

KENWOOD

MICRO HI-FI COMPONENT SYSTEM

HD-5MD

INSTRUCTION MANUAL

KENWOOD CORPORATION



B60-5270-08 00 © (T/M) 0204

2 Before applying power

HD-5MD/EN

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

Units are designed for operation as follows.

U.S.A. and Canada AC 120 V only
Europe and U.K. AC 230 V only

Other countries AC 110-120 / 220-240 V
switchable*

For the United Kingdom

Factory fitted moulded mains plug

1. The mains plug contains a fuse. For replacement, use only a 3-Amp ASTA-approved (BS1362) fuse.
2. The fuse cover must be refitted when replacing the fuse in the moulded plug.
3. Do not cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or adapter, or consult your dealer.

If nonetheless the mains plug is cut off, remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

IMPORTANT : The wires in the mains lead are coloured in accordance with the following code:

Blue : Neutral
Brown : Live

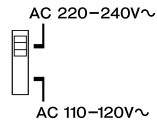
Do not connect those leads to the earth terminal of a three-pin plug.

* AC voltage selection

The AC voltage selector switches on the rear panel are set to the voltage that prevails in the area to which the unit is shipped. Before connecting the power cord to your AC outlet, make sure that the setting positions of these switches match your line voltage. If not, they must be set to your voltage in accordance with the following direction.

AC voltage selector switches





Move switch lever to match your line voltage with a small screwdriver or other pointed tool.



Note : Our warranty does not cover damage caused by excessive line voltage due to improper setting of the AC voltage selector switch.

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.		

**CLASS 1
LASER PRODUCT**

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

Location: Back panel

Special features

Equipped with ATRAC 3 for long digital recording/playback functions (LP2, LP4).

Enables long digital recording and playback up to two times longer (about 160 minutes) or four times longer (about 320 minutes) than the standard time. (Times based on use of an 80-minute disc.)

Supports CD to MD high-speed (4X) dubbing

High-speed CD to MD dubbing function reduces dubbing time to about 1/4 the normal time.

Playback of CD-R/RW discs

The CD player is capable of playing both CD-R and CD-RW music discs, which have been recorded on a CD recorder.

Equipped with a sampling rate converter

Equipped with an optical digital input terminal that can be hooked up to a BS/CS tuner for digital recording.

A 3-disc CD changer and MD player in one slim unit

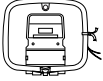
A 3-disc CD changer and MD player in one compact unit is now a reality. This unit not only allows you to enjoy hours of CD music as BGM, but it also makes recording music on a single CD a snap.

Accessories

Unpacking

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

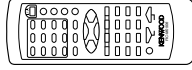
AM loop antenna (1)



FM indoor antenna (1)



Remote control unit (1)



Batteries (R6/AA) (2)



Speaker cords (2)
(provided in the speaker package)






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.

Contents

Caution : Read the pages marked  carefully to ensure safe operation.

Preparation section

 Before applying power	2
 Safety precautions	2
Special features	3
Accessories	4
Contents	5
 IMPORTANT SAFEGUARDS	6
System connections	8
Connection of accessory antennas	8
Connection of FM outdoor antenna (sold separately)	9
Connection of the speaker system	9
Connection of a subwoofer (sold separately)	10
Connection of a cassette deck (sold separately)	10
Connection to an external source (audio equipment)	11
Controls and indicators	12
Main unit	12
Display	13
Remote control unit	14
Operation of remote control unit	15

Basic section

Basic use method	16
Adjusting the tone	18
Playback of CD	20
Playback of MD	22
Receiving broadcast station	24
Channel space setting	25
RDS (Radio Data System) (For U.K. and Europe)	27
Listening to an AUX/TAPE input source	30
In regard to long-play MD stereo recording and playback	31
Recording to MD	32

Application section

Various CD/MD playback features	36
Listening to the desired sequence (program playback)	36

Repeated playback	38
Listening in random order (random mode)	39
Playback only the first track of selected CDs (BEST HITS program playback)	40
Convenient recording methods	41
Recording of all tracks or a single track of a CD by one-touch recording (O.T.E.)	42
Recording only the first track of selected CDs (BEST HITS program recording)	45
MD Edit Functions	46
Selection of the type of edit function	46
Recording by groups (GROUP)	47
Dividing a recorded MD into groups	48
Deleting group information	49
Changing the range of a group	50
Group selection for playback	51
Moving individual tracks (MOVE)	52
Dividing tracks (DIVIDE)	54
Combining tracks (COMBINE)	56
Erasing individual tracks (ERASE)/Erasing all tracks on an MD (ALL ERASE)	58
Assigning a title (name) to a minidisc or a track .	60
Use of title memo (TITLE MEMO)	63
Deletion of the edited contents (EDIT CANCEL)	64
Convenient functions	65
Setting auto power save (A.P.S.)	65
Adjusting the brightness of the display part (DIMMER)	65
Clock adjustment	66
Timer operation	67
Sleep timer (SLEEP)	67
Setting the timer program (PROG. TIMER)	68

Knowledge sections

Important Items	71
Maintenance	71
Reference	71
In case of difficulty	74
Specifications	79

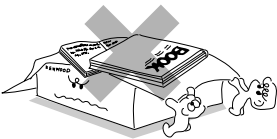
Please read all of the safety and operating instructions before operating this appliance. Adhere to all warnings on the appliance and in the instruction manual. Follow all the safety and operating instructions. These safety and operating instructions should be retained for future reference.

- 1. Power sources** – The appliance should be connected to a power supply only of the type described in the instruction manual or as marked on the appliance. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company. For appliances intended to operate from battery power, or other sources, refer to the instruction manual.
- 2. Power-cord protection** – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

Never pull or stretch the cord.



- 3. CAUTION – Polarization** – This appliance may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
- 4. Ventilation** – Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the appliance and to protect it from overheating, and these openings must not be blocked or covered. The appliance should be situated so that its location or position does not interfere with its proper ventilation.
To maintain good ventilation, do not put records or a tablecloth on the appliance. Place the appliance at least 10 cm away from the walls.
Do not use the appliance on a bed, sofa, rug or similar surface that may block the ventilation openings. This appliance should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

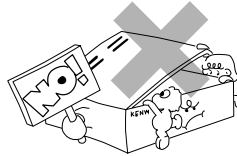


- 5. Water and moisture** – The appliance shall not be exposed to dripping and splashing - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc. Do not place an object containing liquid, such as a flower vase, on the appliance.

- 6. Temperature** – The appliance may not function properly if used at extremely low, or freezing temperatures. The ideal ambient temperature is above +5°C (41°F).
- 7. Heat** – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat. Do not place a flaming object, such as a candle or lantern, on or near the appliance.
- 8. Electric shock** – Care should be taken so that objects do not fall and liquid is not spilled into the enclosure through openings. If a metal objects, such as a hair pin or a needle, comes into contact with the inside of this appliance, a dangerous electric shock may result. For families with children, never permit children to put anything, especially metal, inside this appliance.



- 9. Enclosure removal** – Never remove the enclosure. If the internal parts are touched accidentally, a serious electric shock might occur.



- 10. Magnetic fields** – Keep the appliance away from sources of magnetic fields such as TV sets, speaker systems, radios, motorized toys or magnetized objects.
- 11. Cleaning** – Unplug this appliance from the wall outlet before cleaning. Do not use volatile solvents such as alcohol, paint thinner, gasoline, or benzene, etc. to clean the cabinet. Use a clean dry cloth.
- 12. Accessories** – Do not place this appliance on an unstable cart, stand, tripod, bracket, or table. The appliance may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the appliance. Any mounting of the appliance should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



13. Lightning – For added protection for this appliance during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the appliance due to lightning and power-line surges.

14. Abnormal smell – If an abnormal smell or smoke is detected, immediately turn the power OFF and unplug the appliance from the wall outlet. Contact your dealer or nearest service center.

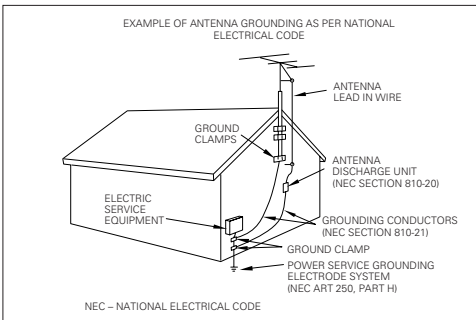


15. Damage requiring service – The appliance should be serviced by qualified service personnel when:

- A.** The power-supply cord or the plug has been damaged.
- B.** Objects have fallen, or liquid has been spilled into the appliance.
- C.** The appliance has been exposed to rain or water.
- D.** The appliance does not appear to operate normally by following the instruction manual. Adjust only those controls that are covered by the instruction manual as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the appliance to its normal operation.
- E.** The appliance has been dropped, or the enclosure damaged.
- F.** The appliance exhibits a marked change in performance.

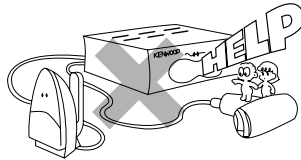
16. Servicing – The user should not attempt to service the appliance beyond that described in the instruction manual. All other servicing should be referred to qualified service personnel.

17. Outdoor antenna grounding – If an outside antenna is connected to the appliance, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Article 810 of the National Electrical Code ANSI/NFPA 70, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure.



18. Power lines – An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

19. AC outlets – Do not connect other audio equipment with a power consumption larger than that specified to the AC outlet on the rear panel. Never connect other electrical appliances, such as an iron or toaster, to it to prevent fire or electric shock.



20. Overloading – Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

21. Attachment – Do not use attachments not recommended by the appliance manufacturer as they may cause hazards.

22. Replacement parts – When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original parts. Unauthorized substitutions may result in fire, electric shock, or other hazards.

23. Safety check – Upon completion of any service or repairs to this appliance, ask the service technician to perform safety checks to determine that the appliance is in proper operating condition.

Notes:

1. Item 3 is not required except for grounded or polarized equipment.
2. Item 17 and 18 are not required except for units provided with antenna terminals.
3. Item 17 complies with UL in the U.S.A.

Make connections as shown below.

When connecting the related system components, refer also to the instruction manuals of the related components.

CAUTION

Do not plug in the power lead until all connections are completed.

Malfunction of microcomputer

If operation is not possible or erroneous display appears even though all connections have been made properly, reset the microcomputer by referring to "In case of difficulty". → 74

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

Top panel : 50 cm

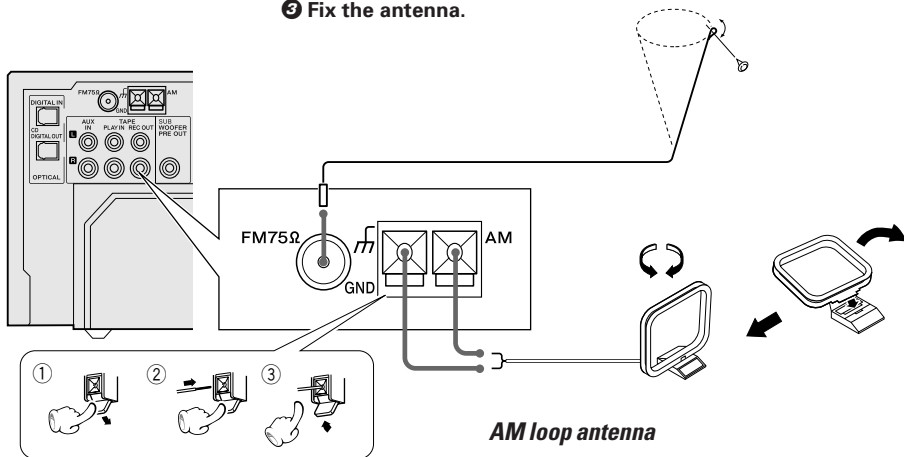
Back panel : 10 cm

Connection of accessory antennas

FM indoor antenna

The supplied antenna is for temporary indoor use only. For stable signal reception, we recommend to use an outdoor antenna. Remove the indoor antenna if you connect to an outdoor antenna.

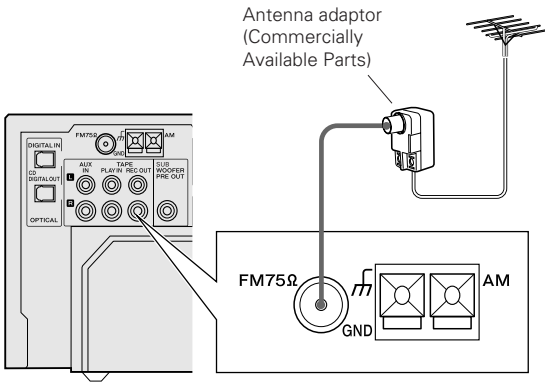
- 1 Connect the antenna to the antenna terminal.
- 2 Locate the position providing good reception condition.
- 3 Fix the antenna.



AM loop antenna

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

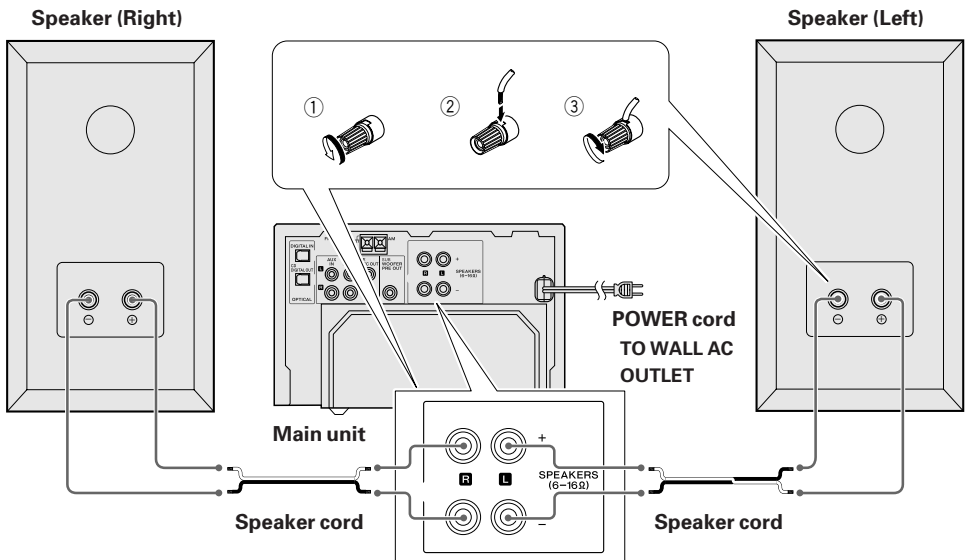
Connection of FM outdoor antenna (sold separately)



FM outdoor antenna

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

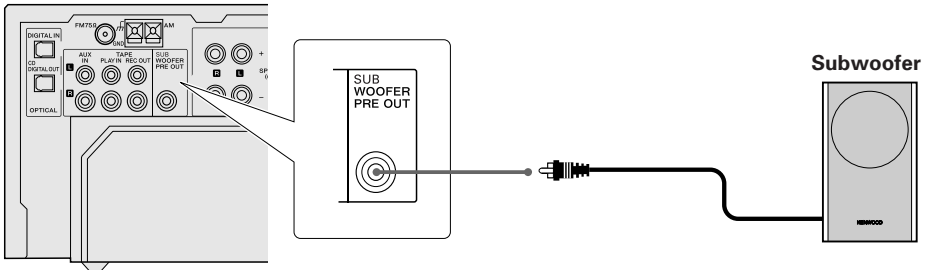
Connection of the speaker system



- Never short-circuit the + and – speaker cords.
- If the left and right speakers are connected inversely or if the speaker cords are connected with reversed polarity, the sound becomes unnatural with ambiguous acoustic image positioning. Be sure to connect the speakers and speaker cords correctly.

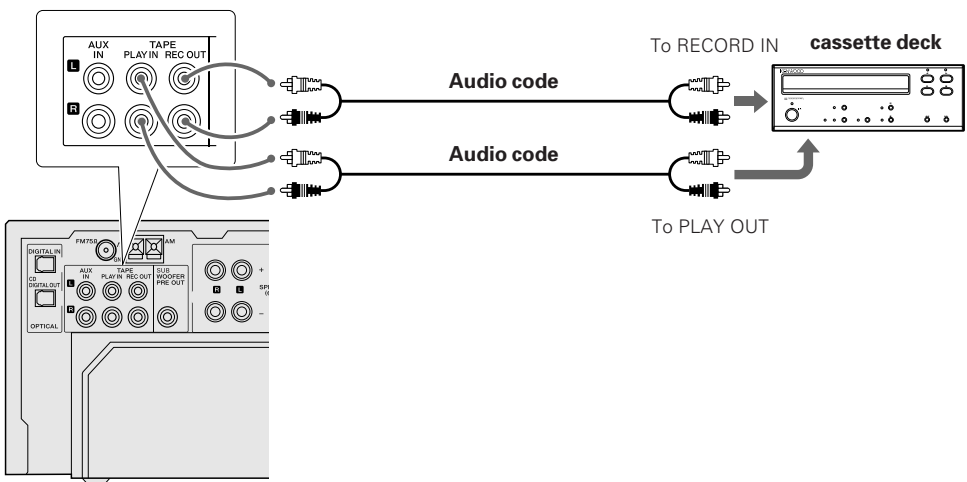
Connection of a subwoofer (sold separately)

A subwoofer provides powerful playback of the very low range. It can be used with all types of playback.



Connection of a cassette deck (sold separately)

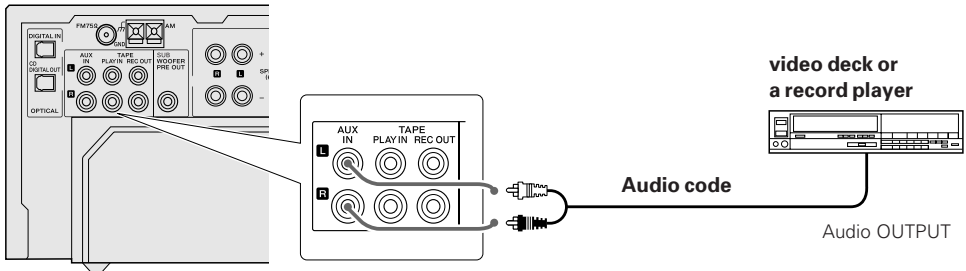
Connect a separately sold cassette deck with the accessory audio cord to the terminals TAPE PLAY IN and REC OUT at the rear of this unit. Please refer also to the operation instructions supplied with the cassette deck.



Connection to an external source (audio equipment)

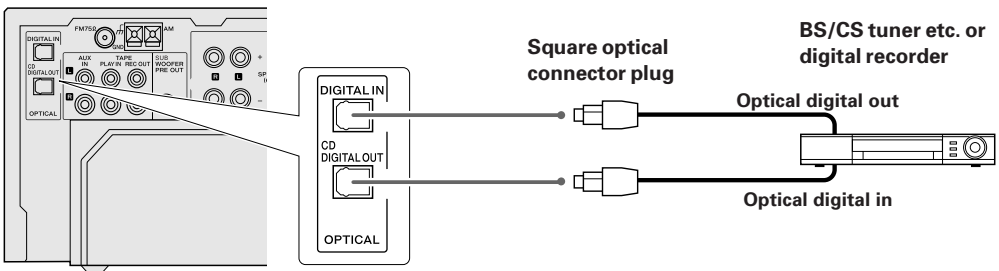
In case of analog connection

You can use the input terminal AUX at the rear of this unit to connect a video deck or a record player (P-110) (sold separately) with built-in RIAA equalizer amplifier.



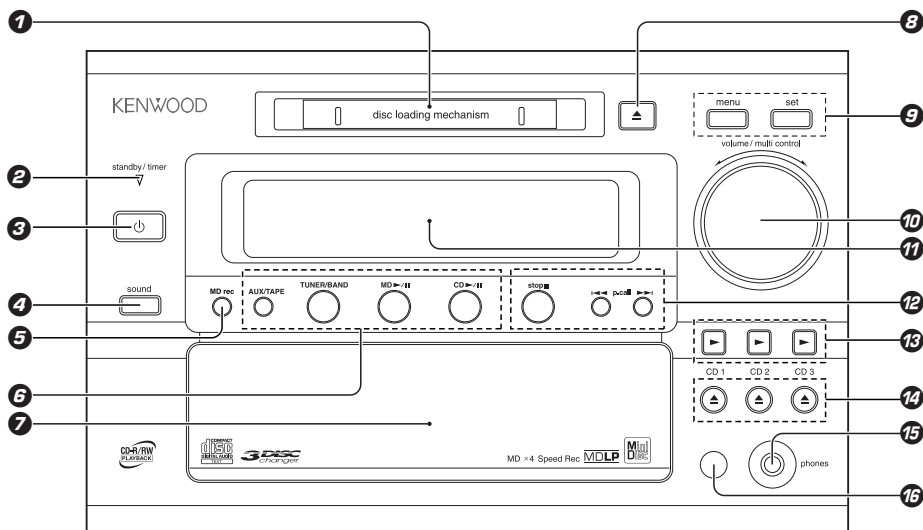
In case of digital connection

You can use the digital I/O terminals OPTICAL at the rear of this unit to connect a BS/CS tuner or other digital equipment for digital input to this unit and output of the digital signal from the CD of this unit to external equipment.



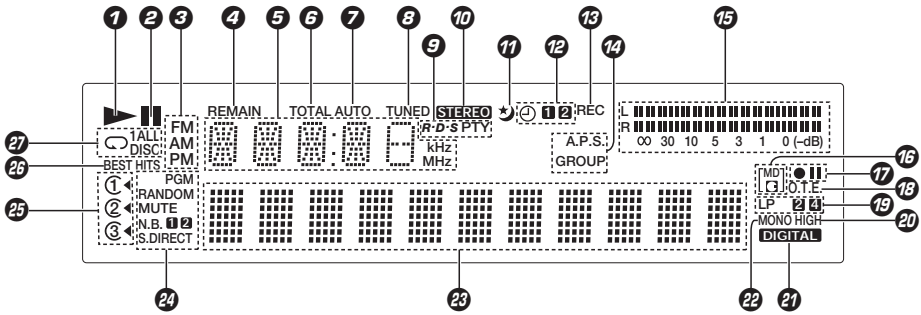
Basic

Main unit



- 1 Mini Disc insertion slot**
- 2 standby/timer indicator**
Standby status (power OFF): Red
Timer standby status (power OFF): Green
Energized (power ON): Not lit
- 3 key** - 16
Press to set the unit to On or Standby.
- 4 sound key** - 17
Used to switch the sound.
- 5 MD rec (record) key** - 33
Used to record to Mini Disc.
- 6 Input selection keys**
AUX/TAPE - 30
Selection of AUX (externally connected equipment) or tape.
TUNER/BAND - 24
Used to switch the broadcasting band (AM or FM) when listening to the radio.
MD II - 22
Used to select MD for playback and for pausing.
CD II - 20
Used to select CD for playback and for pausing.
- 7 CD tray** - 20
- 8 key** - 22
To eject a MD.
- 9 menu key** - 17
Used for application operations for each source.
- set key** - 17
Used to confirm a function selected in the menu.
- 10 volume/multi control knob** - 16 - 17
Used for volume adjustment and to select items in the setting menus.
- 11 Display panel**
- 12 stop key** - 20 - 22
Press to stop a disc.
When this is pressed in standby mode, the present time is displayed for 5 seconds.
- p.call key**
CD, MD : skip CD or MD tracks - 21 - 23
TUNER : select a preset radio station - 24
- 13 keys** - 21
Select the CD1, CD2 or CD3 and start playback.
- 14 keys** - 20
Open or close the CD1, CD2 or CD3 tray to load or eject a CD.
- 15 Headphone jack** - 16
Connect headphone with a stereo mini-plug (optionally available).
- 16 Remote sensor** - 16
This window receives signals from the remote control unit.

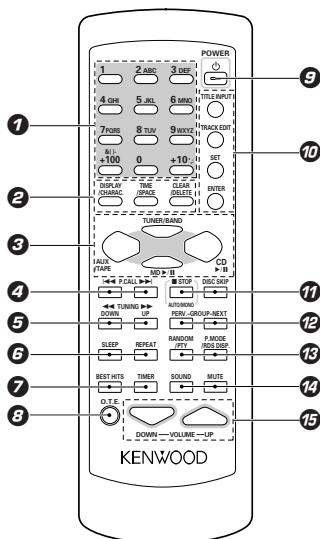
Display



- 1 Playback indication**
- 2 Playback pause indication**
- 3 AM/FM (reception band) indication**
AM/PM (morning/afternoon) indication
- 4 REMAIN (remaining time) indication**
- 5 Numerical display of frequency, time, track No., program No., etc.**
- 6 TOTAL (total recording time) indication**
- 7 AUTO (auto tuning) indication**
- 8 TUNED (radio broadcast tuned) indication**
- 9 R-D-S (Radio Data System) indication, PTY (Program Type Identification) indication (For UK and Europe)**
- 10 STEREO (stereo broadcast reception) indication**
- 11 (sleep timer) indication**
- 12 1 (timer 1) indication**
 2 (timer 2) indication
- 13 REC (recording timer) indication**
- 14 A.P.S. indication**
Indication of automatic power saving status.
- 15 GROUP (MD group function) indication**
- 16 Level indication**
- 16 MD indication**
When an MD is set, the indication on the inside appears.
- 17 (MD recording) indication**
 (MD recording pause) indication
- 18 O.T.E. (one-touch edit) indication**
- 19 LP2 indication**
Indication with stereo 2x recording/playback.
- LP4 indication**
Indication with stereo 4x recording/playback.
- 20 HIGH indication**
Indication at the time of CD high-speed dubbing.
- 21 DIGITAL indication**
Indication at the time of digital recording.
- 22 MONO indication**
Indication of monaural long-time recording.
- 23 Character information display**
Character information like the name of the received radio station (at the time of FM auto preset), CD title, MD title, etc. is displayed.
- 24 PGM indication**
Indication at the time of program playback.
- RANDOM indication**
Indication at the time of random playback.
- MUTE indication**
Indication at the time of mute (no sound).
- N.B.1/N.B.2 indication**
Indication when the N.B. (natural bass) function is selected.
- S.DIRECT indication**
Indication when the source direct function is ON.
- 25 CD loading indications**
- 26 BEST HITS indication**
- 27 Repeat mode indication**
 - 1 : Indication of one track repeat.
 - 1 DISC : Indication of one disc repeat
 - ALL DISC : Indication of all discs repeat

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.



7 BEST HITS key — 45
Used for BEST HITS recording or BEST HITS playback.

TIMER key — 70
Used for execution and cancellation of the various timers.

8 O.T.E. key — 42
When this key is pressed during CD playback, only the track being played will be copied to MD, while the entire CD will be copied when it is pressed while the CD is stopped.

9 POWER key — 16
Press to set the unit to On or Standby.

10 TITLE INPUT key — 60
Used for disc/track title input.

TRACK EDIT key — 48
Used for MD editing.

SET key — 48
When the source is CD or MD

Used for setting, confirmation, etc. at the time of MD editing.

Used to switch the title indication etc.

When the source is the tuner

Used to change the auto-preset station.

At the time of standby

Used for clock display.

ENTER key — 48

When the source is MD

Used for MD editing and for confirmation of the entered title etc.

When the source is the tuner

Used for confirmation of manual presetting.

11 STOP/AUTO/MONO key — 20 — 22
CD, MD :

Press to stop a disc.

TUNER : — 26
Used to switch AUTO tuning or MANUAL tuning (Monaural reception)

Standby mode :

When this is pressed in standby mode, the present time is displayed for 5 seconds.

DISC SKIP key

Each time this key is pressed, the unit switches to CD1, CD2, or CD3 respectively.

Infrared ray system

Model : RC-F0700E (For UK and Europe)

: RC-F0700M (For other countries)

1 Numeric keys — 21 — 23

Used to select a CD/MD track number or recall a preset station of the tuner.

2 DISPLAY/CHARAC. key — 21 — 23

Used for display switching and for selection of the group of input characters.

TIME/SPACE key — 21 — 23

Used for adjustment of the present time and for input of a space at the time of MD editing.

CLEAR/DELETE key — 37

Used to delete a program or input characters.

3 Basic operation keys (input selectors, play/pause)

CD ►/II key — 20

MD ►/II key — 22

TUNER/BAND key — 24

AUX/TAPE key — 30

4 P.CALL key — 21 — 23 — 24

5 TUNING keys — 21 — 23 — 26

6 SLEEP key — 67

Press to set the sleep timer

REPEAT key — 38

Press for setting repeated playback.

12 PREV.-GROUP- NEXT key - 51

Used for MD group editing.

13 RANDOM/PTY key (For Europe and U.K.)

CD, MD : Press for setting playback of tracks in a random order. - 39

TUNER : Used at the time of **PTY** reception. - 28

RANDOM key (For other countries) - 39

Press for setting playback of tracks in a random order.

P.MODE/RDS DISP. key (For Europe and U.K.)

CD, MD : Press to program tracks in the desired sequence. - 36

TUNER : Used at the time of **RDS** reception. - 29

P.MODE key (For other countries) - 36

Press to program tracks in the desired sequence.

12 SOUND key - 17

Press to switch the sound effect.

MUTE key - 17

Press to mute the audio temporarily.

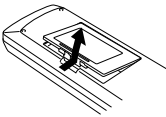
13 VOLUME keys - 16

Press to adjust the volume.

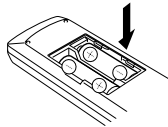
Operation of remote control unit

Loading batteries

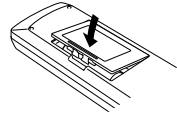
1 Remove the cover.



2 Insert batteries.



3 Close the cover.



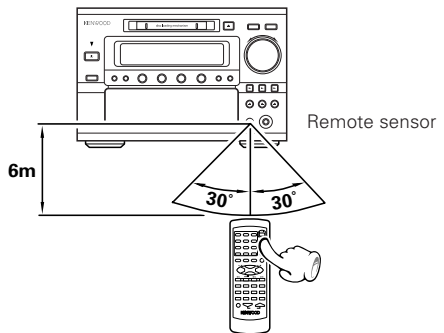
● Insert two R6 ("AA"-size) batteries following the polarity indications.

Operation

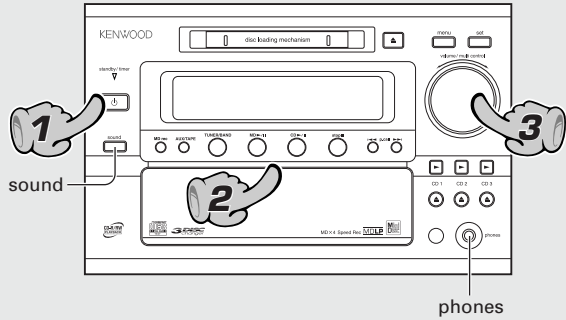
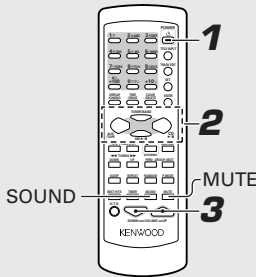
After plugging the power cord of this unit, press the **POWER** (⏻) key of the remote control unit to turn the system **ON**. When the system is turned **ON**, press the key of the function to be operated.

- 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 Power ON (OFF)

When the power is ON and the key is pressed, the power becomes OFF (standby).

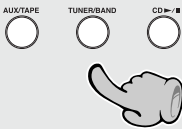
It takes a little time from power OFF operation until the power is switched off.

- For about five seconds after power ON, mute (no sound) status is applied for circuit protection.

One-touch operation function

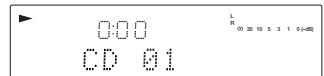
When one of the following keys is operated in power OFF (standby) condition, the power will be switched on, the source will be selected, and playback will start in case of CD.

CD▶/|| key, MD ▶/|| key, TUNER/BAND key, AUX/TAPE key.

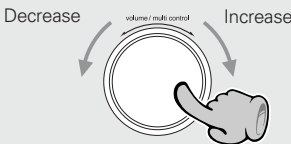


2. Select the source to be listened to.

- CD — 20
- MD — 22
- TUNER — 24
- AUX/TAPE — 30

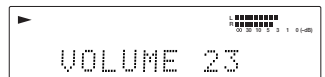


- * The source can also be selected by pressing TUNER/BAND, CD ▶/||, MD ▶/|| or AUX/TAPE on the remote control. (Playback will start automatically when CD ▶/|| or MD ▶/|| key is pressed.)

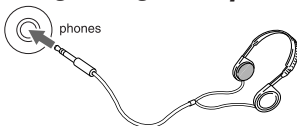


3. Adjust the volume.

- Rapid turning produces a large change in volume. (AI VOLUME function)
- A guide value (0 to MAX) is shown on the display.



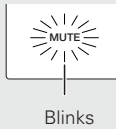
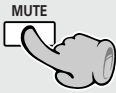
Listening through headphone



- Insert the headphone plug into the headphone jack.
- The sound from all speakers are cut off.
- Turn the volume/multi control knob to adjust the volume.
- Lower the volume before you connect or disconnect plugs.
- Headphone with a stereo mini plug can be connected.

Muting the sound temporarily

Remote control unit only

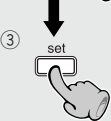
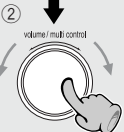
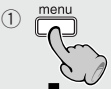


- Press again to resume the original volume.
- This is also canceled when the volume is changed.

Adjust the left/right volume balance

Main unit only

① Select "BALANCE" as follows.



- ① Press the "menu" key.
- ② Select "BALANCE" with the "volume/multi control" knob.

When the "volume/multi control" knob is turned, switching is done as follows.

"MD REC MODE ?"
 "GROUP MAKE ?"
 "REC SPEED ?"
 "REC LEVEL ?"
 "AUX INPUT ?"
 "TONE ?"
 "BALANCE ?"
 "TIME ADJUST ?"
 "TIMER SET ?"
 "A.P.S. SET ?"
 "DIMMER ?"

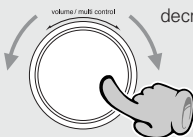
Return to the original status is made when no operation is performed within 20 seconds.

② Press the "set" key.

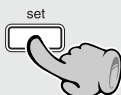
② Adjust the left/right volume balance with the "volume/multi" control knob.

The right volume decreases.

The left volume decreases.



② Press the "set" key.

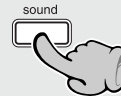


Listening to the original sound of the source (source direct)

The sound from CD, MD or another source can be heard as faithful as possible to the original sound by not passing it though the sound adjustment circuits of this unit.

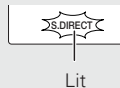
Main unit only

① Press the "sound" key repeatedly to select "S.DIRECT".



Each press switches the modes as follows.

"N.B.1"
 "N.B.2"
 * "TONE 1"
 * "TONE 2"
 * "TONE 3"
 "SOURCE DIRECT"
 "SOUND MODE OFF"



* "TONE 1(2,3)" is not displayed when "BASS" and "TREBLE" both are set to "0".

- When source direct is selected, N.B1, N.B2, and TONE1, TONE2, TONE3 are cancelled.
- To return to normal mode, press the "sound" key repeatedly to select "SOUND MODE OFF".

Adjusting the tone

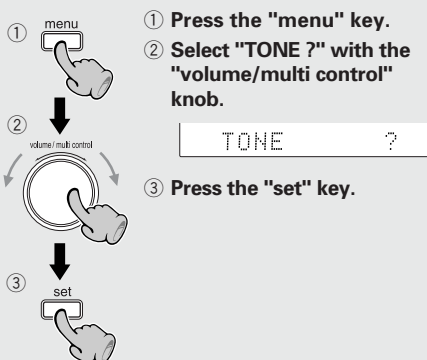
TONE CONTROL

The low range (BASS) and the high range (TREBLE) each can be set to a desired level. Three types of tone control can be set in advance.

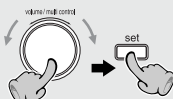
TONE CONTROL setting

Main unit only

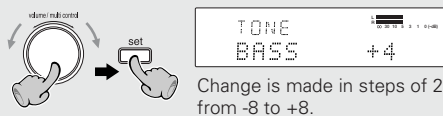
- ① Select "TONE ?" as follows.



- ② Select "TONE 1 ?" (or 2, 3) with the "volume/multi control" knob and press the "set" key.



- ③ Adjust the level for the low range (BASS) with the volume/multi control knob and press the "set" key.



- ④ Adjust the level for the high range (TREBLE) with the volume/multi control knob and press the "set" key.



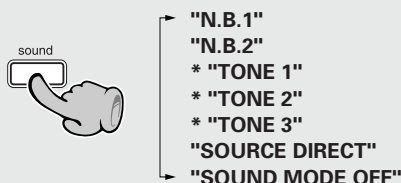
- When the setting has been completed, return to the original display is made after display of "COMPLETE".

Listening with use of TONE CONTROL

Select and set the desired tone control setting set in advance.

- ① Press the "sound" key repeatedly to select "TONE 1", "TONE 2" or "TONE 3".

Each press switches the modes as follows.



* "TONE 1(2,3)" is not displayed when "BASS" and "TREBLE" both are set to "0".

- To return to normal mode, press the "sound" key repeatedly to select "SOUND MODE OFF".

N.B. circuit (natural bass)

NB1 : The low range will be emphasized.

NB2 : The low range will be emphasized still further.

- ① Press the "sound" key repeatedly to select "N.B.1" or "N.B.2".

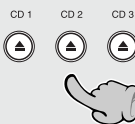
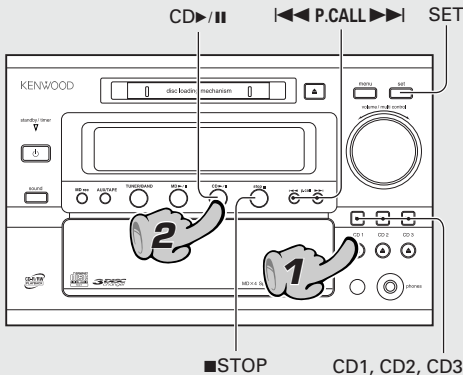
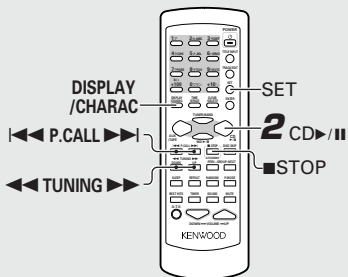
Each press switches the modes as follows.



* "TONE 1(2,3)" is not displayed when "BASS" and "TREBLE" both are set to "0".

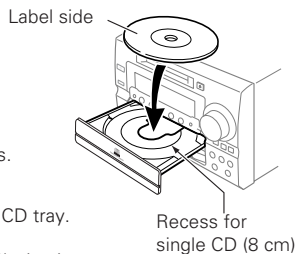
- To return to normal mode, press the "sound" key repeatedly to select "SOUND MODE OFF".





1. Load a disc.

- 1 Open the CD tray.
- 2 Place a disc.
- 3 Close the CD tray.



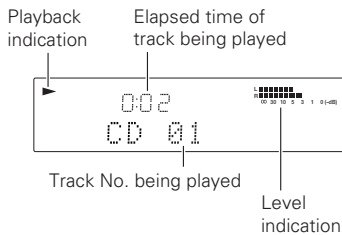
Repeat 1 to 3 to set up to three discs.

- Always press the ▲ key to close the CD tray.
- Do not touch the played side of disc.
- Be sure to place a disc horizontally. Placing it with an inclination will result in malfunction.

When one of the keys CD1 to CD3 is pressed, the CD tray with that number will open, and when the key is pressed again, the tray will close. When a key with a different number is pressed while a tray is open, the open tray will close and then the CD tray corresponding to the pressed key will open.

2. Start playback.

- After a few seconds, play starts from track No.1.
- When more than one disc has been set in this unit, the next disc will be played automatically when playback of one disc ends. Playback will stop when all discs have been played. (Relay playback)



To stop playback

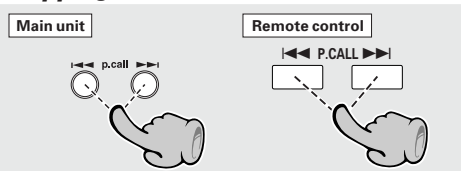


To pause playback



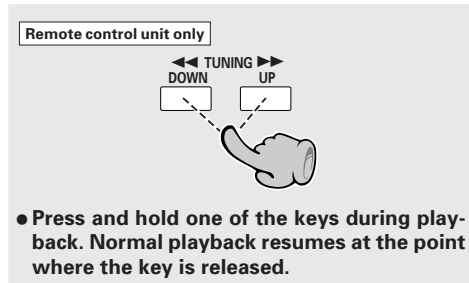
- Each press pauses and plays the CD alternately.

Skipping tracks



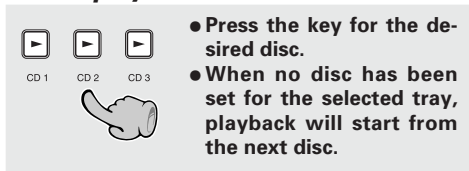
- The track in the direction of the key pressed is skipped, and the selected track will be played from the beginning.
- When the ◀◀ key is pressed once during playback, the track being played will be played from the beginning.
- To skip further to a track located before the current track, press the ◀◀ key quickly.

To fast forward and backward



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

Start of playback from a desired disc



- Press the key for the desired disc.
- When no disc has been set for the selected tray, playback will start from the next disc.

Playback from desired track

Remote control unit only

Select the desired track No.

1	2ABC	3DEF
4GHI	5JKL	6MN0
7PQRS	8TUV	9WXYZ
10	0	+10

Press the numeric keys as shown below...

To select track No. 23
: +10 : +10 : 3DEF

To select track No. 30
: +10 : +10 : +10 : 0

In regard to title display

When a disc conforming to CD TEXT is played and the "DISPLAY/CHARAC." key is pressed during CD playback (or during stop), the character information recorded on the CD can be displayed on the display. Each time the display key is pressed, switching is done between the following items.

Remote control unit only

Disc title *1

→ Track No. → Track title *1

*1 The disc title is displayed during stop. The track title is scrolled during playback.

In regard to display of the disc indication

- 1 -- Disc number indication.
- 2 -- C is displayed when the disc information is read in.
- 3 -- The symbol ◀ lights at the selected disc number. When the CD ▲ key is pressed, playback starts from the disc with the symbol ◀.

Disc indication

In regard to display of the CD time

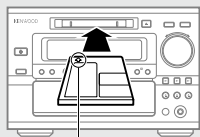
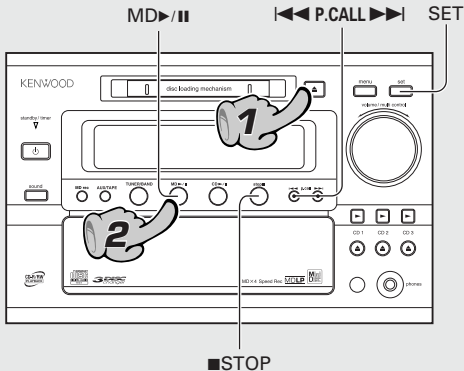
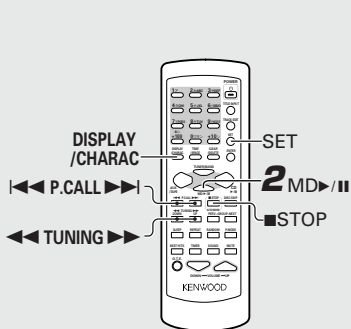
Each time the "TIME/SPACE" key is pressed during CD playback, the time display on the display is switched.

Remote control unit only

- ① Elapsed time of the track : 1:23
- ② Remaining time of the track : REMAIN display 2:37
- ③ Total elapsed time of the disc : TOTAL display 23:50
- ④ Total remaining time of the disc :REMAIN TOTAL display 36:50

- Only ① and ② are displayed during random playback and single track repeat.
- At the time of program playback, ④ becomes the display of the total time for the programmed tracks.

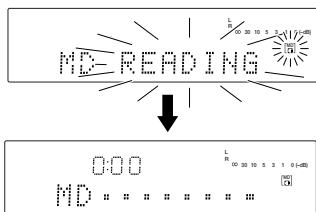
Basic



Insert in arrow direction.

1. Insert a minidisc.

- Insert a minidisc correctly into the slot.



Display example when there is no title

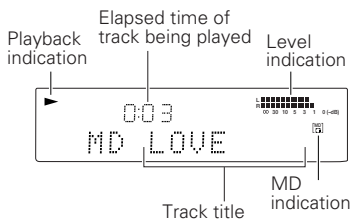
To remove the disc



Minidiscs cannot be inserted or ejected when the power is OFF (standby). Always switch on the power and then insert a minidisc. Forced insertion of a disc in standby condition can cause defects.

2. Start playback.

- Playback starts in the recorded mode (standard, 2x, 4x).
- During playback, the track title is displayed at the start of the track.
- When a track not on the minidisc is selected while "READING" flashes, the last track of the minidisc will be played.



[MD] MD indication : The mark is lit when a disc has been set.

To stop playback



To pause playback



- Each press pauses and plays the CD alternately.

Skipping tracks

Main unit

Remote control

- The track in the direction of the key pressed is skipped, and the selected track will be played from the beginning.
- When the ◀◀ 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 ◀◀ key quickly.

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.

Playback from desired track

Remote control unit only

Select the desired track No.

Press the numeric keys as shown below...

1	2ABC	3DEF
4GHI	5JKL	6MNO
7PQRS	8TUV	9WXYZ
0	.	+10

To select track No. 23
+10.: +10.: 3DEF
: 0., 0., 0.

To select track No. 30
+10.: +10.: +10.: 0
: 0., 0., 0., 0.

To select track No. 113
8(L):
+100 +10.: 3DEF
: 0., 0., 0.

In regard to display of the MD time

Each time the "TIME/SPACE" key is pressed during MD playback, the time display on the display is switched.

Remote control unit only

- ① Elapsed time of the track
: 1:23
- ② Remaining time of the track
: REMAIN display 2:37
- ③ Total elapsed time of the disc
: TOTAL display 23:50
- ④ Total remaining time of the disc
:REMAIN TOTAL display 36:50

- Only ① and ② are displayed during random playback and single track repeat.
- At the time of program playback, ④ becomes the display of the total time for the programmed tracks.

In regard to title display

When the display key is pressed during MD playback (or during stop), the character information recorded on the minidisc can be displayed on the display.

Remote control unit only

DISPLAY /CHARAC.

- ① Track title (during playback)
Disc title (during stop)
- ② Track No. display
- ③ Display of the remaining recording time (see below)

001
R74:10TM

Number of recorded tracks

Remaining recordable time

In regard to the MD playback mode (recording mode) (-)

MD tracks are played back according to the recording mode (REC MODE). MDLP uses the new audio compression standard ATRAC3, and it is shown on MD recorders and MD players with long-time recording and/or playback function for stereo 2x (or 4x), as well as on MD media recorded with ATRAC3 (MDs only for playback).

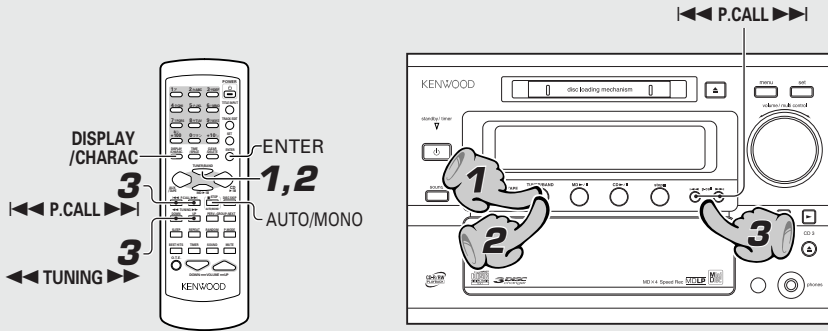
Indication of long-time recording mode

Indication of 2x recording

Indication of 4x recording

LP 2 4

DIGITAL



1. Select the tuner input.

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

- FM
- AM

2. Preset a radio station in memory.

Collective presetting of stations - [25]

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

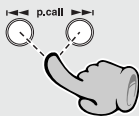
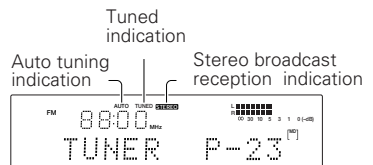
- Once the stations are stored by auto presetting, you are not required to repeat this procedure the next time you listen to radio. However when you shift to another location whereby the broadcast station frequencies are different, you will have to re-execute the presetting of stations.

One-by-one presetting (Manual preset) - [26]

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

3. Tuning (Preset Call)

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



When ▶▶ is pressed : 1→2→3 ... 38→39→40→1...

When ◀◀ is pressed : 40 → 39 → 38 3 → 2 → 1 → 40.....

- 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.

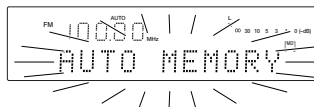
Collective presetting of stations

Remote control unit only

1 Select the tuner input.



2 Press the "ENTER" key for more than 2 seconds



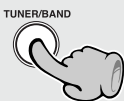
- A maximum of 40 stations of the band presently being received will be preset.
- When there are many stations and the intended station has not been preset, please also use "One-by-one presetting (Manual preset)".

Channel space setting

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

Main unit only

1 Select the tuner input.



2 Press the "stop ■" key for more than 2 seconds.



Each press the "stop ■" key for more than 2 seconds switches the modes as follows.

- ① FM 50 k
- ② FM 100 k

- At FM 50 kHz, the corresponding AM frequency is 9 kHz.
- At FM 100 kHz, the corresponding AM frequency is 10 kHz.

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

Tuning to 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

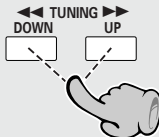
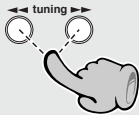
- ① Press the " ■ STOP (AUTO/MONO)" key during TUNER input.

Main unit

Remote control



- ② Tune a station.



Each press alternates the mode.

- ① "AUTO" : Stereo reception
② "MANUAL" : Monaural reception

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

In AUTO mode :

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

In MANUAL mode :

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

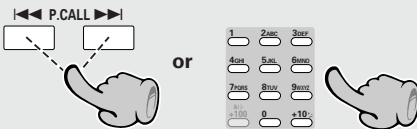
One-by-one presetting (Manual preset)

Remote control unit only

- ① Perform the procedure in "Tuning to a non-preset radio station (Auto tuning, Manual tuning)" to receive the station to be preset.
- ② Press the ENTER key during reception.



- ③ Select one of the preset numbers from 1 to 40.



- ④ Press the ENTER key again.

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

- A maximum of 40 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 :



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.

- 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. During the auto memory function, the presetting sequence priority will be given to the RDS stations.

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.

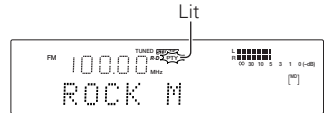
However, if a station is not preset by auto memory, "NO DATA" will light instead of the program (genre) type and PTY search is not available.

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

1. Select the PTY search mode.

Remote control unit only

RANDOM
/PTY

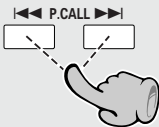


When an RDS broadcast is received, the program type is shown on the display. If no PTY data is available, or if the station is not an RDS station, "NONE" is displayed.

2. Select the desired program type.

Use program type table on the right for your convenience.

Selection with the ◀◀ or ▶▶ key.



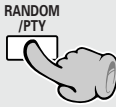
Select while "PTY" is lit.

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.

Program type table

◀◀, ▶▶ keys	Program Type Name	Display
DOWN ↑ UP ▼	Pop Music	POP M
	Rock Music	ROCK M
	Easy Listening Music	EASY M
	Light Classical	LIGHT M
	Serious Classical	CLASSICS
	Other Music	OTHER M
	News	NEWS
	Current Affairs	AFFAIRS
	Information	INFO
	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.

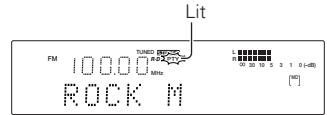


- No sound is heard while "PTY" is blinking.
- If a program of the desired type cannot be found, "NO PROG" is displayed, then after several seconds the display returns to the original display.
- If a program of the desired type is found, that program is received and the program type name display changes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

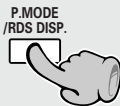


Station name display.

Using the RDS display function

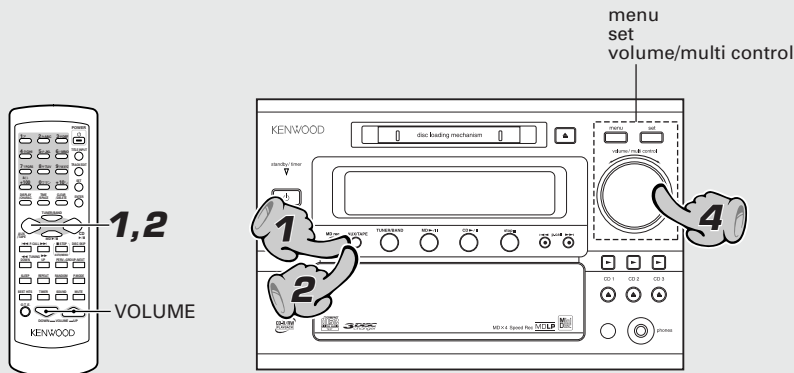
Remote control unit only

Press the P.MODE/RDS DISP. key



Each press alternates the mode.

- ① PS display
- ② Preset number display



1. Press the AUX/TAPE key.

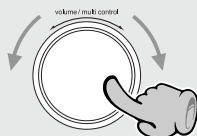
When the AUX/TAPE key is pressed, the unit switches to external input or tape.



2. Select external input or tape.

When the AUX/TAPE key is pressed for at least two seconds, the input is switched as follows.

- ① **AUX** : Playback of the equipment connected to the AUX terminal at the rear.
- ② **TAPE** : Playback of the equipment connected to the TAPE terminal at the rear.
- ③ **DIGITAL IN** : Playback of the equipment connected to the DIGITAL IN terminal at the rear.



3. Start playback of the external source.

4. Adjust the volume.

Adjustment of the input level at the time of AUX selection

When the output level of the source equipment connected to the AUX terminal does not match the input level of this unit (when the volume is too high or too low), it can be adjusted.

- ① Select "AUX INPUT ?" as follows.
 - ① Press the "menu" key.
 - ② Select "AUX INPUT ?" with the volume/multi control knob.
 - ③ Press the "set" key.
- ② Adjust the input level with the volume/multi control knob.
The input level can be adjusted from -5 to +2.
- ③ Press the "set" key to confirm the input level.

This unit is compatible with long-play MD stereo recording and playback (compatible with MDLP).

The recording modes are stereo recording, monaural long-play recording, stereo 2x long-play recording, and stereo 4x long-play recording, and use is possible for all music sources which can be recorded by this MD.

Mixed recording of tracks with different recording modes into the same MD also is possible.

Set the recording mode in advance, and then perform the recording operation.

In regard to long-play stereo recording (LP2, LP4)

Stereo long-play recording permits long-play recording by further increasing the digital compression ratio for the audio signal in comparison with stereo recording and monaural recording. The LP4 mode has a higher compression ratio than the LP2 mode and can record for a longer time.

- Tracks recorded on an MD with stereo 2x long-play recording (LP2) or stereo 4x long-play recording (LP4) with this unit can be played back on other equipment compatible with MDLP.
- With stereo recording on MD, the quality changes with increasing recording time. Use stereo recording (STEREO) for recording with the best quality.

Stamp function (STAMP)

This is a function which automatically adds "LP:" in front of the titles of tracks recorded with stereo 2x long-play recording (LP2) or stereo 4x long-play recording (LP4) with this unit. When the stamp function is used, "LP:" will be displayed in front of the track title.

"LP:" will not be displayed during playback with this unit. It is displayed only at the time of title editing.

"LP:" is displayed as the title only in case of playback on equipment not compatible with MDLP, when tracks recorded by stereo long-play recording are being played.

With this unit, the stamp function (STAMP) can be switched ON ("LP:" is added) or OFF ("LP:" is not added).

Types of record mode

Stereo recording (STEREO):

The possible recording time is the time shown on the MD cartridge.

Stereo 2x long-play recording (LP2):

The recording is in stereo, but the recording time is approximately double the time shown on the MD cartridge.

Stereo 4x long-play recording (LP4):

The recording is in stereo, but the recording time is approximately four times the time shown on the MD cartridge.

Monaural long-play recording (MONO):

The recording is monaural, but the recording time is approximately double the time shown on the MD cartridge.

In case of playback of an MD recorded in stereo long-play mode on equipment not compatible with stereo long-play mode

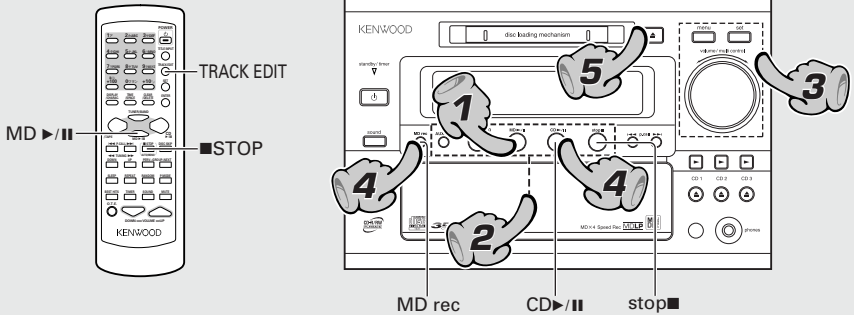
When it is tried to play tracks recorded in stereo long-play mode on equipment not compatible with stereo long-play mode, playback status will be reached, but no sound will be put out. When an MD with mixed stereo or mono recordings and stereo long-play recordings is played on such equipment, sound will be put out only for the stereo or mono recordings.

When such an MD is played and the volume is turned up excessively during a portion where no sound is put out, sound with a large volume will be put out suddenly when a track recorded with stereo or mono is reached. Take care not to turn up the volume excessively.

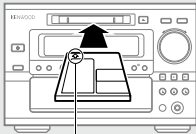


The MD editing functions have limitations in regard to tracks recorded in different recording modes. "Combining tracks" (COMBINE)

All recording functions can be used for long-play recording with ATRAC3 (MDLP) to MD. The recording method using the MD rec key explained here is convenient mainly for recording from the tuner or from an external source. "Convenient recording methods" is recommended for recording from CD. → 41



1. Make the MD recording preparations.



Insert in arrow direction.

- Insert a recordable minidisc correctly into the minidisc insertion slot.
- If a minidisc is being played, press the **STOP** ■ key.
- It is not necessary to find the start of the unrecorded part.
- When the minidisc has only little unrecorded space left, use the "ERASE" function (→ 58) to create sufficient unrecorded space, and then start recording.



Minidiscs cannot be inserted or ejected when the power is OFF (standby). Always switch on the power and then insert a minidisc. Forced insertion of a disc in standby condition can cause defects.

2. Select the source to be recorded.

Recording of radio broadcasts (analog recording)

Press the TUNER key. (Receive the desired station. → 24)

Recording from a CD (digital/analog recording*)

Press the CD >|| key. (Pause the CD at the start of the track to be recorded. → 20)

Recording from tape (analog recording)

Press "TAPE". (Pause the tape at the start of the title to be recorded. → 30)

Recording from external equipment (AUX) (analog recording)

Press "AUX". (Make the required preparations like finding the start of the title etc. → 30)

Digital recording from external equipment(AUX)

Select "DIGITAL" (Make the required preparations like finding the start of the title etc. → 30)

Please refer to page 30 for switching between tape and external input.

- The default recording method for CDs is set to digital at the time of purchase. If required, switch to analog.

Example: Selection of TUNER

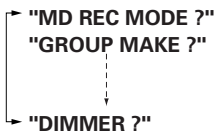


3. Set the recording mode.

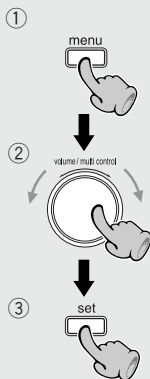
① Select "BALANCE" as follows.

- ① Press the "menu" key.
- ② Select "MD REC MODE ?" with the "volume/multi control" knob.

When the "volume/multi control" knob is turned, switching is done as follows.



Return to the original status is made when no operation is performed within 20 seconds.



② Press the "set" key.

② Select the desired recording mode.

① Select the desired recording mode with the volume/multi control knob.

- "STEREO" Stereo recording: Recording is possible for the time shown on the MD cartridge.
- "LP2" Stereo 2x long-play recording: Recording is possible for approximately double the time shown on the MD cartridge.
- "LP4" Stereo 4x long-play recording: Recording is possible for approximately four times the time shown on the MD cartridge.
- "MONO" Monaural recording: Monaural recording is possible for approximately double the time shown on the MD cartridge.

② Press the "set" key.

③ When LP2 or LP4 has been selected in step {2}, turn the volume/multi control knob, select "ON" or "OFF" for LP:STAMP, and press the set key.

- ↳ "LP:STAMP ON": "LP:" is inserted in front of the track title.
- ↳ "LP:STAMP OFF": "LP:" is not inserted in front of the track title.

4. Start recording.

① Press the MD rec key. (Recording pause status will be entered.)

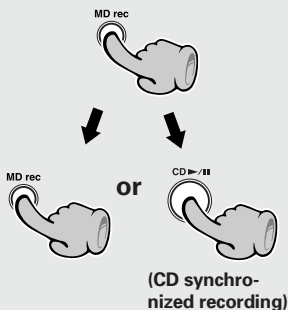
② When the preparations have been completed, press the MD rec key again. (Recording will start.)

- When the source is a CD, pressing the ►/|| key will start CD playback and MD recording. (CD synchro-recording)

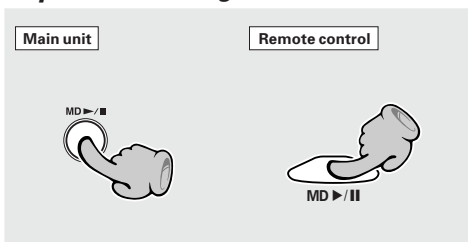
③ Start playback of the source (sound).

This step is not required in case of recording from a tuner or in case of CD synchro-recording.

- When adjustment of the recording level is required, adjust while the recording is paused.

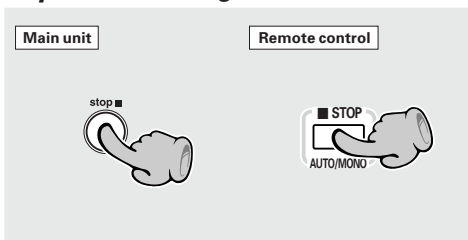


To pause recording



- To start recording again, press the MD > / II key. At this time, the track number will be increased by "1".
- When the CD > / II is pressed during CD recording, the recording and the CD playback can be paused. Press the CD > / II key again to continue the recording.

To pause recording



Eject the minidisc after completion of the recording.

- Always eject the minidisc after completion of the recording.

While "MD WRITING" is displayed, information is being written to the minidisc, and the unit should not be subjected to vibrations or shocks.

In case of a CD with CD-TEXT recording, the TEXT data will not be recorded.

In regard to display messages

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

- "DISC FULL" : The minidisc is full.
 ➡ Delete unwanted titles. - 78
- "PROTECTED" : The slider for prevention of erroneous erasure is open.
 ➡ Close the slider. - 78
- "PLAY ONLY" : This is a minidisc only for playback.
 ➡ Insert a recordable minidisc. - 78

In regard to the track number at the time of re-recording

When recording from a CD, the track number is increased when the track changes.

When recording from external equipment, the track number automatically is increased by "1" when the input level again exceeds a specific level after having dropped for at least 2 sec below this level. In case of classic music, the track number may be increased by "1" when there are longer passages with very low level. Unnecessary track numbers can be deleted later. ("Combining tracks (COMBINE)" - 56)

- In case of tuner recording, the track number automatically increases every 10 minutes. Please edit as required. ("Dividing tracks (DIVIDE)" - 54, "Combining tracks (COMBINE)" - 56)

If you want to increment the track number during a recording, press the TRACK EDIT key on the remote control during the recording to set a track number at that position.

The track numbers can be used to find the start of a track at the time of playback, for programming, etc.

Press during the recording

TRACK EDIT



Select the CD recording format and the recording level. (When the source is a CD)

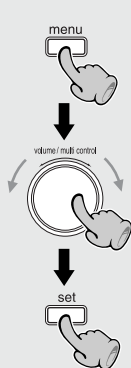
When recording from a commercial CD to an MD, select the recording format as "DIGITAL" (digital recording), the default setting at the time of purchase. However, when recording from CD to MD, digital recording may not be possible because of SCMS*. In such a case, switch the recording format to "ANALOG" (analog recording).

- For details, refer to "In regard to SCMS". 

1 Select CD input



2 Select "REC LEVEL ?" as follows.



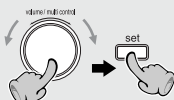
- 1 Press the "menu" key.
- 2 Select "REC LEVEL ?" with the "volume/multi control" knob.

"MD REC MODE ?"
"GROUP MAKE ?"
"REC SPEED ?"
"REC LEVEL ?"
"DIMMER ?"

Return to the original status is made when no operation is performed within 20 seconds.

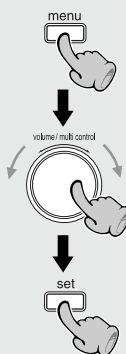
2 Press the "set" key.

2 Select "ANALOG" or "DIGITAL" with the "volume/multi control" knob and press the "set" key.



Adjust the recording level.

- 1 Play the input source to be recorded.
- 2 Press the MD rec key to enter recording pause status. In recording pause status, the recording level can be adjusted while looking at the level indication.
- 3 Select "REC LEVEL ?" as follows.



- 1 Press the "menu" key.
- 2 Select "REC LEVEL ?" with the "volume/multi control" knob.

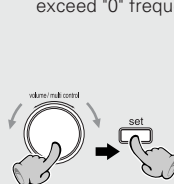
"MD REC MODE ?"
"GROUP MAKE ?"
"REC SPEED ?"
"REC LEVEL ?"
"DIMMER ?"

Return to the original status is made when no operation is performed within 20 seconds.

2 Press the "set" key.

2 Turn the volume/multi control knob to adjust the recording level and press the set key.

Analog or digital recording is selected automatically according to the input source. Adjust so that the level indication does not exceed "0" frequently.




Level indication



Display example in case of digital recording



Display example in case of analog recording

- The analog recording level can be adjusted from -12 to 0. The initial setting is 0.
- The digital recording level can be adjusted from -6 to +6. The initial setting is 0.
- At the time of CD 4x speed O.T.E. recording () recording is done at the recording level "0" (standard value), independent of the level set value.



Once recording has been completed, the recording level returns to the initial set value ("0").

Listening to the desired sequence (program playback)

It is possible to listen to selected tracks from a disc in the desired order. (Max. 32 tracks)

Set the source CD or MD in advance to stop status. → 20 → 22

Remote control unit only

① Press the "P.MODE" (P MODE/RDS DISP) key



P.MODE
/RDS DISP.



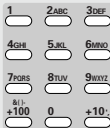
② (At the time of CD program) Press the DISC SKIP keys to select the disc.



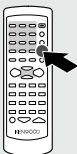
DISC SKIP



③ Press the numeric keys to select the track.



④ Press the "SET" key to confirm the selected track.



SET



⑤ Repeat the steps ② to ④ to continue programming.

⑥ Press the CD ►/II (MD ►/II) key to start program playback.



MD ►/II CD ►/II

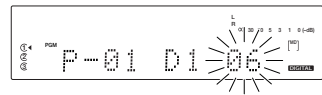
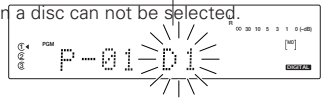
Lit



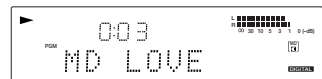
- "PGM" will light and PGM mode will be reached.

Disc Number

- Numbers not on a disc can not be selected.



- Return to the original status is made when no operation is performed within 20 seconds.
- When no operation is performed for some time after confirmation, program stop status will be reached. To continue programming, follow the procedure for "To add a track to an existing program".



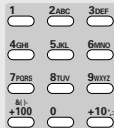
- Up to 32 tracks can be programmed. When "PGM FULL" is displayed, no more tracks can be programmed.
- If you made a mistake, press the CLEAR key and enter the track No. again.
- When a track No. is entered, the track will be added to the end of the existing program.
- Tracks will be played in the order they were programmed (following the program numbers).
- When the "REPEAT" key is pressed during PGM mode playback or stop, the PGM mode playback can be repeated.

To add a track to an existing program

Remote control unit only

Press in stop mode

- (At the time of CD program)
Pres the DISC SKIP keys to select the disc.
- Select the track number to be added with the numeric keys.



- Press the "SET" key.



- 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 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

Remote control unit only

Press in stop mode

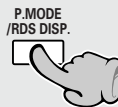


- Each time the key is pressed, the last track in the program is cleared.

To clear the entire program

Remote control unit only

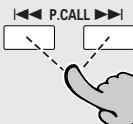
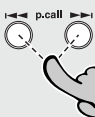
Press in stop mode



Changing to the next track during playback of a track

Main unit

Remote control



- When the $\gg|$ key is pressed during playback, play will skip to the next track in the program.
- When the $\ll|$ key is pressed once during playback, the track being played will be played from the beginning.

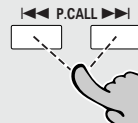
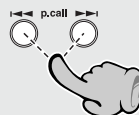
Confirmation of the contents of the programmed tracks

Press the $\ll|$, $\gg|$ keys after completion of programming.

Press in stop mode

Main unit

Remote control



- Each time a key is pressed, the programmed tracks will be displayed sequentially.

Repeated playback

You can repeatedly listen to a favorite track or disc.

1 track repeat The selected track will be repeated.

All repeat The entire disc will be repeated.

Set the source CD or MD in advance to stop status. →

Press the "REPEAT" key ("repeat" key) during playback or stop.

Main unit

Remote control

repeat



REPEAT



Each press switches the repeat mode.

(At MD)

- ① Off : Repeat deactivated
- ② " " : One track repeat
- ③ " " : All repeat

(At CD)

- ① Off : Repeat deactivated
- ② " " : One track repeat
- ③ " " : One disc repeat
- ④ " " : All disc repeat

Repeat mode indication



- To cancel repeat mode, press the "REPEAT" key ("repeat" key) repeatedly to make the repeat indication disappear.

Changing to the next track during playback of a track

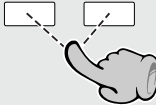
Main unit

Remote control

p.call



P.CALL



- When the key is pressed during playback, play will skip to the next track.
- When the key is pressed once during playback, the track being played will be played from the beginning.

Repeat playback of programmed tracks

① Perform programming. →

② Press the "REPEAT" key.

REPEAT



Each press switches the repeat mode.

- ① Program repeat ON.
- ② Program repeat OFF.

Listening in random order (random mode)

The tracks of one disc or all discs can be played back in random order.

(1 disc) random All tracks of one disc will be played and then playback will stop.

When an MD group has been selected, all tracks in that group will be played in random order. (— [47])

All discs random ... After all tracks of one CD have been played in random order, the tracks of CD2 and CD3 will be played in random order, and then the playback will stop.

Set the source CD or MD in advance to stop status. — [20] — [22]

Press the "random" key ("RANDOM" or "RANDOM/PTY" key) during playback or stop.

Main unit

Remote control



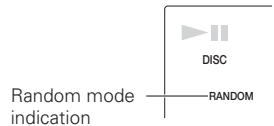
Each press switches the mode.

(MD)

- ① "RANDOM" off Normal playback
- ② "RANDOM" lid Random playback

(CD)

- ① "RANDOM" off
Normal playback
- ② "1 DISC RANDOM" lid
Random playback
- ③ "ALL DISC RANDOM" lid
Random playback

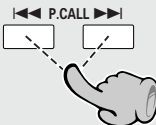
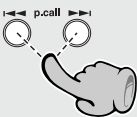


- To cancel random mode, press the "random" key ("RANDOM" key) to make the RANDOM indication disappear.

Changing to the next track during playback of a track

Main unit

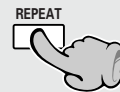
Remote control



- When the ►► key is pressed during playback, the next track will be selected at random and will be played.
- When the ◀◀ key is pressed once during playback, the track being played will be played from the beginning.

Repeated random playback

- ① Perform the operation for random playback.
- ② Press the "REPEAT" key.



Each press switches the repeat mode.

- ① Random repeat ON.
- ② Random repeat OFF.

Playback only the first track of selected CDs (BEST HITS program playback)

Only the first track of the set CDs will be played.

As it is possible to exchange the CDs in the other trays while one CD is being recorded, this can be used conveniently to continue playback or recording the hits of single CDs.

(BEST HITS program recording. - (45))

Remote control unit only

① Set a disc into the CD tray. - (20)

② Enter CD stop status. - (20)

③ Press the "BEST HITS" key.



④ Press the CD ►/II key.



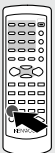
- The first track of the selected disc will be played, and then the unit will switch to the first track of the next disc.
- BEST HITS program playback in combination with repeat playback is not possible.

Playback in sequential order can be continued by sequentially replacing the discs.

Stop the BEST HITS program playback.



Cancel the BEST HITS program playback.



Press the BEST HITS key in the BEST HITS program mode.



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

Recording to MD is possible with long-play recording (MD LP2, LP4) with all recording functions.

To record CD with a simplified method (One-touch edit recording) → 42

All-track recording (O.T.E.)

Records all tracks in a CD onto a tape.

Single-track recording (O.T.E.)

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



When "REC SPEED" is set to "HIGH", recording to MD can be done with 4 times of the normal speed. → 42

To record desired CD tracks by reordering them (Program recording) → 44

Program recording

Recording of programmed tracks in the programmed order. (Convenient for recording only the desired CD tracks in the desired order.)

To record only the first track of selected CDs (Best hits program recording (BEST HITS)) → 45

BEST HITS program recording

The tracks played by the BEST HITS program will be recorded. (This is convenient for producing an original selection of hits.)

To record all tracks of a CD as one group (Group recording (GROUP MAKE + O.T.E.)) → 47

Group recording

The tracks of a recorded CD are recorded as one group. (When many tracks are recorded on an MD, grouping by artists or by albums is convenient for easy genre selection.)



After recording to a minidisc, always press the **▲** key to eject the disc.

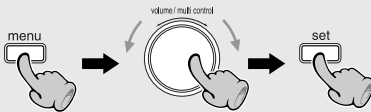
Recording of all tracks or a single track of a CD by one-touch recording (O.T.E.)

All tracks of a CD can be recorded by one-touch recording (normal speed, 4x speed) (all tracks O.T.E.)

Main unit only

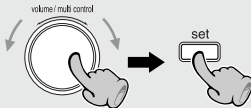
1 Select "REC SPEED ?" as follows.

- ① Press the "menu" key.
- ② Select "REC SPEED ?" with the "volume/multi control" knob.
- ③ Press the "set" key.



2 Select the desired recording speed.

- ① Select the desired recording speed with the "volume/multi control" knob.
- ③ Press the "set" key.



3 Set a recordable minidisc. → 32

4 Set a disc into the CD tray. → 20

5 Enter CD stop status. → 20

6 Set the recording mode (STEREO, LP2, LP4, or MONO).

Perform the operation of step 4 on page 33.

7 Press the "O.T.E." key on the remote control unit.



8 After completion of recording, press the ▲ key to eject the minidisc.

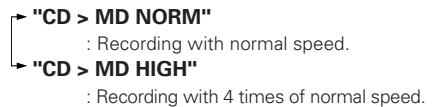


When the "volume/multi control" knob is turned, switching is done as follows.



Return to the original status is made when no operation is performed within 20 seconds.

When the "volume/multi control" knob is turned, switching is done as follows.



- Recording will start from the first track of the CD, and all tracks will be recorded.
- When either the CD playback or the MD recording stops, the other operation also will stop.
- When the possible recording time or the possible number of tracks on the MD is exceeded, "DISC FULL" will be displayed and the recording will stop.
- Eject the minidisc after completion of the recording.

Always eject the minidisc after completion of the recording.

A single track of a CD can be recorded by one-touch recording (normal speed, 4x speed) (Single track O.T.E.)

- ① Set a recordable minidisc. → 32
- ② Play a desired track. → 20
- ③ Press the "O.T.E." key on the remote control unit.



- ④ After completion of recording, press the ▲ key to eject the minidisc.



- When you want to record a track during playback of a CD, return to the start of that track will be made and playback and recording will be started just by pressing the O.T.E. key during playback.
- Recording will be done with the recording mode and the recording speed set in advance. Perform the operation of step 3 on page 33 to change the recording speed.

- At the end of the recording, the CD will enter pause status.
- In the same way, other desired tracks can be recorded.
- When the possible recording time or the possible number of tracks on the MD is exceeded, "DISC FULL" will be displayed and the recording will stop.
- Eject the minidisc after completion of the recording.





Always eject the minidisc after completion of the recording.



In case of CD-R/RW, depending on the disc recording condition and the characteristics, sound skipping or inclusion of noise may occur on rare occasions with recording to MD at 4x speed (CD > MD HIGH), and normal recording may not be possible. In such a case, we recommend recording at normal speed (CD > MD NORM).

Recording in changed order (PGM mode playback + O.T.E.)

It is possible to program the CD tracks and to record this program to an MD. The tracks of three CDs can be programmed and recorded to one MD.

- ① Select the desired recording speed. →  42
- ② Set a recordable minidisc. →  32
- ③ Set the disc(s) to the CD tray(s). →  10
- ④ Bring the CD to stop status.
- ⑤ Program the tracks to be recorded. →  36
- ⑥ Press the "O.T.E." key on the remote control unit.



- ④ After completion of recording, press the  key to eject the minidisc.



Perform the operations of steps ① and ② on page 42 to select normal speed or 4x speed.


Perform the steps ① to ⑤ of "Listening to the desired sequence (program playback)" on page 36 to program the tracks.

- Recording will be done with the recording mode and the recording speed set in advance. Perform the operation of step 3 on page 33 to change the recording speed.
- Recording of the programmed CDs starts.
- When either the CD playback or the MD recording stops, the other operation also will stop.
- When this unit changes the CD automatically according to the program, the recording also is paused automatically and no unnecessary recording (parts without sound) is made.
- When the possible recording time or the possible number of tracks on the MD is exceeded, "DISC FULL" will be displayed and the recording will stop.
- O.T.E. recording in combination with repeat playback is not possible.


- Eject the minidisc after completion of the recording.

Always eject the minidisc after completion of the recording.

Cancel PGM mode playback.

PGM mode can be canceled by the procedure for "To clear the entire program". →  37

Interrupting a recording

When the STOP  key is pressed, the playback and the recording are ended.

Recording only the first track of selected CDs (BEST HITS program recording)

Only the first track of the set CDs will be recorded.

As it is possible to exchange the CDs in the other trays while one CD is being recorded, this can be used conveniently to continue recording the hits of single CDs.

Remote control unit only

- ① Select the desired recording speed. → 42
- ② Set a recordable minidisc. → 32
- ③ Set a disc into the CD tray. → 20
- ④ Enter CD stop status. → 20
- ⑤ Press the "BEST HITS" key.



- ⑥ Press the "O.T.E." key to start recording.



- Recording will be done with the recording mode and the recording speed set in advance. Perform the operation of step 3 on page 33 to change the recording speed.
- Recording of only the first track of the CDs will start.
- The first track of the selected disc will be recorded, and then the unit will switch to the first track of the next disc. (BEST HITS program recording)
- When this unit changes the CD automatically according to the BEST HITS program, the recording also is paused automatically and no unnecessary recording (parts without sound) is made.
- When the BEST HITS program playback or the MD recording stops, the other operation also stops automatically.
- When the possible recording time or the possible number of tracks on the MD is exceeded, "DISC FULL" will be displayed and the recording will stop.
- BEST HITS program recording in combination with repeat playback is not possible.

When discs are replaced sequentially, recording in sequential order can be continued without interruptions.

Stop the BEST HITS program playback.



Cancel the BEST HITS program playback.

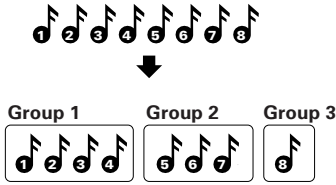


Selection of the type of edit function

When commercial minidisks for recording are used, various types of editing can be performed after recording. Minidisks with commercial software only for playback cannot be edited.

Grouping of tracks

Tracks can be divided into groups, and these groups can be used for editing, repeat playback, etc. - [47] - [51]



Function limitations because of the MD standard

Some functions are limited because of the MD standard. Please check these before you assume a malfunction. - [76] - [78]

When editing, please set the protection tab to the position where recording is possible. - [72]

Dividing and combining tracks

Dividing tracks (DIVIDE) - [54]



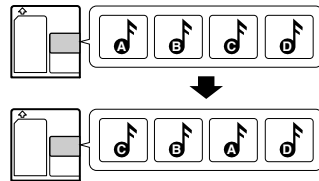
Combining tracks (COMBINE)

- [56]



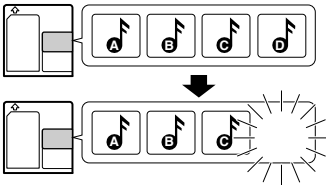
Moving tracks

Moving individual tracks (MOVE) - [52]

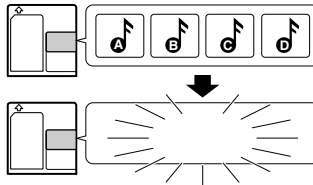


Erasing tracks

Erasing individual tracks (ERASE) - [58]



Erasing all tracks on an MD (ALL ERASE) - [58]



Assigning a name to a minidisk or a track (only remote control) - [60]

Copying or memorizing a title and assigning it to a different minidisk or track (TITLE MEMO)

(only remote control) - [63]

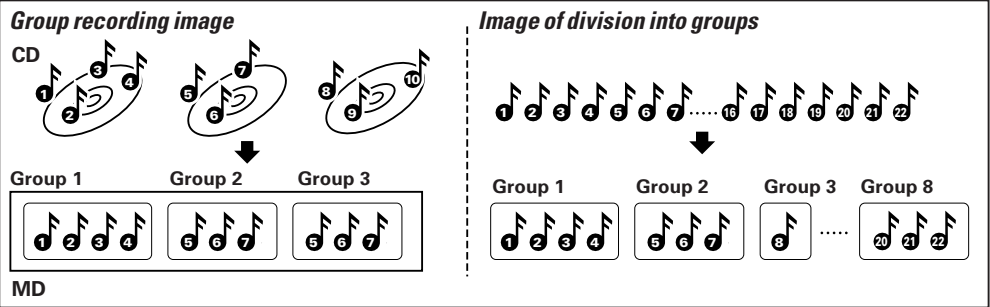
Names can be entered simply by selecting characters sequentially from the characters shown on the display. As the entered titles have compatibility between models, they will be displayed when that minidisk is set to a different MD recorder (player). (Depending on the types of characters and the number of characters which can be displayed, there may be some limitations for the title compatibility.)

Deletion of the edited contents (EDIT CANCEL) - [64]

Recording by groups (GROUP)

As this unit permits long-play recording with 2x and 4x of the standard capacity, a large number of tracks can be recorded onto one MD. When setting for group recording is done before MD O.T.E. recording (page 42), recording by groups, for example by artist or by album, becomes possible. These groups also can be selected for playback, editing by group, repeat [playback, etc.

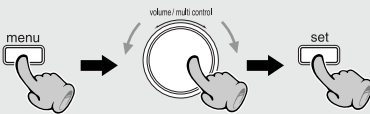
Grouping also can be done for a recorded MD. (→ 48)



Main unit only

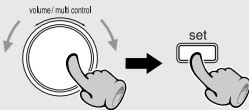
1 Select "GROUP MAKE ?" as follows.

- 1 Press the "menu" key.
- 2 Select "GROUP MAKE ?" with the "volume/multi control" knob.
- 3 Press the "set" key.



2 Select "GROUP MAKE ON" as follows.

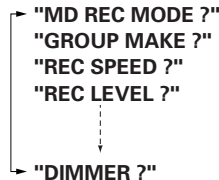
- 1 Select "GROUP MAKE ON" with the "volume/multi control" knob.
- 2 Press the "set" key.



3 Perform the operation for "All tracks of a CD can be recorded by one-touch recording (normal speed, 4x speed) (all tracks O.T.E.)" and start recording. (→ 42)



When the "volume/multi control" knob is turned, switching is done as follows.



Return to the original status is made when no operation is performed within 20 seconds.

- The group recording setting remains unchanged until it is changed again.

Notes

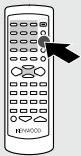
- All tracks from the track with which O.T.E. recording was started to the last recorded track will be one group.
- When the MD to be used for the recording already has 99 groups registered, group recording will not be executed even when the group recording setting is ON.
- When an MD recorded on different equipment compatible with the group function is used on this unit, it may not operate correctly.
- When an MD with group recording is played on equipment not compatible with the group function, the tracks will be played in the order in which they have been recorded.
- When an MD with group recording is edited on other equipment, it may not operate correctly.

Dividing a recorded MD into groups

Create and register groups of consecutive tracks.
Up to 99 groups can be created.
Even a single track can be made a group.

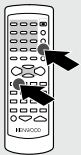
Select MD and obtain stopped condition.

Remote control unit only

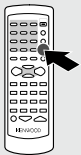
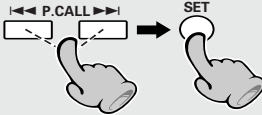


① Press the "TRACK EDIT" key.

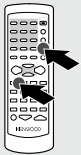
TRACK EDIT



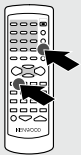
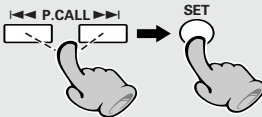
② Press the \lll P.CALL \ggg keys repeatedly to select "EDIT GROUP" and press the "SET" key.



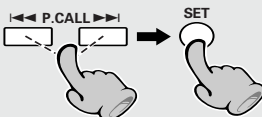
③ Press the "SET" key when "GRP START ?" flashes.



④ Press the \lll P.CALL \ggg keys to select the first track of the group and press the "SET" key.



⑤ Press the \lll P.CALL \ggg keys to select the last track of the group and press the "SET" key.

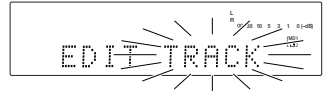


⑥ Press the "ENTER" key to determine the group.

⑦ After editing has been completed, press the \blacktriangle key to eject the minidisc.

- When the editing is to be abandoned, press the "TRACK EDIT" key to stop the editing and to return to the original condition.
- When an item which cannot be edited is selected, an \times will be shown at the beginning of the display.

- MD edit mode is reached.



Return to the original status is made when no operation is performed within 20 seconds.



- When all tracks already have been registered in groups, or when there are already 99 groups, no more groups can be created. Even when there are fewer than 99 groups, it may not be possible to create a new group when much character information has been entered for the MD.

The editing may be aborted when the MD is removed or the power is switched off while "EDIT NOW" is being displayed.

- Remove the minidisc after the editing information has been written to the minidisc with display of "MD WRITING".

While "MD WRITING" is displayed, information is being written to the minidisc, and the unit should not be subjected to vibrations or shocks.

Deleting group information

Information in regard to group registration can be deleted.

The information and the group name for the selected group or all groups of the MD can be erased.

Select MD and obtain stopped condition.

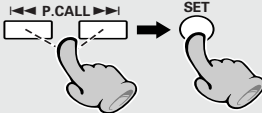
Remote control unit only



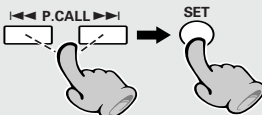
① Press the "TRACK EDIT" key.



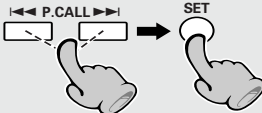
② Press the |◀◀P.CALL▶▶| keys repeatedly to select "EDIT GROUP" and press the "SET" key.



③ Press the |◀◀P.CALL▶▶| keys repeatedly to select "GROUP CANCEL" and press the "SET" key.



④ Press the |◀◀ P.CALL ▶▶| keys to select the group to be deleted and press the "SET" key.



⑤ Press the "ENTER" key.



⑥ After editing has been completed, press the ▲ key to eject the minidisc.

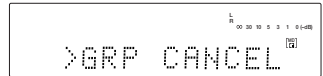


- When the editing is to be abandoned, press the "TRACK EDIT" key to stop the editing and to return to the original condition.
- When an item which cannot be edited is selected, an ✕ will be shown at the beginning of the display.

● MD edit mode is reached.



Return to the original status is made when no operation is performed within 20 seconds.

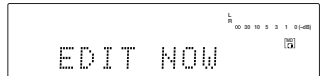


"ALL GROUP" :

All groups on the MD will be deleted.

"Track No. __ Track No." :

The information for the selected group will be deleted.



The editing may be aborted when the MD is removed or the power is switched off while "EDIT NOW" is being displayed.



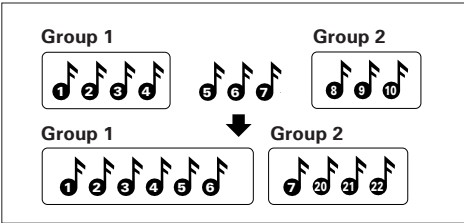
● Remove the minidisc after the editing information has been written to the minidisc with display of "MD WRITING".

While "MD WRITING" is displayed, information is being written to the minidisc, and the unit should not be subjected to vibrations or shocks.

Application

Changing the range of a group

The range of an already registered group can be changed.



Select MD and obtain stopped condition.

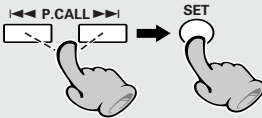
Remote control unit only

- 1 Press the "TRACK EDIT" key.

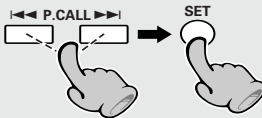


TRACK EDIT

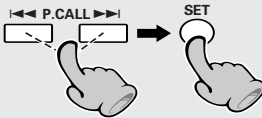
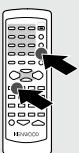
- 2 Press the "P.CALL" keys repeatedly to select "EDIT GROUP" and press the "SET" key.



- 3 Press the "P.CALL" keys repeatedly to select "GROUP EDIT" and press the "SET" key.

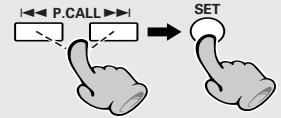


- 4 Press the "P.CALL" keys to select the group to be changed and press the "SET" key.



- When the editing is to be abandoned, press the "TRACK EDIT" key to stop the editing and to return to the original condition.
- When an item which cannot be edited is selected, an will be shown at the beginning of the display.

- 5 Press the "P.CALL" keys repeatedly to select the first track number of the group and press the "SET" key.

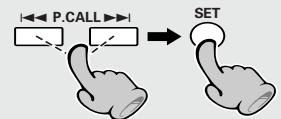


The characters will scroll and the group title numbers will be displayed.

When the track number is not to be changed, press the "SET" key in this condition.

Tracks registered to a different group can not be selected.

- 6 Press the "P.CALL" keys repeatedly to select the last track number of the group and press the "SET" key.



When the track number is not to be changed, press the "SET" key in this condition.

Tracks registered to a different group can not be selected.

- 7 Press the "ENTER" key to determine the group.

The editing may be aborted when the MD is removed or the power is switched off while "EDIT NOW" is being displayed.

- 7 After editing has been completed, press the key to eject the minidisc.

- Remove the minidisc after the editing information has been written to the minidisc with display of "MD WRITING".

Group selection for playback

A group of the MD can be selected to play only the tracks of that group

Select MD and obtain stopped condition.

Remote control unit only

① Press the P.MODE key to light the "GROUP" indicator.



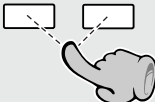
P.MODE



② Press the "GROUP PREV.", "NEXT" keys to select the group to be played.



PERV.-GROUP-NEXT



③ Press the MD ▶/II key to start playback.



MD ▶/II

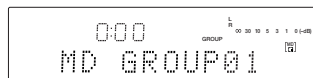
For a minidisc with group settings, the mode will change as shown below each time the "P.MODE" key is pressed.



- ① Group mode
- ② Program mode
- ③ Cancel



The characters will scroll.



When an MD with group recordings is played on equipment not compatible with the group function, numbers or symbols may be displayed in the disk name and correct display may not be possible. In such a case, it should be noted that the group information will be lost when the disk name is edited on such equipment not compatible with the group function.

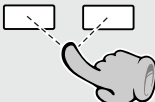
- When an MD recorded on different equipment compatible with the group function is used on this unit, it may not operate correctly.

Playback of a different group during playback

② Press the "GROUP PREV.", "NEXT" keys to select the group to be played.



PERV.-GROUP-NEXT



To stop group playback

Main unit

Remote control



Return to normal playback

Press the "P.MODE" key repeatedly while in stop condition, until "GROUP" goes out.

P.MODE



A group also can be selected for repeat playback or random playback of that group.

Repeat mode → 38

Random mode → 39

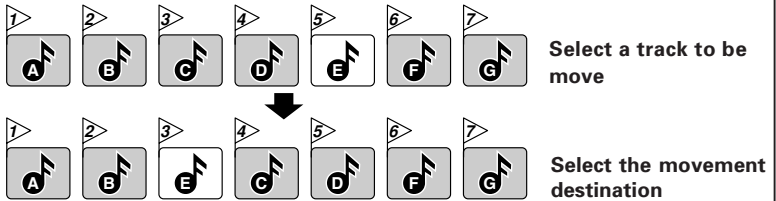


Moving individual tracks (MOVE)

Tracks can be moved to (inserted at) any desired position. When the rearrangement has been completed, all track numbers automatically will be renumbered consecutively. Changing to the desired track order is possible by repeated MOVE operations.

Tracks divided into groups also can be moved. In that case, the track will be registered with the same group as the immediately preceding track at the new position. When the immediately preceding track at the new position is not registered to a group, the moved track also will not belong to any group.

Image for individual moving of tracks



Perform the operation after the display of "GROUP" and "PGM" has been extinguished.

Remote control unit only

① Press the "TRACK EDIT" key.



TRACK EDIT



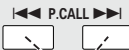
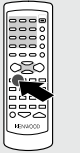
② Confirm that "EDIT TRACK" is being displayed and press the "SET" key.



SET



③ Press the <<<P.CALL>>> keys repeatedly to select "MOVE ?".




④ Press the ENTER key to determine the "MOVE".



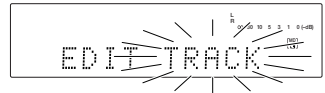
SET



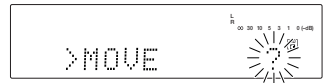
- When the editing is to be abandoned, press the "TRACK EDIT" key to stop the editing and to return to the original condition.
- When an item which cannot be edited is selected, an  will be shown at the beginning of the display.

- MD edit mode is reached.

Return to the original status is made when no operation is performed within 20 seconds.

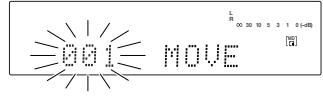
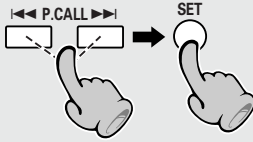
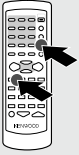


- When something else is being displayed, press the <<<P.CALL>>> keys to switch, and then press the "SET" key.

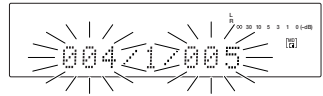
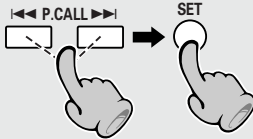
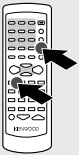


Continued on next page

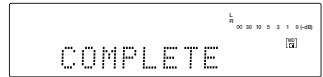
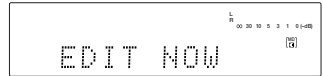
⑤ Press the **◀◀P.CALL▶▶** keys to select the track to be moved, and then press the "SET" key.



⑥ Press the **◀◀P.CALL▶▶** keys to select the movement destination and press the "SET" key.



⑦ Press the "ENTER" key to determine the movement destination.



⑧ After editing has been completed, press the **▲** key to eject the minidisc.

(Main unit)



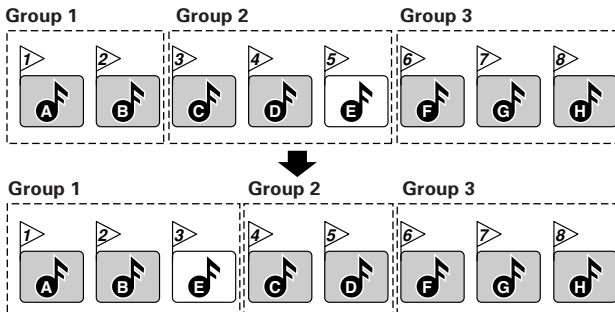
- The movement destination is shown by the directly preceding and the directly following track number, and it moves forward or back each time the key is pressed.

- Remove the minidisc after the editing information has been written to the minidisc with display of "MD WRITING".

While "MD WRITING" is displayed, information is being written to the minidisc, and the unit should not be subjected to vibrations or shocks.

Even after minidisc editing has been completed, it is possible to delete the editing up to that point and to return to the condition at the time of disc insertion. → [64](#)

Image of moving grouped tracks



Application

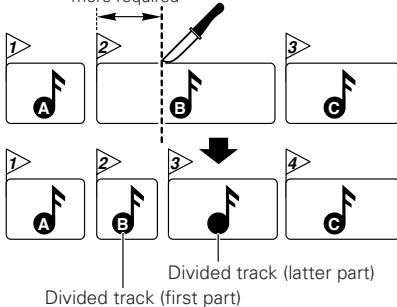
Dividing tracks (DIVIDE)

Tracks can be divided by adding a track number (track number) somewhere in a track. When a track number is added at a position you like, this is convenient for skipping to that position at the time of playback. The tracks after the divided track will be renumbered automatically in consecutive order. The preview function can be used for repeated listening to the part where the track is to be divided in order to perform fine adjustment.

Tracks registered in a group also can be divided.

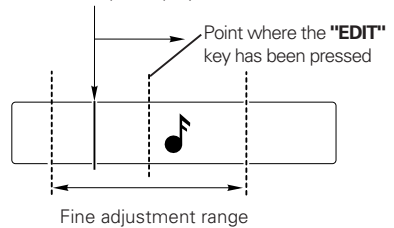
Image of dividing a track (Example: In case of STEREO mode)

About 2 sec or more required



Preview playback image

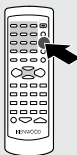
Point selected by fine adjustment for the division point (playback for 3 sec).



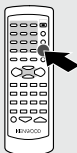
Perform the operation after the display of "GROUP" and "PGM" has been extinguished.


Remote control unit only

- 1 Press the "TRACK EDIT" key during playback at the desired division location.



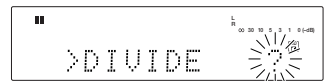
- 2 Confirm that "DIVIDE ?" is displayed and press the "SET" key.





- When the editing is to be abandoned, press the "TRACK EDIT" key to stop the editing and to return to the original condition.
- When an item which cannot be edited is selected, an  will be shown at the beginning of the display.

- The unit will pause in MD edit mode.

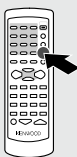
Return to the original status is made when no operation is performed within 20 seconds.



- When something else is being displayed, press the  P.CALL  keys to switch, and then press the "SET" key.

- When a title is to be divided, set the division point at least 2 seconds from the start of the title. Division into titles of about 2 seconds or less is not possible. (4 seconds in case of LP2/MONO mode and 8 seconds in case of LP4 mode)
- No unrecorded part will be created at the end of the divided title and the beginning of the newly created title (before and after the division point).

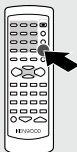
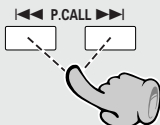
Continued on next page



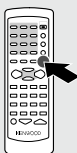
③ Press the "SET" key and start preview playback.



④ Press the <<<P.CALL>>> keys and select the division point.



⑤ Press the "SET" key to determine the division point.



⑥ Press "ENTER" to determine the division.



The steps ① to ⑥ can be repeated to divide a track into a maximum of 254 tracks.

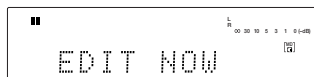
⑦ After editing has been completed, press the \blacktriangle key to eject the minidisc.

(Main unit)

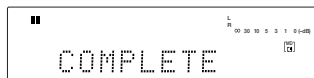


When fine adjustment of the division point with preview playback is not done, press the SET key after step ② to determine the division point. (Step ⑤)

- The approximately 3 seconds following the pause point will be played back repeatedly.
- Each time a key is pressed, the division point is moved one step (6/100 sec) forward or back. (Fine adjustment is possible in the range from -31 to +31 steps.)



The editing may be aborted when the MD is removed or the power is switched off while "EDIT NOW" is being displayed.



- The unit pauses at the beginning of the track created newly by the division.
- The editing may be aborted when the MD is removed or the power is switched off while "EDIT NOW" is being displayed.
- Remove the minidisc after the editing information has been written to the minidisc with display of "MD WRITING".

While "MD WRITING" is displayed, information is being written to the minidisc, and the unit should not be subjected to vibrations or shocks.

Even after minidisc editing has been completed, it is possible to delete the editing up to that point and to return to the condition at the time of disc insertion. — 64

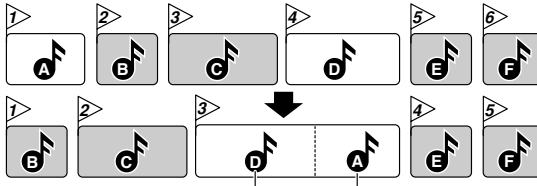
Combining tracks (COMBINE)

Two tracks can be combined to one track. It is possible to combine several tracks or a track with fine subdivisions. After tracks have been combined, all track numbers will be renumbered consecutively.

As long as the tracks are next to each other, they can be combined even when they belong to different groups. The combined track is registered to the group of the first part.

Image for combining tracks

Combining the fourth and the first track



The track number and the title of the first half remain.

The track number and the name of the last half are lost.

The track numbers are adjusted.

Perform the operation after the display of "GROUP" and "PGM" has been extinguished.

Remote control unit only

1 Press the "TRACK EDIT" key while playing the track to be at the beginning after combining.



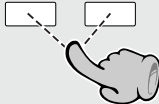
TRACK EDIT



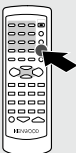
2 Press the |◀◀P.CALL▶▶| keys repeatedly to select "COMBINE?".



◀◀ P.CALL ▶▶



3 Press the "SET" key.



SET

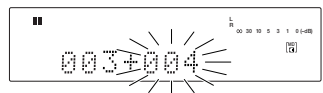


- When the editing is to be abandoned, press the "TRACK EDIT" key to stop the editing and to return to the original condition.
- When an item which cannot be edited is selected, an ✕ will be shown at the beginning of the display.

• The unit will pause in MD edit mode.

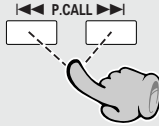


Return to the original status is made when no operation is performed within 20 seconds.



Continued on next page

④ Press the **◀◀P.CALL▶▶** keys to select the track number to become the rear part after combining.



⑤ Press the "SET" key to determine the track.



⑥ Press the "ENTER" key to determine the combination.

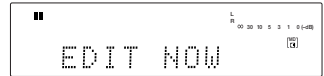


⑦ After editing has been completed, press the **▲** key to eject the minidisc.

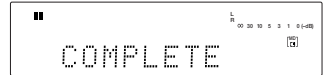
(Main unit)



- The unit will pause at the start of the new combined track.



The editing may be aborted when the MD is removed or the power is switched off while "EDIT NOW" is being displayed.

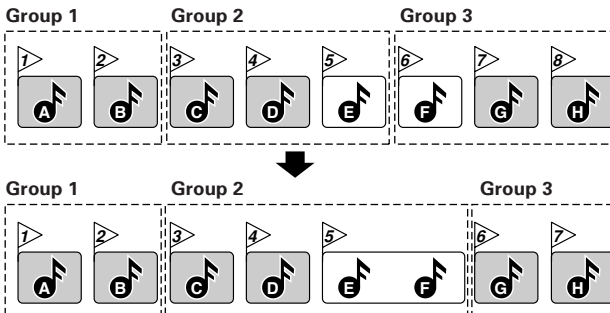


- Remove the minidisc after the editing information has been written to the minidisc with display of "MD WRITING".

While "MD WRITING" is displayed, information is being written to the minidisc, and the unit should not be subjected to vibrations or shocks.

Even after minidisc editing has been completed, it is possible to delete the editing up to that point and to return to the condition at the time of disc insertion. - 64

Image for combining grouped tracks

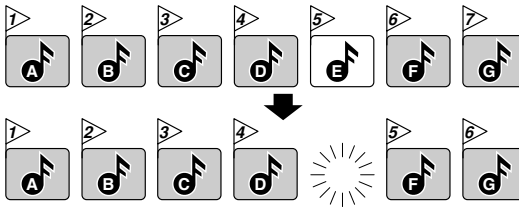


Erasing individual tracks (ERASE)/Erasing all tracks on an MD (ALL ERASE)

While the unit is stopped, it is possible to erase all tracks or only a selected track. When one track is erased, the track numbers of the tracks after it all will be reduced by one.

It is also possible to erase tracks registered in a group.

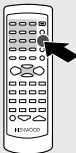
Image for erasing a track



Perform the operation after the display of "GROUP" and "PGM" has been extinguished.

Remote control unit only

① Press the "TRACK EDIT" key.



TRACK EDIT



② Press the "SET" key.



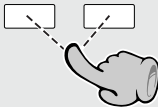
SET



③ Press the <<<P.CALL>>> keys repeatedly to select "ERASE?".



<<< P.CALL >>>



④ Press the "SET" key.



SET



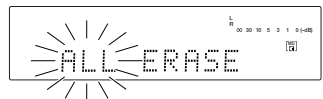
- When the editing is to be abandoned, press the "TRACK EDIT" key to stop the editing and to return to the original condition.
- When an item which cannot be edited is selected, an ☼ will be shown at the beginning of the display.

● MD edit mode is reached.



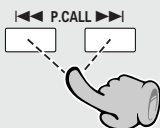
- When something else is being displayed, press the <<< P.CALL >>> keys to switch, and then press the "SET" key.

Return to the original status is made when no operation is performed within 20 seconds.



Continued on next page

4 Press the **◀◀P.CALL▶▶** keys to select the track number to be erased.



5 Press the "SET" key to determine the track.



6 Press the "ENTER" key to determine the erasure.

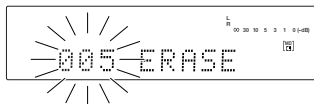


7 After editing has been completed, press the **▲** key to eject the minidisc.

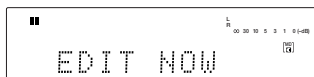
(Main unit)



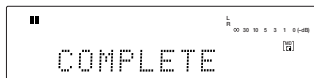
- Select "ALL ERASE" to delete all tracks on an MD.
- In case of operation during playback, only erasing of the track being played can be selected.



- The unit will pause at the start of the title following the erased track.



The editing may be aborted when the MD is removed or the power is switched off while "EDIT NOW" is being displayed.



- Remove the minidisc after the editing information has been written to the minidisc with display of "MD WRITING".

While "MD WRITING" is displayed, information is being written to the minidisc, and the unit should not be subjected to vibrations or shocks.

Even after minidisc editing has been completed, it is possible to delete the editing up to that point and to return to the condition at the time of disc insertion. → 64

Assigning a title (name) to a minidisc or a track

It is possible to give a title to a minidisc or a track. The same method can be used to change or erase a title which has been entered. When ON has been selected for the STAMP function in extended recording mode (LP2 or LP4), LP: will be displayed automatically in front of the title.

It is also possible to give a title to a group. (Group title)

In addition, there is a memo function for storing characters for repeated input.

Preparations for assigning a title

Assigning a disc title:

A title can be assigned when the unit is stopped in group playback mode. If "GROUP" or "PGM" is lit, press the P.MODE key to make it go out.

Assigning a group title:

A title can be assigned in stopped condition in group playback mode.

- ① Press the P.MODE key and light the "GROUP" indication.
- ② Press the PREV. or the NEXT key to select the group which is to be given a group title or a track title.

Assigning a track title:

In normal stop mode, titles can be given to all tracks.

When the unit is stopped in group playback mode, titles can be given to the tracks in the group.

Input of a title memo:

Title memo can be selected in any of the above modes.

Remote control unit only

- ① Press the "TITLE INPUT" key.



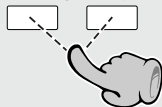
TITLE INPUT



- ② Press the <<<P.CALL>>> keys repeatedly to select the title to be edited.

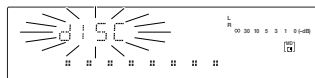


<<< P.CALL >>>



When the editing is to be abandoned, press the "TITLE INPUT" key to stop the editing.

- Title input is not possible while the minidisc read/write indication is flashing.



"..." will be displayed when no name has been assigned.

- The name to be edited will be switched each time the key is pressed.

"DISC" : (DISC TITLE)
 "001" : (TRACK TITLE)
 "002" : (TRACK TITLE)

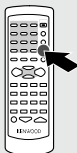
⋮

"[1]" : (TITLE MEMO 1)
 "[2]" : (TITLE MEMO 2)
 "[3]" : (TITLE MEMO 3)

When a group has been selected, the group number will be displayed.

Continued on next page

③ Press the "SET" key to determine the track (or disc, title memo number) to be given a title.

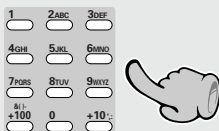


④ Enter the title.

① Press the DISPLAY/CHARAC. key repeatedly to select the character group.



② Press the character input keys (10keys) to select the character.

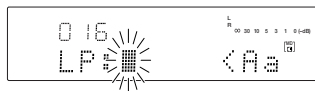
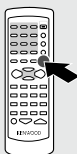


③ Press the "SET" key to determine (enter) the character.



④ Repeat the steps ① to ③.

⑤ Press the ENTER key to determine the entered title.



The character groups

The character groups are as shown below.

"Aa" group

A to z, symbols, and name memos ("[1]", "[2]", "[3]")

"12" group

0 to 9 and symbols

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

Example: Pressing **2ABC**

Each time the key is pressed, the character will change as shown: A → B → C → a → b → c



- The input location (cursor) can be moved left and right with the ◀, ▶ keys.
- Input errors can be deleted with the "CLEAR/DELETE" key.
- Press the "TIME/SPACE" key to enter a space.
- The input is determined when a different character key, the ▶ key, the "DISPLAY/CHARAC." key, etc. is pressed.

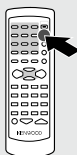
Application



- After the title display has been scrolled, return is made to the display of step ② with the next title selected.
- When the power is switched off (standby) or the "TITLE INPUT" key is pressed to cancel the setting, the entered contents will be erased.

Continued on next page

- ⑥ Press the "TITLE INPUT" key to finish the edit.



TITLE INPUT



- ⑦ After editing has been completed, press the \blacktriangle key to eject the minidisc.

(Main unit)



When the steps ② to ⑤ are repeated before advancing to step ⑥, titles (disc title and track titles) can be given to the entire disc.

- Remove the minidisc after the editing information has been written to the minidisc with display of "MD WRITING".

While "MD WRITING" is displayed, information is being written to the minidisc, and the unit should not be subjected to vibrations or shocks.

Deleting or changing characters

- ① Press the \blacktriangleleft or the \blacktriangleright key to move the cursor to the target character (to be deleted or changed).



\blacktriangleleft TUNING \blacktriangleright
DOWN UP



- ② Press the "CLEAR/DELETE" key to delete the character.



CLEAR
/DELETE



- When a character is to be inserted without deleting a character (step {2}), set the cursor to the character directly following the desired insertion location.
- When all characters are to be deleted, this can be done by pressing the CLEAR/DELETE key repeatedly.

In regard to the number of characters which can be entered

A maximum of 1792 characters, max. 80 per track, can be entered for the entire MD.

A space requires the same amount of data as a character.

When deleting a title, do not enter spaces, but delete the characters (press the "CLEAR/DELETE" key).

In regard to the key functions

\blacktriangleleft or \blacktriangleright key:

Shifts the position of the cursor.

CLEAR/DELETE key:

Deletes the character at the cursor position and advances the characters after this position by one space. Names can be deleted easily by pressing the key repeatedly (or by keeping it pressed).

TIME/SPACE key:

Inserts a space.

Use of title memo (TITLE MEMO)

Characters to be entered repeatedly can be stored in the title memos 1, 2, and 3 ([1], [2], or [3]), and can be called at the time of input for easy input.

For example, in case of input of "SONG:A", "SONG:B", "SONG:C":

Store "SONG:" in the title memo 1, and at the time of track title input, "SONG:A" will be entered with title memo 1 (indication of [1]) and input of "A".

Input of a name memo

- 1 Select title memo [1], [2], or [3] during the title editing procedure.

(Steps 2 and 3 on page 60)

- 2 Enter the characters.

(Steps 4 and 5 on page 61)

"[1]" : (title memo 1)

"[2]" : (title memo 2)

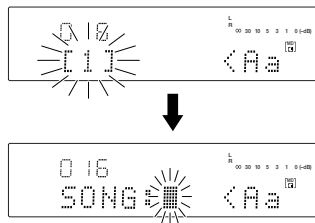
"[3]" : (title memo 3)

Use of a title memo

- 1 Select the character group "Aa" with title input operation.

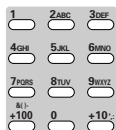
- 2 Press the character key (numeric key) "1" and select [1], [3], or [3].

- 3 Press the "SET" key



Name editing character table

The following types of letters and symbols can be selected.



Group	"Aa"	"12"
1	space [1] [2] [3]	1
2ABC	ABC abc or abc ABC	2
3DEF	DEF def or def DEF	3
4GHI	GHI ghi or ghi GHI	4
5JKL	JKL jkl or jkl JKL	5
6MNO	MNO mno or mno MNO	6
7PQRS	PQRS pqrs or pqrs PQRS	7
8TUV	TUV tuv or tuv TUV	8
9WXYZ	WXYZ wxyz or wxyz WXYZ	9
0		0
+10', :'	' , : ? ! ; . * _ ` \$ space	
+100&()-	& () - / + * = < > # % @	

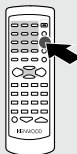
Deletion of the edited contents (EDIT CANCEL)

When the following operation is performed in stopped condition, all editing performed since insertion of the disc can be canceled. Cancellation will not be possible once the disc has been removed or recording has been done.

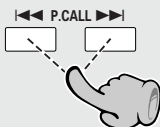
Please do this before removing the disc after editing.

Remote control unit only

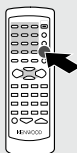
① Press the "TRACK EDIT" key.



② Press the ◀◀ P.CALL ▶▶ keys repeatedly to select "EDIT CANCEL ?".



③ Press the "SET" key.



④ Press the "ENTER" key to cancel the editing.



⑤ After editing has been completed, press the ▲ key to eject the minidisc.

(Main unit)



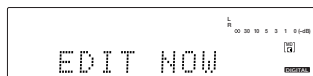
- MD edit mode is reached.



Return to the original status is made when no operation is performed within 20 seconds.



- When X is displayed in front of the indication, the editing up to that time can not be canceled.



The editing may be aborted when the MD is removed or the power is switched off while "EDIT NOW" is being displayed.



- Remove the minidisc after the editing information has been written to the minidisc with display of "MD WRITING".

While "MD WRITING" is displayed, information is being written to the minidisc, and the unit should not be subjected to vibrations or shocks.

Setting auto power save (A.P.S.)

When the auto power save function is set to ON, the power is switched off (standby) automatically when about 30 minutes without any operation have passed after the end of CD or MD playback.

① Select "A.P.S, SET ?" as follows.

- ① Press the "menu" key.
- ② Select "A.P.S, SET ?" with the "volume/multi control" knob.
- ③ Press the "set" key.

When the "volume/multi control" knob is turned, switching is done as follows.

"MD REC MODE ?"
"GROUP MAKE ?"
"TIME ADJUST ?"
"DIMMER ?"

Return to the original status is made when no operation is performed within 20 seconds.

③ Press the "set" key.

② Turn the "volume/multi control" knob to select ON or OFF and press the "set" key.

OFF volume/multi control ON

Lit when ON

A.P.S.

Auto power save operates when there is no operation for about 30 minutes after the following events.

When the input is CD

➡ During stop

When the input is tuner, tape, or external input

➡ When the volume/multi control level is the minimum level or mute.

Adjusting the brightness of the display part (DIMMER)

When the display is felt to be too bright or too dim at night etc., the brightness can be adjusted.

① Select "DIMMER ?" as follows.

- ① Press the "menu" key.
- ② Select "DIMMER ?" with the "volume/multi control" knob.
- ③ Press the "set" key.

When the "volume/multi control knob" is turned, switching is done as follows.

"MD REC MODE ?"
"GROUP MAKE ?"
"TIME ADJUST ?"
"DIMMER ?"

Return to the original status is made when no operation is performed within 20 seconds.

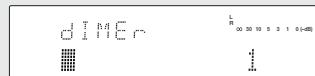
③ Press the "set" key.

② Turn the "volume/multi control" knob to select the desired brightness and press the "set" key.

Darker volume/multi control Brighter



When the brightness has been increased



When the brightness has been decreased

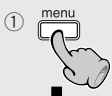
● Adjustment is not possible when the power is off.

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

If you have made a mistake during the setting, start again from step 1.

Main unit only

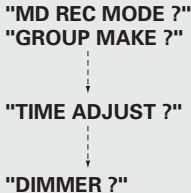
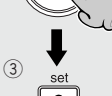
1 Select "TIME ADJUST ?" as follows.



1 Press the "menu" key.



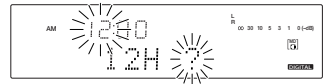
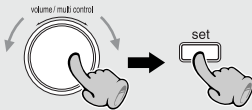
2 Select "TIME ADJUST ?" with the "volume/multi control" knob.



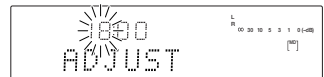
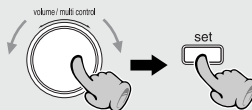
Return to the original status is made when no operation is performed within 20 seconds.



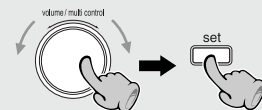
2 Turn the "volume/multi control" knob to select "12H ?" (12-hour display) or "24H ?" (24-hour display) and press the "set" key.



3 Turn the "volume/multi control" knob to adjust the "hour" setting. When "hour" has set, press the "set" key.



4 Turn the "volume/multi control" knob to adjust the "minute" setting. When "minute" has set, press the "set" key.



● When the "set" key in step 4 is pressed with a time signal, accurate setting can be made.

Sleep timer (SLEEP)

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

Timer playback (PROG. 1, PROG. 2)

Playback of the selected input source of the CD, 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 the set volume level is reached.

Adjust the clock before setting the timer - 

Sleep timer (SLEEP)

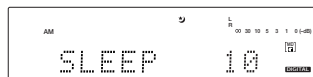
Set the number of minutes after which the unit is to be turned OFF.

Remote control unit only

Press the "SLEEP" key during CD playback, tuner reception, etc.



- 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

To cancel

Turn the unit OFF or press the SLEEP key until the sleep timer is canceled.

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



When the power fails or the plug of the power cable is disconnected from the receptacle during power off (standby) after timer setting, the standby/timer indicator will flash green. In this case, repeat the time setting.

Setting the timer program (PROG. TIMER)

In each of PROG.1 and PROG.2, the timer data including the operating period and played contents can be program and set to be activated or deactivated.

- 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.

Adjust the clock before setting the timer – [35]

1. Make preparations for the play.

Playing the auxiliary input source

Make timer setting of the component connected to the AUX or TAPE input jacks. – [30]

To listen to CD

Insert discs. (Program playback is not possible.) – [20]

To listen to MD

Insert a MD. (Program playback is not possible.) – [22]

To listen to radio

The station should be preset prior. – [30]

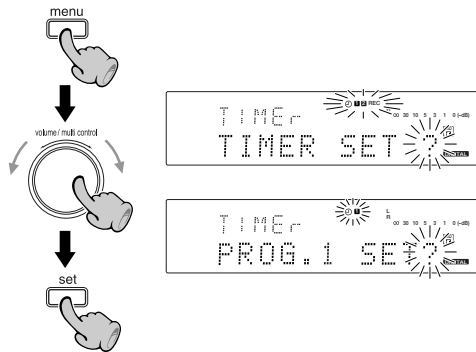
To record

Preparations for assigning MD recording – [32]

2. Set the timer setting program number.

Main unit only

- 1 Press the "menu" key.
- 2 Turn the "volume/multi control" knob and select "TIMER SET?".
Press the "set" key to confirm.
- 3 Turn the "volume/multi control" knob and select "PROG.1 SET (or 2)".
Press the "set" key to confirm.



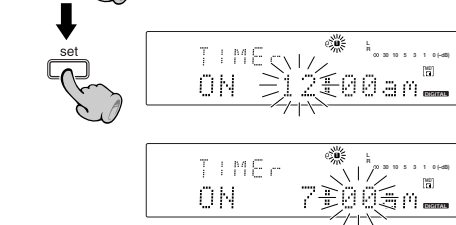
3. Select EVERYDAY or ONETIME execution of the programmed timer.

- 1 Turn the "volume/multi control" knob and select "EVERYDAY" or "ONE TIME".
Press the "set" key to confirm.



4. Set the ON time.

- 1 Turn the "volume/multi control" knob to adjust the "hour" setting.
When "hour" has set, press the "set" key.
- 2 Turn the "volume/multi control" knob to adjust the "minute" setting.
When "minute" has set, press the "set" key.



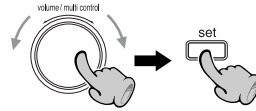
5. Set the OFF time.

- ① Turn the "volume/multi control" knob to adjust the "hour" setting.

When "hour" has set, press the "set" key.

- ② Turn the "volume/multi control" knob to adjust the "minute" setting.

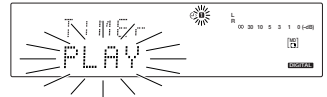
When "minute" has set, press the "set" key.



6. Select "PLAY" or "AI PLAY".

- ① Turn the "volume/multi control" knob and select "PLAY" or "AI PLAY".

Press the "set" key to confirm.



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

7. Make the desired reservation (Timer play)

- ① Turn the "volume/multi control" knob to select the volume at the time of timer ON, then press the "set" key to confirm.

- ② Turn the "volume/multi control" knob to select the source to be play,

- ① "TUNER" : (Broadcasts)
- ② "CD"
- ③ "MD"
- ④ "AUX" : (External input / video, etc.)
- ⑤ "TAPE"
- ⑥ "DIGITAL IN"

Press the "set" key to confirm.

- ③ When TUNER has been selected, turn the "volume/multi control" knob to select the preset number and press the "set" key to confirm.

- ④ Press the "set" key to confirm the source.

Timer setting will be completed and "COMPLETE" will be displayed.



7. Make the desired reservation (Timer recording)

- ① Turn the "volume/multi control" knob to select the volume at the time of timer ON, then press the "set" key to confirm.

- ② Turn the "volume/multi control" knob to select the source to be record.

- ① "TUNER" : (Broadcasts)
- ② "AUX" : (External input / video, etc.)
- ③ "TAPE"
- ④ "DIGITAL IN"

Press the "set" key to confirm.

- ③ When TUNER has been selected, turn the "volume/multi control" knob to select the preset number and press the "set" key to confirm.

- ④ Turn the "volume/multi control" knob to select the recording mode.

- ① "STEREO"
- ② "LP2"
- ③ "LP4"
- ④ "MONO"

- ④ Press the "set" key to confirm the source.

Timer setting will be completed and "COMPLETE" will be displayed.

Application

Continued on next page

8. Put the unit in standby mode.



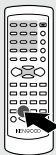
When the timer setting has been completed, confirm that the power is off (standby).

- The standby/timer indicator lights green.
- The SLEEP timer cannot be used when the timer function is being used for playback.
- When the time has not been set, the timer function cannot be used.
- The timer function will not operate when the same time is set for the ON time and the OFF time.

Setting the PROG. timer again to the same contents

Press the TIMER key on the remote control and light "⏻ 01", "⏻ 02", or "⏻ 00".

Remote control unit only

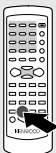


- The PROG. contents set last will be executed.
- Make the preparations for CD.

When timer operation is not desired

While the power is on, press the TIMER key on the remote control to extinguish "⏻".

Remote control unit only



- The PROG. contents will be kept as long as no resetting is done.



- When the power fails or the plug of the power cable is disconnected from the receptacle during power off (standby) after timer setting, the standby/timer indicator will flash green. In this case, repeat the time setting.
- When the standby/timer indicator flashes green after completion of program timer recording, the recording may not have been possible. In that case, set the time again.

Maintenance

Maintenance of the unit

When the front panel or case becomes dirty, wipe with a soft, dry cloth. Do not use thinner, benzene, 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 circumstances:

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

Memory backup function

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

Clock display
N.B. function

Stored contents which will back-up after power plug is unplugged from power outlet:

State of power (on or standby), A, P, S, Last input selection, AUX level, Volume control value, Balance control, Receiving band, Frequency, Preset station, Program Timer, TONE

Note related to transportation and movement

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

- 1 Remove the CD and MD from the unit.
- 2 Press the CD ►/|| key.

CD NO DISC

- 3 Press the MD ►/|| key.

MD NO DISC

- 4 Wait for some time and verify that the display appears as above.
- 5 Wait a few seconds and turn the unit OFF.

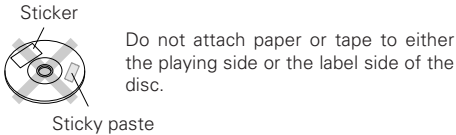
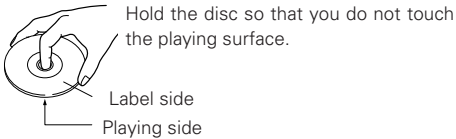
MD section

When the power is off (standby) or the power cable is disconnected from the receptacle, the memory contents will be held for about three days. In case of an extended power failure, disconnection of the power cable, etc., the information in regard to recording or editing (recorded when the minidisc is removed) may be lost or destroyed before recording to the minidisc. Once this information has been lost, it cannot be recovered.

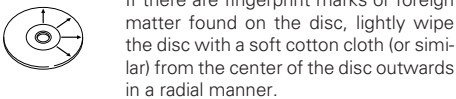
After recording or editing, always remove the minidisc to have this information recorded.

Disc handling precautions

Handling



Cleaning




Storage

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

Never play a cracked or warped disc

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

Discs which can be played with this unit

CD (12 cm, 8 cm), CD-R, CD-RW, and the audio part of CDV, 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.

Disc accessories

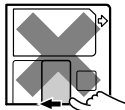
The disc accessories (stabilizer, protection sheet, protection ring, etc.) which are marketed for improving the sound quality or protecting discs as well as the disc cleaner should not be used with this system because they may cause malfunction.

Handling of MD

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

Do not touch the disc directly.

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



Storage position

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

Dust countermeasure

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

Care

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

Note on disc accessories

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

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.

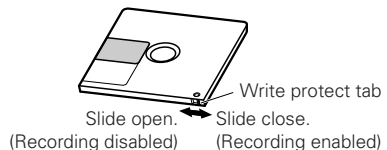
Note on the cartridge labels

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

Write protect tab

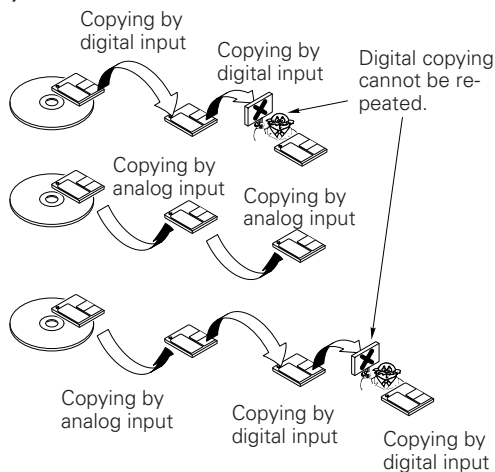
To protect recorded contents against accidental erasure, set the write protect tab of the disc open. Return the tab to the original position when you want to record signals on the disc.

Back side of the disc



SCMS (Serial Copy Management System)

For copyright protection, the serial copy management system specifies that recording of digital signals as digital signals between various digital audio devices shall be possible only for the first generation of recordings.



In regard to the sampling frequency

Normally, there are the three following types of digital signals, and they are called sampling frequencies. The sampling frequencies are divided as follows according to the type of the digital equipment.

48 kHz : Standard mode for DAT, B-mode transmission of BS tuners, etc.

44.1 kHz : Standard mode for DAT, CD, MD, etc.

32 kHz : Standard and long-time mode for DAT, A-mode transmission of BS tuners, etc.

(DAT: Digital Audio Tapedeck)

As this unit has a built-in sampling rate converter, 48 kHz and 32 kHz digital signals can be recorded converted to 44.1 kHz.

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 set key on the main unit depressed, plug the power cord again.

Amplifier section/Speakers

Symptom	Cause	Remedy
Sound is not produced.	<ul style="list-style-type: none"> ● The speaker cords are disconnected. ● The volume control of this set is not adjusted properly. ● The MUTE switch of remote control unit is switched ON. ● The headphone plug is inserted into the jack. 	<ul style="list-style-type: none"> ● Connect properly referring to "System connection".  ● Set the sound volume to an appropriate ● Switch MUTE OFF.  ● Unplug the headphone plug. 
The "standby/timer" indicator blinks in red and no sound is output.	<ul style="list-style-type: none"> ● The speaker cord is short-circuited. 	<ul style="list-style-type: none"> ● Turn power off and re-connect the speaker cord. 
The "standby/timer" indicator blinks in green.	<ul style="list-style-type: none"> ● There was a power failure. ● The power cord was unplugged from the outlet. 	<ul style="list-style-type: none"> ● Adjust the present time again.  ● Adjust the present time again. 
No sound from the headphones.	<ul style="list-style-type: none"> ● The headphone plug is inserted incompletely. 	<ul style="list-style-type: none"> ● Insert correctly. 
Sound is not produced from the left or right speakers.	<ul style="list-style-type: none"> ● The speaker cords are disconnected. ● Left/right volume balance is not adjusted properly. 	<ul style="list-style-type: none"> ● Connect properly referring to "System connection".  ● Adjust the left/right volume balance. 
Power is suddenly interrupted.	<ul style="list-style-type: none"> ● The A.P.S. function is activated 	<ul style="list-style-type: none"> ● Cancel the A.P.S. function. 
The clock display blinks without changing the figures.	<ul style="list-style-type: none"> ● The power plug was unplugged from the outlet while the power switch was ON, or there was a power failure. 	<ul style="list-style-type: none"> ● Adjust the present time referring to "Clock adjustment". 
Timer operation is not possible.	<ul style="list-style-type: none"> ● The present time has not been adjusted or there was a power failure. ● The timer ON time and OFF time have not been set. ● The same setting is used for the timer ON time and the timer OFF time. ● The timer execution was not set up. 	<ul style="list-style-type: none"> ● Adjust the present time referring to "Clock adjustment".  ● Set the timer ON time and OFF time.  ● Set the timer OFF time later than the timer ON time.  ● Refer to "Setting the timer program (PROG. TIMER)" and select "ON" for "PROG. 1" or "PROG. 2". 

Tuner section

Symptom	Cause	Remedy
Radio stations cannot be received.	<ul style="list-style-type: none"> ● The antennas have not been connected. ● A proper broadcasting band has not been selected. ● The frequency of the station to be received is not tuned. ● The space between radio channels is not suitable for the area where you live. 	<ul style="list-style-type: none"> ● Connect antennas. → 8 ● Select a band. → 24 ● Tune to the frequency of the desired station. → 24 ● Refer to "Channel space setting" and reset the channel space. → 25
Noise interferes.	<ul style="list-style-type: none"> ● Car ignition noise. ● Influence of an electric appliance. ● A TV set is installed near the system. 	<ul style="list-style-type: none"> ● Install the outdoor antenna in an apart position from the road. → 9 ● 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"> ● The frequency of the preset station is not tunable. ● The preset memory has been cleared because the power cord has been unplugged for a long period. 	<ul style="list-style-type: none"> ● Preset stations with tunable frequencies. → 25 ● Preset stations again. → 25

CD player

Symptom	Cause	Remedy
A CD is placed in the player but it cannot be played.	<ul style="list-style-type: none"> ● The disc is placed upside down. ● The disc position is displaced. ● The disc is extremely dirty. ● The disc is scratched. ● Dew is condensed on the optics lens. 	<ul style="list-style-type: none"> ● Place the disc properly, with the label side facing upward. → 20 ● Place the disc properly. → 20 ● Clean the disc referring to "Disc handling precautions". → 72 ● Try another disc. ● Refer to "Caution on condensation" and remove the condensation by evaporation. → 72
Sound is not produced.	<ul style="list-style-type: none"> ● The disc has not been placed. ● The player is not put to the play mode. ● The disc is extremely dirty. ● The disc is scratched. 	<ul style="list-style-type: none"> ● Place a disc in the CD player. → 20 ● Press the CD ►/II key. → 20 ● Clean the disc referring to "Disc handling precautions". → 72 ● Try another disc.
Sound skips.	<ul style="list-style-type: none"> ● The disc is dirty. ● The disc is scratched. ● The player is subject to vibration. 	<ul style="list-style-type: none"> ● Clean the disc referring to "Disc handling precautions". → 72 ● Try another disc. ● Install the unit in a place not subject to vibrations.

Remote control unit

Symptom	Cause	Remedy
Remote control operation is not possible.	<ul style="list-style-type: none"> ● Batteries are exhausted. ● The remote control is too far away from the system, the controlling angle is deviated or there is an obstacle in between. ● There is no CD or MD set in the component to be played. 	<ul style="list-style-type: none"> ● Replace with new batteries. → 15 ● Operate the unit inside the remote control-range. → 15 ● Set a CD or MD in the component to be played. → 22









MD section (MD standard symptoms etc.)

Symptom	Cause
"DISC FULL" is displayed although the max. recordable time has not been reached.	<ul style="list-style-type: none"> ● More than 255 titles (track No. 256 and up) can not be recorded even when the max. recordable time has not been reached. (Recording may be impossible even before track No. 256 has been reached.) ● When emphasis ON/OFF etc. is repeated often within a title, this is handled in the same way as a break between titles, and "DISC FULL" will be displayed independent of the time and the number of titles. In this case, the main timer indication on the display becomes "0:00".
The recordable time does not increase when short titles are deleted.	<ul style="list-style-type: none"> ● When the remaining time for the entire minidisc becomes less than 24 sec (MONO, LP2) or 48 sec (LP4), the main timer indication on the display becomes "0:00". When the total time of the deleted titles becomes more than 24 sec (MONO, LP2) or 48 sec (LP4), the indication of the recordable time changes. ● In case of a frequently edited minidisc, the remaining time may not increase even when a short title is erased.
<p data-bbox="64 539 272 555">Titles cannot be combined.</p> <p data-bbox="64 603 456 659">The sum of the recorded time and the recordable time does not coincide with the total recording time for the MD.</p>	<ul style="list-style-type: none"> ● Sometimes it may not be possible to combine titles created by editing. ● Titles with different recording modes cannot be combined. ● As recording is done with 4 sec (MONO, LP2) or 8 sec (LP4) as the min unit, the indicated time may not coincide.
"READING" is displayed for an abnormally long time.	<ul style="list-style-type: none"> ● When a new minidisc for recording (completely unrecorded) is inserted, "READING" will be displayed longer than normal. ● When a minidisc is inserted which has been edited frequently or which has very many tracks, "READING" will be displayed longer than normal.
When titles created by editing are played back fast in forward or reverse direction, the sound becomes interrupted.	<ul style="list-style-type: none"> ● Interrupted sound can be caused by a combination of various conditions, but this is no defect.
The track (title) numbers are not assigned correctly.	<ul style="list-style-type: none"> ● Depending on the recorded source, the track numbers may not be assigned correctly.
Input of 1792 title characters is not possible.	<ul style="list-style-type: none"> ● As the title input area is used in units of 7 characters, it may not be possible to enter 1792 characters.

MD section (other symptoms)

Symptom	Cause	Remedy
No sound is heard even when the MD ►/II key is pressed.	<ul style="list-style-type: none"> ● No minidisc inserted. ● An unrecorded minidisc has been inserted. 	<ul style="list-style-type: none"> ● Insert a minidisc. → 22 ● Insert a recorded minidisc or a playback-only minidisc. → 22
Recording is not possible.	<ul style="list-style-type: none"> ● The minidisc is write-protected. ● Digital recording of a source with digital copy prohibition by SCMS has been tried. ● The recording level is low at the time of AUX recording. ● A playback-only minidisc has been inserted. ● There is no recordable area. ● The source is set to MD. ● The recording time is too short. ● The unit is in menu mode. 	<ul style="list-style-type: none"> ● Return the write protection knob to its original position or replace the disc by a recordable disc. → 72 ● Record after switching the recording mode to "ANALOG". → 35 ● Adjust the input level. ● Insert a minidisc for recording. ● Replace the minidisc. ● Set to the source to be recorded. ● Record for at least one second. ● Press the set key to cancel menu mode.
The sound is distorted.	<ul style="list-style-type: none"> ● The recording level has not been set at the time of recording. ● A minidisc recorded with distorted sound is being played back. 	<ul style="list-style-type: none"> ● Adjust the recording input level. → 35 ● Record again.
There is much noise.	<ul style="list-style-type: none"> ● External noise is being introduced. 	<ul style="list-style-type: none"> ● Move away from electric devices, TVs, etc.
A recorded MD cannot be played on other equipment (equipment not compatible with ATRAC3).	<ul style="list-style-type: none"> ● LP2 or LP4 recording has been performed. 	<ul style="list-style-type: none"> ● Record in STEREO or MONO. → 33
4LP recordings have much noise.	<ul style="list-style-type: none"> ● The disc has many scratches. 	<ul style="list-style-type: none"> ● Record at normal speed. → 42

MD section (list of displayed messages)

Display indication	Meaning	Countermeasures
NO DISC	<ul style="list-style-type: none"> No minidisc inserted. 	<ul style="list-style-type: none"> Insert a minidisc. → 
SCMS	<ul style="list-style-type: none"> Digital copying of a source with digital copy prohibition by SCMS has been tried. 	<ul style="list-style-type: none"> Digital recording is not possible. →  Record after switching the recording mode to "ANALOG". → 
UNLOCK	<ul style="list-style-type: none"> The square optical connector has become disconnected or the connection is imperfect. An external source with a sampling frequency other than 38 kHz, 44.1 kHz, is 48 kHz is connected. 	<ul style="list-style-type: none"> Connect the square optical connector correctly. →  Connect an external source with a sampling frequency suitable for this unit.
DISC FULL	<ul style="list-style-type: none"> There is no recordable area. Recording of the 256th title has been tried. 	<ul style="list-style-type: none"> Replace by a minidisc for recording. It is not possible to record 256 titles or more onto one minidisc.
FULL	<ul style="list-style-type: none"> Title input in excess of the max. character number has been tried. 	<ul style="list-style-type: none"> Refer to "In regard to number of characters which can be entered". → 
BLANK DISC	<ul style="list-style-type: none"> This is a blank minidisc with nothing recorded on it. 	<ul style="list-style-type: none"> For playback, replace by a recorded minidisc.
READING	<ul style="list-style-type: none"> TOC *1, UTOC *2 information is being read. 	<ul style="list-style-type: none"> This is no defect.
MD WRITING	<ul style="list-style-type: none"> Various information is being written at the time of editing or recording. 	<ul style="list-style-type: none"> This is no defect.
UTOC ERROR	<ul style="list-style-type: none"> The TOC *1, UTOC *2 contents are abnormal. 	<ul style="list-style-type: none"> Perform "ALL ERASE". When this is not possible, replace the disc. → 
CAN'T EDIT	<ul style="list-style-type: none"> Deletion of too short titles or other editing exceeding the limitations has been tried. The disc has been removed after recording or editing and the editing information has not been recorded. 	<ul style="list-style-type: none"> Perform editing within the limitations. Press the  key and remove the disc.
"ok" is flashing.	<ul style="list-style-type: none"> This is the confirmation method asking "Is it OK to execute editing?". 	<ul style="list-style-type: none"> Editing will be executed when the ENTER key is pressed.
PROTECTED	<ul style="list-style-type: none"> The minidisc is write-protected (PROTECT). 	<ul style="list-style-type: none"> Bring the minidisc to recordable condition (cancel the protection). → 
PLAY ONLY	<ul style="list-style-type: none"> This is a play-only minidisc. 	<ul style="list-style-type: none"> Insert a minidisc for recording.
NOT AUDIO	<ul style="list-style-type: none"> The input is a digital signal other than an audio signal. 	<ul style="list-style-type: none"> Provide an audio digital signal as output from the connected external source.
WAIT XX min.	<ul style="list-style-type: none"> After the start of CD double-speed recording, double-speed recording of the same disc has been tried within 74 minutes. 	<ul style="list-style-type: none"> Start double-speed recording after the indicated time has elapsed.
CAN'T PLAY	<ul style="list-style-type: none"> Playback of a minidisc which cannot be played because it is unrecorded or for other reasons has been tried. 	<ul style="list-style-type: none"> Replace by a minidisc which can be played back.
PL: SET	<ul style="list-style-type: none"> Title input processing is performed with an increase in the track number. 	<ul style="list-style-type: none"> Set the LP: Stamp function to OFF.

*1: All minidiscs have information called TOC (Table of Contents) recorded in addition to the audio signal.

The TOC corresponds to the table of contents of a book, and it contains the information which cannot be rewritten out of the number of titles, the playback time, character information, etc.

*2: The information characteristic for a minidisc for recording, other than the TOC, is called UTOC.

This UTOC contains the information which can be rewritten out of the number of titles, the playback 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 (DIN)
(1 kHz, 0.7% T.H.D., at 6 Ω) 20W + 20 W
 Frequency response 30Hz ~ 60kHz (+0dB, -3dB)

[MD recorder section]

Laser Semiconductor laser
 D/A Conversion 1 Bit D/A converter
 Sampling frequency 44.1 kHz
 Audio compression ATRAC, ATRAC3
 Digital input
 Optical -15dBm ~ -21dBm

[CD player section]

Laser Semiconductor laser
 D/A Conversion 1 Bit D/A converter
 Over sampling 8 fs (352.8 kHz)
 Frequency response 20Hz ~ 20kHz (+0.5dB, -1dB)
 Digital output
 Optical -15dBm ~ -21dBm

[Tuner section]

FM tuner section

Tuning frequency range 87.5 MHz ~ 108 MHz

AM tuner section

(For U.K. and Europe)

Tuning frequency range 531 kHz ~ 1,602 kHz

(For other countries)

Tuning frequency range

9 kHz step 531 kHz ~ 1,602 kHz

10 kHz step 530 kHz ~ 1,610 kHz

[General]

Power consumption 70 W
 Dimensions W: 220 mm
 H: 145 mm
 D: 356 mm
 Weight (net) 6.8 kg

Speakers

Enclosure ... Bass-reflex type (Magnetically shielded)
 Speaker configuration

Woofer 120 mm, cone type
 Tweeter 25 mm, dome type
 Impedance 6 Ω
 Maximum input power 60 W
 Dimensions W: 155 mm
 H: 270 mm
 D: 263 mm
 Weight (net) 4.5kg (1 piece)



KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

- Sufficient performance may not be exhibited at extremely cold locations (where water freezes).

KENWOOD

For your records

Record the serial number, found on the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for information or service on this product.

Model _____ Serial Number _____

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