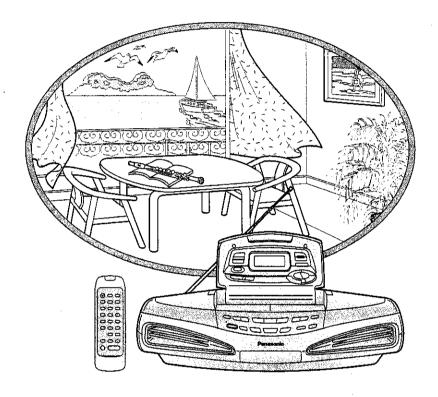
Portable Stereo CD System

Panasonic

RX-ED77

Operating Instructions



The "EB" indication shown on the packing case indicates United Kingdom.

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



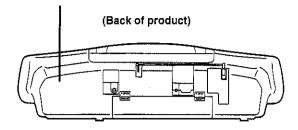








CLASS 1 LASER PRODUCT



	DANGER	INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.
	ADVARSEL	USYNLIG LASERSTRÅLRIG VED ÅBHING. NAR SIKKERHEDSAFBRYDERE Er ude af funktion. Undgå udsættelse for stråling.
	VARO!	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALITIINA NÄKYMÄTÖNTÄ LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEH
Ì	VARNING	OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN AR LIRKOPPLAD. BETRAKTA EJ STRÅLEN.
	ADVARSEL	USYNLIG LASERSTRÁLING NÁR DÉKSEL ÁPNES OG SIKKERHEDSLÁS Brytes. Unngá eksponering for strálen.
Į	VORSICHT	UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.

(Inside of product)
(Indersiden at apparatet)
(Tuotteen sisällä)
(Apparatens insida)
(Produktets innside)

(im Inneren des Gerätes)

For areas except United Kingdom, Australia and New Zealand:

CAUTION:

The AC voltage is different according to the area. Be sure to set the proper voltage in your area before use. (For details, please refer to the page 5.)

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!

DO NOT INSTALL OR PLACE THIS UNIT IN A BOOKCASE, BUILT IN CABINET OR IN ANOTHER CONFINED SPACE IN ORDER TO KEEP WELL VENTILATED CONDITION. ENSURE THAT CURTAINS AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE VENTILATION CONDITION TO PREVENT RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO OVERHEATING.

WARNING:

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

Dear customer

Thank you for purchasing this product.

For optimum performance and safety, please read these operating instructions carefully.

Table of Contents

Before use Power Sources 5 Location of Controls 6 Using Headphones 8 Setting Clock 9 Selecting the Display9 Listening Listening to Cassettes 10 Listening to the Radio 12 Listening to CDs 14 Recording Preparation for Recording18 Recording from CD 20 Timer Using Play Timer24 **General information** Concerning Compact Discs30 Concerning Cassette Tapes31 Troubleshooting Guide34

Caution for AC Mains Lead

(For United Kingdom)

("EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark # or the BSI mark $\textcircled{\triangledown}$ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local dealer.

CAUTION!

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.

THERE IS A DANGER OF SEVERE ELECTRI-CAL SHOCK IF THE CUT OFF PLUG IS IN-SERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.

If in any doubt please consult a qualified electrician.

IMPORTANT

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

Blue: Neutral, Brown: Live.

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL \(\preceq\) OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

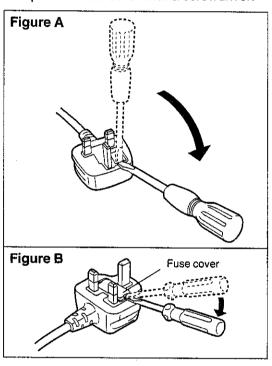
Remove the connector cover.

How to replace the fuse

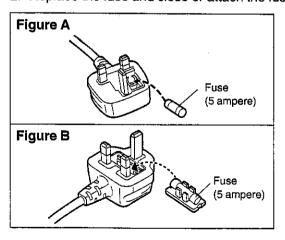
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

Illustrations may differ from actual AC mains plug.

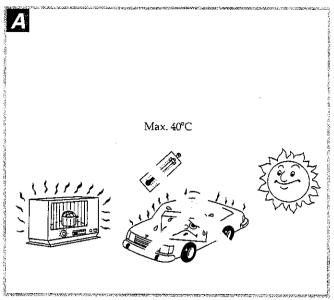
1. Open the fuse cover with a screwdriver.

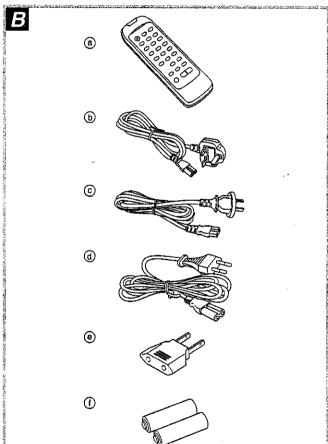


2. Replace the fuse and close or attach the fuse cover.









Precautions m

- If this unit is not used for a long period of time or is used only from an AC mains, remove all the batteries to prevent potential damage due to possible battery leakage.
- Avoid using or placing this unit near sources of heat. Do not leave
 it in an automobile exposed to direct sunlight for a long time with
 the doors and windows closed as this may deform the cabinet.
- Avoid cuts, scratches, or poor connections in the AC mains lead, as they may result in possible fire or electric shock hazard. Also, excessive bending, pulling or splicing of the cord should be avoided.
- Do not unplug the AC mains lead by pulling on the cord. To do so may cause premature failure or shock hazard.
- Do not operate this unit on AC mains in a bathroom, as a potential shock hazard may result.
- When not in use, disconnect the AC mains lead from the household AC outlet.

Use of batteries

- Do not use rechargeable type batteries.
- Do not mix old and new batteries, or batteries of the 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 this 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 them properly.
- Throughly clean the battery compartment before inserting new batteries.
- If the electrolyte comes into contact with skin or clothes, flush with water immidiately.
- Keep batteries out of reach of children.
- Do not attempt to recharge alkaline or manganese batteries.
- Batteries installed with incorrect polarities may leak and damage the unit.

In these operating instructions, "unit off" defined as the following mode.

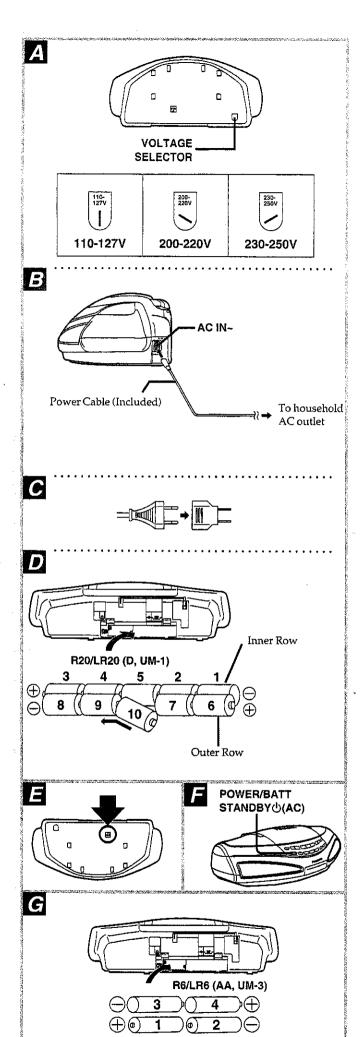
"Standby" when AC power is used.

"Battery power off" when batteries are used.

Supplied Accessories

Please Check and identify the supplied accessories.

Use numbers indicated in parentheses when asking replacement parts.



Power Sources

Operating unit on AC power

For areas except United Kingdom, Australia and New Zealand:

Set the voltage. Use a flat-head screwdriver to turn the voltage selector on the rear to the voltage setting for the area in which you will be using the system.

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

If the power plug will not fit your socket, use the power plug adaptor (included) as illustrated.

Operating unit on battery power (Not included)

Install memory batteries first.

Battery installation and removal D

Place unit on a soft cloth when installing and removing batteries to avoid damaging the front panel.

- ① Open the battery cover on the rear panel.
- ② Install batteries in the order indicated in the diagram.

Remove batteries by inserting finger into hole on the bottom of the unit and pushing out.

Battery life 🖪

When the power/battery check/standby indicator goes off (or dims) during play, replace all the batteries with new ones.

Memory batteries (Not included)

What is memory?

Memory is the information which can be programmed into the unit such as:

- Time
- Timer programming
- •CD programming
- Radio stations

If memory batteries are not used, the memory is cancelled at the following times.

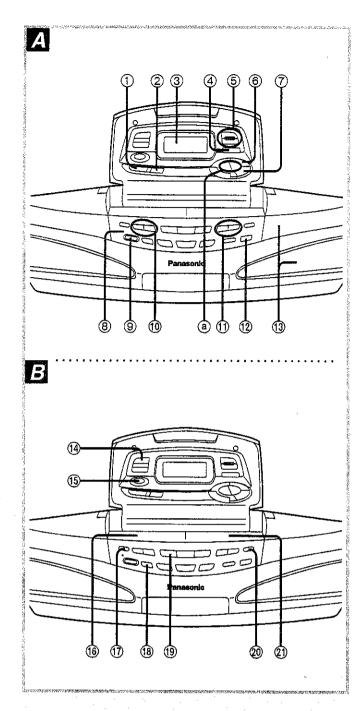
- In electric failures
- When the cable plug is removed from the AC outlet
- When, using batteries as the power source, cable is inserted into the unit while disconnected from the AC outlet

Battery installation and removal @

Press the negative end of the number 4 battery to remove batteries.

Replacing batteries

- 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 memory 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.

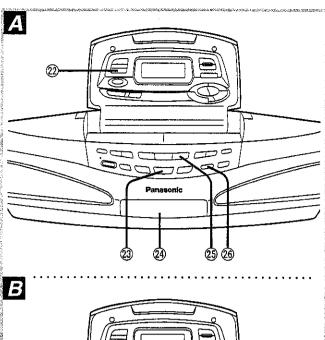


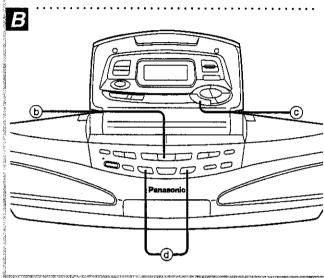
Location of Controls

Bosic cont	rols	A
Number	Designation	Reference Page
② Preset equa ③ Display pan ④ Recording t (REC TIMEF ⑤ Play timer p (PLAY TIME ⑥ Timer time a (TIMER ADJ ⑦ Clock time a (CLOCK AD ⑥ Power/batte [POWER/BA The indicator I When the AC]	alizer button (S.VIRTU lizer button (PRESET el imer programming but i) rogramming button R A, B) adjustment button UST) djustment button JUST) ry life check/standby i ATT, STANDBY () (AC) ights green when the unit power supply is used, it fur (The indicator colour chan	EQ)
check indicato		it functions as a battery
Press to switch standby mode power. Volume con Top panel of	ANDBY ⊕" switch ATT, STAND BY ⊕ (I the unit from on to standle It the unit is still consument ATT, STAND BY ⊕ (I the unit from on to standle I the	by mode or vice versa. In thing a small amount of $+,-$

Mode	Function	Page
Time adjustment	Setting time	9
Radio	Selecting station	12
CD	Selecting tracks for programming	16

Cassette	deck controls	В
Number	Designation	Reference Page
	utton (TAPE EDIT)	23
(●/● II RE	C/REC PAUSE)	19–23
	t button (▲ DECK 1)	40
Cassette pl	ect button (DECK 1/2) ay/direction button (<mark>◀</mark>	► PLAY/DIR) 10
	t button (▲ DECK 2) .	10





Location of Controls

Tuner/CD co	ontrois	A
Number	Designation	Reference Page
② Band button (E② CD tray③ CD play/pause② ▲ CD tray ope	BAND)	EC MODE) 21, 22

Button ⓑ (■ STOP) functions change according to the operation mode when pressed.

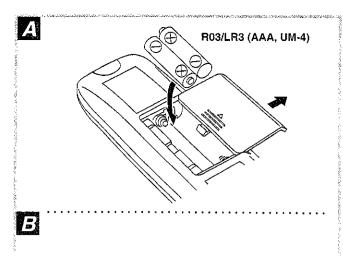
Mode	Function	Page
Tape play/ CD play	Stop play	10 14
Tape stop/ CD stop	Selects between CD and cassette (each time it's pressed)	10 14

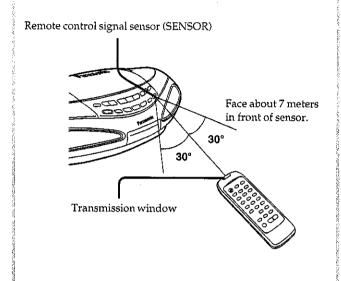
Button © (•MEMORY/ — CLEAR) functions change according to the way the buttons are pressed.

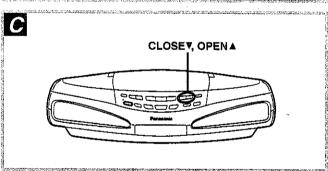
Press	Function	Page
Once	Program	16
Continuously	Cancel programming	16

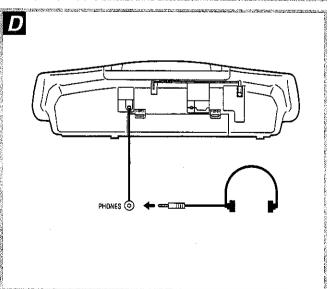
Button ⓓ (∨/!◄◄ REW ṬFS/CD, ∧/►► FF ṬFS/CD) functions change according to the operation mode when pressed.

Mode	Function	Page
Tape stop	Fast forward, rewind	11
Tape play	Return to the beginning of the track	11
Radio	Select preset station	13
CD stop	Select track	14
CD play	Skip track, fast forward, rewind	14









Concerning the Remote Control

Battery installation and removal

Remove the batteries (included for areas except United Kingdom, Australia and New Zealand) by pulling the positive side of the battery up.

Bottery 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

Operation caution

- Do not expose the remote control signal sensor to direct sunlight or bright fluorescent lighting.
- Keep the remote control signal sensor and end of the remote control free from dust.

Opening/Closing the Top Panel @

Press TOP PANEL OPEN ▲ to open panel.

Press TOP PANEL CLOSE ▼ to close the panel.

When this unit operated on battery power, the panel cannot be opened or closed by pressing OPEN or CLOSE on the remote control in the unit off mode. Turn the unit on first by pressing POWER on the main unit before opening or closing the panel.

Do not put any object on the top panel to prevent it would fail inside the unit. It might be cause of fire or trouble.

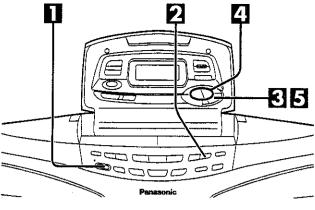
Using Headphones 🛭

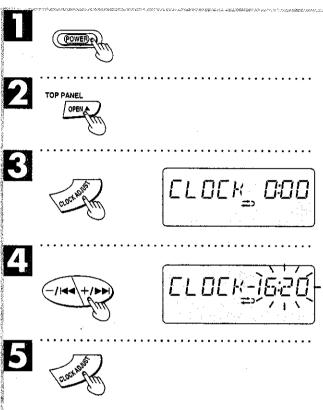
Lower the volume and connect the headphones (not included).

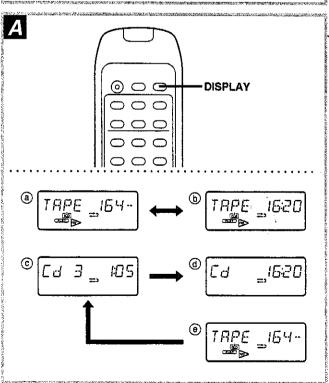
Plug type: 3.5 mm stereo

Note

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







Setting the Clock

The clock has a 24-hour display. Example: Setting the clock to 16:20;

Press POWER.

(This turns the unit on.)

- Press TOP PANEL OPEN ▲ to open top panel.
- 3 Press CLOCK ADJUST.

"CLOCK" is displayed.

Press +/▶▶ or -/ ◄ to show desired time.

The time display can be changed in one minute units by tapping the buttons, and quickly by holding down the buttons.

While the time display is flashing; Press CLOCK ADJUST.

The clock now starts operating, and the display returns to its original status.

To display the clock (When the unit is on):

(Available only from the remote control)

Press DISPLAY when the unit is on.

Selecting the Display M

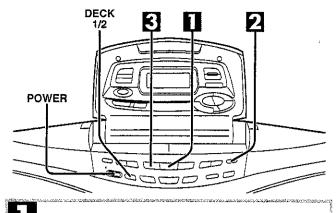
(Only from the remote control)

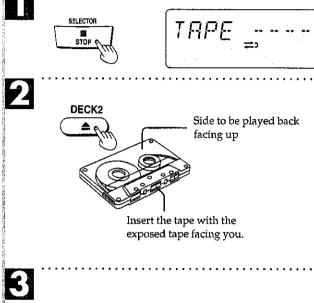
Press DISPLAY when the unit is on.

The display changes each time the button is pressed.

- •When using the cassette
 - Tape counter
 - Present time
- When using the radio or CD
 - © Frequency/play status
 - @ Present time
 - Tape counter

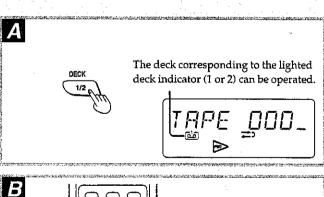
"———" appears on the tape counter display when a cassette has not been inserted.

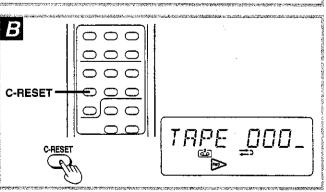




TAPE

Tape travel direction indicator.





Listening to Cassettes

Tapes can be played back either deck 1 or deck 2. Normal, high position and metal tapes can be used.

Press POWER.

(Only when the batteries are used for the power supply)

Press ■ STOP to select the cassette mode.

CD ← TAPE

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

Press DECK 1 ≜ or DECK 2 ≜, load the tape and close the lid.

The direction is automatically set to play the top side (is displayed).

Press ◀ ►.

"FWD" is displayed and play begins. ("REV" is displayed when play begins while < ii displayed.)

: The side which is facing up is played back.

: The reverse side is playback.

To stop play:

Press .

To listen to the other side of the tape:

Press ◀ ▶ during playback.

Hint

Pressing ◀ ▶ automatically turns the unit on, and if a tape is inserted, begins play (only when AC power is supplied).

Changing the operation deck

The deck loaded last is automatically selected.

Press DECK 1/2 to select deck 1 or 2.

Note

To reset the tape counter to "000"

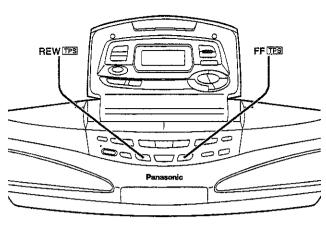
(Available only from the remote control)

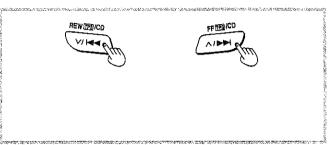
Press C-RESET. 3

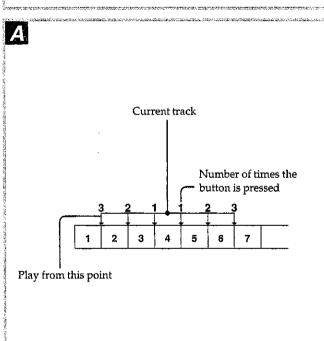
Types of tapes which can be played on this unit:

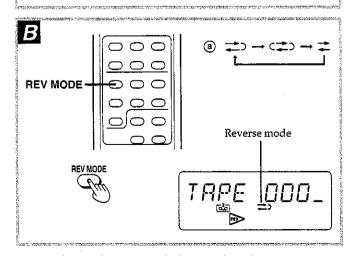
The unit automatically identifies type of tape.

Normal position/TYPE I	0
High position/TYPE II	0
Metal position/TYPE IV	0









Fast forwarding and rewinding a cassette

Press FF $\frac{tres}{tres}$ or REW $\frac{tres}{tres}$ when cassette is in stop mode.

	Rewind	Fast forward
Main unit	∨/ /44	^/▶▶
Remote control	REW TPS	FF (TPS)

Finding the beginning of a track (TPS: Tape Program Sensor) [2]

Press the button once for each track to be skipped (up to 9 tracks).

Press during play mode.

	Backward	Forward
Main unit	∨/ !⊲⊲	^/▶₩
Remote control	REW (TPS)	FF (TPS)

Notes

 Since the blank spaces between tracks are used for locating the begining of each track, the TPS function may not operated in the following cases:

When the blank spaces are 4 seconds or less.

When there are no blank spaces on the tape (such as when the recording has been made from a microphone, etc.).

When there are parts of a track which have been recorded at a particularly low level or which have not been recorded at all (such as with classical music).

When 10 or fewer seconds until elapsed since the begining of a track or when there are 10 or fewer seconds until begining of the next track.

When a tape is recorded with fade-ins or fade-outs.

Selecting the reverse mode

(Available only from the remote control)

Press REV MODE to select the mode.

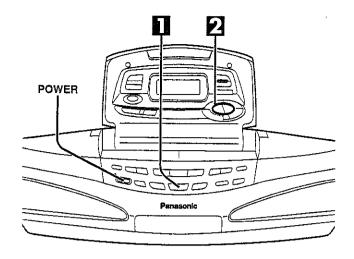
The display changes each time the button is pressed. ⓐ

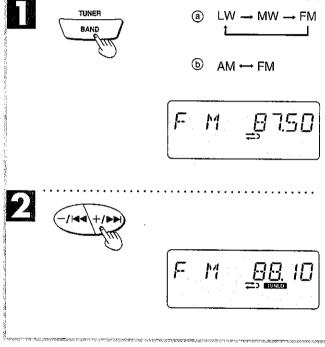
- The tape plays from the side facing up to reverse side, and then it stops automatically.
- The tape plays repeatedly until (STOP) is pressed. (When cassettes are inserted into both decks, both play continuously.)
- Only one side of the tape is played, and then the tape stops automatically.

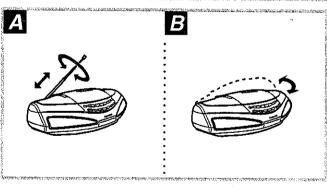
To listen continuously to two tapes in succession:

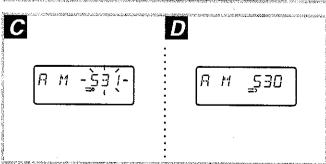
- 1. Load tapes into deck 1 and deck 2.
- 2. Select the reverse mode (CID).
- 3. Select which deck is to start tape by pressing DECK 1/2.
- 4. Press ◀ ▶ to start the tape play.

The tape plays from repeatedly until (STOP) is pressed.









Listening to the Radio

Press POWER.

(Only when the batteries are used for the power supply)

For United Kingdom:

Press BAND to display "LW", "MW" or "FM".

The display changes each time the button is pressed. ⓐ For areas except United Kingdom:

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

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

Press +/▶▶ or -/ ◄ to select the station.

+/▶►: The frequency is increased.

-/ ◄ : The frequency is reduced.

Adjust the frequency until **STUNED** is displayed on the panel (the display blinks or does not light when reception is weak).

Automatic tuning:

Keep $+/ \triangleright \triangleright \mid$ or $-/ \mid \blacktriangleleft \triangleleft$ depressed until the frequency display starts to change. A station with good reception is automatically selected and the selection process then stops.

To stop automatic tuning, press $+/ \rightarrow \rightarrow |$ or $-/ \mid \blacktriangleleft \mid$ again.

Hint

- Pressing BAND will automatically turn the unit on and receive the broadcasts which is previously tuned (only AC power is supplied).
- •The automatic tuning may stop without a station having been tuned in when interference is encountered on neighboring airwaves. In such a case, tune in a station by tapping +/

Adjusting the antenna

For FM reception: 🔼

Adjust the length and direction of the whip antenna.

For AM (LW/MW) reception: E

Adjust the direction in which the main unit is pointed.

For your reference:

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

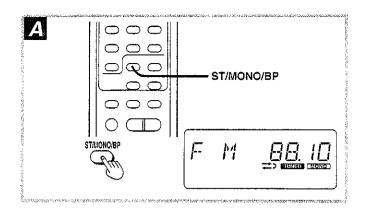
For areas except United Kingdom:

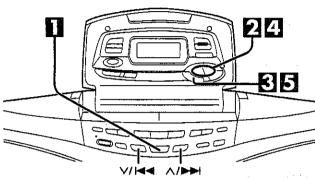
AM allocation setting

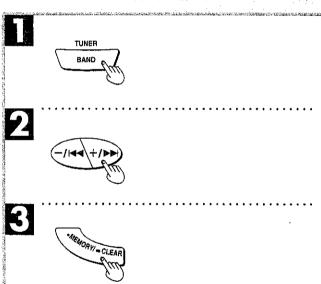
Before receiving the AM broadcasts, be sure to select the correct allocation setting (either 9 kHz or 10 kHz) according to your area.

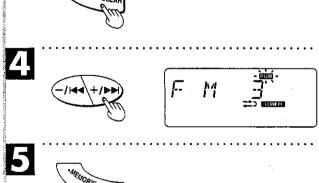
- 1) Press BAND to select FM.
- ② Press and hold BAND for approximately 5 seconds. The frequency display will be returned to the minimum frequency of the AM band and the display will begin to flash. Keep holding for approximately 5 more seconds.
- When the display stops flashing and indicates a different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

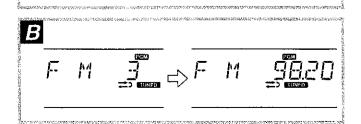
To return to the original frequency, repeat steps 1 to 3 above.











Listening to the Radio

When interference of FM stereo reception occurs ☑

(Available only from the remote control)

Set the sound to the monaural mode to reduce the noise. Press ST/MONO/BP.

The MONO display appears.

The monaural sound is set but noises are reduced and sound become clear

To return to stereo sound, press ST/MONO/BP again to turn off the MONO display.

Keep the MONO display off in usual and FM stereo programs can be heard as stereo sound.

Preset tuning

Once broadcast stations have been programmed, they can easily be turned in.

Up to ten FM, AM (LW/MW) stations each can be programmed.

Programming broadcast stations

(Available only from the main unit)
Preset radio stations on the FM, AM (LW/MW) band.

- For United Kingdom:
 Press BAND to display "LW", "MW" or "FM".
 For areas except United Kingdom:
 Press BAND to display "AM" or "FM".
- Press +/▶▶ or -/◄◄ to select the station.
- Press •MEMORY once.
 PGM flashes.
- While PGM is flashing,

 Press +/▶▶ or -/ ◄◄ to display the preset channel to be programmed.
- While PGM is flashing, Press MEMORY.

If the **PGM** indicator goes during programming, return to step 3.

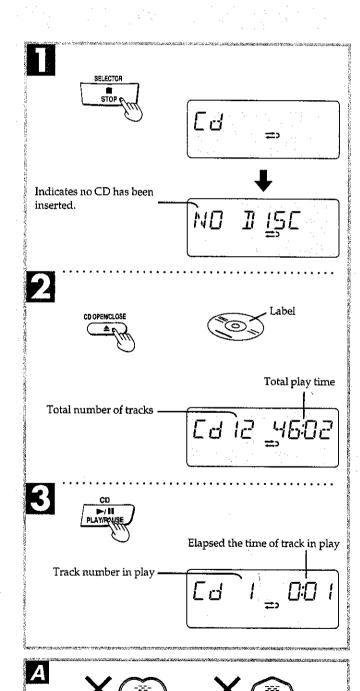
6 Repeat steps 2 to 5 to program other stations.

Selecting the preset channel

- For United Kingdom:
 Press BAND to display "LW", "MW" or "FM".
 For areas except United Kingdom:
 Press BAND to display "AM" or "FM".
- Select the preset channel.

	Down	Up
Main unit	∨/ ◀◀	^/▶▶
Remote control	V	٨

POWER 2



Listening to CDs

Press POWER.

(When using batteries for the power supply)

Press STOP to select the CD mode.

CD ←→ TAPE

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

Press ▲ CD OPEN/CLOSE, insert a CD and press the ▲ again.

Insert the CD with the label facing up.

Press ►/II PLAY/PAUSE.

Plays to the last track and automatically stops.

To stop playing:

Press STOP.

Prese ►/II to pause play.

Press ►/II to return to play mode.

Note

- If interference occurs to radios or televisions, place the unit as far as possible from this equipment.
- Do not use irregular shape CDs (heart-shape, octagonal, etc.).

Hint

Pressing ►/II automatically turns the unit on, and if a CD is inserted, begins play (only when AC power is supplied).

Skipping tracks

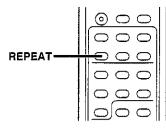
Press the button once for each track to be skipped.

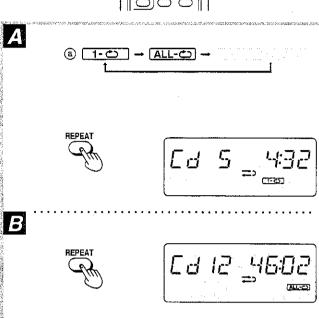
	Backward	Forward
Main unit	∨/ ◀◀	^/₩
Remote control	₩	>>

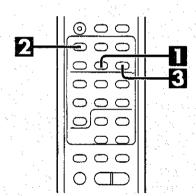
Fast forwarding and rewinding

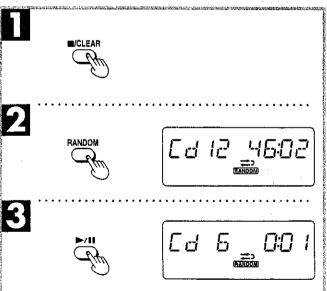
Keep the button pressed during play or pause mode.

	Backward	Forward
Main unit	∨/1€€	^/▶
Remote control	₩4	>>









Listening to CDs

Repeating tracks

(Only from the remote control)

Press REPEAT.

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

To repeat only one track:

Press REPEAT to display 1-0. A

To repeat all tracks on the CD:

Press REPEAT to display ALL-

To repeat programmed tracks:

- ① Program desired tracks (steps 1 to 4 on page 16).
- ② Press REPEAT to display (ALL-C).
- ③ Press ►/II to begin play.

To clear the repeat function:

Press REPEAT to cancel 1-0 or ALL-0.

Random play

(Only from the remote control)

- Press MCLEAR to select the CD mode.
- Press RANDOM when CD is in stop mode.

 RANDOM is not displayed if pressed when CD is in play mode.
- Press ►/II.

All tracks play at random, and play automatically stops.

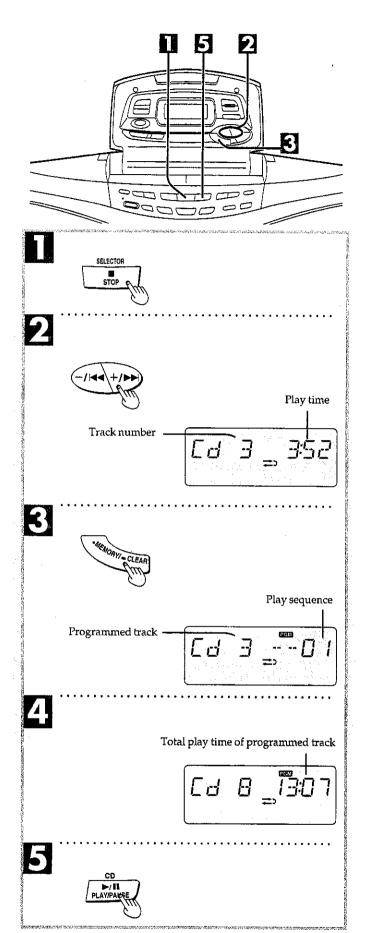
To cancel random play:

Press RANDOM to clear RANDOM display.

• If cancelled during random play, the CD plays from the track in play to the end of the CD, and automatically stops.

Notes

- Random play cannot be used in combination with program play.
- •Skipping to tracks which have already been played is not possible.
- Searching forward and backward are possible only within the track in play.



Listening to CDs

Selecting and listening to favorite tracks (Program play)

Up to 36 tracks can be programmed.

(Only from the main unit)

Press ESTOP to select the CD mode.

When FANDOM is displayed, press RANDOM on the remote control to clear the display.

- Press +/▶▶ or -/ |◄◄ to select desired track.
- Press •MEMORY to record the selection.
- Continue programming by repeating steps 2 and 3.

Press ►/II PLAY/PAUSE.

Selected tracks play in the programmed sequence, and play automatically stops.

To cancel program play:

(From the main unit)

Keep the •MEMORY/ — CLEAR pressed when CD is in stop mode until "CLEAR" is displayed.

(From the remote control)

Press ■/CLEAR when CD is in stop mode to display "CLEAR".

Program play can also be cleared by pressing ▲ CD OPEN/CLOSE.

When "---:---" is displayed:

Total play time of the programmed tracks exceeds 120 minutes.

When "FULL" is displayed:

36 tracks have already been programmed. No further tracks can be programmed.

To check programming:

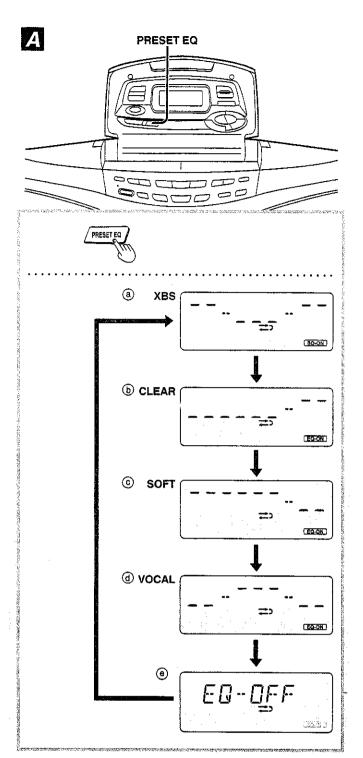
Press $\land / \blacktriangleright \blacktriangleright \mid$ or $\lor / \blacktriangleright \blacktriangleleft$ when CD is in stop mode.

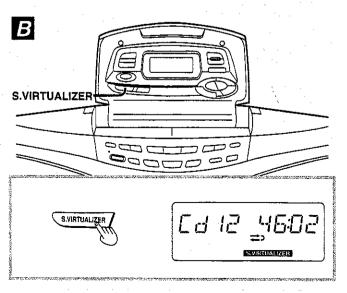
The track number and its play sequence can be checked each time these buttons are pressed.

Memory retention of programmed tracks:

Track programming is retained even if play is stopped or the unit is turned off.

A displayed "P" indicates that programming is retained in the memory. $\boxed{\textbf{A}}$





Changing the Sound Quality

Selecting equalizer effects

Four types of sound quality can be selected.

Press PRESET EQ to select desired sound quality.

The displayed image of a sound quality effect changes each time the button is pressed.

- (XBS)
- (CLEAR) by Lightens pop and other music (CLEAR)
- © Allows BGM enjoyment (SOFT)
- @ Enhances vocals (VOCAL)
- No sound quality effects used.

Using the "live" effect (Sound Virtualizer)

The "live" effect allows enjoyment of the 3-D feeling of listening to live music. Compared with earlier surround sound systems, the sound virtualizer leaves middle-range sounds such as vocals clear and gives natural width and depth to music.

Sound virtualizer is effective with stereo sound.

Press S.VIRTUALIZER to display S.VIRTUALIZER.

To cancel:

Press S.VIRTUALIZER to clear the S.VIRTUALIZER indicator.

When listening through headphones

The effect is less discernable than through the unit speakers.

• When high sounds are felt to be too strong

High-range sounds are difficult to listen to with some kinds of music. In this case, adjust the music using the preset equalizer until music reaches a pleasant range.

• When excessive interference in the FM stereo reception

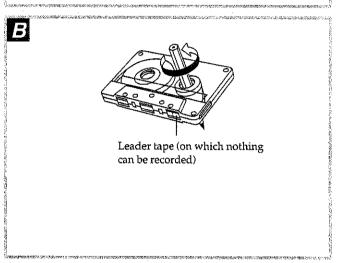
If interference increases, cancel the sound virtualizer effect.

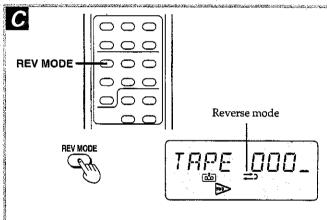


A



Insert the tape with the exposed tape facing you.





Preparation for Recording

Type of tape which can be used for recording

Automatically identifies the type of tapes.

Normal position/TYPE I	0
High position/TYPE II	0
Metal position/TYPE IV	×

This unit can not make a recording or erase correctly, if metal position tapes are used.

Load the tape in deck 2 with the side to be recorded first facing up.

The > automatically selected when the cassette with the side to be recorded facing up.

- When recording from the middle of a cassette
 Stop the cassette at the position where recording is to begin.

Press REV MODE on the remote control to select the mode.

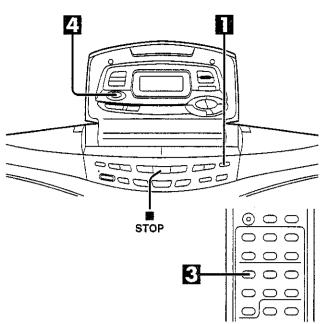
Records from the side facing up to the opposite side and automatically stops.

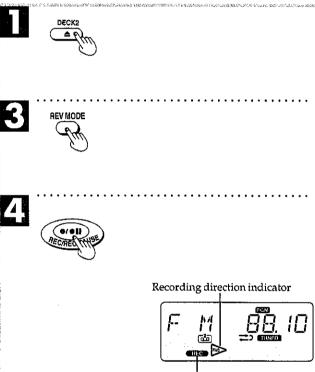
: Records only one side of the cassette and automatically stops.

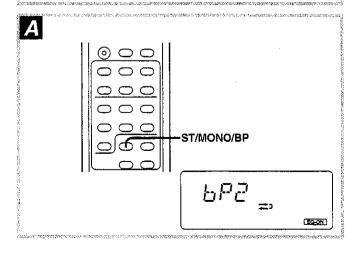
Notes

- You cannot operate deck 1 during recording.
 - "E" is displayed when you attempt to operate deck 1.
- Any change made to the volume or sound 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.
- The recording level is set automatically.

Your attention is drawn to the fact that recording pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.







Light (Flashing during pause)

Recording Radio Programs (Only Deck 2)

- Insert cassette into deck 2 with the side to be recorded facing up.
- Select desired radio station. (Refer to pages 12 to 13)
- Select the mode with REV MODE on the remote control.
- Press •/• II REC/REC PAUSE. "FWD REC" is displayed and recording begins. "REV REC" is displayed when recording begins while < is displayed.

To stop recording:

Press .

To stop recording temporarily:

Press ●/● ■ REC/REC PAUSE.

To resume recording, press ●/● # REC/REC PAUSE.

When there is too much interference during AM (LW/MW) recording 🖾

(Available only from the remote control)

For United Kingdom:

Press ST/MONO/BP.

Select "bP1", "bP2" or "bP3" whichever yields less noise.

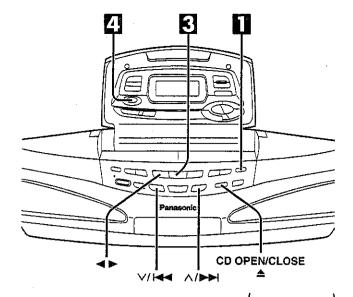
Note

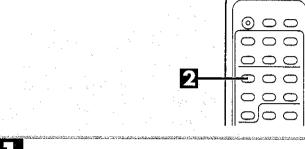
bP3 is available only for LW.

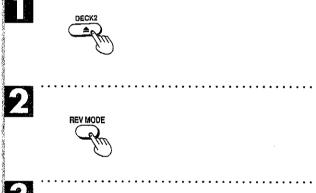
For areas except United Kingdom:

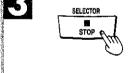
Press ST/MONO/BP.

Select "bP1" or "bP2" whichever yields less noise.



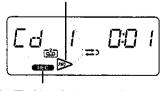








Recording direction indicator



Light (Flashing during pause)

Recording from CD (Only Deck 2)

Recording and CD play automatically begin simultaneously. Getting ready: insert the CD.

Open the cassette cover on deck 2 and insert the cassette with the side to be recorded facing up.

Tape length must be longer than the CD play time.

- Select the mode with REV MODE on the remote control.
- Press STOP to select the CD mode.

 CD ← TAPE

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

To stop recording:

Press STOP.

To pause recording:

Press ●/● II (CD will also pause).
To begin recording again, press ●/● II.

After recording

When CD play is finished, the cassette simultaneously stops.

To continue recording a different CD on the same cassette:

- ① Press ▲ CD OPEN/CLOSE and replace the CD.
- ② Press •/• 11.

Recording favorite tracks

Program desired tracks (refer to steps 1 to 4 on page 16) after step 3.

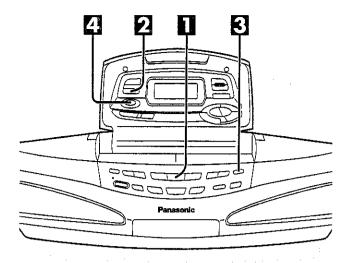
To skip tracks not to be recorded

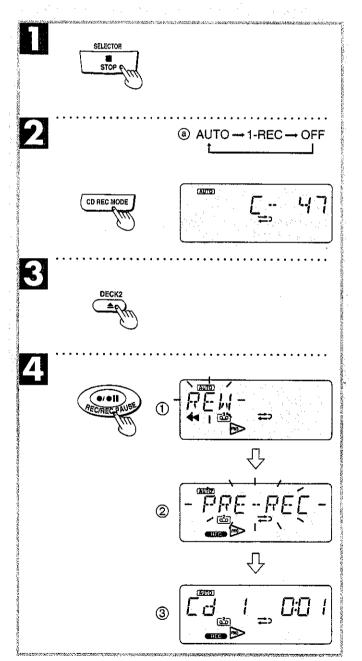
- Press •/• II during recording.
 CD will also pause.
- ② Press ∧/►► or v / ◄◄ to display the number of the next track to be recorded.
- ③ Press ●/● II to begin recording again.

To change cassette direction during recording

Press ◀ ▶ when 🅞 is displayed.

When is displayed, press ●/● II to pause, then press ■ ➤ and ●/● II again.





Recording from CD

Easy CD recording (Auto)

Records all tracks or programmed tracks of a CD in programmed order.

- It is not necessary to rewind the cassette. Recording always begins from the beginning of the side facing up.
- If the side ends in the middle of a track, the track which was cut off is recorded on the opposite side from the beginning.
 Getting ready: insert the CD.
- Press STOP to select the CD mode.
- Press CD REC MODE to display "AUTO".

The display changes each time the button is pressed. ⓐ The necessary tape length will be displayed. (Example: Tape of 47 minutes or more necessary to record all tracks.)

When "C--" is displayed:

Auto-CD recording is not possible. Follow the steps on page 20.

Insert a cassette which is longer than that displayed in step 2.

Insert with the side to be recorded first up.

Press •/• II REC/REC PAUSE.

Automatically rewinds, and recording from the first track begins after a 10 second interval of silence.

- ① Rewinding tape
- 2 Recording 10 second interval of silence
- ③ Recording begun

To stop recording (CD will also stop):

Press STOP.

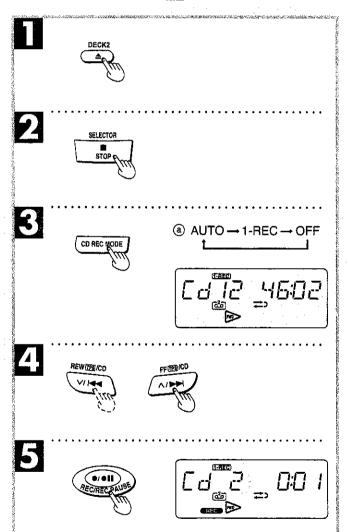
To record favorite tracks:

Program desired tracks (refer to steps 1 to 4 on page 16) after step 1.

Note

Auto CD recording cannot be used in combination with random play (refer to page 15).

►/II PLAY/PAUSE **6**00 CD OPEN/CLOSE



Recording from CD

One track recording (1 TRACK)

Records one track from the CD and stops. Convenient for recording one track each from many CDs.

Recording can begin from any place on the tape.

Getting ready: insert a CD.

Open the cassette cover on deck 2 and insert cassette with the side to be recorded facing up.

Recording direction is automatically set to begin from the side facing up (the > indicator is displayed). Find the position on the tape where recording is to begin.

- Press STOP to select the CD mode.
- Press CD REC MODE to display "1-REC". The display changes each time the button is pressed. (a)
- Press $\wedge/\blacktriangleright\blacktriangleright$ or $\vee/$ | \blacktriangleleft to select the track to be recorded.

Omit this step when recording the first track on the CD.

Press •/• II REC/REC PAUSE.

CD play and recording begin simultaneously. Records only one track and stops.

Reverse mode is displayed as =>.

• If the track is interrupted when the end of the cassette is reached, recording automatically begins again from the beginning of the track on the opposite side (if recording was begun on the opposite side, recording stops at the end of the present side).

To continue recording with another CD:

Press ♠ CD OPEN/CLOSE, insert a CD and follow steps 4 and 5.

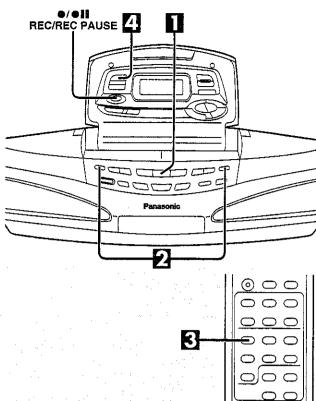
To stop recording (CD will also stop):

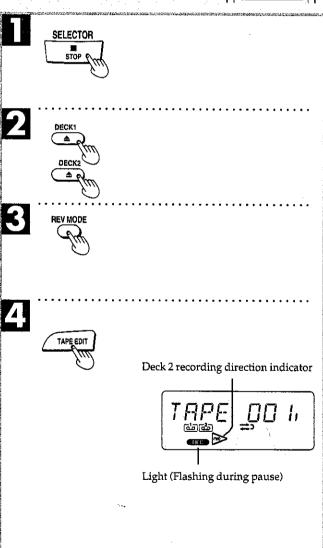
Press STOP.

Hint

Try listening to the track to check the type of song it is before recording. Press CD REC MODE to display "1-REC," then ▶/II to play the

Press ●/● II to record a song you like during CD play. The track is recorded from the beginning.





Recording Tape to Tape

- Press STOP to select the cassette mode.

 CD ← TAPE

 (The display changes each time the button is pressed.)
- Insert the playback cassette into deck 1 and the recording cassette into deck 2.
- Press REV MODE on the remote control to select the mode.
- Play on deck 1 and recording on deck 2 begin simultaneously.

To stop recording:

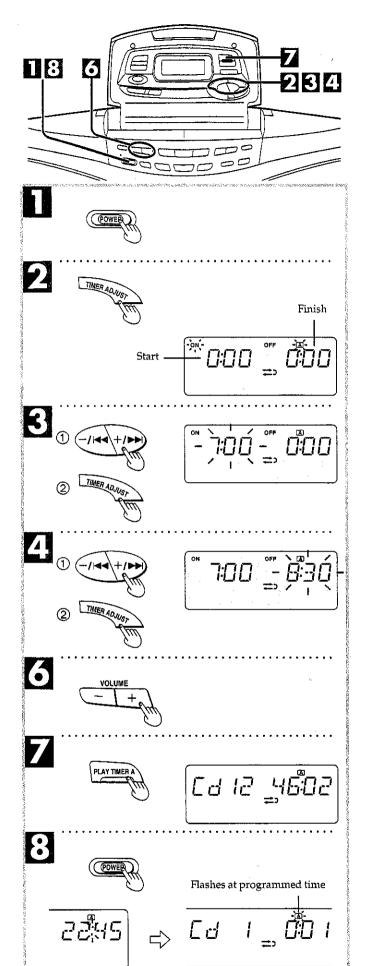
Press .

To temporarily stop recording:

Press ●/● II REC/REC PAUSE.

To resume recording, press TAPE EDIT.





Using the Play Timer

The clock has a 24-hour display.

Timers A and B can be set and used separately for the play start/finish times.

Example: Setting CD play from 7:00 to 8:30 on play timer A.

Setting the start and finish times

- Press POWER to turn the unit on.
- Press TIMER ADJUST to set "ON A" or "ON B" flashing.

ON A → OFF A → ON B → OFF B — Original Display ← OFF REC ← ON REC ←

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

- ① Press +/▶▶ or -/◄◄ when "ON A" or "ON B" is flashing to set the start time.
 - ② Press TIMER ADJUST.

Finish time flashes.

- ☐ 1 Press +/▶▶ or -/◄◄ to set the finish time.
 - ② Press TIMER ADJUST.

Display returns to original mode.
When "E" is displayed:

Check whether start and finish are set for the same time.

Programming play

- Get the music source ready.
 - Listening to cassettes: refer to pages 10 to 11.
 - •When used in combination with the recording timer
 Always insert the cassette to be played into deck 1 and display
 the ⋳둸 indicator.
 - **Listening to the radio:** refer to pages 12 to 13. **Listening to CDs:** refer to pages 14 to 16.
- Press VOLUME to adjust volume for time of play.

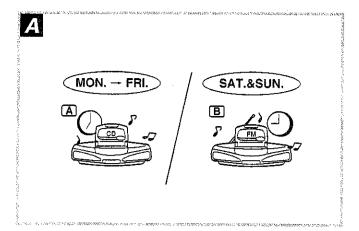
Setting the timer function

Press PLAY TIMER A (or B) to display "PLAY". When "E" is displayed:

Check whether the clock has been set (page 9).

Press POWER to turn the unit off.

Programming can be checked when the unit is off (page 27).



Using the Play Timer

To clear the timer function:

Press PLAY TIMER A (or B) when the unit is on to clear the $\boxed{\underline{\mathbf{A}}}$ or $\boxed{\underline{\mathbf{B}}}$ display.

To play music after programming: (after step 7)

- ① Begin play of the desired music source. Programmed play timer information is retained in the memory even if the volume or music source is changed when music is played.
- ② After playing music, turn the unit off.
- Cassette deck and direction displayed when the unit is turned off are activated in the play timer. After playing music, check the play timer deck and direction before turning the unit off.
- When using the play timer with a CD, check the setting of the random, repeat or programmed play mode before turning the unit off.

Note

Always turn the unit off before the programmed start time. The timer does not activate when the unit is turned on.

To change the source or volume of the timer function:

Press PLAY TIMER A or B to clear the A or B indicator and follow steps 5 to 8.

To use the timer at the same time daily:

Check that A or B is displayed and turn the unit off.

Using the fimers A and B separately

Example: Listening to CDs from 7:00 on weekdays and FM broadcasting from 9:00 on weekends. 🔼

- ① Program play timer A for CD play.
- ② Program play timer B for radio programing.
- ③ Display A on weekdays and B on weekends (steps 7 on page 24).
- A and B cannot be displayed simultaneously.

TIMER ADJUST Finish REC TIMER Flashes when recording begins

Using the Recording Timer

The clock has a 24-hour display.

Radio broadcasts can be recorded at a programmed time.

Example: Recording radio broadcasting from 13:00 to 14:30

Setting the start and finish times

- Press POWER.
- Press TIMER ADJUST to set "ON REC" flashing.

ON A → OFF A → ON B → OFF B Original display ← OFF (REC) ← ON (REC)

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

- ① Press +/▶▶ or -/|◀◀ while "ON REC" is flashing to set the start time.
 - ② Press TIMER ADJUST.

Finish time flashes.

- - ② Press TIMER ADJUST.

Display returns to original mode.

When "E" is displayed:

Check whether start and finish are set for the same time.

Programming recording

- Get the music source ready.
 - Select radio station.
 - ② Insert cassette into deck 2.
 - ③ Press REV MODE on the remote control to select the mode.
 - Reduce the volume when listening during recording is not desired.
 - If there is excessive interference when recording an AM (LW/MW) station, press ST/MONO/BP to switch to reduced static.

Setting the timer function

6 Press REC TIMER to display "REC".

When "E" is displayed:

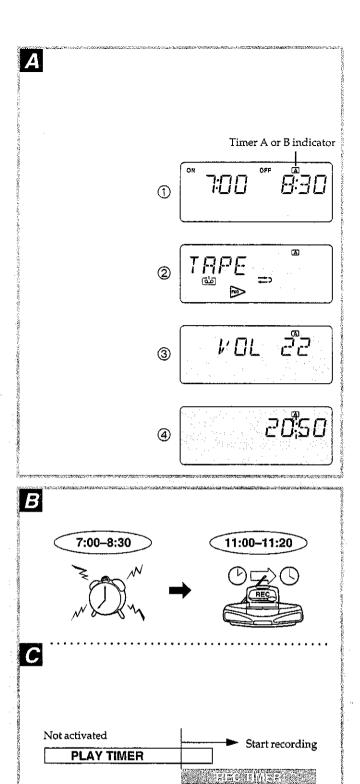
Check whether the clock has been set (page 9).

Press POWER to turn the unit off.

Programming can be checked when the unit is off (page 27). The unit turns on approximately 30 seconds before the set start time and recording begins.

To clear the timer function:

Press REC TIMER when the unit is on to clear the [REC] indicator.

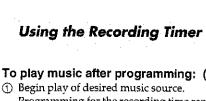


Continue recording

PLAY TIMER

Not activated

D



To play music after programming: (after step 6)

Programming for the recording time remains in the memory even

if the volume or source is changed during play. ② After playing music, turn the unit off. Direction displayed when unit is turned off is activated in the

recording timer. After playing music, check the direction (or) of the cassette to be recorded before turning the unit off.

To change the radio station to be recorded:

Press REC TIMER to clear the [REC] indicator and follow steps 5 to 7.

To use the timer at the same time daily:

Check that (REC) is displayed and turn the unit off.

Note.

Always turn the unit off before the programmed start time. The timer does not activate if unit is on.

To check programming

Play and recording timer programming can be checked.

Press TIMER ADJUST when unit is off.

The display automatically changes in the following order. Display example: Play tape from 7:00 to 8:30 on play timer A.

- ① Programmed time
- ② Programmed music source ්තු (ල්තු) and ➣ (ᢏුන්) are not displayed when batteries are used as the power source.
- ③ Timer volume
- 4 Original display

Using the play and recording timers in combination

Example: Waking up to a cassette in the morning and recording radio programing while away 🖪

- ① Program play timer (A or B) for cassette play (page 24).
- ② Program recording timer for radio recording and insert recording cassette into deck 2 (page 26).
- Insert the playback cassette into deck 1 and the recording cassette into deck 2. In this case, the play timer operates only on deck 1.

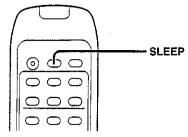
When programmed times overlap

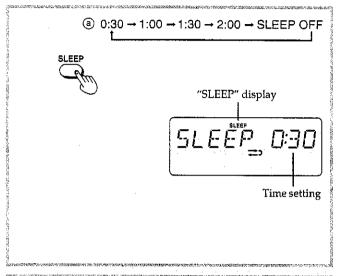
 When recording is programmed to begin during play timer operation 😉

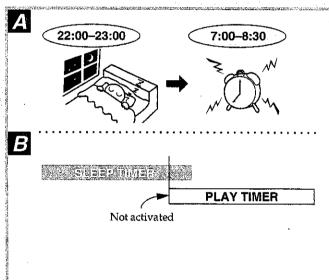
Cancels play and begins recording.

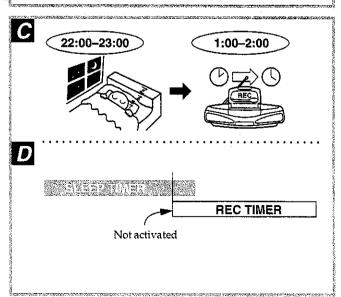
 When play is programmed to begin during recording timer operation D

Continues recording. The play timer is not activated.









Using the Sleep Timer

(Available only from the remote control)

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

Press SLEEP to select the desired time.

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

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 SLEEP to select the desired time.

Hint

Pressing SLEEP can turn the unit on (only AC power is supplied).

Using the sleep and play timers in combination

Example: Falling asleep listening to FM programing and waking up the next morning listening to a CD. 🔼

- 1) Program the play timer (A or B) for CD play (page 24).
- Select the desired radio station and set the sleep timer. Plays the CD at the volume programmed in a in the morning even if it is reduced the night before.

When programmed times overlap

When play is programmed to begin before the sleep timer turns the unit off, the play timer is not activated. The unit turns off after the programmed sleep timer is completed.

Always set the sleep timer so that the unit turns off by the time the play timer is programmed to begin.

Using the sleep and recording timers in combination

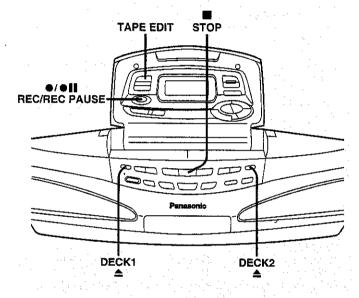
Example: Falling asleep listening to a cassette and recording FM programming during the night G

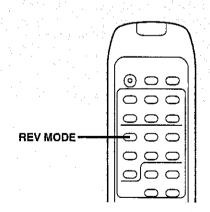
- ① Program the recording timer to record the FM programming and insert recording cassette into deck 2 (page 26).
- ② Insert the playback cassette into deck 1 and set the sleep timer.

When programmed times overlap

When recording is programmed to begin before the sleep timer turns the unit off, the recording timer is not activated.

The unit turns off after the programmed sleep timer is completed. Always set the sleep timer so that the unit turns off by the time the recording timer is programmed to begin.





Using an External Unit

Using microphone

Karaoke

- 1. Lower the volume and connect the microphone (not included).
- 2. Start playing a CD or tape, or turn on the radio.
- 3. Start karaoke singing and adjust the volume.

Recording karaoke sound with accompaniment from a CD

- 1. Lower the volume and connect the microphone.
- 2. Insert the CD and program desired track. (See page 16.)
- 3. Load the tape in deck 2.
- 4. Select the mode using REV MODE on the remote control.
- 5. Press •/• 11 REC/REC PAUSE. Play and recording start.

Recording karaoke sound with accompaniment from a tape

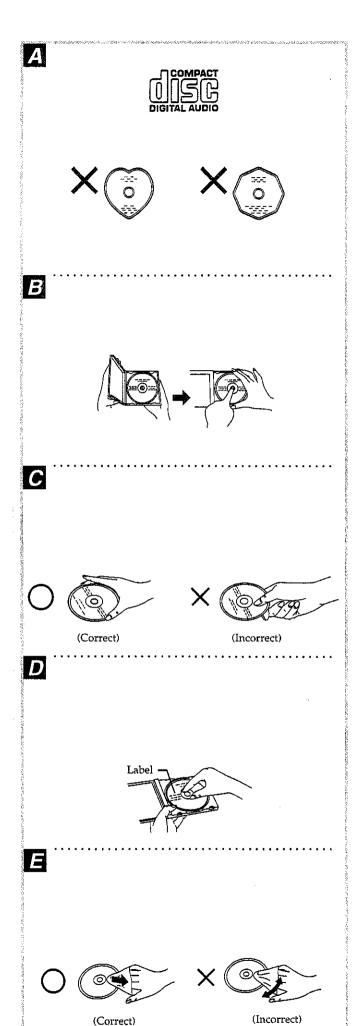
- 1. Lower the volume and connect the microphone.
- 2. Load the karaoke tape in deck 1 and the recording tape in deck 2.
- 3. Select the mode using REV MODE on the remote control.
- 4. Press .
- Press TAPE EDIT. Playback and recording start

Recording the sound through the microphone

- 1. Lower the volume and connect the microphone.
- 2. Press .
- 3. Load the tape in deck 2.
- 4. Select the mode using REV MODE on the remote control.
- Press ●/● REC/REC PAUSE. Recording starts.

Note

When karaoke singing with accompaniment from a CD, sound is heard only while the CD is playing. No sound is heard in the stop or pause mode.



Concerning Compact Discs

Only compact discs having this mark can be used with this unit. However, do not use irregular shape CDs (heart-shape, octagonal, etc.). CDs of the sort can damage the unit.

To remove a disc from its case 🗉

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

To hold the disc @

Hold the disc by the edge so the surface is not soiled with finger-prints.

Fingerprints, dirt and scratches can cause skipping and distortion.

To store a disc in its case D

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

If the surface is soiled

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

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.

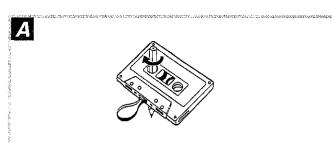
Improper disc storage:

You can damage discs if you store them in the following places;

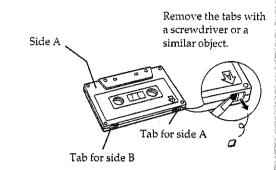
- Areas exposed to direct sunlight
- Humid or dusty areas
- Areas directly exposed to a heat outlet or heating appliance

Handling precautions;

- Do not write on the label side with a ball-point pen or other writing utensils.
- Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.
- Do not use CDs with poorly attached labels or stickers.
 Adhesive protruding from underneath stickers or left over from peeled off stickers can cause your stereo to mulfunction.



В



C

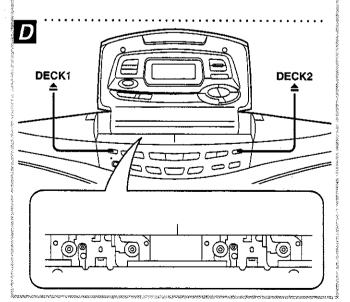
Normal position



High position

Adhesive tape

Detection hole



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 and 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.

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

if the tape loosens, take up the slack 🛮

Tape slack may cause the tape break.

To prevent erasure of recorded sounds 🗉

To re-record on a protected cassette, cover the slot with adhesive tape. $oldsymbol{G}$

Do not cover the detection holes on high position tapes.

Improper tape storage:

You can damage tapes if you store them in the following places;

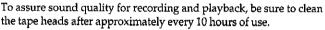
- •In high temperature (35°C or higher) or high humidity (80% or higher) areas
- In a strong magnetic field (near a speaker, on top of TV, etc.)
 This can erase a recording.
- Areas exposed to direct sunlight

To erase sound previously recorded on a tape:

Disconnect the microphone.

- 1. Load the tape in deck 2.
- Press ■.
- Press ●/● II REC/REC PAUSE.

Tape head care



- 1. Open the cassette cover by pressing DECK 1 ▲ and DECK 2 ▲.
- Clean the portions which contact the tape (the shaded portions in the figure) with a cotton swab.

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

Quick Reference of Remote Control Operations

	Common operations	
	Turning the unit on and off (Unit cannot be turned on by remote control when batteries are used as power source.)	POWER
POWER SLEEP DISPLAY	To open the top panel	TOP PANEL OPEN A
RANDOM IN DESCRIPTION OF THE PROPERTY BUCKLEAR DEVIL	To close the top panel	TOP PANEL CLOSE
REV MODE REW IZES FF C-RESET TAPE	Selecting the equalizer effect	PRESET EQ
DECK 1/2 STANONCIBP BAND TUNER YPRESET TUNE A	To turn on sound-space effects	S.VIRTUALIZER
PRESET EQ CLOSE♥ OPEN ▲ S.VINTUALIZER - VOLUME +	Adjusting the volume	- VOLUME +
Panasonic	Selecting the display	DISPLAY
	One touch play	BAND P/III
	Setting/releasing the sleep timer	SLEEP
	Cassette dock apprations	
	Cassette deck operations	
	Starting playback/Changing the direction	*
RANDON INTERPRET BY CONTROL REV MODE REW (TES) FF	Rewinding/Fast forwarding	In the stop mode REW TPS FF
	Finding the begining of a track (TPS)	During playback REW TFS FF
C-RESET TAPE DECK 1/2 STANONGRP BAND	Stopping the tape	<u>.</u>
TUNER VPRESET TUNE A TOP PANEL PRESET EC CLOSE V OPEN A	Selecting the reverse mode	REV MODE
S.VIRTUALIZER -VOLUME + Panasonic	Resetting the tape counter to "000"	C-RESET
T Carticolito	Selecting deck 1/2	DECK 1/2

	Tuner/CD operations	
	Listening to a programmed radio station	V PRESET TUNE ∧
POWER SLEEP DISPLAY	Selecting reception in stereo or mono	STAMONO/BP
RANDOM HAT PARENT REPEAT MICLEAR PAIN	Reducing noise during the recording of AM (LW/MW) programs	ST/MONO/BP
REV MODE REW TES FF C-RESET TAPE	Starting play/ Temporarily stopping play	►/II ○
DECK 1/2 STANONOISP BAND TUNER PRESET TUNE	Stopping play/ To clear program play	■/CLEAR
PRESETED CLOSE PENA SVIRTUALIZER -VOLUME +	To skip tracks	
Panasonic	To search forward or backward	Keep pressing I
	Listening to track(s) repeatedly	REPEAT
	Listening to track at random	RANDOM

Maintenance of external surfaces

To clean this unit, use a soft or dry cloth.

If the surfaces 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 or dry cloth.

Never use alchol, paint thinner, benzine, or chemically treated clothes to clean this unit. Such chemicals may damage the finish of your unit.

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.

Problem	Probable cause (s)	Suggested remedy	Page
Common problems			
"E" appears.	Have you made a mistake in operation?	Read the operating instructions and try again.	<u>.</u>
"U01" appears.	The batteries are flat.	Replace them with new ones. Alternatively, use a household AC outlet as the power source.	5
	The power is not supplied the unit.	Install the batteries or connect the power cable.	5
While listening to CDs		<u> </u>	
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.	14
	Has there been a sudden change in temperature? For instance, was the unit brought straight from a cold place into a warm location?	Condensation may have formed on the lens unit. Leave it for about an hour before attempting operation again.	
Certain sections are not played properly.	Is the CD soiled?	Wipe with a soft cloth.	30
	Is the CD scratched?	Replace with a new CD.	
While listening to tapes			
No recording.	Have the tape's accidental erasure prevention tabs been broken out?	Cover the holes with adhesive tape.	31
Sound is low, intermittent, or poor quality, noisy, scratchy, or unsteady.	Are the head soiled?	Clean them.	31
While listening to the ra	dio		
Stations cannot be tuned in well.	Has the antenna been adjusted properly?	Try changing its direction.	12
Noise heard during AM (LW/MW) reception.	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.	
While using the timer			
No timer operation at the programmed time.	Is the unit turned on (when the play timer and the recording timer are being used)?	Turn the unit off upon completion of the settings.	24 26
	Has the programmed timer indicator (A, B, REC) or SLEEP) lighted?	Operate again so that the display lights up.	24 26 28

Technical specifications

Radio

Frequency range

(United Kingdom)

ĖΜ 87.50-108.00 MHz (50 kHz steps) LW 144-288 kHz (9 kHz steps) MW 522-1611 kHz (9 kHz steps)

(Except United Kingdom)

87.50-108.00 MHz (50 kHz steps) AM 531-1602 kHz (9 kHz steps) 530-1600 kHz (10 kHz steps)

CD player

Sampling frequency 44.1 kHz Decodina 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 Monitor system Variable sound monitor Recording system AC bias Erasing system AC erase

Frequency range

Normal position 30-16000 Hz **High position** 30-17000 Hz

General

Speakers $10 \text{ cm } 2.7\Omega \times 2$

Jacks

Output PHONES: 3.5 mm stereo (16–32 Ω) Input MIX MIC: 3.5 mm (200-600Ω)

Power requirement

AC

Battery

(United Kingdom, Australia and New Zealand)

230-240 V, 50 Hz

(Except United Kingdom, Australia and New Zealand)

110-127 V/200-220 V/230-250 V, 50/60 Hz

Power consumption: 44 W

15 V (Ten R20/LR20 D size, UM-1 batteries)

Do not use rechargeable type batteries.

Memory back-up for computer/clock

6 V [Four R6/LR6 (AA, UM-3) batteries]

Do not use rechargeable type batteries.

Dimensions (W×H×D) 630×178×296 mm

(Top panel closed)

5.6 kg Weight without batteries

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

MASH is a trademark of NTT.

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