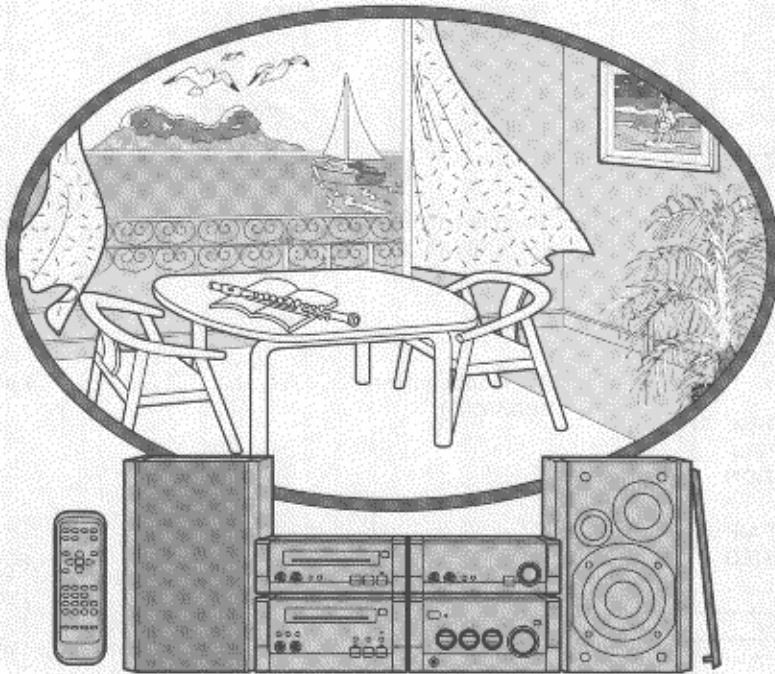


System Component

SC-HD55

Operating Instructions



Technics[®]

Before connecting, operating or adjusting this product, please read these instructions completely. Please save this manual.

PP



This manual was printed with soy based ink.



RQT4593-P

Dear customer

Thank you for purchasing this system.
For optimum performance and safety, please read these instructions carefully.

System	SC-HD55
Amplifier	SE-HD55
Tuner	ST-HD55
CD player	SL-HD55
Cassette deck	RS-HD75
Speakers	SB-HD55

The model number and serial number of this product can be found on either the back or the bottom of the unit.
Please note them in the space provided below and keep for future reference.

MODEL NUMBER _____

SERIAL NUMBER _____

User memo:

DATE OF PURCHASE _____

DEALER NAME _____

DEALER ADDRESS _____

TELEPHONE NUMBER _____

CAUTION!

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

WARNING:

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR PRODUCT DAMAGE, DO NOT EXPOSE THIS APPLIANCE TO RAIN, SPLASHING, DRIPPING OR MOISTURE.

CAUTION:

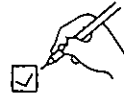
TO PREVENT ELECTRIC SHOCK MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

Supplied accessories

Please check and identify the supplied accessories.

Use numbers indicated in parentheses when asking for replacement parts. (only for U.S.A.)

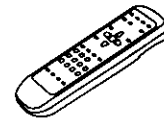
To order accessories contact 1-800-332-5368 or web site (<http://www.panasonic.com>).



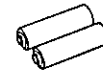
- AC power supply cord 1 pc. (SJA172)



- Remote control transmitter 1 pc. (EUR646467)



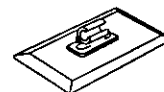
- Remote control batteries 2 pc. [R6/LR6 (AA, UM-3)]



- FM indoor antenna 1 pc. (RSA0006)



- AM loop antenna set (RSA0021)
- AM loop antenna 1 pc.
 - Antenna holder with stand 1 pc.
 - Antenna holder without stand 1 pc.
 - Screw 1 pc.



- Speaker cords 2 pc. (REE0393)



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CAUTION:


This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Notice: This system complies with new Part 15, except for the radio receiver, which complies with old Part 15, Subpart C of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesirable operation. The radio receiver is not subject to above item (2).


Any unauthorized changes or modifications to this equipment would void the user's authority to operate this device.




CAUTION


RISK OF ELECTRIC SHOCK

DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE SCREWS. 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.

Before use

Precautions

Before using this unit please read these operating instructions carefully. Take special care to follow the warnings indicated on the unit itself as well as the safety suggestions listed below. Afterwards keep them handy for future reference.

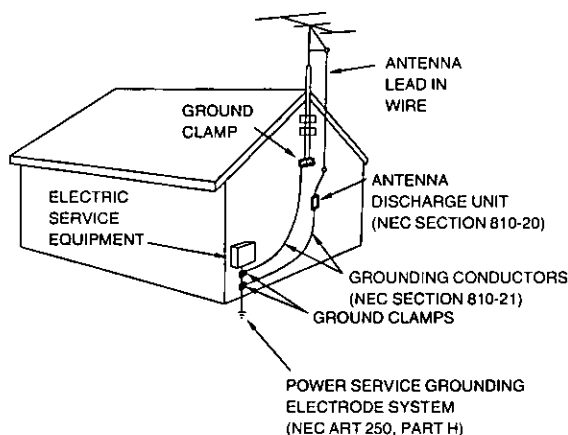
Safety

- 1. Power Source**—The unit should be connected to power supply only of the type described in the operating instructions or as marked on the unit.
- 2. Polarization**—If the unit is equipped with a polarized AC power plug (a plug having one blade wider than the other), that plug will fit into the AC 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.
- 3. Power Cord Protection**—AC 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. Never take hold of the plug or cord if your hand is wet, and always grasp the plug body when connecting or disconnecting it.
- 4. Nonuse Periods**—When the unit is not used, turn the power off. When left unused for a long period of time, the unit should be unplugged from the household AC outlet.

Installation

Environment

- 1. Outdoor Antenna Grounding**—If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1990, 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 below.



NEC—NATIONAL ELECTRICAL CODE

- 2. Water and Moisture**—Do not use this unit near water—for example, near a bathtub, washbowl, swimming pool, or the like. Damp basements should also be avoided.

- 3. Heat**—The unit should be situated away from heat sources such as radiators and the like. It also should not be placed in temperatures less than 5°C (41°F) or greater than 35°C (95°F).
- 4. Condensation**—Moisture may form on the lens in the following conditions...
 - immediately after a heater has been turned on.
 - in a steamy or very humid room.
 - when the unit is suddenly moved from a cold environment to a warm one.If moisture forms inside this unit, it may not operate properly. To correct this problem, turn on the power and wait about one hour for the moisture to evaporate.

Placement

- 1. Ventilation**—The unit should be situated so that its location or position does not interfere with its proper ventilation. Allow 10 cm (4") clearance from the rear of the unit.
- 2. Foreign Material**—Care should be taken so that objects do not fall into and liquids are not spilled into the unit. Do not subject this unit to excessive smoke, dust, mechanical vibration, or shock.
- 3. Magnetism**—The unit should be situated away from equipment or devices that generate strong magnetic fields.
- 4. Stacking**—Do not place heavy objects, other than system components, on top of the unit.
- 5. Surface**—Place the unit on a flat, level surface.
- 6. Carts and Stands**—The unit should be used only with a cart or stand that is recommended by the manufacturer. The unit and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the unit and cart combination to overturn.
- 7. Wall or Ceiling Mounting**—The unit should not be mounted to a wall or ceiling, unless specified in this operating instructions.



Maintenance

(See page 35 for details.)

Clean the cabinet, panel and controls with a soft cloth lightly moistened with mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzene.

Service

- 1. Damage Requiring Service**—The unit should be serviced by qualified service personnel when:
 - (a) The AC power supply cord or the plug has been damaged;
 - (b) Objects have fallen or liquid has been spilled into the unit; or
 - (c) The unit has been exposed to rain; or
 - (d) The unit does not appear to operate normally or exhibits a marked change in performance; or
 - (e) The unit has been dropped, or the enclosure damaged.
- 2. Servicing**—The user should not attempt to service the unit beyond that described in the operating instructions. All other servicing should be referred to an authorized service personnel.

For the address of an authorized servicer:
In the U.S.A. 1-800-211-7262 or web site
(<http://www.panasonic.com>)
In Canada 905-624-5505 or web site
(www.panasonic.ca/fdbckca.htm)

Listening caution



Selecting fine audio equipment such as the unit you've just purchased is only the start of your musical enjoyment. Now it's time to consider how you can maximize the fun and excitement your equipment offers. This manufacturer and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion—and, most importantly, without affecting your sensitive hearing.

We recommend you to avoid prolonged exposure to excessive noise.

Sound can be deceiving. Over time your hearing "comfort level" adapts to higher volumes of sound. So what sounds "normal" can actually be loud and harmful to your hearing.

Guard against this by setting your equipment at a safe level **BEFORE** your hearing adapts.

To establish a safe level:

- Start your volume control at a low setting.
- Slowly increase the sound until you can hear it comfortably and clearly, and without distortion.

Once you have established a comfortable sound level:

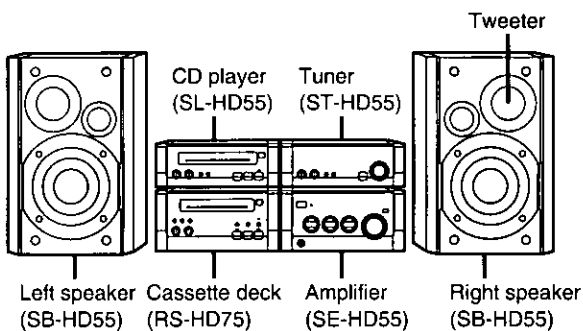
- Set the dial and leave it there.

Taking a minute to do this now will help to prevent hearing damage or loss in the future. After all, we want you listening for a lifetime.

Installation

Placement of the components

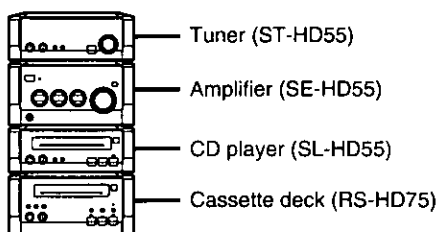
Side-by-side set-up



Note

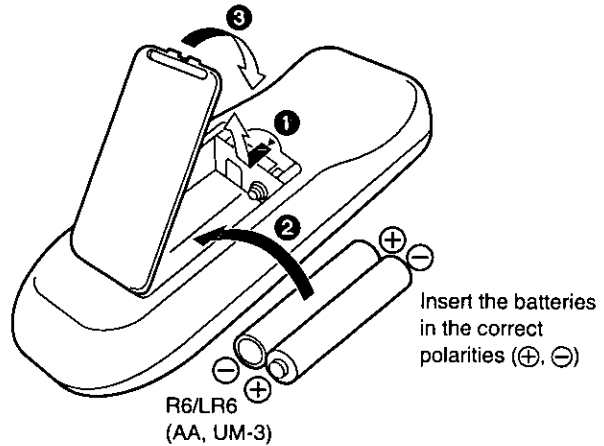
Place the speakers so that the tweeter is on the outside.

Stacking



The remote control

Battery installation

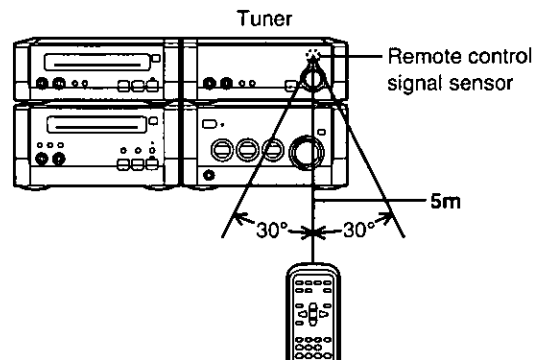


Insert the batteries in the correct polarities (+, -)

- Do not mix old and new batteries, or batteries of different types (manganese and alkaline, etc.).
- Never subject batteries to excessive heat or flame; do not attempt to disassemble them; and be sure they are not short-circuited.
- If the remote control is not to be used for a long period of time, remove the batteries and store them in a cool, dark place.
- Do not attempt to recharge alkaline or manganese batteries.
- Do not use rechargeable type batteries.

The batteries should be replaced if commands from the remote control transmitter do not operate the unit even when the transmitter is held close to the front panel.

Correct method of use



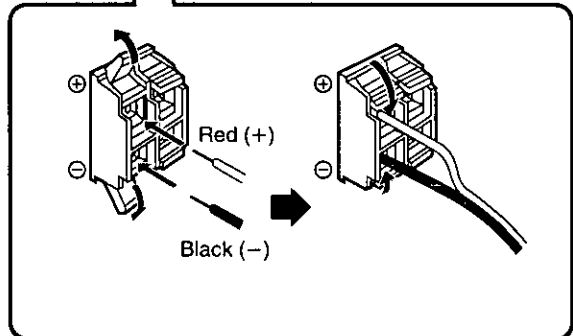
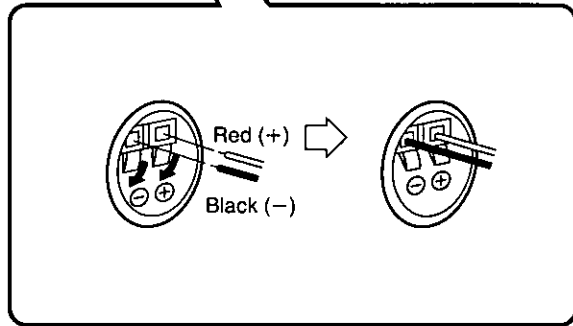
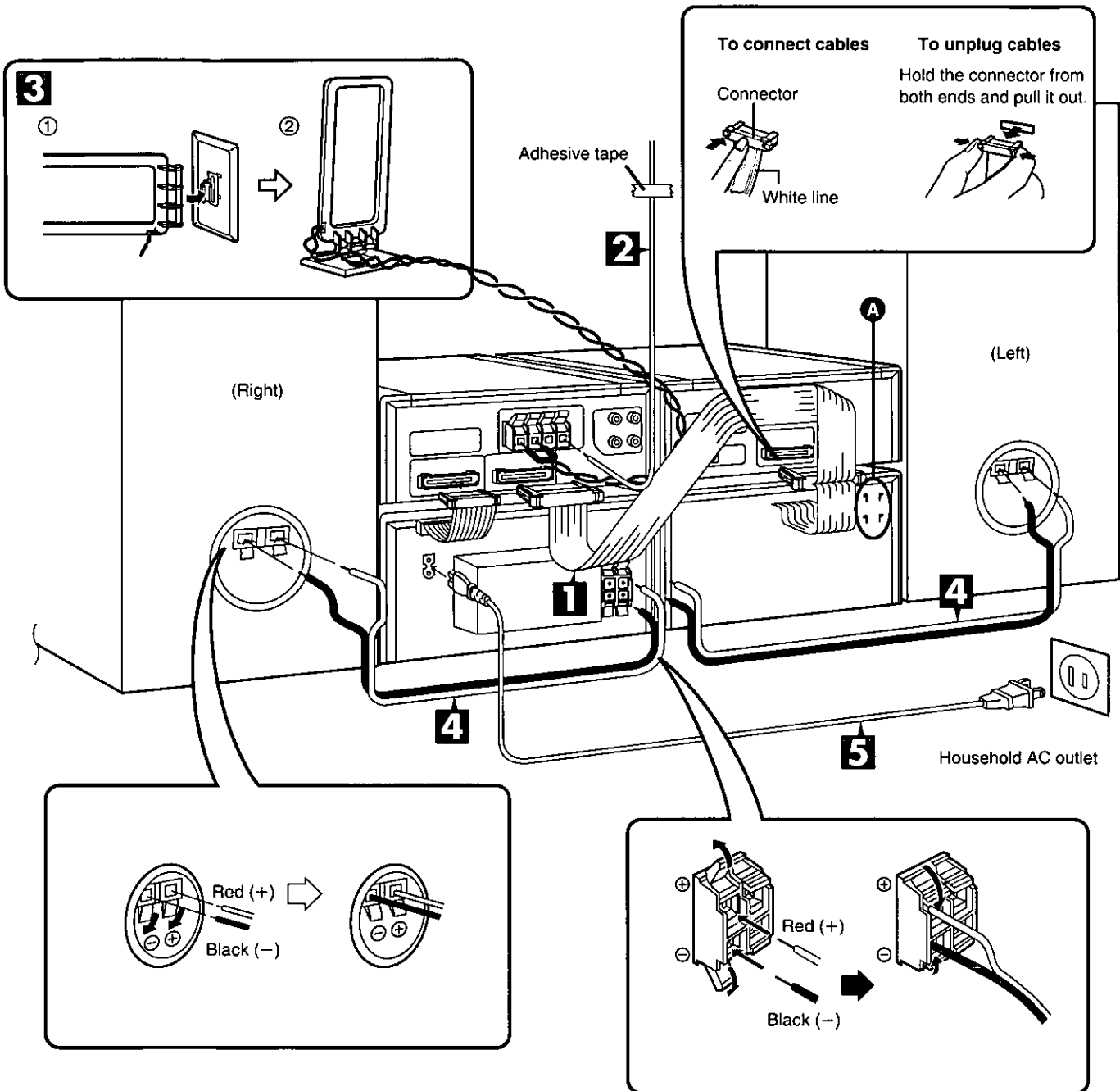
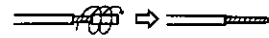
- Aim the remote control's transmission window toward the unit's sensor. Avoid any obstacles.
- The maximum distance is within 5 meters directly facing toward the remote control signal sensor.
- Be sure the transmission window and the unit's sensor are free from dust. Excessive dust might affect its performance.
- The operation may not be correct if direct sunlight or other strong light source strikes the receiving sensor of this unit. If there is a problem, place the unit away from the light source.
- If this system is installed in a rack with glass doors, the glass doors' thickness or color might make it necessary to use the remote control a shorter distance from the system.
- Never place heavy items on the remote control.
- Do not disassemble or reconstruct the remote control.
- Do not spill water or other liquids onto the remote control.

Connections

Connect the AC mains lead after you have connected all other cables.

To prepare the AM loop antenna, the FM antenna wire and speaker cords, twist the vinyl cover tip and pull off.

Before use



1 Connect the flat cables.

Connect the flat cables as shown in the illustration.

Note

Do not try connecting or disconnecting the flat cables while the power is switched to ON.

After connection:

Keep cables as flat against the back of the unit as possible.

2 Connect the FM indoor antenna.

Tape the antenna to a wall or column, in a position where radio signals are received with the least amount of interference.

Note

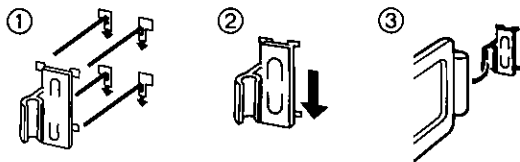
When you cannot get good reception with this FM indoor antenna, we recommend you install an FM outdoor antenna (not included).

3 Connect the AM loop antenna.

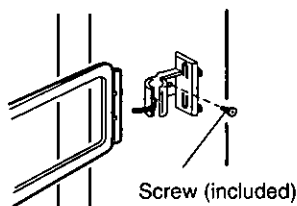
You can attach the AM loop antenna to the rear of the cassette deck, a wall or pillar.

In this case, be sure to use the antenna holder with the hole.

•To install on the cassette deck rear (A)



•To install on a wall or pillar



Note

To minimize noise pickup, bundle the loop antenna cord using tape it to keep away from the flat cables.

4 Connect the right (R) and left (L) speaker cables.

Note

- To prevent damage to circuitry, never short-circuit positive (+) and negative (-) speaker wires.
- Be sure to connect only positive (red) wires to positive (+) terminals and negative (black) wires to negative (-) terminals.

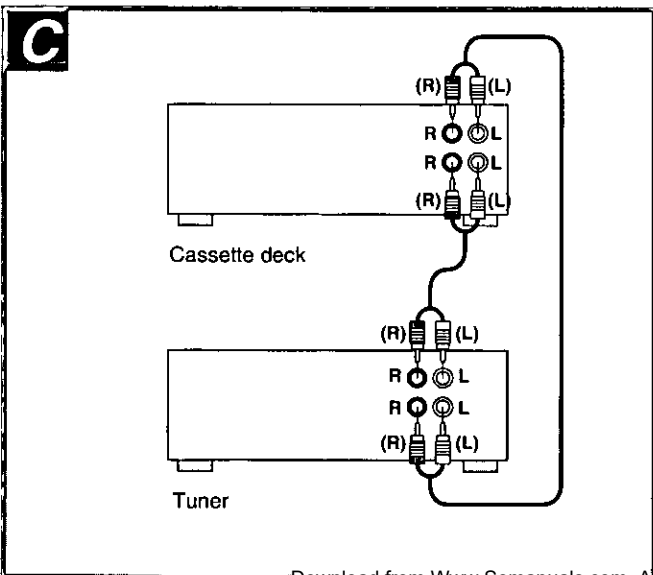
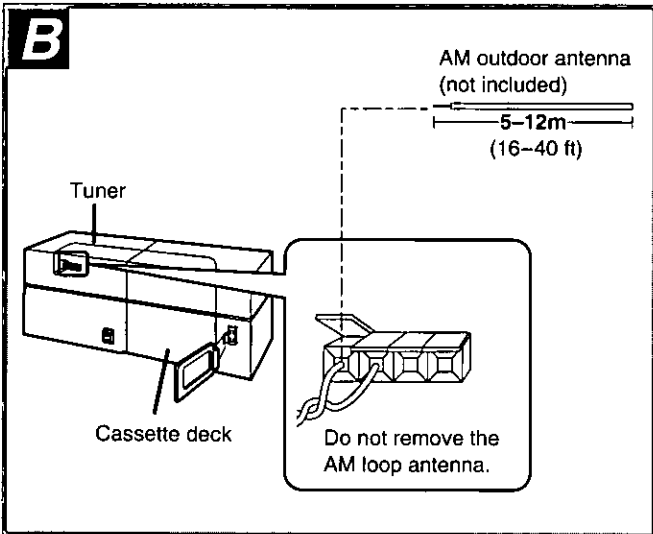
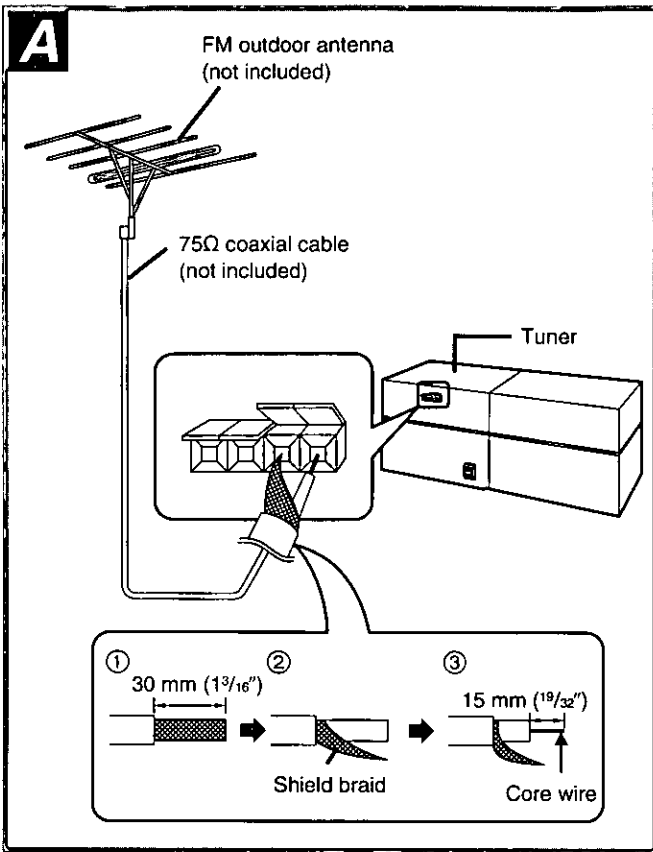
The speakers are made so they can be used in close proximity of a TV, but irregular coloring may result due to how the system is placed. If such distortion occurs, turn off the TV for between 15 and 30 minutes. The demagnetizing function of the TV will eliminate the distortion. If the irregular coloring is still visible, when the TV is turned on again, move the speakers further away from the TV.



Caution

Use the speakers only with the recommended system. Failure to do so may lead to damage to the amplifier and/or the speakers, and may result in the risk of fire. Consult a qualified service person if damage has occurred or if you experience a sudden change in performance.

5 Connect the AC mains lead.



Connections

Optional antenna connections

You may need an outdoor antenna if you use this system in a mountainous region or inside a reinforced-concrete building, etc.

FM outdoor antenna (not included) A

Disconnect the FM indoor antenna if an FM outdoor antenna is installed.

- ① Remove a piece of the outer vinyl insulator.
- ② Twist the shield braid.
- ③ Expose the core wire.

Note

An outdoor antenna should be installed by a competent technician only.

AM outdoor antenna (not included) B

Connect the outdoor antenna without removing the AM loop antenna. Run 5 to 12 m of vinyl-covered wire horizontally along a window or other convenient location.

Note

When the unit is not in use, disconnect the outdoor antenna to prevent possible damage that may be caused by lightning. Never use an outdoor antenna during an electrical storm.

External unit connections

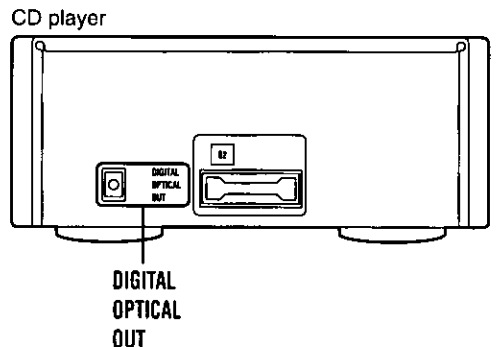
Connecting to another cassette deck A

- Make sure that the power supply for all components has been turned off before making any connections.
- For details, refer to the operating instructions of the cassette deck which is to be connected.
- All peripheral components and cables sold separately.

Stereo connection cable

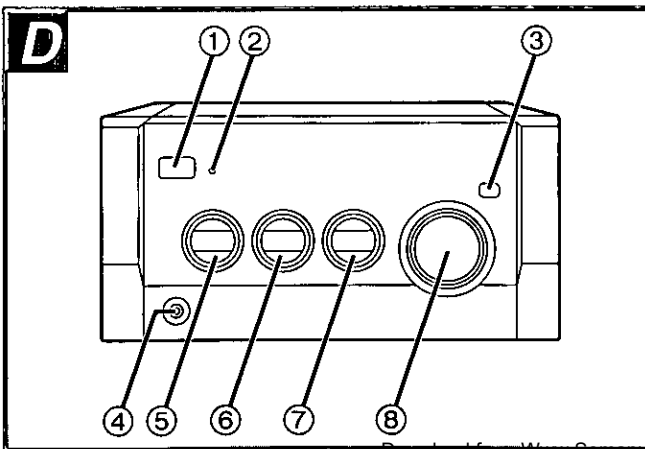
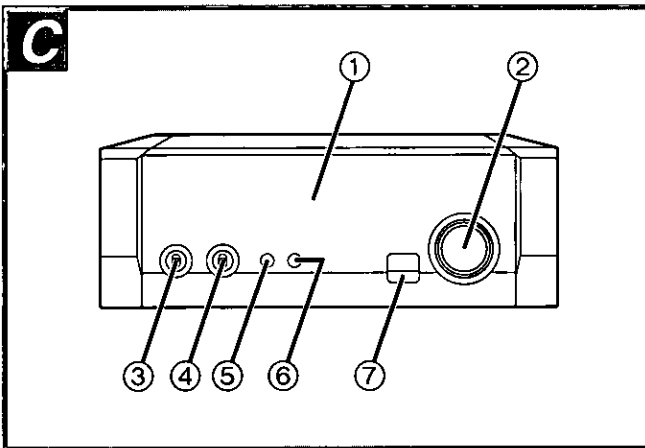
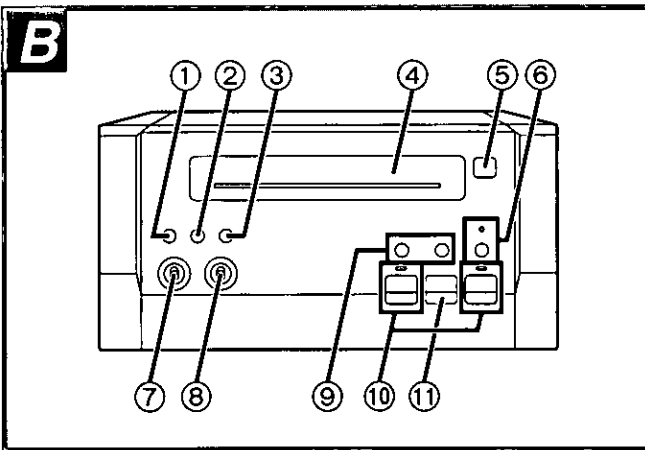
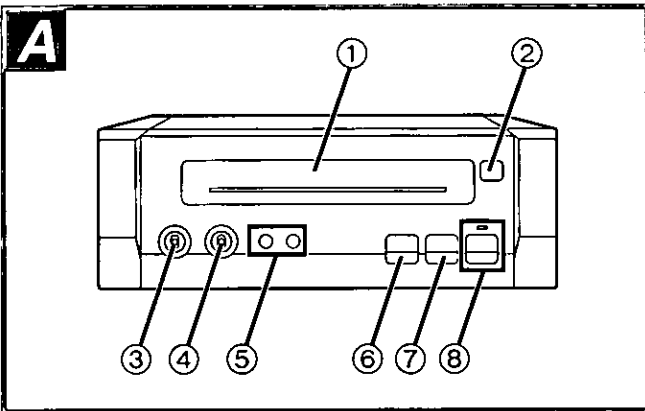
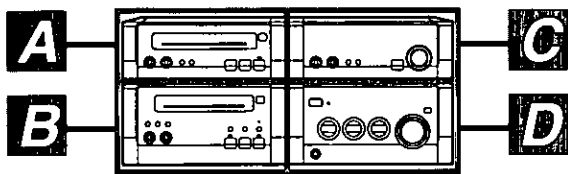


Connections to "DIGITAL OPTICAL OUT" terminal:



Before using this terminal, take out the dust protection cap. Connect an optical fiber cable to the optical input terminal of the DCC or minidisc deck (cables and components not included).

Front panel controls



CD player section

- ① Disc tray 14
 - ② Disc tray open/close button
(Δ OPEN/CLOSE) 14
 - ③ CD-TEXT switch (CD TEXT) 14
 - ④ One track/all tracks switch (TRACK) 14
 - ⑤ Skip/search buttons (\lll / \lll , \ggg / \ggg) 14
 - ⑥ Stop button (\blacksquare) 14
 - ⑦ Pause button (II) 14
 - ⑧ Play button and indicator (\blacktriangleright) 14
- The color of the lamp above the \blacktriangleright button depends on the operation.
If stopped: orange
If playing: green

Cassette deck section

- ① Counter reset button (C-RESET) 18
 - ② Reverse mode select button (REV MODE) 18
 - ③ CD edit recording button (CD EDIT) 23
 - ④ Cassette holder 18
 - ⑤ Cassette tray open/close button (Δ OPEN/CLOSE) 18
 - ⑥ Record pause button and indicator (REC PAUSE) 21
 - ⑦ Dolby noise reduction switch (DOLBY NR) 18
 - ⑧ Tape Program Sensor switch (TPS) 19
 - ⑨ Fast forward/rewind buttons (\lll , \ggg) 18
 - ⑩ Playback buttons and indicators (\blacktriangleleft , \blacktriangleright) 18
- The color of the lamps depends on the operation taking place.
If stopped, fast forwarding or rewinding: orange
If playing, recording, or carrying out TPS: green
- ⑪ Stop button (\blacksquare) 18

Tuner section

- ① Display panel
The display shows information for the cassette deck, CD player, and amplifier as well.
- ② Station selection and JOG dial (TUNE/JOG) 11, 12
- ③ Tuning mode switch (TUNE MODE) 12
- ④ Side light switch (SPOT) 30
- ⑤ Clock/timer button (CLOCK/TIMER) 11, 25, 26
- ⑥ Set button (SET) 11, 25, 26
- ⑦ Band select button (BAND) 12

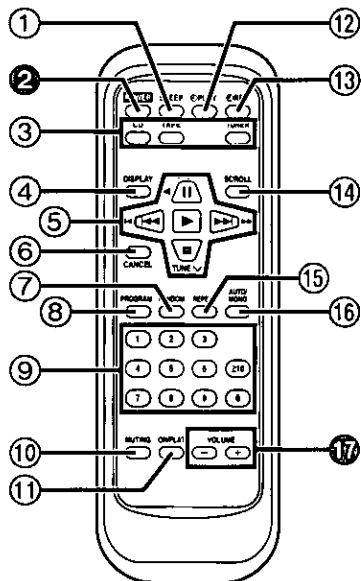
Amplifier section

- ① Power "STANDBY O /ON" switch
(POWER, STANDBY O /ON) 11
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
- ② Standby indicator (STANDBY)
When the unit is connected to the AC main supply, this indicator lights up in standby mode and goes out when the unit is turned on.
- ③ Bass, demo button (-BLFS, -DEMO) 11, 31
- ④ Headphones jack (PHONES) 29
- ⑤ Source input select control (INPUT SELECTOR) 29
- ⑥ Bass control (BASS) 31
- ⑦ Treble control (TREBLE) 31
- ⑧ Volume control (VOLUME) 13, 14, 18

Before use

Remote control

Buttons ② and ⑰ function in exactly the same way as the buttons on the main unit.



① Sleep timer button (SLEEP)	28
② Power Button (POWER)	11
③ Input selection buttons (CD, TAPE, TUNER)	30
④ Display select button (DISPLAY)	30
⑤ Basic operating buttons	
Functions change according to the source	
⑥ Cancel button (CANCEL)	16
⑦ Random button (RANDOM)	17
⑧ Program button (PROGRAM)	16
⑨ Numeric buttons	13, 16
⑩ Muting button (MUTING)	31
⑪ Sound effect button (ON/FLAT)	31
⑫ Play timer button (Ⓢ PLAY)	25
⑬ Record timer button (Ⓢ REC)	26
⑭ Scroll button (SCROLL)	14
⑮ Repeat button (REPEAT)	15
⑯ Stereo/monaural select button (AUTO/MONO)	13
⑰ Volume buttons (VOLUME)	13, 14, 18

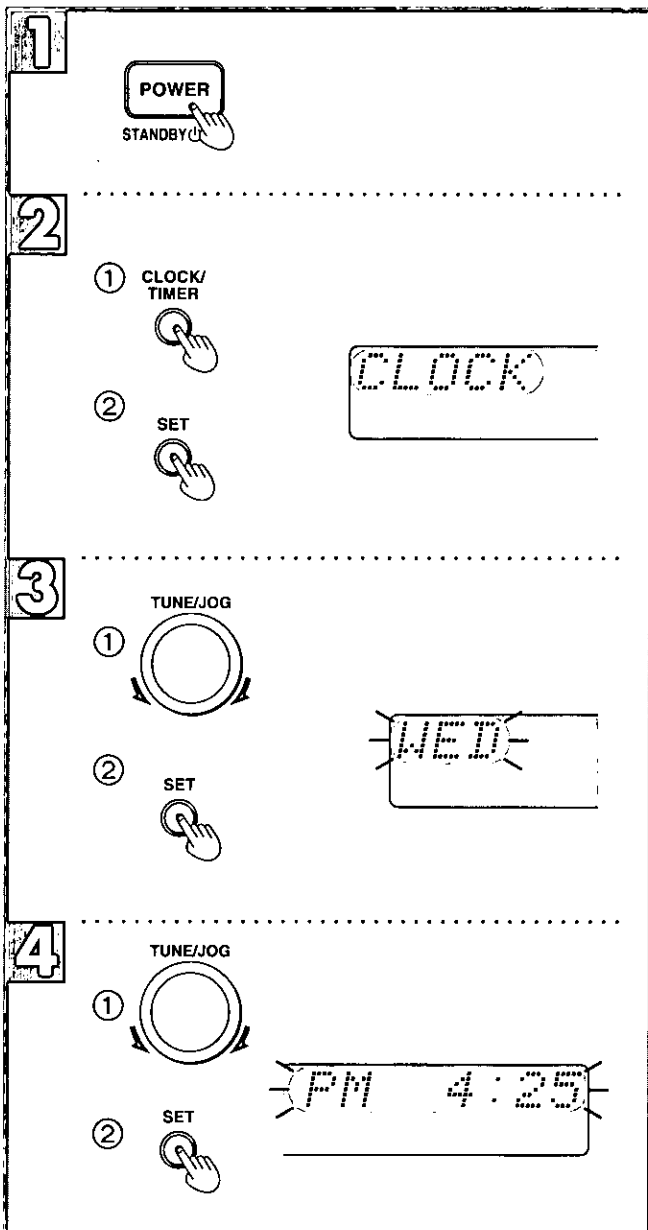
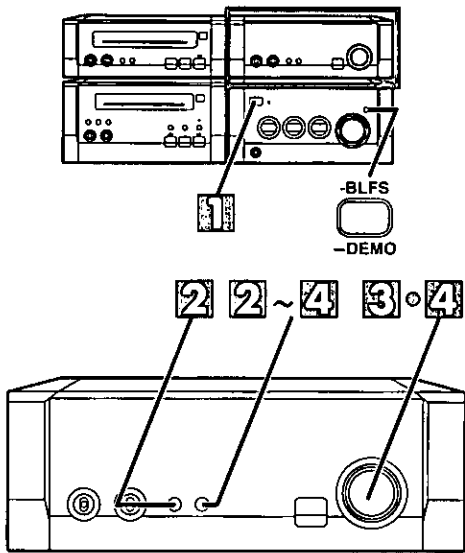
Before use

Setting the time

The tuner displays the time, frequency and information on CDs and tapes.

This is a 12-hour display clock.

These instructions explain how to set the timer for 4:25 P.M. on Wednesday.



1 Switch on the power.

2 1 Press CLOCK/TIMER to show "CLOCK".

Every time you press the button,
CLOCK → ◻ PLAY → ◻ REC → Original display.

2 Within 7 seconds:
Press SET.

3 1 Turn TUNE/JOG to show the day.

2 Press SET.

4 1 Turn TUNE/JOG to show the time.

2 Press SET.

The time is now set and the panel will return to the previous display.

To see the clock while the power is on

Press CLOCK/TIMER.

The clock display will appear for about 5 seconds.

For your reference:

When you turn OFF the system from the POWER button, the system goes on standby and the STANDBY indicator lights up.

The demo function

Different sound effects are displayed on the panel and the unit demonstrates those effects on any music currently playing.

Press and hold -BLFS/-DEMO for 2 seconds.

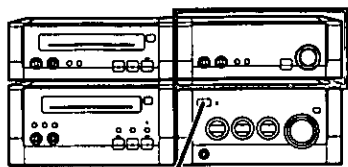
The demonstration begins.

To cancel the demo function

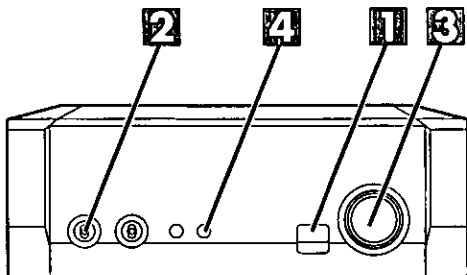
Press any button.

"Technics" fades in and out repeatedly about 10 seconds after the power is turned off and if the clock hasn't been set.

Memory presetting



POWER
STANDBY/ON



Before use

- Once stations have been preset, you can easily select them from the tuner or the remote control.
- The frequencies are automatically preset (in sequence from lower to higher frequencies) into the memory: "channels" 1 to 39 are available for the presetting of FM stations and "channels" 21 to 39 are available for AM stations.

Automatic memory presetting

Preparation: Switch on the power.

- 1 Press BAND to select "FM".**
Each time you press the button:
FM ←→ AM
- 2 Set TUNE MODE to "MANU".**
- 3 Dial TUNE/JOG until the display shows the frequency from which you want to begin automatic memory presetting.**
- 4 Hold down SET.**
Release your finger when the words "AUTO MEMORY" scroll across the display.
All stations that the set is able to pick up are set in the memory.
"SET OK" is displayed when the operation is complete and the unit plays the last station that was put into memory.

"AUTO MEMORY" flashes on in the display while the tuner is storing the received frequencies in memory. When storing is complete, "SET OK" will be displayed.

To preset AM stations

Select "AM" in step 1.

If auto presetting is not possible because radio signals are weak or for some other reason, do the following.

Presetting only your favorite stations

Preset the stations one at a time.

- Press BAND to select the band.
- Set TUNE MODE to "MANU".
- Turn TUNE/JOG to select the station.
- Press SET.
- Turn TUNE/JOG to select a channel to preset the station into.
- Press SET.

NOTE

When you preset a broadcast station to a channel that has already been preset, the previous presetting will be erased. So if, for example, FM frequencies are preset from channel 1 to 39 and then AM frequencies are preset, the first AM frequency will be preset to channel 21 (thus erasing the FM presetting to channel 21), the second AM frequency will be preset to 22 (erasing FM 22), and so on.

FM allocation settings

The FM frequency step is set to 0.2 MHz at the time of shipment. By adjusting the allocation, you can enable the tuner to receive FM broadcasts allocated in 0.1 MHz steps. Press and hold BAND. After a few seconds the display will change to a flashing display of the current minimum FM frequency. If you continue to hold the button down, the minimum frequency will change. Release the button at this time.

To return to the original frequency indication, repeat above.

NOTE

After changing the "allocation" setting, the frequencies you previously preset in the memory will be cleared.

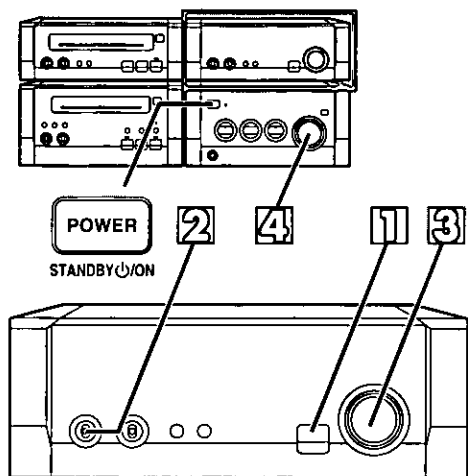
1

2

3

4

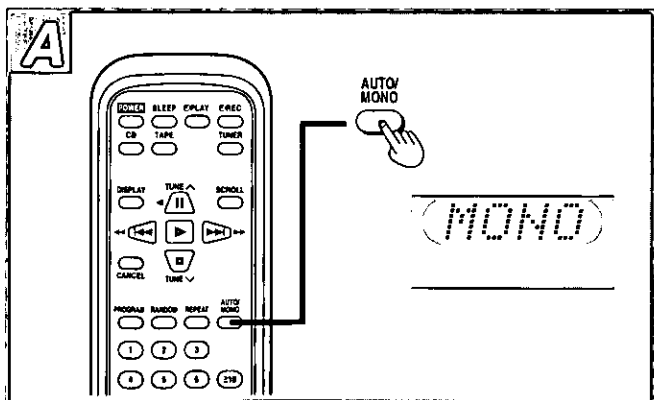
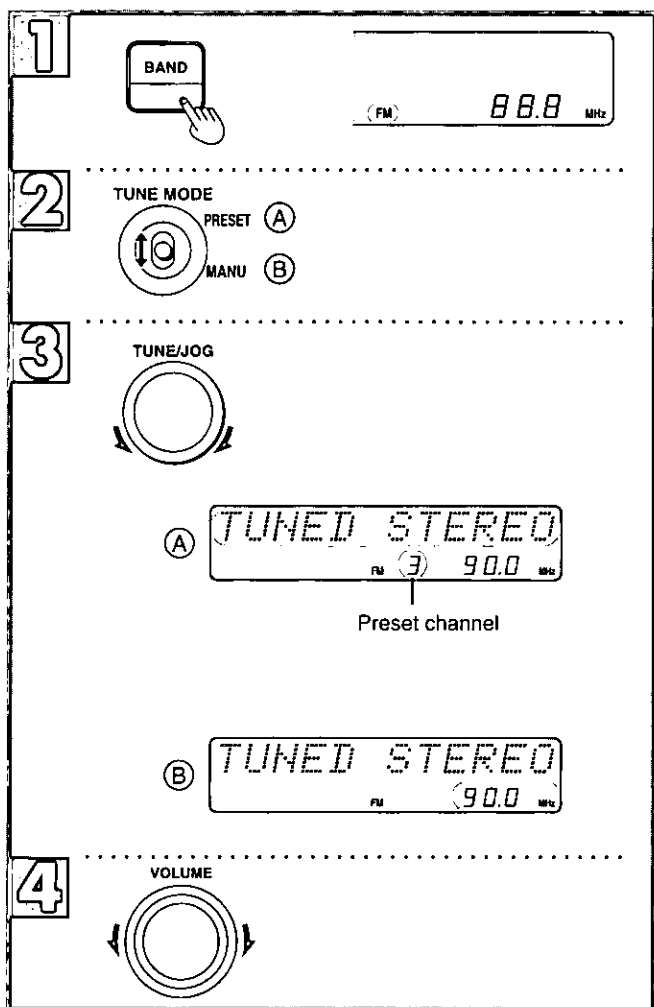
Listening to radio broadcasts



Preparation

- Before tuning, preset a radio station (⇒ page 12).
- Switch on the power.

- 1 Press BAND to select the desired band.**
Every time you press the button; FM ←→ AM
- 2 Set TUNE MODE to select "PRESET" or "MANU".**
 - Select "PRESET" when stations are preset. (A) (⇒ page 12)
 - Select "MANU" when stations are not preset. (B)
- 3 Dial TUNE/JOG to tune in the desired broadcast.**
 - (A) When you select "PRESET"
 - (B) When you select "MANU"
- 4 Adjust the volume.**



For tuning by remote control (when you select "PRESET" in step 2 above):

Specify the channel you want with the numeric buttons (⇒ page 10).

To select a two digit channel:

Press ≥10 and then the two numbers you want within 10 seconds or so.

If noise is excessive in the FM stereo mode:

A

by remote control only

Press AUTO/MONO.

Every time you press the button; MONO ←→ AUTO

The sound reception mode switches to "MONO" (monaural) and "MONO" lights.

The sound will then be heard in monaural. If the broadcast signal is weak, or if there is a large amount of interference, you will get a clearer sound using MONO function.

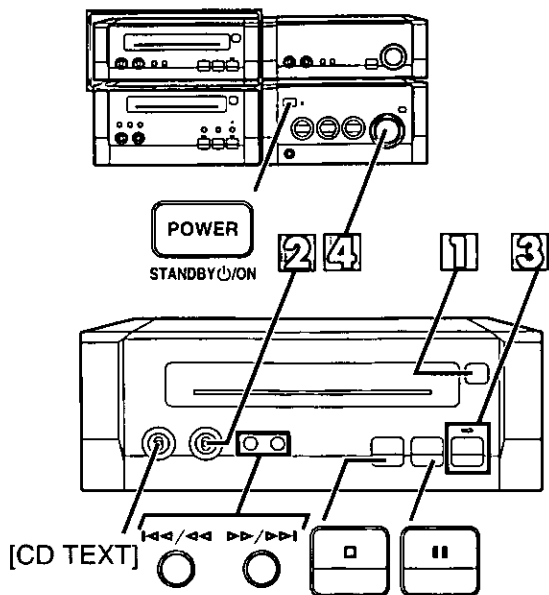
To cancel the "MONO" mode, press the button again.

When "MONO" indicator is off:

Use this setting for normal listening. Both stereo and monaural sounds can be heard as they are.

[Note]

- If you change frequencies in the "MONO" mode, the "MONO" mode will be cancelled.
- Stations can be preset in monaural. Carry out presetting manually (⇒ page 12).



Sequential play

Preparation: Switch on the power.

1 Press Δ OPEN/CLOSE to open the tray.

Set a CD on the tray.

Press Δ OPEN/CLOSE once again to close the tray.

When the "CD" input source is selected, total number of tracks and total playing time will appear on the display.

2 Set TRACK to "ALL".

3 Press \triangleright .

Play will start from the first track, and will stop automatically when the last track is finished.

4 Adjust the volume.

To stop the disc:

Press \square .

To pause play

Press \parallel during play. To resume play, press \parallel or \triangleright .

Skipping tracks backward and forward

Press \lll / \lll to skip backward. Press \ggg / \ggg to skip forward.

Searching backward and forward.

Press \lll / \lll to search backward. Press \ggg / \ggg to search forward. Press and hold during play.

[Note]

- During random play, you can not skip to tracks which have already been played. (\Rightarrow page 17)
- During program play or random play, you can search-forward/backward only within the current track. (\Rightarrow pages 16 and 17)
- During program play, skipping is always in the programmed order, whether forward or backward. (\Rightarrow page 16)
- Do not use CDs with poorly attached labels or stickers. Adhesive protruding from underneath stickers or left over from peeled off stickers can cause your system to malfunction.
- Do not use irregular shape CDs. \boxtimes

Playing CD-Text discs

CD Text discs:

These discs have information such as the title of the album and the name of the artist recorded on them. This unit can read this information and display it.

These discs can be played like normal discs.

You can change the display on the main unit to see either the title of the album or the artist's name.

Select "TITLE" or "ARTIST" with the CD TEXT switch.

Scrolling the artists name or CD title across the screen \boxtimes

Press SCROLL.

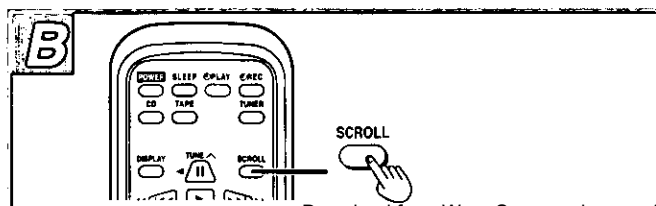
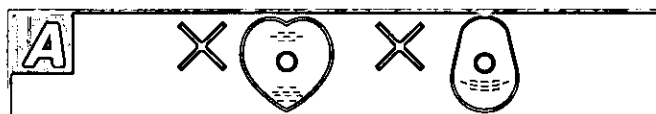
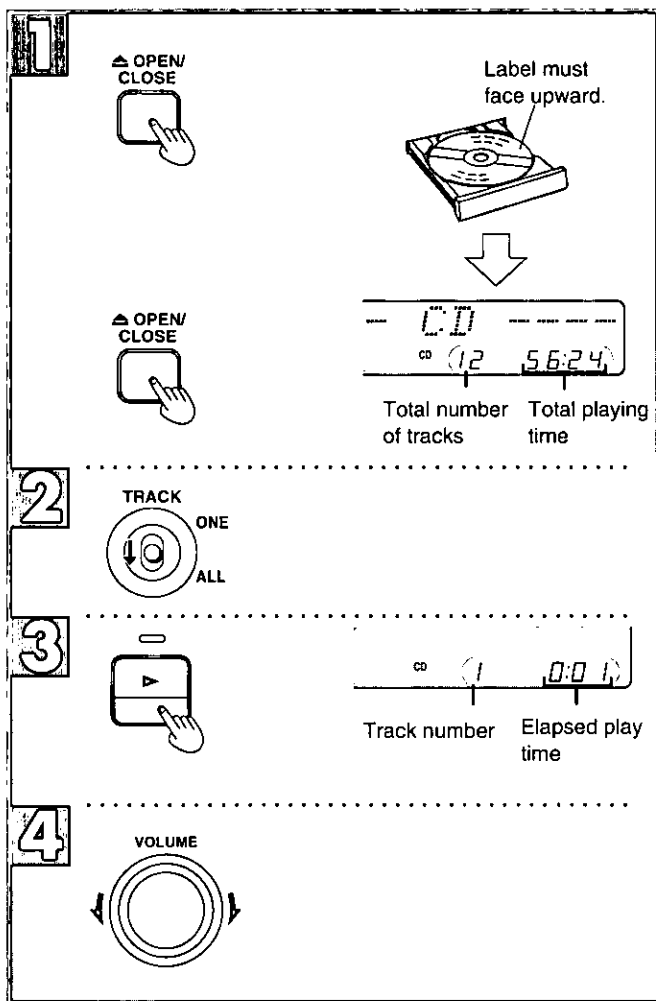
After displaying "SCROLL ON", the chosen display scrolls continuously across the screen.

To cancel

Press SCROLL. "SCROLL OFF" is displayed.

[Note]

If the information to be displayed is less than 12 letters, scrolling will not work. The information will be displayed in the middle of the screen.

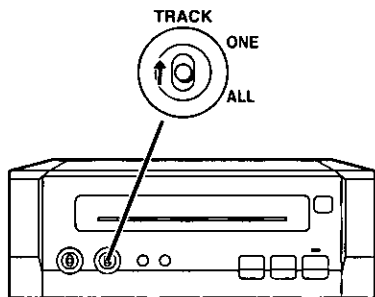


Listening to compact discs

One track play

Select "ONE" with the TRACK switch before or during play.

The unit stops automatically after playing one track.



To cancel

Select "ALL" with the TRACK switch.

Note

Program play and random play will not work if "ONE" is selected. Make sure you select "ALL" again when you are finished.

Repeat play

by remote control only

This function repeats the play of all tracks or programmed tracks.

1 Press CD.

2 Press REPEAT before or during play.

"↻" will light.

To cancel repeat play

Press REPEAT once again.

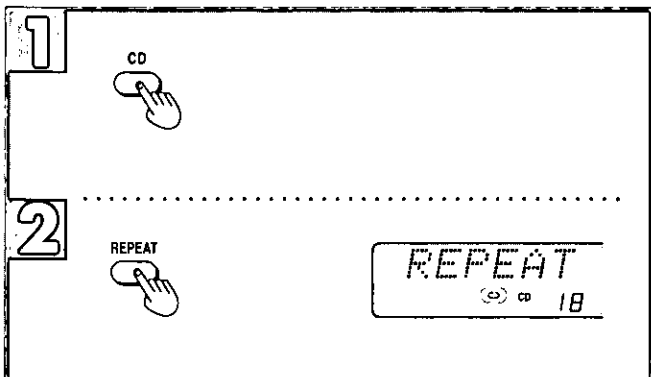
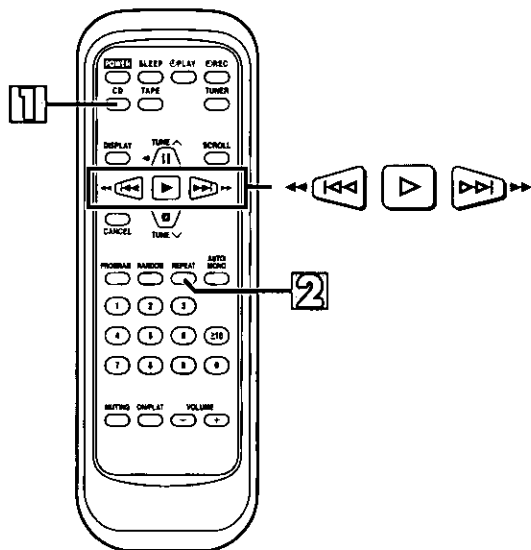
"↻" will go out.

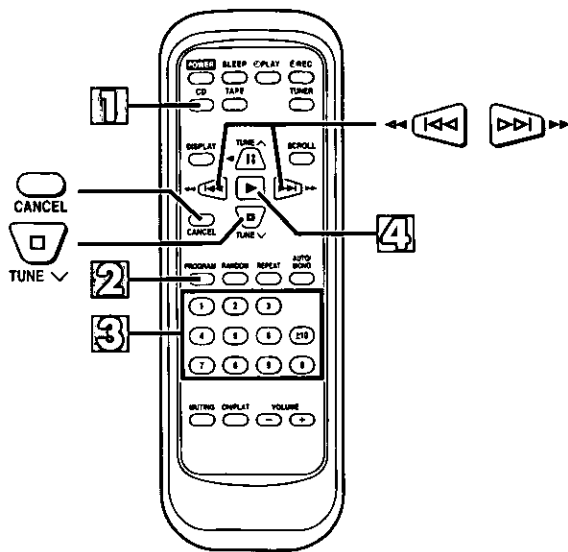
To repeat only one track

- 1 Press |◀◀ or ▶▶| to select the track.
- 2 Switch TRACK to "ONE" from the main unit.
- 3 Press REPEAT to display "↻".
- 4 Press ▶.

For your reference:

In program play mode (⇒ page 16), the CD player will repeat only the programmed tracks.





Program play

by remote control only

This function allows you to program up to 24 tracks.

- 1 Press CD.**
- 2 Press PROGRAM.**
"PROGRAM" will light.
- 3 Press the numeric buttons to enter the track number.**
Repeat this step to program the tracks in the order you want them to play.
- 4 Press ▶.**
Play will start in the programmed sequence.
When all the programmed tracks have been played, the CD player will stop automatically.

To cancel program play mode

Press PROGRAM in the stop mode.

"CLEAR" will appear on the display for approximately 1 second and all the programmed tracks will be cancelled.

To select a two-digit track

Press ≥10 and then the two numbers you want within 10 seconds or so.

When "FULL" appears:

The number of programmed tracks is limited to 24. No further tracks can be programmed.

When "--:--" appears:

The total playing time of the programmed tracks has exceeded 199 minutes 59 seconds, or you tried programming track number 25 or more. In either case, you can still program and play the disc.

To check program contents

Press ◀◀ or ▶▶ while play is stopped. Every time you press one of the buttons, the track No. and program No. are shown on the display.

To add to the program

Repeat step 3 in the stop mode.

Clearing programmed tracks (While stopped)

In order from the last track	Press CANCEL. "CANCEL" is displayed
Selected tracks	Press ◀◀ or ▶▶ to display the track and press CANCEL within 10 seconds.
All tracks	Press □. Program play is also cancelled.

For your reference:

As long as you do not clear the program, the system will retain the programmed tracks in memory for as long as 2 weeks while the system is OFF.

Compact disc operations

1

2

PROGRAM

PROGRAM CD 0 0:00

3

1 2 3

4 5 6 210

7 8 9 0

Programmed track number	Programmed order
CD 3	--- 01

↓

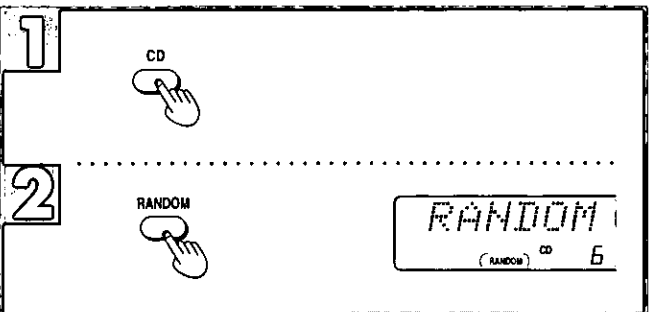
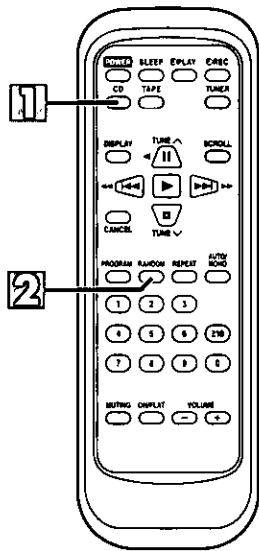
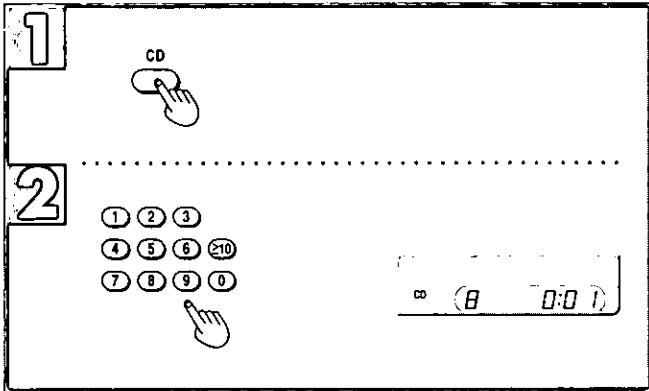
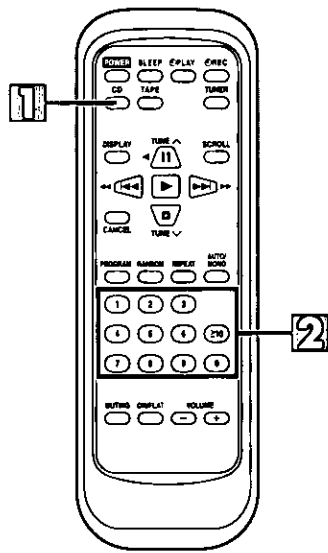
CD 3 (8:39)

Total playing time

4

A

CLEAR



Listening to compact discs

Direct access play

by remote control only

Direct access allows you to start sequential play from a specific track to the last track.

- 1** Press CD.
- 2** Press the numeric button(s) to select the desired track number.
The CD will be played from the selected track to the last track. Play will stop automatically when the last track is finished.

To select a two-digit track

Press ≥ 10 and then the two numbers you want within 10 seconds or so.

Random play

by remote control only

This function automatically selects a sequence of tracks to be played in random order.

- 1** Press CD.
- 2** Press RANDOM.
"RANDOM" will light, and then random play will start. Play will stop automatically when all tracks on the disc finish playing randomly.

To cancel random play

Press RANDOM once again. "RANDOM" will go out.

Listening to tapes

Playback

Types of tapes which can be played correctly:

The unit automatically identifies the type of tape.

Normal position/TYPE I	<input type="radio"/>
High position/TYPE II	<input type="radio"/>
Metal position/TYPE IV	<input type="radio"/>

Preparation: Switch on the power.

1 Press **▲ OPEN/CLOSE** on deck, and then insert the tape.

Load a tape with the exposed side facing the cassette holder's insertion part.

Insert the cassette tape until it touches the back of the compartment.

Press **▲ OPEN/CLOSE** once again to close the cassette holder.

2 Operate **DOLBY NR** to select **Dolby NR ON/OFF**.

(→ page 20)

3 Press **REV MODE** to select the reverse mode.

Each time you press **REV MODE**, one of the indicators will appear.

: The deck plays one side only, and then stops automatically.

: The deck plays both sides, and then stops automatically.

: The deck plays both sides 8 times, and then stops automatically.

4 Press **◀** or **▶**.

Play begins and the lamp changes to green.

▶: The forward side will play.

◀: The reverse side will play.

5 Adjust the volume.

To stop tape playback

Press .

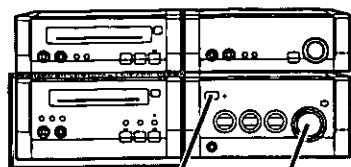
To fast forward or rewind the tape

Press **◀◀** or **▶▶** while the tape is in the stop mode.

Tape direction	To rewind	To fast-forward
▶	◀◀	▶▶
◀	▶▶	◀◀

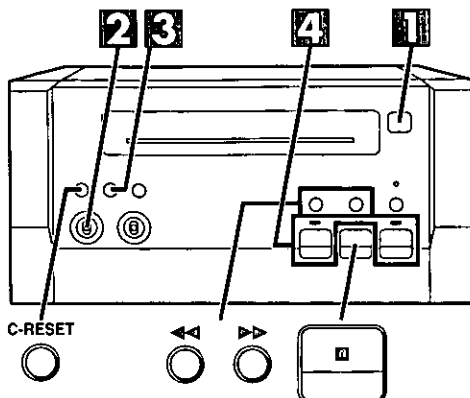
To reset the tape counter

Press **C-RESET**.



POWER

STANDBY/ON



C-RESET

1 **▲ OPEN/CLOSE**

2 **DOLBY NR**

ON

OFF

3 **REV MODE**

TAPE

4

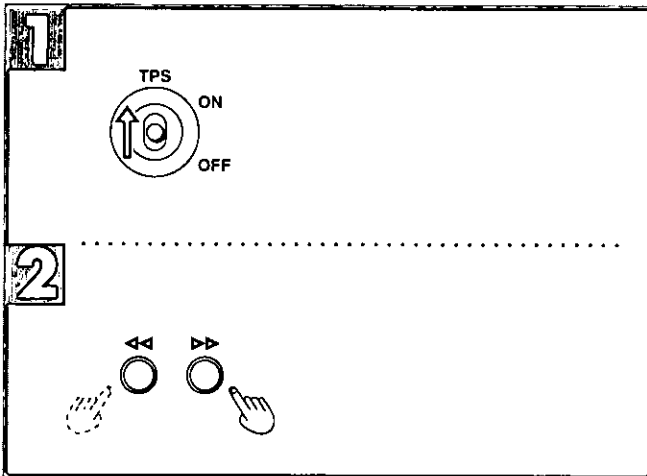
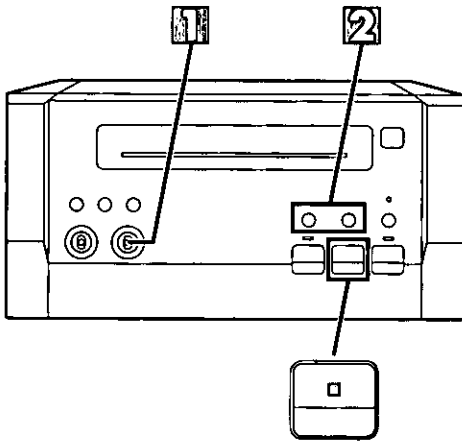
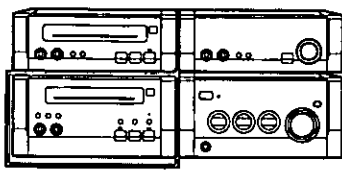
(from the remote control)

TAPE

5 **VOLUME**

A **C-RESET**

TAPE 000



Listening to tapes

To find the beginning of a program (TPS: tape program sensor)

The number of programs corresponding to the number of times ◀◀, ▶▶ was pressed will be skipped, and the desired program is located.

1 Switch TPS on.

2 Push ◀◀ or ▶▶ while the tape is playing.

Choose the number of tracks you want to skip.

• To go forward

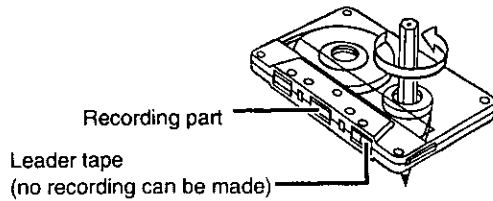
If you are listening to track one, then pressing the button 3 times will make the tape skip to the beginning of track 4.

• To go backward

If you are listening to track 4, then pressing the button 3 times will make the tape skip to the beginning of track 2.

Note:

- To change the setting (the number of the programs to be skipped, the tape travel direction, etc.) while TPS skip is activated, press ■ to stop the deck first.
- If the number of TPS skips specified is larger than the number of songs recorded on the tape, the unit may stop at the end of the tape or otherwise fail to operate correctly.
- TPS searches for silent parts in a tape program. It may sometimes fail to operate correctly in the following situations:
 - When the interval between programs is less than 4 seconds
 - When there is a particularly low-level passage in a program (for example, classical music)
 - When the program is less than 10 seconds, or when it is less than 10 seconds from the listening point to the beginning of the next tune
 - When a tape is recorded with fade-ins or fade-outs
- The deck continues to carry out TPS, even if you turn TPS off during operation. It turns off when the operation is complete.



Before recording

Types of tapes which can record correctly

The unit automatically identifies the type of tape.

Normal position/TYPE I	<input type="radio"/>
High position/TYPE II	<input type="radio"/>
Metal position/TYPE IV	<input type="radio"/>

How to advance the leader tape ⁴

Wind the leader tape forward so that recording can start as soon as you press the button. This is not necessary if one-touch editing from CDs.

About Dolby noise-reduction

The Dolby noise-reduction system is designed to effectively reduce the annoying high-frequency "hissing" noise typical of cassette tapes. During recording, the system functions to increase the high-frequency sound level, and then, during playback, that same portion is weakened to bring it back to the previous level. This unit is equipped with Dolby B NR.

Dolby B-type noise reduction:

Noise is reduced to about one-third.

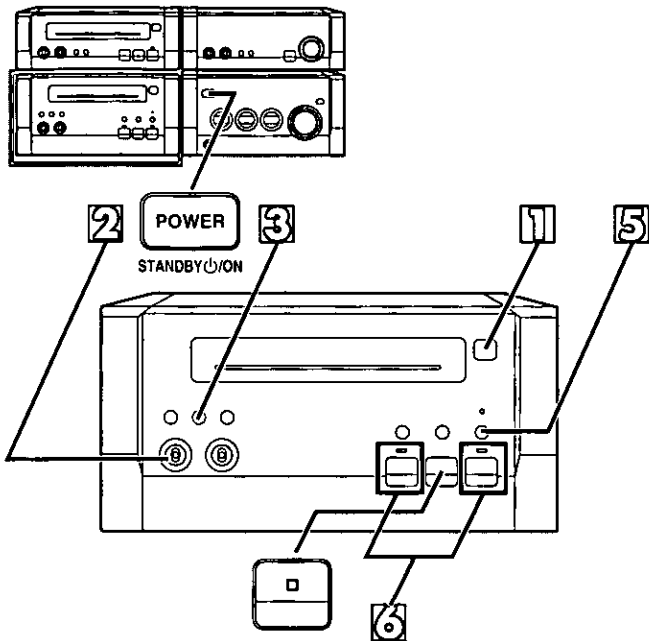
Use this system when playing back tapes recorded by the Dolby-B noise-reduction system, such as prerecorded music tapes, etc.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol **DD** are trademarks of Dolby Laboratories Licensing Corporation.

Volume and sound quality in recording

Changes to volume or sound quality are not recorded on tapes at all.

Recording from radio broadcasts



Preparation:

- Advance the tape to a point from where recording can start immediately.
- Switch on the power.

1 Press \triangle OPEN/CLOSE on deck, and then insert the tape with the exposed part of the tape facing inward.

Insert the cassette tape until it touches the back of the compartment.

Press \triangle OPEN/CLOSE once again to close the holder.

2 To record in Dolby B NR:

Operate DOLBY NR to select Dolby NR ON.

3 Press REV MODE to select the reverse mode.

\rightarrow : One side will record, and then the tape will stop automatically at the tape end.

\leftrightarrow : Both sides will record (forward side \rightarrow reverse side), and then the tape will stop automatically at the tape end.

\leftarrow : Same as above (When you press REC PAUSE, " \leftarrow " will be automatically switched over to " \leftrightarrow ").

4 Tune in the desired station.

(\Rightarrow page 13.)

5 Press REC PAUSE to put the cassette deck into the recording standby mode.

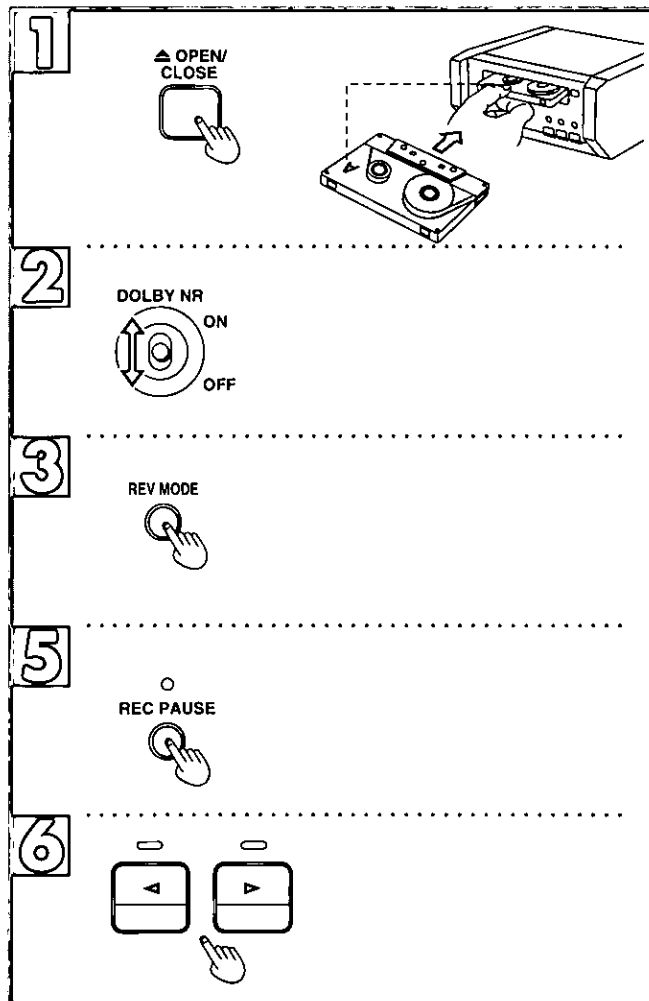
REC PAUSE indicator will light.

The playback indicators above \triangleleft or \triangleright will start flashing.

6 Press \triangleleft or \triangleright to start recording.

\triangleright : To begin recording from the forward side.

\triangleleft : To begin recording from the reverse side.



To stop recording

Press \square .

To display the tape counter while recording

Press DISPLAY on the remote control.

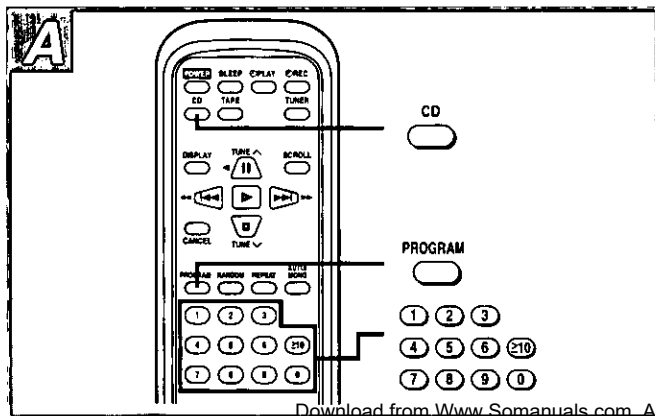
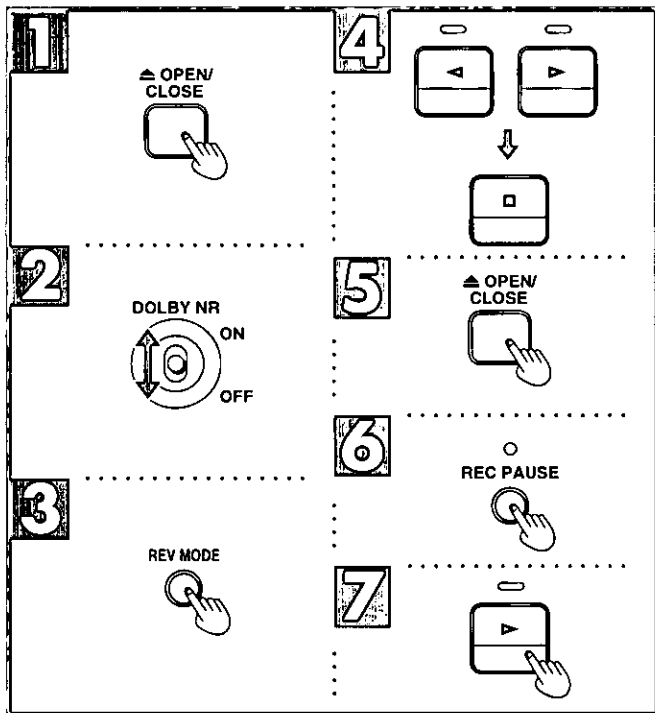
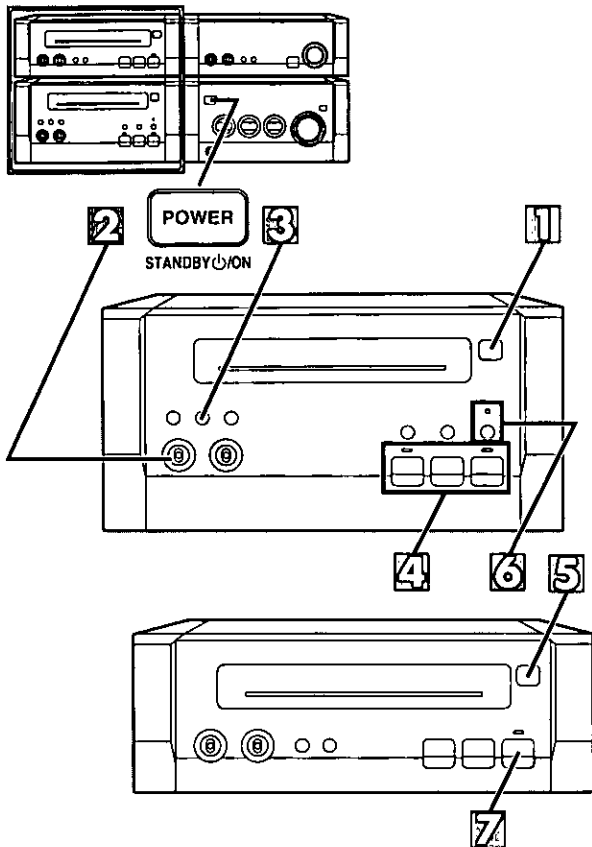
The tape counter will be displayed for approximately 5 seconds. This is a useful way for knowing what point of the tape you're at.

To cut an unnecessary part while recording

1. Press REC PAUSE.

The cassette deck will go into the recording standby state.

2. To resume recording, press \triangleleft or \triangleright , whichever playback indicator is flashing.



Normal recording

Preparation:

Switch on the power.

- 1** Press Δ OPEN/CLOSE on deck, and then insert the tape with the exposed part of the tape facing inward.
Press Δ OPEN/CLOSE once again to close the holder.
- 2** To record in Dolby B NR:
Operate DOLBY NR to select Dolby NR ON.
- 3** Press REV MODE to select the reverse mode.
 - \rightarrow : One side will record, and then the tape will stop automatically at the tape end.
 - \leftrightarrow : Both sides will record (forward side \rightarrow reverse side), and then the tape will stop automatically at the tape end.
 - \leftarrow : Same as above (When you press REC PAUSE, " \leftarrow " will be automatically switched over to " \leftrightarrow ").
- 4** Set the tape travel direction.
To change the tape travel direction, first press \blacktriangleleft or \blacktriangleright on the cassette deck, then press \square .
 - \blacktriangleright : Recording from the forward side
 - \blacktriangleleft : Recording from the reverse side
- 5** Insert a CD in the tray.
(\rightarrow page 14.)
- 6** Press REC PAUSE to put the cassette deck into the recording standby mode.
REC PAUSE indicator will light.
- 7** Press \blacktriangleright on the CD player.
Recording will automatically start corresponding to the tape travel direction.

Approximately 4 seconds after the CD finishes playing, the cassette deck will automatically put recording on standby.

To stop recording

•To add a 4 second silent interval before stopping

Press \square on the CD player.

The cassette deck will go into the recording standby state.

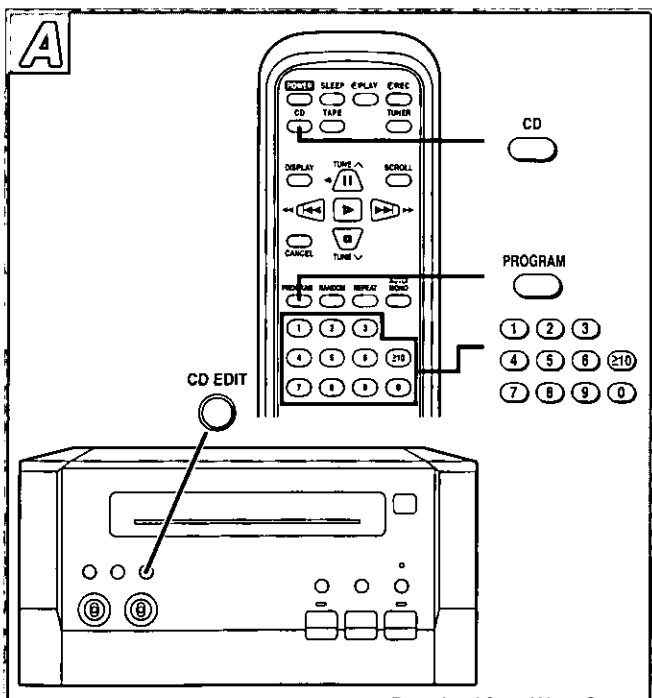
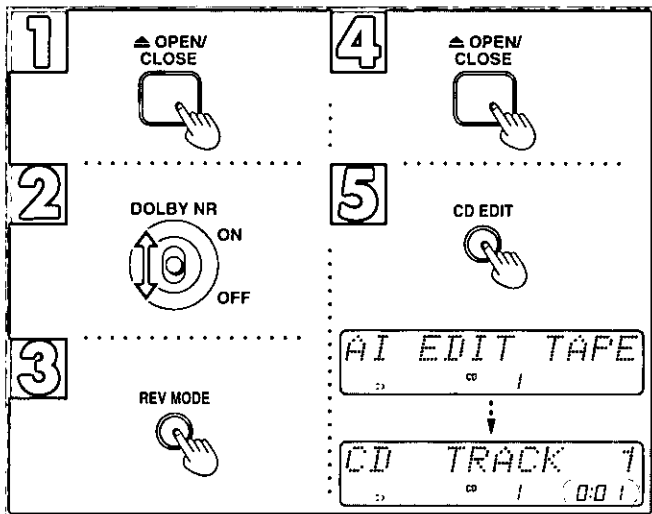
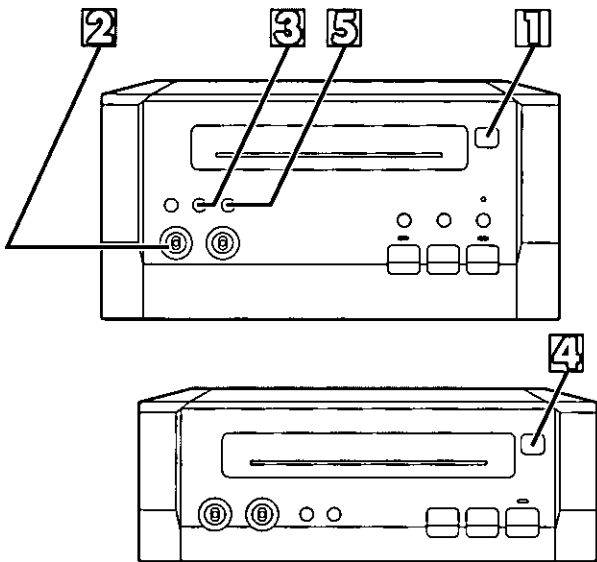
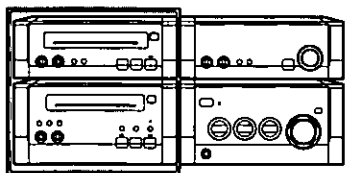
•To stop recording without a silent interval

Press \square on the cassette deck.

The CD player will not stop.

To record programmed tracks \square

- 1** Perform steps **1**–**5** above, and then press CD on the remote control.
- 2** Press PROGRAM on the remote control.
- 3** Select the track number from the remote control with the numeric button(s).
- 4** Repeat step **3** until you have programmed all tracks (max. 24 tracks).
- 5** Perform steps **6** and **7** above.



One-touch editing (AI EDIT)

The tape deck automatically reads the length of the loaded tape, and then calculates which tracks go on which side of the tape so that no track is cut in the middle at the end of either side. Recording will begin from the first track of the disc. It will continue through to the last track of the disc and then stop automatically.

One-touch editing automatically positions the leader tape for you, so you don't have to do it manually.

1 Press Δ OPEN/CLOSE on deck, and then insert a tape.
Press Δ OPEN/CLOSE once again to close the holder.

2 To record in Dolby B NR:
Operate DOLBY NR to select Dolby NR ON.

3 Press REV MODE to select the reverse mode.
 \leftarrow : One side will record, and then the tape will stop automatically at the end of the tape.
 \leftrightarrow : Both sides will record (forward side \rightarrow reverse side), and then the tape will stop automatically at the end of the tape.
 $\leftarrow \rightarrow$: Same as above (When you press CD EDIT, " $\leftarrow \rightarrow$ ") will be automatically switched over to " \leftrightarrow ").

4 Insert a CD in the tray.
(= page 14.)

5 Press CD EDIT.
The deck will rewind the tape and recording will start. In the meantime, "AI EDIT TAPE" will scroll across the display from right to left. However, it will take a moment for recording to actually begin.

To stop one-touch editing

Press \square on the cassette deck.
The CD player will also stop.
"EDIT OUT" will scroll across the display from right to left.

When tracks are allotted to side B:

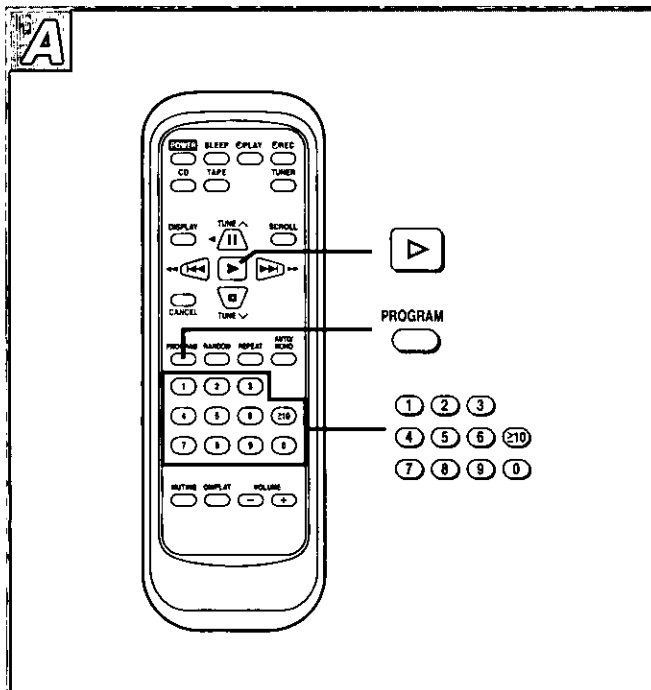
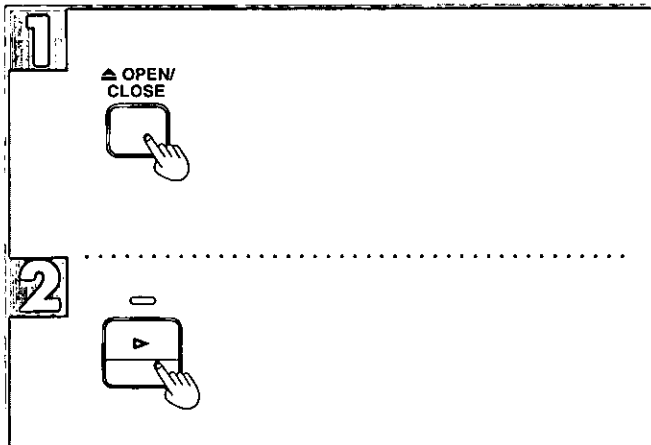
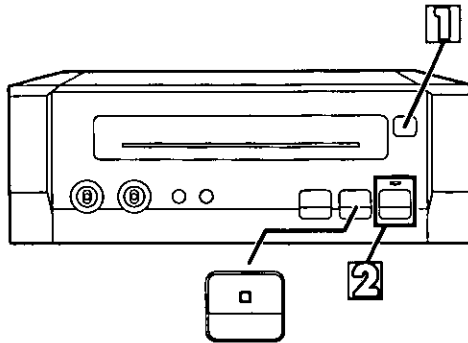
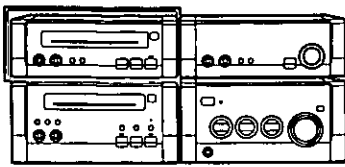
After recording the allotted tracks on side A, the cassette deck will continue recording on side A and will make a blank portion on side A in order to measure the proper length of the tape.

After edit-recording has finished:

The tape deck automatically puts recording on standby. In the meantime, if "LINK" flashes on the display, there is enough space on the tape that you can continue recording from another CD (= page 24).
If you want to link the tracks, do not press \square on the CD player.

To edit-record programmed tracks \square

- 1 Perform steps 1-4 above, and then press CD and PROGRAM on the remote control.
- 2 Select the track number from the remote control with the numeric buttons.
- 3 Repeat step 2 until you have programmed all tracks (max. 24 tracks).
- 4 Press CD EDIT. Recording will begin.



Recording from compact discs

Recording onto left over space on tapes (LINK)

After the edit-recording of a CD has finished, you can subsequently edit-record other CD(s) on the remaining blank portion of the tape.

For your reference:

It is better to use a tape slightly longer than the CD playing time when recording.

You can link up another CD when "LINK" flashes after editing a CD.

1 Press Δ OPEN/CLOSE to replace the CD with another one.

Press Δ OPEN/CLOSE once again to close the tray.

The display shows the time remaining on the tape for a few seconds.

2 Press \triangleright .

Linking will start.

As long as there is space on the tape to record, when recording has finished, the cassette deck will put linking on standby.

To continue linking tracks

Repeat steps 1 and 2.

To cancel the LINK function

Press \square on the CD player.

"EDIT OUT" will scroll across the display from right to left.

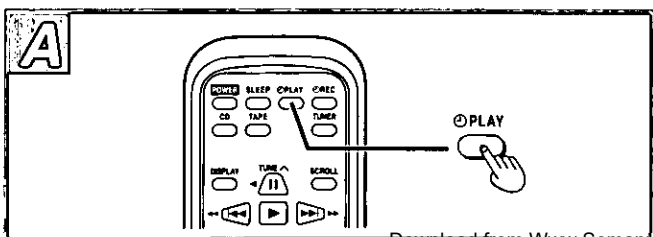
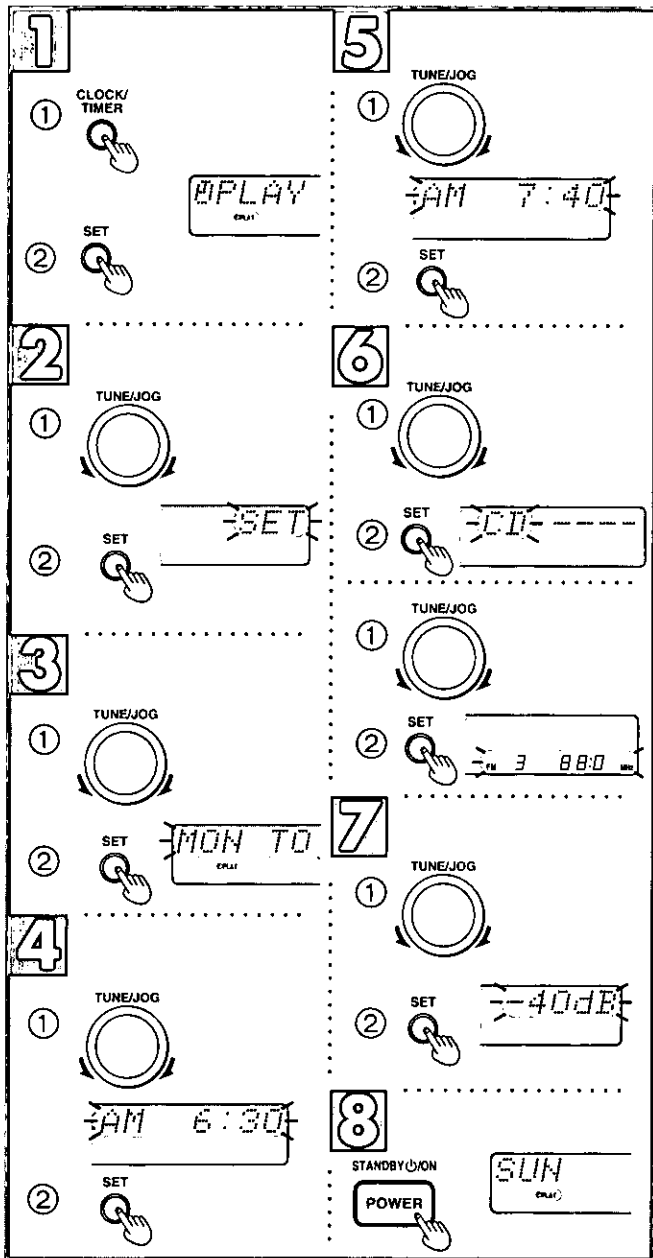
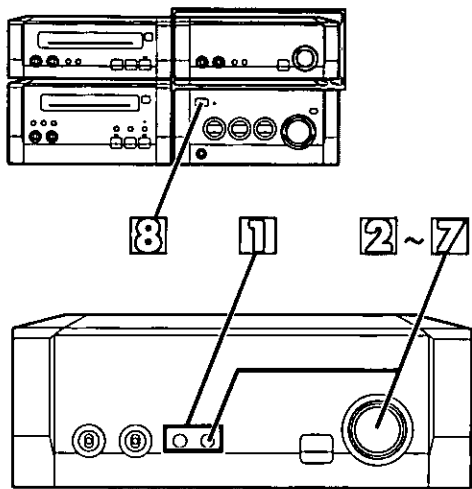
(Note)

Linking cannot be done if the time remaining on the cassette is too short to fit any of the songs on the loaded CD.

Linking programmed tracks

- 1 Perform step 1 above, and then press PROGRAM on the remote control.
- 2 Select the track number from the remote control with the numeric button(s).
- 3 Repeat step 2 until you have programmed all tracks (max. 24 tracks).
- 4 Press \triangleright . Linking will begin.

Using the timer



Setting the play timer

Select this timer when you want to use the timer as an alarm clock. You can wake up listening to music (CD, tuner, tape) at a desired volume level and time.

The example in the figure shows how to set the play timer for; playing a CD at -40 dB everyday from Monday through Friday 6:30 A.M. to 7:40 A.M.

Preparation

- ① Turn on the power.
- ② Set the time (→ page 11).
- ③ Preset radio stations if you want the timer to start playing the radio. (→ page 12)

- ① **Press CLOCK/TIMER to select "⊙ PLAY".**
CLOCK → ⊙ PLAY → ⊙ REC
Original display ←
- ② **Press SET within 10 seconds.**
- ② **Turn TUNE/JOG to select "⊙ PLAY SET".**
② **Press SET.**
- ③ **Turn TUNE/JOG to select the day.**
"SUN" "MON"-"FRI" "SAT"=One day from Sunday to Saturday
"SUN TO SAT"=Everyday from Sunday to Saturday
"MON TO SAT"=Everyday from Monday to Saturday
"MON TO FRI"=Everyday from Monday to Friday
"SAT, SUN"=Saturday and Sunday only

② **Press SET.**

- ④ **Turn TUNE/JOG to select the start time.**
② **Press SET.**

- ⑤ **Turn TUNE/JOG to select the finish time.**
② **Press SET.**

- ⑥ **Turn TUNE/JOG to select the source.**
CD ← TUNER ← EXT ← TAPE

- Insert a CD or tape if you select these sources.
- Set the timer on the external source for the same time if you select this source.

② **Press SET.**

If you have selected tuner

- ① **Turn TUNE/JOG to select a preset channel.**
② **Press SET.**

- ⑦ **Turn TUNE/JOG to set the volume you want the unit to start at.**
② **Press SET.**

② **Press SET.**

The unit is now in the timer standby mode. After displaying the day, start time, finish time, source and volume for 3 seconds each, the panel will return to the original display.

- ⑧ **Press POWER to switch the power to standby mode.**

Please confirm "⊙ PLAY".

The timer play will start at the preset time with volume increasing gradually up to the volume level you preset.

To cancel the timer

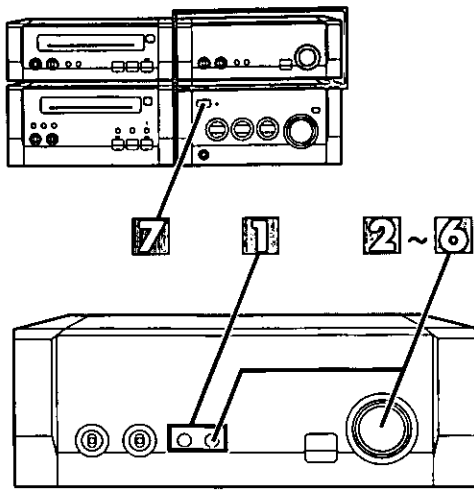
• From the remote control ④

Press ⊙ PLAY so that "⊙ PLAY" goes out.

• On the main unit

① Press CLOCK/TIMER to select "⊙ PLAY" and press SET.

② Turn TUNE/JOG to select "⊙ PLAY CANCEL" and press SET.



Setting the record timer

Use this timer to record radio programs when you are out. The system will record the program you set at the time you set. The following example in the figure shows how to set the record timer for; recording preset channel no. 3 on Saturday from 6:30 P.M. to 7:30 P.M.

Preparation:

- ① Turn on the power.
- ② Set the time (⇒ page 11).

1 ① Press **CLOCK/TIMER** to select "⊙ REC".
CLOCK→⊙ PLAY→⊙ REC
←Original display←

② Press **SET** within 10 seconds.

2 ① Turn **TUNE/JOG** to select "⊙ REC SET".
② Press **SET**.

3 ① Turn **TUNE/JOG** to select the day.
"SUN" "MON"-"FRI" "SAT"=One day from Sunday to Saturday
"SUN TO SAT"=Everyday from Sunday to Saturday

② Press **SET**.

4 ① Turn **TUNE/JOG** to select the start time.
② Press **SET**.

5 ① Turn **TUNE/JOG** to select the finish time.
② Press **SET**.

6 ① Turn **TUNE/JOG** to select a preset channel.
② Press **SET**.

The unit is now in the timer standby mode. After displaying the day, start time, finish time, source and recording device for 3 seconds each, the panel will return to the original display.

7 Press **POWER** to switch the power to standby mode.

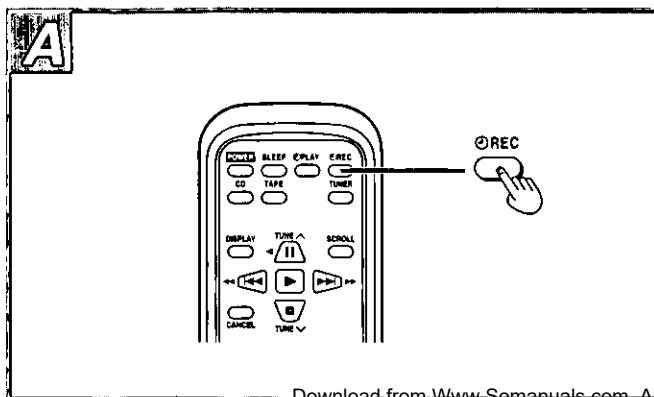
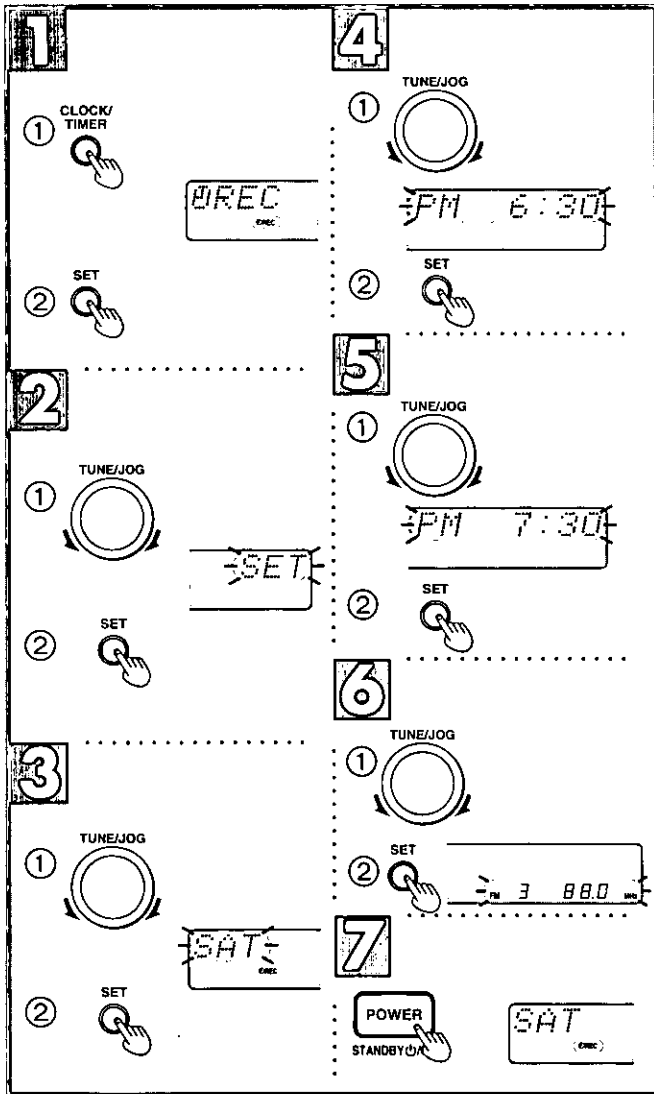
Please confirm "⊙ REC".

The tuner recording will start 30 seconds before the set time. The sound will be automatically muted during timer recording.

To cancel the timer:

- From the remote control Press ⊙ REC so that "⊙ REC" goes out.
- On the main unit

- ① Press **CLOCK/TIMER** to select "⊙ REC" and press **SET**.
- ② Turn **TUNE/JOG** to select "⊙ REC CANCEL" and press **SET**.



Using the timer

Using the play/record timer

If you set the timer incorrectly

Repeat the procedure from step 1.

Checking the timers

Press **CLOCK/TIMER** to select “⊖ PLAY” (or “⊖ REC”).

The contents of the timer selected will be displayed in the following order.

Day→Start time→Finish time→Source→Volume (or “REC TAPE”)

You can check the settings even when the system is OFF.

To enjoy the desired source after the timer setting is completed

The volume level and music source are stored in the timer memory and the timer will start in these preset conditions.

1. Turn on the power and start playing the desired source.
2. Reset reverse mode if you have changed it, confirm that a disc or cassette is inserted, then press power to put the unit on standby.

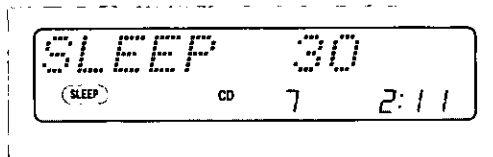
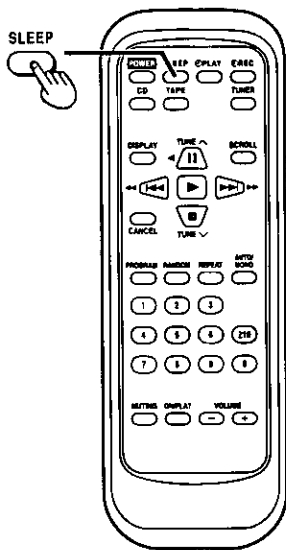
Turning the timer ON/OFF

As long as “⊖ PLAY” or “⊖ REC” is displayed, the timer will come on as set.

You can turn the timer ON/OFF by pressing ⊖ PLAY (for play timer) or ⊖ REC (for record timer) on the remote control while the system is OFF.

Note

- If the power is on, the timer will not function. The system must be in the standby mode.
- If you switch the power to the standby mode while the play/record timer is functioning, the OFF time setting will not be activated.



Using the timer

To use the sleep timer

by remote control only

The system will go into power standby mode at the set time (max. 2 hours, set every half hour), so you can go to sleep listening to music.

The example in the figure shows how to set the system to standby mode after 30 minutes.

While enjoying the desired source:

Press **SLEEP**.

"SLEEP" lights up.

Each time you press the button, the display will change as follows:

SLEEP 30 → SLEEP 60 → SLEEP 90

↑ ↓
SLEEP OFF ←————→ SLEEP 120

To cancel the sleep timer

Press SLEEP to select "SLEEP OFF".

"SLEEP" goes out.

To confirm the remaining time

(While sleep timer is functioning:)

Press SLEEP.

The remaining time will be displayed for 5 seconds.

To change the timer setting while sleep timer is functioning

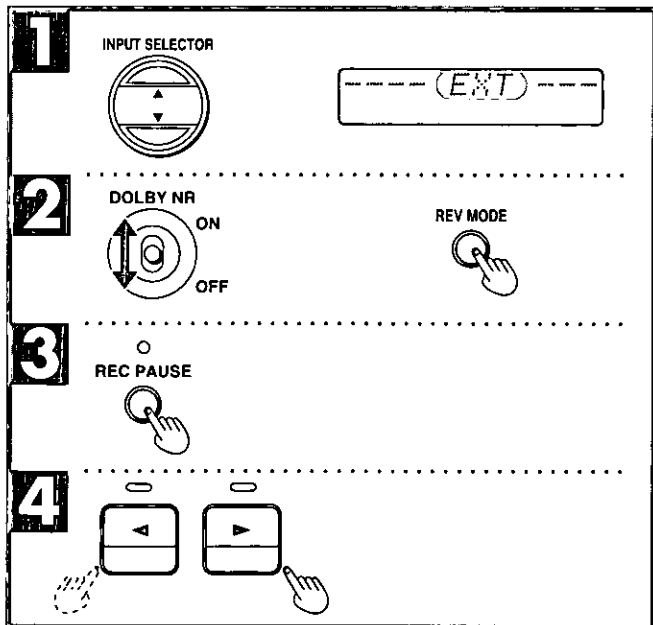
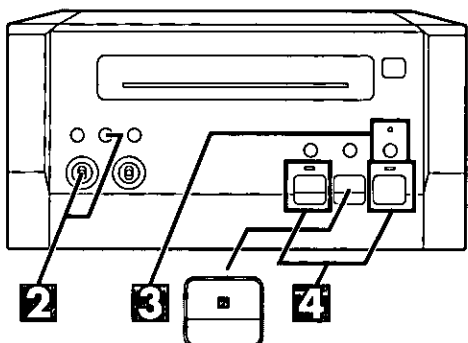
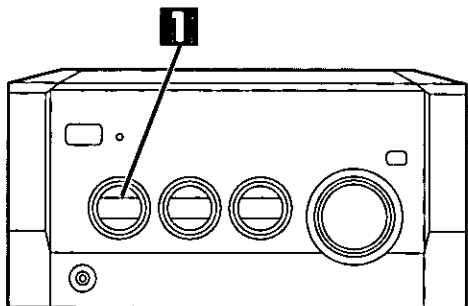
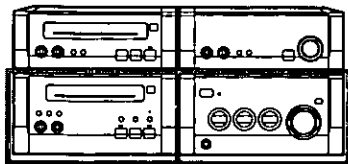
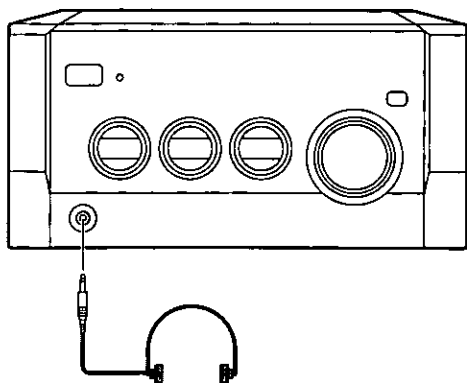
1. Press SLEEP.

The remaining time will be displayed for 5 seconds.

2. Press SLEEP again to select the desired sleep timer.

Using two timers together

You can use the sleep timer, play timer, and record timer together. Be aware that the sleep timer always has precedence. Ensure the times do not overlap.

A**B**

Using an external unit

Listening to an external source

- 1** Press **INPUT SELECTOR** to select the external source (**EXT**).
Each time you press this button,
TUNER ↔ CD ↔ TAPE ↔ EXT
↑
- 2** Operate the unit which is connected to the system.
See the instruction manual of the unit concerned for operation.

Recording from an external source **A**

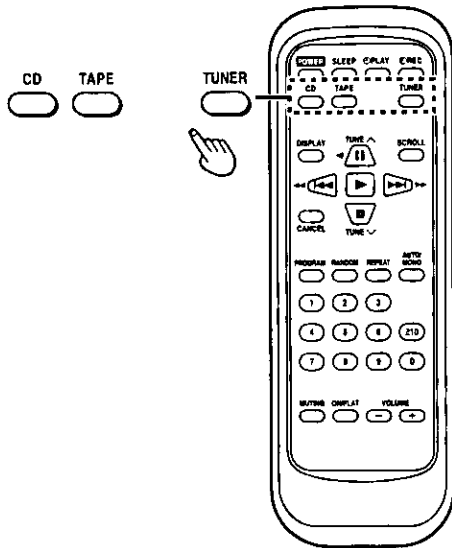
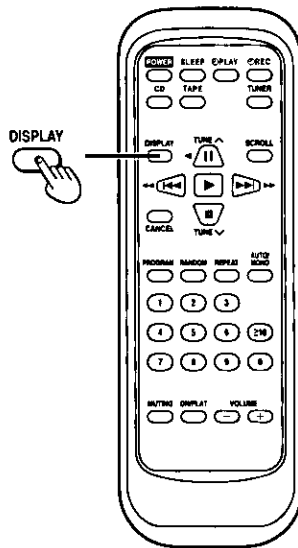
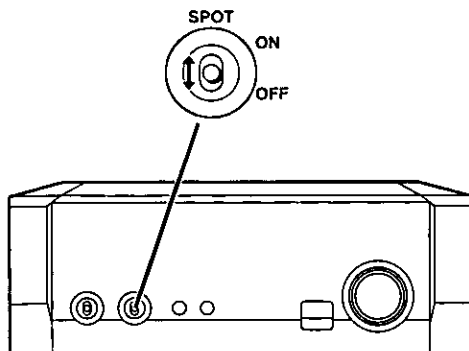
- 1** Press **INPUT SELECTOR** to select the external source (**EXT**).
- 2** Select the Dolby noise reduction and reverse mode.
- 3** Press **REC PAUSE** to put the cassette deck into the recording standby mode.
- 4** Press ◀ or ▶ to start recording.
- 5** Start playing the source to be recorded.
See the instruction manual of the unit concerned for operation.

To stop recording

Press ■ on the cassette deck.

To use headphones **B**

- Before connecting, reduce the volume level.
- Avoid listening for prolonged periods of time to prevent hearing damage.
- Plug type: 3.5 mm (1/8") stereo

A**B****C**

Convenient functions

One-touch play

by remote control only

When the system is on standby, playing starts automatically when you press one of the following buttons.

Listening to radio broadcasts

TUNER

The station heard previously is tuned in.

Listening to compact discs

CD

Play starts from track 1 of the CD played previously.

Listening to tapes

TAPE

Playback starts the tape in the direction previously selected.

Changing the display

Press DISPLAY.

The display changes in different ways depending on the mode the unit is in and the type of signals being received.

Note

When the tape counter or "TUNED STEREO" display is selected, a display is shown for 5 seconds, then the original display is resumed.

When the radio is on**•If a station is not tuned in**

Blank display ↔ Tape counter

•If tuned in to a station

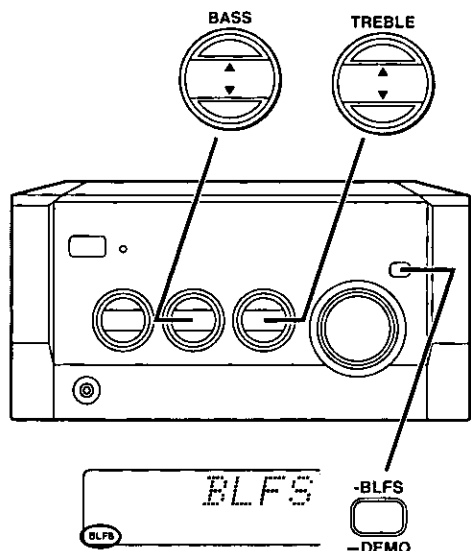
TUNED STEREO display ↔ tape counter

When in CD mode

CD display ↔ tape counter

The sidelight

The sidelight (the blue light on either side of the unit) turns on and off when the SPOT switch is turned ON/OFF.

A

Convenient functions

Changing the tone

To adjust the tone quality **A**

Press **BASS** to adjust the low-frequency sound.

Press **TREBLE** to adjust the high-frequency sound.

Note

The effect works only with playback. It cannot be used in recording.

Emphasizing low frequency sounds

The Brisk Low Frequency Sound (BLFS) function boosts the low frequency range of music and gives it power.

Press **-BLFS, -DEMO**.

To cancel

Press **-BLFS, -DEMO** to clear "BLFS" from the panel.

Note

Adjusting the tone with the **BASS** and **TREBLE** controls cancels **BLFS**.

Adjusting sound quality with the remote control

Press **ON/FLAT**.

Every time you press the button:

FLAT → **BLFS** → **TONE**

"**TONE**" is displayed only if the tone has been adjusted with **BASS** or **TREBLE**.

To mute the volume **B**

This feature is convenient when you have a telephone call, etc.

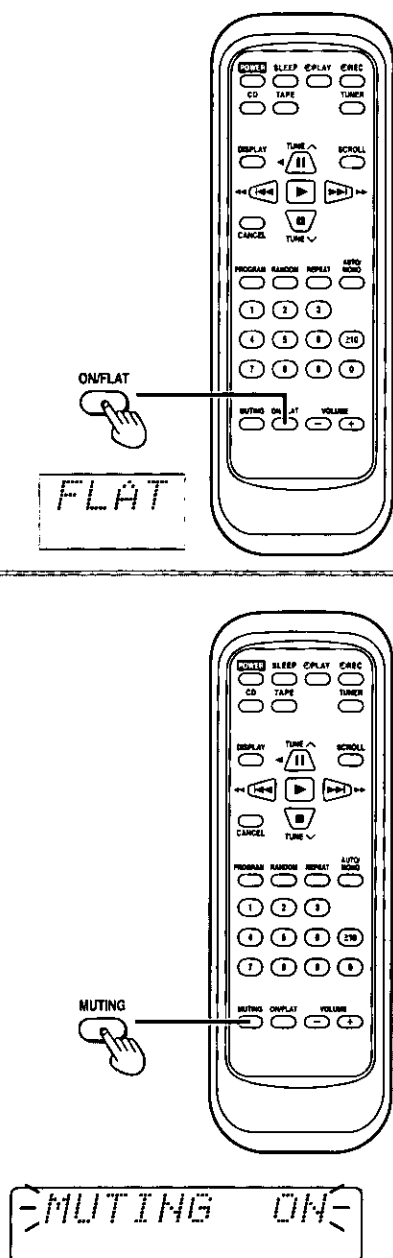
by remote control only

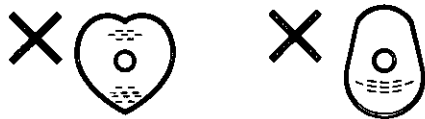
Press **MUTING**.

"**MUTING ON**" will flash.

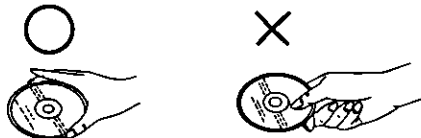
To cancel, press **MUTING** once again. ("MUTING OFF" lights up.)

To cancel from the amplifier, reduce the volume level to the minimum position (— dB) and then reset to the desired volume. Muting is also cancelled if you turn **OFF** the system.

B

A**B**

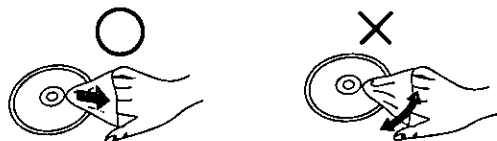
How to hold CDs



Do not touch the recorded surface.

C

How to clean CDs



Wipe from inside outward.

D

How to take up tape slack

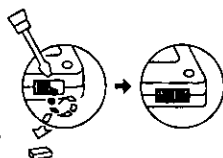
**E**

Side A



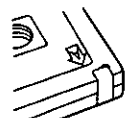
Tab for side "B"

Tab for side "A"



To re-record

Normal tape




Hi-position tape



Discrimination hole

Concerning CDs

With this system, you can only play CDs having this mark.

However, do not use irregular shape CDs. CDs of the sort can damage the unit. 

**Handling precautions****B-C**

- If you are taking the CD from a cold to a warm environment, moisture may form on the CD. Wipe this off with a soft, dry, lint-free cloth before using the CD.
- Do not write on the label side with a ball-point pen or other writing instrument.
- Do not use record cleaning sprays, benzene, thinner, static electricity prevention liquids or any other solvent.
- Do not attach labels or stickers to CDs. (Do not use CDs with exposed adhesive from tape or left over peeled off stickers.)
- Do not use scratch-proof protectors or covers other than those specified for use with this system.

Storage precautions

Be sure to store CDs in their cases to protect them from dust, scratches, and warping.

Do not place or store CDs in the following places

- Locations exposed to direct sunlight
- Humid or dusty locations
- Locations directly exposed to a heat vent or heating appliance
- In the glove compartment or on the rear deck of an automobile

Concerning cassette tapes**Selection of cassette tapes**

Tapes can get caught on the capstans. Use caution with the following types of tapes.

Cassette tapes exceeding 100 minutes

Tapes are made of a thin film material. Do not repeatedly advance and stop the tape, fast-forward it or rewind it.

Endless-tapes

For this unit, it is recommended to use tapes which are appropriate to the auto reverse mechanism.

Always read the instructions provided with your tapes.

Tape slack**D**

Tape slack may cause the tape to break.

Erasure prevention**E**

Use a screwdriver or similar object to break out the tab.

Storage precautions

Do not place or store tapes in the following places;

- In high temperature (35°C or higher) or high humidity (80% or higher) areas
- In a strong magnetic field (near a speaker, on top of a TV, etc.) This can erase a recording.
- Locations exposed to direct sunlight

TUNER

■ Pre-amplifier section

Input sensitivity/impedance	
EXT	300 mV/15 kΩ
Output level	
EXT	250 mV/1.5 kΩ

■ FM tuner section

Frequency range	
	87.9–107.9 MHz (0.2 MHz steps)
	87.5–108.0 MHz (0.1 MHz steps)

S/N

MONO	70 dB (75 dB, IHF)
Antenna terminal(s)	75Ω (unbalanced)

■ AM tuner section

Frequency range	
	520–1710 kHz (10 kHz steps)

■ Timer section

Clock	Quartz-lock type
Function	24-hour programmable;
	Play timer (1 time), Rec timer (1 time),
	Sleep (120 min, 30 min intervals)

■ General

Dimensions (W×H×D)	
	202×76×262.5 mm
	(7.95"×2.99"×10.33")
Weight	1.2 kg (2.7 lb.)

AMPLIFIER

■ Amplifier section

Power output	
	40 Hz–16 kHz, THD 1%, both channels
driven	2×15 W (6Ω)
Load impedance	6Ω

■ General

Power supply	AC 120 V, 60 Hz
Power consumption	70 W
Dimensions (W×H×D)	
	202×104.5×273 mm
	(7 ¹⁵ / ₁₆ "×4 ¹ / ₈ "×11 ¹⁷ / ₃₂ ")
Weight	3.6 kg (7.4 lb.)

CD PLAYER

■ Audio

DA converter	1 bit 2 DAC MASH
■ Pickup	
Wavelength	780 nm
■ General	
Dimensions (W×H×D)	202×76×254 mm
	(7 ¹⁵ / ₁₆ "×2 ³¹ / ₃₂ "×10")
Weight	1.4 kg (3.1 lb.)

CASSETTE DECK

Deck system	Stereo cassette deck
Track system	4 track, 2 channel
Recording system	AC bias
Bias frequency	100 kHz
Erasing system	AC erase
Heads	

Recording/Playback head

	Permalloy head
Erasing head	Double gap ferrite head

Motors

Capstan drive	DC servo motor
Reel table drive	DC motor

Tape speed	4.8 cm/s (1–7/8 ips)
Wow and flutter	0.1% (WRMS)

Fast forward and rewind times

	Approx. 52 seconds with
	C-60 cassette tape

Frequency response (Dolby NR off)

TYPE I (NORMAL)	20 Hz–17 kHz
TYPE II (HIGH)	20 Hz–17 kHz
TYPE IV (METAL)	20 Hz–17 kHz

S/N (Signal level=max recording level,

TYPE II type tape)	
NR off	56 dB (A weighted)
Dolby B NR on	64 dB (A weighted)

Input sensitivity and impedance

REC (IN)	280 mV/23 kΩ
----------	--------------

Output voltage and impedance

PLAY (OUT)	280 mV/470Ω
------------	-------------

■ General

Dimensions (W×H×D)	
	202×104.5×271 mm
	(7 ¹⁵ / ₁₆ "×4 ¹ / ₈ "×10 ¹¹ / ₁₆ ")
Weight	1.6 kg (3.5 lb.)

SPEAKER SYSTEM

Type 2 way, 2 speaker, bass-reflex system

Speaker(s)	
Woofer:	12 cm cone type
Tweeter:	6 cm cone type
Impedance	6Ω
Input power	100 W (Music), 50 W (DIN)
Output sound pressure level	

86 dB/W (1.0 m)

Cross over frequency 6 kHz

Frequency range	55 Hz–30 kHz (–16 dB)
	65 Hz–26 kHz (–10 dB)

■ General

Dimensions (W×H×D)	180×282×215 mm
	(7 ³ / ₃₂ "×11 ³ / ₃₂ "×8 ¹⁵ / ₃₂ ")
Weight	3.5 kg (7.7 lb.)

Notes:

- Specifications are subject to change without notice. Weight and dimensions are approximate.
- Total harmonic distortion is measured by the digital spectrum analyzer.

MASH is a trademark of NTT.

Product Service

Do not attempt to remove the cover(s) or repair the unit yourself. Refer servicing to qualified personnel only.

The servicer will require all components to service your system. Therefore, should service ever be necessary, be sure to bring the entire system.

Product information

For product service, product information or assistance with product operation, refer to the servicer directory.

Troubleshooting guide

Before requesting service, make the below checks. If you can't fix the system as described below, or if something not here listed occurs, contact the place of purchase. To install antennas, make adjustments and the sort, contact the place of purchase.

For detailed instructions, contact an authorized servicenter in the U.S.A. and Panasonic Canada Inc. Customer Care Center in Canada. In the U.S.A. 1-800-211-7262 or web site (<http://www.panasonic.com>) In Canada 905-624-5505 or web site (www.panasonic.ca/faq.html)

Reference pages are given as black circled numbers.

Problem	Probable cause(s)	Suggested remedy
Common Problems		
The power is on but there is no sound.	Is the volume set to the minimum level?	Adjust the volume. ⑩, ⑪, ⑫
Sounds are unfixed.	Are the (+) and (-) speaker cords connected to the wrong terminals?	Connect the cords to the correct terminals. ⑥, ⑦
Left and right sounds are reversed.	Are the left and right speaker cords connected to the opposite terminals?	Connect the cords to the corresponding terminals. ⑥, ⑦
Humming is heard while playing.	A power cord or fluorescent lamp is located in the vicinity of cables.	Keep electric appliances away from the stereo. Try plugging the cord in another way.
Only one speaker is emitting sound.	One of the wires of the speaker cord is disconnected.	Connect the speaker cord correctly. ⑥, ⑦
There is no sound when a source is being played.	The (+) and (-) wires of the speaker cords are shorted.	Switch the system to the standby mode, and reconnect the speaker cords so that they are not shorted. Then switch on the power.
"ERROR" appears on the display.	Wrong operation has been done.	Operate the unit correctly by following the operating instructions.
"U70" appears on the display.	Flat cables are not connected steadily.	Connect the flat cable steadily. ③, ⑦ When the "U70" display is not cleared after the flat cable have been connected properly, the unit is damaged. Consult your dealer.
The clock isn't displayed when the unit is in standby mode.	Is SPOT off?	Turn SPOT on. ④

While listening to FM broadcasts

There is a "rushing noise" during a stereo broadcast which is not audible during a monaural broadcast.	The transmitting station is a long distance away.	If you are using an indoor antenna, change to an outdoor antenna. ③
You hear excessive noise during a stereo broadcast, and occasionally the sound disappears.	The installation location and orientation of the antenna are unsuitable.	
The stereo indicator flickers and does not light completely.	The transmitting station is a long distance away.	Try switching off the TV set or VCR.
	The power of the TV set or VCR is ON.	
The sound during a stereo broadcast is highly distorted.	There is a building or mountain nearby. [Distortion is caused by interference between the signal from the transmitting station (direct wave) and the signal reflected from the building or mountain (reflected wave).]	Use a high-grade outdoor antenna, and install it in a good location, height, and orientation for reception. ③

When there is a television set nearby

The picture on the TV disappears or stripes appear on the screen.	The location and orientation of the antenna are incorrect.	If you are using an indoor antenna, change to an outdoor antenna. ③
	The TV antenna wire is too close to the system.	Separate the antenna wire of the TV set from the system.

Problem	Probable cause(s)	Suggested remedy
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While listening to AM broadcasts

You hear an unusual beat sound.	You are using the system at the same time you are playing a TV set.	Switch off the TV set, or use the system further away from it.
You hear a low-frequency hum.	The antenna wire is too close to the flat cables/power cord.	Move the antenna away from the flat cables/power cord.
	Is the flat cable touching the AM loop antenna?	Separate them. ③, ⑦

While listening to tapes

Sound is low, intermittent, poor quality, noisy, scratchy, or unsteady.	Heads are dirty.	Clean the heads. ⑬
	Dolby noise reduction is set in the wrong position.	Set it to match the Dolby NR recording mode. ⑩
The deck does not enter the recording mode.	The erase-prevention tabs have been removed from the cassette.	Attach tape to cover the space left by removal of the erase-prevention tabs. ⑫

While listening to compact discs

The display will not show the correct indication. Disc play does not start when you press the play button.	The disc is loaded upside down.	Reload the disc. ⑭
	The disc is dirty.	Wipe the disc with a soft cloth. ⑮
	The disc is scratched.	Replace the disc with a new one.
	The disc is badly warped.	
	The disc is a nonstandard one.	Replace the disc with a different one.
There is condensation inside the CD the player.	Wait for 60 minutes before using the CD player.	

During one-touch editing

"NO TAPE" appears on the display.	No tape is loaded into deck.	Load a tape. ⑯
"CHANGE TAPE" appears on the display.	The protector tab on the tape is broken.	Cover the tab's hole with adhesive tape or use another tape. ⑰

While using the remote control

The system cannot be operated with the remote control.	The batteries are installed in the reverse polarity.	Reinsert the batteries in the correct polarity. ⑤
	The batteries are worn.	Replace the batteries with new batteries. ⑤

The servicer will require all components to service your system. Therefore, should service ever be necessary, be sure to bring the entire system.

Maintenance

☐ Maintenance of external surfaces

To clean this unit, use a soft, dry cloth. If the surfaces are extremely dirty, use a soft cloth dipped in a soap-and-water solution or a weak detergent solution.

Wring the cloth well before wiping the unit. Wipe once again with a soft, dry cloth. Never use alcohol, paint thinner, benzine, or chemically treated cloths to clean this unit. Such chemicals may damage the finish of your system.

☑ Tape head care

To assure sound quality for recording and playback, be sure to clean the heads after approximately every 10 hours of use with a head cleaning tape (sold separately).

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