aiwa

CD - R/CD STEREO SYSTEM
SISTEMA ESTEREO CD - R/CD
CHAINE STEREO AVEC PLATINES CD - R/CD

XR-C303RW

OPERATING INSTRUCTIONS
MANUAL DE INSTRUCCIONES
MODE D'EMPLOI

En (English)

E (Español)

F (Français)

Owner's record

For your convenience, record the model number and serial number (you will find them on the rear of your set) in the space provided below. Please refer to them when you contact your Aiwa dealer in case of difficulty.

Model No. _____   Serial No. _____

For assistance and information

call toll free 1-800-BUY-AIWA (United States and Puerto Rico)

COMPACT
disc
DIGITAL AUDIO
Recordable
ReWritable

U

aiwa

ENGLISH

- On the CD-R/RW player, Random play and Programmed play cannot be performed for a non-finalized CD-R or CD-RW. They can be done only for a finalized one.
- When playing back of equipment connected to **DIGITAL IN** jack, the playback sound is disrupted if the CD-R/RW player reads a disc, one of the buttons for CD-R/RW recording is pressed, or ■ is pressed to stop the recording.
- In case of digital recording from the 3 CD Changer to the CD-R/RW Recorder, there may be a slight difference between the track playing time of a source CD and that of a destination CD-R or CD-RW. However, it does not affect the recorded contents at all.
- When using a CD-R or CD-RW recorded on this unit with other equipment, there may be a slight difference between the disc total playing time displayed on the equipment and that on this unit.
  However, it does not affect the disc performance at all.

ESPAÑOL

- En el reproductor CD-R/RW, la reproducción aleatoria y la reproducción programada no pueden realizarse si el CD-R o el CD-RW no está finalizado. Para realizar estas reproducciones el disco tiene que estar finalizado.
- Cuando haga la reproducción en un equipo conectado a la toma **DIGITAL IN**, el sonido de la reproducción se distorsionará si el reproductor CD-R/RW lee un disco, se pulsa uno de los botones de grabación de CD-R/RW o se pulsa ■ para detener la grabación.
- En el caso de realizar una grabación digital desde un cambiador de 3 CDs a una grabadora CD-R/RW, puede haber una ligera diferencia entre el tiempo de reproducción de las pistas de un CD fuente y el tiempo de grabación del CD-R o CD-RW de destino. Sin embargo, esto no afectará en absoluto al contenido grabado.
- Cuando utilice un CD-R o CD-RW grabado en esta unidad con otro equipo, puede haber una ligera diferencia entre el tiempo de reproducción total del disco visualizado en el equipo y el visualizado en esta unidad.
  Sin embargo, esto no afectará en absoluto a la reproducción del disco.

FRANÇAIS

- Sur le lecteur de CD-R/RW, la lecture aléatoire et la lecture programmée d'un CD-R ou CD-RW non-finalisé sont impossibles. Elles ne sont possibles que pour un disque finalisé.
- Lors de l'utilisation d'un appareil connecté à la prise **DIGITAL IN**, le son de la lecture est interrompu si le lecteur de CD-R/RW lit un disque, si une des touches pour l'enregistrement de CD-R/RW est actionnée, ou si on appuie sur ■ pour arrêter l'enregistrement
- Dans le cas d'un enregistrement numérique du changeur à trois CD vers l'enregistreur de CD-R/RW, il peut y avoir une légère différence entre le temps de lecture de plage du disque compact source et celui du CD-R ou CD-RW de destination. Toutefois, ceci n'affecte aucunement le contenu enregistré.
- Lors de l'utilisation d'un CD-R ou CD-RW enregistré sur cet appareil avec un appareil différent, il peut y avoir une légère différence entre le temps de lecture total du disque affiché sur l'un et celui affiché sur l'autre.
  Toutefois, ceci n'affecte aucunement la lecture du disque.

PORTUGUÊS

- No toca CD-R/RW, o Random play e o play Programado não podem ser efetuados para CD-R ou CD-RW não-finalizados. Estes podem ser feitos somente em um disco finalizado.
- Quando reproduzir do equipamento conectado ao jack **DIGITAL IN**, o som reproduzido é rompido se o toca CD-R/RW estiver lendo um disco, um dos botões para gravação de CD-R/RW estiver apertado, ou ■ estiver apertado como gravação stop.
- No caso da gravação digital a partir do Variador 3 CD para Gravador CD-R/RW, pode existir uma pequena diferença entre o tempo de reprodução da música de uma fonte de CD e à destinação de CD-R ou CD-RW. Porém, isto não afetará o conteúdo de gravação no todo.
- Quando usar um CD-R ou CD-RW gravados neste aparelho com outro equipamento, pode existir uma pequena diferença entre o tempo de reprodução do disco total tocado do equipamento e deste aparelho.
  Porém, isto não afetará o desempenho do disco no todo.

ENGLISH

NOTE

In case of digital dubbing with the external equipment via **CD DIGITAL OUT (OPTICAL)** jack on this unit, extra defective tracks may be added.

• Please read additional MESSAGES as shown below besides CD/CD-R/CD-RW GUIDE MESSAGES (page 37) in the Operating Instructions.

Message	Cause	Solution
CD-DA	A conventional music CD (only for playback) ,or a finalized CD-R is being used for recording.	Replace the disc with a recordable disc.
UNFINAL	A non-finalized CD-R or CD-RW is being used for Programmed play on the CD-R/RW player.	Finalize the disc.
No Audio	The loaded CD-R or CD-RW on the CD-R/RW player is not for Audio use.	Replace the disc with a CD-R or CD-RW for Audio use.(Page12)
Rec Err	An error occurs while recording on a CD-R or CD-RW.	Check the disc and try recording again.

ESPAÑOL

NOTA

En el caso de realizar el copiado digital con el equipo exterior a través de la toma **CD DIGITAL OUT (OPTICAL)** de esta unidad, puede que se añadan pistas defectuosas.

• Lea los MENSAJES adicionales mostrados a continuación además de los MENSAJES GUIA DE CD/CD-R/CD-RW (página 37) del manual de instrucciones.

Mensaje	Causa	Solución
CD-DA	Se está utilizando un CD de música convencional (sólo para reproducción) o un disco CD-R finalizado para grabar.	Reemplace el disco por otro grabable.
UNFINAL	Se está utilizando un CD-R o CD-RW sin finalizar para la reproducción programada en el reproductor CD-R/RW.	Finalice el disco.
No Audio	El CD-R o CD-RW introducido en el reproductor CD-R/RW no es para audio.	Reemplace el disco por un CD-R o CD-RW para audio. (Página 12)
Rec Err	Se produce un error mientras se graba en un CD-R o CD-RW.	Compruebe el disco e intente grabar otra vez.

FRANÇAIS

REMARQUE

Dans le cas d'une copie numérique avec un dispositif externe connecté à la prise **CD DIGITAL OUT (OPTICAL)** de cet appareil, des plages défectueuses peuvent être ajoutées.

• Prière de lire les MESSAGES indiqués ci-dessous en plus des MESSAGES DE GUIDAGE POUR CD/CD-R/CD-RW se trouvant dans le mode d'emploi (page 37).

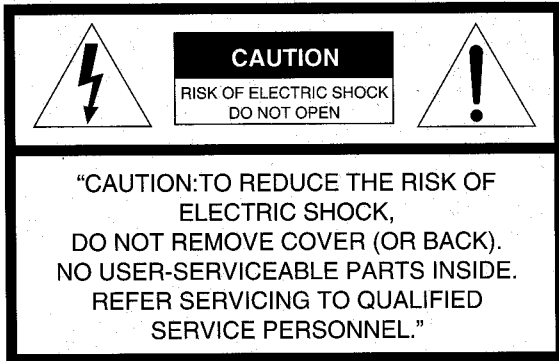| Message	Cause	Remède
CD-DA(Disque inadéquat)	Un CD de musique ordinaire (qui ne peut être que lu) ou un disque CD-R finalisé est utilisé pour l'enregistrement.	Le remplacer par un disque enregistrable.
UNFINAL (Pas finalisé)	Un CD-R ou CD-RW non-finalisé est utilisé pour la lecture programmée sur le lecteur de CD-R/RW.	Finaliser le disque.
No Audio (Pas audio)	Le CD-R ou CD-RW en place dans le lecteur de CD-R/RW n'est pas destiné à un emploi audio.	Le remplacer par un CD-R ou CD-RW destiné à un emploi audio. (Page 12)
Rec Err (Erreur d'enregistrement)	Une erreur se produit pendant l'enregistrement sur un CD-R ou CD-RW.	Contrôler le disque et recommencer l'enregistrement.

PORTUGUÊS

OPMERKING

No caso da cópia digital com equipamento externo via jack **CD DIGITAL OUT (OPTICAL)** neste aparelho, músicas com defeitos em extra poderão ser adicionados.

• Favor ler as MENSAGENS adicionais mostrados abaixo além da GUIA DE MENSAGENS DE CD/CD-R/CD-RW (pág.37) do Manual de Instruções.
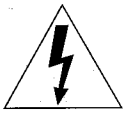
Mensagem	Causa	Solução
CD-DA	Um CD musical convencional (somente para reprodução), ou um finalizado CD-R está sendo usado para gravação.	Recoloque o disco em um disco gravável.
UNFINAL	Um CD-R não-finalizado ou CD-RW está sendo usado para play Programado no toca- CD-R/RW.	Finalize o disco.
No Audio	O CD-R carregado ou CD-RW do toca-CD-R/RW não é para o uso do Audio.	Recoloque o disco em um CD-R ou CD-RW para uso em Audio (Pág.12)
Rec Err	Um erro ocorre enquanto estiver gravando no CD-R ou CD-RW.	Verifique o disco e tente gravar novamente.

WARNING

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

⚡ CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN ❗

"CAUTION:TO REDUCE THE RISK OF
ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED
SERVICE PERSONNEL."

Explanation of Graphical Symbols:

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

PRECAUTIONS

Read the Operating Instructions carefully and completely before operating the unit. Be sure to keep the Operating Instructions for future reference. All warnings and cautions in the Operating Instructions and on the unit should be strictly followed, as well as the safety suggestions below.

Installation

1 **Water and moisture** – Do not use this unit near water, such as near a bathtub, washbowl, swimming pool, or the like.

2 **Heat** – Do not use this unit near sources of heat, including heating vents, stoves, or other appliances that generate heat. It also should not be placed in temperatures less than 5°C (41°F) or greater than 35°C (95°F).

3 **Mounting surface** – Place the unit on a flat, even surface.

4 **Ventilation** – The unit should be situated with adequate space around it so that proper heat ventilation is assured. Allow 10 cm (4 in.) clearance from the rear and the top of the unit, and 5 cm (2 in.) from the each side.
- Do not place the unit on a bed, rug, or similar surface that may block the ventilation openings.
- Do not install the unit in a bookcase, cabinet, or airtight rack where ventilation may be impeded.

5 **Objects and liquid entry** – Take care that objects or liquids do not get inside the unit through the ventilation openings.

6 **Carts and stands** – When placed or mounted on a stand or cart, the unit should be moved with care.
Quick stops, excessive force, and uneven surfaces may cause the unit or cart to overturn or fall.

7 **Condensation** – Moisture may form on the CD pickup lens when:
- The unit is moved from a cold spot to a warm spot
- The heating system has just been turned on
- The unit is used in a very humid room
- The unit is cooled by an air conditioner
When this unit has condensation inside, it may not function normally. Should this occur, leave the unit for a few hours, then try to operate again.

8 **Wall or ceiling mounting** – The unit should not be mounted on a wall or ceiling, unless specified in the Operating Instructions.
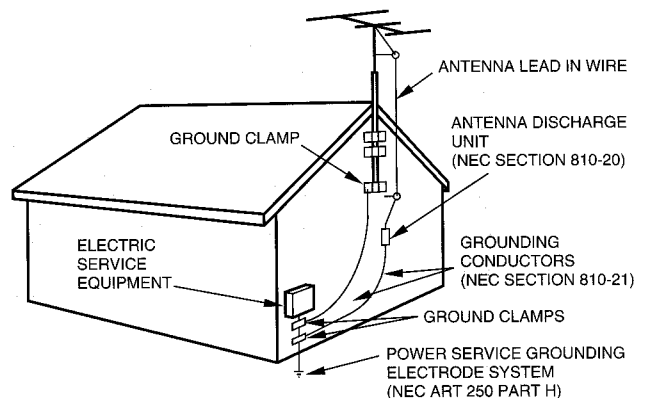
Electric Power

1 **Power sources** – Connect this unit only to power sources specified in the Operating Instructions, and as marked on the unit.

2 **Polarization** – As a safety feature, some units are equipped with polarized AC power plugs which can only be inserted one way into a power outlet. If it is difficult or impossible to insert the AC power plug into an outlet, turn the plug over and try again. If it still does not easily insert into the outlet, please call a qualified service technician to service or replace the outlet. To avoid defeating the safety feature of the polarized plug, do not force it into a power outlet.

3 **AC power cord**
- When disconnecting the AC power cord, pull it out by the AC power plug. Do not pull the cord itself.
- Never handle the AC power plug with wet hands, as this could result in fire or shock.
- Power cords should be routed to avoid being severely bent, pinched, or walked upon. Pay particular attention to the cord from the unit to the power socket.
- Avoid overloading AC outlets and extension cords beyond their capacity, as this could result in fire or shock.

4 **Extension cord** – To help prevent electric shock, do not use a polarized AC power plug with an extension cord, receptacle, or other outlet unless the polarized plug can be completely inserted to prevent exposure of the blades of the plug.

5 **When not in use** – Unplug the AC power cord from the AC outlet if the unit will not be used for several months or more. When the cord is plugged in, a small amount of current continues to flow to the unit, even when the power is turned off.

Outdoor Antenna

1 **Power lines** – When connecting an outdoor antenna, make sure it is located away from power lines.

2 **Outdoor antenna grounding** – Be sure the antenna system is properly grounded to provide protection against unexpected voltage surges or static electricity build-up. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information on proper grounding of the mast, supporting structure, and the lead-in wire to the antenna discharge unit, as well as the size of the grounding unit, connection to grounding terminals, and requirements for grounding terminals.

Antenna Grounding According to the National Electrical Code

ANTENNA LEAD IN WIRE

ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)

GROUND CLAMP

ELECTRIC SERVICE EQUIPMENT

GROUNDING CONDUCTORS (NEC SECTION 810-21)

GROUND CLAMPS

POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250 PART H)

NEC-NATIONAL ELECTRICAL CODE

Maintenance
Clean the unit only as recommended in the Operating Instructions.

Damage Requiring Service
Have the units serviced by a qualified service technician if:
- The AC power cord or plug has been damaged
- Foreign objects or liquid have gotten inside the unit
- The unit has been exposed to rain or water
- The unit does not seem to operate normally
- The unit exhibits a marked change in performance
- The unit has been dropped, or the cabinet has been damaged
DO NOT ATTEMPT TO SERVICE THE UNIT YOURSELF.

Check your system and accessories

XR-C303RW

CX-NC303RW CD-R/CD stereo cassette receiver
SX-WNC303 Front speakers

Remote control   AM antenna   FM antenna

# TABLE OF CONTENTS

En

CONNECTIONS

IMPORTANT

Connect the speakers, antennas, and all optional equipment first.
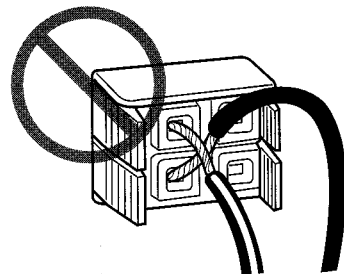Then connect the AC cord.
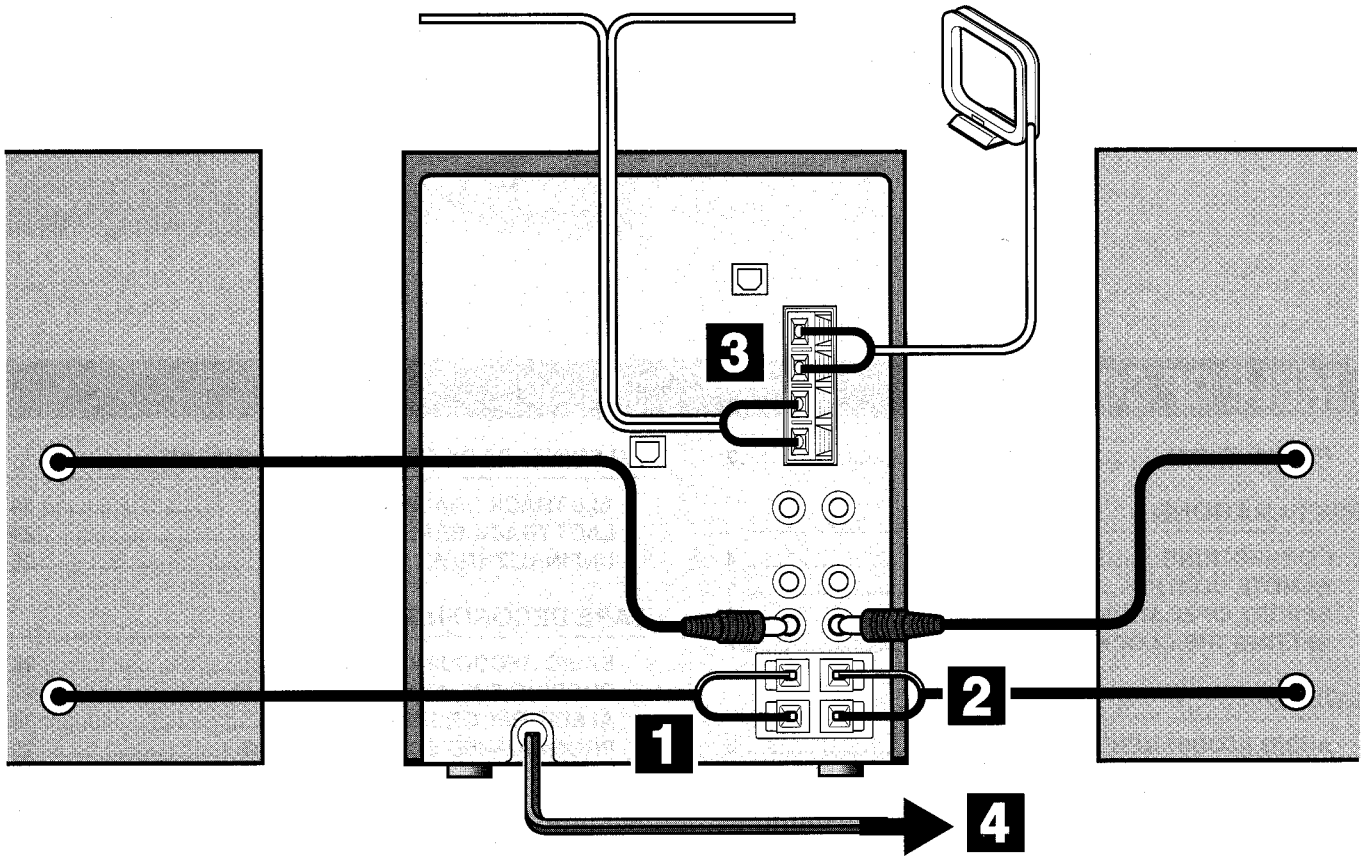
1 Connect the right speaker to the main unit.

① Connect the speaker cord with the plug to the **SPEAKERS HIGH FREQ R** terminal.

② Connect the speaker cord with the white stripe to the **SPEAKERS LOW FREQ R** ⊕ terminal and the black cord to the ⊖ terminal.
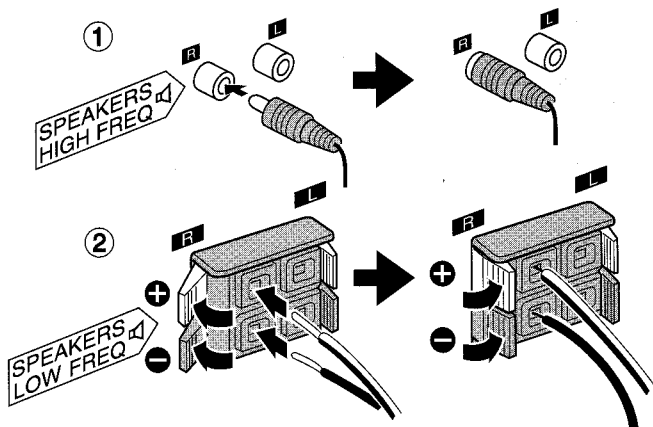
NOTE

• Be sure to connect the speaker cords correctly. Improper connections can cause short circuits in the **SPEAKERS** terminals.
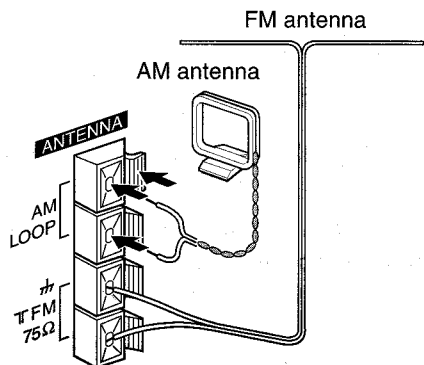

2 Connect the left speaker to the main unit.

Connect the speaker cord with plug to the **SPEAKERS HIGH FREQ L** terminal, and the other speaker cord to the **SPEAKERS LOW FREQ L** terminals in the same manner as step 1.

❸ Connect the supplied antennas.

Connect the FM antenna to **FM 75 Ω** terminals and the AM antenna to **AM LOOP** terminals.

FM antenna

AM antenna

❹ Connect the AC cord to an AC outlet.

The DEMO will begin when the AC cord is plugged into an AC outlet for the first time. To deactivate the DEMO, set the clock.

NOTE

• Do not leave objects generating magnetism, such as credit cards, near the speakers, as these objects may be damaged.
• Do not bring the FM antenna near metal objects or curtain rails.
• Do not bring the AM antenna near other optional equipment, the stereo system itself, the AC cord or speaker cords, since noise will be picked up.
• Do not unwind the AM antenna wire.
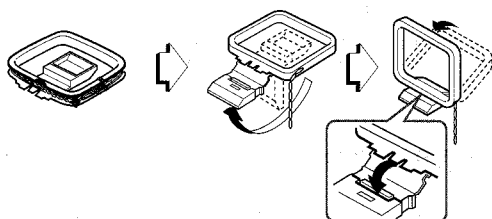
To position the antennas
FM feeder antenna:
Extend this antenna horizontally in a T-shape and fix its ends to the wall.
AM antenna:
Position and rotate this annenna to find the best possible reception.

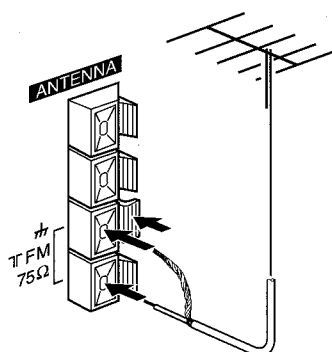### To stand the AM antenna on a surface
Fix the claw to the slot.

CONNECTING AN OUTDOOR ANTENNA

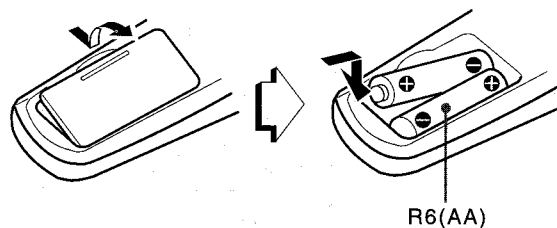For better FM reception, use of an outdoor antenna is recommended.
Connect the outdoor antenna to **FM 75 Ω** terminals.

REMOTE CONTROL

Inserting batteries
Detach the battery cover on the rear of the remote control and insert two R6 (size AA) batteries.

R6(AA)

When to replace the batteries
The maximum operational distance between the remote control and the sensor on the main unit should be approximately 5 meters (16 feet). When this distance decreases, replace the batteries with new ones.

To use SHIFT on the remote control
Buttons ① have two different functions. One of these functions is indicated on the button, and the other on the plate above the button.
To use the function on the button, simply press the button.
To use the function on the plate above the button, press the button while pressing **SHIFT**.

To use FUNCTION on the remote control
FUNCTION substitutes for the function buttons (**TAPE DECK 1/2, TUNER BAND, AUX/D-IN, 3CD, CD-R/RW**) on the main unit.
Each time **FUNCTION** is pressed, the next function is selected cyclically. When tapes are inserted in both decks, each deck is selected with **FUNCTION**.

▶/◀▶ PRESET on the remote control
The function is the same as that of ◀▶ on the main unit.

① —
SHIFT — — FUNCTION
— ▶/◀▶
PRESET
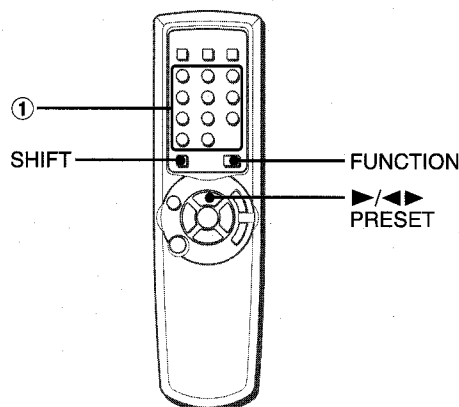
NOTE

• If the remote control is not going to be used for an extended period of time, remove the batteries to prevent possible electrolyte leakage.
• The remote control may not operate correctly when:
  - The line of sight between the remote control and the remote sensor inside the display window is exposed to intense light, such as direct sunlight
  - Other remote controls are used nearby (those of a television, etc.)

TAPE — 3CD
POWER
◄► ECO
■ ENTER
II MULTI JOG
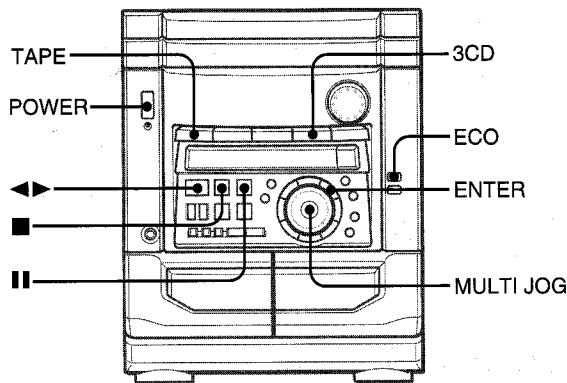
To turn the power on
Press one of the function buttons (**TAPE DECK 1/2, TUNER BAND, AUX/D-IN, 3CD, CD-R/RW**). Playback of the inserted disc or tape begins, or the previously tuned station is received (Direct Play Function).
POWER is also available.

NOTE
• When the power is turned on, the disc compartment may open and close to reset the unit.
• While "Good-bye" is displayed, you cannot turn the unit on. Wait until the message disappears.

To turn the power off
Press **POWER**.

DEMO (Demonstration)

When the AC cord is plugged into an AC outlet for the first time after purchase, the DEMO will begin in the display. When the power is turned on, the DEMO will end. When the power is turned off, the DEMO will begin again.
When the clock is set, the DEMO will not begin even if the power is turned off.

To deactivate or activate DEMO
Press ◄► to deactivate.
Press it again to activate.

SETTING POWER ECONOMIZING MODE

When you set power economizing mode to "ECO ON" or "ECO AUTO", the unit reduces power consumption by conducting four ECO operations as follows.

ECO ON
• The unit (all the illumination of the display and the buttons) blacks out when the power is turned off. Only the red indicator lights up.
• If DIMMER (1-3) is selected, the illumination of the display and the buttons brighten for 10 seconds only when you press a button or turn **VOLUME** or **MULTI JOG**.
• The display dimmer mode is set to the dimmest, the button illumination lights off, and the volume is set to the minimum (0) when the unit turns on by timer recording.
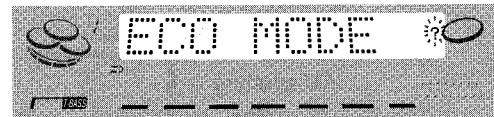
ECO AUTO
• In addition to the three operations of ECO ON, the unit automatically turns itself off if you do not operate it and the sound source is mute for 10 minutes.

ECO OFF
The power economizing mode does not function.

1 Press ECO.
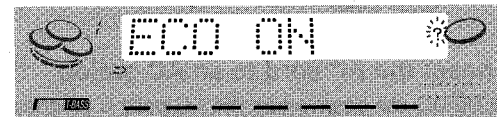"ECO MODE" will be displayed.

2 Press ENTER within 4 seconds.
The current power-economizing mode status will be displayed.

3 Turn MULTI JOG within 4 seconds to select one of the power-economizing modes.
Example : When "ECO ON" is selected.


4 Press ENTER within 4 seconds.

NOTE
If the clock is not set, the unit does not black out.
Instead, the DEMO will begin when the power is turned off.

DIMMER MODE

To change the display dimmer mode
1 Press **ECO** repeatedly until "DIM MODE" is displayed.
2 Within 4 seconds, press **ENTER**.
3 Within 4 seconds, turn **MULTI JOG** to select one of the dimmer modes changed cyclically as below.
4 Within 4 seconds, press **ENTER**.

┌─► DIM-OFF ◄─► DIMMER 1 ◄─► DIMMER 2 ◄─► DIMMER 3 ◄─┐
└──┘
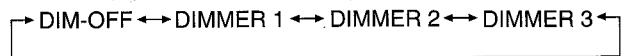
"DIM-OFF" mode is the brightest and "DIMMER 3" mode is the dimmest. In "DIMMER 3" mode, the spectrum analyzer, the window of the unit top, and the button illumination light off in addition.

FLASH WINDOW

The window on the top of the unit lights up or flashes and the inside of the cassette holders light up while the unit is being powered on.
To turn off the light of the top window, press ■ while pressing **3CD**. To turn off the light inside the cassette holders, press ■ while pressing **TAPE**. To turn either light back on, repeat the operation, respectively.

SETTING THE CLOCK
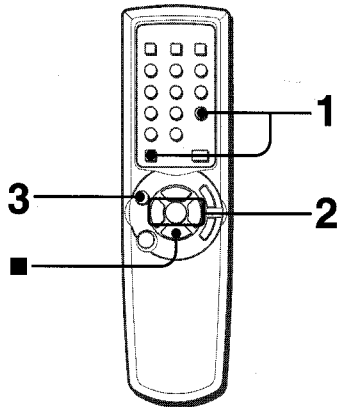
Use the remote control.

1 Press CLOCK while pressing SHIFT.

When using the unit, press II while the power is off.
The clock is displayed. (The ":" between the hours and minutes flashes.)

2 Within 4 seconds, press ◄◄ or ►► to designate the hour and the minute.

Pressing either button changes both the hour and the minute.
Holding it down will vary the time rapidly.
MULTI JOG is also available in place of ◄◄ or ►►.

3 Press II.

The clock starts from 00 seconds.

To restore an original clock setting
Press **CLOCK** while pressing **SHIFT** before completing step 3 to restore the previous time setting. This cancels any new setting.

To view the clock when another display is in the display
Press **CLOCK** while pressing **SHIFT**. The time is displayed for 4 seconds and then the original display reappears. However, the clock cannot be displayed during recording.

To switch to the 24-hour standard
Press **CLOCK** while pressing **SHIFT** and then press ■ within 4 seconds.
Repeat the same procedure to restore the 12-hour standard.

In the 12-hour standard, "AM 12:00" indicates midnight and "PM12:00" indicates noon.

> **If the clock display flashes**
> If the display flashes when the clock is displayed, it indicates that the clock has stopped due to a power failure or the removal of the power cord. The current time needs to be reset.

NOTE

If the power-economizing mode (page 6) is on, the unit blacks out when the power is turned off. To view the clock, press **CLOCK** while pressing **SHIFT** so that the time is displayed for 4 seconds.
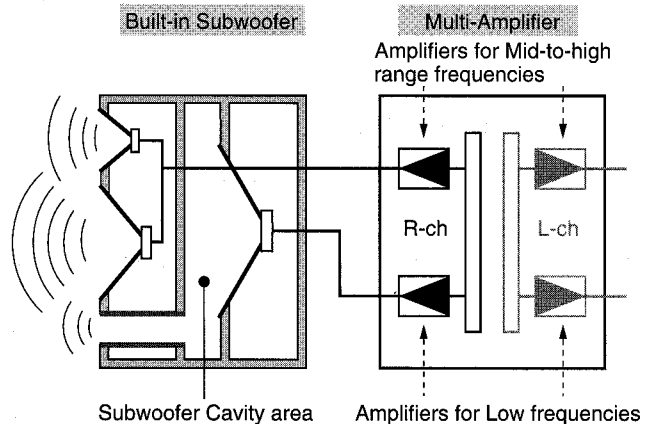
4-Channel Multi-Amplifier System

To provide reinforcement for the ultra-low frequencies, in addition to the Left/Right 2-channel amplifier used to reproduce mid-to-high-range frequencies, this system incorporates a second L/R 2-channel amplifier just for reproduction of ultra-low frequencies — making it, in effect, a 4-amplifier system. By utilizing discrete amplifiers for mid to-high-frequencies and low frequencies, high-quality sonic reproduction that is virtually free from distortion can be realized.
This Multi Amplifier System, which utilizes independent circuitry for the different frequency ranges, enables superb sonic reproduction free from distortion.
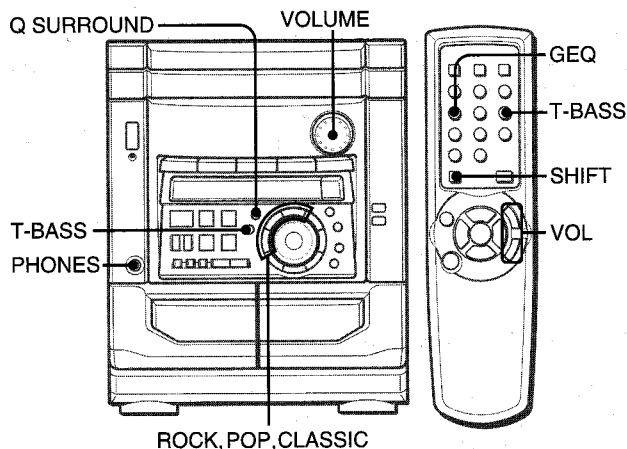
Built-in Subwoofer System

The built-in subwoofer system has a separate subwoofer cavity area that is part of the loudspeaker cabinet structure, which acts as a sonic filter to cut distortion components. (In the Multi Amplifier System, the ultra-low frequency signals transmitted from their own independent amplifier are reproduced in this area.) This separate construction gives a clear, rich definition to bass reproduction and it can realize clear, well-defined mid-to-high frequency signals.
And AIWA's built-in subwoofer system incorporates a subwoofer capable of powerful, satisfying bass performance with true stereo separation.

Subwoofer Cavity area   Amplifiers for Low frequencies

AUDIO ADJUSTMENTS

Q SURROUND ——— VOLUME

GEQ
T-BASS
SHIFT
VOL

T-BASS
PHONES

ROCK, POP, CLASSIC

VOLUME

Turn VOLUME on the main unit, or press VOL on the remote control.
The volume level is displayed as a number from 0 to 30 followed by MAX.
The volume level is automatically set to 16 when the power is turned off while the volume level is set to 17 or more.

SUPER T-BASS SYSTEM

The T-BASS system enhances the realism of low-frequency sound.
Press T-BASS.
Each time it is pressed, the level changes. Select one of the three levels, or the off position to suit your preference.
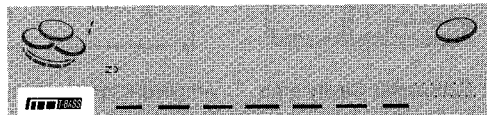
To select with the remote control
Press **T-BASS** while pressing **SHIFT**.

NOTE
Low frequency sound may be distorted when the T-BASS system is used for a disc or tape in which low frequency sound is originally emphasized. In this case, cancel the T-BASS system.

GRAPHIC EQUALIZER

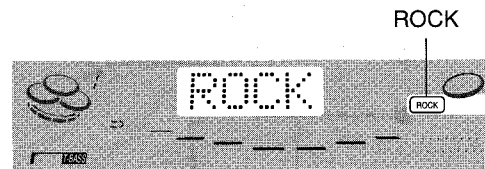This unit provides the following three different equalization curves.
ROCK: Powerful sound emphasizing treble and bass
POP: More presence in the vocals and midrange
CLASSIC: Enriched sound with heavy bass and fine treble

Press ROCK, POP or CLASSIC.
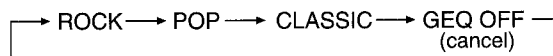The selected equalization mode is displayed for 4 seconds.

ROCK

To cancel the selected mode
Press the selected button again. "GEQ OFF" is displayed for 4 seconds.

To select with the remote control
Press **GEQ** repeatedly while pressing **SHIFT**. The GEQ mode is displayed cyclically as follows.

ROCK —→ POP —→ CLASSIC —→ GEQ OFF ⌐
(cancel)

Q SURROUND SYSTEM

The Q SURROUND system built into this unit uses only two speakers at the left and right to create an atmosphere that sounds as if you are surrounded by two front speakers and two rear speakers.

Press **Q SURROUND** on the main unit to light up "Q SURROUND" in the display window.
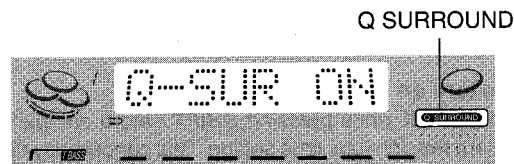
Q SURROUND

To cancel the Q SURROUND effect
Press **Q SURROUND** again.

NOTE
• The Q SURROUND system does not work in monaural mode.
• At higher volumes, turning Q SURROUND on may cause sound distortion. In this case, turn the volume down.

Using the headphones
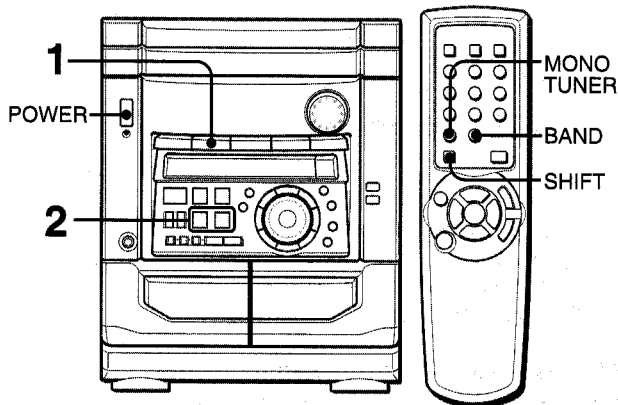Connect headphones to **PHONES** jack with a stereo standard plug (ø6.3 mm, 1/4 inch).
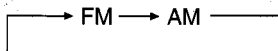No sound is output from the speakers while the headphones are plugged in.

Sound adjustment during recording
The output volume and tone of the speakers or headphones may be freely varied without affecting the recording.

MANUAL TUNING

1 Press TUNER BAND repeatedly to select the desired band.

$$\longrightarrow FM \longrightarrow AM \longrightarrow$$
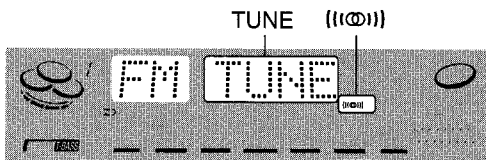
When **TUNER BAND** is pressed while the power is off, the power is turned on directly.

To select a band with the remote control
Press **BAND** while pressing **SHIFT**.

2 Press ◄◄ DOWN or ►► UP to select a station.

Each time the button is pressed, the frequency changes.
When a station is received, "TUNE" is displayed for 2 seconds.
During FM stereo reception, ((⊙)) is displayed.

To search for a station quickly (Auto Search)
Keep ◄◄ **DOWN** or ►► **UP** pressed until the frequency starts to change rapidly. After tuning in to a station, the search stops. To stop the Auto Search manually, press ◄◄ **DOWN** or ►► **UP**.
• The Auto Search may not stop at stations with very weak signals.

When an FM stereo broadcast contains noise
Press **MONO TUNER** while pressing **SHIFT** on the remote control so that "MONO" appears on the display.
Noise is reduced, although reception is monaural.
To restore stereo reception, repeat the above so that "MONO" disappears.

To change the AM tuning interval
The default setting of the AM tuning interval is 10 kHz/step. If you use this unit in an area where the frequency allocation system is 9 kHz/step, change the tuning interval.
Press **POWER** while pressing **TUNER BAND**.
To reset the interval, repeat this procedure.

NOTE

When the AM tuning interval is changed, all preset stations are cleared. The preset stations have to be set again.

PRESETTING STATIONS
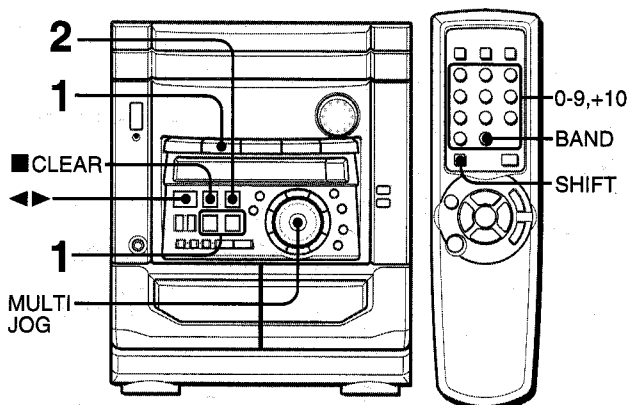
The unit can store a total of 32 preset stations. When a station is stored, a preset number is assigned to the station. Use the preset number to tune in to a preset station directly.

1 Press TUNER BAND to select a band, and press ◄◄ DOWN or ►► UP to select a station.

2 Press II SET to store the station.
A preset number beginning from 1 in consecutive order for each band is assigned to the station.
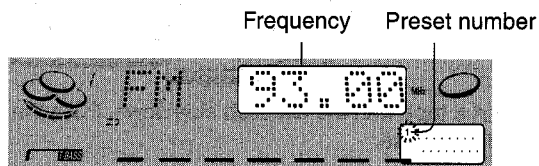
3 Repeat steps 1 and 2.
The next station will not be stored if a total of 32 preset stations for all the bands have already been stored.

NOTE

"PRST FULL" is displayed if you attempt to store more than 32 preset stations.

PRESET NUMBER TUNING

Use the remote control to select the preset number directly.

1 Press BAND while pressing SHIFT to select a band.

2 Press numbered buttons 0-9 and +10 to select a preset number.
Example:
To select preset number 20, press **+10**, **+10** and **0**.
To select preset number 15, press **+10** and **5**.

Selecting a preset number on the main unit
Press **TUNER BAND** to select a band. Then, press ◄►
repeatedly or turn **MULTI JOG**.
Each time ◄► is pressed, the next ascending number is selected.

To clear a preset station
Select the preset number of the station to be cleared. Then, press
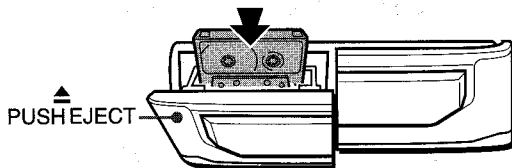■ **CLEAR**, and press II **SET** within 4 seconds.
The preset numbers of all other stations in the band with higher numbers are also decreased by one.

BASIC OPERATIONS
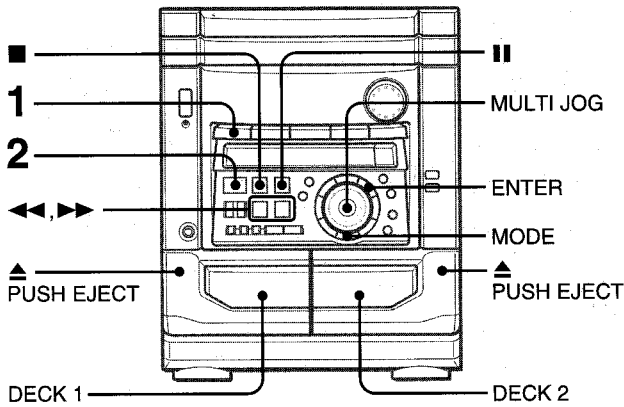
DECK 1 ———

DECK 2

- On deck 1, tapes are always played back on both sides.
- On deck 2, you can select a reverse mode to play back one or both sides.

1 Press TAPE and press ▲ PUSH EJECT to open the cassette holder.

PUSH EJECT

Insert a tape with the exposed side down. Push the cassette holder to close.

2 Press ◄► to start play.

Playing deck number   Tape counter

Playback side indicator
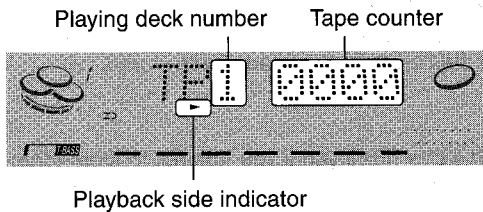
►: The front side is being played (forward).
◄: The back side is being played (reverse).

Types of tape

This unit was designed for optimal playback of Type I (normal) tapes.

NOTE

Type II tapes can also be played back in this unit. When playing back a Type II tape, turn **MULTI JOG** to display "SOFT" in the display window. This will set the optimum playback sound for Type II tapes. However, "SOFT" playback will be canceled if the graphic equalizer is selected (page 8), the unit is switched to a different audio source, the cassette holder is opened, or when the power is turned off.

To select a reverse mode (deck 2 only)

1 Press **MODE** repeatedly until "Deck 2 MODE?" is displayed.
2 Within 10 seconds, press **ENTER**, then turn **MULTI JOG** to select the reverse mode.
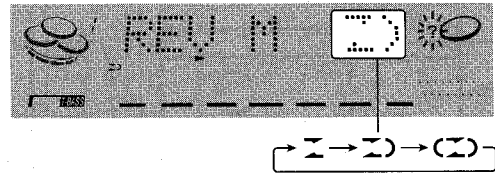
To play one side only, select "Ɔ".
To play from front side to reverse side once only, select "Ɔ".
To play both sides repeatedly, select "ƆƆ".
3 Within 10 seconds, press **ENTER** again.

When tapes are loaded in both decks

Press **TAPE DECK 1/2** first to select a deck.
The selected deck number is displayed.

To stop play, press ■.
To pause play (deck 2 only), press ▐▐. To resume play, press again.
To fast forward or rewind, press ◄◄ or ►►. Then press ■ to stop the tape.

To start play when the power is off (Direct Play Function)

When the tape is loaded, press **TAPE DECK 1/2**. The power is turned on and play of the inserted tape begins.

To set the tape counter to 0000

Press ■ in stop mode.
The counter is also set to 0000 when the cassette holder is opened.

2

4

1

MULTI JOG

ENTER

MODE

1
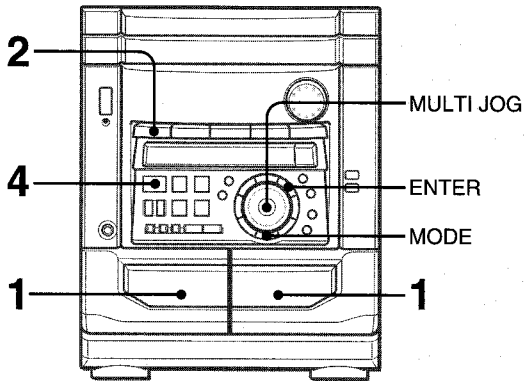
After playback on one deck finishes, the tape in the other deck will start to play without interruption.

1 Insert tapes into deck 1 and deck 2.

2 Press TAPE DECK 1/2 to select the deck to be played back first.

3 Set the reverse mode to "⊃".
1 Press **MODE** repeatedly until "Deck 2 MODE?" is displayed.
2 Within 10 seconds, press **ENTER**, then select "⊃" with **MULTI JOG**.
3 Within 10 seconds, press **ENTER** again.

4 Press ◄► to start playback.
Playback continues until ■ is pressed.

About cassette tapes
• **To prevent accidental erasure**, break off the plastic tabs on the cassette tape after recording with a screwdriver or other pointed tool.

Side A ———— Tab for side A
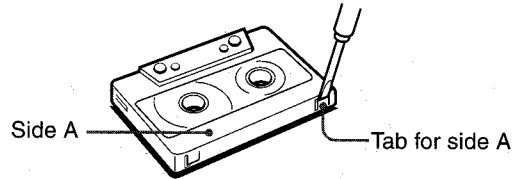
To record on the tape again, cover the tab openings with adhesive tape, etc.
• **120-minute or longer tapes** are extremely thin and easily deformed or damaged. They are not recommended.
• **Take up any slack in** the tape with a pencil or similar tool before use. Slack tape may break or jam in the mechanism.

En

TAPE PLAYBACK
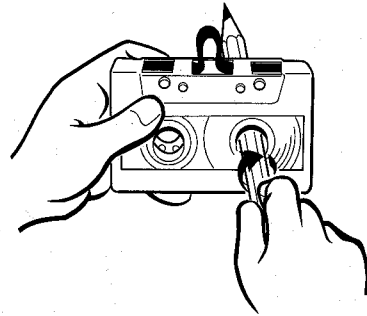
Before playing or recording on a disc, read this section thoroughly.

USABLE DISCS

This unit has two CD player systems.
One is a **3 CD Changer Player** on which a conventional music CD, a finalized* CD-R or a finalized CD-RW can be played back. The other one is a **CD-R/RW Player/Recorder** (COMPACT DISC RECORDER) on which a conventional music CD, a CD-R or a CD-RW can be played back and a CD-R or a CD-RW can be recorded on.
* See "FINALIZATION" in the right column.

TYPES OF DISCS

• CD-R and CD-RW Discs

For recording and playback you can use the CD-R and CD-RW discs with the following logos:
Be sure that the logos have "**DIGITAL AUDIO**" which indicates the CD-R or CD-RW is for AUDIO use. It is not assured that operations such as playing and recording can be performed on this unit correctly if you use a CD-R or CD-RW without this mark.

A CD-R disc cannot be erased, while a CD-RW disc can be erased and recorded repeatedly.
A finalized CD-R disc can be played back on conventional CD players as well. A CD-RW disc can be played back only on CD-RW players.

DISC	RECORDING	PLAYBACK
CD-R	Can be recorded, but not erased.	Can be played on conventional CD players.
CD-RW	Can be erased and recorded repeatedly.	Can be played only on CD-RW players.

• Conventional Music CDs

Discs with the following logo can be played back on this unit, but no recordings can be made on them.

When you load a CD-R, CD-RW or any other disc that is not compatible with this unit, "Check Disc" or "Disc err" may appear on the display to warn you that the disc cannot be used in this unit for recording.

CAUTION

Do not open and close the CD-R/RW tray unnecessarily with a non-finalized CD-R disc inside. For the reason why, see "OPC" in the right column.

WARNING
Digital recording capabilities this unit provides you with are only for personal use.
Dubbing copyrighted material without permission of the copyright owner is a violation of the copyright laws.

TERMS AND FEATURES

• FINALIZATION

Finalization is the process of embedding a Table Of Contents (TOC) on a CD-R or CD-RW on which recording is completed. This process enables a CD-R and CD-RW to be played back on the 3 CD changer of this unit or any other conventional CD players. (CD-RW discs, however, can be played only on CD-RW players.)
See "FINALIZATION" on page 23 for details.

• OPC (Optimum Power Control)

When a non-finalized CD-R or CD-RW is loaded on the CD-R/RW tray, OPC determines the intensity of the recording laser beam that is best for the currently loaded disc. OPC can run only a limited number of times(500 times) on a non-finalized CD-R. Therefore, do not open and close the CD-R/RW tray unnecessarily when a CD-R is loaded.
When a CD-R approaches its OPC limit, "OPC Full" is displayed. While this message is on, you cannot remove the disc unless you finalize it. (If you press ▲CD-R OPEN/CLOSE, "FINALIZE ?" is displayed.) In such a case, see "FINALIZATION" on page 23 and finalize the disc.
OPC does not run on a finalized disc.

• SCMS (Serial Copy Management System)

When digital recording is attempted from recorded material with copyrights, digital dubbing cannot be performed to a CD-R or CD-RW from another disc recorded in digital because of the built-in record restriction function which complies with the SCMS standard.

SCMS is the standard to restrict single digital dubbing between digital audio systems thus protecting copyrights.

Mini Disc
(prerecorded sound source)

CD-R or CD-RW
Digital dubbing

CD

Recording through
analog inputs
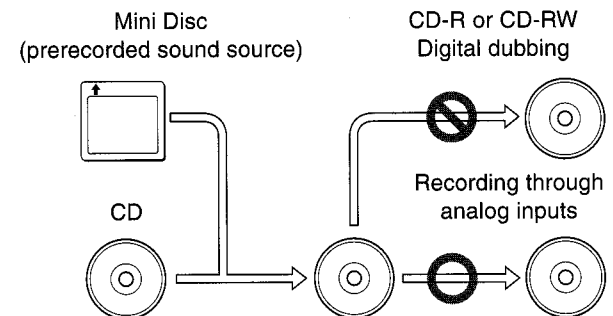
BASIC OPERATIONS

The 3 CD Changer of this unit can play a Conventional Music CD, a CD-R and CD-RW.
However, a CD-R or CD-RW which is not finalized* cannot be played back on the 3CD changer.
Use the CD-R/RW player to play a non-finalized CD-R or CD-RW. (Page 16)
* See "FINALIZATION" on page 23.

3CD BLANK SKIP
DISPLAY
CD EDIT CHECK
DISC DIRECT PLAY 1-3
3CD
MULTI JOG
II
■
◀▶
◀◀,▶▶
DISC DIRECT PLAY 1-3
DISC CHANGE
▲OPEN/CLOSE
RANDOM/REPEAT
0-9,+10
SHIFT

LOADING DISCS

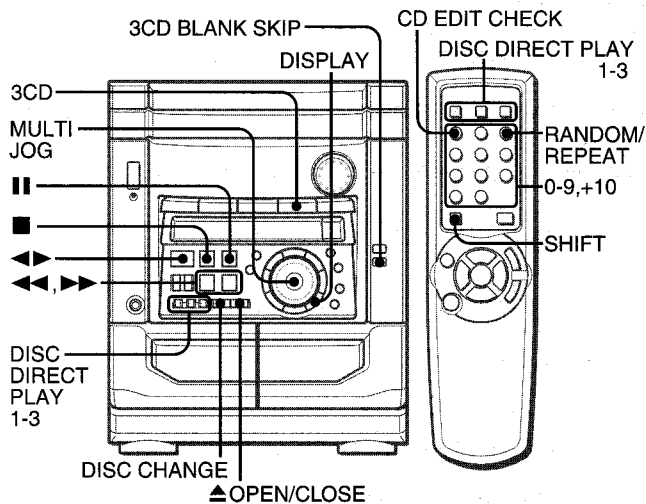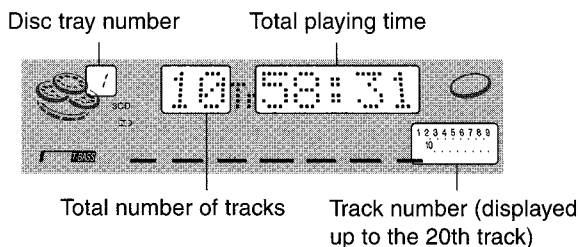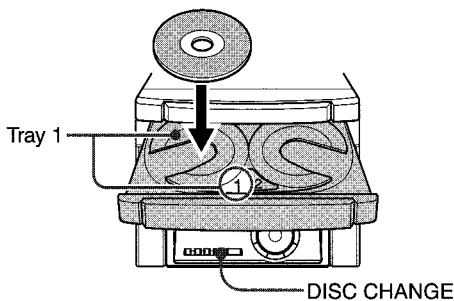Press 3CD, then press ▲ OPEN/CLOSE to open the 3CD changer compartment. Load disc(s) with the label side up.
To play one or two discs, place the discs on tray 1 and 2.
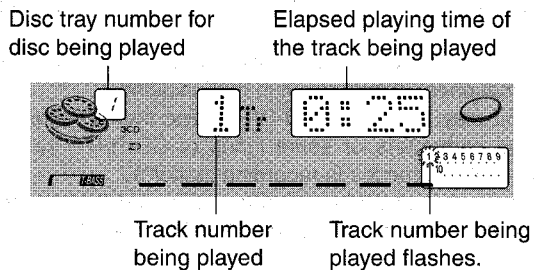To play three discs, press DISC CHANGE to rotate the trays after placing two discs. Place the third disc on tray 3.
Close the disc compartment by pressing ▲ OPEN/CLOSE.

Tray 1
DISC CHANGE

Disc tray number   Total playing time

Total number of tracks   Track number (displayed up to the 20th track)

PLAYING DISCS

Load discs.

To play all discs in the disc compartment, press ◀▶.
Play begins with the disc on tray 1.

Disc tray number for disc being played   Elapsed playing time of the track being played

Track number being played   Track number being played flashes.

To play one disc only, press DISC DIRECT PLAY 1-3.
The selected disc is played once.

To stop play, press ■.
To pause play, press II. To resume play, press again.
To search for a particular point during playback or in pause mode, keep ◀◀ or ▶▶ pressed and release it at the desired point.
To skip to the beginning of a track, press ◀◀ or ▶▶ repeatedly or turn MULTI JOG until the desired track is displayed.
To remove discs, press ▲ OPEN/CLOSE.

To start play when the power is off (Direct Play Function)
Press 3CD when the disc (s) is (are) loaded. The power is turned on and play of the loaded disc(s) begins.
When ▲ OPEN/CLOSE is pressed, the power is also turned on.

To check the remaining time
During playback (except random play or programmed play), press DISPLAY on the unit or press CD EDIT/CHECK on the remote control while pressing SHIFT. The amount of time remaining until all tracks finish playing is displayed. To restore the elapsed playing time display, repeat the above.

Selecting a track directly with the remote control
1 Press DISC DIRECT PLAY 1-3 to select a disc tray number.
2 Press numbered buttons 0-9, and +10 to select a track.
   Example:
   To select the 25th track, press +10 twice and 5.
   To select the 10th track, press +10 and 0.
   The selected track starts to play and playback continues to the end of that disc.

NOTE
If you press +10, press the next numbered button within 4 seconds.

Replacing discs during play
While one disc is playing, the other discs can be replaced without interrupting play.
1 Press DISC CHANGE.
2 Remove the discs and replace with other discs.
3 Press ▲ OPEN/CLOSE to close the disc compartment.

- The 3 CD Changer cannot play a non-finalized CD-R or CD-RW.
- When loading an 8-cm (3-inch) disc, put it on the inner circle of the tray.
- Do not place more than one compact disc on one disc tray.
- Do not tilt the unit with discs loaded. Doing so may cause malfunctions.
- Do not use irregular shape discs (example: heart-shaped, octagonal ones). It may result in malfunctions.
- The unit may not play a CD-R/RW disc that is recorded on persona computers or some kinds of CD-R/RW recorders because of differences in recording platforms.
- Do not attach any seal or label to either side (the recordable side or the labeled side) of a CD-R/RW disc. It may cause malfunction.

BLANK SKIP PLAY

The silent portions between the tracks recorded on a disc can be skipped during playback.
- Blank skip play may not function with some discs.

1 Press 3CD BLANK SKIP.
"CD BLANK SKIP" appears.

CD BLANK SKIP

2 Start playback.

If the last of the track fades out (ends with the sound gradually decreasing), the fadeout portion also will be skipped.

To return to normal playback
Press **3CD BLANK SKIP** again, and "CD BLANK SKIP" will disappear.

- BLANK SKIP PLAY is automatically canceled when performing AI EDIT recording (page28), PROGRAMMED EDIT recording (page29), or the recording of programmed playback (page15).
- BLANK SKIP PLAY cannot be performed on the CD-R/RW player.

RANDOM/REPEAT PLAY

Use the remote control.

RANDOM play
All the tracks on the selected disc or all the discs can be played randomly.
- You cannot perform random play of the programmed tracks.

REPEAT play
A single disc or all the discs can be played repeatedly.
- You can also repeat the programmed tracks.

Press RANDOM/REPEAT repeatedly while pressing SHIFT.
Each time it is pressed, the function is selected cyclically.

RANDOM   ↻
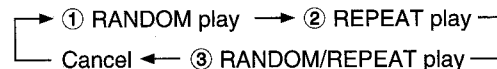
```
┌─→ ① RANDOM play ──→ ② REPEAT play ─┐
└── Cancel ←── ③ RANDOM/REPEAT play ─┘
```

① "RANDOM" lights up on the display.
② "↻" lights up on the display.
③ "RANDOM" and "↻" light up on the display.

To play all discs, press ◄► to start play.
To play a single disc, press **DISC DIRECT PLAY 1-3**.

- During random play, the following operations are not possible:
  - to select the tracks directly with the numbered buttons. The random play will be canceled.
  - to skip to the previously played track with ◄◄ or **MULTI JOG**.

Up to 30 tracks can be programmed from any of the inserted discs.

Use the remote control.

1 Press PRGM while pressing SHIFT in stop mode.
"PRGM" lights up.

"PRGM"

2 Press DISC DIRECT PLAY 1-3 to select a disc.

3 Press numbered buttons 0-9 and +10 to program a track.
Example:
To select the 25th track, press **+10** twice and **5**.
To select the 10th track, press **+10** and **0**.

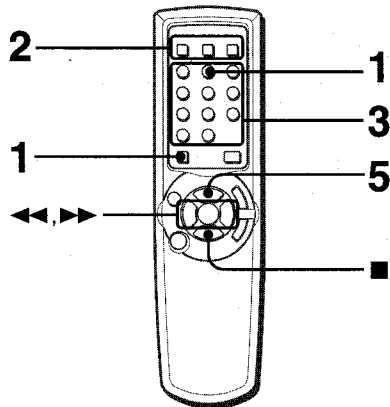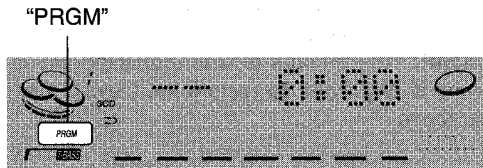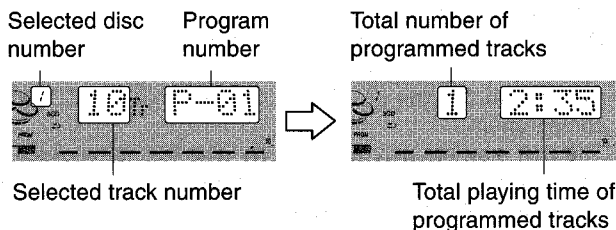| Selected disc number	Program number	Total number of programmed tracks

Selected track number   Total playing time of programmed tracks

4 Repeat steps 2 and 3 to program other tracks.

5 Press ◄► to start play.

To check the program
Each time ◄◄ or ►► is pressed in stop mode, a track number and a program number will be displayed.

To clear the program
Press ■ in stop mode. The program will be also cleared when you open the disc compartment.

To add tracks to the program
Repeat steps 2 and 3 in stop mode. The track will be programmed after the last track.
• If you attempt to program more than 30 tracks, "PRGM FULL" is displayed.

To change the programmed tracks
You cannot change the order of programmed tracks. Clear the program by pressing ■ and repeat all the steps again.

To play the programmed tracks repeatedly
After programming the tracks, press **RANDOM/REPEAT** repeatedly while pressing **SHIFT** until "⟳" appears on the display.

NOTE
• During programmed play, you cannot select the tracks directly with the numbered buttons. "Can't USE" will be displayed.
• In the following cases, the total playing time of programmed tracks is displayed "--:--", which means you cannot check the total playing time of programmed tracks, but the programmed tracks are still registered in memory.
  - the total playing time of programmed tracks exceeds 99 minutes 59 seconds.
  - you selected a track having a track number more than 30.

En

CD PLAYING (USING 3 CD CHANGER)

BASIC OPERATIONS

The CD-R/RW player of this unit can play a Conventional Music CD, a CD-R or CD-RW, <u>whether the CD-R or the CD-RW are finalized* or not</u>.
* See "FINALIZATION" on page 23.
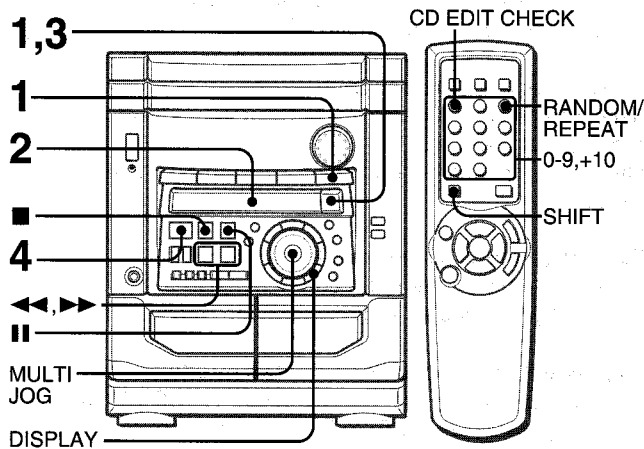
1 Press CD-R/RW and press ▲ CD-R OPEN/CLOSE to open the CD-R/RW compartment .

2 Load a disc on the CD-R/RW tray with the label side up.
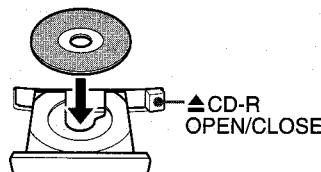
▲CD-R OPEN/CLOSE

3 Press ▲ CD-R OPEN/CLOSE to close the CD -R/RW compartment .
"TOC READ" is displayed. Wait until this message disappears and then proceed to the next step.

Display in stop mode

Total number of tracks   Track number (displayed up to the 20th track)

Total playing time

4 Press ◄►.
Play begins.

Display in playback mode

Track number being played   Track number being played flashes.

Elapsed playing time of the track being played

To stop play, press ■.
To pause play, press **II**. To resume play, press again.
To search for a particular point during playback or in pause mode, keep ◄◄ or ►► pressed and release the button at the desired point.
To skip to the beginning of a track, press ◄◄ or ►► repeatedly or turn **MULTI JOG** until the desired track is displayed.
To remove a disc, press ▲ CD-R OPEN/CLOSE.

To start play when the power is off (Direct play function)
Press **CD-R/RW** when the disc is loaded. The power is turned on and play of the loaded disc begins.

To select a track directly with the remote control
Press numbered buttons 0-9 and +10.
    Example:
    To select the 25th track, press **+10** twice and **5**.
    To select the 10th track, press **+10** and **0**.
    The selected track starts to play and playback continues to the end of that disc.

NOTE

If you press +10, press the next numbered button within 4 seconds.

To check the remaining time
During playback or in pause mode, press **DISPLAY** on the main unit or press **CD EDIT/CHECK** on the remote control while pressing **SHIFT**. The amount of time remaining until all tracks finish playing is displayed. To restore the playing time display, repeat the above.

NOTE

• "Check Disc" is displayed if the CD-R/RW player fails to read a disc.
• When attempting to play a non-finalized CD-R or CD-RW on the CD-R/RW player, there may be a case where the disc cannot be played if the disc is recorded on other equipment.
• Do not place more than one compact disc on one disc tray.
• Do not tilt the unit with discs loaded. Doing so may cause malfunctions.
• Do not use irregular shape discs (example: heart-shaped, octagonal ones). It may result in malfunctions.
• Do not turn the unit off when a disc is inside the CD-R/RW compartment.
• The unit may not play a CD-R/RW disc that is recorded on personal computers or some kinds of CD-R/RW recorders because of differences in recording platforms.
• Do not attach any seal or label to either side (the recordable side or the labeled side) of a CD-R/RW disc. It may cause malfunction.
• A trouble may occur in this unit if a CD-R/RW disc with dirt or scratches is used. In such a case, refer to CD/CD-R/CD-RW GUIDE MESSAGES.

RANDOM / REPEAT PLAY

Use the remote control.

RANDOM play
All the tracks on the inserted disc can be played randomly.
• You cannot perform random play of the programmed tracks.

REPEAT play
All the tracks on the inserted disc can be played repeatedly.
• You can also repeat the programmed tracks.

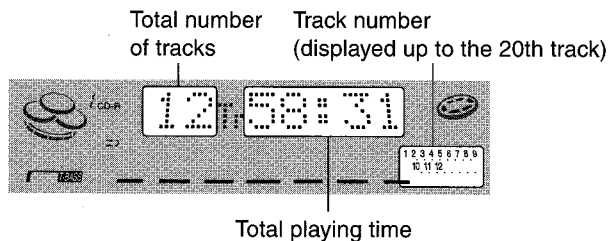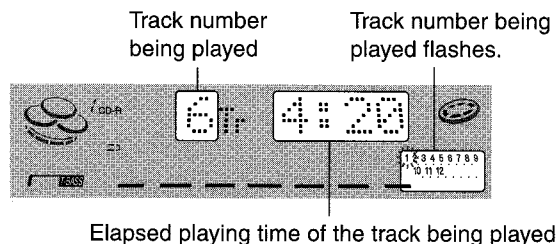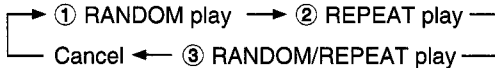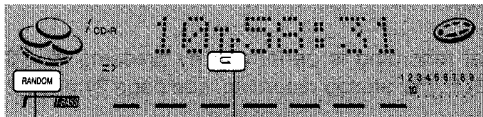## Press RANDOM/REPEAT repeatedly while pressing SHIFT.
Each time it is pressed, the function is selected cyclically.

```
 ┌─► ① RANDOM play ──► ② REPEAT play ─┐
 └── Cancel ◄── ③ RANDOM/REPEAT play ──┘
```

① "RANDOM" lights up on the display.
② "↻" lights up on the display.
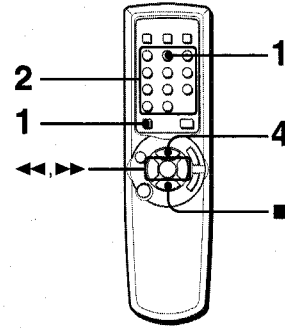③ "RANDOM" and "↻" light up on the display.


"RANDOM"   "↻"

NOTE
• During random play, the following operations are not possible:
  - to select the tracks directly with the numbered buttons.
    The random play will be cancelled.
  - to skip to the previously played track with ◄◄ or **MULTI JOG**.
• BLANK SKIP PLAY cannot be performed on the CD-R/RW player.

PROGRAMMED PLAY

Up to 30 tracks can be programmed from the inserted disc.
Use the remote control.

1 Press PRGM while pressing SHIFT in stop mode.
"PRGM" lights up.

"PRGM"
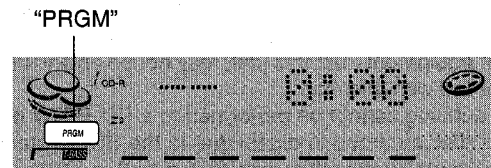
2 Press numbered button 0-9 and +10 to program a track.
Example:
To select the 25th track, press **+10**, **+10**, and **5**.
To select the 10th track, press **+10** and **0**.

Program number / Total number of programmed tracks

Selected track number / Total playing time of programmed tracks
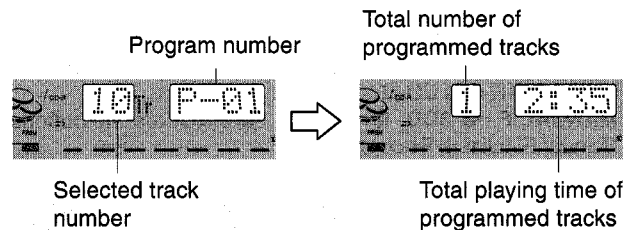
3 Repeat step 2 to program other tracks.

4 Press ►/◄► to start play.

To check the program
Each time ◄◄ or ►► is pressed in stop mode, a track number and a program number will be displayed.

To clear the program
Press ■ in stop mode. When the disc is removed, the program is also cleared.

To add tracks to the program
Repeat step 2 in stop mode. The track will be programmed after the last track.
• If you attempt to program more than 30 tracks, "PRGM FULL" is displayed.

To change the programmed tracks
You cannot change the order of programmed tracks. Clear the program by pressing ■ and repeat all the steps again.

To play the programmed tracks repeatedly
After programming the tracks, press **RANDOM/REPEAT** repeatedly while pressing **SHIFT** on the remote control until "↻" appears on the display.

NOTE
During programmed play, you cannot select the tracks directly with the numbered buttons. "Can't USE" will be displayed.

En

NOTE

• A finalized CD-R or CD-RW cannot be recorded on.
• Never turn the unit off by pressing POWER or disconnecting the AC cord during the recording process.
  Doing so even by accident or power failure damages the disc and it may no longer be restored.
  (To restore a damaged CD-RW, see "ERASING RECORDINGS ON A CD-RW" on page 24)
• Do not turn the unit off when a disc is inside the CD-R/RW compartment.
• The shortest possible length of recording is standardized to 4 seconds. So, you cannot terminate recording before the first 4 seconds are up. During this interval, pressing ■ or II has no effect.
• Additional recordings are added in sequence to the end of the last track if the remaining time on the disc is long enough.
• Up to 99 tracks can be recorded on a single disc.
• Do not tilt the unit with a disc loaded. Doing so may cause malfunction.
• During recording with ● 3CD or ● SINGLE, II cannot be used.
• If there is a blank section lasting more than 1 minute in the source to be recorded, recording automatically stops.
• A CD-R/RW disc, which is recorded with a personal computer or other equipment than this unit, may not be able to be played or recorded with this unit.
• Digital dubbing cannot be performed to a CD-R/RW disc from another disc recorded in digital due to the SCMS standard. If you accidentally start this restricted digital dubbing, "CAN' T COPY" is displayed.

Auto Finalizing Recording
Auto Finalizing Recording automatically finalizes* a CD-RW right after recording is completed, and it is applicable only to CD-RW. AUTO F(RW) ● 3CD is the button for Auto Finalizing Recording.
* See "FINALIZATION" on page 23.

Manual Finalizing Recording
Manual Finalizing Recording only records, and it is applicable to both a CD-R and CD-RW.
MANUAL F (● 3CD, ● SINGLE, ● REC) are the buttons for Manual Finalizing Recording.

RECORDING A WHOLE CD

1 Load a CD-R or CD-RW on the CD-R/RW tray.
  Load the disc with the label side up. To open or close the CD-R/RW compartment, press ▲CD-R OPEN/CLOSE.

2 Press 3 CD and load a CD to be recorded on the 3 CD Changer tray 1.

3 For Manual Finalizing Recording, press MANUAL F ● 3CD.
  For Auto Finalizing Recording (only for a CD-RW), press AUTO F(RW) ● 3CD.
  While the CD-R/RW Recorder is reading a disc, all the buttons for CD-R/RW recording are inoperative. In such a case, wait for a while and then press the button again.
  Recording starts.

Recording source and destination

CD REC   AUTO FINALIZE (Appears only
             for Auto Finalizing Recording)
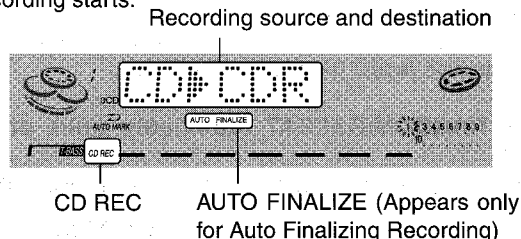
During recording, the display changes to elapsed playing time. When the last track of the CD finishes playing, recording stops automatically and then Finalization starts if Auto Finalizing Recording is selected in step 3.
When recording finishes, "CD REC" disappears in the display.

Digital recording is performed by pressing ● 3CD or ● SINGLE. For analog recording, see page 21 and 22.

To check the remaining recordable time of the CD-R or CD-RW before recording starts
Press CD-R/RW, then press CD EDIT/CHECK on the remote control while pressing SHIFT. Or, press DISPLAY on the main unit. The remaining recordable time is displayed for 4 seconds.

To stop recording halfway
Press ■. The recording stops.
To stop playing the CD, press ■ again.

Registering track marks automatically
The track order information in the original CD will be copied as the track marks.

To record on a previously recorded CD-R or CD-RW
If there is an unrecorded section left on the CD-R or CD-RW, the new recording automatically starts from where the previous recording finished. If you want to start recording from the beginning of a previously recorded CD-RW, erase the previous recording completely. (See page 24.)
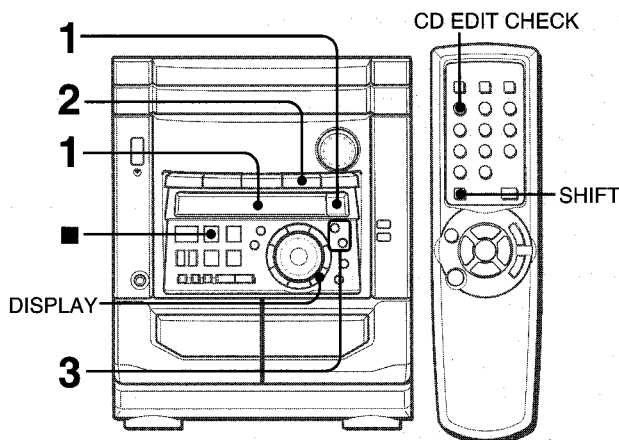A finalized* CD-R or a finalized CD-RW, however, cannot be recorded on.
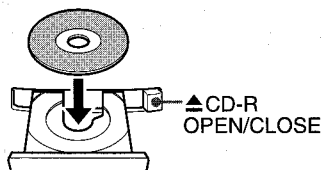See "FINALIZATION" on page 23.

NOTE

You can change from Auto Finalizing Recording to Manual Finalizing Recording if you press MANUAL F ● 3CD before recording is completed. To do the opposite, similarly press AUTO F(RW) ● 3CD.

Only the first tracks of the CDs on the 3CD changer trays are recorded continuously. You can keep recording continuously without interruption, if you press **DISC CHANGE** to replace the CDs during recording.

1 Load a CD-R or CD-RW on the CD-R/RW tray.
Load the disc with the label side up. To open or close the CD-R/RW compartment, press ▲CD-R OPEN/CLOSE.

2 Press 3CD and start playing the track of the CD to be recorded on the 3 CD Changer.

3 For Manual Finalizing Recording, press MANUAL F ● 3CD.
For Auto Finalizing Recording (only for a CD-RW), press AUTO F(RW) ● 3CD.
While the CD-R/RW Recorder is reading a disc, all the buttons for CD-R/RW recording are inoperative. In such a case, wait for a while and then press the button again. Recording starts.

CD playing returns to the beginning of the currently playing track and recording begins.
When the selected track of the CD finishes playing, recording stops automatically and then Finalization starts if Auto Finalizing Recording is selected in step 3. The CD playback continues to the next track. To stop playing the CD, press ■.
When recording finishes, "CD REC" disappears in the display.
• A track mark is registered automatically at the beginning of the track.

NOTE
You can change from Auto Finalizing Recording to Manual Finalizing Recording if you press **MANUAL F ● 3CD** before recording is completed. To do the opposite, similarly press **AUTO F(RW) ● 3CD**.
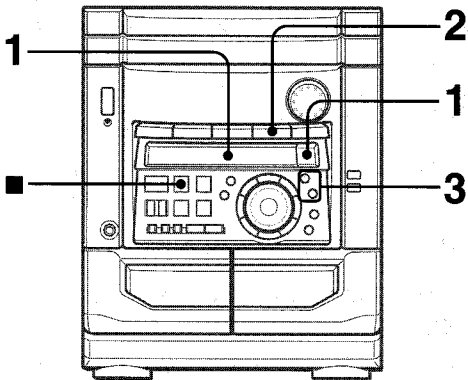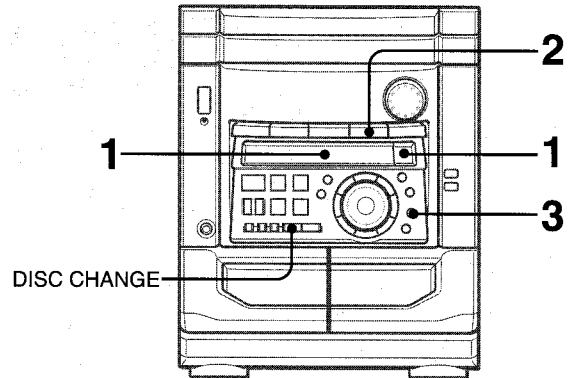
1 Load a CD-R or CD-RW on the CD-R/RW tray.
Load the disc with the label side up. To open or close the CD-R/RW compartment, press ▲CD-R OPEN/CLOSE.

2 Press 3CD and load CDs to be recorded on the 3 CD Changer trays.

3 Press MANUAL F ● SINGLE.
While the CD-R/RW Recorder is reading a disc, all the buttons for CD-R/RW recording are inoperative. In such a case, wait for a while and then press the button again. Recording starts.

CD REC

When recording finishes, "CD REC" disappears in the display.

To replace CDs during recording, press **DISC CHANGE** and replace with other CDs. Then, press **DISC CHANGE** to close the disc compartment.

• A track mark is registered automatically at the beginning of the track.

NOTE
• Cancel programmed play of CD on the 3 CD Changer (page 15) when you perform the "auto first tracks recording". Otherwise, "auto first tracks recording" cannot be performed.
• When you perform the "auto first tracks recording", random or repeat play of CD on the 3 CD Changer is automatically canceled (page 14).

CD-R/CD-RW RECORDING

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PROGRAMMED RECORDING OF CDS

Up to 30 tracks can be programmed and recorded from any of the discs loaded on the 3CD Changer. For programming, see page 15.
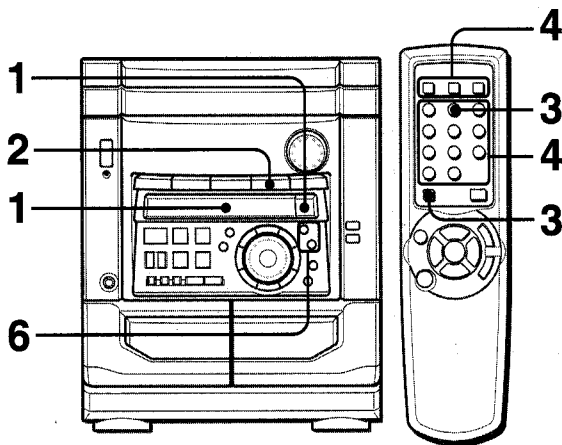
1 **Load a CD-R or CD-RW on the CD-R/RW tray.**
Load the disc with the label side up. To open or close the CD-R/RW compartment, press ▲ CD-R OPEN/CLOSE.

2 **Press 3CD and load CDs to be recorded on the 3 CD Changer trays.**

3 **Press PRGM on the remote control while pressing SHIFT.**
"PRGM" is displayed.

"PRGM"
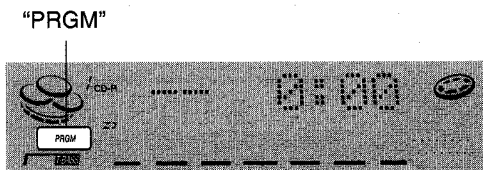
4 **Press DISC DIRECT PLAY 1-3 to select a CD. Then, press numbered buttons 0-9 and +10 on the remote control to program a track.**

Selected disc number   Program number   Total number of programmed tracks

Selected track number   Total playing time of programmed tracks
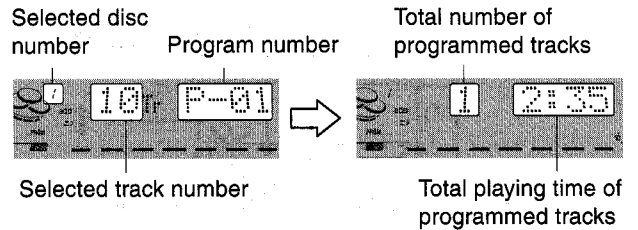
5 **Repeat step 4 to program other tracks.**

6 **For Manual Finalizing Recording, press MANUAL F ● 3CD.**
For Auto Finalizing Recording (only for a CD-RW), press AUTO F(RW) ● 3CD.
While the CD-R/RW Recorder is reading a disc, all the buttons for CD-R/RW recording are inoperative. In such a case, wait for a while and then press the button again.
Recording starts.

When the programmed tracks finish playing, recording stops automatically and then Finalization starts if Auto Finalizing Recording is selected in step 6.
When recording finishes, "CD REC" disappears in the display.
• A track mark is registered automatically at the beginning of the track.

NOTE

You can change from Auto Finalizing Recording to Manual Finalizing Recording if you press **MANUAL F ● 3CD** before recording is completed. To do the opposite, similarly press **AUTO F(RW) ● 3CD**.

RECORDING THREE CDS CONTINUOUSLY
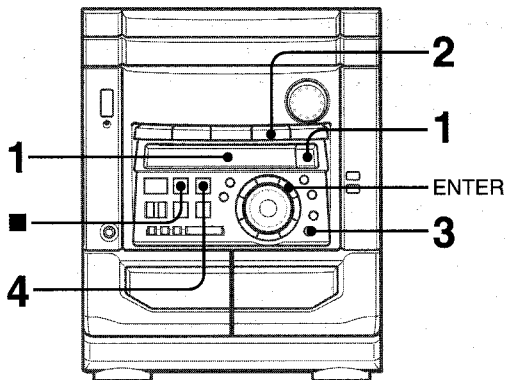
MANUAL F ● REC is used for recording. In this case, the sound of the CD is carried toward the CD-R or CD-RW as <u>analog signals.</u>

1 **Load a CD-R or CD-RW on the CD-R/RW tray.**
Load the disc with the label side up. To open or close the CD-R/RW compartment, press ▲ CD-R OPEN/CLOSE.

2 **Press 3CD and load CDs to be recorded on the 3 CD Changer trays.**

3 **Press MANUAL F ● REC.**
While the CD-R/RW Recorder is reading a disc, all the buttons for CD-R/RW recording are inoperative. In such a case, wait for a while and then press the button again. The unit enters the standby mode. Wait until "CDR REC" or "CDRW REC" disappears and then proceed to the next step.

4 **Press II to start recording.**
It will take a few seconds before actual recording starts. When all the CDs on the trays finish playing, the recording stops automatically.

To stop recording
Press ■.
When recording finishes, "CD REC" disappears in the display.

To add track marks during recording
Press **ENTER** at the desired point during recording.
However, once a track mark is added, the next track mark cannot be added for 4 seconds.

Recording level
This unit sets the recording level automatically.

NOTE
• You cannot register track marks without registering track numbers.
• If you pause recording, the track number increases.
• Depending on source discs, there is a case where the head part sound is cut off from the recording when analog signal recording is performed.

Display information during recording with ● 3CD or MANUAL F ● REC.
When **DISPLAY** is pressed repeatedly during recording with the ● **3CD** or **MANUAL F ● REC**, the display changes as follows.

```
 ┌─► Track number and ──► Remaining time of the CD ─┐
 │   elapsed playing                                 │
 │   time of the CD                                  │
 │                                                   │
 └── Track number of the ◄──── Remaining recordable ─┘
     CD-R or CD-RW              time of the CD-R or CD-RW
     being recorded and
     elapsed recording time
```

For further information, see page 32.

CD-R/CD-RW RECORDING

En

ENGLISH 21

2 — ENTER

1 — **1**

5 —

4 — **3**

DISPLAY

1 Load a CD-R or CD-RW on the CD-R/RW tray.

Load the disc with the label side up. To open or close the CD-R/RW compartment, press ▲ CD-R OPEN/CLOSE.

2 Press one of the function buttons and prepare the source to be recorded.

- **To record from a tape**, press **TAPE** and insert a tape.
- **To record from the radio**, press **TUNER BAND** and tune in a station.
- **To record from source equipment connected to DIGITAL IN jack on the rear**, press **AUX/D-IN** repeatedly until "D-IN" appears on the display.
- **To record from source equipment connected to VIDEO/ AUX jacks on the rear**, press **AUX/D-IN** repeatedly until "AUX" appears on the display.

3 Press MANUAL F ● REC.

While the CD-R/RW Recorder is reading a disc, all the buttons for CD-R/RW recording are inoperative. In such a case, wait for a while and then press the button again. The unit enters the standby mode. Wait until "CDR REC", "CDRW REC" or "D-IN REC" disappears and then proceed to the next step.
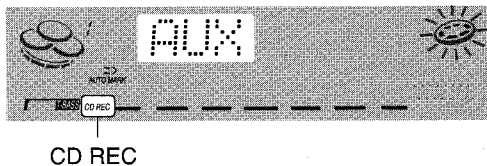
CD REC

4 Press II to start recording.

It will take a few seconds before actual recording starts. To record from connected equipment, set the equipment to playback mode.

5 Press ■ to stop recording.

When recording finishes, "CD REC" disappears in the display.

To add track marks during recording

Press **ENTER** at the desired point during recording. However, once a track mark is added, the next track mark cannot be added for 4 seconds.
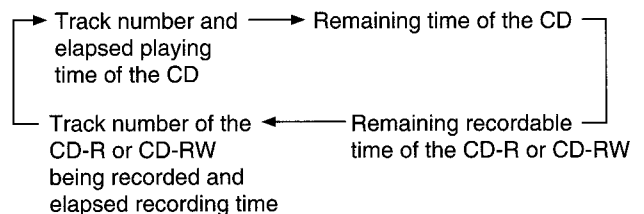
NOTE

- You cannot register track marks without registering track numbers.
- If you pause recording, the track number increases.
- Depending on source, there is a case where the head part sound is cut off from the recording when analog signal recording is performed.

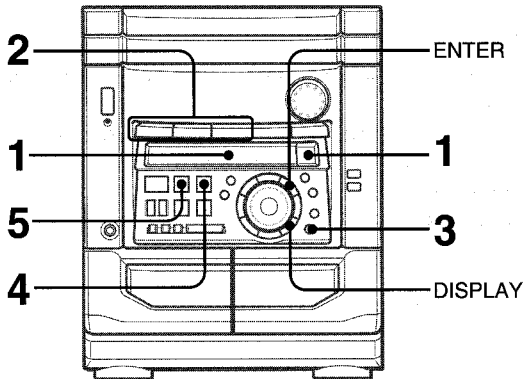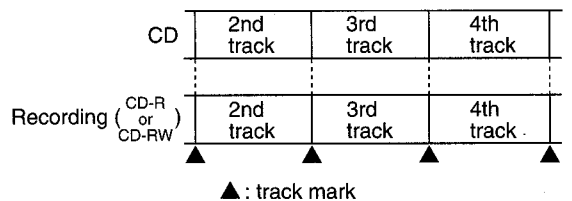**TRACK MARK**

- When recording from a CD with ● **3CD** or ● **SINGLE**, the track mark information recorded on the CD is copied as it is.

CD	2nd track	3rd track	4th track
Recording (CD-R or CD-RW)	2nd track	3rd track	4th track

▲ ▲ ▲ ▲

▲ : track mark

- When recording CDs or other sources with **MANUAL F ● REC**, if there is a blank section lasting more than 4 seconds, a track mark is automatically registered when a sound signal is input in the following time.

Blank

Sound source	♫♪	♫♪	♪♪
Recording (CD-R or CD-RW)	2nd track	3rd track	4th track

▲ ▲ ▲ ▲
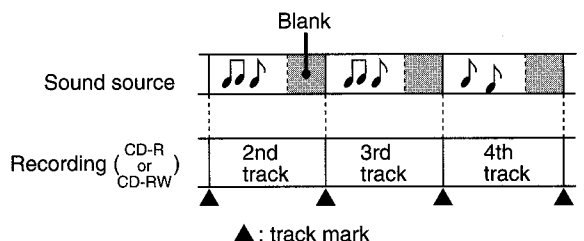
▲ : track mark

* A track mark can be added manually by pressing **ENTER** when recording by either means above.

FINALIZATION

Finalization is the process of embedding a Table Of Contents (TOC) on a CD-R or CD-RW on which recording is completed. This process enables the CD-R and CD-RW to be played back on the 3 CD changer of this unit or any other conventional CD players. (CD-RW discs, however, can be played only on CD-RW players.)
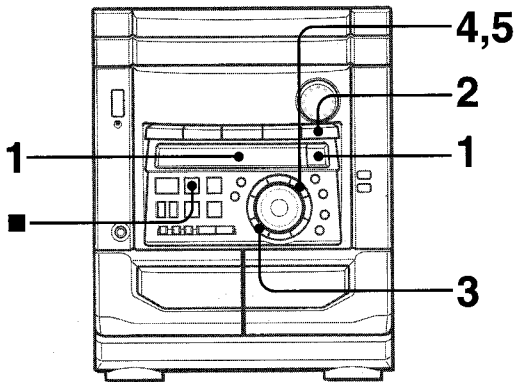Once finalized, a CD-R can no longer be recorded, while a CD-RW becomes recordable again if it is erased or unfinalized (see "ERASING RECORDINGS ON A CD-RW" on page 24).

Finalizing a CD-R or CD-RW

1 Load a CD-R or CD-RW on the CD-R/RW tray.
Load the disc with the label side up. To open or close the CD-R/RW compartment, press ▲ CD-R OPEN/CLOSE.

2 Press CD-R/RW.
When "TOC READ" is displayed, wait until this message disappears and then proceed to the next step.
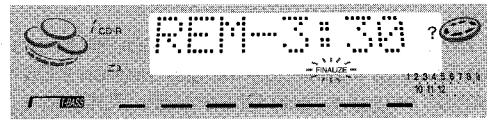
3 Press FINALIZE.
"FINALIZE ?" is displayed.

4 Within 10 seconds, press ENTER.
"FINALIZE ??" is displayed.

To cancel, press ■.

5 Within 1 minute, press ENTER to start finalization.
The approximate finalizing time is displayed and counts down.

NOTE
• **Never turn the unit off by pressing POWER or disconnecting the AC cord during the finalizing process.**
Doing so even by accident or power failure damages the disc and it may no longer be restored.
(To restore a damaged CD-RW, see "ERASING RECORDINGS ON A CD-RW" on page 24)
• Do not finalize the CD-R or CD-RW which is recorded on other equipment. Doing so may cause the finalizing process to be unsuccessful.
• During the finalizing process, all the buttons (except **POWER**) are inoperative.
• Dust or scratches on a disc may prevent it from being successfully finalized.

DISC TYPE INDICATION
Before and after finalization, disc type indications on the display for a CD-R or CD-RW on the CD-R/RW player change as follows. (The indications can be displayed only when the function is CD-R/RW)
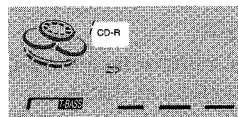
CD-R
Before   After
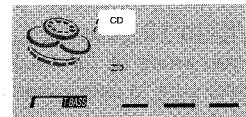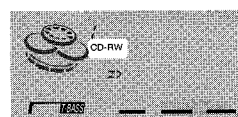
CD-RW
Before   After
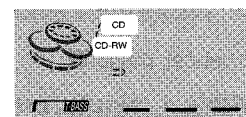
* In case of Unfinalization of a CD-RW, the indications change in reverse.

You can erase recordings on a CD-RW in the following three ways.
(All these ways are applicable only to a CD-RW. Recordings on a CD-R cannot be erased in any way.)
All Track Erasing erases all tracks on a CD-RW at one time.
Last Track Erasing erases only the last track on a CD-RW.
Unfinalization erases a Table Of Contents (TOC) on a finalized CD-RW.

Through the erasing process, you can restore a CD-RW damaged by unsuccessful recording or finalizing due to a power interruption during the process.

ALL TRACK ERASING

All Track Erasing erases all tracks on a CD-RW at one time and it erases the Table Of Contents (TOC) on the CD-RW as well if the CD-RW is finalized.
After erasing, the CD-RW cannot be played back on the 3 CD changer of this unit or any other couventional CD players.
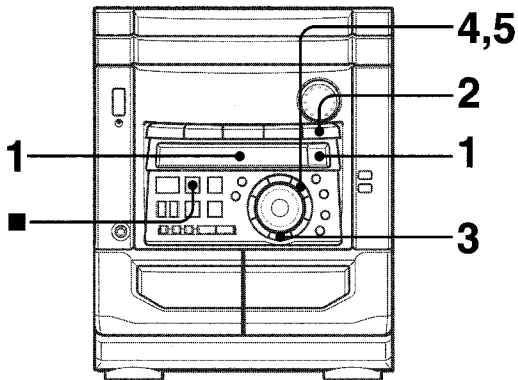
1 Load a CD-RW on the CD-R/RW tray.
Load the disc with the label side up. To open or close the CD-R/RW compartment, press ▲ CD-R OPEN/CLOSE.

2 Press CD-R/RW.
When "TOC READ" is displayed, wait until this message disappears and then proceed to the next step.

3 Press MODE in stop mode repeatedly until "Erase All?" is displayed.

4 Within 10 seconds, press ENTER.
If you erase all the tracks, you cannot retrieve them again. Make sure to check that it is all right to erase all tracks.

To cancel, press ■.

5 Within 1 minute, press ENTER again.
"ERASE" appears in the display, and the approximate erasing time is displayed and counts down.

LAST TRACK ERASING

Last Track Erasing erases only the last track on a CD-RW.
To erase the last track on a finalized CD-RW disc, unfinalize the disc first. You cannot erase a last track unless you unfinalize a finalized CD-RW.
After erasing, the CD-RW cannot be played back on the 3 CD changer of this unit or any other conventional CD players. To do so, finalize the CD-RW.
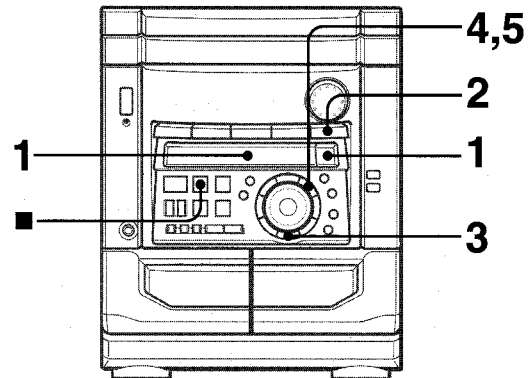
1 Load a CD-RW on the CD-R/RW tray.
Load the disc with the label side up. To open or close the CD-R/RW compartment, press ▲ CD-R OPEN/CLOSE.

2 Press CD-R/RW.
When "TOC READ" is displayed, wait until this message disappears and then proceed to the next step.

3 Press MODE in the stop mode repeatedly until "Erase ?" is displayed.
Example: To erase the last track on a 12-track disc

4 Within 10 seconds, press ENTER.
If you erase a track, you cannot retrieve it again. Make sure to check that it is all right to erase the track.

To cancel, press ■.

5 Within 1 minute, press ENTER again.
"ERASE" appears in the display, and the approximate erasing time is displayed and counts down.

• You cannot erase any track other than the last track directly. For example, if you want to erase the 11th track of 12 tracks on a CD-RW, you have to erase the last (12th) track first, and then erase the target (11th) track.
You cannot erase the 11th track without erasing the 12th track.

• **Never turn the unit off by pressing POWER or disconnecting the AC cord during the erasing process.**
Doing so even by accident or power failure damages the disc and it may no longer be restored.
• During the erasing process, all the buttons (except **POWER**) are inoperative.

UNFINALIZATION

Unfinalization is the process of erasing a Table Of Contents (TOC) on a CD-RW and is applicable only to a finalized CD-RW.
Unlike Track Erasing , unfinalization does not erase any tracks on a CD-RW. The tracks will be kept intact.
This process enables a CD-RW to be recorded on again if there is enough recordable time.
Unfinalized CD-RW discs, however, cannot be played back on the 3 CD changer of this unit or any other conventional CD players. To do so, finalize the CD-RW.

Unfinalizing a CD-RW
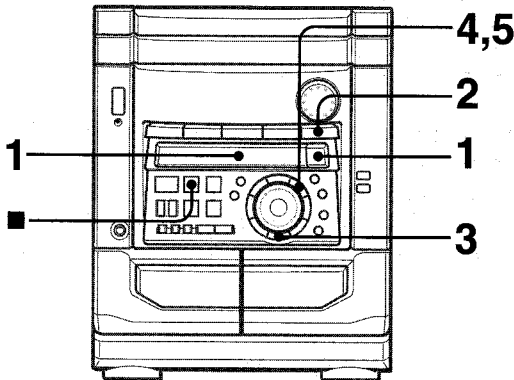
1 **Load a finalized CD-RW on the CD-R/RW tray.**
Load the disc with the label side up. To open or close the CD-R/RW compartment, press ▲ CD-R OPEN/CLOSE.

2 **Press CD-R/RW.**
When "TOC READ" is displayed, wait until this message disappears and then proceed to the next step.

3 **Press MODE in stop mode repeatedly until "UNFINAL?" is displayed.**

4 **Within 10 seconds, press ENTER.**
"UNFINAL??" is displayed.

To cancel, press ■.

5 **Within 1 minute, press ENTER to start unfinalization.**
The approximate unfinalizing time is displayed and counts down.

• **Never turn the unit off by pressing POWER or disconnecting the AC cord during the unfinalizing process.**
Doing so even by accident or power failure damages the disc and it may no longer be restored.
• A CD-R cannot be unfinalized.
• Do not unfinalize the CD-RW which is finalized on other equipment.
Doing so may cause the unfinalizing process to be unsuccessful.
• During the unfinalizing process, all the buttons (except **POWER**) are inoperative.
• Dust or scratches on a disc may prevent it from being successfully unfinalized.

En

BASIC RECORDING

This section explains how to record from a tape, the tuner, 3 CD, CD-R/RW or external equipment.
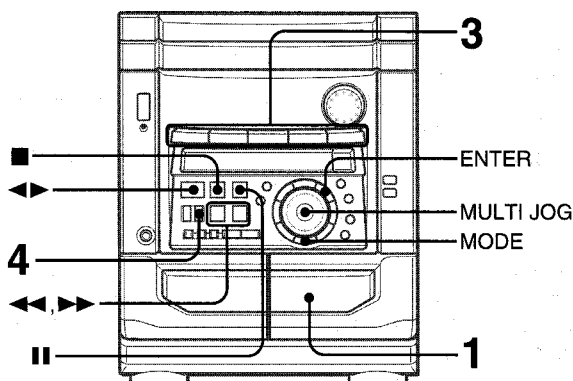
Preparation
Use Type I (normal) tapes only.

1 Insert the tape to be recorded on into deck 2.
Insert the tape with the side to be recorded on facing out from the unit.
• Set the tape to the point where recording will start with ◄►, ◄◄ or ►►, and stop the tape with ■.

PUSH EJECT
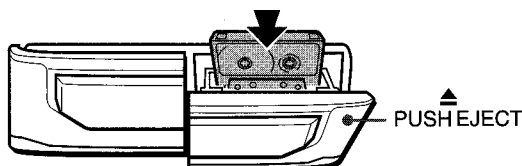
2 Select the reverse mode using MODE, ENTER and MULTI JOG (page 10).
To record on one side only, select "⊐".
To record on both sides, select "⊐)" or "(⊐)".
When recording from a tape, the reverse mode is automatically set to "⊐". Note that recording will be done on one side of the tape only.
• When recording from the rear of the tape, the tape stops at the end of recording of the rear side, even if the reverse mode is set to "⊐)" or "(⊐)".

3 Press one of the function buttons and prepare the source to be recorded.
To record from a tape, insert the tape into deck 1, and press **TAPE DECK 1/2** to display "TP1". Set the tape to the point where recording will start with ◄►, ◄◄ or ►►, and stop the tape with ■.
**To record from a disc in the 3 CD Changer**, press **3CD** and load the disc(s) on the 3CD Changer tray(s). Then, select a track to be recorded first with ◄◄, ►► or **MULTI JOG**.
To record from a disc in the CD-R/RW player, press **CD-R/RW** and loaded a disc on the CD-R/RW tray. Then, select a track to be recorded first with ◄◄, ►► or **MULTI JOG**.
To record from a radio broadcast, press **TUNER BAND** and tune in to a station.
To record from a connected source;
• To record from a source equipment connected to **DIGITAL IN** jacks on the rear, press **AUX/D-IN** repeatedly until "D-IN" appears on the display. (The recording is not made in digital.)
• To record from a source equipment connected to **VIDEO/ AUX** jacks on the rear, press **AUX/D-IN** repeatedly until "AUX" appears on the display.

4 Press ● REC/REC MUTE TAPE to start recording.
When the selected function is 3 CD or CD-R/RW, playback and recording start simultaneously.
To record from a connected source, begin the playback of that source.

To stop recording, press ■.
When recording from a disc, press ■ again to stop playback of the disc.
To pause recording, press **II**. (Applicable when the source is TUNER or AUX/D-IN.) To resume recording, press again.

Sound adjustment during recording
The output volume and tone of the speakers or headphones may be freely varied without affecting the recording.
Setting of T-BASS or graphic equalizer has no effect on recording.

To record desired tracks of a disc
Select tracks to be recorded by programmed play (page 15), and start recording.
In this case, set the blank skip play function to OFF (page 14).

INSERTING BLANK SPACES

4-second blank spaces can be inserted at the desired point during recording. (Applicable when the source is TUNER or AUX/D-IN.)
1 Press ● REC/REC MUTE TAPE during recording or while in recording pause mode.
"TAPE REC" on the display flashes for 4 seconds and the tape runs without recording. After 4 seconds, the deck enters the recording pause mode.
2 Press **II** to resume recording.

To insert a blank space of less than 4 seconds, press ● REC/REC MUTE TAPE again while "TAPE REC" is flashing.
To insert blank spaces of more than 4 seconds, after the deck enters the recording pause mode, press ● REC/REC MUTE TAPE again. Each time the button is pressed, a 4-second blank space is added.

TO ERASE RECORDING

1 Insert the tape to be erased in the deck 2.
2 Press TAPE to display "TP2" on the display window.
3 Set the tape to the point where erasing will start with ◄►, ◄◄ or ►►, and stop the tape with ■.
4 Press ● REC/REC MUTE TAPE to start erasing.

This function allows you to make exact copies of the original tape.

NOTE

• Use Type I (normal) tapes only.
• Prepare a tape of the same length as that of the original tape, or a tape longer than the original.
• Dubbing does not start from a point halfway in the tape.

1 **Press TAPE.**

2 **Insert the original tape into deck 1 and the tape to be recorded on into deck 2.**

Tape for playback   Tape for recording

Deck 1   Deck 2

Insert each tape with the side to be played back or recorded on facing out from the unit.

3 **Press ● SYNC DUB TAPE to start recording.**
• The reverse mode is automatically set to "⊃" (recording on both sides).
• While recording, any of the buttons other than ■ are disabled.
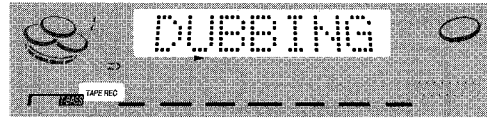
The tapes are rewound to the beginning of the front sides, and recording starts.

To stop dubbing
Press ■.

TAPE RECORDING

En

AI EDIT RECORDING

MULTI-JOG

DISC DIRECT PLAY 1-3

2
■
6
4
◄◄,►►
1
3
5
3
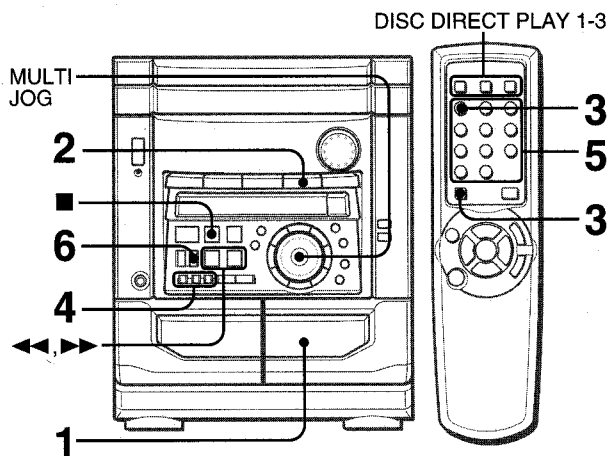
The AI edit function enables CD recording without worrying about tape length and track length. When a CD is inserted, the unit automatically calculates the total track length. If necessary, the track order is rearranged so that no track is cut short.
(AI: Artificial Intelligence)

NOTE

• **Use Type I (normal) tapes only.**
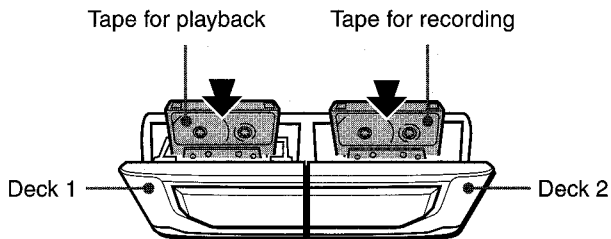• AI edit recording will not start from a point halfway into the tape. The tape must be recorded from the beginning of either side.
• Set the blank skip play function to OFF (page 14).

1 Insert the tape into deck 2.
Insert the tape with the side to be recorded on first facing out from the unit.

2 Press 3 CD and load the disc(s) on the 3CD changer tray(s).

3 Press CD EDIT/CHECK once on the remote control while pressing SHIFT.
"AI" is displayed.

When "PRGM" is displayed, press CD EDIT/CHECK while pressing SHIFT again.

4 Press DISC DIRECT PLAY 1-3 to select a disc.

5 Press numbered buttons 0-9 on the remote control to designate the tape length.
10 to 99 minutes can be specified.
Example: When using a 60-minute tape, press 6 and 0.
In a few seconds, the microcomputer programs the tracks to be recorded on each side of the tape.
• ◄◄ and ►►, or **MULTI JOG** on the main unit are also available to designate the tape length.

Tape length   Tape side A (front side)   Programmed tracks for side A

Total number of programmed tracks on side A   Remaining time of side A

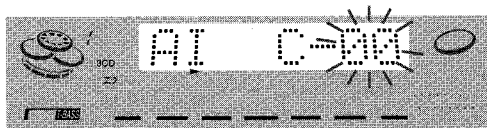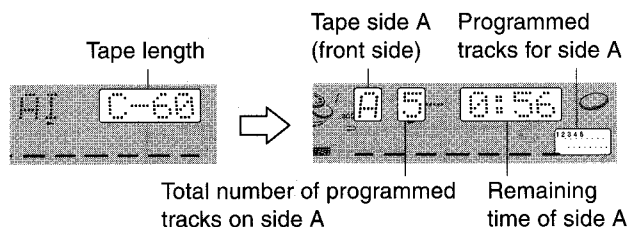### 6 Press ● REC/REC MUTE TAPE to start recording on the front side.
The tape is rewound to the beginning of the front side, the lead segment is played through for 10 seconds, and recording starts. When recording on the front (side A) ends, recording on the back (side B) starts.

To stop recording
Press ■. Recording and the disc play stop simultaneously.

To clear the edit program
Press ■ twice in stop mode to return to the display of total playing time.

To check the order of the programmed track numbers
Before recording, press **CD EDIT/CHECK** on the remote control while pressing **SHIFT** to select side A or B, and press ►► repeatedly.

Tape side   Program number

Track number
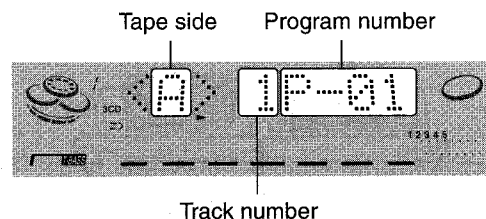
To add tracks from other discs to the edit program
If there is any time remaining on the tape after step 5, you can add tracks from other discs in the CD compartment.
1 Press **CD EDIT/CHECK** on the remote control while pressing **SHIFT** to select side A or B.
2 Press **DISC DIRECT PLAY 1-3** to select a disc.
3 Press numbered buttons **0-9** and **+10** on the remote control to select tracks. "PRGM" lights up.
   A track whose playing time is longer than the remaining time cannot be programmed.
4 Repeat steps 2 and 3 to add more tracks.

Time on cassette tapes and editing time
The actual cassette recording time is usually a little longer than the specified recording time printed on the label. This unit can program tracks to use the extra time. When the total recording time is a little longer than the tape's specified recording time after editing, the display shows the extra time (without a minus mark), instead of the time remaining on the tape (with the minus mark).

NOTE

The AI edit function cannot be used with discs containing 31 tracks or more. "TR OVER" will be displayed.

PROGRAMMED EDIT RECORNG

DISC DIRECT PLAY 1-3

MULTI JOG
2
■
8
5
◄◄,►►
1

3,7
4,5
3,7
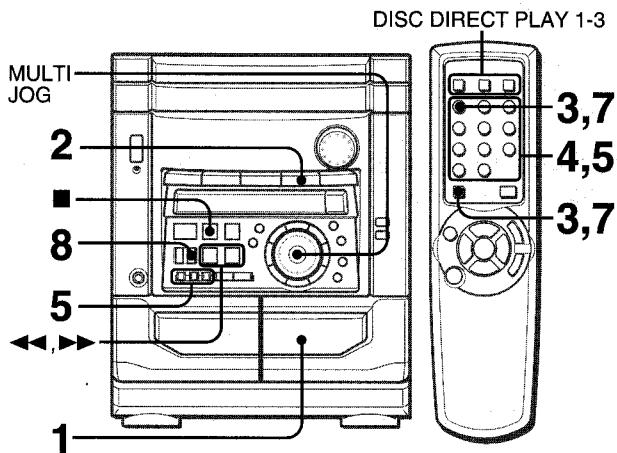
Programmed edit function enables CD recording while checking the remaining time on each side of the tape as the tracks are programmed.

NOTE

• The programmed edit recording will not start from a point halfway in the tape. The tape must be recorded from the beginning of either side.
• Set the blank skip play function to OFF (page 14).
• You can record up to 30 tracks by the programmed edit function.
• You can set up to 30th track numbers by the programmed edit function.

1 **Insert the tape to be recorded on into deck 2.**
Insert the tape with the side to be recorded on first facing out from the unit.

2 **Press 3CD and load the disc(s) on the 3CD changer tray(s).**

3 **Press CD EDIT/CHECK twice on the remote control while pressing SHIFT.**
"PRGM" lights up.

When "Al" is displayed, press **CD EDIT/CHECK** while pressing **SHIFT** again.

4 **Press numbered buttons 0-9 on the remote control to designate the tape length.**
10 to 99 minutes can be specified.
• ◄◄ and ►►, or **MULTI JOG** on the main unit are also available to designate the tape length.

5 **Press DISC DIRECT PLAY 1-3 to select a disc. Then, press numbered buttons 0-9 and +10 to program a track.**

6 **Repeat step 5 for the rest of the tracks for side A.**
A track whose playing time is longer than the remaining time cannot be programmed.

Selected disc   Program   Total number of
number   number   programmed tracks

Selected track   Remaining time
number   of side A

7 **Press CD EDIT/CHECK on the remote control while pressing SHIFT to select side B and program the tracks for side B.**
After confirming "B" on the display, repeat step 5.

Maximum recording
Tape side B   time for side B

8 **Press ● REC/REC MUTE TAPE to start recording.**
The tape is rewound to the beginning of the front side, the lead segment is played through for 10 seconds, and recording starts. When recording on the front (side A) ends, recording on the back (side B) starts.

To stop recording
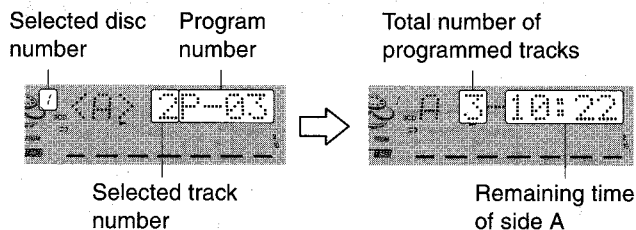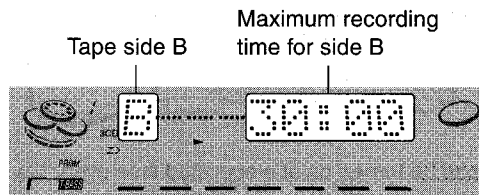Press ■. Recording and the disc play stop simultaneously.

To check the order of the programmed track numbers
Before recording, press ►► repeatedly.

Tape side   Program number

Track number
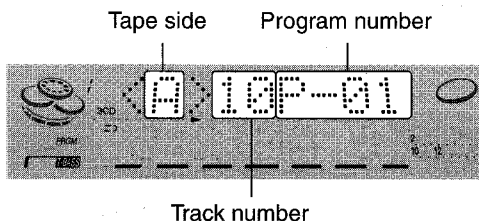
To change the program of each side
Press **CD EDIT/CHECK** on the remote control while pressing **SHIFT** to select side A or B, and press ■ to clear the program of the selected side. Then program the tracks again.

To clear the edit program
Press ■ twice in stop mode to return to the normal display.

En

SETTING THE TIMER PLAYBACK AND TIMER RECORDING
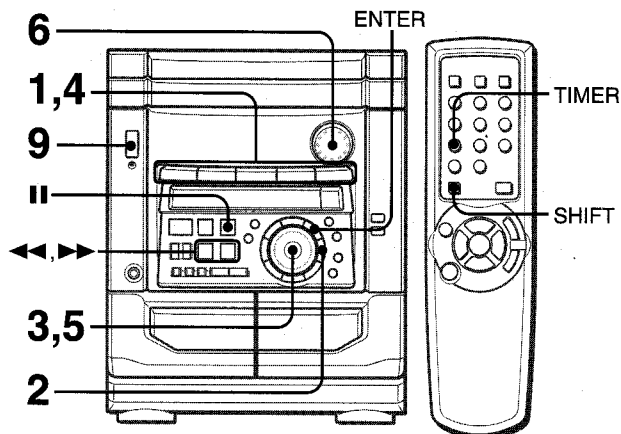
The unit can be turned on at a specified time every day with the built-in timer.
First, make sure the clock is set correctly.

1 Select the source.

Press one of the function buttons to select a source for playback or recording.
For timer playback of a tape, select the deck 1 or 2 with **TAPE DECK 1/2**.

2 Press TIMER repeatedly, or press TIMER on the remote control while pressing SHIFT repeatedly to select the timer playback or the timer recording.

Time and audio source
display flash alternately

Timer playback: ② is displayed.
Timer recording: ② and "REC" are displayed.

3 Within 6 seconds, begin setting the timer-on time.

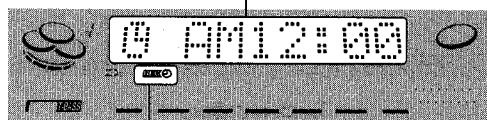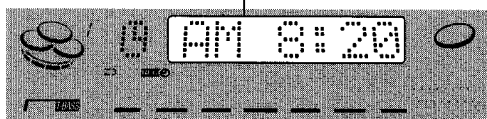Turn **MULTI JOG** to the right to advance the time and turn it to the left to move the time back. The speed with which the time changes varies accoding to how fast you turn **MULTI JOG**. You can also press ◄◄ or ►►. Holding these buttons down will vary the time rapidly.

Timer-on time

• **For timer playback**: When the timer-on time is set, press **ENTER** or **II**, then skip to step 5.
• **For timer recording**: When the timer-on time is set, go to step 4.

4 For timer recording, select the recording destination.

**To record on a CD-R or CD-RW**, press **CD-R/RW**.
To record on a tape, press **TAPE**.
Example: For recording the radio (FM) to a CD-R or CD-RW, "FM ► CDR" is displayed.
When the recording destination is selected, press **ENTER** or **II**.

5 Within 4 seconds, set the duration for the timer-activated period.

Turn **MULTI JOG** or press ◄◄ and ►► to set the duration. The duration can be set between 5 and 240 minutes in 5-minute steps.
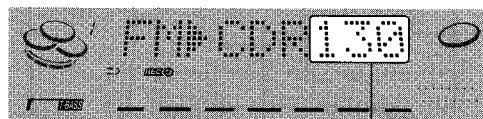
Timer-activated period

When the duration is set, press **ENTER** or **II**. (If no button is pressed, the chosen duration is automatically set after 4 seconds.)

6 Adjust the volume.

The source sound will be audible at the volume set here when the power goes on at the set time.
However, when power economizing mode (page 6) has been turned on, the volume for timer recording will be 0 (minimum level).

7 Prepare the source.

For timer playback of a tape, insert a tape to a deck selected in step 1.
For timer playback of a CD, CD-R or CD-RW, load a disc on the 3 CD changer tray 1 or the CD-R/RW tray.
For timer playback/recording of the tuner, press **TUNER BAND** to select FM or AM and tune in the desired station.
For timer playback/recording of the equipment connected to the VIDEO/AUX jacks, press **AUX/D-IN** repeatedly to display "AUX" and set the timer of the equipment so that playback begins at the same time.
For timer playback/recording of the equipment connected to the DIGITAL IN jack, press **AUX/D-IN** repeatedly to display "D-IN" and set the timer of the equipment so that playback begins at the same time.

8 For timer recording, prepare a recordable CD-R, CD-RW or tape.

For CD-R or CD-RW recording, load a CD-R or CD-RW on CD-R/RW tray.
For tape recording, insert a recordable tape into deck 2, and select the reverse mode (page 10).

9 Press POWER to turn off the unit.

The timer is activated.
②, or ② and "REC" are displayed (when the power economizing mode is set to OFF).
• If the volume level is set to 17 or higher, however, it will automatically be set to 16 when the power is turned on.
• You can change the source that was selected in step 1 by pressing one of the funcion buttons before pressing **ENTER** or **II** in step 3.

- Timer playback and timer recording will not begin unless the power is turned off.
- Timer recording from CD, CD-R, CD-RW or tape cannot be made.
- If you use the unit while the timer is set, check again the preparation of the source for timer playback or recording and the setting of volume before turning off the power.
- If the timer recording is done with the economizing mode (page 6) set to "ECO ON" or "ECO AUTO" and the power turns off, the dimmer mode will be set to dimmest and the volume level will be 0 (minimum level) the next time the power is turned on.
- You can check the timer setting by pressing TIMER even while the power is off. In this case, if you press ENTER or II within 4 seconds after pressing TIMER, you can enter the timer setting mode and change the previous setting.

To check the timer setting
Press TIMER on the main unit, or press TIMER on the remote control while pressing SHIFT.
The selected source, the timer-on time, and the duration for the timer-activated period will be displayed for 4 seconds.

To change the timer setting
Set the timer again from the beginning.

To cancel the timer standby mode
Press TIMER of the main unit, or press TIMER on the remote control repeatedly while pressing SHIFT so that "☉ OFF" appears.

SLEEP TIMER
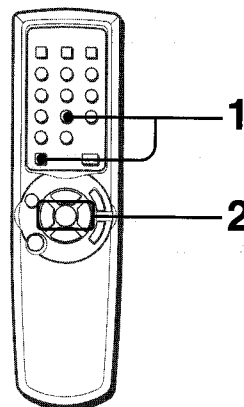
The unit can be turned off automatically at a specified time.

Use the remote control.

1 Press SLEEP while pressing SHIFT.

Specified time

SLEEP
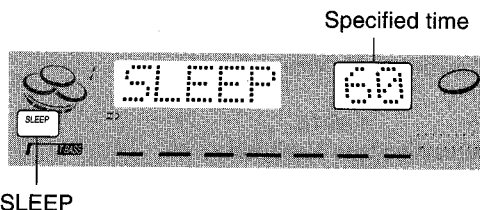
2 Within 4 seconds, press ◄◄ DOWN or ►► UP to specify the time until the power is turned off.
The time changes between 5 and 240 minutes in 5-minute steps.
MULTI JOG is also available in place of ◄◄ or ►►.

To check the time remaining until the power is turned off
Press SLEEP once while pressing SHIFT. The remaining time is displayed for 4 seconds.

To cancel the sleep timer
Press SLEEP twice while pressing SHIFT so that "SLEEP oFF" appears on the display.

DISPLAY INFORMATION

If you press **DISPLAY** on the main unit, or press **CD EDIT/CHECK** on the remote control while pressing **SHIFT**, the display changes as follows.

WHEN THE SOUND SOURCE IS 3CD

During playback or pause mode (when no recordable CD-R or CD-RW is loaded on the CD-R/RW tray)

① 3CD 1 Tr   3:42
   (Elapsed playing time)

② 3CD   − 36:15
   (Remaining time of playback)

• During random play or programmed play, remaining time of playback is not displayed.

During playback or pause mode (when a recordable CD-R or CD-RW is loaded on the CD-R/RW tray)

① 3CD 1 Tr   3:42
   (Elapsed playing time)

② 3CD   − 36:15
   (Remaining time of playback)

③ CD-R
   or   Rem   − 52:38*
   CD-RW
   (Recordable time of CD-R or CD-RW: displayed for 4 seconds)

* Displayed only when being operated with the **DISPLAY** button on the main unit.

• During random play or programmed play, remaining time of playback is not displayed.

DURING RECORDING FROM 3CD TO A CD-R OR CD-RW

• You can change the display only by pressing **DISPLAY** on the main unit.

① 3CD 1 Tr   1:23
   (CD track number and elapsed time)

② 3CD   − 34:46
   (Remaining time of playback)

③ CD-R
   or   − 36:15
   CD-RW
   (Recordable time of CD-R or CD-RW)

④ CD-R
   or   10Tr   1:27
   CD-RW
   (CD-R or CD-RW track number in recording and elapsed time)

WHEN THE SOUND SOURCE IS CD-R/RW

During playback or pause mode

① CD
   or
   CD-R   1 Tr   3:42
   or
   CD-RW
   (Elapsed playing time)

② CD
   or
   CD-R   −32:37
   or
   CD-RW
   (Remaining time of playback)

During stop mode

① CD
   or
   CD-R   9 Tr   14:54
   or
   CD-RW
   (Total playing time)

② CD-R
   or   Rem   −59:06*
   CD-RW
   (Recordable time of CD-R or CD-RW: displayed for 4 seconds)

* Displayed only when a recordable CD-R or CD-RW is loaded on the CD-R/RW tray.

DURING MANUAL RECORDING FROM TAPE, TUNER, OR CONNECTED SOURCE TO A CD-R OR CD-RW

• You can change the display, only by pressing **DISPLAY** on the main unit.

① AUX
   (sound source)

② CD-R
   or   − 15:14
   CD-RW
   (Recordable time of CD-R or CD-RW)

③ CD-R
   or   12Tr   2:58
   CD-RW
   (CD-R or CD-RW track number in recording and elapsed time)

CONNECTING OPTIONAL EQUIPMENT

DIGITAL IN
(OPTICAL)

CD DIGITAL OUT
(OPTICAL)

VIDEO/AUX

SURROUND
SPEAKERS
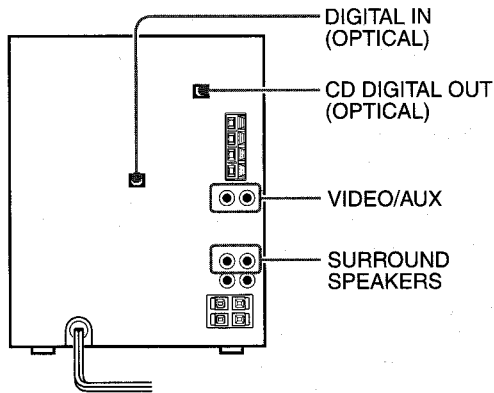
Refer to the operating instructions of the connected equipment for details.
• The connecting cords are not supplied. Obtain the necessary connecting cords.
• Consult your local Aiwa dealer for optional equipment.

VIDEO/AUX JACKS

This unit can input analog sound signals through these jacks.
Use a cable with RCA phono plugs to connect audio equipment (turntables, LD players, MD players, VCRs, TV, etc.).
Connect the red plug to the **R** jack, and the white plug to the **L** jack.

When connecting a turntable
Use an Aiwa turntable equipped with a built-in equalizer amplifier.

CD DIGITAL OUT (OPTICAL) JACK

This unit can output CD digital sound signals through this jack.
Use an optical cable to connect digital audio equipment (digital amplifier, DAT deck, MD recorder, etc.).
Remove the dust cap ⓐ from **CD DIGITAL OUT (OPTICAL)** jack. Then, connect an optical cable plug to **CD DIGITAL OUT (OPTICAL)** jack.
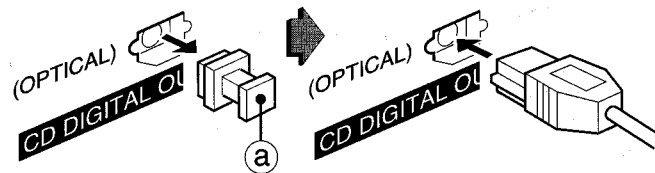
When CD DIGITAL OUT (OPTICAL) jack is not being used
Attach the supplied dust cap.

NOTE
Because this unit complies with the SCMS standard (page 12), digital CD-R/CD-RW recordings made with this unit cannot be recorded again via digital input to other digital devices.
Digital dubbing of CD-R/CD-RW recordings made with this unit from an external satellite/cable receiver, however, may be possible depending on the type of the tuner being used.

DIGITAL IN (OPTICAL) JACK

This unit can input digital sound signals through this jack.
This unit has a built-in sampling frequency rate converter, which converts the sampling frequency rates that are different from the CD sampling frequency rate (BS/CS tuner or DAT (32 kHz or 48 kHz), and other digital signals) into a sampling frequency rate that can be recorded on a CD-R or CD-RW (44.1 kHz).
Use an optical cable to connect digital audio source equipment (DAT deck, MD player, etc.).
Remove the dust cap ⓐ from **DIGITAL IN (OPTICAL)** jack. Then, connect an optical cable plug to **DIGITAL IN (OPTICAL)** jack.
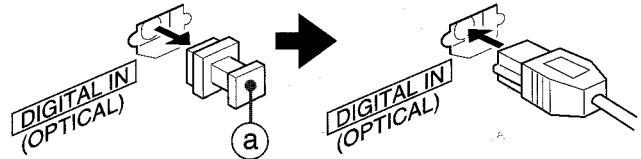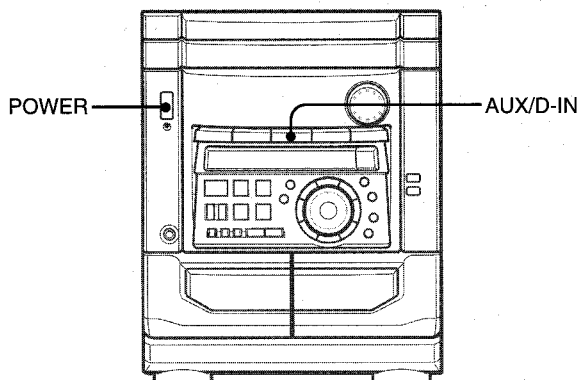

When DIGITAL IN (OPTICAL) jack is not being used
Attach the supplied dust cap.

SURROUND SPEAKERS JACKS

Connect optional surround speakers with 8 to 16 ohms impedance to the jacks.

LISTENING TO EXTERNAL SOURCES

POWER — AUX/D-IN

TO PLAY AN EQUIPMENT CONNECTED TO THE VIDEO/AUX JACKS

1 Press AUX/D-IN repeatedly until "AUX" appears on the display.

2 Play the connected equipment.

To change a source name in the display
When **AUX/D-IN** is pressed, "AUX" is displayed initially. It can be changed to "VIDEO" or "TV".
With the power on, press **POWER** while pressing **AUX/D-IN**.
Repeat the procedure to select one of the names.

TO PLAY AN EQUIPMENT CONNECTED TO THE DIGITAL IN JACK

1 Press AUX/D-IN repeatedly until "D-IN" appears on the display.

2 Play the connected equipment.

NOTE

If you load a disc on the CD-R/RW tray during playback of the equipment connected to the **DIGITAL IN** jack, the playback sound may not be heard while reading the disc.

CARE AND MAINTENANCE

Occasional care and maintenance of the unit and the software are needed to optimize the performance of your unit.

To clean the cabinet
Use a soft and dry cloth.
If the surfaces are extremely dirty, use a soft cloth lightly moistened with mild detergent solution. Do not use strong solvents, such as alcohol, benzine or thinner as these could damage the finish of the unit.

To clean the tape heads
When the tape heads are dirty;
- high frequency sound is not emitted
- the sound is not adequately high
- the sound is off-balance
- the tape cannot be erased
- the tape cannot be recorded on
After every 10 hours of use, clean the tape heads with a head cleaning cassette.
Refer to the instructions of the cleaning cassette for details.

To demagnetize the tape heads
The tape heads may become magnetized after long-term use. This may narrow the output range of recorded tapes and increase noise.
After every 20 to 30 hours of use, demagnetize the tape heads with a separately sold demagnetizing cassette.
Refer to the instructions of the demagnetizing cassette for details.

Care of discs
• When a disc becomes dirty, wipe the disc from the center out with a cleaning cloth.
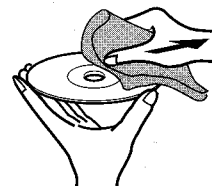
• After playing a disc, store the disc in its case. Do not leave the disc in places that are hot or humid.

Care of tapes
• Store tapes in their cases after use.
• Do not leave tapes near magnets, motors, television sets, or any source of magnetism. This will downgrade the sound quality and cause noise.
• Do not expose tapes to direct sunlight, or leave them in a car parked in direct sunlight.

SPECIFICATIONS

Main unit CX-NC303RW

FM tuner section
Tuning range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	16.8 dBf
Antenna terminals	75 ohms (unbalanced)

AM tuner section
Tuning range	530 kHz to 1710 kHz (10 kHz step)
	531 kHz to 1602 kHz (9 kHz step)
Usable sensitivity	350 µV/m
Antenna	Loop antenna

Amplifier section
Mid-high frequency amplifier

Power output* 15 watts per channel, Min. RMS at 8 ohms, from 200 Hz to 20 kHz, with no more than 1% Total Harmonic Distortion

Total harmonic distortion 0.06 % (8 W, 1 kHz, 8 ohms, DIN AUDIO)

Low frequency amplifier

Power output* 45 watts per channel, Min. RMS at 6 ohms, from 50 Hz to 200 Hz, with no more than 1% Total Harmonic Distortion

Total harmonic distortion 0.06 % (20 W, 130 Hz, 6 ohms, DIN AUDIO)

* without connecting to the SURROUND SPEAKERS

Inputs VIDEO/AUX: 500 mV
DIGITAL IN

Outputs SPEAKERS:
LOW FREQ: accept speakers of 6 ohms
HIGH FREQ: accept speakers of 8 ohms
SURROUND SPEAKERS: accept speakers of 8 to 16 ohms
PHONES (stereo jack): accepts headphones of 32 ohms or more
CD DIGITAL OUT (OPTICAL) jack

Compact disc player section (3CD Changer)
Laser	Semiconductor laser (λ = 780 nm)
D-A converter	1 bit dual
Signal-to-noise ratio	85 dB (1 kHz, 0 dB)
Harmonic distortion	0.05 % (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

Compact disc recorder section (CD-R/RW Player/Recorder)
Laser	Semiconductor Laser (λ = 785 ±5 nm)
Recording Method	Track at Once
Sampling Frequency	44.1 kHz
Harmonic Distortion	Play 0.05 % or less (1 kHz, 0 dB) Digital Record 0.05 % or less (1 kHz, 0 dB)

Cassette deck section
Track format	4 tracks, 2 channels stereo
Frequency response	50 Hz to 15000 Hz
Recording system	AC bias
Heads	Deck 1: Playback head × 1
	Deck 2: Recording/playback head × 1, erase head × 1

General
Power requirements	120 V AC, 60 Hz
Power consumption	120 W
Power consumption in standby mode	If the power-economizing mode is ECO OFF: 30 W
	If the power-economizing mode is ECO ON or ECO AUTO: 0.9 W
Dimensions (W × H × D)	260 × 326 × 370 mm (10 1/4 × 12 7/8 × 14 5/8 in.)
Weight	9.3 kg (20 lbs 8 oz.)

Speaker system SX-WNC303
Speaker system	3 way, Built-in subwoofer (magnetic shielded type)
Speaker units	Subwoofer: 160 mm (6 3/8 in.) cone type Full range: 100 mm (4 in.) cone type Super tweeter: 20 mm (13/16 in.) ceramic type
Impedance	6 ohms/8 ohms
Sensitivity	87 dB/W/m
Dimensions (W × H × D)	240 × 324 × 270 mm (9 1/2 × 12 7/8 × 10 3/4 in.)
Weight	4.8 kg (10 lbs 9 oz.)

Specifications and external appearance are subject to change without notice.

COPYRIGHT
Please check the laws on copyright relating to recordings from discs, radio or external tape for the country in which the machine is being used.

NOTE
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION
Modifications or adjustments to this product, which are not expressly approved by the manufacturer, may void the user's right or authority to operate this product.

OTHER CONNECTIONS GENERAL

En

TROUBLESHOOTING GUIDE

If the unit fails to perform as described in these Operating Instructions, check the following guide.

GENERAL

There is no sound.
• Is the AC cord connected properly?
• Is there a bad connection? (→ page 4)
• There may be a short circuit in the speaker terminals.
  → Disconnect the AC cord, then correct the speaker connections.
• Was an incorrect function button pressed?

The display window becomes dark.
• Timer recording is performed when the power economizing mode is set to ON or AUTO.
  → Adjust the Dimmer MODE (→ page 6).

Sound is emitted from one speaker only.
• Is the other speaker disconnected?

An erroneous display or a malfunction occurs.
  → Reset the unit as stated below.

The indication on the display window moves when the power is off.
• The demo display is active.
  → Press ◄►. The demo display goes off.

The power shuts off though you do not turn off the power.
• The power economizing mode is set to ON or AUTO.
  If the tape, CD, CD-R/CD-RW are stopped and there is no audio input from any connected external equipment for 10 minutes, the power shuts off automatically.
  → Set the power economizing mode to OFF (→ page 6).

TUNER SECTION

There is constant, wave-like static.
• Is the antenna connected properly? (→ page 5)
• Is the signal weak?
  → Connect an outdoor antenna.

The reception contains noise interferences or the sound is distorted.
• Is the system picking up external noise or multipath distortion?
  → Change the orientation of the antenna.
  → Move the unit away from other electrical appliances.

CASSETTE DECK SECTION

The tape does not run.
• Is deck 2 in pause mode? (→ page 10)

The sound is off-balance or not adequately high.
• Is the playback head dirty? (→ page 34)

Recording is not possible.
• Is the erasure prevention tab on the tape broken off? (→ page 11)
• Is the recording head dirty? (→ page 34)

Erasure is not possible.
• Is the erasure head dirty? (→ page 34)
• Is a metal tape or CrO2 tape being used?

High frequency sound is not emitted.
• Is the recording/playback head dirty? (→ page 34)

3CD CHANGER SECTION

The CD player does not play.
• Is the disc correctly inserted? (→ page 13)
• Is the disc dirty? (→ page 34)
• Is a non-finalized CD-R or CD-RW trying to be played.
  → Play it on the CD-R/RW player (→ page 16)
• Is the lens affected by condensation?
  → Wait for a few hours and try again.

CD-R/RW PLAYER/RECORDER SECTION

The CD-R/RW recorder cannot be operated.
• Is there a disc inside the unit?
  → load a disc.
• Is the lens affected by condensation?
  → Wait for a few hours and try again.

Sound is noisy.
• Is the unit placed close to an object with a strong magnetic field such as a television?
  → Move the unit away from the television.

Sound is intermittent.
• Is the unit placed on an unstable surface with a lot of vibration?
  → Place the unit on a stable surface with no vibration.

Recording is not possible.
• Is the CD-R or CD-RW finalized? (→ page 23)

NOTE

If the unit cannot be turned on
Disconnect the power cord from the AC outlet, wait for a few seconds, and re-connect the power cord to the AC outlet. Then try to turn the unit on again.

To reset
If an unusual condition occurs in the display window or the cassette decks, reset the unit as follows.
1 Press **POWER** to turn off the power.
2 Press **POWER** to turn the power back on while pressing ■.
  Everything stored in memory after purchase is canceled, and the demo display will appear.
3 Press **POWER** again to turn on the power.
If the power cannot be turned off in step 1 because of a malfunction, reset by disconnecting the AC cord, and connect it again. Then carry out step 2.

CD/CD-R/CD-RW GUIDE MESSAGES

Message	Cause	Solution
Blank Disc	Nothing is recorded on the disc.	—
UP DATE	Recording on a CD-R or CD-RW is finished.	Wait until the message disappears.
Check Disc	The disc is damaged by scratches.	Clean the disc or replace the disc.
	The TOC data is not proper.	
	A disc loaded on the CD-R/RW tray is not compatible with this unit.	Replace the disc with a usable disc. (page 12)
Disc Err	Error concerning CD-R or CD-RW occurs.	Replace the disc or Erase all tracks.
Can't Copy	Dubbing is prohibited by the SCMS standard.	—
WAIT	Finalization, Erasing, or Unfinalization is not finished within the unit-set time and so the unit is retrying the process.	Wait until the message disappears.
SYS ERROR	Mechanical or electrical error occurs in the unit.	Press **POWER** to turn the power off and then press it again to turn the power back on. If the message is still on, consult your local Aiwa dealer.
No Disc	There is no disc loaded	Load a disc.
No Signal	Input digital signal cannot be received.	Plug in properly with the digital connecting cord (optical).
Disc Full	There is not enough time left to be recorded on the disc.	Replace the disc with another recordable disc or erase tracks (CD-RW only).
OPC Full	The CD-R approaches the OPC limit. (page 12)	Finalize the CD-R.
OPC ERROR	The disc reached or exceeded the OPC limit or the disc is damaged and so OPC process failed.	The disc can be played back. To record, replace the disc.
ERASE Err	The erasing process fails.	Try again. If Last Track erasing fails, try All Track erasing.
Track Full	More than 99 tracks are trying to be recorded on a single disc.	Replace the disc with another disc or erase tracks (CD-RW only).
Mecha Err	Mechanical error occurs. (A disc may be unable to be removed)	Turn the power off / on and try to remove the disc. If you still cannot remove a disc, consult your local Aiwa dealer.

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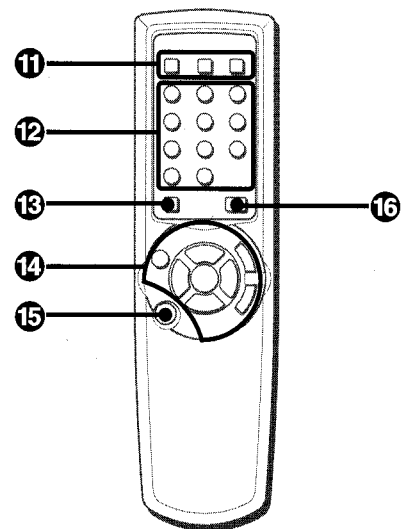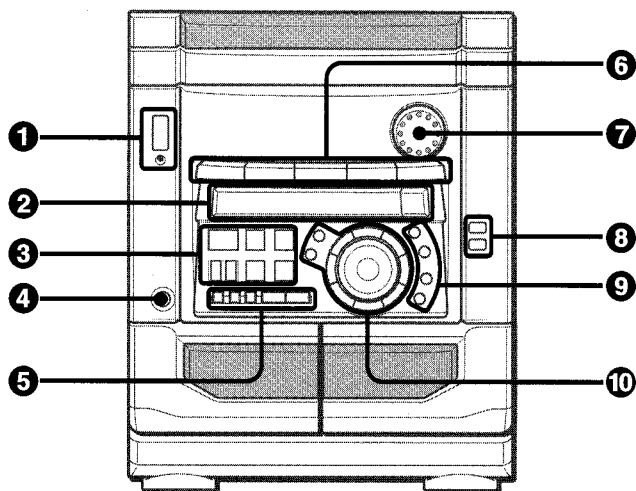
Name/Nombre/Nom	Page/Página/Page
❶ POWER	6
❷ CD-R/RW tray /Bandeja del CD-R/RW /Plateau à CD-R/RW	16,18
▲CD-R OPEN/CLOSE	16,18
❸ ‖SET	9,10,13,16,21,22,26,30,31
■CLEAR	6,9-11,13,15-18,21-29
◄►DIRECTION/PRESET	6,9-11,13-16,26
●SYNC DUB TAPE	27
●REC/REC MUTE TAPE	26,28,29
TUNING◄◄DOWN/►►UP	9,10,13,15,16,26,28-31
❹ PHONES	8
❺ DISC DIRECT PLAY 1-3	13,14,28,29
DISC CHANGE	13
▲OPEN/CLOSE	13
❻ TAPE DECK1/2	10,11
TUNER BAND	9
AUX/D-IN	22,26,34
3CD	13,18-21,30
CD-R/RW	16,23-25,30
❼ VOLUME	8
❽ ECO	6
3CD BLANK SKIP	14
❾ AUTO F(RW) ●3CD	18,19,20
MANUAL F ●3CD	18,19,20
MANUAL F ●SINGLE	19
MANUAL F ●REC	21,22

Name/Nombre/Nom	Page/Página/Page
❿ Q SURROUND	8
T-BASS	8
MULTI JOG	10,11,13,16,26,28-31
ENTER	10,11,21-26,30,31
TIMER	30,31
DISPLAY	13,16,18,32
MODE	10,11,24-26
FINALIZE	23
ROCK, POP, CLASSIC	8
⑪ DISC DIRECT PLAY1-3	13,14,28,29
⑫ 0-9,+10	9,13,15-17,28,29
1/CD EDIT/CHECK	13,16,28,29,32
2/PRGM	15,17
3/RANDOM/REPEAT	14,17
4/GEQ	8
6/T-BASS	8
7/TIMER	30
8/SLEEP	31
9/CLOCK	7
0/MONO TUNER	9
+10/BAND	9
⑬ SHIFT	5
⑭ I◄◄/◄◄ DOWN	9,10,13,15,16,26,28-31
►►I/►►UP	9,10,13,15,16,26,28-31
‖SET	9,10,13,16,21,22,26,30,31
■CLEAR	6,9-11,13,15-18,21-29
►/◄►PRESET	6,9-11,13-16,26
VOL (∧,∨)	8
⑮ POWER	6
⑯ FUNCTION	5

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