys.

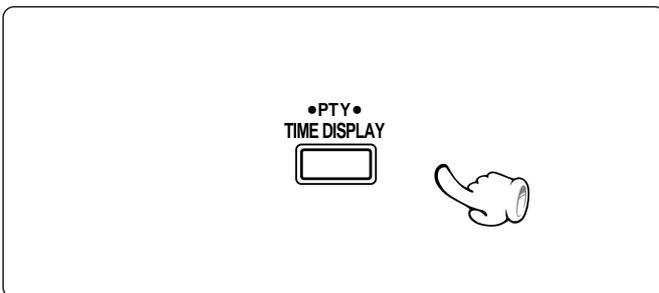


The program types 1 to 9 and 0 can be selected directly with the number keys. Use the ◀◀ or ▶▶ key to select other program types.

Program type table

◀◀, ▶▶ keys	Program Type Name	Display	
DOWN ↑ UP ▶▶	1 Pop Music	POP M	
	2 Rock Music	ROCK M	
	3 Easy Listening Music	EASY M	
	4 Light Classical	LIGHT M	
	5 Serious Classical	CLASSICS	
	6 Other Music	OTHER M	
	7 News	NEWS	
	8 Current Affairs	AFFAIRS	
	9 Information	INFO	
	0 Sport	SPORT	
		Education	EDUCATE
		Drama	DRAMA
		Culture	CULTURE
		Science	SCIENCE
		Varied	VARIED
		Weather	WEATHER
		Finance	FINANCE
		Children's programs	CHILDREN
		Social Affairs	SOCIAL
		Religion	RELIGION
		Phone In	PHONE IN
		Travel	TRAVEL
		Leisure	LEISURE
		Jazz Music	JAZZ
		Country Music	COUNTRY
		National Music	NATION M
		Oldies Music	OLDIES
		Folk Music	FOLK M
		Documentary	DOCUMENT

3 Start the search.



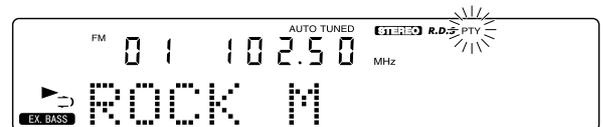
- No sound is heard while "PTY" is blinking.
- If a program of the desired type cannot be found, "No Program" is displayed, then after several seconds the display returns to the original display.
- If a program of the desired type is found, that program is received and the program type name display changes temporarily to the station name display.

To change to a different program type :

Repeat steps 1, 2, 3.

When searching for a Rock Music broadcast

Display while the tuner is searching.



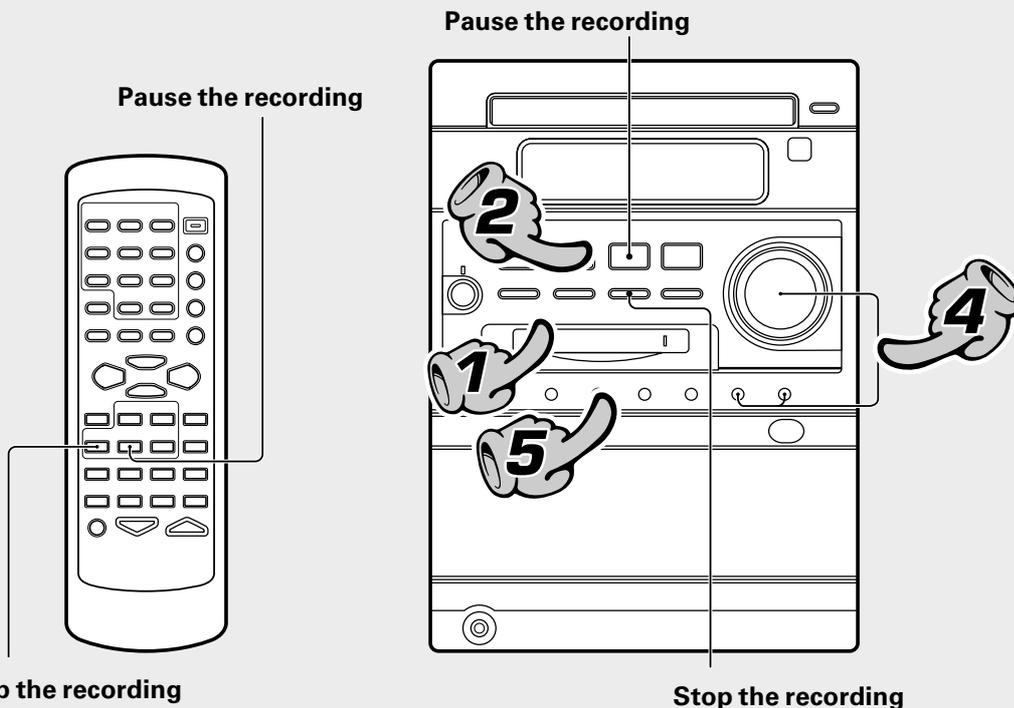
Program type name display.

When a station is received.

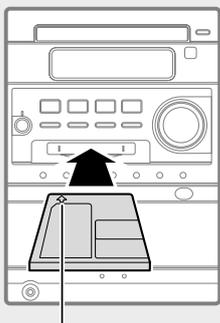


Station name display.

Recording in LP modes based on ATRAC3 (MDLP) is possible with all of the MD recording functions of the unit. For recording playback of a CD onto an MD, see "Convenient recording Methods". → 41



Basic section



In the direction of the arrow

1. Make the preparations for recording.

- ❶ Open the write protect tab of the Mini Disc to make it recordable. → 79
- ❷ Load the Mini Disc.

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.

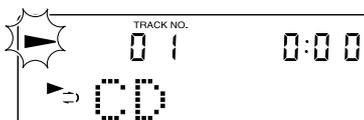
Select an input source other than "MD"

Example:
To select the CD input



2. Select the source to be recorded.

- CD** : Only digital recording
- TAPE** : Only analog recording
- TUNER (Broadcasts)** : Only analog recording
- AUX (External input)** : Only analog recording [Adjusting the AUX input level → 69]



The character information display shows the recording input source.

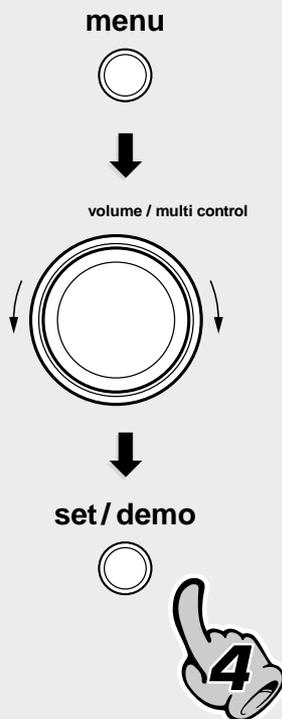
- If a CD or tape has already been loaded, it starts to play now. Press the ■ **STOP** key to stop it.
- Even when the CD contains the recording of CD-TEXT data, the data is not copied onto the MD.
- If the CD input is selected, the digital input is recorded automatically.

3. Prepare the recording source.

- TUNER (Radio)** : Receive a station.
- CD** : Put the CD player in record-pause mode at the beginning of the track to be recorded.
- TAPE** : Search the beginning of the section to be recorded and put the tape deck in record-pause mode there.
- AUX (Auxiliary input)** : Make the source component ready for reception or playback. → 69

4. Set the recording mode.

Discs or tracks recorded in the LP2 or LP4 mode will produce no sound if they are played back on a player which is incompatible with the LP2 or LP4 mode. When a disc is expected to be MDLP-incompatible players, record it in the STEREO or MONO mode.



- ➊ Press the menu key to select "MD REC MODE", then press the set/demo key.
- ➋ Turn the volume/multi control knob to select the desired recording mode, then press the set/demo key.

Turning the knob switches the display contents.

- "STEREO" : Stereo audio can be recorded for the same time period as the figure indicated on each MD cartridge.
- "LP2" : Stereo audio can be recorded for twice the figure of time indicated on each MD cartridge. ("LP 2" light up)
- "LP4" : Stereo audio can be recorded for four times the figure of time indicated on each MD cartridge. ("LP 4" light up)
- "MONO" : Monaural audio can be recorded for twice the figure of time indicated on each MD cartridge. ("MONO" light up)

- ➌ When "LP2" or "LP4" is selected in step ➋, turn the volume/multi control knob to select "LP : STAMP on" or "LP : STAMP off", then press the set/demo key. → 33

Turning the knob switches the display contents.

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

5. Start recording.



- ➍ Press the MD rec key (the unit enters record-pause mode).
- ➎ When the preparation is complete, press the MD rec key again.
- ➏ Start playback of the source. (This step is not required when recording the Tuner input.)

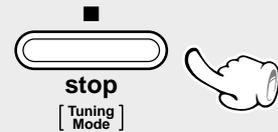
- When recording a CD, pressing the CD ►/|| key after step ➍ starts playback of CD and recording of MD simultaneously. (CD sync recording)
- When it is required to adjust the recording level of an AUX source component, adjust it during record-pause. → 69

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



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

In regard to track numbers at the time of recording

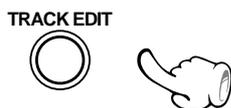
When audio is input after a no-sound blank for more than 3 seconds during recording, the track number is automatically incremented by "1". (The track number may sometimes not be incremented during recording from TAPE or TUNER.) The track number may also be incremented when a pianissimo section has continued during recording of classical music, etc. Remember that track numbers assigned automatically by the unit can be deleted later.

The erroneously set track number can be erased later. When it is desired to increase the track No. during recording, press the TRACK EDIT key during recording to record a track No. at that position.

The track numbers are used at the time of playback to find the start of tracks, for programming, etc.

Remote control unit only

Press during recording.



- With digital recording from a CD, the track number is increased when the track changes.



When recording playback of CD, the track number may sometimes be incremented by "1" at the moment the CD starts to be played. This is due to the signal included in the digital signal components from the CD. To delete unnecessary track numbers, see **"Erasing multiple tracks (QUICK ERASE) or erasing all tracks in disc (ALL ERASE)"** or **"Erasing a single track (ERASE)"**. → 56 → 58

In regard to display messages

Recording is not possible when one of the following messages is displayed.

- "DISC FULL"** : The minidisc is full.
 → Erase unrequired tracks. → 56 → 58
- "PROTECTED"** : The write protect tab is open.
 → Close it. → 79
- "PLAY ONLY"** : The minidisc is only for playback.
 → Insert a recordable disc.

Stereo long play recording/playback of MD

The MD recorder of this unit is compatible with stereo long play of MD (MDLP compatible equipment). The available recording modes include the stereo, monaural LP, stereo LP2 and stereo LP4 modes. It is possible to accommodate tracks recorded in different recording modes in a single MD. Be sure to select the recording mode before starting recording of MD.

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.

- The tracks recorded in the stereo LP2 or stereo LP4 mode on the MD recorder of the unit can be played back only on MDLP-compatible recorder/player.
- In stereo recording of MD, the recorded audio quality may be degraded as the recording time per disc is increased. If you want to record audio by putting priority on the quality, it is recommended to use the STEREO mode.

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).

Types of recording modes

Stereo (STEREO) :

The available recording time is equal to the figure indicated on each MD cartridge.

Stereo LP 2 (LP2) :

The recording time, available in stereo, becomes about twice the figure indicated on each MD cartridge.

Stereo LP 4 (LP4) :

The recording time, available in stereo, becomes about four times the figure indicated on each MD cartridge.

Monaural LP (MONO) :

The recording time, available only in monaural, becomes about twice the figure indicated on each MD cartridge.

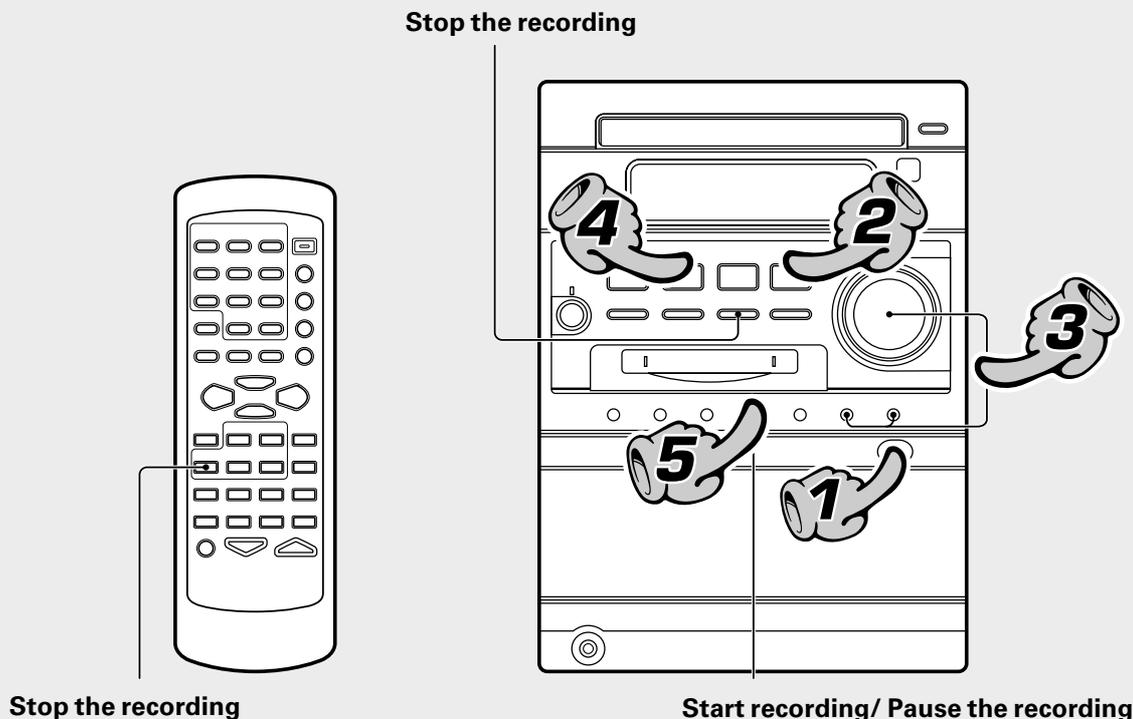
If an MD recorded in the LP2 or LP4 mode is played back on a recorder/player incompatible with LP2/LP4

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.



The tape deck of the unit can record signals only on Normal (Type I) and High (Type II) tapes. It cannot record on Metal (Type IV) tapes.



1. Load a tape in deck.

- ① Press the area marked ▲ push open to open the cassette holder.
- ② Insert a tape.
- ③ Press the area marked ▲ push open to close the cassette holder.

Do not use a cassette with more than 90-minute recording time, for the tape used with such a cassette is very thin and tends to cause troubles such as entanglement around the pinch roller or cutting of tape.

- Remove tape slack before loading.



2. Select the tape transport direction.

To reverse the transport direction :

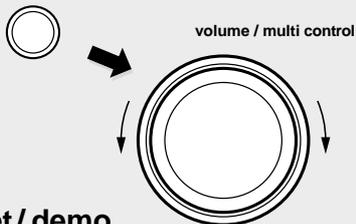
- ① Press the play key.
- ② Press the play key again.
- ③ Stop playback.

- When recording is started, the tape is transported in the direction selected in this step.

Check the tape transport direction indicator. → 22

- Search the position you want to start recording in advance.

menu



set / demo



3. Set the recording condition.

Select the reverse mode. → 23

- Check the tape transport direction before starting recording. If it is set to the reverse direction, only one side of tape can be recorded regardless of the reverse mode setting made here.
- The tape equalizer is defeated during recording.

Select an input source other than "TAPE"

Example:
To select the CD input



4. Select the source to be recorded.

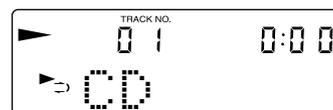
CD

MD

TUNER (Broadcasts)

AUX (External input) : [Adjusting the AUX input level → 69]

- If a CD or MD has already been loaded, it starts to play now. Press the ■ **STOP** key to stop it.



The character information display shows the recording input source.

TAPE rec



5. Start recording.

- 1 Press the TAPE rec key.
- 2 Play (or tune) the input source to be recorded.

- Recording stops automatically when the tape side (s) to be recorded have been fully recorded.

Pause the recording

Main unit only

TAPE rec



Lights



- Press the **TAPE rec** key during recording. It stops after leaving a non-recorded blank of 4 seconds. (Press the key again to resume recording.)

Stop the recording



stop
[Tuning Mode]

Points in CD recording

When recording CD tracks onto a tape, if you leave the cassette deck in record-pause mode beforehand, the cassette deck recording can be started at the CD starts to be played.

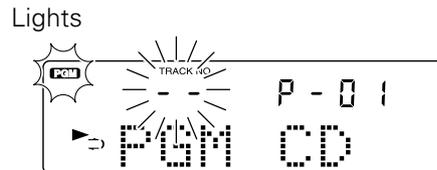
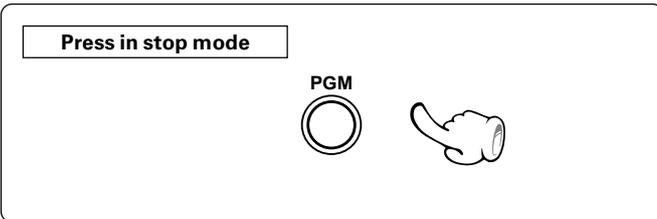
- ❶ Put the CD player in pause mode.
- ❷ Select the track to be recorded with the skip (◀◀, ▶▶) keys. (The CD player pauses at the beginning of the selected track.)
- ❸ Put the cassette deck in Record-pause mode. (Press TAPE rec key twice)
- ❹ Start playing the CD. (Recording starts)
 - To stop recording, press the ■ STOP key.
 - Recording from an MD is possible with the same procedure as above.

Listening to the desired sequence (program playback)

Use the following procedure to program desired tracks in a desired order. (up to 32 tracks)

Select the CD or MD input.

1 Let the "PGM" indicator light.



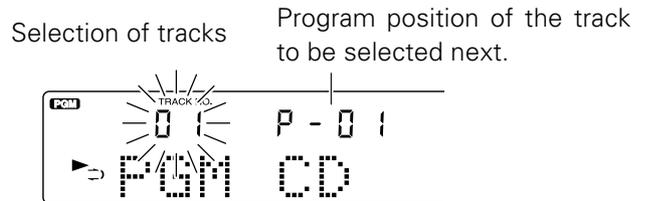
2 Select track numbers in the order you want to play them.

1 Select the track.

(Go to step 2 within 20 seconds.)

2 Confirm the selection.

(To select more than one track, repeat steps 1 and 2 for each track.)

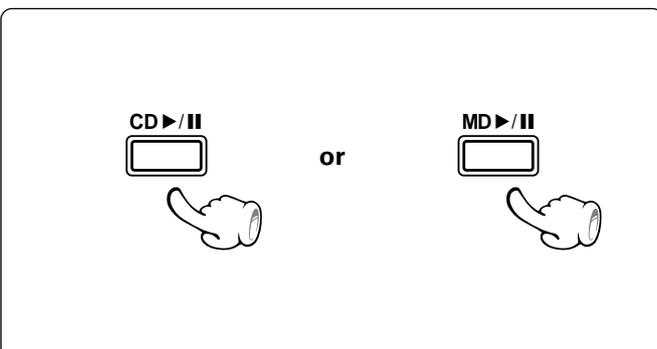


Press the numeric keys as shown below....

- To select track No. 23 : +10 x 2, 3
- To select track No. 40 : +10 x 4, 0
- To select track No. 102 : +10 x 10, 2

- Track No. 100 or more can be selected only with MD.
- Up to 32 tracks can be programmed. When "PGM FULL" is displayed, no more tracks can be programmed.
- If you made a mistake, press the **CLEAR/DELETE** key and enter the track No. again.
- When a track No. is entered, the track will be added to the end of the existing program.
- When the total time of CD program is 256 minutes or more or when that of MD program is 1000 minutes or more, the display shows "-- : --".

3 Start playback.

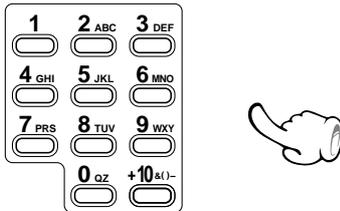


- Tracks will be played in the order they were programmed (following the program numbers).
- When the **◀◀/▶▶** key is pressed during play, the program will jump to the preceding or the following track respectively.
- When the **◀◀** key is pressed once during playback, the play position returns to the 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 select track No. 23 : +10 × 2, 3

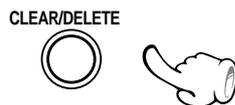
To select track No. 40 : +10 × 4, 0

To select track No. 102 : +10 × 10, 2

- Track No. 100 or more can be selected only with MD.
- Up to 32 tracks can be programmed. When "PGM FULL" is displayed, no more tracks can be programmed.
- If you made a mistake, press the **CLEAR/DELETE** key and enter the track No. again.
- 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



P-5 has been deleted

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

To clear the entire program

Press in stop mode



Goes off



- 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.

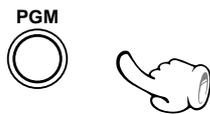
Repeated playback

You can repeatedly listen to a favorite track or disc.

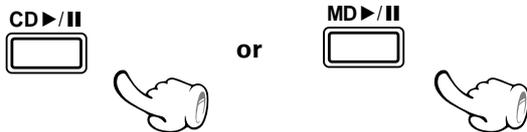
Select the CD or MD input.

Setup for repeating a single track

1 Confirm that the "PGM" indicator is not lit.



2 Play the track to be repeated.



3 Select "ONE REPEAT".



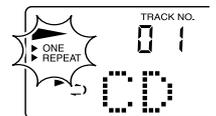
- If the "PGM" indicator is lit, turn it off by pressing the PGM key in stop mode to cancel the program mode.

Confirm that this is not lit.



Each press switches the repeat mode.

- 1 "ONE REPEAT"
- 2 "REPEAT"
- 3 Off.... Repeat deactivated

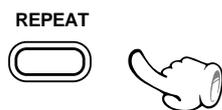


Setup for repeating all tracks in a disc

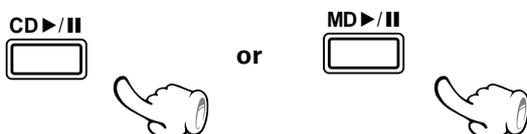
1 Confirm that the "PGM" indicator is not lit.



2 Select "REPEAT".



3 Start playback.



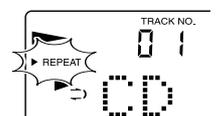
- If the "PGM" indicator is lit, turn it off by pressing the PGM key in stop mode to cancel the program mode.

Confirm that this is not lit.



Each press switches the repeat mode.

- 1 "ONE REPEAT"
- 2 "REPEAT"
- 3 Off.... Repeat deactivated



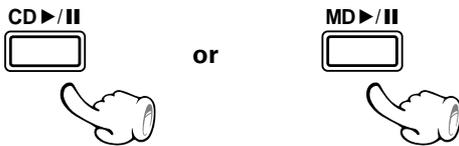
Setup for repeating selected tracks

① Program the track sequence according to steps ① to ② of "Listening to the desired sequence (program playback)". → 37

② Select "REPEAT".



③ Start playback.



Each press switches the repeat mode.

- ① "REPEAT"
- ② Off... Repeat deactivated



- All selected tracks will be repeated.

To stop repeated playback

Press the REPEAT key repeatedly until the repeat mode is switched off.

- The "REPEAT" indicator turns off and playback according to the current CD player or MD recorder mode.

Playing tracks in a random order (random playback)

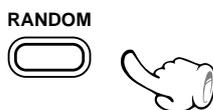
As the titles each time are selected randomly, the music can be enjoyed without getting tired of it.

Select the CD or MD input.

① Confirm that the "PGM" indicator is not lit.



② Press the RANDOM key.



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

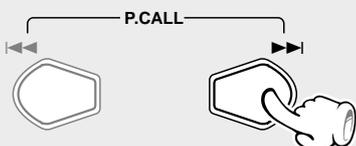
Each press switches the modes as follows.

- ① "RANDOM" on (Random playback)
- ② "RANDOM" off (Normal playback)



- 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



- Pressing the P.CALL key returns the playback position to the beginning of the track being played.

To cancel random playback

Press so that the "RANDOM" indicator is turned off.



- The "RANDOM" indicator goes off and the playback in order of the tracks starts from the track being played.

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.

The tape deck of the unit can record signals only on Normal (Type I) and High (Type II) tapes. It cannot record on Metal (Type IV) tapes.

Recording a CD onto an MD in short time (CD → MD) → 42

All-track high-speed recording



All tracks in a CD can be recorded onto an MD in half the time required for normal-speed recording.

Single-track high-speed recording



The CD track being played can be recorded onto an MD in half the time required for normal-speed recording. (This is convenient when you want to record only the tracks which sound good from a CD that you play for the first time.)

To record CD with a simplified method (CD → MD/ CD → TAPE) → 44

- One-touch edit recording from an MD to Tape is not available.

All-track recording



Records all tracks in a CD onto either an MD or tape.

Single-track recording



Records only one CD track being played onto either an MD or tape.
(This is convenient for recording of desired tracks from a disc being heard for the first time.)

To record CD simultaneously onto an MD and tape (TWIN REC) → 46

All-track twin recording



Simultaneous recording of an entire CD onto an MD and tape.

Single-track twin recording



Simultaneous recording of the CD track being played onto an MD and tape.
(This is convenient for recording of desired tracks from a disc being heard for the first time.)

To record desired CD or MD tracks by reordering them (CD → MD/ CD → TAPE/ TWIN REC/ MD → TAPE) → 48 → 50

Program recording



Recording of programmed tracks in the programmed order.
(Convenient for recording only the desired CD or MD tracks in the desired order.)
Simultaneous recording of programmed CD tracks onto both MD and Tape is also possible.



With recording onto tape, the track will be interrupted for the part of the guide tape at the tape reversal, where recording is not possible. Please use single-side recording if this is to be avoided.

High-speed recording (CD → MD)

All tracks in a CD can be recorded onto an MD at twice the normal speed. (All-track high-speed recording)
During listening to a CD, only the track being played can be recorded with a one-touch operation. (Single-track high-speed recording)

Make sure to put the MD recorder to stop mode.

1 Make preparation for recording.

- ① Select the CD input.
- ② Ensure that the "PGM" and "RANDOM" indicators are not lit.
- ③ Insert a recordable MD in the MD recorder.
- ④ Insert the desired CD in the CD player.

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

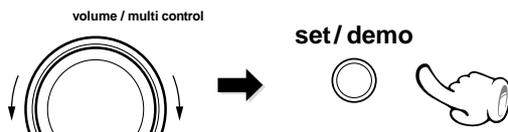
2 Select the recording mode.

- ① Press the menu key.



- ② Turn the volume/multi control knob to select "MD REC MODE", then press the set/demo key.

- ③ Turn the volume/multi control knob to select the recording mode, then press the set/demo key.



(If you selected "STEREO" or "MONO", go to step ④.)

- ④ To use the LP stamping function, turn the volume/multi control knob to set "LP: STAMP on", then press the set/demo key.

Discs or tracks recorded in the LP2 or LP4 mode will produce no sound if they are played back on a player which is incompatible with the LP2 or LP4 mode. When a disc is expected to be MDLP-incompatible players, record it in the STEREO or MONO mode.

Turning the knob switches the display contents.

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

Turning the knob switches the display contents.

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

3 Select the recording speed.

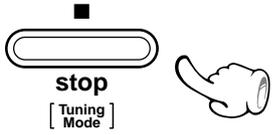
- ① Press the menu key.
- ② Turn the volume/multi control key to select "REC SPEED ?", then press the set/demo key.
- ③ Turn the volume/multi control key to select "CD → MD HIGH", then press the set/demo key.

Turning the knob switches the display contents.

- ① "CD → MD NORM" : Normal-speed recording of MD
- ② "CD → MD HIGH" : High-speed recording of MD

- When "CD → MD HIGH" ② is selected, the "HIGH-SPEED" indicator lights up.

4 Check the current play mode of the CD player.

All-track high-speed recording	Single-track high-speed recording
<p>If it is in play mode, stop it.</p> 	<p>Select the desired CD track and play it.</p> <ul style="list-style-type: none"> When step 5 is performed in the middle of CD playback, the current track will be recorded from the beginning. <p>(To record other tracks, repeat steps 4 and 5 for each track)</p>

5 Start recording.

- 1 Press the menu key.
 - 2 Turn the volume/multi control knob to select "REC OPTIONS", then press the set/demo key.
 - 3 Turn the volume/multi control knob to select "CD → MD", then press the set/demo key to start high-speed recording.
- If you want to control step 5 from the remote, simply press the MD O.T.E. key once to start recording.

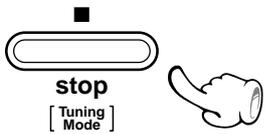
The recorded audio may skip, noise may be recorded on the MD or unnecessary tracks may be created depending on the condition of the CD. In such a case, restart recording at the normal speed.

Turning the knob switches the display contents.

- 1 "CD → MD" : Select for high-speed recording of CD onto MD.
- 2 "CD → TAPE"
- 3 "TWIN REC"

- When either the playback of CD or recording of MD or tape is stopped, the other operation is stopped automatically.

To interrupt a recording



(Recording and playback will be stopped)

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

At the end of the recording

MD recorder : Stop.

- One high-speed recording starts, it is not permitted to record the same disc with high-speed recording for 74 minutes after the start of recording. If you want to record the same disc immediately, use one-touch edit recording (recording at normal speed). → 44



Time period until high-speed recording of the same disc is permitted

- High-speed recording of more than 100 tracks within 74 minutes is not permitted.

One-touch edit recording (CD → MD/CD → TAPE)

Records all tracks in a CD with a simple operation. (All-track recording)

Records a single CD track being played from the beginning. (Single-track recording)

The tape deck of the unit can record signals only on Normal (Type I) and High (Type II) tapes. It cannot record on Metal (Type IV) tapes.

Make sure to put the MD recorder or cassette deck to stop mode.

1 Make preparation for recording.

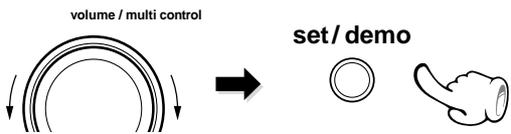
CD → MD	CD → TAPE
<ol style="list-style-type: none"> ① Select the CD input. ② Ensure that the "PGM" and "RANDOM" indicators are not lit. ③ Insert a recordable MD in the MD recorder. ④ Insert the desired CD in the CD player. ⑤ Ensure that the "HIGH-SPEED" indicator is not lit. → 42 	<ol style="list-style-type: none"> ① Perform steps 1 to 3 of the procedure in "Recording on TAPE". → 34 ② Ensure that the "PGM" and "RANDOM" indicators are not lit. ③ Insert disc in the CD player. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>To record CD onto tape, go to step ③</p> </div>

- If the "PGM" indicator is lit, turn it off by pressing the **PGM** key in stop mode to cancel the program mode.
- If the "RANDOM" indicator is lit, turn it off by pressing the **RANDOM** key to cancel the random play mode.
- When the "HIGH-SPEED" indicator is lit, the MD recording is performed as high-speed recording.

2 Select the recording mode.

- ① Press the menu key.


- ② Turn the volume/multi control knob to select "MD REC MODE", then press the set/demo key.
- ③ Turn the volume/multi control knob to select the recording mode, then press the set/demo key.



(If you selected "STEREO" or "MONO", go to step ④.)
- ④ To use the LP stamping function, turn the volume/multi control knob to set "LP: STAMP on", then press the set/demo key.

Discs or tracks recorded in the LP2 or LP4 mode will produce no sound if they are played back on a player which is incompatible with the LP2 or LP4 mode. When a disc is expected to be MDLP-incompatible players, record it in the STEREO or MONO mode.

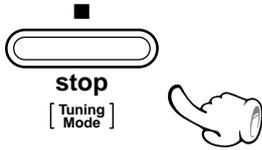
Turning the knob switches the display contents.

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

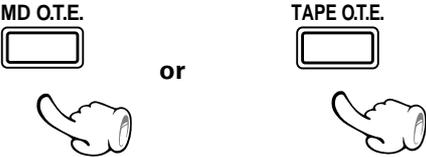
Turning the knob switches the display contents.

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

3 Check the current play mode of the CD player.

All-track recording	Single-track recording
<p>If it is in play mode, stop it.</p> 	<p>Select the desired CD track and play it.</p> <ul style="list-style-type: none"> When step 4 is performed in the middle of CD playback, the current track will be recorded from the beginning. <p>(To record other tracks, repeat steps 3 and 4 for each track)</p>

4 Start recording.

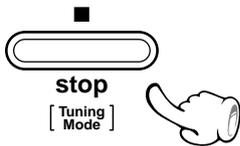


MD O.T.E. or TAPE O.T.E.

If you are operating the main unit, the same effect as step 4 can be obtained by selecting "REC OPTIONS" then selecting "CD → MD" or "CD → TAPE".

- When either the playback of CD or recording of MD or tape is stopped, the other operation is stopped automatically.

To interrupt a recording



(Recording and playback will be stopped)

At the end of the recording

- MD recorder : Stop.
- Cassette deck : Stop is executed after an unrecorded portion of about 4 sec. has been produced.

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

Twin recording onto MD and tape (TWIN REC)

All the tracks on a CD can be recorded simultaneously onto an MD and tape. (All-track twin recording)
The current track can be recorded from the beginning simultaneously onto an MD and tape. (single-track twin recording)

The tape deck of the unit can record signals only on Normal (Type I) and High (Type II) tapes. It cannot record on Metal (Type IV) tapes.

Make sure to put the MD recorder or cassette deck to stop mode.

1 Make preparation for recording.

- ① Select the CD input.
- ② Ensure that the "PGM" and "RANDOM" indicators are not lit.
- ③ MD : Insert a recordable MD in the MD recorder.
TAPE : Perform steps 1 to 3 of the procedure in "Recording on TAPE". → 
- ④ Insert the desired CD in the CD player.

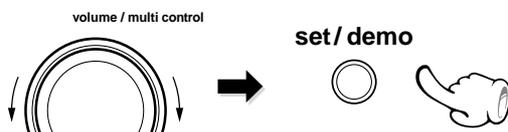
High-speed recording is not available in twin recording onto MD and tape.

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

2 Select the recording mode.

- ① Press the menu key.
 
- ② Turn the volume/multi control knob to select "MD REC MODE", then press the set/demo key.

- ③ Turn the volume/multi control knob to select the recording mode, then press the set/demo key.



(If you selected "STEREO" or "MONO", go to step ④.)

- ④ To use the LP stamping function, turn the volume/multi control knob to set "LP: STAMP on", then press the set/demo key.

Discs or tracks recorded in the LP2 or LP4 mode will produce no sound if they are played back on a player which is incompatible with the LP2 or LP4 mode. When a disc is expected to be MDLP-incompatible players, record it in the STEREO or MONO mode.

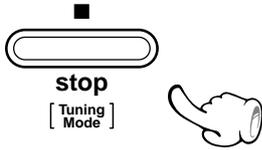
Turning the knob switches the display contents.

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

Turning the knob switches the display contents.

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

3 Check the current play mode of the CD player.

All-track twin recording	Single-track twin recording
<p>If it is in play mode, stop it.</p> 	<p>Select the desired CD track and play it.</p> <ul style="list-style-type: none"> When step 4 is performed in the middle of CD playback, the current track will be recorded from the beginning. <p>(To record other tracks, repeat steps 3 and 4 for each track)</p>

4 Start recording.

- 1 Press the menu key.
- 2 Turn the volume/multi control knob to select "REC OPTIONS", then press the set/demo key.
- 3 Turn the volume/multi control knob to select "TWIN REC", then press the set/demo key to start twin recording.

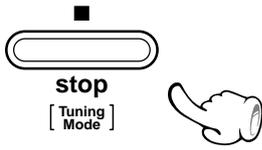
This operation is not available from the remote.

Turning the knob switches the display contents.

- 1 "CD → MD"
- 2 "CD → TAPE"
- 3 "TWIN REC" : Select to record a CD onto both MD and tape.

- When either the playback of CD or recording of MD or tape is stopped, the other operation is stopped automatically.

To interrupt a recording



(Recording and playback will be stopped)

At the end of the recording

MD recorder : Stop.
 Cassette deck : Stop is executed after an unrecorded portion of about 4 sec. has been produced.

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

Program recording (CD → MD / CD → TAPE / TWIN REC)

Desired CD tracks can be programmed in the desired sequence and recorded onto an MD or tape.

The tape deck of the unit can record signals only on Normal (Type I) and High (Type II) tapes. It cannot record on Metal (Type IV) tapes.

Make sure to put the MD recorder or cassette deck to stop mode.

1 Make preparation for recording.

- ① Select the CD input.
- ② Ensure that the "RANDOM" indicators are not lit.
- ③ MD : Insert a recordable MD in the MD recorder.
TAPE : Perform steps 1 to 3 of the procedure in "Recording on TAPE". → 
- ④ Insert the desired CD in the CD player.
- ⑤ Ensure that the "HIGH-SPEED" indicator is not lit. → 

Even when the "HIGH-SPEED" indicator is lit, the MD recording is performed as normal-speed recording.

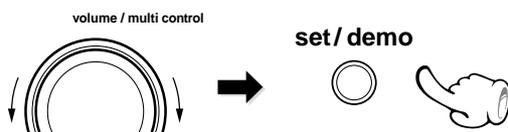
- If the "RANDOM" indicator is lit, turn it off by pressing the **RANDOM** key to cancel the random play mode.
- If the "HIGH-SPEED" indicator is lit, turn it off by setting the recording speed to the normal speed.

To record a CD only onto tape, go to step ④.

2 Select the recording mode.

- ① Press the menu key.
 
- ② Turn the volume/multi control knob to select "MD REC MODE", then press the set/demo key.

- ③ Turn the volume/multi control knob to select the recording mode, then press the set/demo key.



(If you selected "STEREO" or "MONO", go to step ④.)

- ④ To use the LP stamping function, turn the volume/multi control knob to set "LP: STAMP on", then press the set/demo key.

Discs or tracks recorded in the LP2 or LP4 mode will produce no sound if they are played back on a player which is incompatible with the LP2 or LP4 mode. When a disc is expected to be MDLP-incompatible players, record it in the STEREO or MONO mode.

Turning the knob switches the display contents.

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

Turning the knob switches the display contents.

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

3 Program the desired sequence of CD tracks.

Perform steps 1 and 2 of the procedure in "Listening to the desired sequence (Program playback)". → 

- When the **PGM** key is pressed to cancel the edited contents, the entire editing contents will be erased. → 
- Tracks programmed beyond the available MD or tape recording time will be interrupted in the middle.

4 Start recording.

- 1 Press the menu key.
- 2 Turn the volume/multi control knob to select "REC OPTIONS", then press the set/demo key.
- 3 Turn the volume/multi control knob to select "CD → MD", "CD → TAPE" or "TWIN REC", then press the set/demo key to start recording.

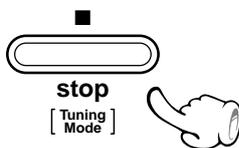
If you want to control step 3 from the remote, simply press the MD O.T.E. or TAPE O.T.E. key once to start recording.

Turning the knob switches the display contents.

- ① "CD → MD" : Select to record a CD onto MD.
- ② "CD → TAPE" : Select to record a CD onto tape.
- ③ "TWIN REC" : Select to record a CD onto both MD and tape.

- Recording starts from the first track in the program and ends after having recorded the entire programmed tracks.
- Recording stops automatically when the program playback of CD has completed.
- When either the playback of CD or recording of MD or tape is stopped, the other operation is stopped automatically.

To interrupt a recording



(Recording and playback will be stopped)

At the end of the recording

- | | | |
|---------------|---|---|
| MD recorder | : | Stop. |
| Cassette deck | : | Stop is executed after an unrecorded portion of about 4 sec. has been produced. |

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

Program recording (MD → TAPE)

Desired MD tracks can be programmed in the desired sequence and recorded onto a tape.

The tape deck of the unit can record signals only on Normal (Type I) and High (Type II) tapes. It cannot record on Metal (Type IV) tapes.

Make sure to put the MD recorder or cassette deck to stop mode.

1 Make the preparations for recording.

① Select the MD input.

② MD : Insert a disc into the MD recorder.

TAPE : Perform steps 1 to 3 of the procedure in "Recording on TAPE". → [34](#)

2 Program the desired sequence of MD tracks.

Perform steps ① and ② of the procedure in "Listening to the desired sequence (Program playback)". → [37](#)

- When the **PGM** key is pressed to cancel the edited contents, the entire editing contents will be erased. → [38](#)
- Tracks programmed in excess of the tape recording time will be cut off.

3 Put the MD recorder in pause mode before starting program playback.

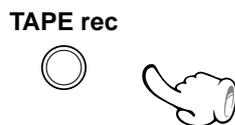
(Press twice.)



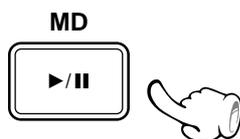
- When program playback starts, press the **◀◀** key once to return to the beginning of the track.

4 Put the tape deck in record-pause mode.

(Press twice.)

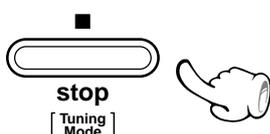


5 Start recording.



- Tape recording starts at the same time as the MD program playback.

To interrupt a recording



(Recording and playback will be stopped)

At the end of the recording

Cassette deck : Stop is executed after an unrecorded portion of about 4 sec. has been produced.

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

- Note that editing is not possible with commercially available prerecorded Mini Disc software designed for playback only.
- For editing, set the write protect tab of the mini disc to "Write enable" side. → 79

Function Limitations because of the MD Standard

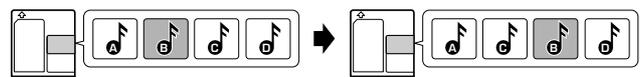
Some of the functions are limited because of the MD standard. Please check this before assuming a malfunction. → 81

Reordering tracks by moving them

Moving multiple tracks (QUICK MOVE) → 52

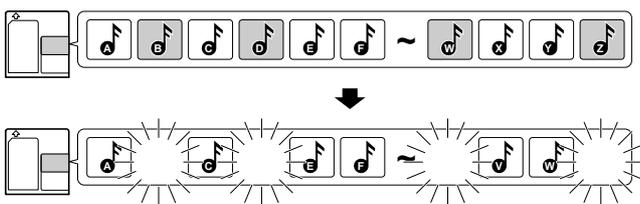


Moving a single track (MOVE) → 54

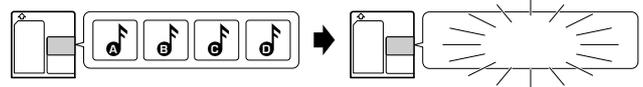


Erasing track(s)

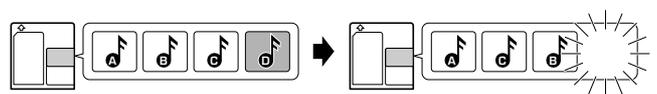
Erasing multiple tracks (QUICK ERASE) → 56



Erasing all tracks in disc (ALL ERASE) → 56



Erasing a single track (ERASE) → 58



Dividing a track, combining two tracks

Combining two tracks (COMBINE) → 59



Dividing a track (DIVIDE) → 60



Assigning a title to a disc or track → 62

Changing or deleting a title/ Erasing all titles → 65

Entering characters in Title Memo (TITLE MEMO) → 66

Copying a title (TITLE COPY) → 67

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.)

To delete the edited contents (EDIT CANCEL) → 68

The edited contents can be canceled by performing a simple operation before ejecting the MD disc.

Moving multiple tracks (QUICK MOVE)

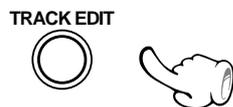
The following procedure shows you how to select tracks (track numbers) in the order you like and move them at once to change their order. After the tracks have been moved, their track numbers will be adjusted automatically in the new order.

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

Select the MD input and execute operation in stop mode.

1 Select "► Q. MOVE ?".

- ① Press the TRACK EDIT key repeatedly until "► Q. MOVE?" is selected.



- ② Set it.



Each press switches the operation.

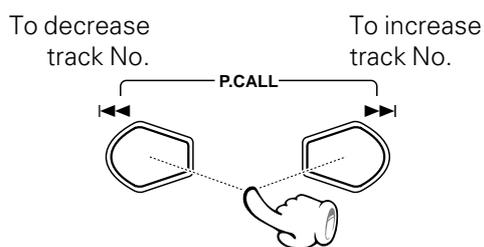
- ① "► Q. MOVE ?"
- ② "► Q. ERASE ?"
- ③ "► CANCEL ?"
- ④ The "MD-EDIT" indicator is turned off (Cancel MD edit mode)



- To cancel the operation in the middle, press the TRACK EDIT key any time before step ④.

2 Select track numbers in the new order you want.

- ① Select a track number.

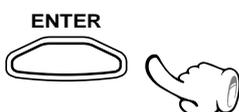


- ② Set it.

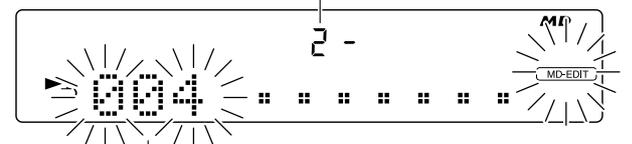


- ③ Repeat steps ① and ② above.

- ④ Complete the selection of track numbers to be reordered.



Number of selected tracks

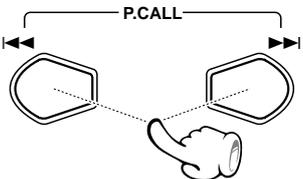


Track No. to be moved

- Up to 32 tracks can be selected. "FULL" is displayed when you attempt to select a 33rd track.
- Press the CLEAR/DELETE key to clear the last selected track number.

3 Select the move destination track number.

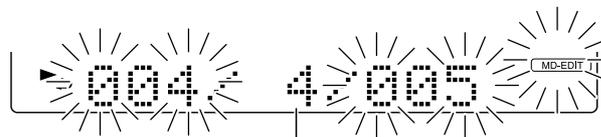
1 Select the move destination.



2 Set it



Example for moving between tracks No. 4 and No. 5



Number of selected tracks

4 Execute the track reordering operation.



Display after execution

"EDIT NOW" → "COMPLETE !"

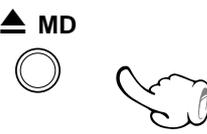
(When editing is completed successfully)

"EDIT NOW" → "CAN' T EDIT !"

(When editing is impossible)

5 After editing, eject and remove the mini disc.

The MD editing is established finally at the moment the MD disc is ejected. To cancel the editing contents, perform the operation described in "To delete the edited contents (EDIT CANCEL)" before ejecting the disc. → 68

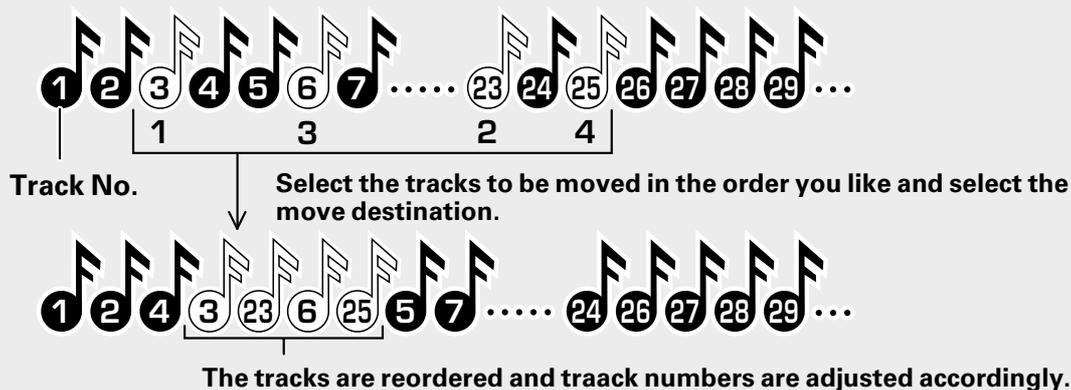



Information is being written.

Mini Disc has been ejected.

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

Image of Quick Move operation



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.

Execute operation in play or pause mode.

1 Select "► MOVE?".

① Press the TRACK EDIT key repeatedly until "► MOVE?" is selected. (Pressing the key in the middle of playback initiates pause.)



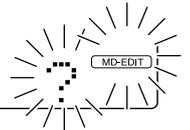
② Set it.



Each press switches the operation.

- ① "► DIVIDE ?"
- ② "► COMBINE ?"
- ③ "► ERASE ?"
- ④ "► MOVE ?"
- ⑤ The "MD-EDIT" indicator is turned off
(Cancel MD edit mode)

► MOVE

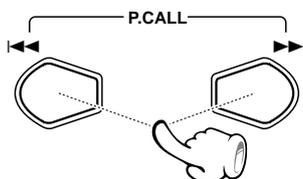


- To cancel the operation in the middle, press the TRACK EDIT key any time before step ③.

2 Select the moving destination track.

① Select a track number.

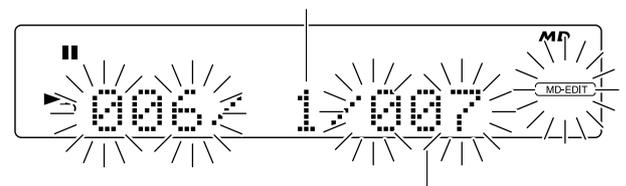
To decrease track No. To increase track No.



② Set it.

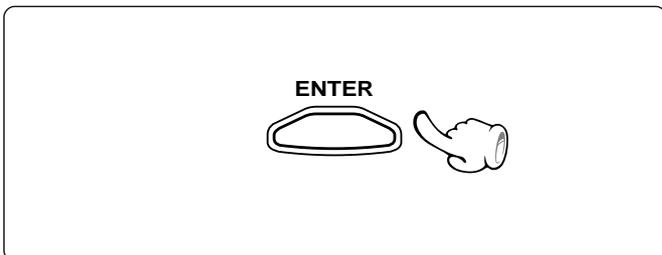


The displayed number of tracks is always "1".



Destination track No.

3 Execute track move.



Display after execution

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

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

4 After editing, eject and remove the mini disc.

The MD editing is established finally at the moment the MD disc is ejected. To cancel the editing contents, perform the operation described in "To delete the edited contents (EDIT CANCEL)" before ejecting the disc. → 68

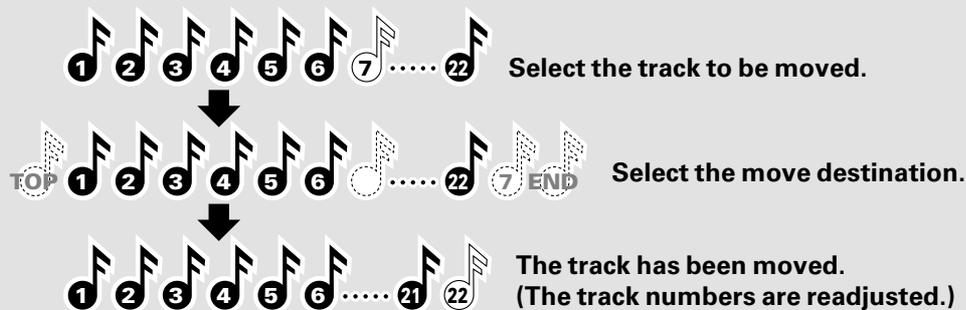


Information is being written.

Mini Disc has been ejected.

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

Image of track reordering by Move



Erasing multiple tracks (QUICKERASE) or erasing all tracks in disc (ALL ERASE)

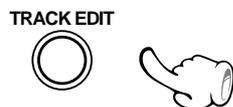
The selected track can be erased while the player is stop mode. Be careful in using this operation because the erased tracks may not be recovered once it has been erased.

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

Select the MD input and execute operation in stop mode.

1 Select "► Q.ERASE ?".

1 Press the TRACK EDIT key repeatedly until "► Q.ERASE ?" is selected.



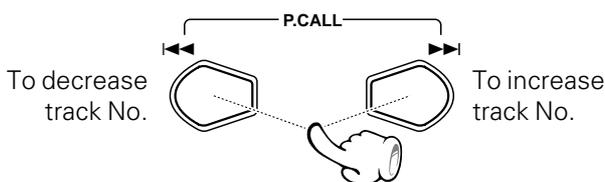
2 Set it.



To erase all tracks in a MD disc, press the ENTER key while "ALL ERASE" is displayed, then perform the operation in step 3.

2 Select the title to be erased.

1 Select the title to be erased.

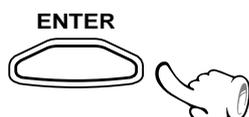


2 Set it.



3 Repeat steps 1 and 2 above.

4 End the selection.



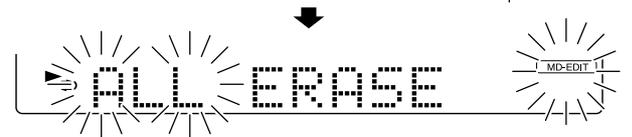
Each press switches the operation.

1 "► Q.MOVE ?"

2 "► Q.ERASE ?"

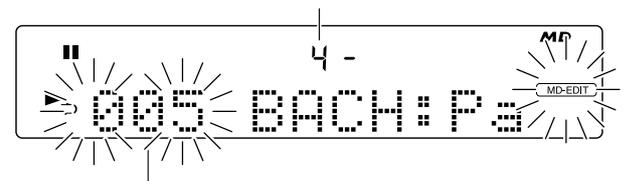
3 "► CANCEL ?"

4 The "MD-EDIT" indicator is turned off
(Cancel MD edit mode)



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

Number of selected tracks



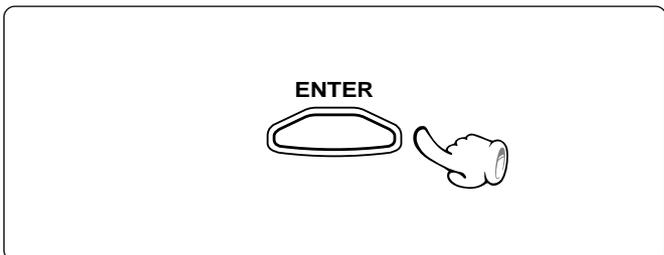
Display the track No. to be erased.

- Up to 32 tracks can be selected. "FULL" is displayed when you attempt to select a 33rd track.
- If you simply want to erase a track, the last track selected can be erased by pressing the CLEAR/DELETE key.



Number of selected tracks

3 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)

4 After editing, eject and remove the mini disc.

The MD editing is established finally at the moment the MD disc is ejected. To cancel the editing contents, perform the operation described in "To delete the edited contents (EDIT CANCEL)" before ejecting the disc. → 68



Information is being written.

Mini Disc has been ejected.

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

Image of erasing several tracks at a time

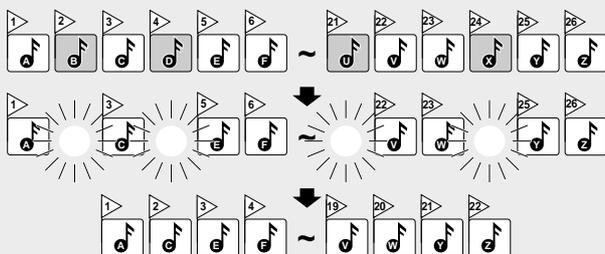
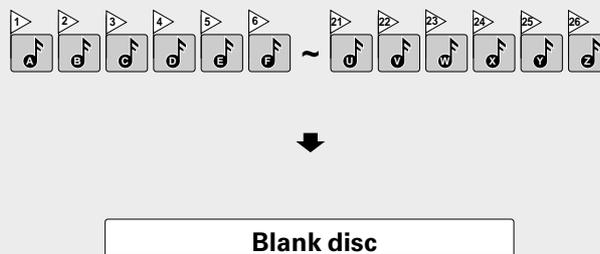


Image of All Erase operation



Erasing a single track (ERASE)

The following procedure shows you how to erase a single track which is being played. After the track has been erased, the track numbers after it will be adjusted automatically. Be careful in using this operation for a track may sometimes be unable to be recovered once it has been deleted.

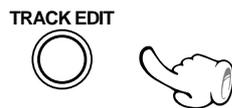
Before starting MD editing, be sure to cancel the program mode by pressing the PGM key in stop mode.

Execute operation in play or pause mode.

1 Play the track to be erased.

2 Select "▶ ERASE ?".

- ① Press the TRACK EDIT key repeatedly until "▶ ERASE ?" is selected. (Pressing the key in the middle of playback initiates pause.)



- ② Set it.



- ③ Press the SET key again.



3 Execute the track erasure operation.



4 After editing, eject and remove the mini disc.

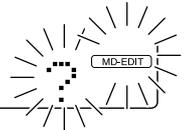
The MD editing is established finally at the moment the MD disc is ejected. To cancel the editing contents, perform the operation described in "To delete the edited contents (EDIT CANCEL)" before ejecting the disc. 



Each press switches the operation.

- ① "▶ DIVIDE ?"
- ② "▶ COMBINE ?"
- ③ "▶ ERASE ?"
- ④ "▶ MOVE ?"
- ⑤ The "MD-EDIT" indicator is turned off (Cancel MD edit mode)

▶ ERASE



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

Display after execution

"EDIT NOW" → "COMPLETE !"

(When editing is completed successfully)

"EDIT NOW" → "CAN' T EDIT !"

(When editing is impossible)



Information is being written.

Mini Disc has been ejected.

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

Combining two tracks (COMBINE)

The following procedure shows you how to combine two tracks into a single track. It is also possible to combine more than two tracks or a piece of music composed of several tracks into a single track. After the two tracks have been combined, the track numbers after them will be adjusted 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.

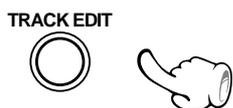
Execute operation in play or pause mode.

1 Play the first of the two tracks to be combined.

- The track selected in step 2 will be appended at the end of the track selected in step 1.

2 Select "► COMBINE ?".

1 Press the TRACK EDIT key repeatedly until "► COMBINE ?" is selected. (Pressing the key in the middle of playback initiates pause)

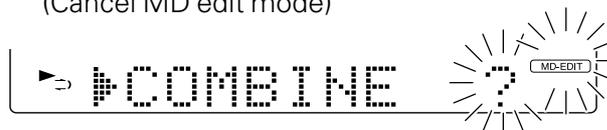


2 Set it.



Each press switches the operation.

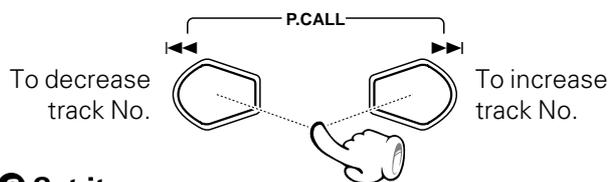
- 1 "► DIVIDE ?"
- 2 "► COMBINE ?"
- 3 "► ERASE ?"
- 4 "► MOVE ?"
- 5 The "MD-EDIT" indicator is turned off (Cancel MD edit mode)



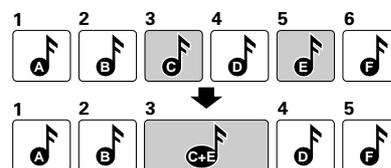
- To cancel the operation in the middle, press the TRACK EDIT key any time before step 4.

3 Select the second of the tracks to be combined.

1 Select the track number.



2 Set it.



Track No. and title of the first track are left. (Track No. and title of the second track are cleared.)

4 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)

5 After execution, press the ▲ MD key to eject the disc.

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.

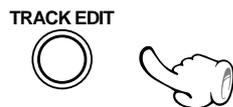
Before starting MD editing, be sure to cancel the program mode by pressing the PGM key in stop mode.

Execute operation in play or pause mode.

1 Play the track to be divided.

2 Select "► DIVIDE?".

1 Play the track to be divided and, when the position you want to divide it comes, press the TRACK EDIT key repeatedly until "► DIVIDE?" is selected. (Pressing the key in the middle of playback initiates pause)



2 Set it.



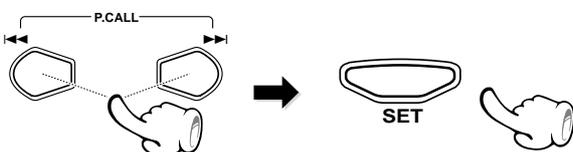
 If you do not need preview, press the ENTER key once and go to step 4.

3 If you need preview.

1 Execute preview.



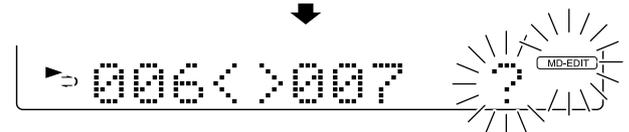
2 Fine adjust and set the dividing point.



- 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.

Each press switches the operation.

- ① "► DIVIDE ?"
- ② "► COMBINE ?"
- ③ "► ERASE ?"
- ④ "► MOVE ?"
- ⑤ The "MD-EDIT" indicator is turned off (Cancel MD edit mode)

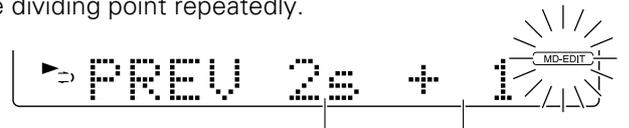


Elapsed play time since the dividing point

Number of steps of fine adjustment of dividing point

- To cancel the operation in the middle, press the TRACK EDIT key any time before step 4.

- The preview plays a section of about 2 seconds from the dividing point repeatedly.

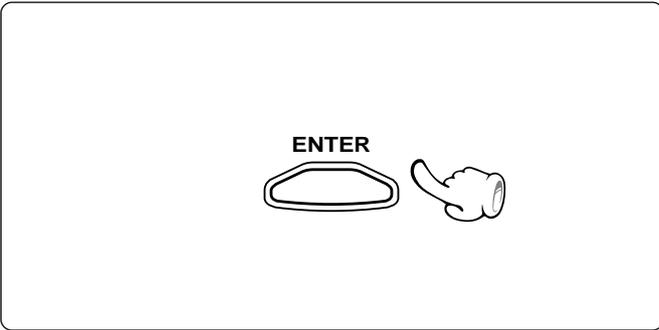


Elapsed play time since the dividing point

Number of steps of fine adjustment of dividing point

- The dividing point can be fine adjusted in the range in 60 ms (6/100 sec.) steps between steps -31 and +31 (i.e. in the range of about 4 sec.) assuming that the position where the TRACK EDIT key is "0".

4 Execute the track divide operation.



Up to 255 track numbers can be inserted additionally by repeating 1 to 4 for each of them.

5 After editing, eject and remove the mini disc.

The MD editing is established finally at the moment the MD disc is ejected. To cancel the editing contents, perform the operation described in "To delete the edited contents (EDIT CANCEL)" before ejecting the disc. - 68

A diagram showing a hand pressing the MD key on a device. The key is labeled "MD".

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.



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

Image of divide

Should be approx. 2 sec. or longer.

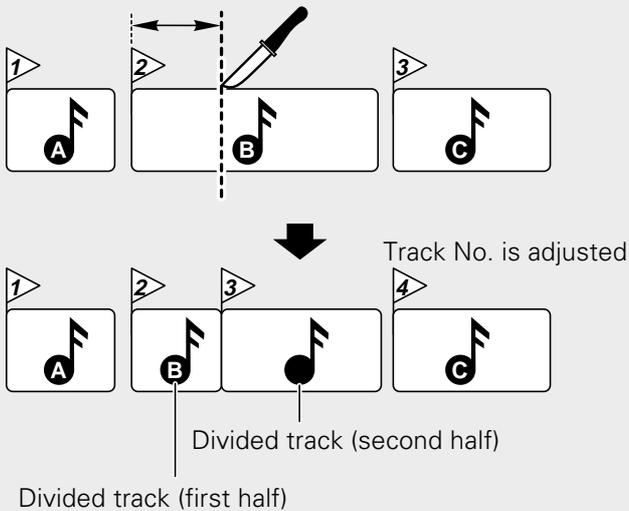
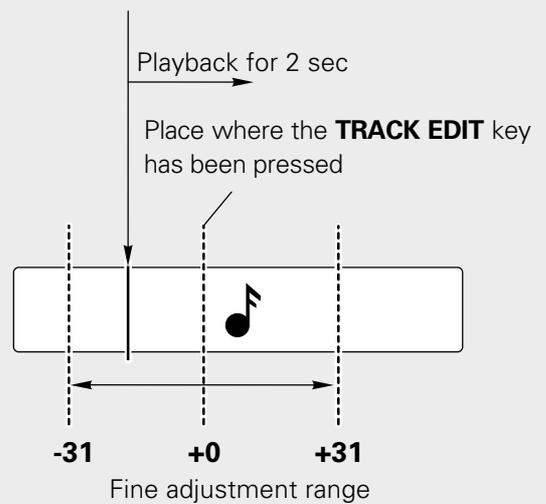


Image of preview

Point selected by fine adjustment of dividing point



Assigning a title to a disc or track

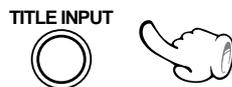
When titles are input in discs and tracks, the titles can be displayed when they are played back. The following procedure can also be used to modify or erase input titles.

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

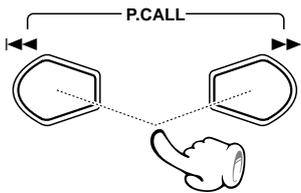
Select the MD input.

1 Activate the title input mode.

① Press the TITLE INPUT key.



② Select the title (disc title or track title) to be edited.



③ Set the title to be edited.



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. → 33

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. → 65

- It takes a while because data should be read out of the disc.
- To cancel the operation in the middle, press the **TITLE INPUT** key any time before step ③.

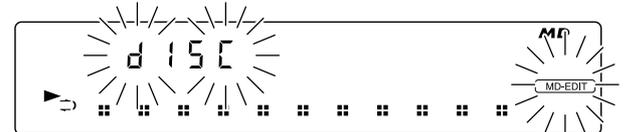
Each press of the ◀◀ or ▶▶ keys switches the operation.

- ① "dISC" : Disc title *1
- ② "001", "002" : Track title *2
- ③ "ALLERASE" : 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. When step ①-① is performed in play mode, the display begins with the information on the track being played.
- *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 :

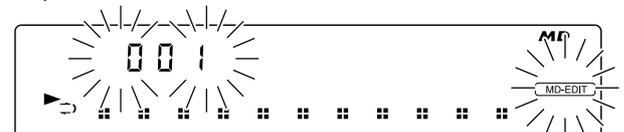
Select "dISC"



In case of track title :

Select the desired track No.

(The track can also be selected using the numeric keys.)



2 Input the title.

Characters can be selected either in the "character input key mode" or "skip key mode".

To enter a character using the character input keys (Character input key mode)

If "Aa" or "12" is not displayed, press any character input key.

1 Press the CHARAC. key repeatedly to select a character group.



2 Select the first character by pressing a character input key.

Pressing a key more than once changes the character input with it.

Example: When the ABC key is pressed

Each press changes the character which can be input.

A→B→C→a→b→c
↑

3 Press the SET key to set the character.



(Repeat steps 1 to 3 for each character to be entered.)

The character group which can be used in the "character input key mode" are as follows.

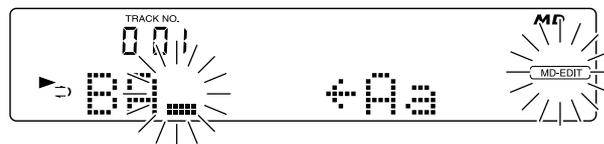
"Aa" group :

A to z, symbols plug title memos ([1], [2], [3])

"12" group :

0 to 9 and symbols.

- Press the ◀ or ▶ key to move the input location (cursor) to the left or right.
- If you commit a mistake, press the CLEAR/DELETE key to clear the character.



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

Title editing character list

Key \ Group	"Aa"	"12"
1	space [1] [2] [3]	1
2 ABC	ABCabc	2
3 DEF	DEFdef	3
4 GHI	GHIghi	4
5 JKL	JKLjkl	5
6 MNO	MNOmno	6
7 PRS	PRSprs	7
8 TUV	TUVtuv	8
9 WXY	WXYwxy	9
0 QZ	QZqz	0
+10 &()-	', : ? ! ; . " _ ` \$ ^ & () - / + * = + < > # % @	
SPACE	space	

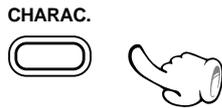
- The first alphabet which appears when a character input key is pressed may sometimes be an uppercase or sometimes a lowercase letter depending on each occasion.

Continued on next page

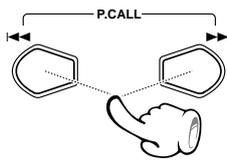
Selecting characters using the ◀◀ or ▶▶ key (Skip key mode)

If "Aa" or "12" is displayed, press the ◀◀ or ▶▶ key.

① Press the CHARAC. key repeatedly to select a character group.



② Press the ◀◀ or ▶▶ key to move the selection cursor on the desired character.



③ Press the SET key to set the character.



(Repeat steps ① to ③ for each character to be entered.)

The character group which can be used in the "skip key mode" are as follows.

Uppercase alphabet group :

A to Z and space (1 blank character)

Lowercase alphabet group :

a to z and space

Numeral and symbol group :

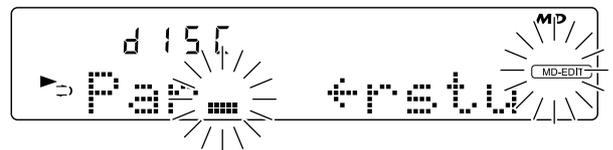
0 to 9, space and symbols

Title group :

Title memos ([123]), disc title and track titles

- Holding the ◀◀ or ▶▶ key scrolls the display so any character in the same character group can be selected.
- Press the ◀◀ or ▶▶ key to move the input location (cursor) to the left or right.
- If you commit a mistake, press the **CLEAR/DELETE** key to clear the character.

Example with an MD title



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

Selecting characters using the ◀◀/ ▶▶ keys (Skip key mode)

Uppercase alphabet group	ABCDEFGHIJKLMNOPQRSTUVWXYZ space
Lowercase alphabet group	abcdefghijklmnopqrstuvwxyz space
Numeral and symbol group	0123456789 space ! " # \$ % & ' () * + , - . / : ; < = > ` ? @ ^ _
Title group	[123] [dISC] [001] [002] . . .

- In the "Skip key mode" for character entry, a title memo or the title of another disc/track can be copied and entered in the same way as the entry of alphabet characters. → 66 → 67

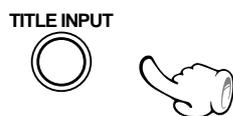
3 Executing title input

1 Press the ENTER key to set the title input.

- If power is switched off (to STANDBY mode) or the **TITLE INPUT** key is pressed to cancel setting before the **ENTER** key is pressed here, the inputs made until then will be cleared.



2 Press the TITLE INPUT key to exit from editing.



3 Press the ▲ MD key and eject the MD.



The MD editing is established finally at the moment the MD disc is ejected. To cancel the editing contents, perform the operation described in "To delete the edited contents (EDIT CANCEL)" before ejecting the disc. → [68](#)

- When the **ENTER** key is pressed, the selection of the next title (disc title or track title) to be edited can be restarted. To continue editing of another title, repeat the above procedure from step **1-2**.



Information is being written.

Mini Disc has been ejected.

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

Changing or deleting a title

1 Perform step 1 in "Assigning a title to a disc or track" to select the disc title or track title to be changed or erased.

2 Press the ◀◀ or ▶▶ key to place the cursor on the character to be modified or erased.

- If it is required to insert a character, place the cursor on the character immediately before the desired insertion location.

3 Press the CLEAR/DELETE key to delete the character. (If you are erasing the title, go to step 5.)

4 If you are changing the title, perform step 2 in "Assigning a title to a disc or track".

5 Perform step 2 in "Assigning a title to a disc or track".

Erasing all titles

1 Select the MD input and press the TITLE INPUT key.

2 Press the ◀◀ or ▶▶ key repeatedly to select "ALL ERASE".

3 Press the SET key to set the "ALL ERASE" selection.

4 Press the ENTER key to erase all titles.

- All of the disc and track titles are erased.

5 Press the TITLE INPUT key to exit from editing.

6 Press the ▲ MD key and eject the MD.

Entering characters in Title Memo (TITLE MEMO)

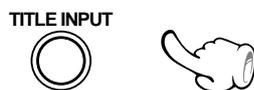
To save labor required for character input, up to three frequently-used sets of characters can be stored in title memo "[1]", "[2]" and "[3]".

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

Select the MD input.

1 Select the title memo number to be used as the entry destination.

- ① Press the TITLE INPUT key so that "MD - EDIT" blinks.



- ② Press the ◀◀ or ▶▶ key repeatedly to select the entry destination, which may be title memo "[1]", "[2]" or "[3]".

- ③ Press the SET key.

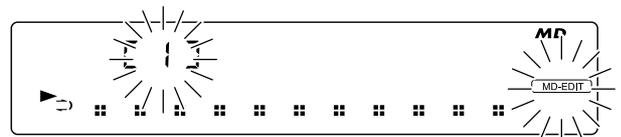
Each press of the ◀◀ or ▶▶ keys switches the operation.

- ① "dISC" : Disc title *1
- ② "001", "002"..... : Track title *2
- ③ "ALL ERASE"
- ④ "[1]", "[2]", "[3]" : Title Memo

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

*2 When step ①-① is performed in play mode, the display begins with the information on the track being played.

Title memo No.



- To cancel the operation in the middle, press the TITLE INPUT key any time before step ③ - ①.

2 Input the characters.

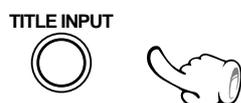
See step ② in "Assigning a title to a disc or track". → 62

3 Execute title entry.

- ① Press the ENTER key to store the characters in title memo.



- ② To exit from editing, press the TITLE INPUT key.



- A disc title (Mini Disc name) or track title can also be copied in title memo "[1]", "[2]" or "[3]". → 67

- To continue character input in other title memo, repeat steps ① - ② and ② for each set of characters.

Copying a title (TITLE COPY)

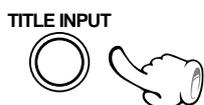
A set of title characters, disc title (Mini Disc name) or track title stored under a title memo number ("[1]", "[2]" or "[3]") can be copied in another title memo number, disc or track.

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

Select the MD input.

1 Select the disc title, track title or title memo you want to assign as the copy destination.

- 1 Press the TITLE INPUT key so that "MD - EDIT" blinks.



- 2 Press the ◀◀ or ▶▶ key repeatedly to select the copy destination from the following; ① "diSC" (disc) ; ② "001", "002",... (track number) ; ④ "[1]", "[2]" or "[3]" (title memo number).
- 3 Press the SET key.

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

- ① "diSC" : Disc title *1
- ② "001", "002"..... : Track title *2
- ③ "ALL ERASE"
- ④ "[1]", "[2]", "[3]" : Title Memo

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

*2 When step 1-1 is performed in play mode, the display begins with the information on the track being played.

- To cancel the operation in the middle, press the TITLE INPUT key any time before step 3 - 1.

2 Select the title to be copied.

- 1 Press the ◀◀ or ▶▶ key.
- 2 Press the CHARAC. key repeatedly until "[1 2 3]" is displayed.

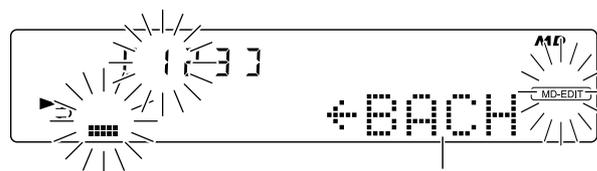


- 3 Press the ◀◀ or ▶▶ key repeatedly until the title to be copied is displayed.

- "diSC" : Disc title
- "001", "002" : Track title
- "[1 2 3]" : A title stored in one of title memo numbers "[1]", "[2]" or "[3]"

- 4 Press the SET key.

Title memo No.



- To continue character input in other title memo, repeat steps 1 and 2 for each set of characters.

3 Execute title copy.

- 1 Press the ENTER key to copy the selected title.
- 2 To exit from editing, press the TITLE INPUT key.
- 3 Press the ▲ MD key and eject the MD.

To delete the edited contents (EDIT CANCEL)

The following procedure allows you to cancel the editing operations performed since the disc was inserted. Remember that the edited contents can be canceled only before the disc is ejected.

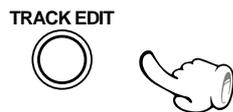
Once the MD disc is ejected or subjected to another recording session after editing, the edited contents can no longer be canceled.

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

Select the MD input and execute operation in stop mode.

1 Select "▶ CANCEL ?"

① Press the TRACK EDIT key repeatedly until "▶ CANCEL ?" is selected.



② Set it.



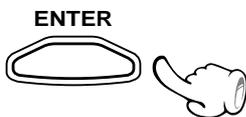
Each press switches the operation.

- ① "▶ Q.MOVE ?"
- ② "▶ Q.ERASE ?"
- ③ "▶ CANCEL ?"
- ④ The "MD-EDIT" indicator is turned off (Cancel MD edit mode)

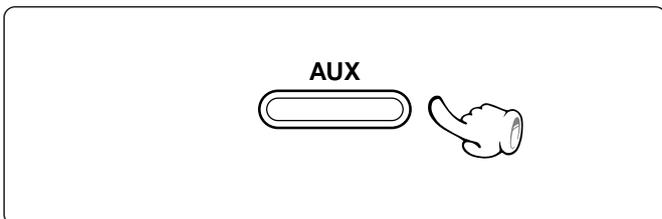


- If the MD disc has already been ejected after editing, "X CANCEL" is displayed and the cancellation operation is not available.
- To cancel the operation in the middle, press the TRACK EDIT key any time before step ②.

2 Execute the deletion of edited contents.

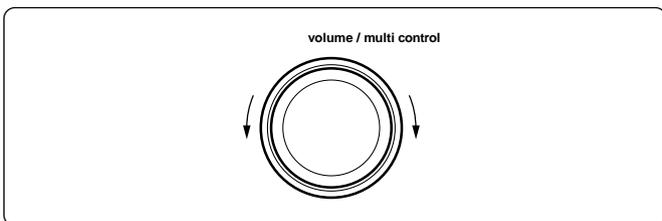


1 Select AUX (external input).



2 Play the connected equipment.

3 Adjust the volume.

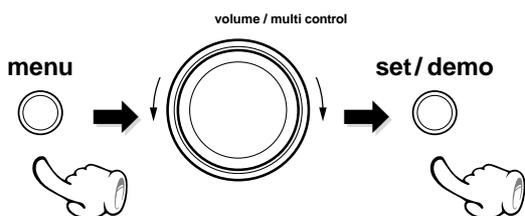


Adjusting the AUX Input Level

This adjusts the input level for the external equipment (video deck etc.) connected to the AUX input 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)

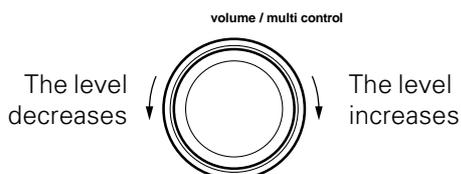
1 Press the AUX key.

2 Select "AUX INPUT ?".

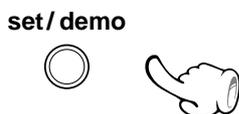


(Press the set/demo key while the "?" mark is blinking.)

3 Adjust the input level.

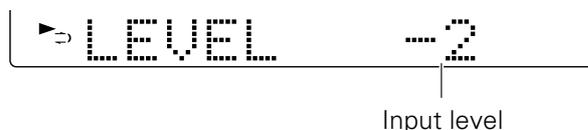


4 Set it.



Turning the knob switches the display contents.

- "TAPE RVS. ?"
- "MD REC MODE"
- "REC SPEED ?"
- "REC OPTIONS"
- "AUTO PRESET" or "AUTO MEMORY"
(Only when the TUNER input is selected)
- "AUX INPUT ?"
(Only when the AUX input is selected)
- "TIMER SET ?"
- "A.P.S. SET ?"



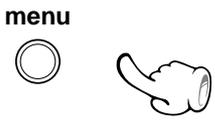
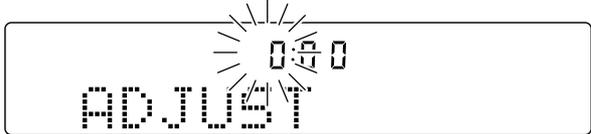
- Adjustment is possible over the range from - 5 to + 2.
- Adjusting the input level control also varies the recording level from the input source connected to the AUX input jacks.

As the clock is not used to show the time of the day but is also used in timer operations, be sure to set the clock in advance.

1 *Activate the clock adjustment mode.*

Press and hold for more than 2 sec. when the power is ON.

menu

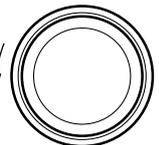
- The time display starts to blink.

2 *Enter the figure of hour.*

1 Enter the figure of hour.

volume / multi control

To decrease hour



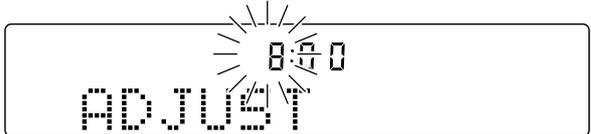
To increase hour

2 Set it.

set / demo



Example: Adjustment to 8:07



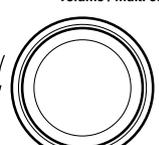
- In other areas than the U.K. and Europe the clock shows the time of the day in the 12-hour system.
- Press the **set/demo** key. The hour is entered and the minute display starts to blink.

3 *Enter the figure of minute.*

1 Enter the figure of minute.

volume / multi control

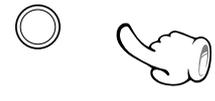
To decrease minute



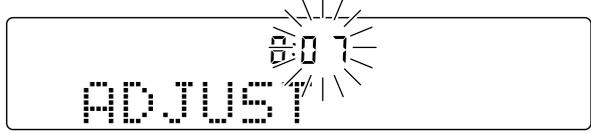
To increase minute

2 Set it.

set / demo



Example: Adjustment to 8:07



- If you make a mistake, restart from the beginning.
- When the time of day has been set by pressing the **set/demo** key, the display shows "**COMPLETE !**".
- After a power failure or the power cord has been unplugged then plugged in again, it is required to set the time again.
- When the **STOP** key is pressed while the power is in the standby mode, the time of the day will be displayed for 5 seconds.

Sleep timer (SLEEP)

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

Operate easy To use Timer (O.T.T.) →

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" →  ~ 

Set the time.



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

- The unit is turned OFF automatically after the set time has elapsed.
- Each press increases the timer period by 10 minutes. The sleep timer can be set up to 90 minutes.

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



Duration for sleep timer

- 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.

Setting the O.T.T. timer

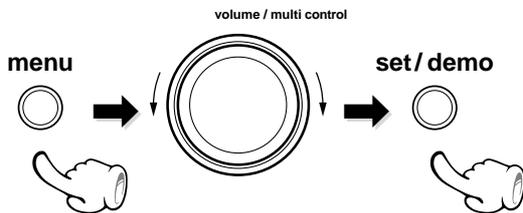
Timer playback which occurs only once and only for an hour can be programmed by simply setting the start time. The timer playback reproduces the source selected at the last time the unit is turned off at the last set volume.

Adjust the clock before setting the timer → 70

Connect the related equipment under reference to "System connection" → 6 ~ 8

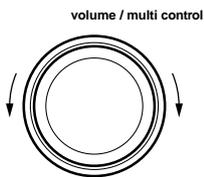
1 Select the O.T.T. timer.

① Select "TIMER SET ?".

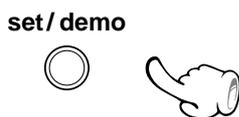


(Press the set/demo key while the "?" mark is blinking.)

② Select "O.T.T. SET ?".



③ Set it.



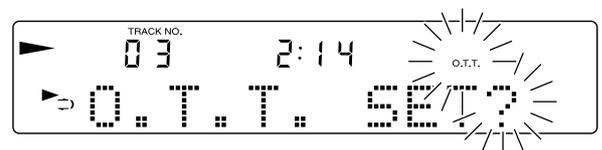
(Press during display of the program contents.)

Turning the knob switches the display contents.

"TAPE RVS. ?"
 "MD REC MODE"
 "REC SPEED ?"
 "REC OPTIONS"
 "AUTO PRESET" or "AUTO MEMORY"
 (Only when the TUNER input is selected)
 "AUX INPUT ?"
 (Only when the AUX input is selected)
 "TIMER SET ?"
 "A.P.S. SET ?"

Turning the knob switches the display contents.

① "O. T. T. SET ?"
 ② "PROG. 1 SET ?"
 ③ "PROG. 2 SET ?"



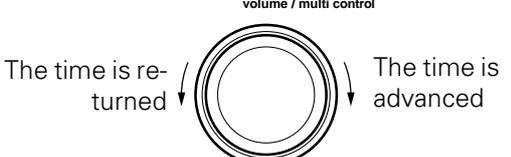
- The previously set contents are displayed. (If you do not want to change them, simply press the **set/demo** key.)
- When a timer setting has already been made in the selected timer, the setting will be overwritten by the new setting.

Continued on next page

2 Set the time at which you want to start playback or reception (On time).

1 Adjust the time.

volume / multi control

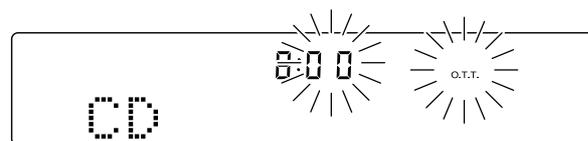


The time is re-
turned

The time is
advanced

2 Set it.

set / demo

- In other areas than the U.K. and Europe the clock shows the time of the day in the 12-hour system.
- The ON time can be set in steps of 5 minutes.
- If you make a mistake, press the **menu** key and restart from step **1**.

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

3 Reserve the timer operation.

TIMER



Each press switches the timer as follows.

- ① "O.T.T."
- ② "PROG. **1**"
- ③ "PROG. **2**"
- ④ "PROG. **1 2**"
- ⑤ Extinguished

- Press the remote's **TIMER** key repeatedly until "O.T.T." lights up.
- To cancel the timer reservation after it has been activated, press the **TIMER** key while the unit is on so that all of the timer-related indicators are turned off. (The setting made above is still left in memory.)
- When the O.T.T. timer is set while the PROG.1 or PROG.2 timer has been set, the reservation by the PROG.1 or PROG.2 timer is canceled.

4 Put the unit in standby mode.

POWER
I/⏻



- When the unit enters the Standby mode, the **standby/timer** indicator lights in green.
- 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 green. In this case, the clock setting should be restarted from the beginning.\

Setting an everyday timer program (PROG. TIMER)

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.

Adjust the clock before setting the timer → 70

Connect the related equipment under reference to "System connection" → 6 ~ 8

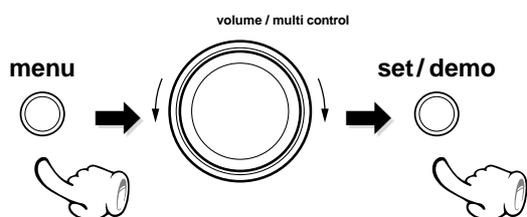
1 Make preparations for the play (recording).

To listen to CD	To listen to MD	To listen to tape
Insert a disc. (Program playback is not possible.)	Load a disc. (Program playback is not possible.)	Set a tape into.
To listen to radio	Playing the auxiliary input source	For recording
The station should be preset prior. → 25	Make timer setting of the component connected to the AUX input jacks.	Make preparations for recording. MD → 30 TAPE → 34

- Two timer settings can be reserved independently in two programs PROG.1 and PROG.2.
- Please make reservations with an interval of at least one minute, so that the operation times of PROG. 1 and PROG. 2 do not overlap.

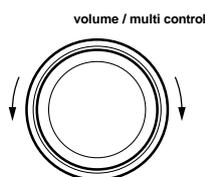
2 Select the timer number.

① Select "TIMER SET ?".

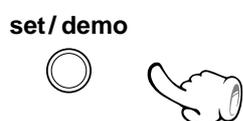


(Press the set/demo key while the "?" mark is blinking.)

② Select "PROG. 1 SET ?" or "PROG. 2 SET ?".



③ Set it.



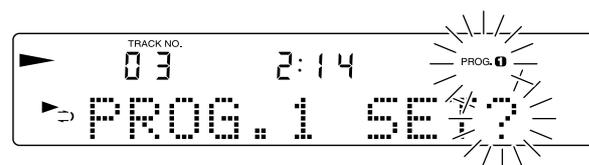
(Press during display of the program contents.)

Turning the knob switches the display contents.

"TAPE RVS. ?"
 "MD REC MODE"
 "REC SPEED ?"
 "REC OPTIONS"
 "AUTO PRESET" or "AUTO MEMORY"
 (Only when the TUNER input is selected)
 "AUX INPUT ?"
 (Only when the AUX input is selected)
 "TIMER SET ?"
 "A.P.S. SET ?"

Turning the knob switches the display contents.

① "O.T.T. SET ?"
 ② "PROG. 1 SET ?"
 ③ "PROG. 2 SET ?"

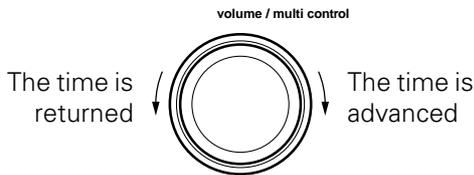


- The previously set contents are displayed. (If you do not want to change them, simply press the **set/demo** key.)
- When a timer setting has already been made in the selected timer, the setting will be overwritten by the new setting.

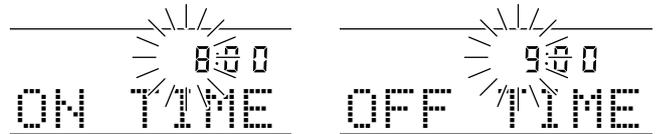
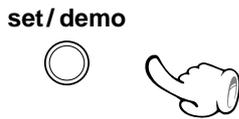
Continued on next page

3 Set the ON time then the OFF time.

1 Adjust the time.



2 Set it.



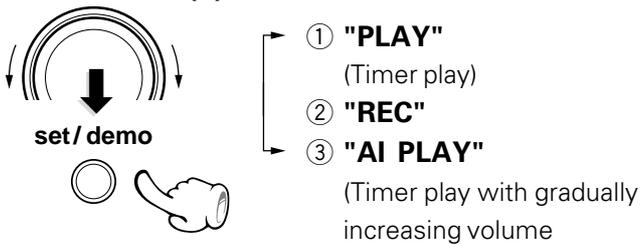
- In other areas than the U.K. and Europe the clock shows the time of the day in the 12-hour system.
- For each of the ON time and OFF time, enter the figure of "hour" by performing steps 1 and 2 then enter the figure of "minute" in the same manner.
- If you make a mistake, press the **menu** key and restart from step 2.

4 Make the desired reservation.

For timer playback or AI timer playback

1 Select the mode.

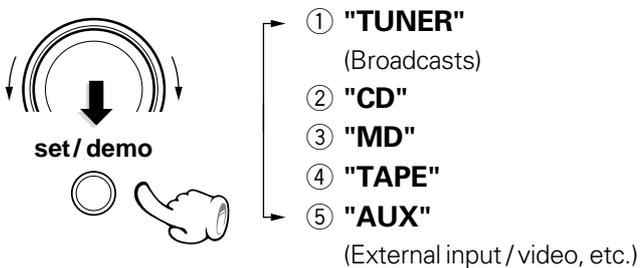
(1) Select "PLAY" or "AI PLAY".



(2) Set it.

2 Select the input source.

(1) Select the source to be played.



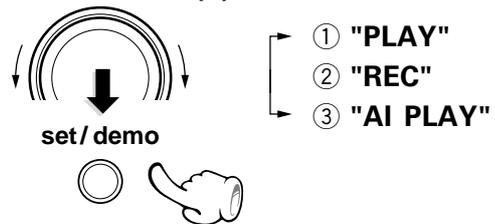
(2) Set it.

Continued on next page

For timer recording

1 Select the mode.

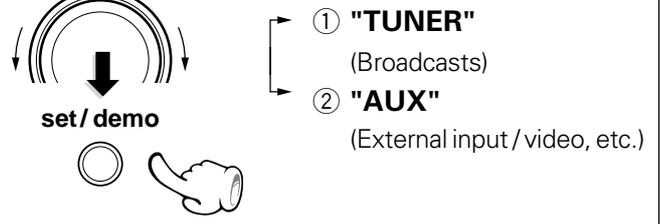
(1) Select "REC".



(2) Set it.

2 Select the input source.

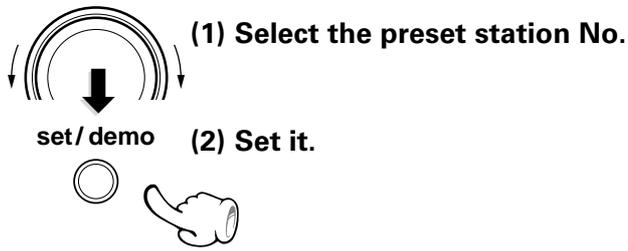
(1) Select what is to be recorded.



(2) Set it.

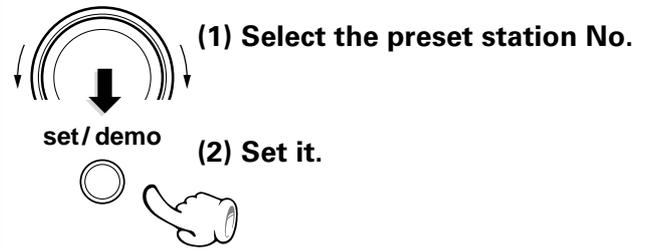
Continued on next page

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

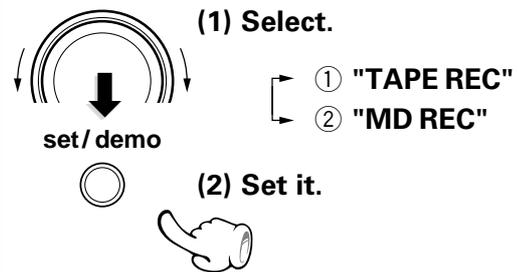


- When the timer setting is completed by pressing the **set/demo** key, "**COMPLETE !**" is displayed.
- When "**PLAY**" is selected, the timer playback will start at the volume setting used at the moment the unit is set to the Standby mode.

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



4 Select the recording equipment.



- When the timer setting is completed by pressing the **set/demo** key, "**COMPLETE !**" is displayed.
- 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.

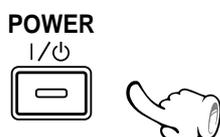


To check or modify the reservation contents, restart the timer reservation from the beginning.

5 Reserve the timer operation.



6 Put the unit in standby mode.



Each press switches the timer as follows.

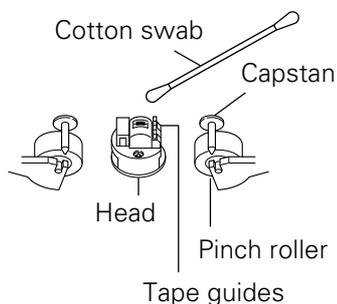
- ① "O.T.T."
- ② "PROG. 1"
- ③ "PROG. 2"
- ④ "PROG. 1 2"
- ⑤ Extinguished

- Press the **TIMER** key on the remote repeatedly until "**PROG. 1**", "**PROG. 2**" or "**PROG. 1 2**" lights.
- To cancel timer reservation after it has been activated, press the **TIMER** key while the unit is on so that all of the timer-related indicators are turned off. (The setting made above is still left in memory.)

- When the unit enters the Standby mode, the **standby/timer** indicator lights in green.
- 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 green. In this case, the clock setting should be restarted from the beginning.

Maintenance

Cleaning the head section



Cleaning the heads and peripheral components

Cleaning the heads and peripheral components

For maintaining the best condition of the deck and for longer service life, always keep the heads, capstan and pinch roller clean. To clean them, perform the following:

1. Open the cassette holder.
2. Using a cotton swab dipped in alcohol, clean the head, capstan and pinch roller carefully.

Demagnetizing the head

When the recording / playback head is magnetized, the sound quality will deteriorate. In such a case, demagnetize the head using a commercially available demagnetizer (head eraser).



There are precisely aligned parts around the heads, including the tape guides.

When cleaning, pay special attention so as not to apply shock to them.

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 a following circumstance:

When this unit is carried from a 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.

- ❶ Remove the CD or MD from the unit.
- ❷ Press the MD ►/|| key.

MD NO DISC

- ❸ Press the CD ►/|| key.

CD NO DISC

- ❹ Wait for some time and verify that the display becomes as shown in the figure.
- ❺ 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), Last input selection, Volume control value, Tone control levels, AUX input level, Setting auto power save

Tuner section

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

Cassette deck section

Transport direction, Tape EQ., Reverse mode

MD recorder section

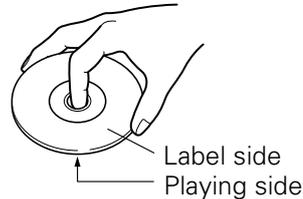
Recording mode, recording speed

Disc handling precautions

Handling

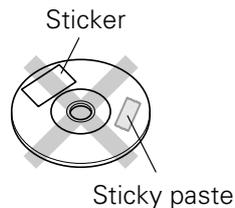
Hold the discs so that you do not touch the playing surface.

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



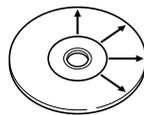
Cleaning

If fingerprints or foreign matter become attached to 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 a 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.

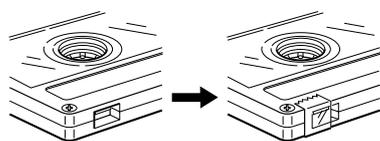
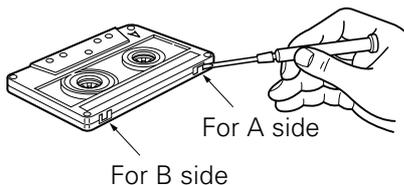
Discs which can be played with this unit

CD (12 cm, 8 cm) and the audio part of CD-G, CD-EG and CD-EXTRA. Use discs that comply with the IEC standard, for example a disc carrying the marking on the label surface.

Notes on cassette tape

Safety tab (accidental erasure prevention tab)

After an important recording has been finished, break the safety tab, to prevent the recorded contents from being erased or recorded on accidentally.

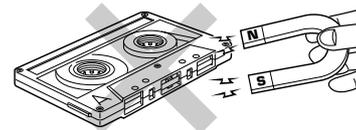


To re-record

Apply tape only to the position where the tab has been removed.

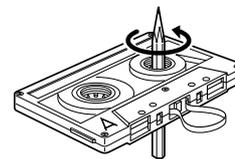
To store cassette tapes

Do not store the tapes in a place which is subject to direct sunlight, or near equipment that generates heat. Keep the cassette tapes away from any magnetic field.



When there is slack in the tape

In such a case, insert a pencil into the reel hole and wind the reel hub to remove the slack.



1. Longer tape than 90 minutes cassette tape

Do not use a cassette with more than 90-minute recording time, for the tape used with such a cassette is very thin and tends to cause troubles such as entanglement around the pinch roller or cutting of tape.

2. Endless tapes

Do not use an endless tape, as this could damage the mechanism of the unit.

WARNING NOTICE:

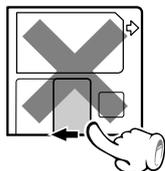
In most cases it is an infringement of copyright to make copies of tapes or discs without the permission of the copyright owners. Anyone wishing to copy commercially available tapes or disc should contact the mechanical copyright protection society limited or the performing rights society limited.

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 place where the temperature and/or humidity are extremely high (for example, in a place subject 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.

Note on disc accessories

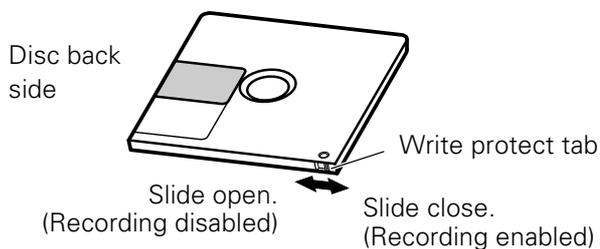
Do not use the lens cleaner for this may lead to malfunction of the unit.

Care

Wipe periodically dust and dirt attached on the cartridge with a dry cloth.

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 be peeled 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.

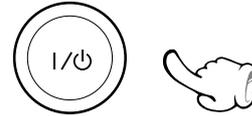
What seems to be a malfunction is not always so. Before calling for service, check the following table according to the symptom of your trouble.

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.

- Please note that resetting the microcomputer clears the contents stored in and it returns to condition when it left the factory.

Unplug the power cord from the power outlet then, while holding the I/⏻ key depressed, plug the power cord again.



Amplifier section/Speakers

Symptom	Remedy
Sound is not produced.	<ul style="list-style-type: none"> ● Connect properly referring to "System connections". → 6 ● Adjust to an required volume. ● Switch MUTE OFF. → 15 ● Unplug the headphone plug.
The "standby/timer" indicator blinks in red and no sound is put out.	<ul style="list-style-type: none"> ● A speaker cord is short-circuited. Turn power off and re-connect the speaker cord.
The "standby/timer" indicator blinks in amber.	<ul style="list-style-type: none"> ● Adjust the present time again. → 70
No sound from the headphones.	<ul style="list-style-type: none"> ● Insert correctly. → 15 ● Adjust to an required volume. → 14
Sound is not produced from the left or right speakers.	<ul style="list-style-type: none"> ● Connect properly referring to "System connections". → 6
The clock display blinks without changing the figures.	<ul style="list-style-type: none"> ● Adjust the present time again. → 70
Timer operation is not possible.	<ul style="list-style-type: none"> ● Adjust the present time referring to "Clock adjustment". → 70 ● Set the timer ON time and OFF time. → 75 ● Press the TIMER key to set up the execution. → 73 → 76

Tuner section

Symptom	Remedy
Radio stations cannot be received.	<ul style="list-style-type: none"> ● Connect antennas. → 7 ● Select a band. → 24 ● Tune to the frequency of the desired station. → 24
Noise interferes.	<ul style="list-style-type: none"> ● Install the outdoor antenna in an apart position from the road. ● Switch the suspected electric appliance OFF. ● Install the TV or the system at an increased distance between them.
A station has been preset but it cannot be received by pressing the P.CALL key.	<ul style="list-style-type: none"> ● Preset stations with tunable frequencies. → 25 ● Preset stations again. → 25

Symptoms related to MD standard

Symptom	Cause
"DISC FULL" is displayed while the disc still has a remaining recordable time.	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> 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).	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> This derives from the restriction in the MD system standard and not a malfunction.
The track numbers are not assigned correctly.	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> Monaural recording and stereo recording are executed according to different formats. This is not a malfunction.
Input of 1792 title characters is not possible.	<ul style="list-style-type: none"> 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"> Load a prerecorded disc or playback-only disc.
Recording is not possible	<ul style="list-style-type: none"> Change the position of the write protect tab to the write position or use a recordable disc. →  79 Set the input selector to the source to be recorded. →  30
Recording level is too low. (when the AUX input is recorded).	<ul style="list-style-type: none"> Adjust the AUX input level. →  69
Sound is distorted.	<ul style="list-style-type: none"> The recording level is not set properly (when the AUX input is recorded). Adjust the AUX input level. →  69
Noise is noticeable.	<ul style="list-style-type: none"> Install the unit at a position apart from an electric appliance or TV set.

CD player section

Symptom	Remedy
A CD is placed in the player but it cannot be played.	<ul style="list-style-type: none"> ● Place the disc properly, with the label side facing upward. ● Clean the disc referring to "Disc handling precautions". → 78 ● Refer to "Caution on condensation" and remove the condensation by evaporation. → 77
Sound is not produced.	<ul style="list-style-type: none"> ● Press the CD ▶/II key. ● Clean the disc referring to "Disc handling precautions". → 78
Sound skips.	<ul style="list-style-type: none"> ● Clean the disc referring to "Disc handling precautions". → 78 ● Install the unit in a place not subject to vibrations.

Cassette deck section

Symptom	Remedy
Sound cannot be produced by pressing the play key.	<ul style="list-style-type: none"> ● Clean the head referring to "Maintenance". → 77 ● The tape is wound too tight due to irregular winding. ● Play a recorded tape.
No operation occurs even when an operation key is pressed.	<ul style="list-style-type: none"> ● Press operation keys in more than a few seconds after closing the cassette holder. → 22 ● Change the tape transport direction or reverse the tape insertion orientation. → 22
The cassette holder cannot be opened by pressing " ▲ push open ".	<ul style="list-style-type: none"> ● Press in stop mode. ● Reset the microcomputer. → 80
Sound is harsh or high frequencies are not reproduced.	<ul style="list-style-type: none"> ● Clean the head referring to "Maintenance". → 77 ● Try another tape.
Sound is distorted.	<ul style="list-style-type: none"> ● Recording level is too low. (when the AUX input is recorded). Adjust the AUX input level. → 69
Noise is noticeable.	<ul style="list-style-type: none"> ● Demagnetize the head referring to "Maintenance". → 77 ● Install the system at a distance from other electric appliances and TV. ● Set the TAPE EQ. to on. → 23
Sound vibrates.	<ul style="list-style-type: none"> ● Clean the head referring to "Maintenance". → 77 ● Wind the tape again by fast forwarding, rewinding or playing from an end to the other. → 22 → 23
Recording cannot be started by pressing the record key.	<ul style="list-style-type: none"> ● Use a cassette with an unbroken recording protect tab or block the hole. → 78 ● Close the holder completely. → 22 ● Set the input selector to the source to be recorded. → 35 ● Change the tape transport direction or reverse the tape insertion orientation. → 22

Remote control unit

Symptom	Remedy
Remote control operation is not possible.	<ul style="list-style-type: none"> ● Replace with new batteries. → 13 ● Operate the unit inside the remote controllable range. → 13

Displayed messages and actions to be taken against them

Displayed Message	Meaning
BLANK DISC	● The MD contains no recording at all.
BUFFER OVER	● An attempt is made to record more than 100 CD tracks within 74 minutes with high-speed recording.
CAN'T EDIT	● An attempt is made to edit a track which is too short.
DISC ERROR	● The contents of UTOC* is abnormal. Perform "ALL ERASE". →  If this is impossible, use another MD.
DISC FULL	● 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.
FULL	● An attempt is made to select the 33rd track in "Q.ERASE" or "Q.MOVE". →  → 
MD WRITING	● The data related to editing or recording is being written in the MD.
NO TRACKS	● The MD does not contain any tracks and has only the disc title.
PGM FULL	● An attempt is made to select a 33rd track in programming of CD or MD. → 
PGM Mode	● An attempt is made to start random playback, high-speed recording (CD → MD) or MD editing in the program mode. Exit from the program mode before these operations. → 
PLAY ONLY	● An attempt is made to record signals in a playback-only MD. Use a recordable MD.
PROTECTED	● The MD in use is protected against recording. Enable recording. →  The cassette in use is protected by breaking the erasure protection tab. Attach a piece of tape on the hole made by breaking the tab. → 
RANDOM Mode	● An attempt is made to perform MD O.T.E. recording or TAPE O.T.E. recording while the unit is in the CD random play mode. Exit from the random play mode. → 
READING	● The TOC* data is being read out.
SCMS	● 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.
TEXT FULL	● An attempt is made to display the text data of a CD-TEXT disc containing more than 1 kB of text data.
TITLE FULL	● 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:").
Blinking "?"	● Confirmation message asking if a setting or MD editing can be executed.

* 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 during STEREO operation
 (1 kHz, 10 % T.H.D., at 6 Ω) 25 W + 25 W
 Rated output power during STEREO operation
 (1 kHz, 0.7 % T.H.D., at 6 Ω) 18 W + 18 W
 Frequency response
 AUX 40 Hz~50 kHz (0 dB ~ -3dB)

[Tuner section]

FM tuner section
 Tuning frequency range 87.5 MHz ~ 108 MHz
 MW (AM) tuner section
 Tuning frequency range 531 kHz ~ 1,602 kHz

[MD recorder section]

Laser Semiconductor laser
 Oversampling 8 fs (352.8 kHz)
 Laser wave length 765 to 805 nm
 Laser power class Class 3B (IEC)
 Recording method
 Field modulation overwrite method
 Audio compression ATRAC, ATRAC 3
 D/A Conversion 1 Bit

[CD player section]

Laser Semiconductor laser
 Oversampling 8 fs (352.8 kHz)
 Laser wave length 760 to 800 nm
 Laser power class Class 3A (IEC)
 D/A Conversion 1 Bit

[Cassette deck section]

Track 4-track, 2-channel stereo
 Recording system AC bias system
 (Frequency: 105 kHz)
 Heads
 Playback / recording head 1
 Erasing head 1
 Motor 1
 Wow and flutter 0.2 % (W.R.M.S.)
 Fast winding time Approx. 110 seconds
 (C-60 tape)

[General]

Power consumption 90 W
 Dimensions W : 180 mm
 H : 255 mm
 D : 317 mm
 Weight (net) 5.6 kg

Speakers

Enclosure Bass-reflex type
 Speaker configuration
 Woofer 120 mm, cone type
 Tweeter 25 mm, dome type
 Impedance 6 Ω
 Maximum input level 30 W
 Dimensions W : 120 mm
 H : 255 mm
 D : 215 mm
 Weight (net) 2.3 kg(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 _____