Panasonic®

Portable Stereo Component System
RX-DT770

Operating Instructions
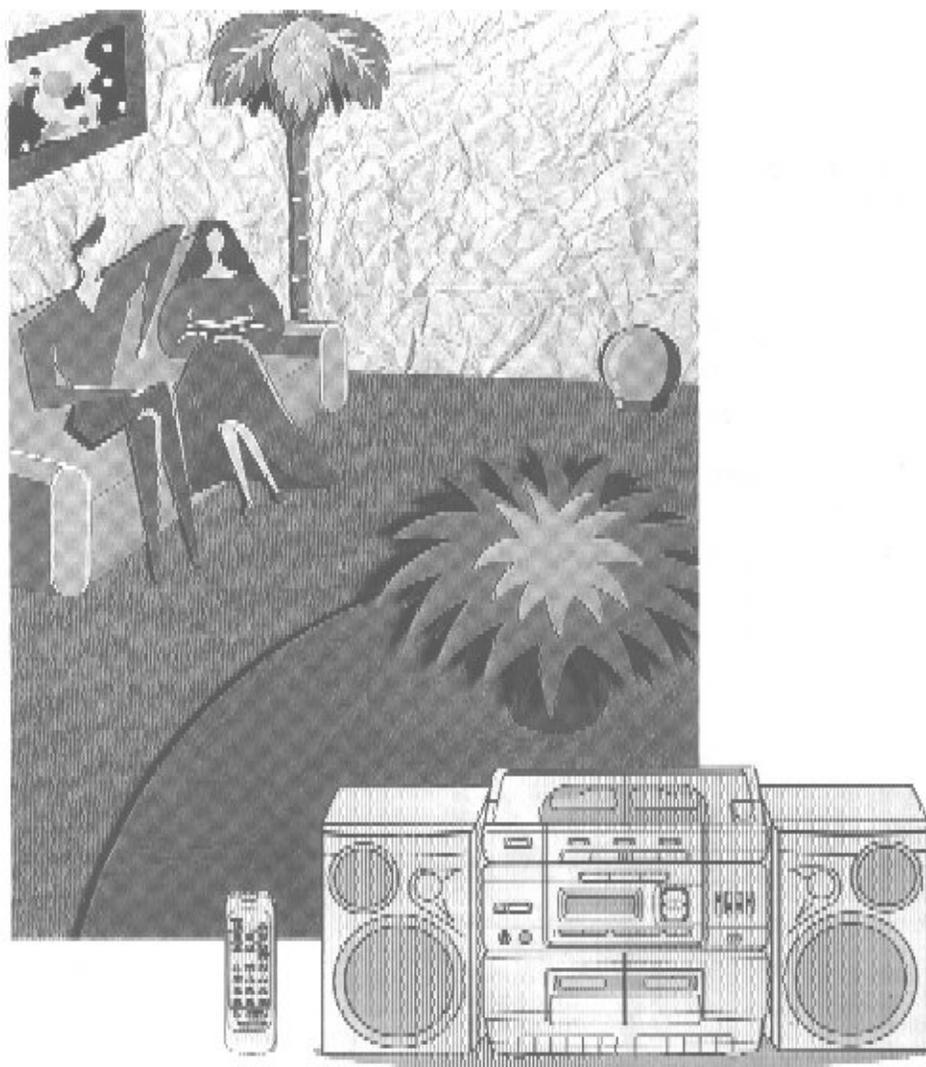
COMPACT
disc
DIGITAL AUDIO

P PC

RQT3287-P

Dear Customer

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

> 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 _____ **RX-DT770** _____
>
> SERIAL NUMBER _____

User memo:

> DATE OF PURCHASE _____
> DEALER NAME _____
> DEALER ADDRESS _____
>
> TELEPHONE NUMBER _____.

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

WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

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.

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.

THE FOLLOWING PHRASES ARE APPLIED ONLY FOR U.S.A.:

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.

Supplied Accessories

Please check and identify the supplied accessories.
(Only for U.S.A.)
To order accessories call MSC Accessory Dept. 1-800-332-5368.

☐ AC power cord (Polarized) .... 1 pc.
(SJA172)

☐ Remote control transmitter .... 1 pc.
(EUR643824)

Use numbers indicated in parentheses when asking for replacement parts.

Table of Contents

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. **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.
2. **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.
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).

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

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 benzine.

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; or
   (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.
   (Only for U.S.A.)
   Call 1-800-545-2672 for the address of an authorized factory servicenter.

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.

Use of batteries

- Do not mix old and new batteries, or batteries of different types (manganese and alkaline, etc.).
- Always remove old, weak or worn-out batteries promptly and dispose of them properly.
- Never subject batteries to excessive heat or flame; do not attempt to disassemble them/and be sure they are not short-circuited.
- If the unit is not to be used for a long period of time or is used only from an AC power source, remove the batteries and store them in a cool, dark place.
- If a battery leaks, remove all batteries and dispose of them properly.
- Thoroughly clean the battery compartment before inserting new batteries.
- If the electrolyte comes into contact with skin or clothes, flush with water immediately.
- Keep batteries out of reach of children.
- Do not use rechargeable type batteries.
- Do not attempt to recharge alkaline or manganese batteries.
- Batteries installed with incorrect polarities may leak and damage the unit.

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Power Sources

To operate on AC power

Connect the included AC power cord to the AC socket of this unit and your household AC outlet.

Household AC outlet
(AC 120 V, 60 Hz)

AC IN ~

AC power cord
(included)
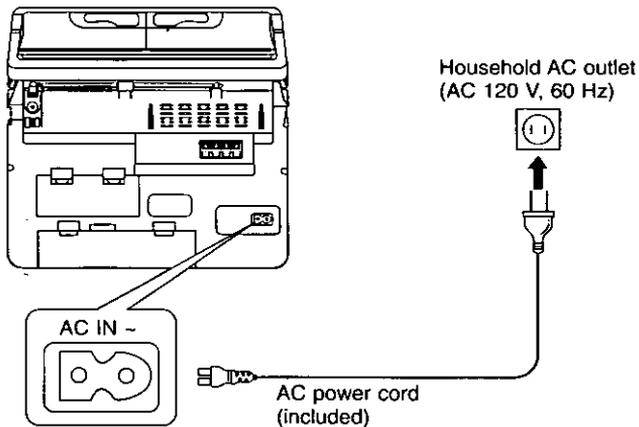
To operate on battery power

Battery installation

Unplug the AC power cord from the household AC outlet and the AC socket of the unit.
Insert eight "D" size batteries (not included) into the battery compartment, making sure that the batteries are installed in the designated numerical order and that the proper polarities are maintained. It is recommended that the memory back-up batteries are installed before you install "D" size batteries (see right of this page).

Inner row ⊖ 1 2 ⊕
⊕ 4 5 3 ⊖
Outer row ⊖ 6 8 7 ⊕
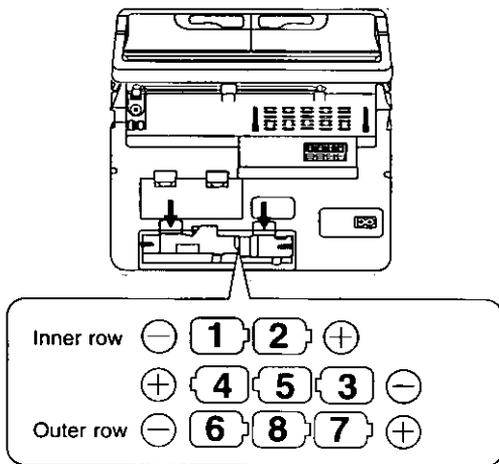
Battery life

When the display of the front panel starts to flash, replace all the batteries with new ones.
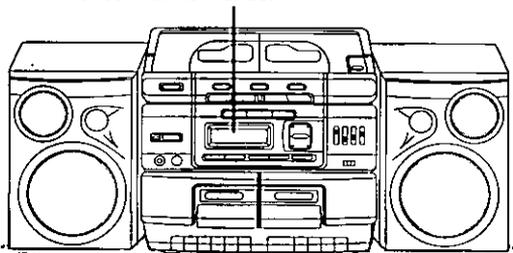
Memory Back-up Batteries

It is recommended that the memory back-up batteries (not included) be installed first to prevent the memory contents from being lost when the power fails, the power cable has been disconnected or the batteries have become flat.

Battery installation

Insert four "AA" batteries (not included) in the order numbered in the illustration below.

⊕ 4 3 ⊖
⊖ 1 2 ⊕
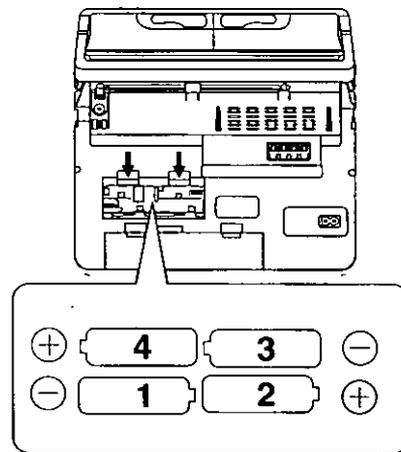
Battery removal

Remove as shown in the figure below.

Bottom of the unit
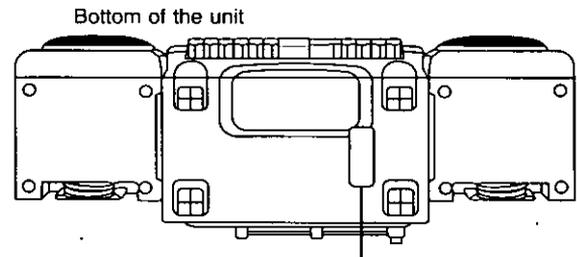
Insert your finger and push out the batteries.

Battery life

● The service life of these batteries is approximately one year.
To preserve the memory contents, connect the power cable to the household AC outlet before replacing all the back-up batteries with new ones.
● When disconnecting the power cable, first turn the unit off by pressing POWER.
The service life of the memory back-up batteries is reduced if the power cable is disconnected from the household AC outlet with the power still supplied.

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Concerning the Remote Control

Battery installation

Insert two "AAA" batteries (not included) in the correct polarities as illustrated. .
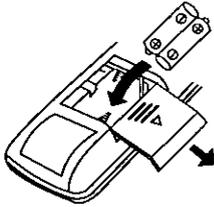
To remove the batteries, pull out the ⊕ side.

Battery life

The battery life is about one year.
Although the battery life varies depending on how often the device is used, the batteries should be replaced about once every year on the average.
The batteries should be replaced if commands from the remote control transmitter do not operate the unit even when transmitter is held close to the front panel.

Correct method of use

Face about 7 meters in front of the sensor.

Remote control signal sensor (SENSOR) .

Transmission window
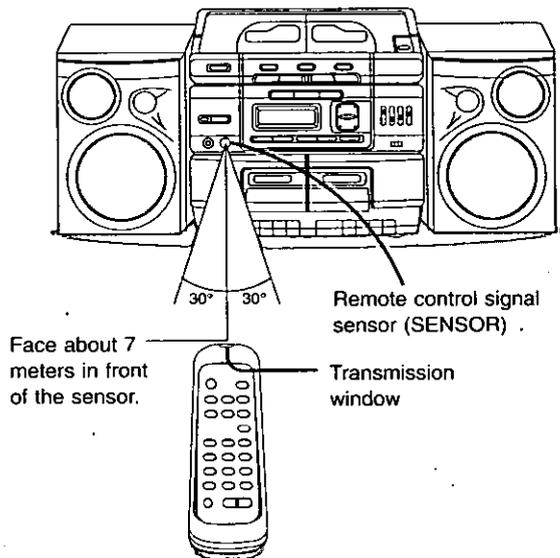
Operation notes

- Do not place obstacles between the remote control signal sensor and remote control unit.
- Do not expose the remote control signal sensor to direct sunlight or to the bright light of an inverter fluorescent light.
- Take care to keep the remote control signal sensor and end of the remote control unit free from dust.
- Do not disassemble or remodel the unit.
- Do not place heavy objects on top of it. ·
- Do not leave it where it will be exposed to direct sunlight.
- Do not spill beverages or other liquids over it.

Using Headphones

PHONES

Headphones (not included)
Plug type: stereo mini
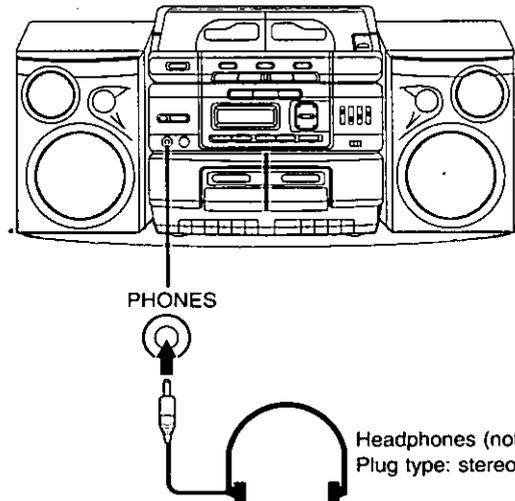
Lower the volume when connecting or disconnecting the headphones.
Avoid listening for prolonged periods of time to prevent hearing damage.

Selecting the Display

(Available only from the remote control)
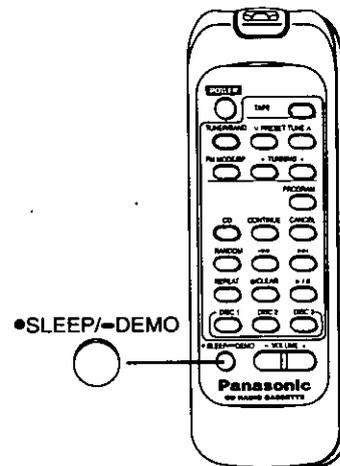
●SLEEP/-DEMO

●SLEEP/-DEMO

Press and hold ●SLEEP/-DEMO.
The display starts demonstration.
To resume normal display, press CD, TAPE, TUNER/BAND as desired.

Speaker System Connection

This unit can be used as a one-piece portable stereo CD system, or a three-piece component system, by attaching or detaching the speaker system.

Before attaching or detaching the speakers, be sure to disconnect the speaker cables from the speaker terminals. Be sure to press POWER to turn off the unit before connecting/disconnecting the speaker cables.

Attaching the speakers

1. **Align the speaker with the main unit as shown in the figure, interlock the grooves and press down.**

Confirm that both speakers are fixed properly.
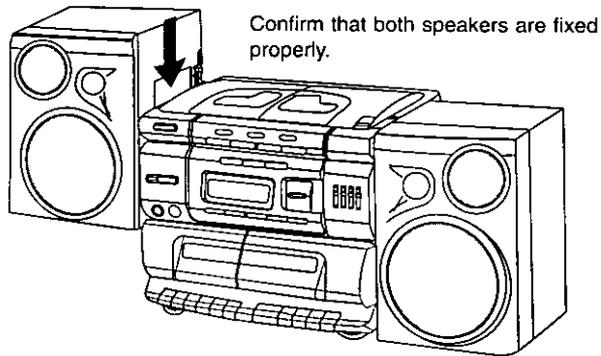
2. **Connect the colored speaker cable to the same colored speaker terminals.**

⊕ R ⊖   ⊖ L ⊕

SPEAKER (IMP 6–16Ω)
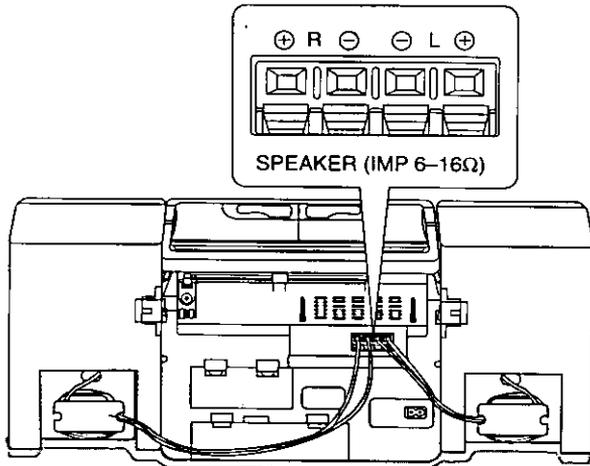
3. **When using the unit with the speakers attached, wind the speaker cables as shown above.**

Note

Since a strong magnet is used for the speaker, keep magnetized commuter passes, tickets or personal credit cards, recorded tapes, watches, etc away from the set. The speaker magnet in the set may damage them.

Detaching the speakers

1. **Unlock the speaker release levers by pulling them in the direction shown below, and slide each speaker up.**
2. **Connect the speaker cables to the speaker terminals.**

RELEASE ⇐   RELEASE ⇒

Caution
Use this speaker only with the recommended system. Failure to do so may lead to damage to the amplifier and/or the speaker, 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.

Location of Controls
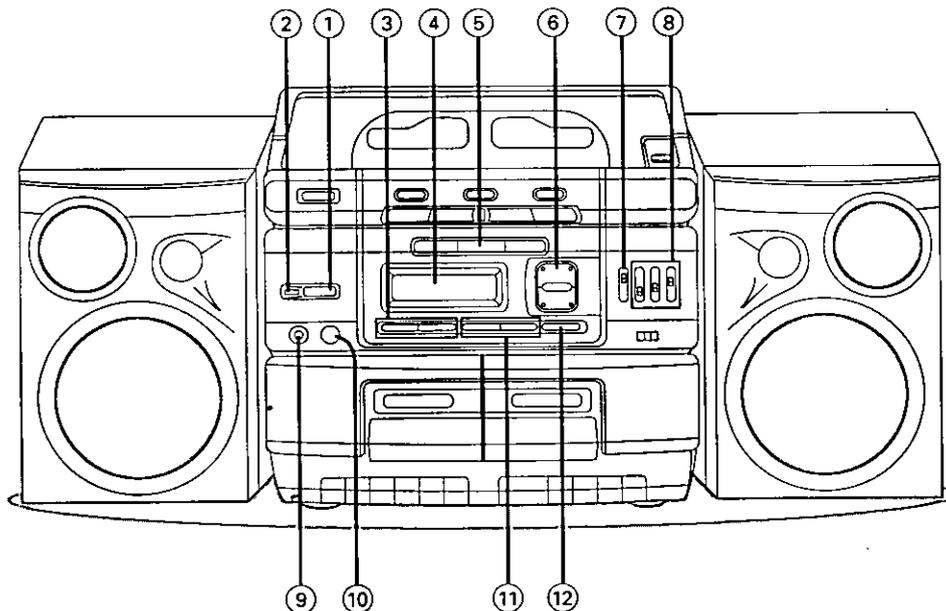
No.	Name	Ref. page
①	Power button ([POWER])	—
②	Power/Battery indicator (PWR/BATT)	—
③	Preset tuning buttons (∨ PRESET TUNING ∧)	16
④	Display panel	5
⑤	Tuner/Band select button (TUNER/BAND)	15
⑥	Volume control (VOLUME +, –)	—
⑦	XBS control (XBS)	—
⑧	Graphic equalizer (GRAPHIC EQUALIZER)	—

No.	Name	Ref. page
⑨	Headphones jack (PHONES)	6
⑩	Remote control signal sensor (SENSOR)	6
⑪	Tuning buttons (– TUNING +)	15
⑫	Memory button (MEMORY)	15

CD controls
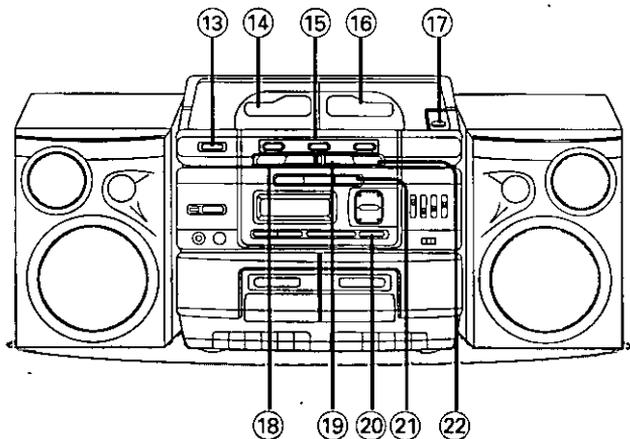
No.	Name	Ref. page
⑬	Disc tray open button (for playing) (▲ CD EJECT)	11
⑭	Playing position (CD PLAYER)	11
⑮	Disc select buttons (DISC 1–3)	11
⑯	Disc storage (CD STORAGE)	11
⑰	Disc storage open button (▲, CD EJECT)	12
⑱	Skip/Search buttons (I◄◄, ►►I)	12
⑲	Stop/clear button (■/CLEAR)	11
⑳	Program button (MEMORY)	13
㉑	CD button (CD)	11
㉒	CD Play/pause button (►/II)	11

Cassette deck controls
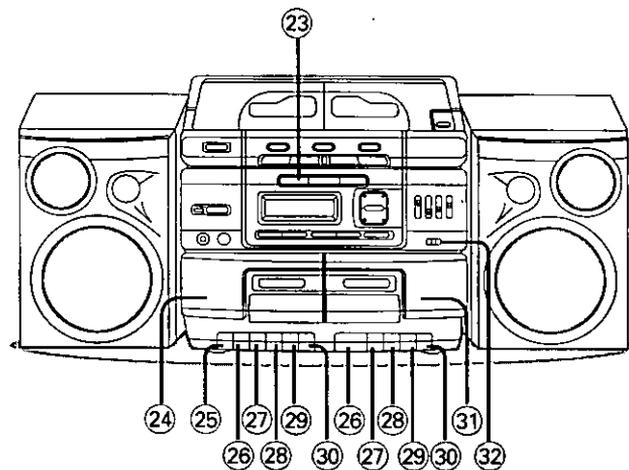
No.	Name	Ref. page
㉓	Tape button (TAPE)	10
㉔	Deck 1 cassette holder	10,22
㉕	Recording button (●REC)	19,21,22
㉖	Playback button (► PLAY)	10
㉗	Rewind/review button (◄◄ REW/REV)	10
㉘	Fast forward/cue button (►► FF/CUE)	10
㉙	Stop/eject button (■/▲ STOP/EJECT)	10
㉚	Pause button (II PAUSE)	10
㉛	Deck 2 cassette holder	10,22
㉜	Tape Speed Edit button (TAPE EDIT)	22

Listening to Tapes

Only normal tapes (TYPE I) can be used with this unit. This unit has a dual cassette system, which means that a tape can be played back with both Deck 1 and Deck 2.
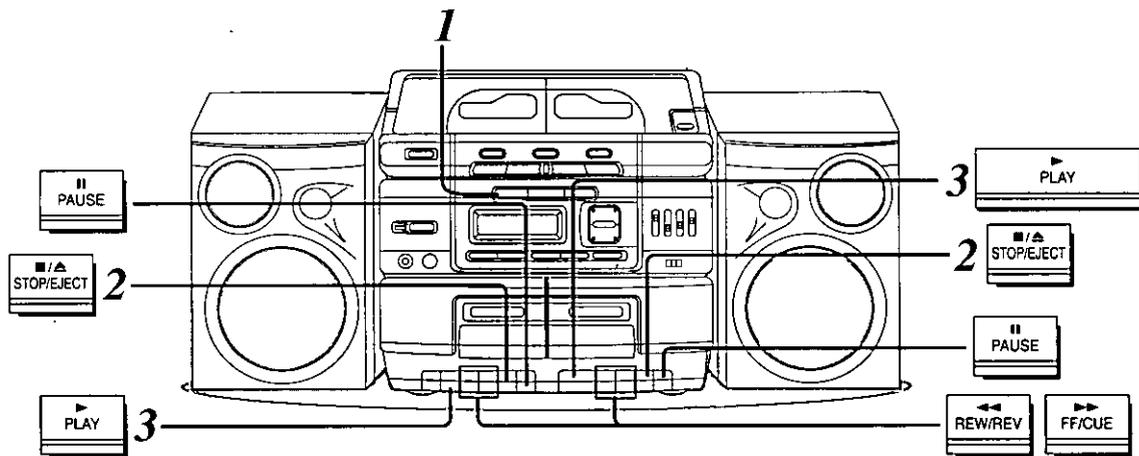
1 | TAPE | **Press TAPE.**

2 | STOP/EJECT | **Press STOP/EJECT, load the tape and close the cassette lid.**

Reverse side

Top side

3 | PLAY | **Press PLAY to start play.**

To stop play:

| STOP/EJECT | **Press STOP/EJECT.**

To temporarily stop play:

| PAUSE | **Press PAUSE.**

To resume play:
Press PAUSE again.

Type of tape which can be played on this unit:

Normal position/TYPE I	O
High position/TYPE II	×
Metal position/TYPE IV	×

This unit will not be able to do full justice to characteristics of high-position tapes and metal tapes even if they are played back.

To rewind or fast forward the tape

| REW/REV | FF/CUE | **In the stop mode, press REW/ REV or FF/CUE.**

Note
Do not press PLAY during rewinding or fast forwarding, as this may jam the tape. Be sure to press STOP/EJECT before proceeding to the next operation.

To search a particular spot on a tape

| REW/REV | FF/CUE | **During playback, press REW/ REV or FF/CUE.**
Tape play is resumed when the button is released.

Automatic playback relay (Deck 2 to Deck 1)

When Deck 2 playback has finished, Deck 1 playback starts automatically.
1 Insert the playback tapes into Deck 1 and Deck 2.
2 Press Deck 2 PLAY.
3 Press Deck 1 PAUSE, then press PLAY.

Full auto-stop

During playback, recording, fast forward or rewind when the tape reaches its end, the automatic stop system will release the operation buttons.

Listening to CDs

Power button

2-② 2-① 1

Bass range   Treble range
XBS   GRAPHIC EQUALIZER
330Hz   1kHz   10kHz

Tone control

■/CLEAR   ►/ıı
DISC 1–3

Volume control

To load CDs

1   CD   **Press CD.**

2   ① DISC 1   DISC 2   DISC 3
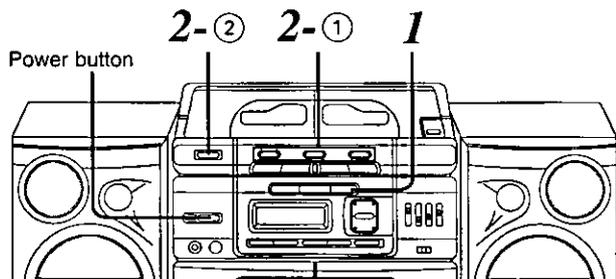
① **Press one of the disc buttons (DISC 1–3) to select the disc.**
When you load only one disc, you can skip this step.

② CD EJECT   ② **Press ▲ CD EJECT, insert the CD and close the lid.**
Insert the CD with its label surface facing up.
Be sure to place 3" (8 cm) discs in the center of the tray.
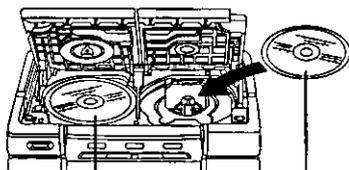
Label   Be sure to load only one CD on a tray

3   **Repeat step 2 to load more CDs.**

Concerning the disc display and the disc trays

Discs tray at the playing position   Discs in the disc storage
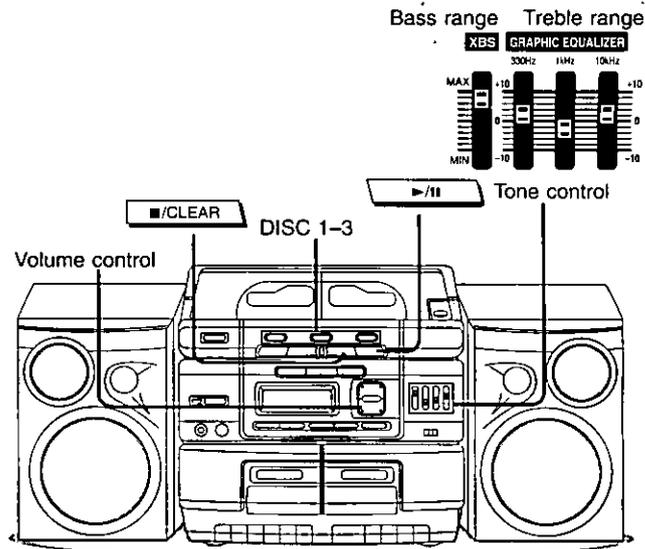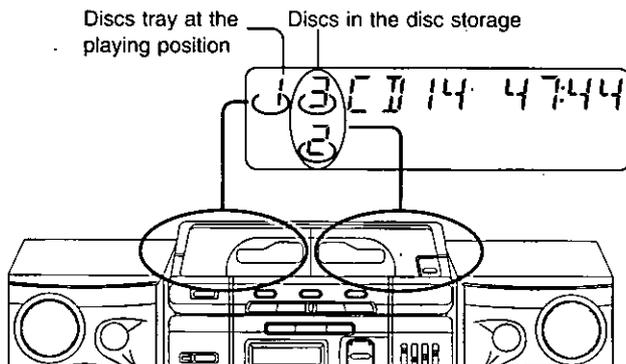
To play one CD

Before proceeding, follow steps 1, 2–② of "To load CDs" on the left.

►/ıı   **Press ►/ıı.**
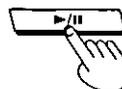
Disc number in play   Elapsed play time of track in play
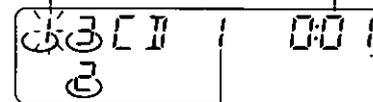
Track number in play

Play starts from track 1 on the disc at the playing position and continues to the last track, after which it automatically stops.

Total number of tracks
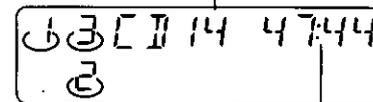
Total play time

To stop play:
Press ■/CLEAR.

To stop play temporarily:
Press ►/ıı.
To resume play, press ►/ıı again.

To play desired disc:
Press DISC 1–3 to start play.

Hints
● If a CD is loaded on the tray at the playing position, pressing ►/ıı will automatically turn the unit on and start play.
● If "NO DISC" appears on the display, it indicates that there is no disc loaded.

Listening to CDs
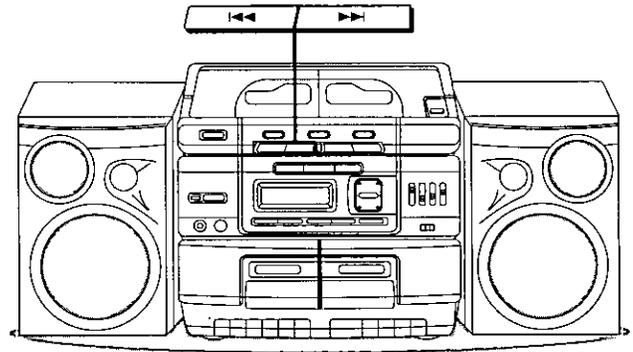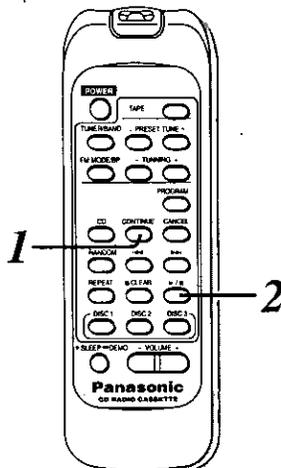
To play 2 or more CDs in succession (CONTINUE)

(Available only from the remote control)

One of the discs in the disc storage can be changed during play. Before proceeding, complete the steps of "To load CDs" on page 11.
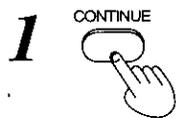
1 CONTINUE

Press CONTINUE on the remote control.

Lights

2 ►/II
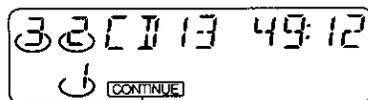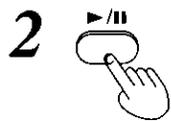
Press ►/II to start play.
Play starts from the disc at the playing position and continues in order for the loaded discs, after which it automatically stops.

Discs can be exchanged during playback
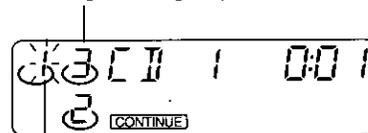
Disc on the tray at the playing position

- When the tray rotates and the unit finds there is no disc on the tray at the playing position, the ⟳ mark disappears.
- Press ▲ CD EJECT for the disc storage during play allows CDs to be exchanged.
- If the ▲ CD EJECT for the tray at the playing position is pressed during play, disc playing stops.

Note
Do not press DISC 1 to 3 when the disc storage is open, as this may result in injury or malfunction.

To skip tracks

Press I◄◄ or ►►I.
Press the button repeatedly to skip tracks in number that corresponds to the number of times you press the button.

Note
Tracks can only be skipped within the CD at the playing position.

To search forward or backward

During play:
Continuously press I◄◄ or ►►I.
Release the button at the desired position.

Note
Search is only possible within the playing CD.

Notes
- Interference may affect radio or TV reception when CDs are played close to a radio or TV set. If this occurs, place the unit as far away from the radio or TV.
- Do not move the unit while the disc tray is moving, as this may scratch the CD or cause it to become lodged inside the unit resulting in a mulfunction.
- The disc tray may not operate if the unit is used in a tilted condition. In these cases, place the unit on a level surface and perform the operation again.
- Do not use the following discs, as they may cause malfunctions.
  - Badly warped discs
  - 3" (8 cm) disc adaptors
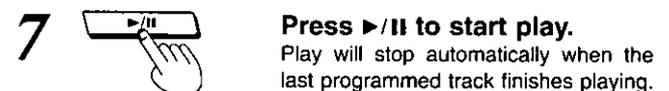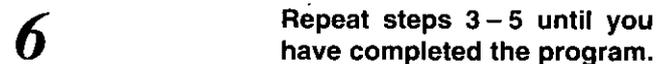 - Broken or cracked discs

Program play

This function allows you to program up to 24 tracks from desired disc(s) in any order you choose.


```
[ |◄◄  | |  ►►| ] 4    3    7  1  2●5  MEMORY
```

CD EJECT   ■/CLEAR
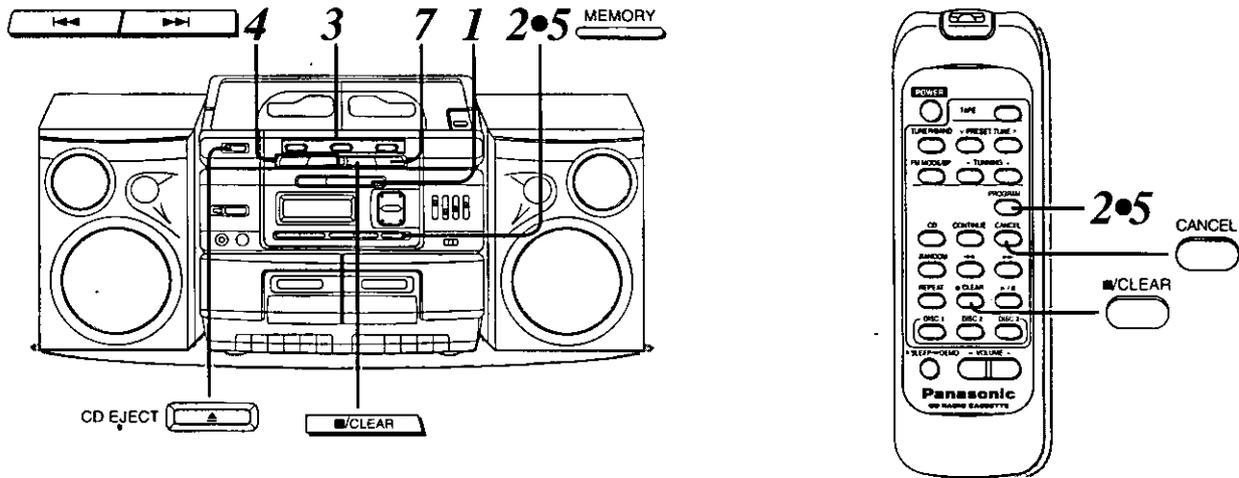
This example shows how to program track 8 on disc 2.

1 `[ CD ]` **Press CD.**

2 `MEMORY` / `PROGRAM` **Press MEMORY or PROGRAM on the remote control.**

⤵⤵ CI I2 45:58
Ↄↄ [PROGRAM]

Lights

3 `[ DISC 1 ]` `[ DISC 2 ]` `[ DISC 3 ]`

Press one of the disc select buttons (DISC 1–3) to select disc.

Example: When DISC 2 is pressed:

CI
Ↄↄ [PROGRAM]

Disc number

4 `[ |◄◄ | | ►►| ]` **Press |◄◄ or ►►| to select the track you want to play.**

CI 8
Ↄↄ [PROGRAM]

5 `MEMORY` / `PROGRAM` **Press MEMORY or PROGRAM on the remote control.**

Programmed order

Track number

CI 8 --0 I
Ↄↄ [PROGRAM]

Disc number

If you enter non-existing disc(s) or track(s) in the program contents, the corresponding indicator illuminates and the entry is included in the count. In the play mode, the changer will cancel the non-existing entry.

6 **Repeat steps 3 – 5 until you have completed the program.**

7 `[ ►/II ]` **Press ►/II to start play.**
Play will stop automatically when the last programmed track finishes playing.

13

To cancel program play:

Press ■/CLEAR in the stop mode.
"CLEAR" appears on the display and all the programmed contents will be cleared.

When "CD FULL" appears:

This indicates that an attempt has been made to program more than 24 tracks. No more than 24 tracks can be programmed.

Memory retention of programmed tracks

This programming of the tracks will be retained in the memory even if play is stopped at any time or the unit is turned off.
"P" appears on the display indicating that programmed memory remains and the following operations are available.

Indicates programmed memory remains
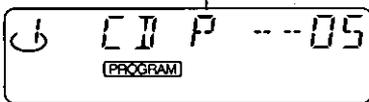
To check what has been programmed:

While "P" is on the display, press ►►I or I◄◄ in the stop mode. Each time these buttons are pressed, a track number and its play sequence can be checked.

To add an entry:

While "P" is on the display, follow these steps.
1. Press one of the disc buttons (DISC 1–3)
2. Press I◄◄ or ►►I to select the track to be added.
3. Press MEMORY.

To clear a programmed track one by one:

(Available only from the remote control)
While "P" is on the display, follow these steps.
1. Press I◄◄ or ►►I repeatedly until the display shows the disc and the track number you want to cancel.
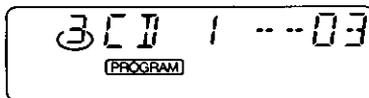
2. Press CANCEL during desired disc and track number is on the display.

To clear all tracks:

Press ■/CLEAR once in the stop mode or twice in the play mode.

The programmed memory will be cancelled in the following cases;
* When ▲ CD EJECT on the front panel is pressed.
* When MEMORY on the front panel or PROGRAM on the remote control is pressed in the stop mode.
* When you disconnect the power cord without installing the memory back-up batteries.
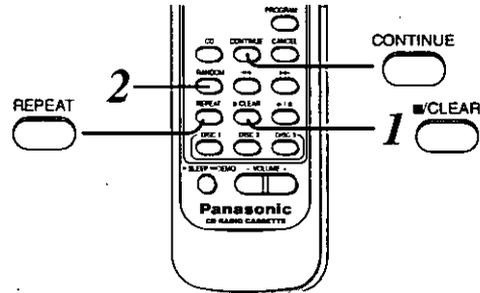
Random play

(Available only from the remote control).

This unit will randomly choose a track from the disc in the CD PLAYER.
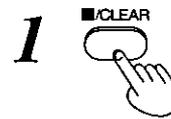
1 ■/CLEAR   **Press ■/CLEAR.**

2 RANDOM   **Press RANDOM.**
Random play will start.
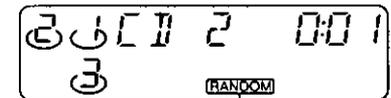
Lights

To play 2 or more discs randomly:
Press CONTINUE and RANDOM.
The unit will stop automatically when all the tracks on all the loaded discs have been played.

To clear random play:

Press ■/CLEAR to turn off the (RANDOM) indicator.
* Skipping is not possible to track which have been played (see page 12).
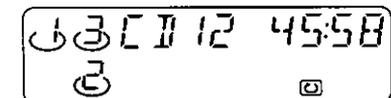* Search (see page 12) is possible only within the track in play.

To repeat tracks

(Available only from the remote control)

All the tracks or the programmed tracks are played repeatedly.
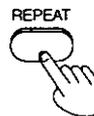
REPEAT   **In the play or stop mode, press REPEAT.**

Lights

To release repeat play:

Press REPEAT.

To listen to the same track over and over again:

Program the track to be repeated (see page 13) and press REPEAT.

To play 2 or more discs repeatedly:
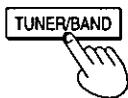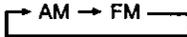
Press CONTINUE and REPEAT.
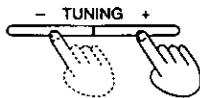
Programming Broadcasts Stations

Once broadcast stations have been programmed, they can easily be tuned in at the touch of a button on the unit or on the remote control.
Up to ten FM and AM stations each can be programmed.
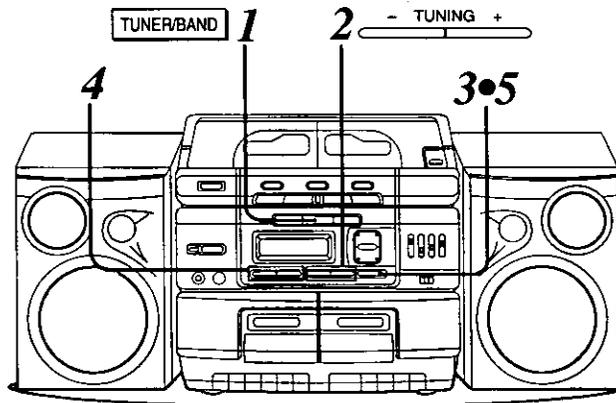
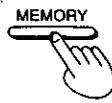**Example: Programming FM 88.1 MHz in preset channel 2.**

1 [TUNER/BAND] **Press TUNER/BAND to display "FM" or "AM".**
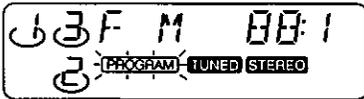
┌→ AM → FM ─┐

(The display changes each time the button is pressed.)

2 − TUNING + **Press − TUNING + to tune in the broadcast station.**

FM stations can be selected automatically (see the right).

```
⟳⊛F M   88.1
  ⟳         TUNED STEREO
```

3 MEMORY **Press MEMORY.**

```
⟳⊛F M   88:1
  ⟳  PROGRAM TUNED STEREO
```
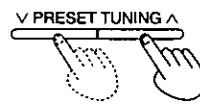
4 ∨ PRESET TUNING ∧ **Press ∨ PRESET TUNING ∧ to display the preset channel in which the station is to be programmed.**

Preset channel

```
⟳⊛F M   2
  ⟳  PROGRAM TUNED STEREO
```
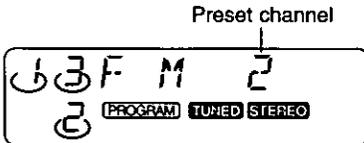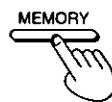
5 MEMORY **When PROGRAM is flashing, press MEMORY.**

6 **Repeat steps 2 to 5 to program the other stations.**

Selecting FM stations automatically:

Keep pressing − TUNING + until the frequency display starts to change. A station with good reception is automatically selected and the selection process then stops.

To stop the selection at any time:
Press − TUNING + again.
The selection may stop without tuning into any station if there is interference in the vicinity. In such case, tap − TUNING + until a station's frequency is picked up.

Programming AM stations:
1. Press TUNER/BAND in step 1 to display AM.
2. Perform steps 2 to 5.

FM allocation setting

This unit comes equipped with an electronic digital tuner that divides the broadcast band into may small steps. These steps match the assignable broadcast frequencies and the intervals in between. This unit can receive FM broadcasts allocated in 200 kHz steps. It may not be able to receive some stations whose frequencies fall within the 200 kHz allocation. By adjusting the allocation, you can enable this unit to receive FM broadcasts allocated in 100 kHz steps.

1. Press TUNER/BAND to select AM.
2. Press and hold TUNER/BAND for approximately 5 seconds. The frequency display will be returned to the minimum frequency of the FM band and the display will begin to flash. Keep holding for approximately 5 more seconds.
3. When the display stops flashing and indicates a different frequency number, release TUNER/BAND.

To return to the original frequency, repeat steps 1 to 3 above.

Note
After changing the "allocation" setting, the frequencies you previously preset into the memory will be cleared.
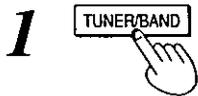
15

Listening to Radio Broadcasts

Preset tuning

Make sure you have completed the procedure for "Programming Broadcast Stations". (See page 15 beforehand).
To listen to a station without programming it first, refer to "Listening to broadcast stations which have not been programmed". (See right.)
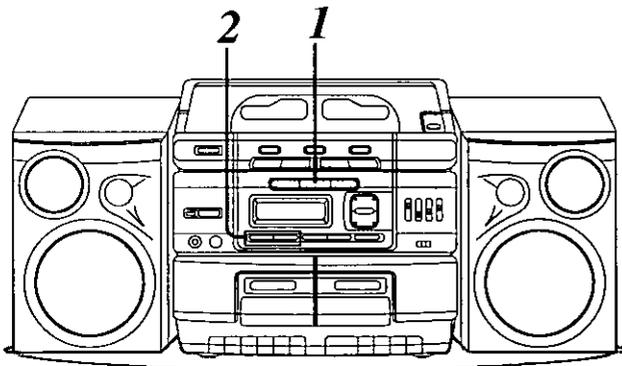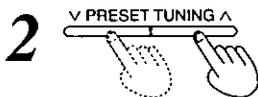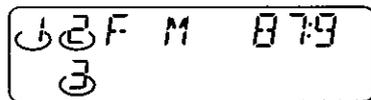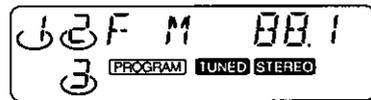

Using the main unit

1 [TUNER/BAND]

Press TUNER/BAND to display "FM" or "AM".

r→ AM → FM ─┐

(The display changes each time the button is pressed.)

$\bigcirc\bigcirc$ F M 87.9

2 ∨ PRESET TUNING ∧

Press ∨ PRESET TUNING ∧ to select the preset channel.
The station is changed each time the button is pressed.

$\bigcirc\bigcirc$ F M 88.1
[PROGRAM] [TUNED] [STEREO]

Using the remote control
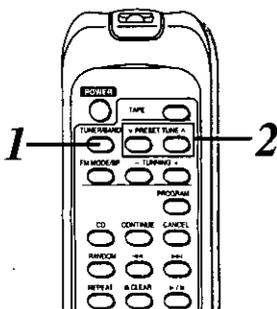
Listening to broadcast stations which have not been programmed (Manual tuning)
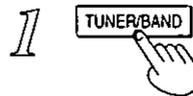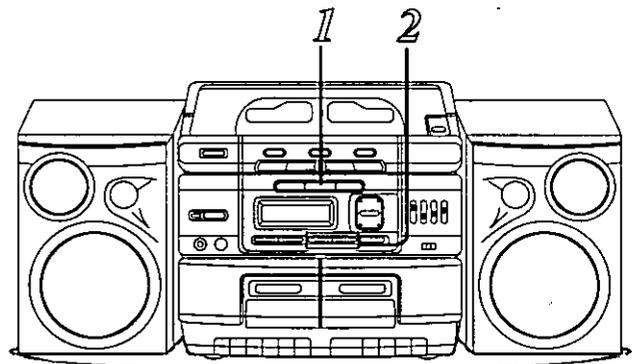
1 [TUNER/BAND]

Press TUNER/BAND to display "FM" or "AM".

r→ AM → FM ─┐

(The display changes each time the button is pressed.)
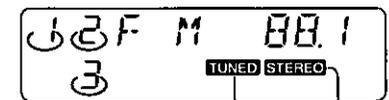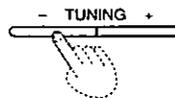
$\bigcirc\bigcirc$ F M 87.9
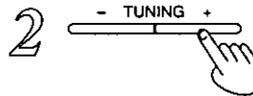
2 – TUNING +

Press – TUNING + to tune in the broadcast station.
+: Press this to increase the broadcast frequency.
–: Press this to decrease the broadcast frequency.
FM stations can be selected automatically (see below).

$\bigcirc\bigcirc$ F M 88.1
[TUNED] [STEREO]

Lights when a station is tuned in properly

Lights when an FM stereo program is picked up.

Selecting FM stations automatically:
Keep the button depressed until the frequency display starts to change. A station with good reception is automatically selected and the selection process then stops.
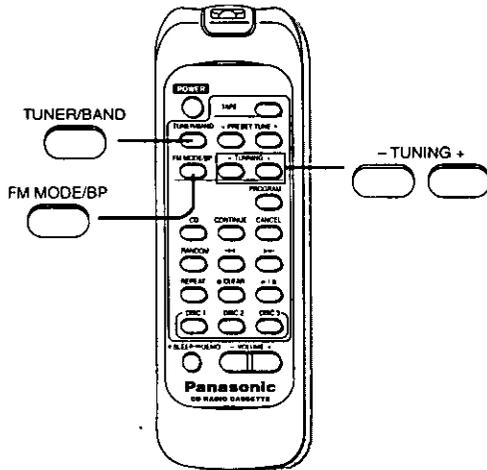
Frequency display steps:
The frequency display changes in the following steps:
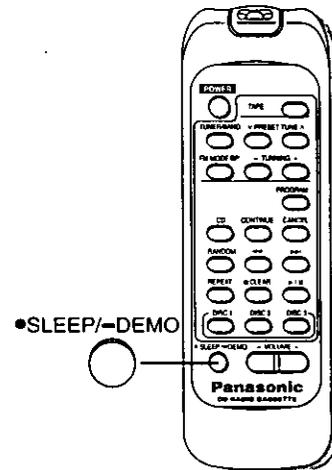FM: 200 kHz/100 kHz steps
AM: 10 kHz steps

(To change the allocation settings, see page 15.)

TUNER/BAND

FM MODE/BP

– TUNING +

Panasonic

For better reception

When there is too much interference during an FM stereo broadcast

(Available only from the remote control)

Reduce the interference by setting the sound to monaural.

FM MODE/BP

Press FM MODE/BP.

Lights

To return to stereo reception, repeat the same procedure and turn off the MONO display.

Note

The STEREO display will not light in the monaural mode even when a stereo broadcast is received.

Adjusting the antenna for better reception

FM

Pull out the telescopic antenna and adjust its length and angle for optimum reception.

AM

Turn the unit in the direction which gives the best results.

Reference

Radio broadcasts may be hard to receive in a moving vehicle or building because their signals are weak. Whenever possible, use the unit by a window.
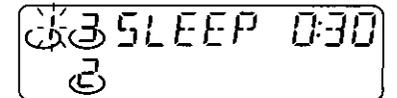

(Available only from the remote control)

The unit off time can be set up to two hours ahead of the present time.

●SLEEP/–DEMO

Panasonic

●SLEEP/–DEMO

While the unit is on:
Press SLEEP to select the desired time.

┌→ 0:30 → 1:00 → 1:30 → 2:00 → OFF┐
└――――――――――――――――――――――――――┘

(The display changes each time the button is pressed.)

The unit is turned off after the time set has elapsed.

To release the timer function:
Press SLEEP to select "SLEEP-OFF".

To check the time remaining during operation:
Press SLEEP.

To change the time remaining during operation:
Press SLEEP to show the remaining time then press SLEEP to select the desired time.

Hint

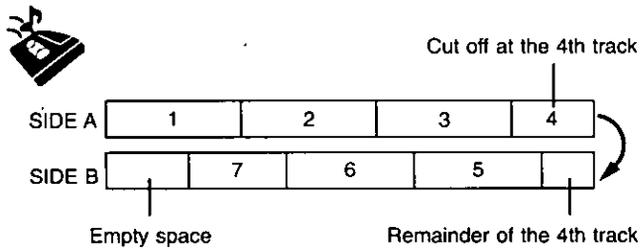Pressing SLEEP can turn the unit on (only when AC power is supplied).
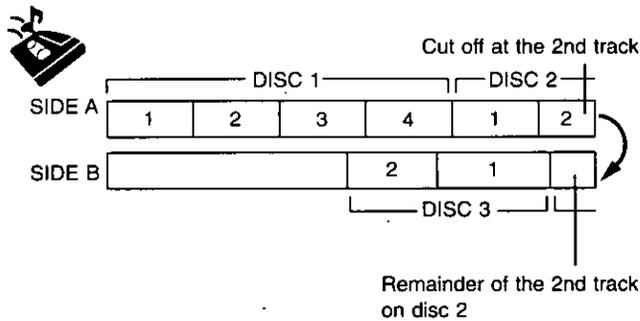
Recording from CD

Synchro recording

(See page 19, 20.)

- Recording can be performed from part-way along the tape.
- If the tape reaches its end part-way through a track, the track is cut off.
- Recording stops when 1 CD is completely recorded.
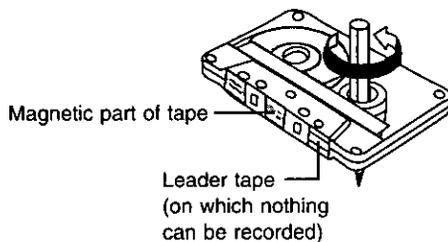
Recording 1 CD:

Cut off at the 4th track

| SIDE A | 1 | 2 | 3 | 4 |
| SIDE B | | 7 | 6 | 5 | |

Empty space   Remainder of the 4th track

Recording 3 CDs:

Cut off at the 2nd track

DISC 1   DISC 2

| SIDE A | 1 | 2 | 3 | 4 | 1 | 2 |
| SIDE B | | | 2 | 1 | | |

DISC 3

Remainder of the 2nd track on disc 2

■ Please read the following notes before recording

To wind up the leader tape:

Magnetic part of tape

Leader tape
(on which nothing can be recorded)

Type of tape which can be used for recording:

| Normal position/TYPE I	O
High position/TYPE II	×
Metal position/TYPE IV	×

The sound may not be recorded properly if high-position tapes and metal position tapes are used with this unit.


For your reference:

- In order to prevent trouble caused by flat batteries, it is recommended that you either supply power to the unit from the household AC outlet or replace all the batteries with new ones when you are recording something which is important to you.
- Any change made to the volume or sound quality during recording will not affect the recording.
- The recording level is set automatically.

Synchro recording

The following instructions are to record only one disc on the tray at the playing position.
Recording and CD play starts at the same time.
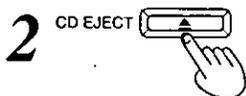Normal tape (Type I) can be used.
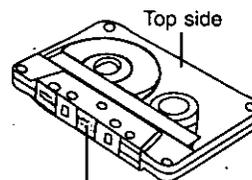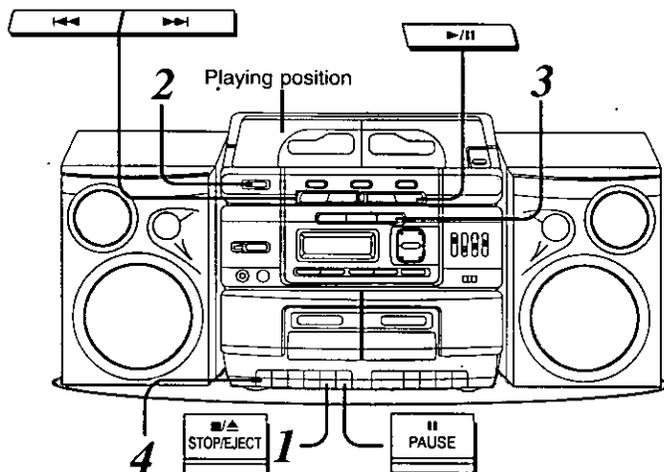
Insert the tape with the side
exposed tape facing down

---
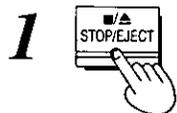
1 ■/▲ STOP/EJECT

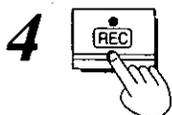**Press ■/▲ STOP/EJECT and load the tape with the side to be recorded facing you.**
Find the position on the tape where the recording is to start.
When recording from the start of side A or B, have the leader tape wound up before proceeding. (See page 18.)

2 CD EJECT ▲

Press ▲ CD EJECT on the front panel and insert the CD.

3 CD
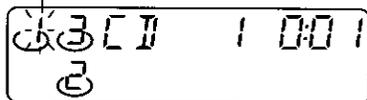
Press CD.

4 ● REC
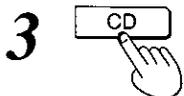
Press ● REC.
Recording and CD play starts simultaneously.

Disc number being recorded

To record another CD in succession:
① Press ▲ CD EJECT on the tray at the playing position.
② Replace the disc.
③ Press ● REC.

To stop recording:
Press ■/▲ STOP/EJECT.

To stop recording temporarily:
Press II PAUSE.
To resume recording, press II PAUSE.

Recording your favourite tracks

You can program desired tracks from the 3 discs on the trays, and make a recording.
Before proceeding to step 4 on the left, perform steps 2 to 6 on page 13.

To skip tracks which you do not want to record

1. During recording, press ►/II.
   Tape also pauses.
2. Press ►►I or I◄◄ to display the track number which is to be recorded next.
3. Press ►/II to resume recording.

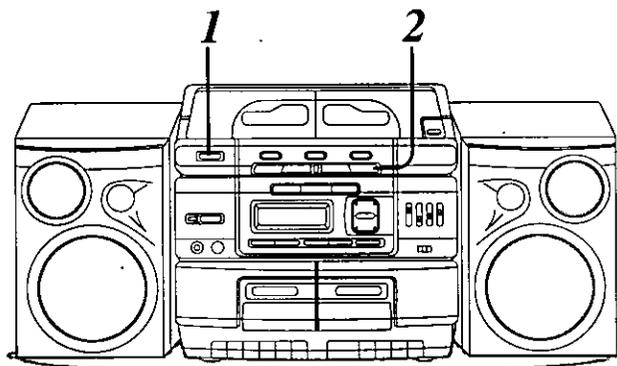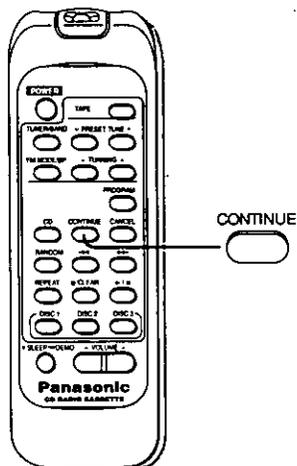**Note**
If the ▲ CD/EJECT on the front panel is pressed during recording, recording is interrupted.
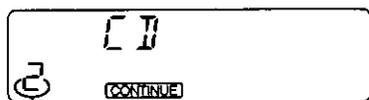
Automatic link function

When CDs are loaded in the three trays beforehand, if there is enough empty space on the tape after recording for the first disc is finished, recording can be continued with the next disc.

When recording is finished for the first disc

Disc to be recorded next

Recording stops temporarily, the tray rotates, and then recording of the second CD starts automatically.
If there is no disc on the second tray, recording will proceed to the third tray.

When recording is finished for all of the trays, recording stops temporarily.

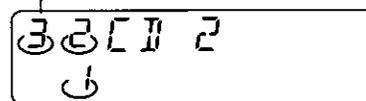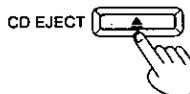**1** Perform the procedures on page 19 "Synchro Recording".

2 CONTINUE Press CONTINUE to record the next disc.

To continue recording a different CD

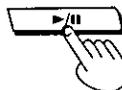Disc which can be replaced

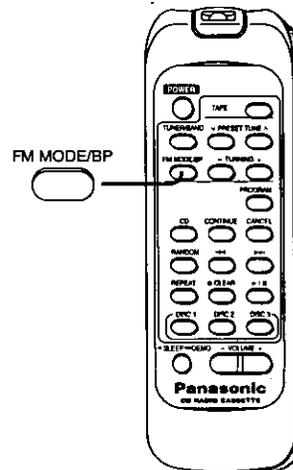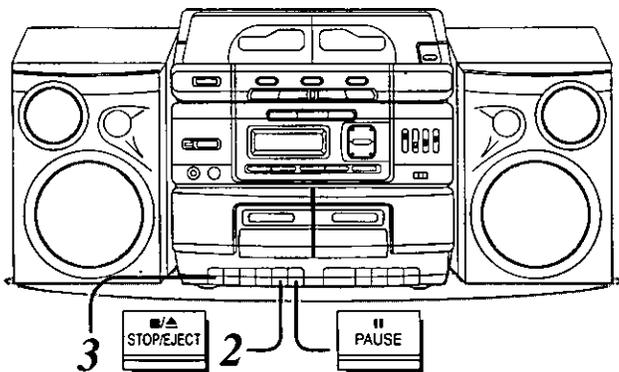**1** CD EJECT Press ▲ CD EJECT on the front panel and replace the CD.

2 ►/II Press ►/II and start recording.
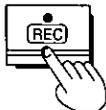When recording is finished for this CD, the tape stops.

Recording Radio Programs

Normal tape (Type I) can be used.

FM MODE/BP

Preparation: Take up the leader tape before proceeding. (See page 18.)

1 **Tune in the broadcast station.**
(See page 16.)

2 **Press ■/▲ STOP/EJECT and load the tape.**
Load the tape with the side to be recorded facing you.

3 **Press ● REC.**

To stop the recording:

Press ■/▲ STOP/EJECT.

To stop the recording temporarily:
Press PAUSE.
To resume recording, press PAUSE again.

When too much noise is heard while recording an AM broadcast:
(Available only from the remote control)

FM MODE/BP

Set FM MODE/BP to whichever position yields less noise.
The display changes each time the button is pressed.

BP1 → BP2 ─┐
└──────────┘
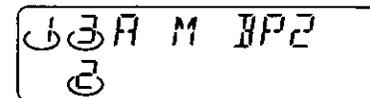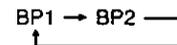
For your reference:
● Any change made to the volume or tone quality during recording will not affect the recording.
● In order to prevent trouble caused by flat batteries, it is recommended that you either supply power to the unit from the household AC outlet or replace all the batteries with new ones when you are recording something which is important to you.

Recording Tape to Tape

When the Deck 1 pause and record buttons are pressed, tape editing starts by pressing the Deck 2 playback button.
Only normal tape can be used with this unit.

Take up the leader tape before proceeding. (Refer to page 18).

1 [TAPE] **Press TAPE.**

2 [■/▲ STOP/EJECT] **Press Deck 1 STOP/EJECT and insert the tape to be recorded.**
Insert the tape with the side to be recorded facing you.

3 [■/▲ STOP/EJECT] **Press Deck 2 STOP/EJECT and insert the tape to be played back.**
Insert the tape with the side to be played facing you.
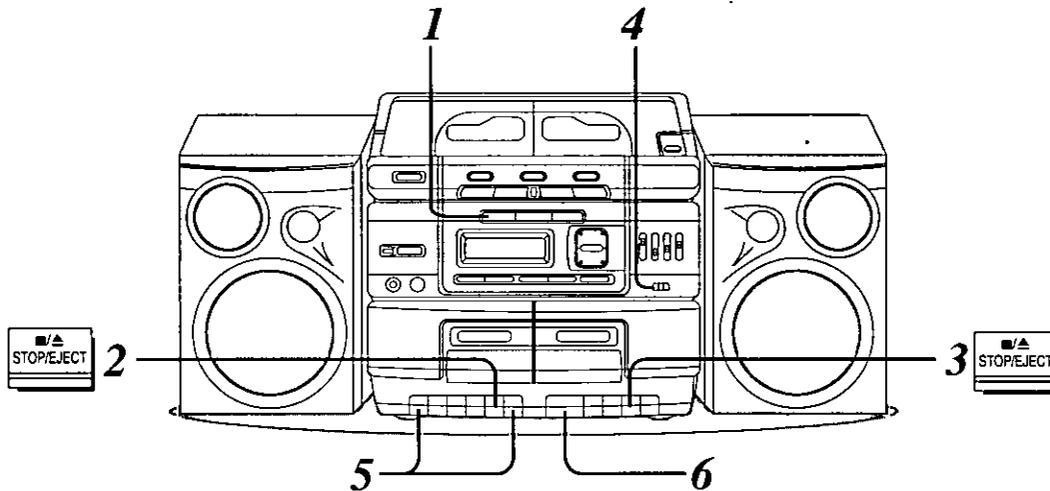
4 TAPE EDIT NORMAL ⌐ ⌐ HIGH **Select the editing speed by setting TAPE EDIT.**
HIGH : High speed
NORMAL : Normal speed
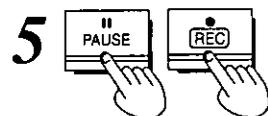
5 [II PAUSE] [● REC] **Press Deck 1 PAUSE, then press ● REC .**
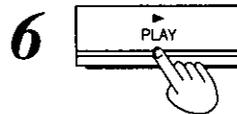
6 [► PLAY] **Press the Deck 2 PLAY.**

Editing is started by means of the synchro-start function.
Do not set the "CD" or "RADIO" function selector during editing.
Do not change the editing selector during editing. The playback sound may flutter.
Some TV sets generate noise that could be recorded during editing. To prevent the possibility of this, do not use this unit closer than 1.5 m to a TV set.

To stop the editing:

[■/▲ STOP/EJECT] **Press the Deck 1 and Deck 2 STOP/EJECT.**

For your reference:

Recording is not affected by changes made to the volume or tone quality during the recording.
The recording level and the noise reduction effect of the original (playback) tape will be recorded on the new tape.

Concerning Compact Discs

Only compact discs having this mark can be used with this unit.

COMPACT disc DIGITAL AUDIO

To remove a disc from its case

Press the center holder and lift the disc holding by the edges.

Center holder

To hold the disc

Hold the disc by the edges so the surface is not soiled with fingerprints.
Fingerprints, dirt and scratches can cause skipping and distortion.
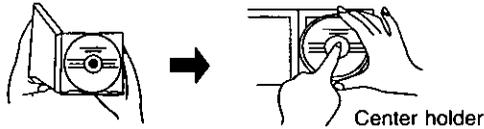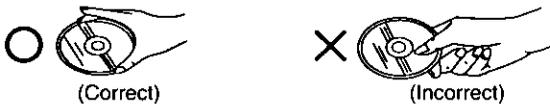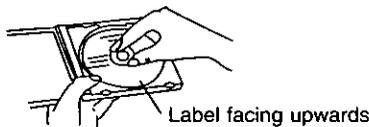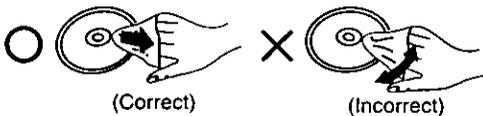
(Correct)   (Incorrect)

To store a disc in its case

Insert the disc with label facing upwards and press downward at the center.

Label facing upwards

If the surface is soiled ·

Wipe gently with a soft, damp (water only) cloth.

(Correct)   (Incorrect)

If the disc is brought from a cold to a warm environment, moisture may form on the disc

Wipe this moisture off with a soft, dry, lint-free cloth before using the disc.

Improper disc storage:
You can damage disc if you store them in the following places:
- Areas exposed to direct sunlight
- Humid or dusty areas
- Areas directly exposed to a heat outlet or heating appliance

Handling precautions:
- Do not write on the label side with a ball-point pen or other writing utensils.
- Do not use record cleaning sprays, benzene, thinner, static electricity prevention liquids or any other solvent.
- Do not soil with fingerprints.
- Do not attach paper or tape to disc.

Concerning Cassette Tapes

Selection of cassette tapes

Cassette tapes exceeding 100 minutes:
These tapes are handy for their long playback and recording time but be careful about repeatedly stopping, starting, rewinding and fast forwarding these tapes in short intervals as they are thin, tend to stretch and may become entangled in the deck mechanism.

Endless tapes:
Failure to operate these tapes correctly may cause the tape to wind around the revolving parts.

If the tape loosens, take up the slack

Tape slack may cause the tape to break.

To prevent erasure of recorded sounds

Remove the erase-prevention tabs with a screwdriver or a similar object.

Side A

Tab for side A
Tab for side B
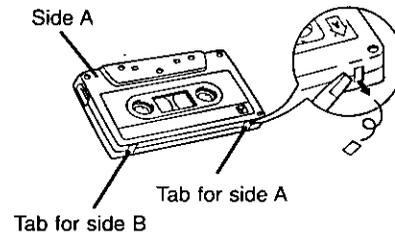
To re-record on a protected cassette, cover the slot with adhesive tape.

Adhesive tape
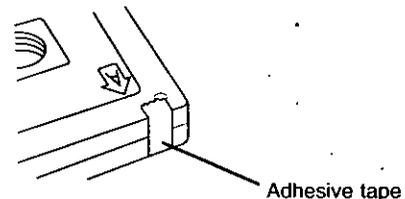
Improper tape storage:
You can damage tapes if you store them in the following places:
- In high temperature ([35°C (95°F) or higher] or high humidity (80% or higher) areas
- In a strong magnetic field (near a speaker, on top of a TV, etc.) This can erase a recording.
- Areas exposed to direct sunlight

23

Common operations		
Turn the unit on and off (When using the battery power, you can only turn off.)		**POWER** ◯
Adjusting the volume		– VOLUME + ⊏▯⊐
To show the display DEMO		●SLEEP/—DEMO ◯
Selecting the input source		CD TUNER/BAND TAPE ◯ ◯ ◯
Setting/releasing the sleep timer		●SLEEP/—DEMO ◯
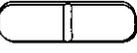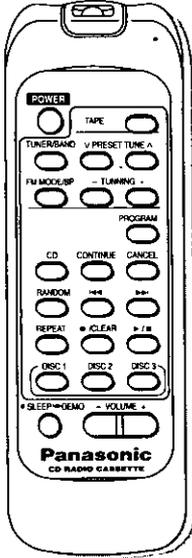
Tuner operations		
Listening to a programmed radio station		∨ PRESET TUNE ∧ ◯ ◯
Listening to a radio station which has not been programmed.		– TUNING + ◯ ◯
Selecting reception in stereo or mono/ Reducing noise during the recording of AM programs		FM MODE/BP ◯
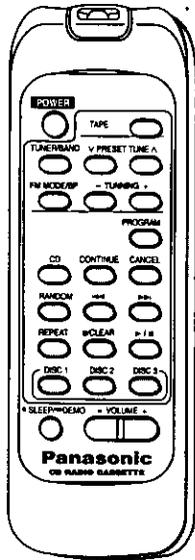
CD operations	
Starting play/ Temporarily stopping play	►/II
Listening from desired disc	DISC 1 DISC 2 DISC 3
Listening through the discs on 3 disc trays continuously	CONTINUE → ►/II
Stopping play/ To clear program play	■/CLEAR
To skip tracks	I◄◄ ►►I
To search forward or backward	Keep pressing I◄◄ ►►I
Listening to track(s) repeatedly	REPEAT
Selecting and listening to favourite tracks (See page 13.)	① PROGRAM ② DISC 1 DISC 2 DISC 3 ③ I◄◄ ►►I ④ PROGRAM ⑤ ►/II
Cancelling the programmed track (See page 14.)	I◄◄ ►►I → CANCEL
Listening to tracks at random	■/CLEAR → RANDOM

Troubleshooting Guide

Before requesting service for this unit, check the chart below for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.

If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, refer to the directory of Authorized Service Centers (enclosed with this unit) to locate a convenient service center, or consult your dealer for instructions.

(In U.S.A. consult MSC Authorized Servicenters for detailed instructions or call 1-800-545-2672 for the address for an authorized factory servicenter.)

Problem	Probable cause(s)	Suggested remedy	Page

Common Problems

Problem	Probable cause(s)	Suggested remedy	Page
No operation. (When batteries are used as the power source)	Is the AC power cable still connected to the unit while batteries are being used?	Disconnect the AC power cable.	5
	Are the batteries flat?	Replace them with new ones. Alternatively, use a household AC outlet as the power source.	5
	Have the batteries been installed incorrectly with their (+) and (−) polarities reversed?	Align the (+) and (−) polarities correctly.	5
"ERROR" appears.	Have you made a mistake operation?	Read the operating instructions and try again.	—
"U01" appears.	The batteries are flat.	Replace them with new ones. Alternatively, use a household AC outlet as the power source.	5
"U02" appears.	Preparations have not been made to supply power to the unit.	Install the batteries or connect the power cable.	5

While listening to CDs

Problem	Probable cause(s)	Suggested remedy	Page
Play does not start. No display of track numbers, etc.	Has the CD been installed upside down?	Install the CD with the label side facing up.	11
	Has condensation formed on the unit's CD section?	Turn the unit on and leave it on for about an hour before further operation.	—
Certain sections are not played properly.	Is the CD soiled?	Wipe with a soft cloth.	23
	Is the CD scratched?	Replace with a new CD.	—
The CD tray does not rotate.	Is the unit tilted?	Place the unit on a level surface.	12
	Is the CD lodged inside the unit?	Consult your dealer.	—
The disc lid does not open even if ▲ CD EJECT is pressed on the front panel.	Two CDs are loaded on the same disc tray.	Insert the thin wire or something like that into the Ⓐ hole to open the lid, and re-insert one CD on the tray. 	—

While listening to tapes
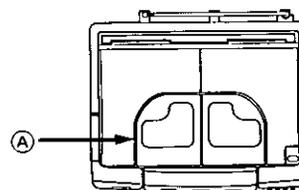
Problem	Probable cause(s)	Suggested remedy	Page
No recording.	Have the tape's accidental erasure prevention tabs been broken out?	Cover the holes with adhesive tape.	23
Sound is low, intermittent, or poor quality, noisy, scratchy, or unsteady.	Are the heads soiled?	Clean them.	27
	Have the heads been magnetized?	Demagnetize them using a demagnetizer available from an audio store.	27

While listening to the radio

Problem	Probable cause(s)	Suggested remedy	Page
Stations cannot be tuned in well. Noise heard during AM reception.	Has the antenna been adjusted properly?	Try changing its direction.	17
	Are you using a remote control of other appliances near the unit?	Use the remote control at a distance.	—
	Are you operating the unit and a TV set at the same time?	Place the unit at a distance from the TV. Alternatively, turn the TV off.	—

| Problem	Probable cause(s)	Suggested remedy	Page
While using the remote control			
No operation.	Are the batteries flat?	Replace them with new ones.	6
	Have the batteries been installed incorrectly with their (+) and (–) polarities reversed?	Align the (+) and (–) polarities correctly.	6
	Is the remote control's transmitter pointed at the unit's sensor?	Check whether anything is obstructing the path between the two and point the remote control squarely at the unit's sensor and operate.	6
	Is the unit's sensor exposed to direct sunlight or strong fluorescent light?	Shield the sensor from strong sources of light.	6

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.

Lens care

1. Press ▲ CD EJECT on the front panel.
2. Clean the lens with a blower (not included). If the lens is extremely dirty, clean it with a cotton swab.

Blower (not included)   Cotton swab
Lens
Playing position
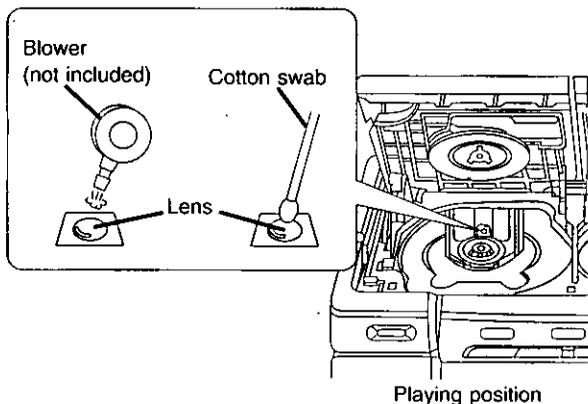
Tape head care

To assure sound quality for recording and playback, be sure to clean the tape heads after approximately every 10 hours of use.

1. Open the cassette compartment cover by pressing ■/▲ STOP/EJECT.
2. Clean the portions which contact the tape (the shaded portions in the figure below) with a cotton swab.

Do not use any solution other than alcohol for head cleaning.

Capstan
Heads   Pinch roller
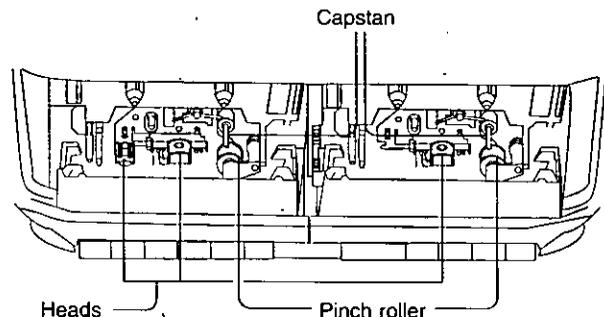
Head demagnetization

In order to maintain good sound quality, it is recommended that the head assembly be demagnetized when distortion or poor sound quality persists after cleaning the head. If the head assembly becomes magnetized, it could create loss of high end frequency response.

Several types of head demagnetizers are available and may be purchased separately at local electronics supply stores. Follow the instructions that are supplied with the device.

Do not bring any type of metal objects or tools, such as magnetic screwdrivers, in contact with the head assembly.

Technical Specifications

Radio
Frequency range

FM	87.9–107.9 MHz (200 kHz steps)
	87.5–108.0 MHz (100 kHz steps)
AM	520–1710 kHz (10 kHz steps)

CD player

Sampling frequency	44.1 kHz
Decoding	16 bit linear
Beam source	Semiconductor laser (wavelength; 780 nm)
No. of channels	2 channel, stereo
Frequency Response	20 Hz–20 kHz (+1, −1 dB)
Wow and flutter	Less than possible measurement data
D/A converter	MASH (1 bit DAC)

Tape recorder

Track system	4 track, 2 channel, stereo
Monitor system	Variable sound monitor
Recording system	AC bias
Erasing system	Magnet (Multi pole)
Frequency range (Normal position)	50-13,000 Hz

General
Power requirement

AC	120 V, 60 Hz
	Power consumption: 58 W
Battery	12 V (Eight "D" size, R20/LR20 batteries)
Memory back-up for computer	6 V (Four "AA" size, R6/LR6 batteries)
Speakers	12 cm [4¾" × 2 (Full range/woofer)]
	1.5 cm [⅝" × 2 (Tweeter)]

Jacks

Output	SPEAKER: 6–16Ω (Woofer)
	PHONES: 32Ω
Dimensions (W×H×D)	658 × 264 × 261.2 mm
	(25⅞" × 10⅜ × 10⁵⁄₁₆")
Main unit:	317 × 254 × 261.2 mm
	(12½" × 10" × 10⁵⁄₁₆")
Speaker box:	170.5 × 254 × 197.2 mm
	(6¹¹⁄₁₆" × 10" × 7¾")
Weight	7.1 kg (15 lb. 10 oz.) without batteries

Note:
Specifications are subject to change without notice.
Weight and dimensions are approximate.

> 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.

Product information

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