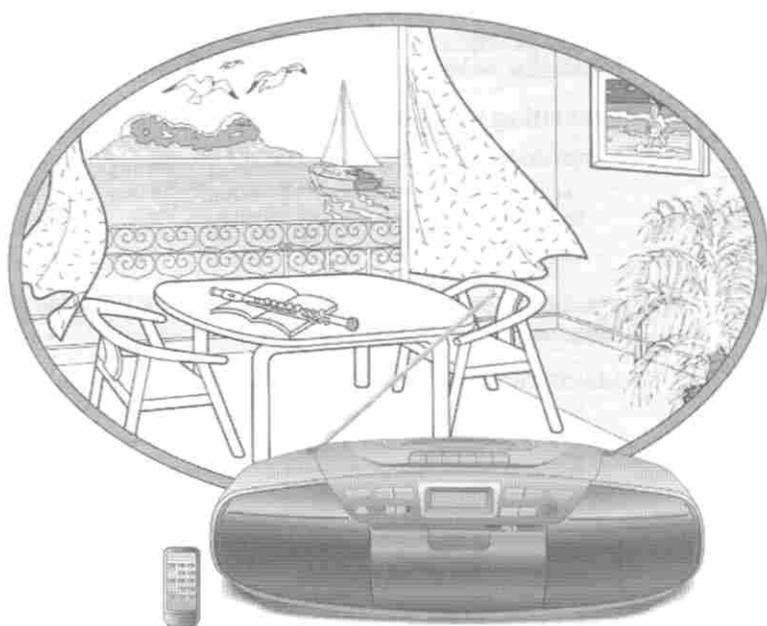


Portable Stereo CD System

RX-DS17

Operating Instructions



COMPACT
disc
DIGITAL AUDIO

Panasonic®

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

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 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; 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.

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.

Precautions

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:

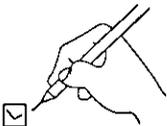
- Start your volume control at a low setting.
- Slowly increase the sound until you can hear it comfortably and clearly, and without distortion.

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 future. After all, we want you listening for a lifetime.

Supplied accessories



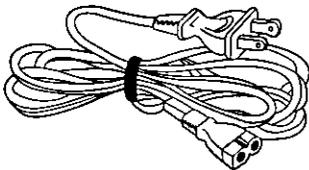
Please check and identify the supplied accessories.

Use numbers indicated in parentheses when asking for replacement parts.

(Only for U.S.A.)

To order accessories call PASC Accessory Dept. 1-800-332-5368.

- AC power supply cord (polarized) 1 pc. (SJA172)



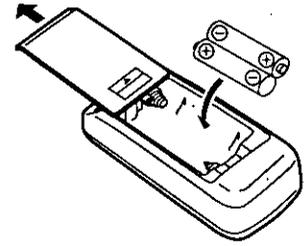
- Remote control transmitter 1 pc. (RAK-RX929WK)



Concerning the remote control

Battery installation

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



R6/LR6
(AA size,
UM-3)

Use of batteries

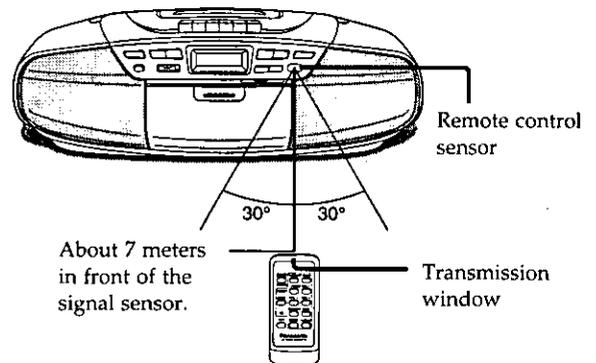
- Do not mix old and new batteries, or batteries of different types (manganese and alkaline, etc.).
- Never subject batteries to excessive heat or flame; do not attempt to disassemble them; and be sure they are not short-circuited.
- If the remote control is not to be used for a long period of time,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

Battery life

The battery life is about one year.

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



Operations 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.
- If this system is installed in a rack with glass doors, the glass door's thickness or color might make it necessary to use the remote control a shorter distance from the system.

To prevent damage

- Never place heavy items.
- Do not disassemble or reconstruct.
- Do not spill water or other liquids.

Power sources

Using a household AC outlet **A**

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

Using batteries (not included) **B**

Disconnect the AC power cable from the AC IN~ socket on the rear panel, and insert eight R20/LR20 ("D" size, UM-1, not included) batteries in the order numbered as illustrated.

How to remove the batteries **C**

When to replace the batteries:

When the batteries are weak:

- The display of the front panel will start to flash "  ".
- The unit will automatically turn itself off, then "U01" will be appeared on the display.

In those cases, replace all batteries with new ones.

Note

If the unit is not going to be used for a prolonged period of time when a household AC outlet is used to power it, disconnect the power cable to conserve power.

Memory back-up batteries

In the event of a power failure, or if the AC power cable is disconnected from the household AC outlet (during AC operation), or should the batteries fail, the memory back-up batteries will preserve the preset memory of this unit.

Battery installation **D**

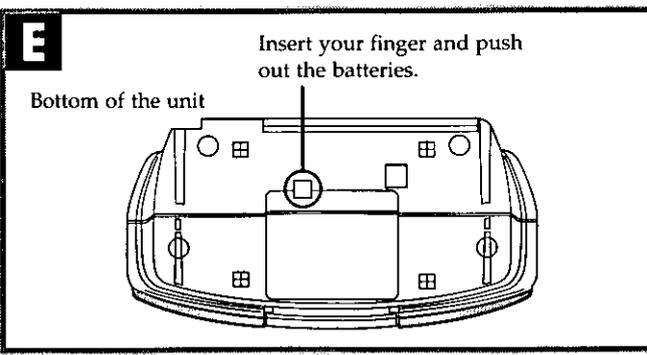
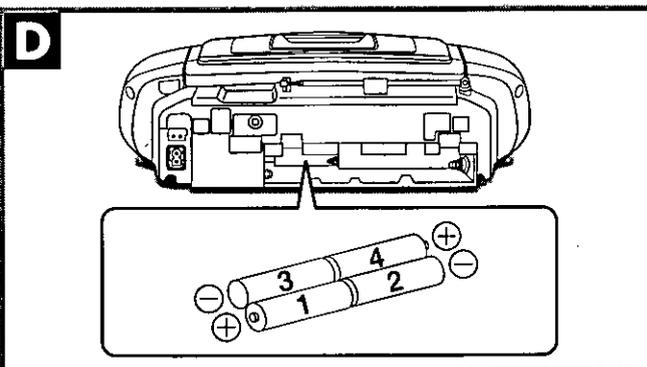
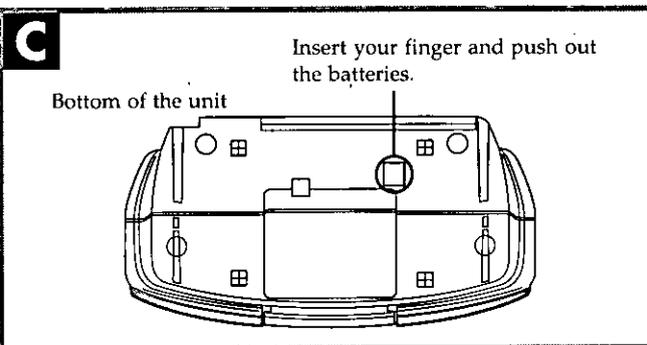
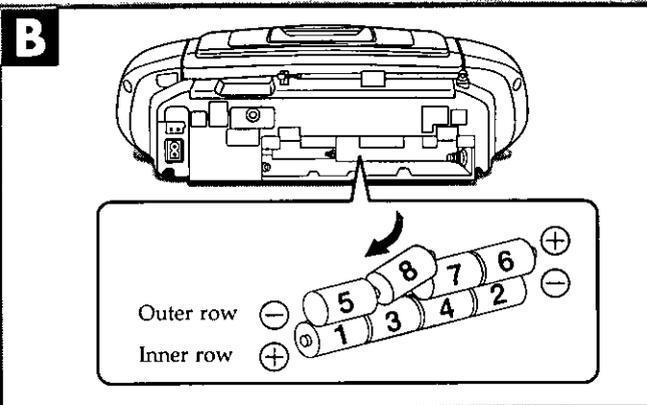
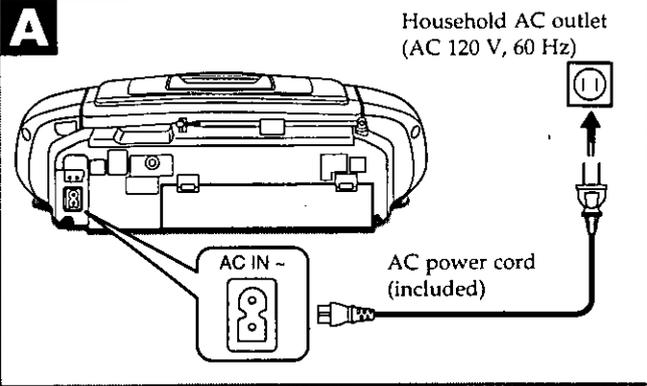
Insert four R6/LR6 ("AA" size, UM-3, not included) batteries into the battery compartment, making sure that the batteries are installed in the designated numerical order and that the proper polarities are maintained.

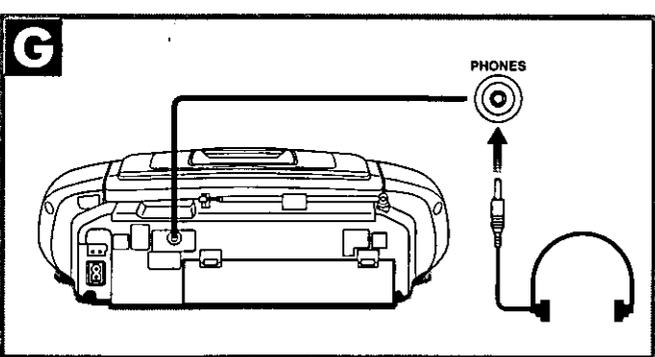
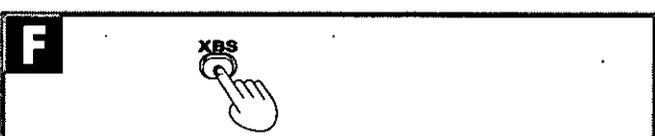
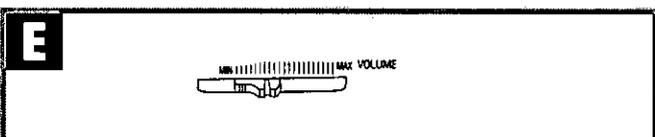
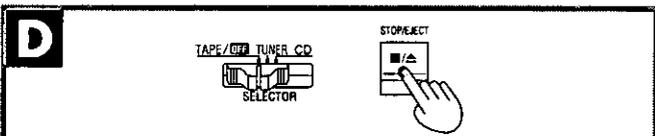
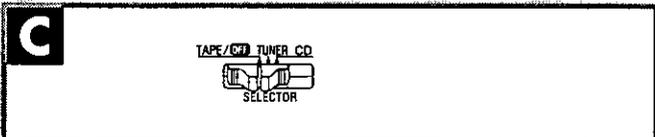
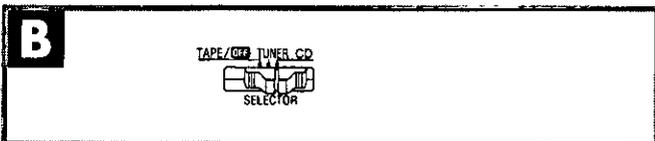
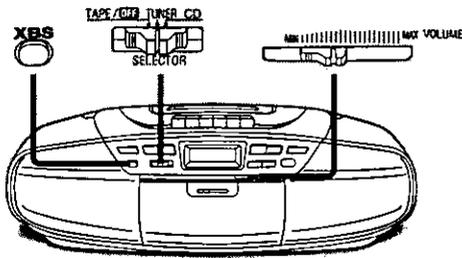
- The life of the memory back-up batteries can be prolonged by keeping the AC power cable plugged in the household AC outlet at all times.
- When disconnecting the AC power cable, switch off the power first by setting the SELECTOR to TAPE/Off. The life of the memory back-up batteries is reduced if the AC power cable is disconnected from a household AC outlet with the power still supplied.

Battery removal **E**

Battery life

The life of the memory back-up batteries is about one year.





Common operations

Turning the Power ON/OFF

To listen to the radio **A**

Set SELECTOR to TUNER.

To listen to CDs **B**

Set SELECTOR to CD.

To listen to tapes **C**

Set SELECTOR to TAPE/OFF.

To turn the unit OFF **D**

Set SELECTOR to TAPE/OFF.

Press STOP/EJECT if a tape is travelling.

Adjusting the volume **E**

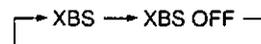
Slide VOLUME to adjust the volume to the desired level.

Adjusting the deep-bass (XBS) **F**

When the XBS level control is adjusted, the level of the dynamic low frequency sound range is boosted.

Press XBS.

Every time you press the button;



To listen through headphones (not included) **G**

Turn down the volume and connect the headphones to the PHONES jack.

Plug type used: 3.5 mm stereo

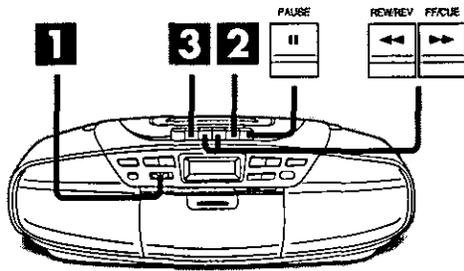
- Avoid listening for prolonged periods of time to prevent hearing damage.

Listening to tapes

Type of tape which can be played on this unit:

Normal position/TYPE I	○
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 position tapes even if they are played back.



1 Set SELECTOR to TAPE/CD.

2 Press ■/▲ STOP/EJECT, and insert the tape to be played.

3 Press ► PLAY to start play.

To stop play:

Press ■/▲ STOP/EJECT.

To stop play temporarily:

Press || PAUSE.

To resume play:

Press || PAUSE again.

To fast-forward or rewind the tape **A**

Press ◀◀ REW/REV or ▶▶ FF/CUE in the stop mode.

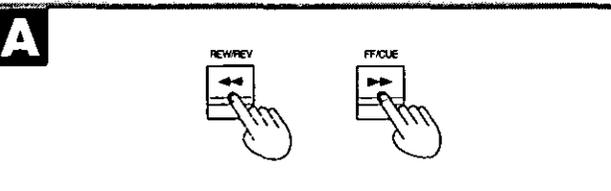
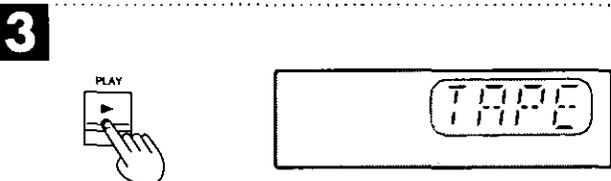
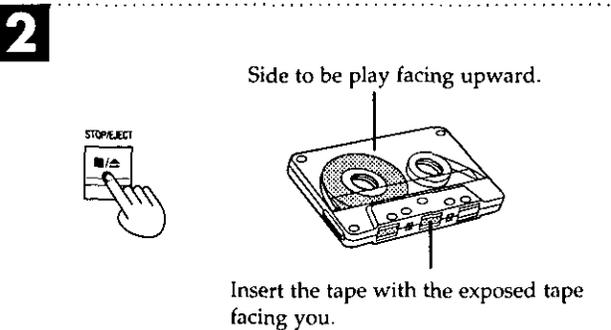
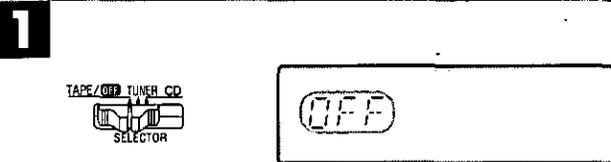
To rewind	To fast-forward
◀◀ REW/REV	▶▶ FF/CUE

To search a particular spot on a tape **A**

Press ◀◀ REW/REV or ▶▶ FF/CUE during playback.

Tape play is resumed when the button is released.

To search backward	To search forward
◀◀ REW/REV	▶▶ FF/CUE



Presetting radio broadcasts

by remote control only

- Up to ten FM and AM stations each can be programmed.
- If broadcast frequencies are preset in the memory, you can easily tune in any of these frequencies from the remote control unit.
- You can preset just those stations you like.

Preparation: Set SELECTOR to TUNER on the main unit. **A**

- 1** Press **BAND** to select "FM" or "AM".
Every time you press the button; FM ↔ AM
- 2** Press **◀/–** or **▶/+** to select the desired broadcast.
"TUNED" lights when you precisely tune in a broadcast station.
- 3** Press **MEMORY**.
- 4** While "PGM" is flashing:
Press **PRESET TUNE ∇** or **∧** to select the preset channel.
- 5** While "PGM" is flashing:
Press **MEMORY**.
- 6** Repeat step 2 to 5 to program the other stations.

FM allocation setting

By adjusting the allocation, you can enable this tuner to receive FM broadcasts allocated in 0.1 MHz steps.

1. Press and hold **BAND** for approximately 5 seconds during AM display. 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.

2. When the display stops flashing and indicates a different frequency number, release **BAND**.

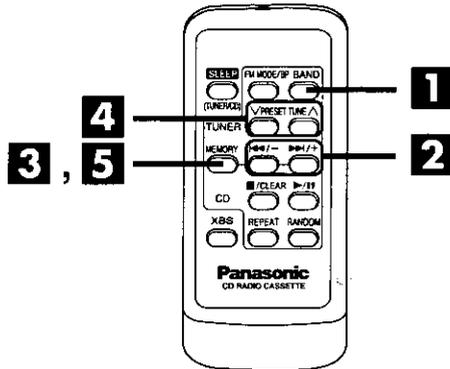
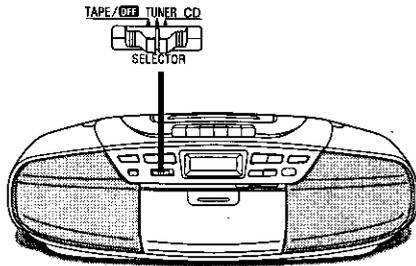
To return to the original frequency, repeat steps 1 to 2 above.

Selecting the stations automatically:

(FM stations only)

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

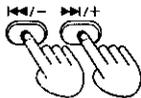
A



1



2

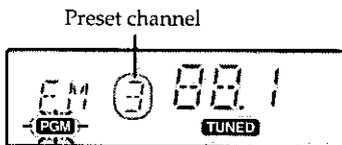
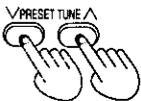


Lights

3



4



Preset channel

5



Listening to a radio broadcasts

Listening to programmed stations (Preset tuning) A

by remote control only

Make sure you have completed the procedure for "Presetting radio broadcasts" (on page 8) first.

- 1** Set the **SELECTOR** to **TUNER** on the main unit.
- 2** Press **BAND** to select "FM" or "AM".
Every time you press the button; FM ↔ AM
- 3** Press **PRESET TUNE** ∇ or ▲ to select the desired broadcast.

Listening to broadcast stations which have not been programmed (Manual tuning) B

- 1** Set the **SELECTOR** to **TUNER** on the main unit.
- 2** Press **BAND** to select "FM" or "AM".
Every time you press the button; FM ↔ AM
- 3** Press **TUNING** – or + to tune in the broadcast station.
" **TUNED** " lights when you precisely tune in a broadcast station.

Adjusting the antennas C

For FM reception:

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

For AM reception:

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.

When an FM stereo broadcast is accompanied by too much noise D

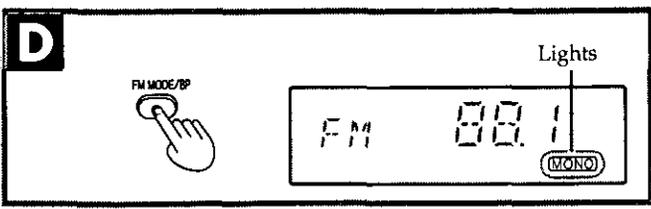
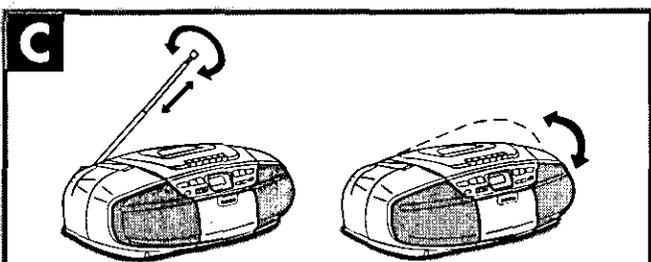
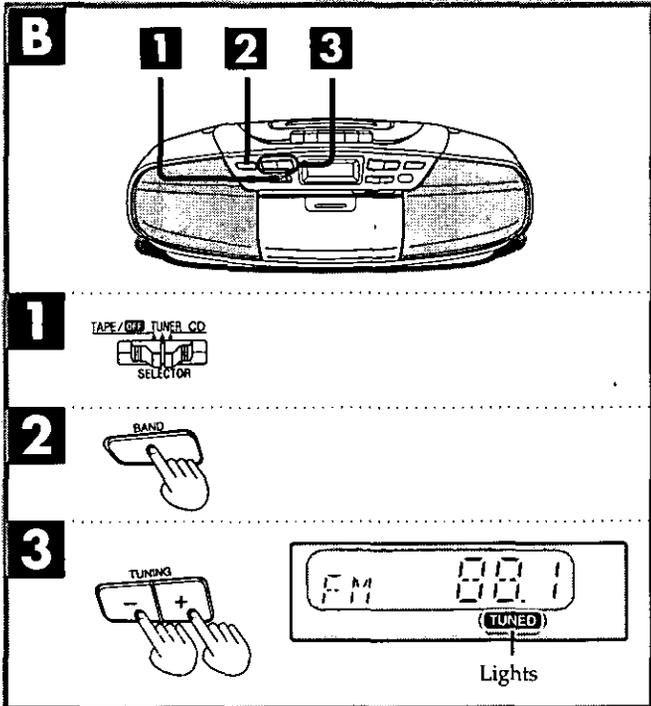
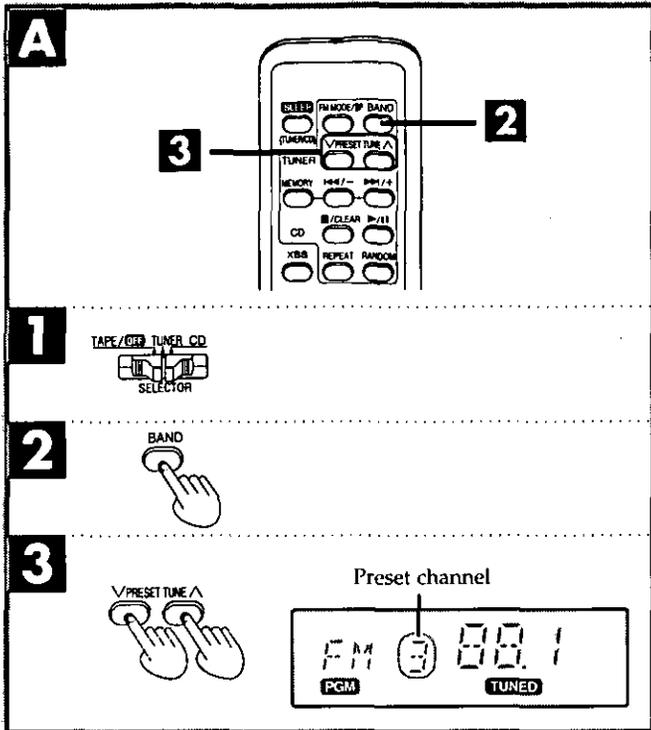
by remote control only

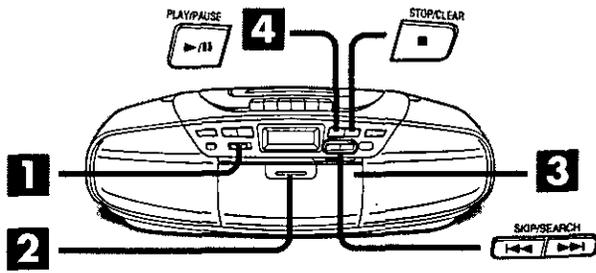
Reduce the interference by setting the sound to monaural.

Example:

While an FM stereo program is being received;
Press **FM MODE/BP**.

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





1 **TAPE/CD TUNER CD SELECTOR**

2 **CD EJECT**

3 **Total number of tracks** **Total playing time**

4 **PLAY/PAUSE** **Elapsed playing time of track in play**

A

REPEAT

B

RANDOM

Lights

Listening to compact discs

Sequential play

- 1** **Set SELECTOR to CD.**
Press ■ STOP/CLEAR when "OFF" appears.
- 2** **Press ▲ CD EJECT, insert the CD.**
- 3** **Close the CD tray.**
- 4** **Press ►/|| PLAY/PAUSE to start play.**
Play starts from track 1 and continues to the last track, after which it automatically stops.

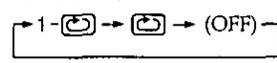
To stop the disc play:
Press ■ STOP/CLEAR.

To pause	Press ►/ PLAY/PAUSE during playback. To resume playback, press ►/ PLAY/PAUSE.
To search forward/backward (Search)	Hold down SKIP/SEARCH ◀◀ (backward) or ▶▶ (forward) during playback.
To skip forward/backward	Press SKIP/SEARCH ◀◀ (backward) or ▶▶ (forward) during playback.

Repeat play

by remote control only

Press REPEAT before or during play. A
Every time you press the button;



To repeat just one track:
Press REPEAT to select "1-(REPEAT)".

To repeat all tracks:
Press REPEAT to select "(REPEAT)".

To cancel repeat play:
Press REPEAT to cancel "1-(REPEAT)" or "(REPEAT)".

To repeat programmed tracks:

1. Program desired tracks (steps 1 to 4 on page 11).
2. Press REPEAT to display "(REPEAT)".
3. Press ►/|| to begin play.

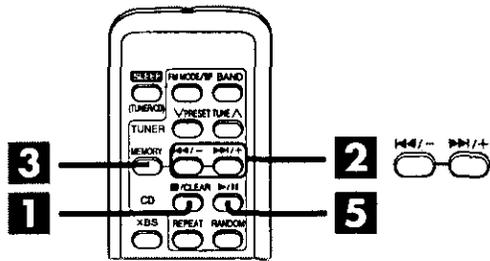
Random play

by remote control only

Press RANDOM in the stop mode. B
All tracks on the loaded CD will be played in random order. Playback will stop automatically when all tracks have been played.

To cancel random play:
Press RANDOM once again.

Note
Random play cannot be used in combination with program play.

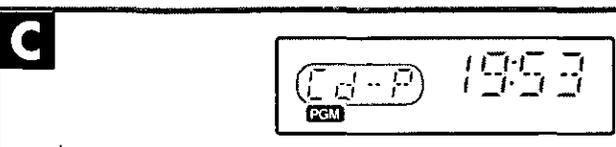
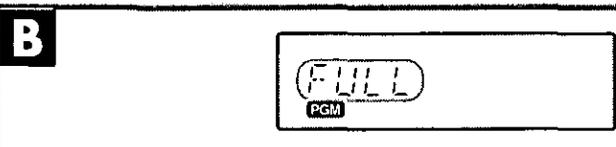
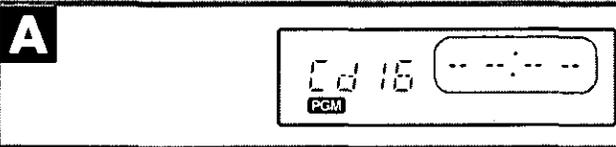
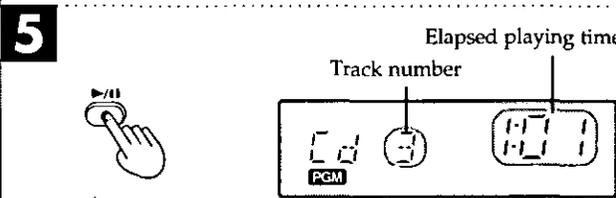
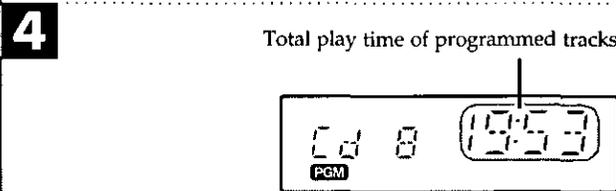
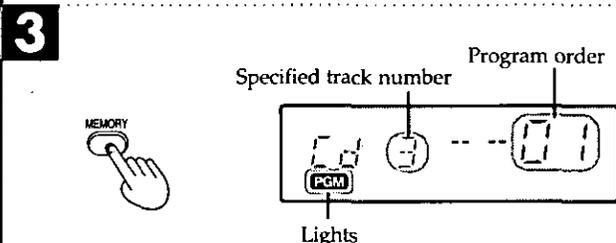
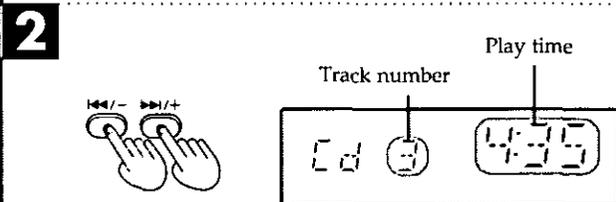


Program play

by remote control only

You can program up to 24 tracks.

- 1** Press **■/CLEAR**.
- 2** Press **◀◀/-** or **▶▶/+/** to select the desired track.
- 3** Press **MEMORY**.
- 4** Repeat steps 2 through 3 until you have programmed all the tracks you want.
- 5** Press **▶/||**.
Play will start in the programmed sequence.



To cancel program play mode:
Press **■/CLEAR** in the stop mode.

When "---" appears: A
This means that the total play time of the programmed tracks has exceeded 120 minutes. Tracks can still be programmed and played.

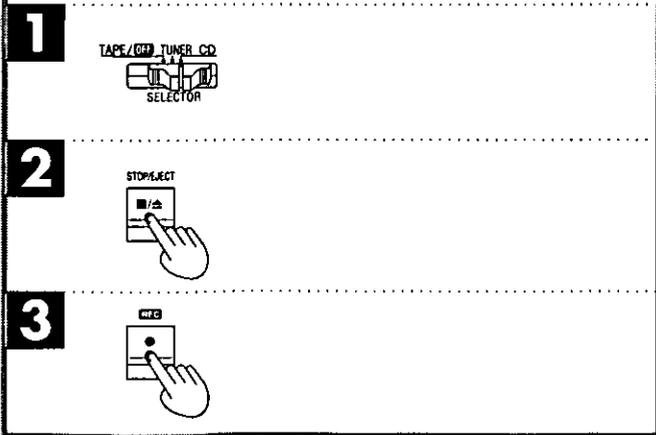
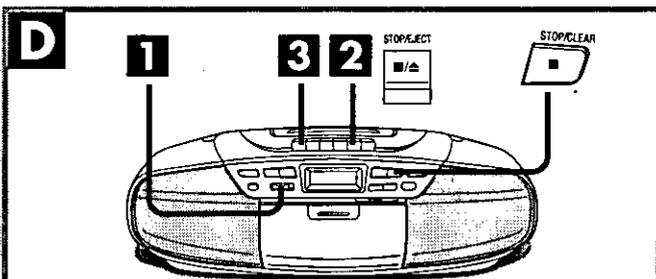
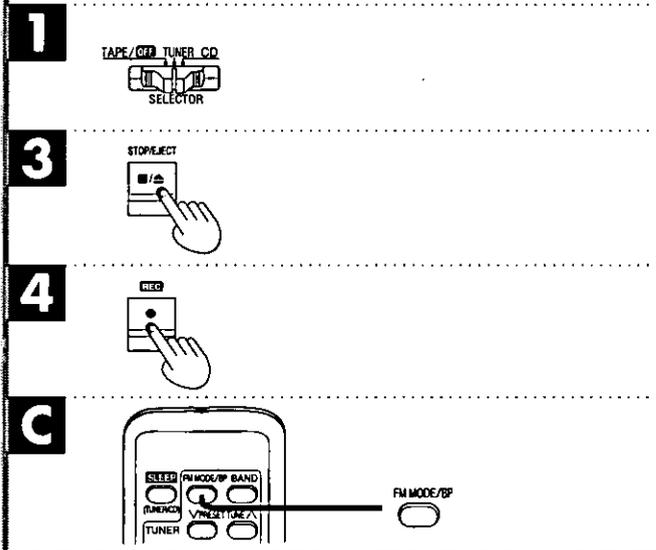
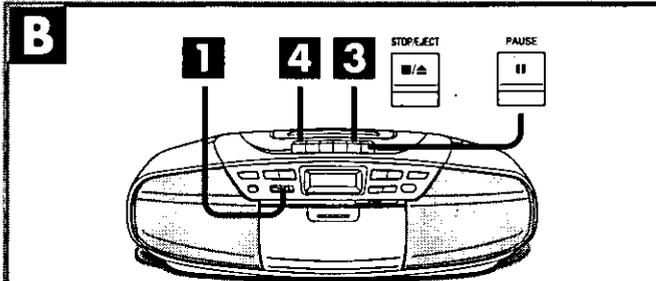
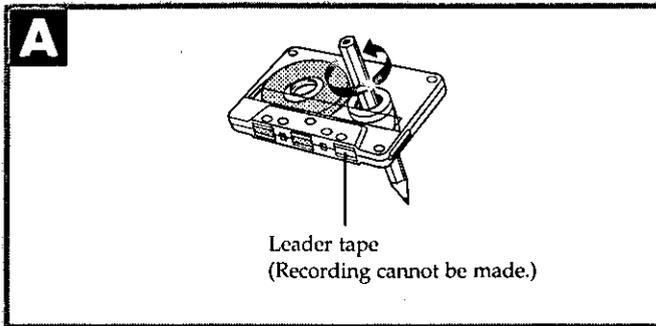
When "FULL" appears: B
The number of programmed tracks is limited to 24. No further tracks can be programmed.

To check what has been programmed: C
While "Cd-P" display is on, press **◀◀/-** or **▶▶/+/**.
The programmed track numbers and the play sequence will now appear.
The programming is cleared by opening the disc lid.

Memory retention of programmed tracks:
The programming of the tracks will be retained in the memory even if play is stopped at any time or the power is turned off.

Notes

- During random play (page 10), you cannot skip to tracks which have already been played out.
- During program play or random play, you can search forward or backward only within the current track.
- During program play, skipping is always in the programmed order, whether forward or backward.



Before recording

To take up the leader tape: **A**

Type of tape which can be used for recording:

Normal position/TYPE I	○
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.

References

- Any changes made to the volume or XBS level 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.

Note

If the unit is brought near a TV set during recording, noise may be recorded due to the effects of the signals from the TV set. Maintain a distance of at least 1.5 meters between the unit and a TV set.

Recording from radio broadcasts **B**

- Set SELECTOR to TUNER.
- Tune in the broadcast station.
(See page 9.)
- Press **■/▲** STOP/EJECT and load the tape.
Load the tape with the side to be recorded facing upward.
- 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: **C**

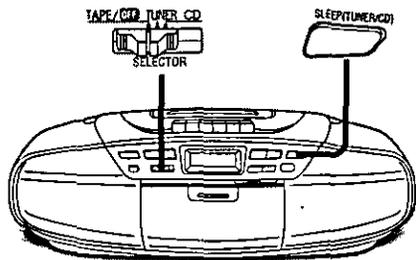
Press FM MODE/BP to whichever position yields less noise.
Every time you press the button; bP1 ↔ bP2

Recording from compact discs **D**

- Set SELECTOR to CD.
- Press **■/▲** STOP/EJECT and load the tape.
Load the tape with the side to be recorded facing upward.
- Press **●** REC.
CD play starts simultaneously.

To stop the recording:
Press **■** STOP/CLEAR and **■/▲** STOP/EJECT.

Using the sleep timer



(Available only when you are listening to a Radio broadcast or CD)
This timer turns power to your system OFF at the set time (Max. 2 hours, settable at 30 minute intervals). It lets you fall asleep while listening to music.

While enjoying the desired source:
Press SLEEP to select the desired time. **A**

Every time you press the button;

→ 0:30 → 1:00 → 1:30 → 2:00 → Previous display →

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

To cancel the sleep timer:

Press SLEEP repeatedly until "SLEEP" goes off or set the SELECTOR to TAPE/Off.

To confirm the remaining time:

(only while power is ON)

Press SLEEP.

To change the time remaining during operation:

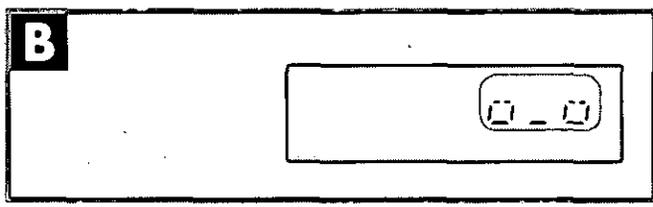
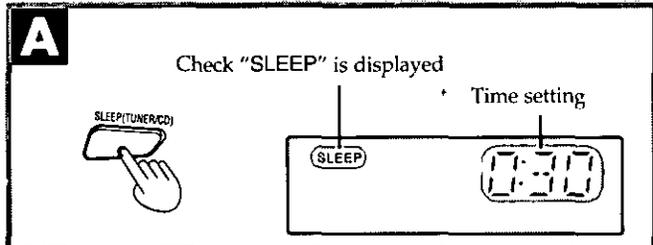
Press SLEEP to show the remaining time then press SLEEP to select the desired time.

If you are recording during sleep operation:

When the sleep timer reaches it's set timing, Radio Broadcast or CD will stop, but the tape will continue until it reaches the end of the tape. **B**

Note

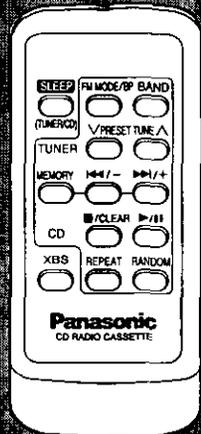
Sleep will not function if you set the SELECTOR to TAPE/Off.

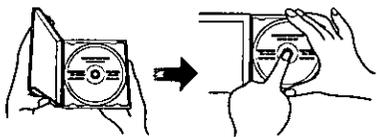


Remote control buttons and functions

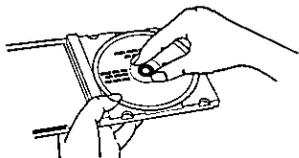
Reference pages given as black circled numbers.

Button	Source	Radio	CD	Other component
		For setting sleep timer 13		-
		Reduce interference during FM broadcast (FM MODE) 9 To reduce noise during AM recording (BP) 12		-
		For selecting band 8 , 9	-	-
		For station selection 8 , 9	-	-
		Engages program input 8 , 11		-
		For tuning the broadcast frequency 8	<ul style="list-style-type: none"> Searching forward/backward 10 Skipping forward/backward 10 	-
		-	Stop 10	-
		-	Playback (▶) 10 Pause () 10	-
		-	For selecting repeat playback mode 10	-
		-	Random playback 10	-
		For setting XBS level 6		



A How to remove CDs

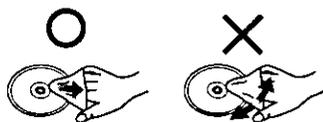
Press on center piece and lift from both sides.

B How to return CDs to their case

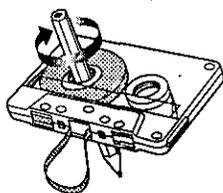
Face label upwards and press downward from above.

C How to hold CDs

Do not touch the recorded surface

D How to clean CDs

Wipe from inside outward.

E How to take up tape slack**F**

Side A

Tab for side B

Tab for side A

To re-record
Normal position tape

**Concerning compact discs**

With this player, you can only play compact discs having this mark.

**Handling precautions**

Handle CDs as shown on the left (**A** - **D**).

- If you are taking the disc from a cold to a warm environment, moisture may form on the disc. Wipe this off with a soft, dry, lint-free cloth before using the disc.
- Do not write on the label side with a ball-point pen or other writing instrument.
- Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.

Storage precautions

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

Do not place or store discs 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

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

Always read the instructions provided with your tapes.

Tape slack **E**

Tape slack may cause the tape to break.
Use a pencil or similar object to take up the slack.

Erasure prevention **F**

Use a screwdriver or similar object to break out the tab.
To re-record on a protected cassette, cover the hole with adhesive tape.

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.

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 PASC Authorized Servicers for detailed instructions or call 1-800-545-2672 for the address of an authorized factory servicer.)

Problem	Probable cause(s)	Suggested remedy	Page
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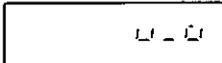
Common problems

No operation when the unit is powered by dry batteries	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 properly.	5
"U01" appears	Are the batteries flat?	Replace them with new ones. Alternatively, use a household AC outlet as the power source.	5
"U02" appears	Have the preparations been made to supply power to the unit?	Install the batteries or connect the power cable.	5
	When the memory back-up batteries have not been installed, "U02" does not appear		

While listening to CDs

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.	10
	Has condensation formed on the unit's CD section?	Turn the unit on and leave it on for about an hour before further operation.	3
Certain sections are not played properly	Is the CD dirty?	Wipe with a soft cloth.	14
	Is the CD scratched?	Replace with a new CD.	

While listening to tapes

Tape is not ejected	Are the batteries flat?	Replace them with new ones or, alternatively, use a household AC outlet as the power source and then perform the operation once again.	5
No recording	Has the tape's accidental erasure-prevention tabs been broken off?	Cover the holes with adhesive tape.	14
High level of noise, poor sound quality	Are the heads dirty?	Clean them.	16
	Have the heads been magnetized?	Demagnetize them using a demagnetizer available from an audio store.	
Tape is travelling but there is no sound and the display on the right appears		Press  STOP/EJECT to stop the tape from travelling.	

While listening to the radio

High level of noise, stations cannot be tuned in well	Has the antenna been adjusted properly?	Try changing its direction.	9
Noise heard during AM reception	Are you using the remote controller of other appliances near the unit?	Use the remote controller 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 off the TV's power.	

While using the remote control transmitter

No operation	Are the batteries flat?	Replace them with new ones.	4
	Have the batteries been installed with their (+) and (-) polarities aligned properly?	Align the (+) and (-) polarities properly.	4
	Is the remote control transmitter pointed toward the unit's receiving sensor?	Check whether anything is obstructing the path between the remote control and the unit. Point the remote control properly at the unit's sensor, and operate.	4
	Is the unit's sensor exposed to direct sunlight, fluorescent light or another strong source of light?	Shield the sensor from strong sources of light.	4

Maintenance

If the surfaces are dirty

To clean this unit, wipe with 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

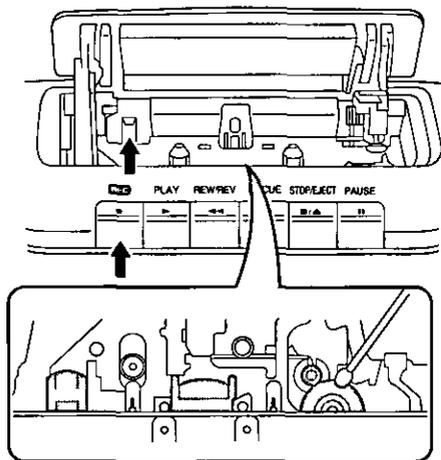
- Never use alcohol, paint thinner, benzine, or chemically treated cloths to clean this unit
- Before using chemically impregnated cloth, read the instructions that came with the cloth carefully

For a cleaner crisper sound

Tape head care

We recommend that you periodically clean parts (the shaded portion in the figure below) the tape contacts like the heads with a cotton swab

Do not use any solution other than alcohol for head cleaning



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

CD player

Sampling frequency

44.1 kHz

Decoding

16 bit linear

Beam source

Semiconductor laser (wavelength 780 nm)

No. of channels

2 channel, stereo

Wow and flutter

Less than possible measurement data

D/A converter

MASH (1 bit DAC)

Tape recorder

Track system

4 track, 2 channel, stereo

Recording system

AC bias

Erasing system

Multi pole magnet

Monitor system

Variable sound monitor

Frequency range

Normal

50–12,000 Hz

General

Power requirement

AC

120 V, 60 Hz

Power consumption 16 W

Battery

12 V (Eight R20/LR20, "D" size, UM-1 batteries)

- Do not use rechargeable type batteries

Memory back-up

for computer 6 V (Four R6/LR6, "AA" size, UM-3 batteries)

- Do not use rechargeable type batteries

Speakers

10 cm (4") x 2

Jacks

Output

Headphones, 32 Ω

Dimensions (WxHxD)

480 x 156 x 243 mm

(18 1/12" x 6 1/12" x 9 1/2")

Weight

3.2 kg (7 lb 1 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

Panasonic Consumer Electronics
Company, Division of Matsushita
Electric Corporation of America
One Panasonic Way Secaucus,
New Jersey 07094

Panasonic Sales Company,
Division of Matsushita Electric of
Puerto Rico, Inc ("PSC")
Ave 65 de Infanteria, Km 9.5
San Gabriel Industrial Park, Carolina,
Puerto Rico 00985

Panasonic Canada Inc
5770 Ambler Drive,
Mississauga, Ontario
L4W 2T3

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