CD Stereo System

Operating Instructions

Model No. **SC-AK300**
SC-AK200
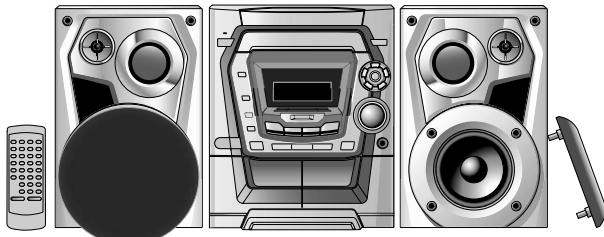
The illustrations show SC-AK300.

COMPACT DISC
DIGITAL AUDIO

E EB EE GN

Panasonic®

Dear customer

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

These operating instructions are applicable to the following system.
These operating instructions, however, fundamentally explain the operation of system SC-AK300.

System	SC-AK300	SC-AK200
Main unit	SA-AK300	SA-AK200
Speakers	SB-AK300	SB-AK200

CLASS 1
LASER PRODUCT

LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT
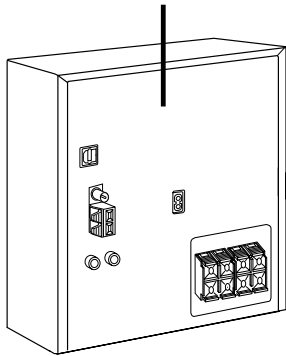
(Back of product)

| DANGER	INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.
ADVARSEL	USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO!	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTÖNTÄ LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING	OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.
ADVARSEL	USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VORSICHT	UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.

Inside of product
Tuotteen sisällä
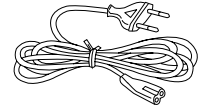Produktets innside

Supplied accessories
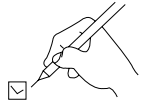
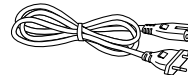Please check and identify the supplied accessories.

☐ **AC mains lead .... 1 pc.**

For United Kingdom
(RJA0044-3C)
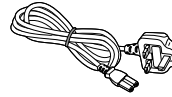
For Continental Europe
(RJA0043-1C)

For Russia and Ukraine
(RJA0019-2X)

For Australia and
New Zealand
(RJA0035-X)
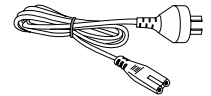
☐ **Remote control transmitter .... 1 pc.**

SC-AK300
For Europe
(N2QAGB000015)

For Australia and
New Zealand
(N2QAGB000017)

SC-AK200
For United Kingdom,
Continental Europe,
Australia and New Zealand
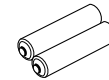**Silver: (N2QAGB000013)**

For Continental
Europe, Russia
and Ukraine only
Black: (N2QAGB000016)

For Russia and Ukraine
Silver: (N2QAGB000015)

☐ **Batteries for remote control .... 2 pcs.**

☐ **FM indoor antenna .... 1 pc.**

For Europe
(RSA0007-J)

For Australia and
New Zealand
(RSA0006-J)

☐ **AM loop antenna (N1DADYY00002) .... 1 pc.**
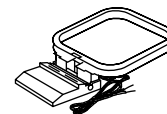
☐ **Antenna plug adaptor (for United Kingdom only)**
(SJP9009) .... 1 pc.

Use numbers indicated in parentheses when asking for replacement parts.

Table of contents

Safety precautions

Placement

Set the unit up on an even surface away from direct sunlight, high temperatures, high humidity, and excessive vibration. These conditions can damage the cabinet and other components, thereby shortening the unit's service life.

Place it at least 15 cm away from wall surfaces to avoid distortion and unwanted acoustical effects.

Do not place heavy items on the unit.

Voltage

Do not use high voltage power sources. This can overload the unit and cause a fire.

Do not use a DC power source. Check the source carefully when setting the unit up on a ship or other place where DC is used.

AC mains lead protection

Ensure the AC mains lead is connected correctly and not damaged. Poor connection and lead damage can cause fire or electric shock. Do not pull, bend, or place heavy items on the lead.

Grasp the plug firmly when unplugging the lead. Pulling the AC mains lead can cause electric shock.

Do not handle the plug with wet hands. This can cause electric shock.

Foreign matter

Do not let metal objects fall inside the unit. This can cause electric shock or malfunction.

Do not let liquids get into the unit. This can cause electric shock or malfunction. If this occurs, immediately disconnect the unit from the power supply and contact your dealer.

Do not spray insecticides onto or into the unit. They contain flammable gases which can ignite if sprayed into the unit.

Service

Do not attempt to repair this unit by yourself. If sound is interrupted, indicators fail to light, smoke appears, or any other problem that is not covered in these instructions occurs, disconnect the AC mains lead and contact your dealer or an authorized service center. Electric shock or damage to the unit can occur if the unit is repaired, disassembled or reconstructed by unqualified persons.

Extend operating life by disconnecting the unit from the power source if it is not to be used for a long time.

Before using

(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 ♡ 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 ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as stated 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 ⏚ 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.

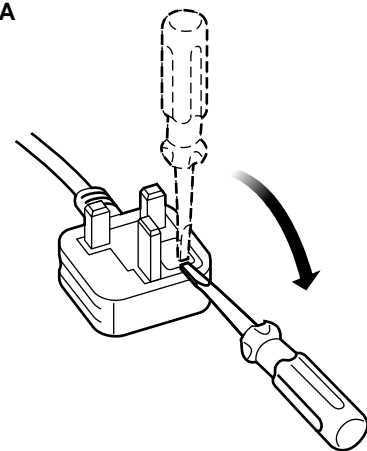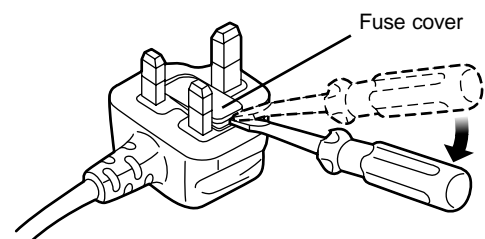1. Open the fuse cover with a screwdriver.

Figure A

Figure B

Fuse cover

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

Figure A

Fuse (5 ampere)

Figure B

Fuse (5 ampere)

A

For SC-AK300: Australia and New Zealand
For SC-AK200: United Kingdom, Continental Europe,
Australia and New Zealand

R6, AA, UM-3

For SC-AK300: Europe
For SC-AK200: Continental Europe, Russia and Ukraine only

R6/LR6, AA, UM-3

B

Remote control signal sensor

30° 30°

Transmission window

About 7 meters in front of the signal sensor
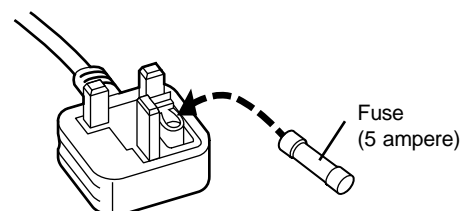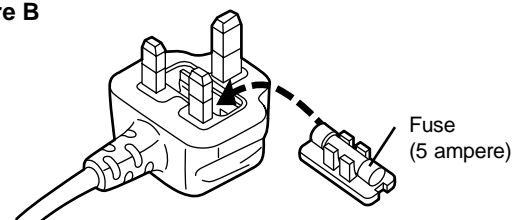
C

SC-AK300

Super tweeter

SC-AK200

Concerning the remote control

A Battery installation

Use of batteries

- Align the poles (+ and –) properly when inserting the batteries.
- Do not mix old and new batteries or different types of batteries.
- Do not recharge ordinary dry cell batteries.
- Do not heat or disassemble the batteries. Do not allow them to contact flame or water.
- Remove the batteries if the unit is not to be used for a long time.
- Do not keep together with metallic objects such as necklaces.
- Do not use rechargeable type batteries.
- Do not use batteries if the covering has been peeled off.

Mishandling of batteries can cause electrolyte leakage which can damage items the fluid contacts and may cause a fire.
If electrolyte leaks from the batteries, consult your dealer.
Wash thoroughly with water if electrolyte comes in contact with any part of your body.

B Correct method of use

Operation notes

- Do not place obstacles between the remote control signal sensor and remote control unit.
- Do not expose the remote control signal sensor to direct sunlight or to the bright light of a 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 doors' thickness or colour might make it necessary to use the remote control a shorter distance from the system.

To prevent damage

- Never place heavy items on top of the unit.
- Do not disassemble or reconstruct the unit.
- Do not spill water or other liquids into the unit.

C Placement of speakers

SC-AK300
Place the speakers so that the super tweeter is on the outside.

SC-AK200
Speakers are designed identically so that no left or right channel orientation is necessary.
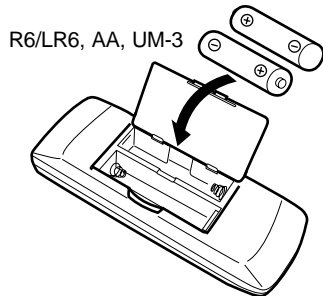
Notes
- Keep your speakers at least 10 mm away from the system for proper ventilation.
- These speakers do not have magnetic shielding. Do not place them near televisions, personal computers or other devices easily influenced by magnetism.
- To avoid damage to the speakers, do not touch the speaker cones if you have taken the nets off.
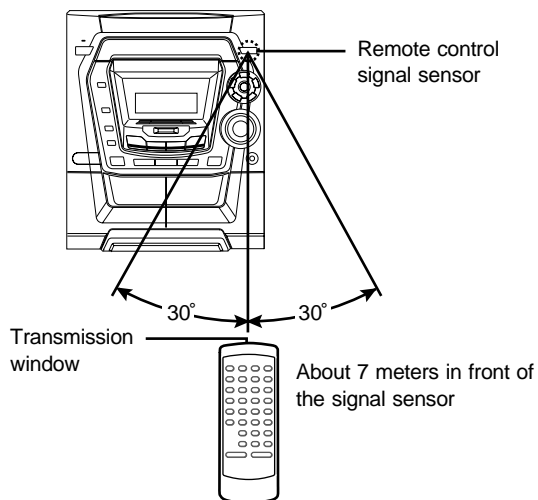
To household mains socket
4

1 For Australia and New Zealand   For Europe

Adhesive tape

FM indoor antenna

FM ANT (75 Ω)
GND

FM ANT (75 Ω)

2 For Australia and New Zealand   For Europe

AM ANT
LOOP
EXT

AM ANT
LOOP
EXT

AM loop antenna

3

HIGH (6Ω)   LOW (6Ω)

SPEAKERS

⊕ ⊖ ⊖ ⊕

Red (+)
Black (–)
Blue (–)
Gray (+)

Blue
Gray   Black   Red
HIGH (6Ω)   LOW (6Ω)

SPEAKERS

⊕ ⊖

4   Connector
Appliance inlet
Approx. 6 mm
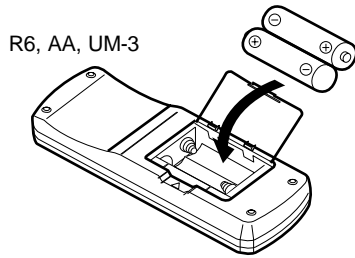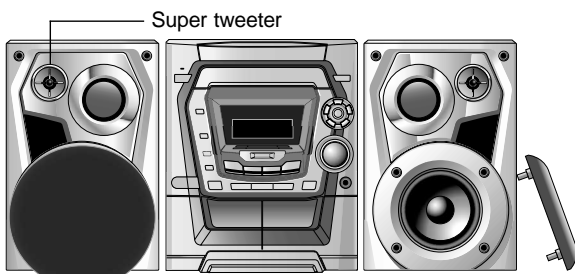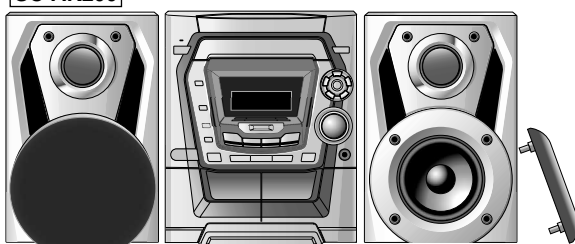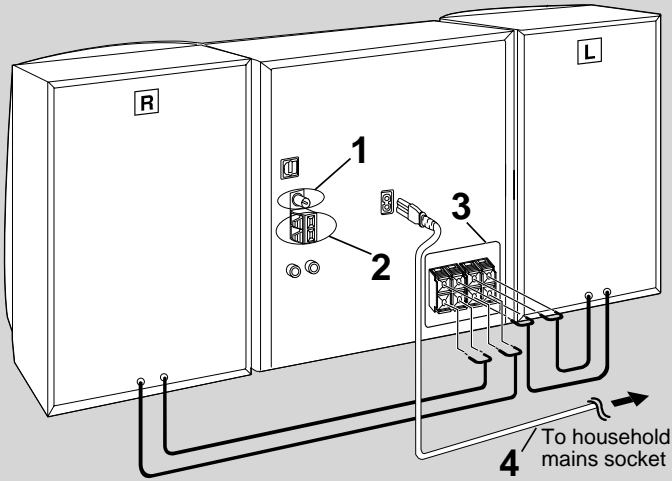
Connections

Basic connections (for supplied accessories)

- Plug the AC mains lead into a household mains socket only after all other connections have been made.
- To prepare the antenna wires and speaker cords, twist the vinyl cover tip and pull off.

1 Connect the FM indoor antenna.

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

Note

For best reception sound quality:
An FM outdoor antenna is recommended. (See page 7.)
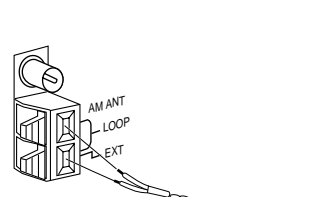
2 Connect the AM loop antenna.

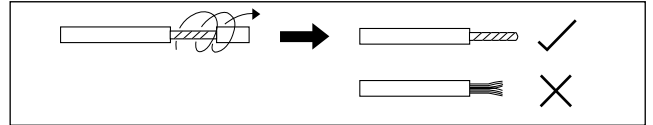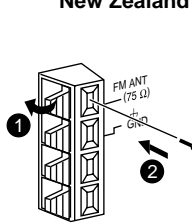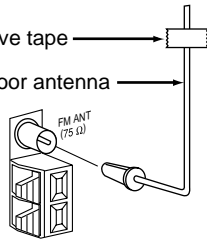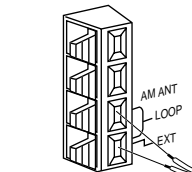After attaching the antenna, turn on the system and tune in a broadcast station. Put the antenna where the reception is best and interference is minimal.

3 Connect the speaker cables.

Connect each end of the speaker cables to the terminal lever of the same colour so (+) and (–) are correct. Never allow the exposed wires to contact each other when connected.
Incorrect connection can damage the unit.

Caution
- **Use only the supplied speakers.**
  The combination of the main unit and speakers provide the best sound. Using other speakers can damage the unit and sound quality will be negatively affected.
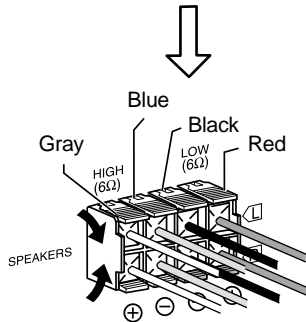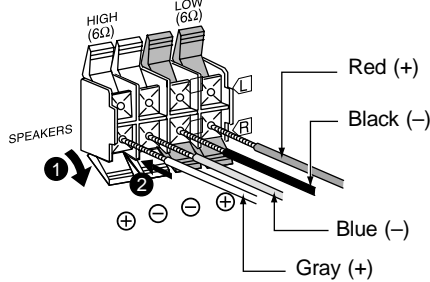
Caution
- **Use the speakers only with the recommended system.**
  Failure to do so may lead to damage to the amplifier and/or the speakers, and may result in the risk of fire.
  Consult a qualified service person if damage has occurred or if you experience a sudden change in performance.
- **Do not attach these speakers to walls or ceilings.**

---

4 Connect the AC mains lead.

FOR UNITED KINGDOM ONLY
READ THE CAUTION FOR THE AC MAINS LEAD ON PAGE 4 BEFORE CONNECTION.

Insertion of connector
Even when the connector is perfectly inserted, depending on the type of inlet used, the front part of the connector may jut out as shown in the drawing.
However there is no problem using the unit.

Note
The included AC mains lead is for use with this unit only. Do not use it with other equipment.

A

For Australia and New Zealand

FM outdoor antenna
(not included)

75 Ω coaxial cable (not included)

① → 30 mm

② Shield braid

③ 15 mm Core wire

FM ANT
(75 Ω)

GND

❶

❷

For Europe

FM outdoor antenna
(not included)

75 Ω coaxial cable
(not included)

FM ANT
(75 Ω)

(For United Kingdom only)
Antenna plug
adaptor (included)

B

For Australia and New Zealand

5 -12 m

AM outdoor antenna
(not included)

AM ANT

LOOP

EXT

AM loop antenna
(included)

For Europe

5 -12 m

AM outdoor antenna
(not included)

AM ANT

LOOP

EXT

AM loop antenna
(included)

C

AUX

R   L

Rear panel of this unit

(R)   (L)

Analogue player
(not included)

D

OPTICAL
OUT

Rear panel of this unit

Optical fiber
cable
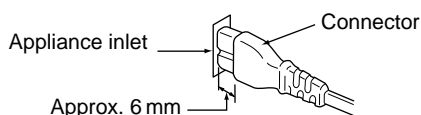(not included)

Receiver
(not included)

OPTICAL
IN

Connections

Optional antenna connections

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

A   FM outdoor antenna

Disconnect the FM indoor antenna if an FM outdoor antenna is installed.
① Remove a piece of the outer vinyl insulator.
② Twist the shield braid.
③ Expose the core wire.

Note

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

B   AM outdoor antenna

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

Note

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

External unit connection

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

C   Connecting analogue equipment

An analogue player with a built-in phono equalizer can be connected. When units other than those described are to be connected, please consult your audio dealer.

D   Connecting digital equipment to the optical fiber out terminal
(For SC-AK300 except Russia, Ukraine, Australia and New Zealand)

Connect this unit to other digital equipment with an optical fibre terminal, such as a receiver or digital surround processor.

For your reference
If you have DTS format CDs, you can enjoy six channel playback by connecting this unit to a receiver or digital surround processor that has a DTS decoder.
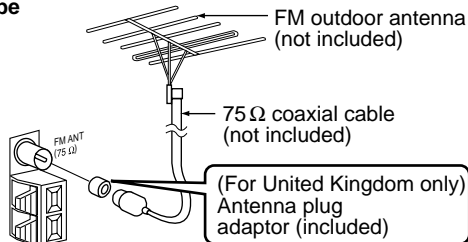
Note
Use only the optical fibre terminal when playing back DTS format discs. DTS signals can only be correctly output through the digital terminal.
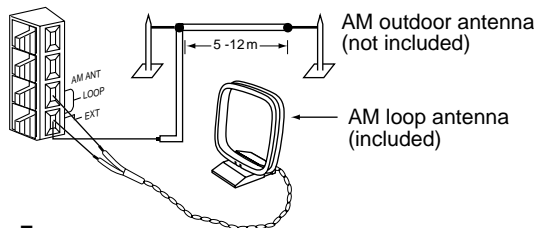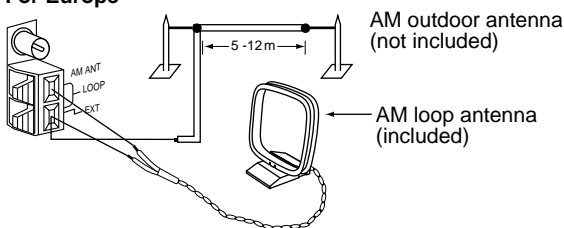- DTS is a trademark of Digital Theater Systems, L.P.
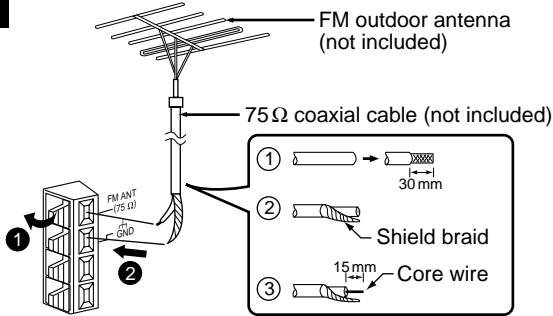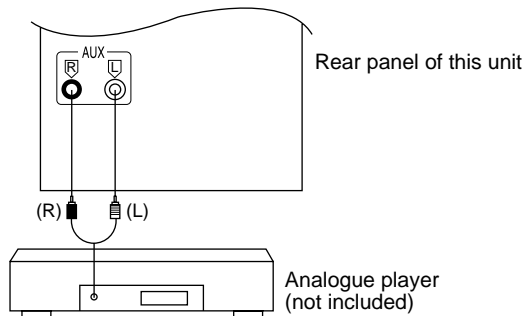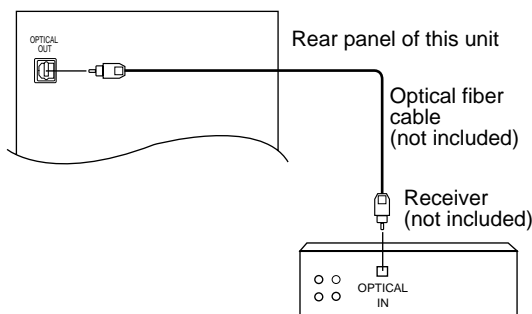
A
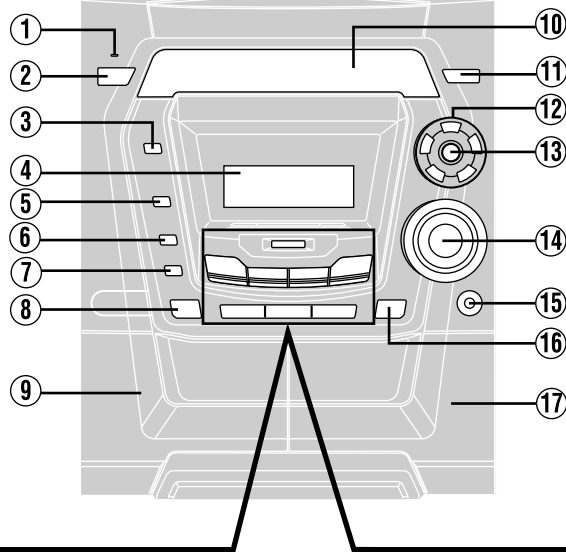
B
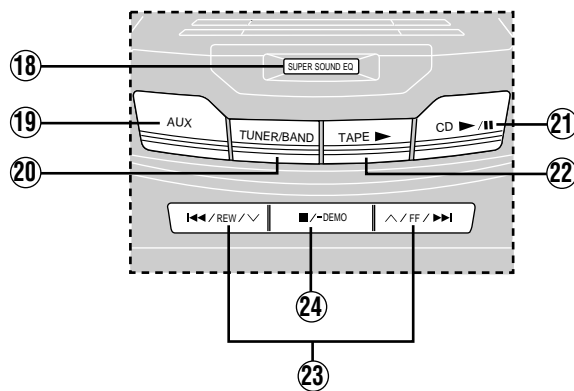
Front panel controls

A	**Main unit**	

No.	Name	Ref. page

① **AC supply indicator (AC IN)**
This indicator lights when the unit is connected to the AC mains supply.

② **Standby/on switch (⏻/l)**
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

③ **Display button (DISPLAY) 12, 18**

④ **Display**

⑤ **Preset EQ select button (PRESET EQ) 22**

⑥ **Record button (● REC)..21**

⑦ **Deck select button (DECK 1/2) 19**

⑧ **Deck 1 open button (▲ DECK 1 OPEN) 19**

⑨ **Deck 1 cassette holder 19**

⑩ **Disc tray**

⑪ **Remote control signal sensor (SENSOR) 5**

⑫ **Disc direct play buttons (1 ~ 5) 15**

⑬ **CD tray open/close button (▲) 15**

⑭ **Volume control (VOL DOWN, UP)........................... 12**

⑮ **Headphone jack (PHONES) 25**

⑯ **Deck 2 open button (▲ DECK 2 OPEN) 19**

⑰ **Deck 2 cassette holder 19**

B	**Center console**	

⑱ **Super sound EQ button (SUPER SOUND EQ)........ 22**

⑲ **AUX button (AUX) 25**

⑳ **Tuner/band select button (TUNER/BAND) 12**

㉑ **CD play/pause button (CD ▶/ ‖) 15**

㉒ **Tape play button (TAPE ▶) 19**

㉓ **CD skip/search, tape fast-forward/rewind, tune/preset channel select, time adjust buttons (I◀◀/REW/∨, ∧/FF/▶▶I) 11, 12, 13, 15, 19**

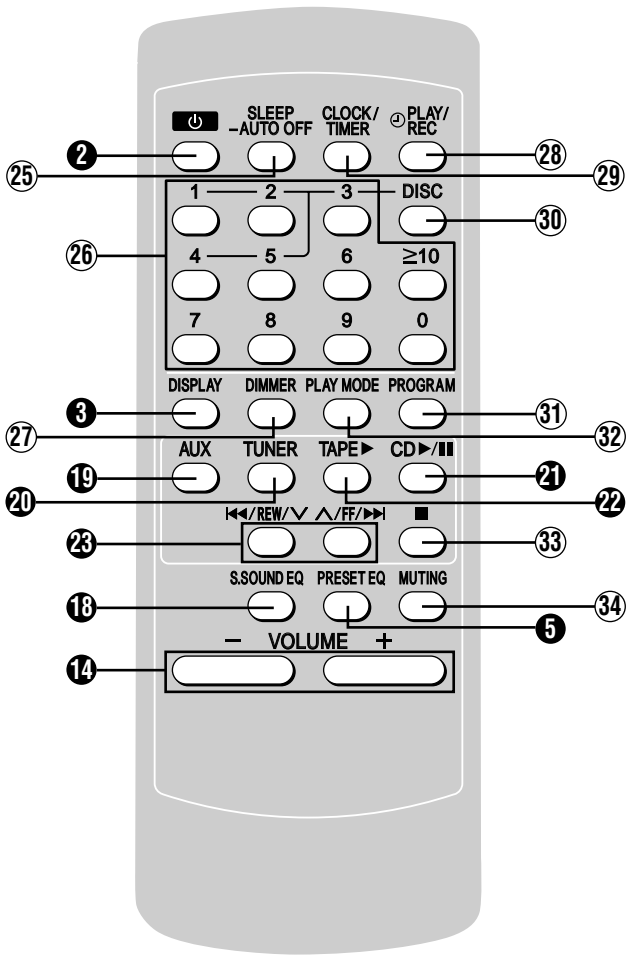㉔ **Stop/program clear and demonstration button (■/–DEMO)..10, 15, 16, 19**

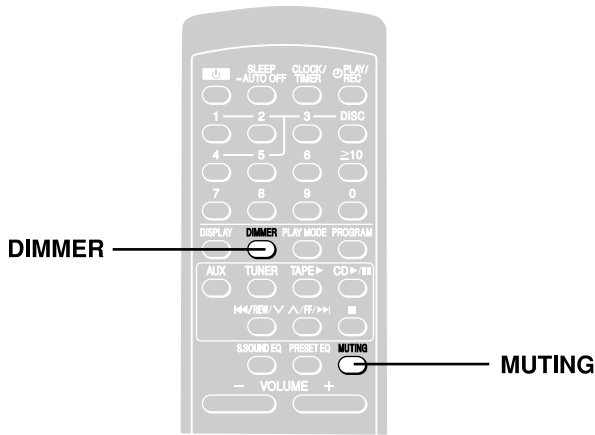## Front panel controls

Remote control

Buttons such as ❷ function in exactly the same way as the buttons on the main unit.

A

■ /–DEMO

A Turning the demo function off

If the clock has not been set, a demonstration of the display is shown when the unit is switched to standby mode.
This function is set to on at the time of purchase.

During standby mode
Press and hold [■/–DEMO] until "NO DEMO" is displayed.
The display changes each time the button is held down.
NO DEMO (off) ↔ DEMO ON (on)

To show a demonstration of the display
Press and hold [■/–DEMO] until "DEMO ON" is displayed.

Notes
- You cannot turn demo function off when the unit is on.
- (SC-AK300)
  DEMO function cannot be turned on in Full-Dim mode.
- (SC-AK200)
  DEMO function cannot be turned on when Dimmer is on.

■ /–DEMO

NO DEMO

↑↓

DEMO ON

Convenient functions

B **To dim the display panel**

Remote control only
Use this for better television viewing.

SC-AK300
Press [DIMMER].
Every time you press the button:
Semi-Dim ——→ Full-Dim
↑_____ Restores the ←_____|
original display
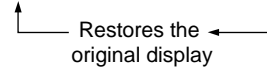
Semi-Dim: The backlights of the display are turned off.
Full-Dim: The display is dimmed and the backlights of the display and the indicator, except for the AC supply indicator, are turned off.

SC-AK200
Press [DIMMER].
The display is dimmed and the indicator is turned off.
(The AC supply indicator remains on.)
Press [DIMMER] again to restore the display.

DIMMER

MUTING

C **To mute the volume**

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

Press [MUTING].
Press the button again to cancel.
"MUTING" goes out.
Muting can also be cancelled by lowering the volume all the way (--dB).

When the system is turned off, the muting operation will be automatically cancelled.

B
DIMMER

C
MUTING

MUTING
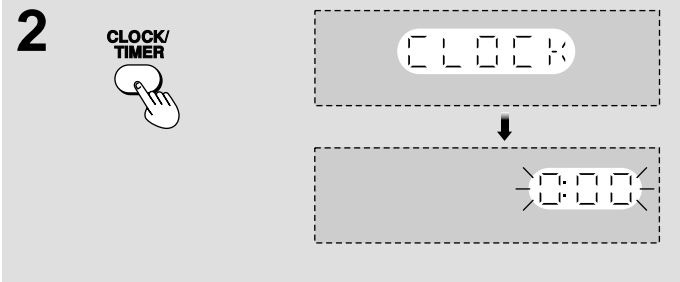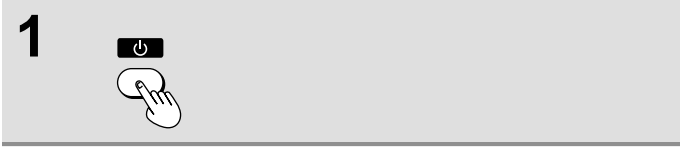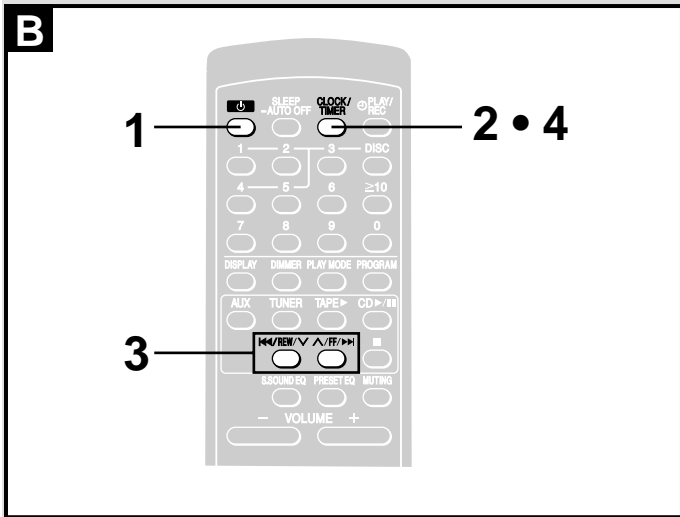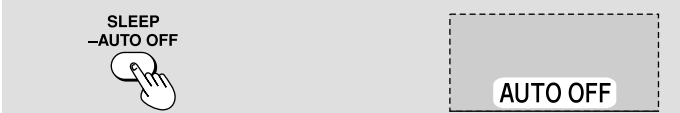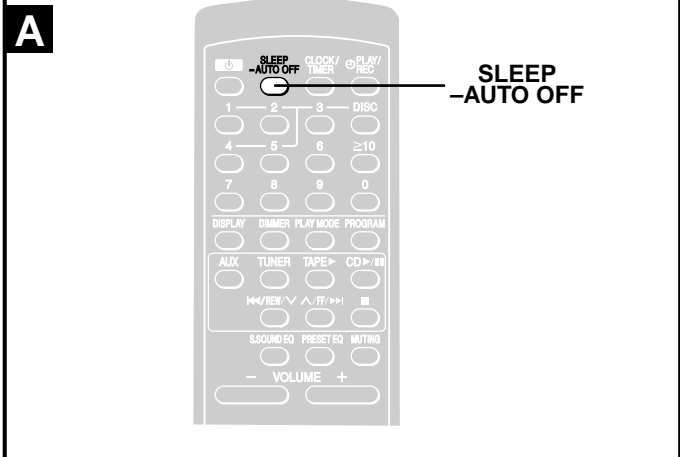
-1# A Auto-off function

Remote control only
When CD or tape is selected as the source
To save power, the unit turns off if it is left unused for ten minutes.

Note
This function does not work if the source is tuner or AUX.

Press and hold [–AUTO OFF].
"AUTO OFF" is shown on the display.

To cancel
Press and hold [–AUTO OFF] again to clear "AUTO OFF" from the display.

For your reference
The setting is maintained even if the unit is turned off. When the unit is turned on again, "AUTO OFF" is displayed and the unit functions as described above.
"AUTO OFF" disappears from the display if either tuner or AUX is selected as the source but continues to function normally.
"AUTO OFF" remains displayed if CD or tape is selected as the source.

B Setting the time

Remote control only
This is a 24-hour display clock.
This example in the figure shows how to set the time for 16:25.

1 **Switch on the unit.**

2 **Press [CLOCK/TIMER] to select "CLOCK".**
Every time you press the button:

CLOCK → ⊘PLAY → ⊘REC
└── Previous display ◄──┘

3 (within 7 seconds or so)
Press [I◄◄/REW/∨] or [∧/FF/►►I] to show the present time.

4 **Press [CLOCK/TIMER] to finish setting the time.**
The display will return to whatever was displayed before you set the time.

To display the time when system is ON
Press [CLOCK/TIMER] to select "CLOCK".

To display the time when system is OFF
Press [CLOCK/TIMER].

The time will be displayed for about 5 seconds and then the display will return to whatever was previously displayed.

Note
The clock may lose or gain some time over a period. Readjust if necessary.

Before using

11

RQT6131

1

TUNER/BAND

`FM 87.50`

2 PLAY MODE

`MANUAL`

3 I◀◀/REW/∨ | ∧/FF/▶▶I

`FM 88.10`
TUNED ST

4

— DOWN VOL UP —

`VOL -40dB`

A DISPLAY

RDS

↓

RDS
PS

↓

RDS
PTY

B

PLAY MODE

PLAY MODE

`FM 88.10`
TUNED MONO
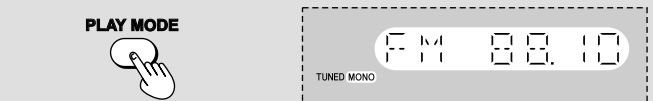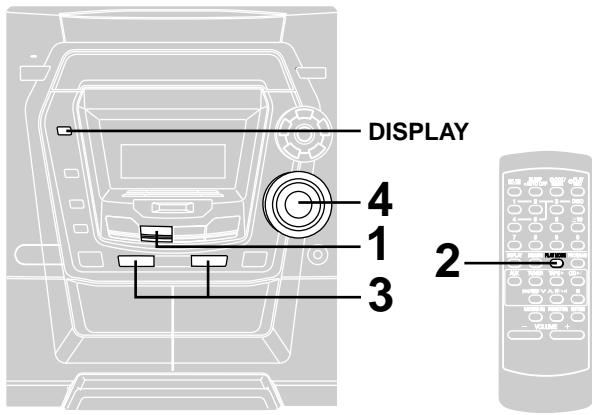
Listening to radio broadcasts

1 Press [TUNER/BAND] to select band.
The unit comes on automatically.
Every time you press the button:
FM ↔ AM

2 Press [PLAY MODE] on the remote control to select "MANUAL".
Every time you press the button:
MANUAL ↔ PRESET

3 Press [I◀◀/REW/∨] or [∧/FF/▶▶I] to select the frequency of the required station.
"TUNED" is displayed when a radio station is tuned.
"ST" is displayed when a stereo FM broadcast is being received.

4 Adjust the volume.

Auto tuning
Press and hold [I◀◀/REW/∨] or [∧/FF/▶▶I] for a moment until the frequency starts changing rapidly. The unit begins auto tuning, stopping when it finds a station.
● Auto tuning may not function when there is excessive interference.
● To cancel auto tuning, press [I◀◀/REW/∨] or [∧/FF/▶▶I] once again.

A **(For Europe except Russia and Ukraine)
RDS broadcasting**

This unit can display the text data transmitted by the radio data system (RDS) available in some areas.
If the station you are listening to is transmitting RDS signals, " RDS " will light up on the display.

Displaying the name of a broadcasting station or a program type
Press [DISPLAY].
Every time you press the button:

Frequency display → Station Name (PS) → Program type (PTY)

Program type displays			
NEWS	VARIED	FINANCE	COUNTRY
AFFAIRS	POP M	CHILDREN	NATIONAL
INFO	ROCK M	SOCIAL A	OLDIES
SPORT	M.O.R M*	RELIGION	FOLK M
EDUCATE	LIGHT M	PHONE IN	DOCUMENT
DRAMA	CLASSICS	TRAVEL	TEST
CULTURE	OTHER M	LEISURE	ALARM
SCIENCE	WEATHER	JAZZ	

Notes
● RDS displays may not be available if reception is poor.
  * "M.O.R M"="Middle of the road music"
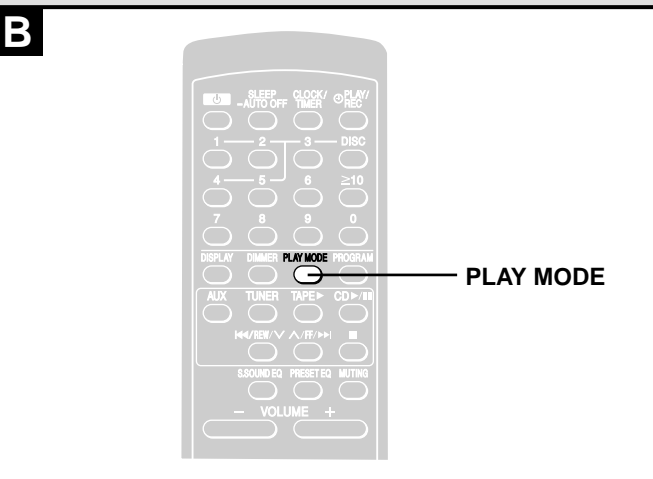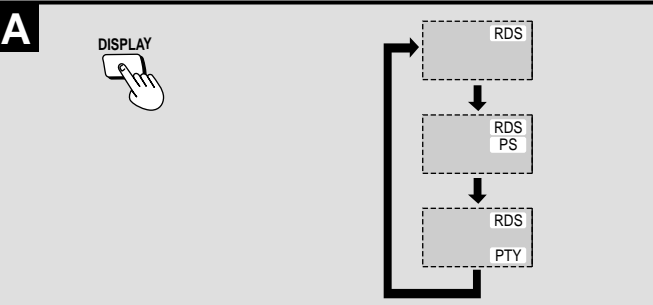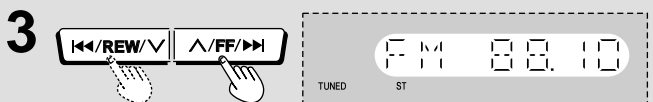● Sound is momentarily interrupted if you load/unload tapes while listening to an AM broadcast.

B **If noise is excessive in FM**

Remote control only

Press and hold [PLAY MODE] to display "MONO".
This mode improves sound quality if reception is weak, but broadcasts will be heard in monaural.
Press and hold [PLAY MODE] again to cancel the mode.
"MONO" goes out. MONO is also cancelled if the frequency is changed.
Turn off "MONO" for normal listening. Stereo and monaural broadcasts are automatically played as they are received.

A

PROGRAM

TUNER

I◀◀/REW/∨,
∧/FF/▶▶I

PROGRAM

⌐F M   ⌐8 7.5 0⌐

PGM

B

1

PLAY MODE

I◀◀/REW/∨,
∧/FF/▶▶I

VOLUME

2

1

1	2	3
4	5	6	≥10
7	8	9	0

Preset channel

2   − VOLUME +

Presetting radio broadcasts

Remote control only
There are two methods of presetting stations.
Automatic presetting : All the stations the tuner can receive are preset.
Manual presetting : You can select the stations to preset and the order they are preset in.
Up to 15 stations each can be set in the FM and AM bands.

Preparation:
Press [TUNER] to select "FM" or "AM".

A   Automatic presetting

Do the following once each for FM and AM.

Preparation:
Tune to the frequency where presetting is to begin (➜ page 12).

Press and hold [PROGRAM].
Release the button when frequency begins to change.
The tuner presets all the stations it can receive into the channels in ascending order. When finished, the last station memorized is tuned in.

Manual presetting

Preset the stations one at a time.

① **Press [PROGRAM] then press [I◀◀/REW/∨] or [∧/FF/▶▶I] to tune to the required station.**
② **Press [PROGRAM] then press [I◀◀/REW/∨] or [∧/FF/▶▶I] to select a channel.**
③ **Press [PROGRAM].**

The station occupying a channel is erased if another station is preset in that channel.

B   Selecting channels

1   Press the numbered buttons to select the channel.
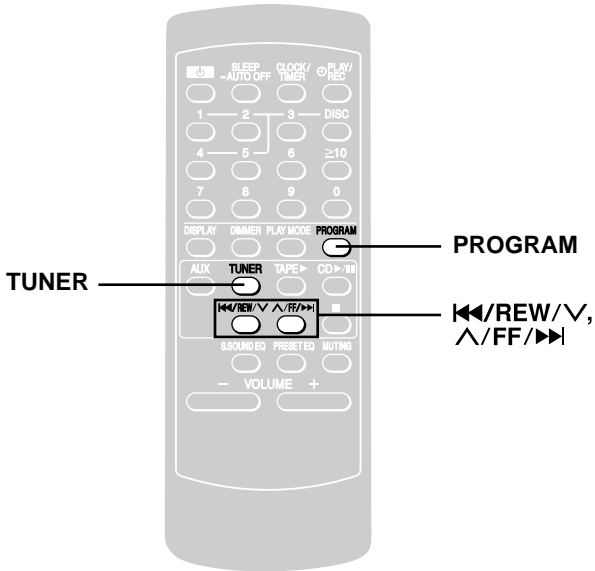To enter channels 10 or over
Press [≥ 10], then the two digits.
OR
① **Press [PLAY MODE] to select "PRESET".**
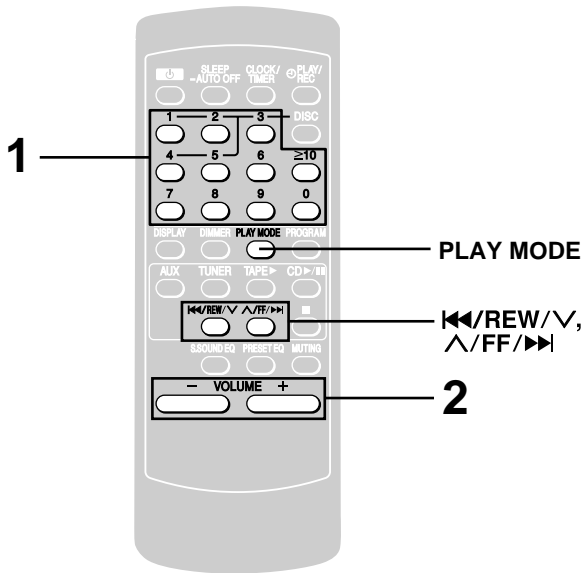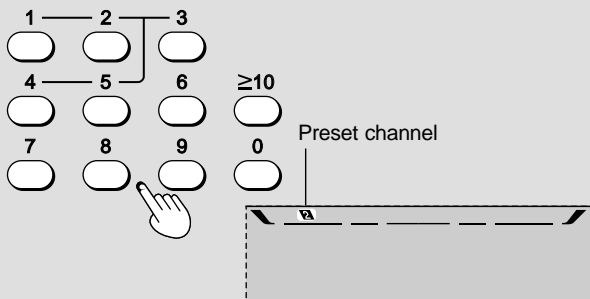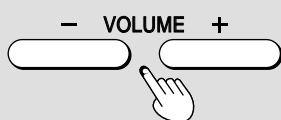② **Press [I◀◀/REW/∨] or [∧/FF/▶▶I] to select the channel.**

2   Adjust the volume.

Radio operations

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RQT6131

A

B

How to hold CDs

✓

✗ Do not touch the recorded surface.

C

How to clean CDs

✓

✗

Wipe from inside outward.

D

E

✓ ✗

F

✓ ✗ 8 cm CD

✓ ✗ 12 cm CD
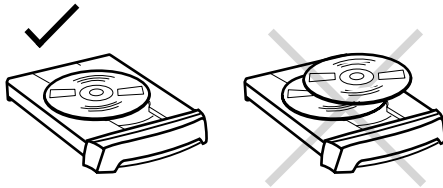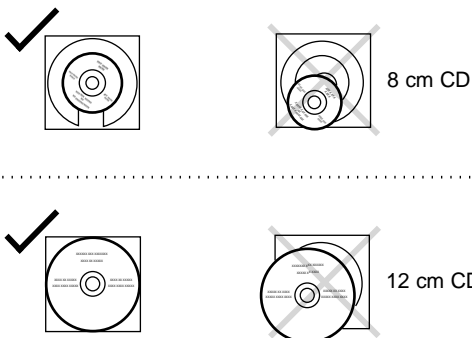
Concerning compact discs

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

A However, do not use irregularly shaped CDs. CDs of the sort can damage the unit.

B ~ **D** **Handling precautions**

- 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.
- Do not attach labels or stickers to CDs. (Do not use CDs with exposed adhesive from tape or left over peeled off stickers.)
- Do not use scratch-proof protectors or covers other than those specified for use with this system.
- Do not use CDs printed with label printers available on the market.

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

To prevent damage

Always observe the following points.
- **E** Load only 1 CD on the tray.
- **F** Load CDs as shown in the figure.
  The adapter is not needed with 8 cm CDs (singles).
- Set the system on a flat, level surface.
  Do not set it on top of magazines, inclined surfaces, etc.
- Do not move the system while tray is opening/closing, or when loaded. Always unload all CDs before moving the system.
- Do not put anything except a CD in the tray.
- Do not use cleaning CDs or CDs which are badly warped or cracked.
- Do not disconnect the AC mains lead from the household mains socket during disc changing operation.

3 ──────── 1

4

■/‒DEMO

I◀◀/REW/∨,
∧/FF/▶▶I ──────── CD ▶/II

1

2   Label must face upward.

3

⁵●●②
④③   ⁃CHANGE⁃

Track number ↓

●●②
④③   0:01

Disc indicator   Elapsed playing time
                 (Of current track number)

4   VOL ‒48dB

A   Number of tracks

■/‒DEMO   ●●②   16   48:52
          ④③

Total playing time

B   \ 1234 56 7890 1112 131415≫ / ≫

Listening to compact discs

This unit can play CD-DA (digital audio) format audio CD-R and CD-RW that have been finalized (a process that enables CD-R/CD-RW players to play audio CD-R and CD-RW) upon completion of recording.
It may not be able to play some CD-R or CD-RW due to the condition of the recording.

1 Press [▲] button.
The unit will come on automatically and the tray opens.

2 Set CD in the tray.
To continue loading CDs in the other trays
Press another [(1) ~ (5)] to select the required tray and press [▲] to open the tray.
The current tray closes and the selected tray automatically opens.
Press [▲] to close the tray.

3 Press [(1) ~ (5)] to play your desired disc.
(If the desired CD is indicated on the display panel, the same operation can be accomplished by pressing [CD ▶/ II].)
The selected disc is played.
Use the CD Play Mode function's ALL-DISC mode to play CD in succession. (➡ page 17)

4 Adjust the volume.

A To stop the disc play
Press [■/–DEMO].

B When "≫" appears on the display
It indicates there are 16 or more tracks on the disc in the playing position.

Disc indicator
The disc indicator on the display lights whenever the tray is in the playing position whether it is loaded or not.

One touch play
If the unit is in standby mode and a CD is loaded, press [CD ▶/ II] or [(1) ~ (5)].
The unit will come on automatically and play will start.

To pause	Press [CD ▶/ II] during playback. To resume playback, press [CD ▶/ II].
To search forward/ backward (Search)	Hold down [I◀◀/REW/∨] (backward) or [∧/FF/▶▶I] (forward) during playback or pause mode.
To skip forward/ backward	Press [I◀◀/REW/∨] (backward) or [∧/FF/▶▶I] (forward) during playback or pause mode.

Notes

- During 1-Disc Random play or All-Disc Random play (➡ page 17), you cannot skip to tracks which have already been played.
- During program play (➡ page 16), 1-Disc Random play or All-Disc 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.
- Always stop the changer before loading or changing CDs. You cannot change CDs while a disc is playing.

Compact disc operations

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1
CD ▶/▐▐ → ■   14   60:02

2
PROGRAM   - -

3
DISC   C 1

4
1 — 2 — 3
4 — 5

5
1 — 2 — 3
4 — 5 — 6   ≥10
7   8   9   0

Specified track number

Program order

7
CD ▶/▐▐   C   0:0 1

A
CD FULL

B
Indicates program mode

C 1   P 14
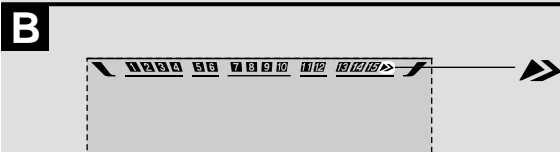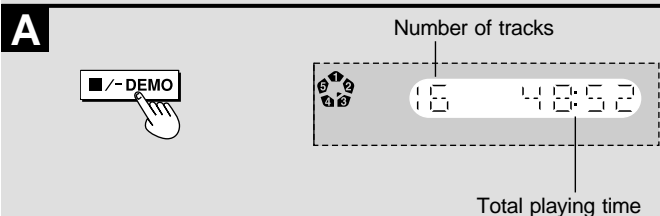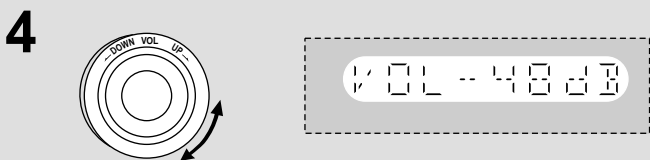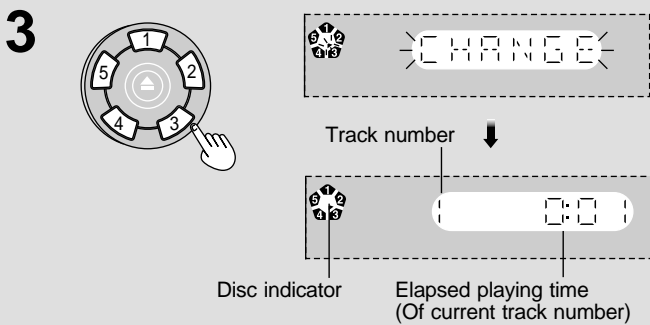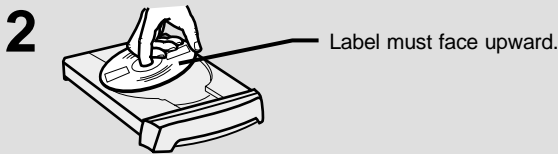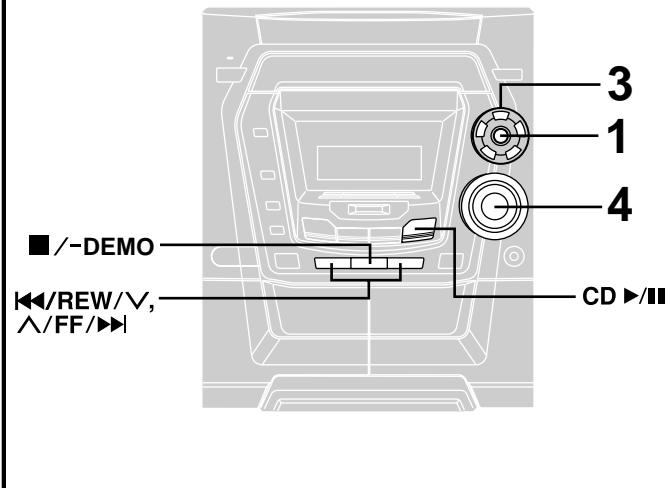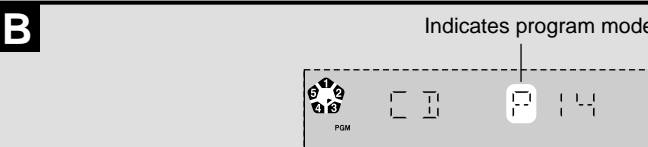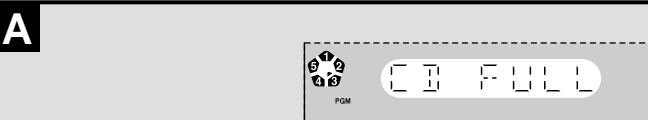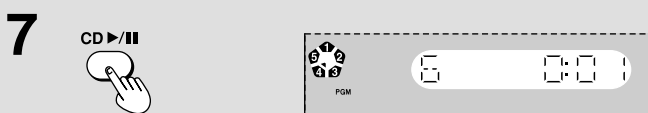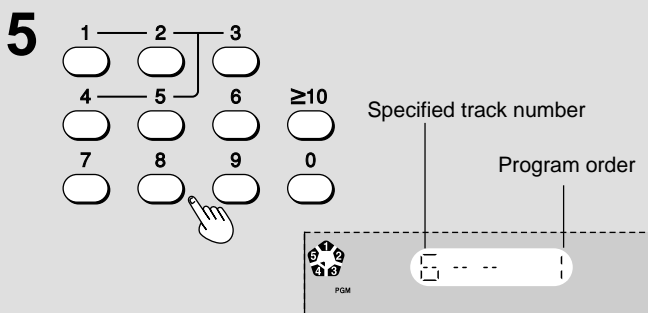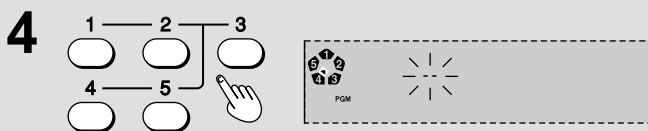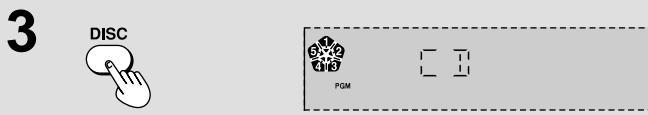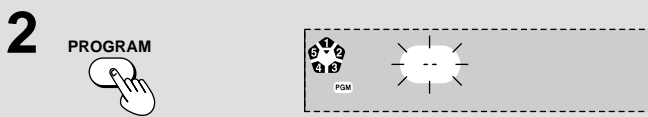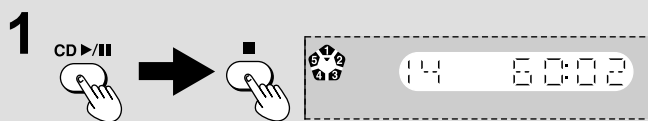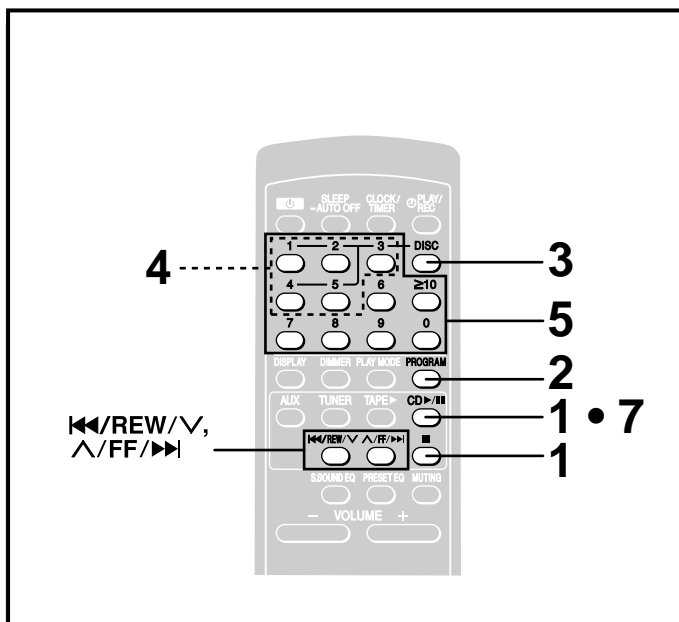
Listening to compact discs

Program play

Remote control only

You can program up to 24 tracks.

1 Press [CD ▶/ ▐▐] and then [■].

2 Press [PROGRAM].

3 Press [DISC].

**4 (within 10 seconds or so)
Press [1] – [5] to select the disc you want.**

5 Press the numeric button to select the desired track.

6 Repeat steps 3 through 5 until you have programmed all the tracks you want.

7 Press [CD ▶/ ▐▐].
Play will start in the programmed sequence.

To cancel program play mode
Press [PROGRAM] in the stop mode.
Programmed contents will be saved in memory.
To clear all programmed tracks
Press [■] in the stop mode. "CLEAR" is displayed.

To select a two-digit track
Press [≥10] and then the two numbers you want within 10 seconds or so.
For example
Track no. 20: [≥10] → [2] → [0]
Track no. 35: [≥10] → [3] → [5]

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

B You can do the following during program mode
● Check program contents.
  Press [◄◄/REW/∨] or [∧/FF/►►].
  Every time you press one of the buttons, the track and program No. are shown on the display.
● Add to the program.
  Repeat steps 3 through 5.

Memory retention
Your program is retained in memory for about 2 weeks while the system is unplugged.

To replay your program
If you turned OFF your program with [PROGRAM], you can play it again as explained below.
1. Press [PROGRAM].
2. Press [CD ▶/ ▐▐].

If you program a track not on your CDs
The track is initially programmed, but during program play, the player will skip that track and will continue playing from the next programmed item.

Listening to compact discs

To listen to specific CDs and tracks (CD Play Mode function)

Remote control only

This function makes it easier for you to select specific CDs and tracks from those loaded in the player.

There are 5 disc/track selection modes.

All-Disc mode:	Plays all loaded discs in succession from the selected disc to the final disc ※.
1-Song mode:	Plays one selected track on the selected disc.
1-Disc Random mode:	Plays one selected disc in random order.
All-Disc Random mode:	Plays all loaded discs in random order.
1-Disc mode:	Plays one selected disc.

1 Press [CD ▶/❚❚] and then [■].

2 Press [PLAY MODE] to select the desired mode.

Every time you press the button:

ALL-DISC → 1-SONG → 1-RANDOM → A-RANDOM

└──────── 1-DISC ◄────────┘

ALL-DISC: All-Disc mode
1-SONG: 1-Song mode
1-RANDOM: 1-Disc Random mode
A-RANDOM: All-Disc Random mode
1-DISC: 1-Disc mode
(The original display is restored in about 2 seconds.)

Note

Proceed to step 6 if A-RANDOM was selected in this step.

3 Press [DISC].

4 Press [1]-[5] to select the disc.

The CD starts if ALL-DISC, 1-RANDOM or 1-DISC was selected in this step.

Note

Steps 5 and 6 are not required if ALL-DISC, 1-RANDOM or 1-DISC was selected in step 2.

5 Press [I◄◄/REW/∨] or [∧/FF/►►I] to select the desired track.

6 Press [CD ▶/❚❚].

The CD starts.

To stop play
Press [■].

When playback ends
The current play mode will retain.

※ **Final disc**
For example, if play starts from disc 4, disc 3 will be the "final disc".
Order of progression:
Disc 4→5→1→2→3

Note

You can use the CD Play Mode function together with repeat play.

Compact disc operations

17

RQT6131

1 DISC

2 1 — 2 — 3
   4 — 5

3 1 — 2 — 3
   4 — 5 — 6 — ≥10
   7 — 8 — 9 — 0

A PLAY MODE

B DISPLAY

DISPLAY

DISPLAY

PLAY MODE

CD ▶/❙❙
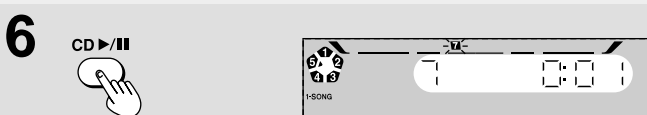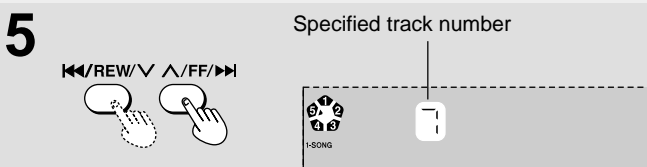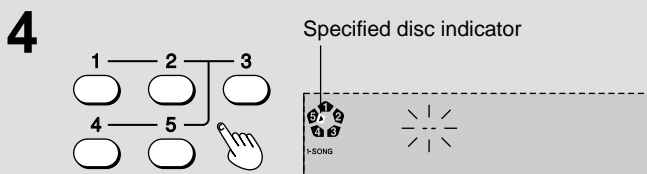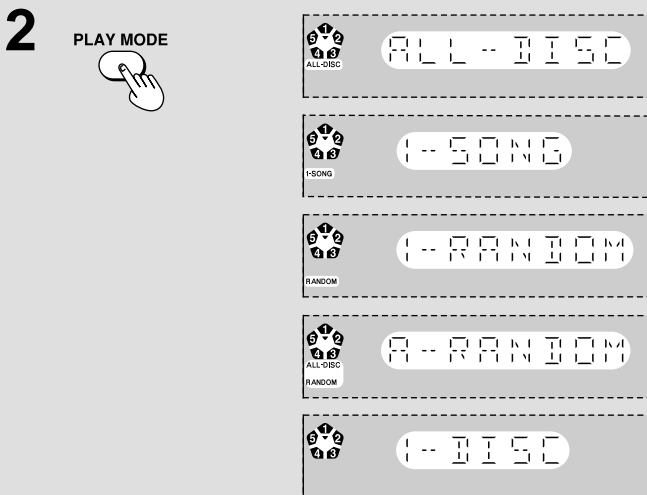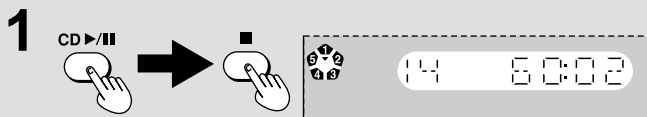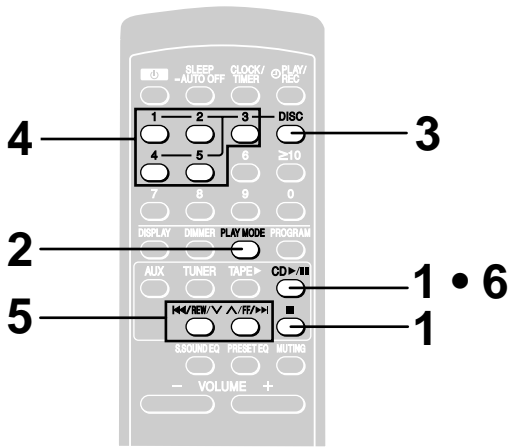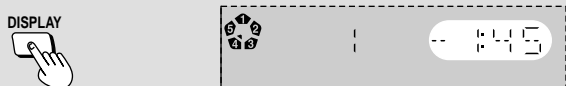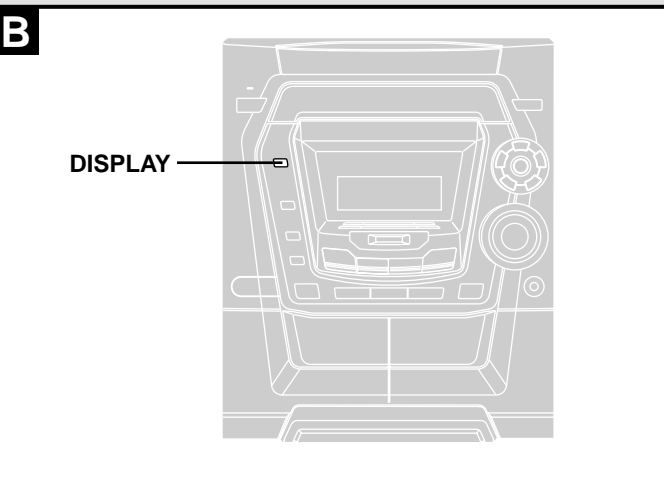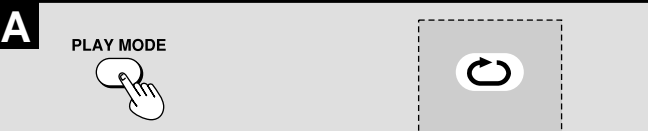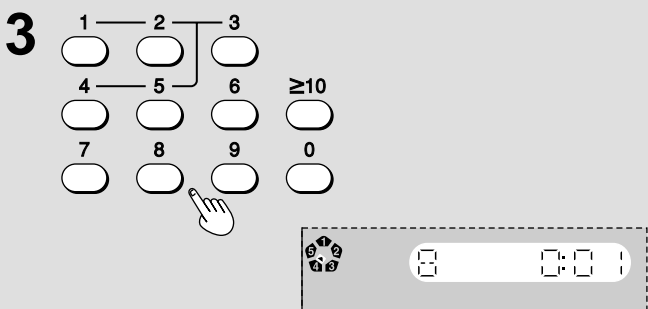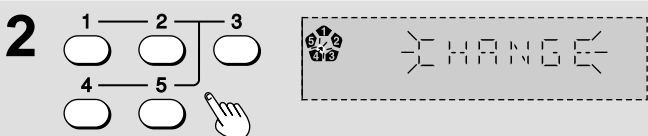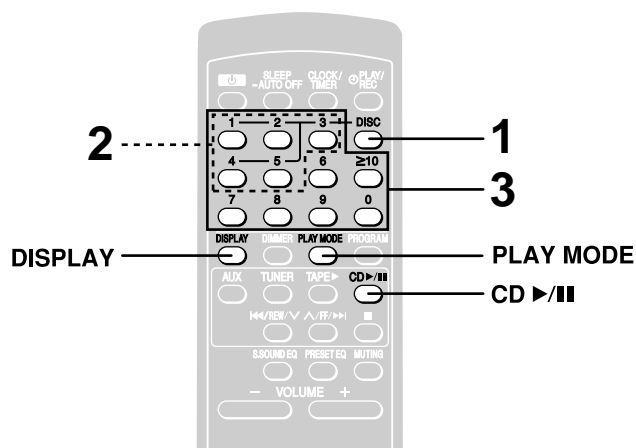
Listening to compact discs

Direct access play

<u>Remote control only</u>

1 **Press [DISC].**

2 **(within 10 seconds or so)**
Press [1] – [5] to select the disc you want.

3 **Press the numeric button to select the desired track number.**
The CD will be played from the selected track to the last track of the disc.

To select a two-digit track
Press [≥10] and then the two numbers you want within 10 seconds or so.
For example
Track no. 20: [≥10] → [2] → [0]
Track no. 35: [≥10] → [3] → [5]

Note

You cannot use direct access play with 1-SONG, 1-RANDOM or A-RANDOM mode.

Repeat play

<u>Remote control only</u>

A Press and hold [PLAY MODE] before or during play.
"REPEAT ON" and "↻" are displayed.

To cancel repeat play
Press and hold [PLAY MODE] once again. "REPEAT OFF" is displayed and "↻" is cleared.

To repeat your favorite tracks
1. Program the tracks you want (perform steps 1 ~ 6 on page 16).
2. Press and hold [PLAY MODE] and make sure "REPEAT ON" and "↻" are displayed.
3. Press [CD ▶/❙❙]. Playback will start.

To use repeat play with CD Play Mode function
Set the desired mode (➡ page 17), press and hold [PLAY MODE] before or during playback, and make sure "REPEAT ON" and "↻" are displayed.

B CD display

This function allows you to display the remaining play time of the current track.

During play or pause mode
Press [DISPLAY].
Every time you press the button:
Elapsed play time ↔ Remaining play time

Note

When track number 25 or greater is playing, remaining play time display shows "– –:– –".

1

TAPE▶

2

▲ DECK 1 OPEN   ▲ DECK 2 OPEN   Front side

↓

3

TAPE▶

DECK 1 ⏵ ⏵

4

DOWN VOL UP

VOL - 48dB

A

DECK 1/2

DECK 2 ⏵ ⏵

DECK 1/2

■/–DEMO

4

1•3

2

I◀◀/REW/∨,
∧/FF/▶▶I

Listening to tapes

You can use either deck 1 or deck 2 for tape playback.
Use normal position tapes.
High position and metal position tapes can be played, but the unit will not be able to do full justice to the characteristics of these tapes.

1 Press [TAPE ▶].

The unit will come on automatically.
If the unit was off and a cassette was loaded, play will start automatically (One touch play function).

2 Press [▲ DECK 1 OPEN] or [▲ DECK 2 OPEN] and insert the tape.

Insert the tape with the exposed tape facing down.
Close the holder by hand.

3 Press [TAPE ▶] to start playback.

One side is played, then playback stops automatically.
To play on the other side of the tape, turn the tape over and press [TAPE ▶].

4 Adjust the volume.

To stop tape playback
Press [■/–DEMO].

Fast-forward and rewind
Press [I◀◀/REW/∨] (rewind) or [∧/FF/▶▶I] (fast-forward).

A To change the deck to be used
Press [DECK 1/2] to select the deck you want to use when you load cassettes into both decks.
You can also use remote control to perform by pressing [PLAY MODE].

Notes

• Playback is momentarily interrupted while playing back tapes, if you open the other deck.
• Tapes exceeding 100 minutes are thin and can break or get caught in the mechanism.
• Tape slack can get caught up in the mechanism and should be taken up before the tape is played.
• Failure to operate endless tapes correctly may cause the tape to wind around the revolving parts. Always read the instructions provided with your tapes.

Cassette deck operations

19
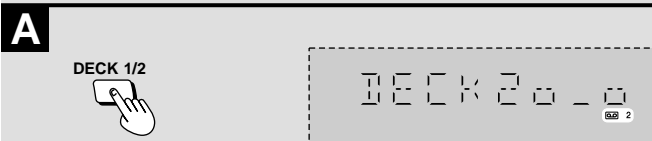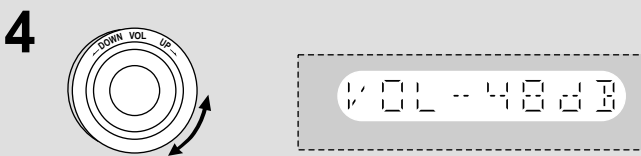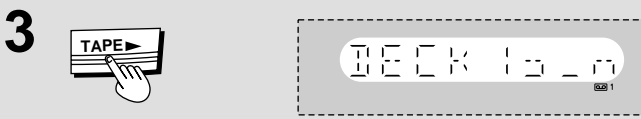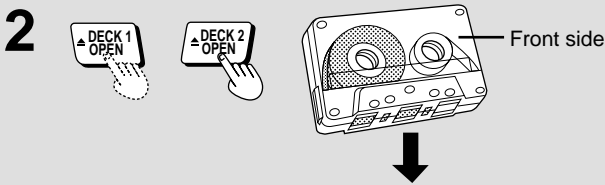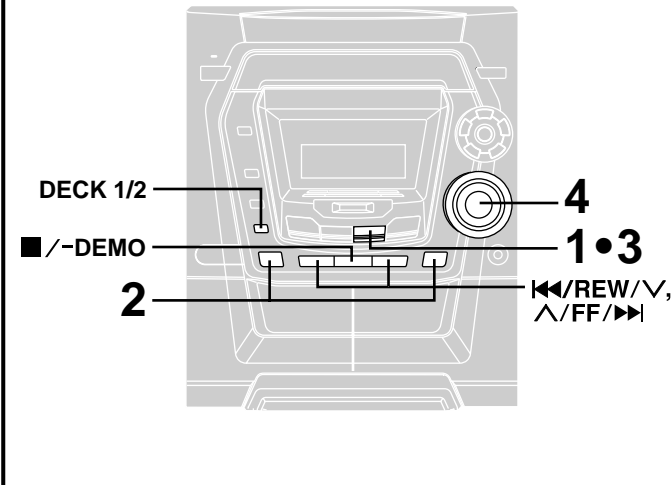
A

To protect tapes against further recording

Side A

Tab for side B   Tab for side A
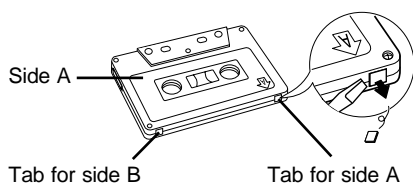
To re-record
Normal position tape

Adhesive tape

B

3

1

1   2

C

▲ DECK 2
OPEN

▲ DECK 2
OPEN

Front side
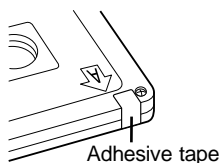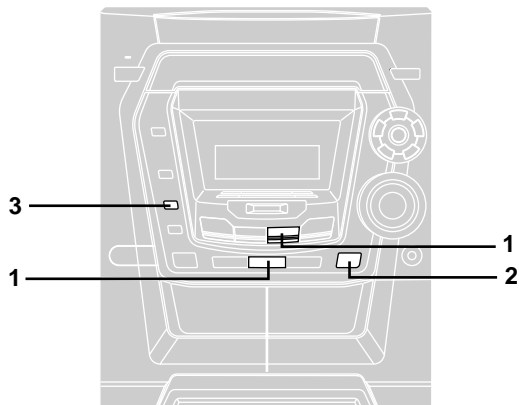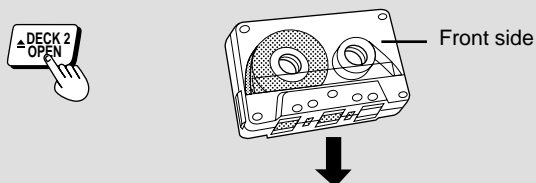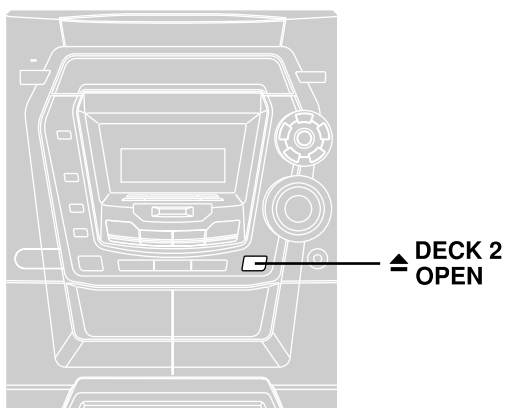
Before recording (Deck 2 only)

Types of tapes which can be recorded correctly

Use normal position tapes.
High position and metal position tapes can be used, but this unit will not be able to record or erase them correctly.

A Erasure prevention

The illustration shows how to remove the tabs to prevent recording. To record on the tape again, cover as shown.

How volume and sound quality affect recording

The tape you are recording is not affected whatsoever by changes in volume and sound quality.

B To erase a recorded sound

1. **Press [TAPE ▶] then [■/–DEMO].**
2. **Insert the recorded tape into deck 2.**
   Ensure there is no tape in deck 1.
3. **Press [● REC].**

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

Notes
● You cannot open deck 1 while recording.
● You cannot fast-forward or rewind one deck while recording with the other.

C Preparatory steps

Do these steps before each recording.
Wind up the leader tape so recording can begin immediately.

Press [▲ DECK 2 OPEN] and insert the cassette to be recorded on.
Insert with the exposed tape facing down.

A

2, ② — ⬛/-DEMO

2
②

●REC

| 1   0:0 1 |
| 🔲 2 REC |

B

2

2

●REC

| F M   88. 10 |
| 🔲 2 REC |

C

PLAY MODE

DISPLAY DIMMER **PLAY MODE** PROGRAM

AUX TUNER TAPE► CD►/❚❚

|◄◄/REW/∨ ∧/FF/►►| ⬛

S.SOUND EQ PRESET EQ MUTING

− VOLUME +

PLAY MODE

| A M   B P 1 |

Ⓐ Recording from compact discs

You can use 1-DISC/ALL-DISC/1-SONG mode (➜ page 17) to make recordings.

Preparations:
- Do the preparatory steps (➜ page 20).
- Insert the disc(s) you want to record (➜ page 15).

1-DISC/ALL-DISC recording

1 **Do steps 1 to 4 on page 17.**
Ensure CD is stopped.

2 **Press [● REC] to start recording.**
The CD starts.

1-SONG recording

① **Do steps 1 to 5 on page 17.**

② **Press [● REC] to start recording.**
The CD starts.

To stop recording
Press [⬛/–DEMO].
Disc play stops automatically.

If the tape finishes before the disc
The disc continues playing. Press [⬛/–DEMO] to stop it.

To record programmed tracks
① Program the tracks (➜ page 16).
② Press [● REC] to start recording.
Play starts.
To stop recording, press [⬛/–DEMO].
Disc play stops automatically.

Ⓑ Recording from radio broadcasts

Preparation: Do the preparatory steps (➜ page 20).

1 **Tune to the required station.**
(➜ page 12 or 13).

2 **Press [● REC] to start recording.**

To stop recording
Press [⬛/–DEMO].

To record from a specific point on a tape
Before recording, advance the tape to the point from where you want to start recording.

To cut an unnecessary part while recording
1. Press [⬛/–DEMO] during the unnecessary part. The cassette deck will go into the stop mode.
2. Press [● REC] to resume recording again.

To record on the other side of the tape
Turn the tape over and press [● REC].

Note

When recording an AM broadcast, sound is momentarily interrupted when you start and stop the recording.

Ⓒ To reduce noise while AM recording (Beat proof function)

Remote control only
Press and hold [PLAY MODE] while recording.
Each time you press and hold the button, "BP1" and "BP2" will be displayed alternately.

Select the position where there is less noise.

Recording operations

A

1

DECK 1
OPEN

`DECK 1o _ o`

2

REC

`DECK 1 --> 2`

B

PRESET EQ

PRESET EQ

PRESET EQ

`HEAVY`
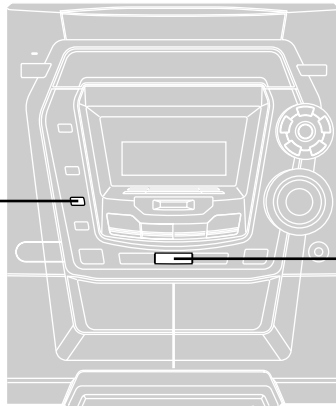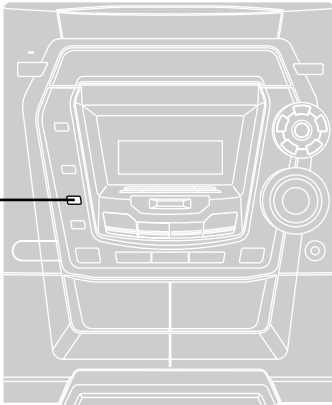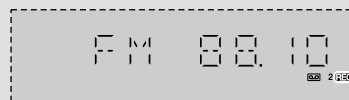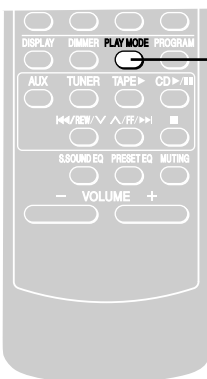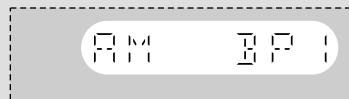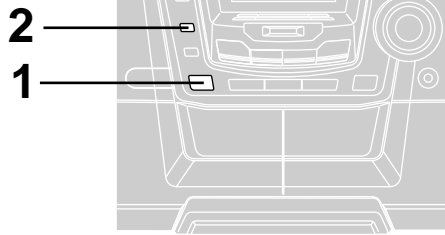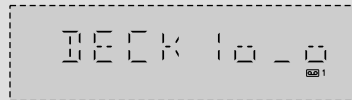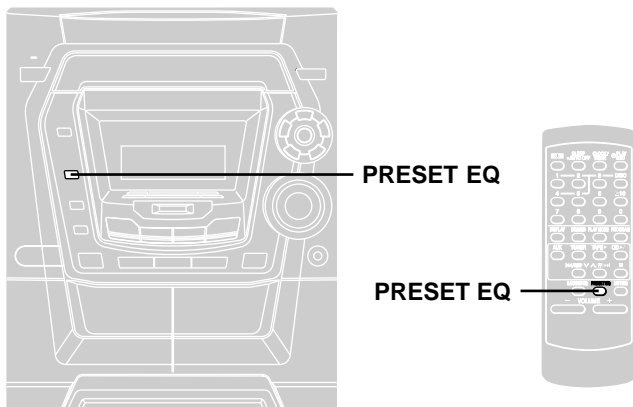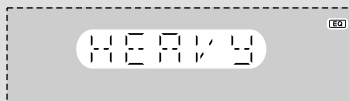
C
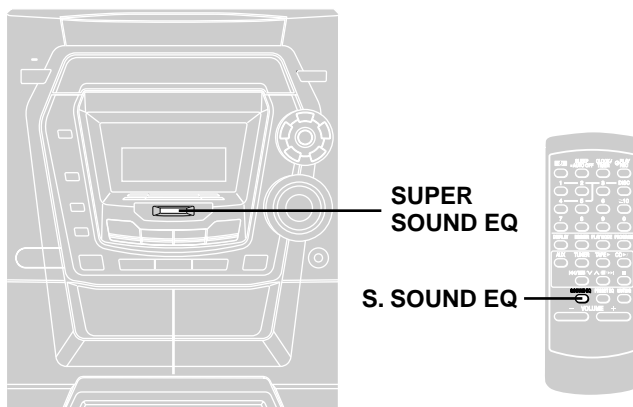
SUPER
SOUND EQ

S. SOUND EQ

A Tape-to-tape recording

The recording level will be recorded as it is on the tape being played back.

Preparations:
- Do the preparatory steps (➔ page 20).
- Press [TAPE ▶] then [■/–DEMO] to select tape as the source.

1 Press [▲ DECK 1 OPEN] and insert the tape you want to record.

2 Press [● REC] to start recording.

To stop recording
Press [■/–DEMO].
Both decks will stop.

To record from a specific point on a tape
Before recording, advance the tape to the point from where you want to start recording.

B Using the built-in sound quality settings

Press [PRESET EQ] to select the sound quality.
Every time you press the button:

HEAVY → SOFT → CLEAR → VOCAL

EQ-OFF

HEAVY : Select this when playing rock or other kinds of music that sounds better with an added punch.
SOFT : Select this when listening to background music.
CLEAR : Select this for jazz or other kinds of music for which clarity in the treble range is desired.
VOCAL : Select this to add gloss to vocals.

The original display is restored on the display panel in about 4 seconds.

Notes
- Preset EQ cannot be used together with Super Sound EQ.
- All recordings are performed at "EQ-OFF" setting even if an alternative sound quality setting has been selected.

C Enhancing the sound quality

This feature enhances the bass and treble effect of the sound.

Press [SUPER SOUND EQ].
Remote control: Press [S.SOUND EQ].
Press the button again to cancel.
The button light goes out.

Using the timers

Using the play/record timer

Remote control only

The timer has two functions. It can be set to on at a certain time to wake you up, or it can be set to record the radio or from the aux source.

The play timer cannot be used in combination with the record timer.

Preparations:
- Turn the unit on and set the clock (➡ page 11).
- **For the play timer**, prepare the music source you want to listen to; tape, CD, radio or aux, and set the volume.
- **For the record timer**, check the cassette's erasure prevention tabs (➡ page 20: **A**), insert the tape in deck 2 (➡ page 20: **C**) and tune to the radio station (➡ page 12) or select the aux source (➡ page 25).

1 Press [CLOCK/TIMER] to select the timer function.

Every time you press the button:

CLOCK → ⏰PLAY → ⏰REC

⌐— Previous display ◄—⌐

⏰PLAY : to set the play timer
⏰REC : to set the record timer

2 ON time setting

① **(Within 8 seconds or so)**
Press [I◄◄/REW/∨] or [∧/FF/►►I] to select the starting time.
② Press [CLOCK/TIMER].

3 OFF time setting

① Press [I◄◄/REW/∨] or [∧/FF/►►I] to select the finishing time.
② Press [CLOCK/TIMER].
The start and finish times are now set.

4 Press [⏰PLAY/REC] to display the timer indicator.

Every time you press the button:
⏰PLAY → ⏰REC

⌐—— (OFF) ◄—⌐

⏰PLAY : to turn the play timer on
⏰REC : to turn the record timer on
(The indicator doesn't appear if the start and finish times or the clock hasn't been set.)

5 Press [⏻] to turn the unit off.

The unit must be off for the timers to operate.
- **For play timer**
  The timer play will start at the preset time with volume increasing gradually up to the volume level you pre-set.
- **For record timer**
  The record timer comes on about 30 seconds earlier than the set time.

To cancel the timer
Press [⏰PLAY/REC] to clear the timer indicators from the display.
(The timer comes on at the set time everyday if the timer is on.)

To change the settings (when unit is on)
- **To change the play/record times**
  Do steps 1, 2, 3 and 5.
- **To change the source or volume**
  1. Press [⏰PLAY/REC] to clear the timer indicator from the display.
  2. Make changes to the source or volume.
  3. Do steps 4 to 5.

---

5 ⏻

4 CLOCK/TIMER ⏰PLAY/REC

1•2②•3②

2①•3① I◄◄/REW/∨ ∧/FF/►►I

1 CLOCK/TIMER

FOR PLAY TIMER	FOR RECORD TIMER
�0PLAY	�0REC

2 ① I◄◄/REW/∨ ∧/FF/►►I

FOR PLAY TIMER	FOR RECORD TIMER
ON 6:30	ON 13:00
ON ⏰PLAY	ON ⏰REC

② CLOCK/TIMER

3 ① I◄◄/REW/∨ ∧/FF/►►I

FOR PLAY TIMER	FOR RECORD TIMER
OFF 7:40	OFF 14:30
OFF ⏰PLAY	OFF ⏰REC

② CLOCK/TIMER

4 ⏰PLAY/REC

FOR PLAY TIMER	FOR RECORD TIMER
⏰PLAY	⏰REC

5 ⏻

Timer operations

23
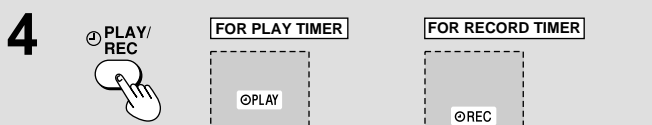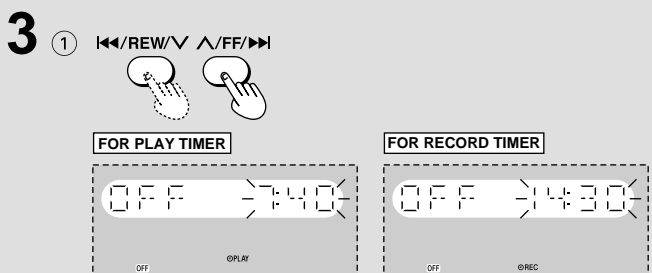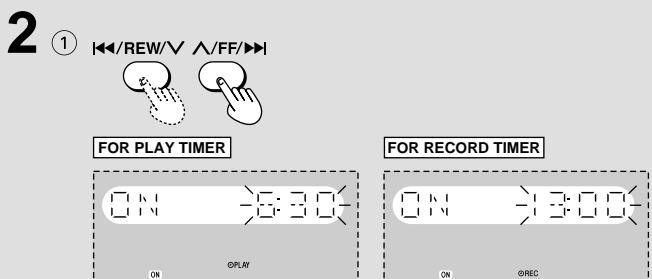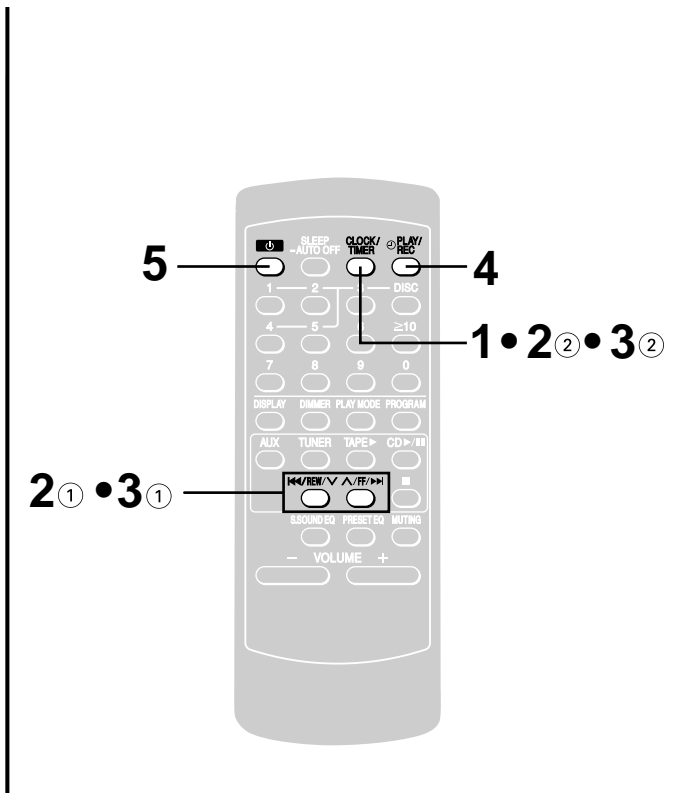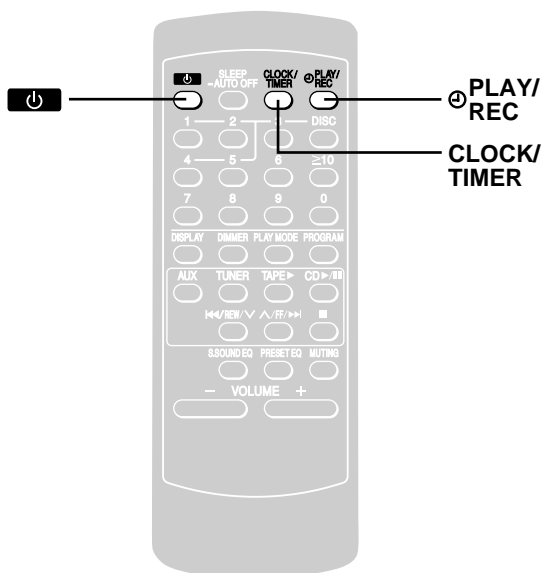
Using the timers

Using the play/record timer

Remote control only

To change the timer

Press [⊘PLAY/REC] to select the desired timer.

Every time the button is pressed the setting changes as follows.

$$\odot PLAY \rightarrow \odot REC$$
$$\uparrow\!\!\_\!\_ (OFF) \longleftarrow\!\!\_\!\_|$$
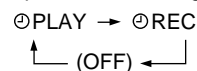
To check settings

While the unit is on and the "⊘PLAY" (or "⊘REC") indicator is on, press [CLOCK/TIMER] so "⊘PLAY" (or "⊘REC") appears on the display.

Two seconds after "⊘PLAY" (or "⊘REC") appear, the settings are displayed in the following order:

- For play timer
  1. Play start time
  2. Play finish time
  3. Play source
  4. Playback volume

- For record timer
  1. Recording start time
  2. Recording finish time
  3. Recording source

You can check the settings even when the system is OFF by pressing [CLOCK/TIMER] twice.

To enjoy the desired source after the timer setting is completed

The volume level (for play timer) and music source are stored in the timer memory and the timer will start in these preset conditions. However, the Disc numbers do not get stored in the timer memory.

1. After step 4, start playing the desired source.
2. Reset the Disc numbers if you have changed any of them, confirm that a Disc or cassette is inserted, then press [⏻] to put the unit on standby.

Notes

- If you switch the system to the standby mode while the play/record timer is functioning, the OFF time setting will not be activated.
- If AUX is selected as the source, when the timer comes ON, the system will turn ON and will engage "AUX" as the source. If you want to playback or record from a connected component, set the component's timer to the same time. (See the instruction manual that came with the component.)

A Using the sleep timer

A

SLEEP – AUTO OFF

SLEEP –AUTO OFF

SLEEP   30

SLEEP

B

●REC
AUX

C

Headphones
(not included)

Remote control only

This timer turns your system OFF at the set time (Max. 2 hours, set at 30-minute intervals). It lets you fall asleep listening to music.

Preparations:
Switch on the power.

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

While enjoying the desired source:

Press [SLEEP] to select the desired time.

Every time you press the button:

→ SLEEP 30 → SLEEP 60 → SLEEP 90 → SLEEP 120 → SLEEP OFF ┐

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

To cancel the sleep timer:
Press [SLEEP] to select "SLEEP OFF".

To confirm the remaining time:
(only while system 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.

Notes

• The sleep timer turns OFF automatically the moment you attempt to edit-record a CD.
• The sleep timer can be used in combination with the play/record timer.
  The sleep timer always has priority.
  Be sure not to overlap timer settings.

B Using an external unit

Listening to an external source

(See page 7 for external unit connection)

1. Press [AUX].
   The system will come on automatically.
2. Start playback from the external source. (For details, refer to the owner's manual of the equipment.)

Recording from an external source

1. Press [AUX].
2. Press [● REC] (recording starts).
3. Start playback from the external source. (For details, refer to the owner's manual of the equipment.)

C Listening with headphones

Reduce the volume level, and connect the headphones.
Plug type: 3.5 mm stereo

Note

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

Timer operations

Reference

Troubleshooting guide

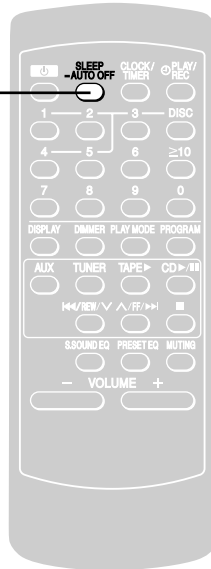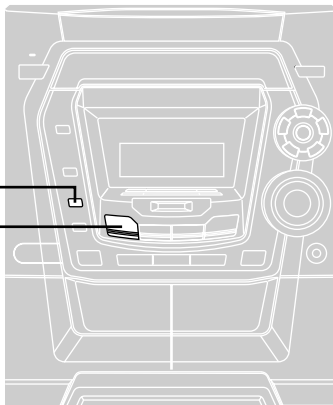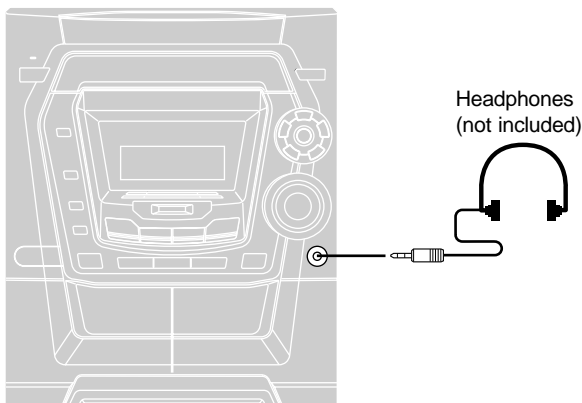Before requesting service, make the checks below. If you can't fix the system as described below, or if something not listed here occurs, refer to the enclosed directory to locate an Authorized Service Center convenient to you or contact your dealer.

Reference pages are shown as black circled numbers ❻.

Common Problems

No sound. Sound stops.	Turn the volume up. Switch off the unit, determine and correct the cause, then switch the unit on. Causes include shorting of the positive and negative speaker wires, straining of the speakers through excessive volume or power, and using the unit in a hot environment.
Sound is unfixed, reversed or comes from one speaker only.	Check the speaker connections. ❻
Humming heard during play.	An AC mains lead or fluorescent light is near the cables. Keep other appliances and cords away from this unit's cables.
"ERROR" is displayed.	Incorrect operation performed. Read the instructions and try again.
"– –:– –" appears on the display at standby mode.	You plugged the mains lead in for the first time or there was a power failure recently. Set the time. ⓫
"F61" is displayed.	Check and correct the speaker cords connection. ❻ If this does not fix the problem, there is a power supply problem. Consult the dealer.

Listening to the radio

Noise is heard. The stereo indicator flickers or doesn't light. Sound is distorted.	Use an outdoor antenna. ❼
A beat sound is heard.	Turn the TV off or separate it from the unit.
A low hum is heard during AM broadcasts.	Separate the antenna from other cables and cords.

When there is a television set nearby

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

Using the cassette deck

Poor quality sound.	Clean the heads. see below
Recording is not possible.	If the erasure prevention tabs have been removed, cover the holes with adhesive tape. ⓴

Playing discs

The display is wrong or play won't start.	The disc may be upside down. ⓯ Wipe the disc. Replace the disc if it is scratched, warped, or non-standard. Condensation may have formed inside the unit due to a sudden change in temperature. Wait about an hour for it to clear and try again.
CD-RW cannot be read.	The disc was incompletely formatted. Use the recording equipment to fully format the disc before recording.
"TAKE OUT/DISC" appears on the display.	There is a problem with the disc mechanism. (A power failure may have occurred.) The tray will open automatically. Remove the disc from the tray, and after ensuring there is no disc in the tray, close it. The unit will make the disc changing noises for a few moments and then it should operate normally.
The changer cannot change to the selected disc or play won't start.	Press [PLAY MODE] on the remote control to clear 1-SONG mode and try again.

Remote control

Remote control doesn't work.	Check the batteries are inserted correctly. ❺ Replace the batteries if they are worn.

Maintenance

If the surfaces are dirty

To clean this unit, wipe with a soft, dry cloth.

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

For a cleaner, crisper sound

Clean the heads regularly to assure good quality playback and recording.
Use a cleaning tape (not included).

Specifications

AMPLIFIER SECTION SC-AK300
(For Europe)
  RMS Power output
    10% Total harmonic distortion
    1kHz, both channels driven
      (Low channel) 52 W per channel (6 Ω)
    10 kHz, both channels driven
      (High channel) 48 W per channel (6 Ω)
    Total Bi-Amp power
                100 W per channel
(For Australia and New Zealand)
  RMS Power output
    10% Total harmonic distortion
    1 kHz, both channels driven
      (Low channel) 42 W per channel (6 Ω)
    10 kHz, both channels driven
      (High channel) 38 W per channel (6 Ω)
    Total Bi-Amp power 80 W per channel
Input sensitivity
  AUX   250 mV
Input Impedance
  AUX   13.3 kΩ

AMPLIFIER SECTION SC-AK200
RMS Power output
  10% Total harmonic distortion
  1 kHz, both channels driven
    (Low channel) 36 W per channel (6 Ω)
  10 kHz, both channels driven
    (High channel) 34 W per channel (6 Ω)
  Total Bi-Amp power 70 W per channel
Input sensitivity
  AUX   250 mV
Input Impedance
  AUX   13.3 kΩ

FM TUNER SECTION
Frequency range
      87.50 – 108.00 MHz (50 kHz steps)
(For Europe)
  Sensitivity   1.8 μV (IHF)
  S/N 26 dB   1.5 μV
(For Australia and New Zealand)
  Sensitivity   2.5 μV (IHF)
  S/N 26 dB   2.2 μV
Antenna terminal(s) 75 Ω (unbalanced)

AM TUNER SECTION
Frequency range
      522 – 1629 kHz (9 kHz steps)
Sensitivity
  S/N 20 dB (at 999 kHz)   560 μV/m

CASSETTE DECK SECTION
Track system   4 track, 2 channel
Heads
  Record/playback   Solid permalloy head
  Erasure   Double gap ferrite head
Motor   DC servo motor
Recording system   AC bias 100 kHz
Erasing system   AC erase 100 kHz
Tape speed   4.8 cm/s
Overall frequency response
(+3 dB, −6 dB at DECK OUT)
  NORMAL (TYPE I)   35 Hz − 14 kHz
S/N   50 dB (A weighted)
Wow and flutter   0.18% (WRMS)
Fast forward and rewind time
              Approx. 120 seconds with
                  C-60 cassette tape

CD SECTION
Sampling frequency   44.1 kHz
Decoding   16 bit linear
Pickup
  Beam source/wavelength
      Semiconductor laser/780 nm
  (For Norge)
  Bølgelengde   780 nm
  Laser-styrke   Ingen farlig stråling
                   sendes ut
Number of channels   Stereo
Frequency response
      20 Hz–20 kHz (+1, −2 dB)
Wow and flutter   Below measurable limit
Digital filter   8 fs
D/A converter   MASH (1 bit DAC)

SPEAKER SECTION SB-AK300
Type   3 way speaker system
Speaker(s)
  Woofer   12 cm cone type
  Tweeter   6 cm cone type
  Super tweeter   Piezo type
Impedance
  HIGH   6 Ω
  LOW   6 Ω
Input power
  HIGH   100 W (Music)
  LOW   100 W (Music)
Output sound pressure level
              85 dB/W (1.0 m)
Cross over frequency   3.5 kHz
Frequency range 45 Hz–22 kHz (−16 dB)
            55 Hz–20 kHz (−10 dB)
Dimensions (WxHxD) 210 x 315 x 251 mm
Mass   2.8 kg

SPEAKER SECTION SB-AK200
Type   2 way speaker system
Speaker(s)
  Woofer   12 cm cone type
  Tweeter   6 cm cone type
Impedance
  HIGH   6 Ω
  LOW   6 Ω
Input power
  HIGH   80 W (Music)
  LOW   80 W (Music)
Output sound pressure level
              85 dB/W (1.0 m)
Cross over frequency   3.5 kHz
Frequency range 45 Hz–22 kHz (−16 dB)
            55 Hz–20 kHz (−10 dB)
Dimensions (WxHxD) 210 x 315 x 228 mm
Mass   2.6 kg

GENERAL
Power supply
  (For United Kingdom, Australia
  and New Zealand)
              AC 230-240 V, 50 Hz
  (For Continental Europe, Russia and
  Ukraine)
               AC 230 V, 50 Hz
Power consumption
  SC-AK300
  (For Europe)   165 W
  (For Australia and New Zealand) 155 W
  SC-AK200   120 W
Dimensions (WxHxD) 250 x 315 x 345 mm
Mass
  SC-AK300
  (For Europe)   7.3 kg
  (For Australia and New Zealand) 7.0 kg
  SC-AK200   6.7 kg

Power consumption in standby mode:
Approx. 0.49 W

Notes
1. Specifications are subject to change without notice.
   Mass and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.
3. The labels "HIGH" and "LOW" on the rear of the speakers refer to High frequency and Low frequency.

CAUTION!

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORM-ANCE OF PROCEDURES OTHER THAN THOSE SPECI-FIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
DO NOT OPEN COVERS AND DO NOT REPAIR YOUR-SELF. REFER SERVICING TO QUALIFIED PERSONNEL.

CAUTION!

- **DO NOT INSTALL, OR PLACE THIS UNIT, IN A BOOKCASE, BUILT-IN CABINET OR IN ANOTHER CONFINED SPACE. ENSURE THE UNIT IS WELL VENTILATED. TO PREVENT RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO OVERHEATING, ENSURE THAT CURTAINS AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE VENTILATION VENTS.**
- **DO NOT OBSTRUCT THE UNIT'S VENTILATION OPENINGS WITH NEWSPAPERS, TABLECLOTHS, CURTAINS, AND SIMILAR ITEMS.**
- **DO NOT PLACE SOURCES OF NAKED FLAMES, SUCH AS LIGHTED CANDLES, ON THE UNIT.**
- **DISPOSE OF BATTERIES IN AN ENVIRONMENTALLY FRIENDLY MANNER.**

WARNING:

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR PRODUCT DAMAGE, DO NOT EXPOSE THIS APPARATUS TO RAIN, MOISTURE, DRIPPING OR SPLASHING AND THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.

This product may receive radio interference caused by mobile tele-phones during use. If such interference is apparent, please increase separation between the product and the mobile telephone.

THIS UNIT IS INTENDED FOR USE IN MODERATE CLIMATES.

TÄMÄ LAITE ON TARKOITETTU KÄYTETTÄVÄKSI LEUDOSSA ILMASTOSSA.

DETTE APPARATET ER BEREGNET TIL BRUK UNDER MODERATE KLIMAFORHOLD.

SUOMI

VAROITUS!

LAITTEEN KÄYTTÄMINEN MUULLA KUIN TÄSSÄ KÄYT-TÖOHJEESSA MAINITULLA TAVALLA SAATTAA ALTIS-TAA KÄYTTÄJÄN TURVALLISUUSLUOKAN 1 YLITTÄ-VÄLLE NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE.

VAROITUS!

- **ÄLÄ ASENNA TAI LAITA TÄTÄ LAITETTA KABINET-TITYYPPISEEN KIRJAKAAPPIIN TAI MUUHUN SULJET-TUUN TILAAN, JOTTA TUULETUS ONNISTUISI. VARMISTA, ETTÄ VERHO TAI MIKÄÄN MUU MATERIAALI EI HUONON-NA TUULETUSTA, JOTTA VÄLTETTÄISIIN YLIKUUMENE-MISESTA JOHTUVA SÄHKÖISKU- TAI TULIPALOVAARA.**
- **ÄLÄ PEITÄ LAITTEEN TUULETUSAUKKOJA SANOMALEH-DELLÄ, PÖYTÄLIINALLA, VERHOLLA TAI MUULLA VASTAAVALLA ESINEELLÄ.**
- **ÄLÄ ASETA PALAVAA KYNTTILÄÄ TAI MUUTA AVOTULEN LÄHDETTÄ LAITTEEN PÄÄLLE.**
- **HÄVITÄ PARISTOT LUONTOA VAHINGOITTAMATTOMAL-LA TAVALLA.**

VAROITUS:

TULIPALO-, SÄHKÖISKUVAARAN TAI TUOTETTA KOHTAAVAN MUUN VAHINGON VÄHENTÄMISEKSI EI LAITETTA SAA ALTISTAA SATEELLE, KOSTEUDELLE, VESIPISAROILLE TAI ROISKEELLE, EIKÄ NESTETTÄ SISÄLTÄVIÄ ESINEITÄ, KUTEN ESIMERKIKSI MALJAKOITA, SAA ASETTAA LAITTEEN PÄÄLLE.

NORSK

ADVARSEL!

DETTE PRODUKTET ANVENDER EN LASER.
BETJENING AV KONTROLLER, JUSTERINGER ELLER ANDRE INNGREP ENN DE SOM ER BESKREVET I DENNE BRUKSANVISNING, KAN FØRE TIL FARLIG BESTRÅLING. DEKSLER MÅ IKKE ÅPNES, OG FORSØK ALDRI Å RE-PARERE APPARATET PÅ EGENHÅND. ALT SERVICE OG REPARASJONSARBEID MÅ UTFØRES AV KVALIFISERT PERSONELL.

ADVARSEL!

- **APPARATET MÅ IKKE PLASSERES I EN BOKHYLLE, ET INNEBYGGET KABINETT ELLER ET ANNET LUKKET STED HVOR VENTILASJONSFORHOLDENE ER UTILSTREKKELIGE. SØRG FOR AT GARDINER ELLER LIGNENDE IKKE FORVERRER VENTILASJONSFORHOL-DENE, SÅ RISIKO FOR ELEKTRISK SJOKK ELLER BRANN FORÅRSAKET AV OVERHETING UNNGÅS.**
- **APPARATETS VENTILASJONSÅPNINGER MÅ IKKE DEKKES TIL MED AVISER, BORDDUKER, GARDINER OG LIGNENDE.**
- **PLASSER IKKE ÅPEN ILD, SLIK SOM LEVENDE LYS, OPPÅ APPARATET.**
- **BRUKTE BATTERIER MÅ KASSERES UTEN FARE FOR MILJØET.**

ADVARSEL:

FOR Å REDUSERE FAREN FOR BRANN, ELEKTRISK STØT ELLER SKADER PÅ PRODUKTET, MÅ DETTE APPARATET IKKE UTSETTES FOR REGN, FUKTIGHET, VANNDRÅPER ELLER VANNSPRUT. DET MÅ HELLER IKKE PLASSERES GJENSTANDER FYLT MED VANN, SLIK SOM BLOMSTERVASER, OPPÅ APPARATET.