aiwa

COMPACT DISC STEREO SYSTEM

XR-M99

OPTIONAL COMPONENTS
STEREO CASSETTE DECK
FX-LM99
MINI DISC RECORDER
AM-LM99

OPERATING INSTRUCTIONS
MANUAL DE INSTRUCCIONES
MODE D'EMPLOI

En (English)
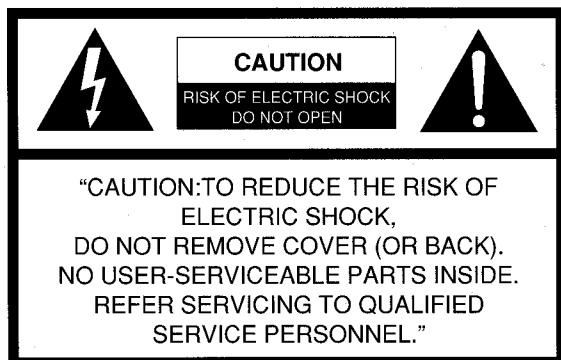
E (Español)

F (Français)

For assistance and information,
call toll free 1-800-BUY-AIWA.
(United States and Puerto Rico)

MiniDisc

COMPACT disc
DIGITAL AUDIO

U

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.
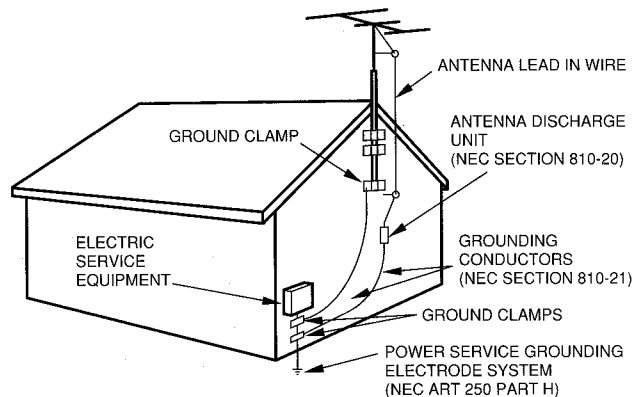
Electric Power

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 power plugs 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

GROUNDING CONDUCTORS (NEC SECTION 810-21)

ELECTRIC SERVICE EQUIPMENT

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 unit 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.

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.

Compact Disc Stereo System XR-M99

Model No.	Serial No. (Lot No.)
MX-LM99	
TX-LM99	
DX-LM99	
SX-LM99	

Optional Stereo Cassette Deck

Model No.	Serial No. (Lot No.)
FX-LM99	

Optional Mini Disc Recorder

Model No.	Serial No. (Lot No.)
AM-LM99	

TABLE OF CONTENTS

En

CHECK YOUR SYSTEM AND ACCESSORIES

The XR-M99 Compact Disc Stereo System consists of the following items.

TX-LM99 Stereo Tuner

SX-LM99 Speaker System

Remote control

MX-LM99 Stereo
Integrated Amplifier

DX-LM99 Compact Disc Player

AM antenna

FM antenna

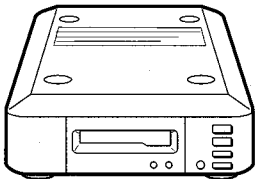Operating Instructions, etc.
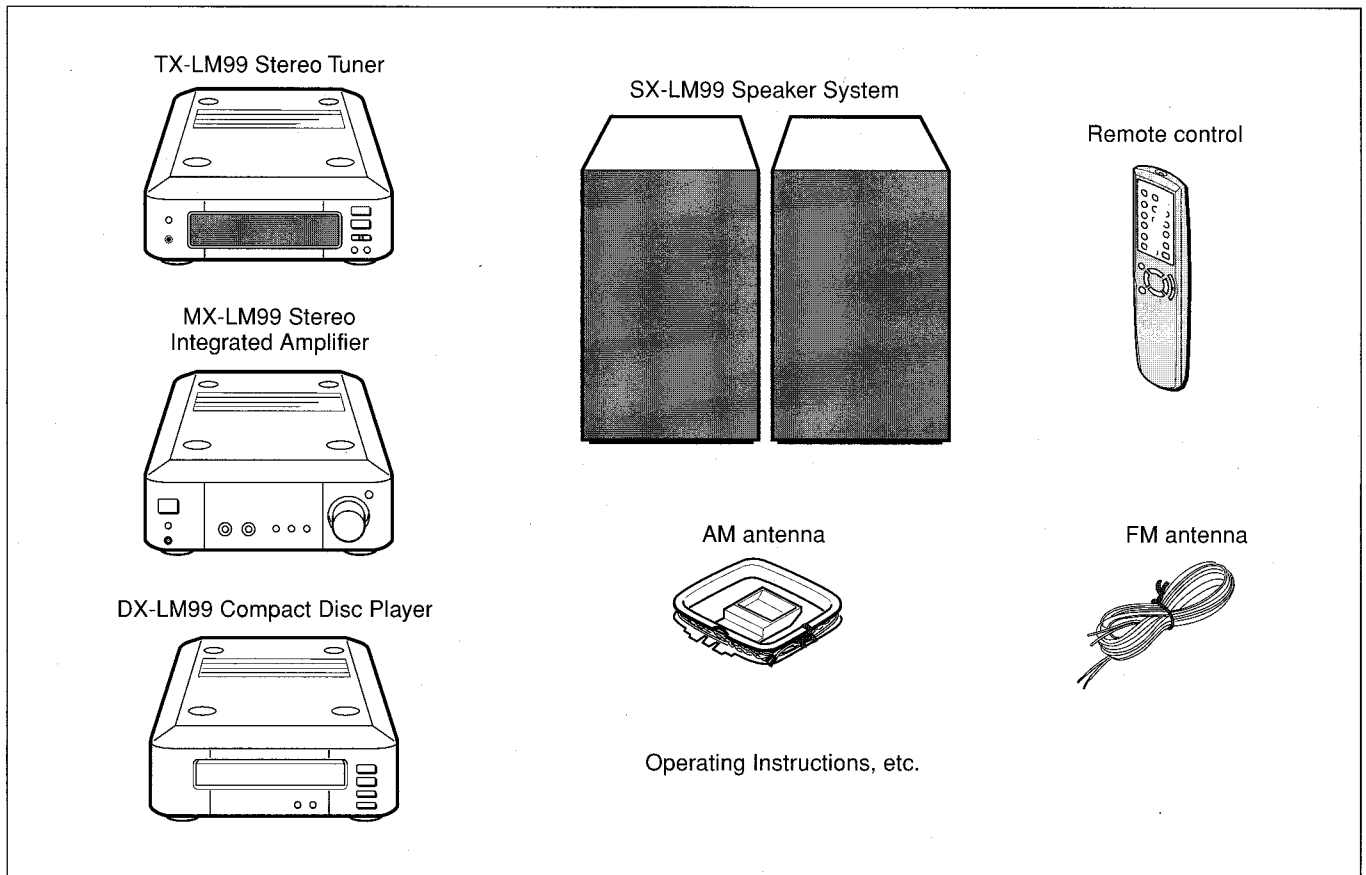
OPTIONAL UNITS
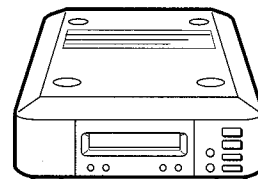
The following two units are optionally available.

FX-LM99 Stereo Cassette Deck
This unit allows you to play back a tape and to record various sound sources onto a tape.

AM-LM99 Mini Disc Recorder
This unit allows you to play back an MD and to record various sound sources including an external digital audio equipment onto an MD.

HOW TO USE THIS MANUAL

This manual consists of the following 9 sections:

PREPARATIONS
Describes how to hook up the XR-M99 Compact Disc Stereo System, how to turn on and off the system, and how to use the remote control. This chapter also explains how to set the system's clock, how to turn on and off the power economizing mode, and how to change the brightness of the display.

SOUND
Describes how to adjust the playback sound to your preference.

RADIO RECEPTION
Explains how to use the TX-LM99 Stereo Tuner.

CD PLAYING
Explains how to use the DX-LM99 Compact Disc Player.

USING THE OPTIONAL STEREO CASSETTE DECK
This section describes how to connect the FX-LM99 optional Stereo Cassette Deck to the system, and how to use it to playback tapes and record onto tapes.

USING THE OPTIONAL MINI DISC RECORDER
This section describes how to connect the AM-LM99 optional Mini Disc Recorder to the system, and how to use it to playback MDs, record onto MDs, and edit the recorded contents on MDs.

TIMER
Explains how to use the timer playback, timer recording, and sleep timer functions of the system.

OTHER CONNECTIONS
Describes how to connect and listen to external sound sources.

GENERAL
This section contains the useful information such as "care and maintenance," "MD guide messages," "troubleshooting guide," and "parts index."

For the users of the FX-LM99 Stereo Cassette Deck
First make connections referring to the "PREPARATIONS" section and "USING THE OPTIONAL STEREO CASSETTE DECK" section.

### For the users of the AM-LM99 Mini Disc Recorder
First make connections referring to the "PREPARATIONS" section and "USING THE OPTIONAL MINI DISC RECORDER" section.
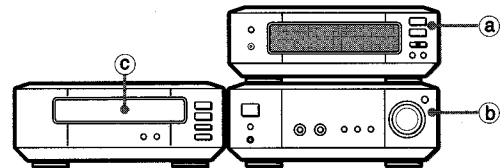
RECOMMENDED POSITIONING

The XR-M99 Compact Disc Stereo System is designed to be operated by placing each unit as illustrated below:

ⓐ Stereo Tuner
ⓑ Stereo Integrated Amplifier
ⓒ Compact Disc Player
ⓓ Optional Stereo Cassette Deck or Mini Disc Recorder

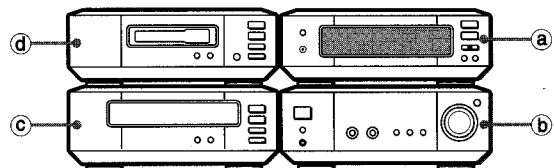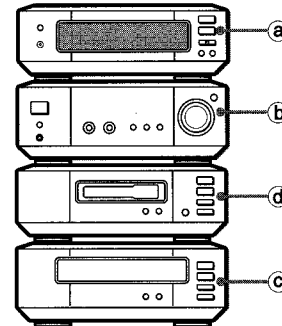**Placing three units vertically**
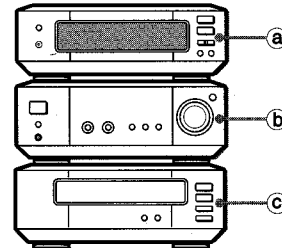
Placing the Compact Disc Player at the side of the Stereo Integrated Amplifier

When the optional units are added

CONNECTIONS

Before connecting the AC cord

The rated voltage of your unit shown on the rear panel of the MX-LM99 Stereo Integrated Amplifier is 120V AC. Check that the rated voltage matches your local voltage.

IMPORTANT

• Connect the speakers, antennas, and all optional equipment first. Then connect the AC cord.
• Both speakers can be connected as L (Left) or R (Right).

NOTE

When placing the Compact Disc Player at the side of the Stereo Integrated Amplifier, make sure that the flat cable does not obstruct the ventilation openings at the rear of the Stereo Integrated Amplifier.
Always leave adequate clearance between the flat cable and the ventilation openings.
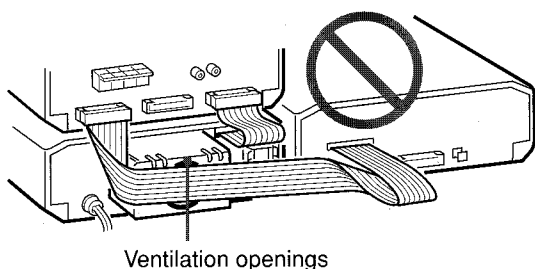
Ventilation openings

1 Connect the Stereo Integrated Amplifier and the Compact Disc Player to the Stereo Tuner.

Connect the flat cable of the Stereo Integrated Amplifier to the FROM AMP terminal, and connect the flat cable of the Compact Disc Player to the FROM CD terminal.
Push the connectors until they click into place.
Note that there is only one possible direction to plug in the connectors.

Stereo Tuner

Flat cable

Stereo Integrated Amplifier

Compact Disc Player

Flat cable
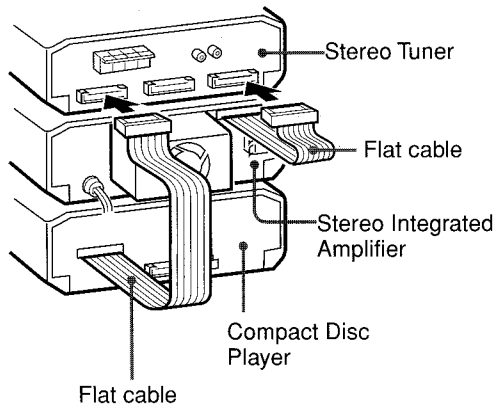
2 Connect the speaker cords to the speakers.

Connect the cords with the white stripes to ⊕ terminals and the other cords to ⊖ terminals.
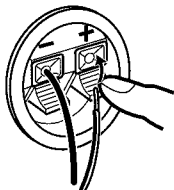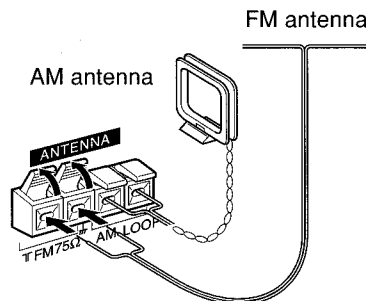
3 Connect the speaker cords to the Stereo Integrated Amplifier.

The cords with the white stripes should be connected to the ⊕ terminals and the other cords to the ⊖ terminals.
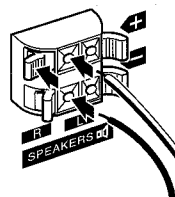
4 Connect the supplied antennas to the Stereo Tuner.

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

FM antenna

AM antenna

5 Connect the AC cord to an AC outlet.

NOTE

Do not short-circuit the ⊕ and ⊖ speaker cord leads; otherwise the sound may become inaudible or the system may be turned off.
If this happens, disconnect the AC cord from the AC outlet and re-connect the speaker cords correctly. Connect then the AC cord and turn the system on again.
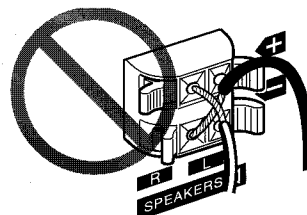
To stand the AM antenna on a surface
Fix the claw to the slot.
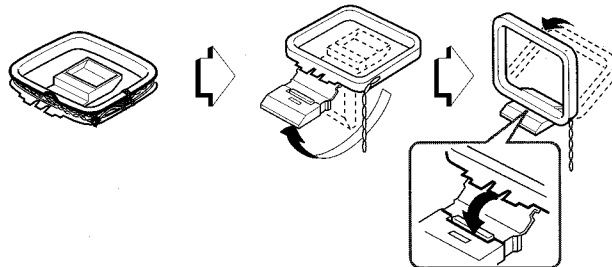
To position the antennas
FM feeder antenna:
Extend this antenna horizontally in a T-shape and fix its ends to the wall.
AM loop antenna:
Position to find the best direction.

Connection diagram

FM antenna

Right speaker

AM antenna

Left speaker

Stereo Tuner

Stereo Integrated Amplifier

Compact Disc Player

to an AC outlet

AC cord

NOTE

• Do not connect any speakers to the system other than the supplied ones.
• Do not leave objects generating magnetism near the speakers.
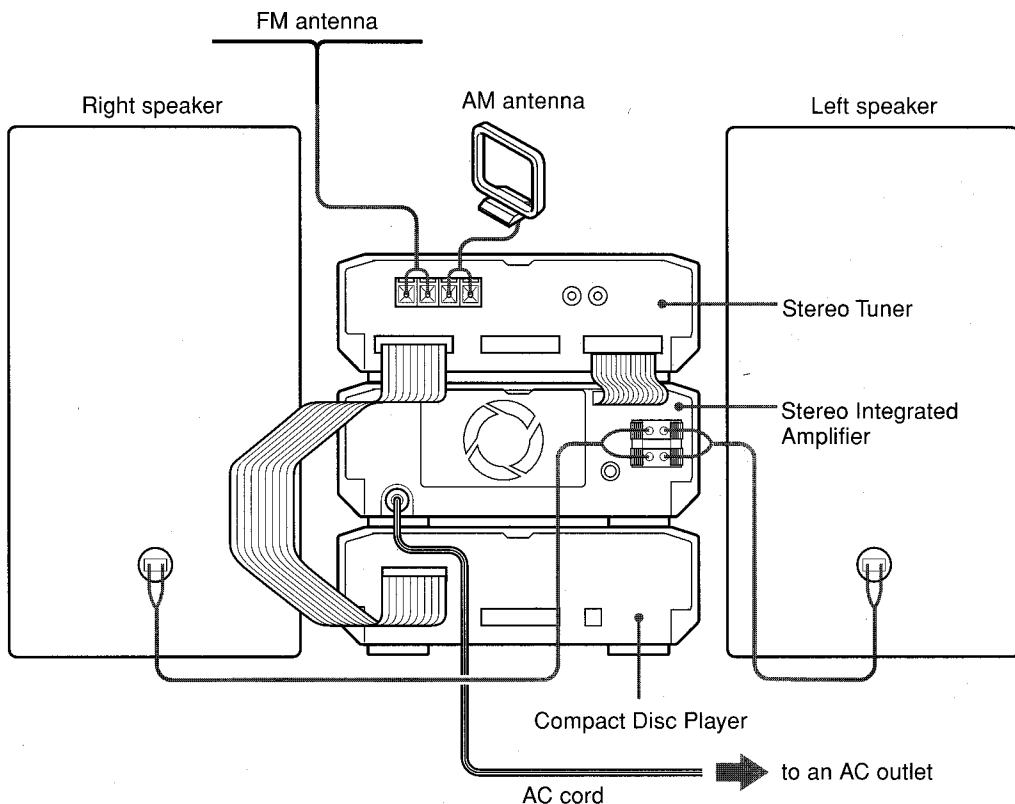• Do not bring the FM antenna near metal objects or curtain rails.
• Do not bring the AM antenna near other optional equipment, the stereo system itself, the AC cord or speaker cords, since noise will be picked up.
• Do not unwind the AM antenna wire.
• Care should be taken so that the speaker and antenna cords do not get into the ventilation openings on the rear of the Stereo Integrated Amplifier.

CONCERNING THE DISPLAY WINDOW'S DEMO DISPLAY

When the AC cord is plugged into an electrical outlet for the first time after purchase, a demo display will appear in the display window of the Stereo Tuner. When the power is turned on, the demo display will end. When the power is turned off, the demo display will appear again. Until the clock is set, the demo display will appear whenever the power is turned off. (For setting the clock, see page 9.)

When the clock is set
The demo display can be seen using the DEMO button on the Stereo Tuner, either while the power is turned off or on. To end the demo display, press the DEMO button again.

CONNECTING AN OUTDOOR ANTENNA

En

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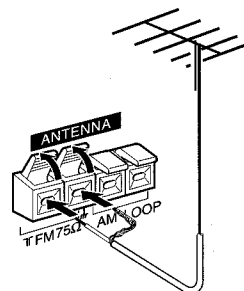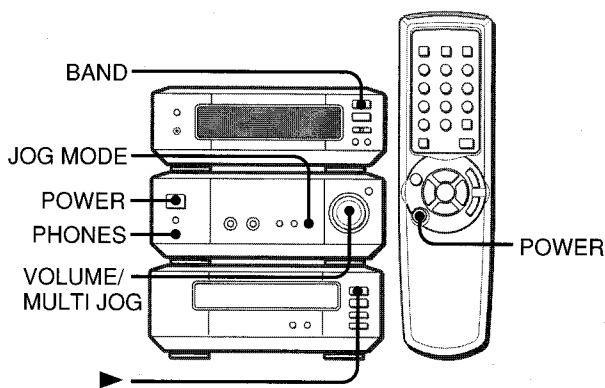
CONNECTING OTHER EQUIPMENT

To connect the FX-LM99 optional Stereo Cassette Deck
See page 15.

To connect the AM-LM99 optional Mini Disc Recorder
See page 20.

To connect other commercially available audio equipment
See page 36.

BEFORE OPERATION

BAND
JOG MODE
POWER
PHONES
VOLUME/
MULTI JOG
POWER

TURNING THE SYSTEM ON

Press one of the following buttons.
The POWER button on the Stereo Integrated Amplifier or on the remote control:
The system is turned on and enters the previously selected function mode.
The BAND button on the Stereo Tuner:
The system is turned on and tuned in to the previously received radio station.
The ▶ button on the Compact Disc Player :
The system is turned on and the play of the loaded CD begins.

To turn the system off
Press the POWER button.

VOLUME/MULTI JOG dial
The VOLUME/MULTI JOG dial on the Stereo Integrated Amplifier can be used when adjusting the volume and setting the clock.
It can also be used with the JOG MODE button as a convenient dial to adjust the sound quality.
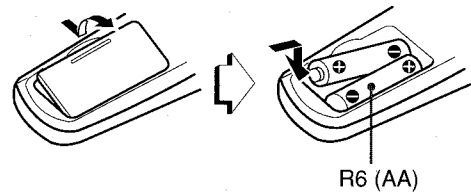Detailed explanations are given on each related page.

USING THE HEADPHONES

Connect headphones with a stereo mini plug (ø3.5mm, ⅛ inch) to the PHONES jack on the Stereo Integrated Amplifier.

USING THE 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 system should be approximately 5 meters (16 feet). When this distance decreases, replace the batteries with new ones.

To use the remote control
Some operations can be performed using the buttons on the remote control only, or those on the main units only, while others can be performed using the buttons on the main units as well as on the remote control. This instructions manual clearly describes the buttons available for each operation.

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 system is exposed to intense light, such as direct sunlight.
  - Other remote controls are used nearby (television, etc.)
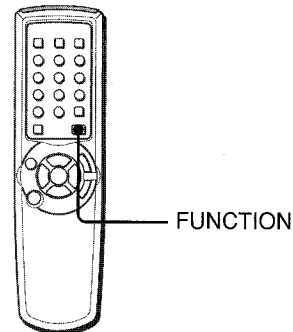
FUNCTION

To use the FUNCTION button
Each time the FUNCTION button is pressed while power is on, functions of the system is switched from one to another cyclically.

SETTING THE CLOCK

SET —

TUNING —
UP/DOWN

VOLUME/ —
MULTI JOG

ENTER/ —
ILLUMINATION
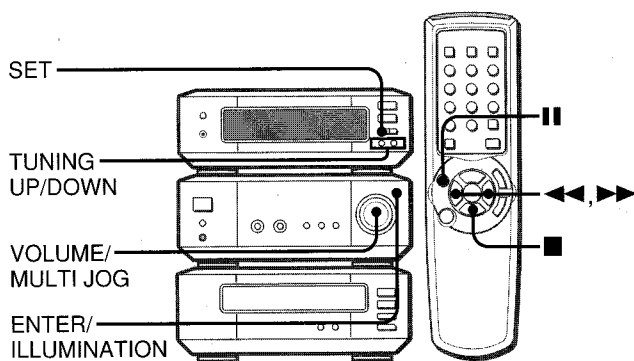
1 Turn the system off.

2 Press one of the following buttons:
The SET button on the Stereo Tuner.
The ENTER/ILLUMINATION button on the Stereo Integrated Amplifier.
The II button on the remote control.
The clock is displayed . (Or the clock becomes brighter.)
• When the power cord is plugged into an AC outlet for the first time after purchase or when the clock setting is canceled due to a power failure, the entire clock display flashes. Within 4 seconds, start setting the clock as described in step 3.
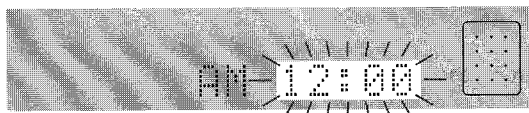
To switch to the 24-hour standard, press the CLEAR button on the Stereo Tuner or the ■ button on the remote control.
To restore the 12-hour standard, press the CLEAR or the ■ button again.

3 While the clock is displayed brighter (for 4 seconds), start setting the time.
Turn the VOLUME/MULTI JOG dial 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 according to how fast you turn the VOLUME/MULTI JOG dial. You can also press the TUNING UP/DOWN buttons on the Stereo Tuner or the ◄◄ or ►► button on the remote control. Holding these buttons down will vary the time in 10-minute units.

4 Press one of the following buttons:
The SET button on the Stereo Tuner.
The ENTER/ILLUMINATION button on the Stereo Integrated Amplifier.
**The II button on the remote control.**

When the clock is set for the first time after purchase
Everything on the display will clear.
This is because the power economizing mode of the system is activated, and is not a malfunction.
The power economizing mode can be canceled. See "ECONOMIZING POWER" for details.

> If the demo display appears when the system is turned off and pressing the DEMO button on the Stereo Tuner makes the clock flashing, this indicates that the clock has been stopped due to a power failure or the disconnection of the AC cord. The current time needs to be reset.

ECO —
ENTER/
ILLUMINATIOIN
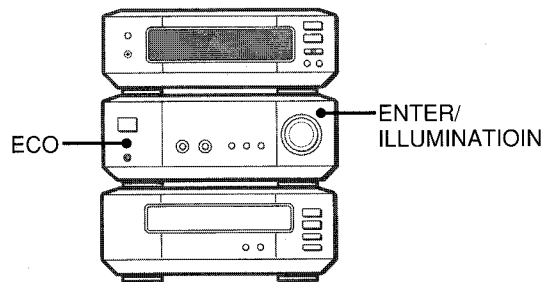
ECONOMIZING POWER

This system allows you to regulate its power consumption by displaying nothing on the display while the power is off.
This is called the power economizing mode.

Turn the system on, and press the ECO button on the Stereo Integrated Amplifier repeatedly to turn on or off the power economizing mode.
Display ECO ON to turn on the power economizing mode.
Display ECO OFF to turn off the power economizing mode.

When the power economizing mode is set
Each time the system is turned off, "Eco Mode" is displayed for 4 seconds, and everything on the display will clear.
Only the red indicator above the POWER button on the Stereo Integrated Amplifier lights to show that the power is supplied to the system.

Standby power consumption
If the power economizing mode is activated : 1.9 W
If the power economizing mode is deactivated : 13.7 W

TURNING ON/OFF THE ILLUMINATION AND DIMMING THE DISPLAY

This system allows you to turn on and off the blue illumination of each unit, and change the brightness of the display window according to your preference.

Press the ENTER/ILLUMINATION button on the Stereo Integrated Amplifier while the system is turned on.
Each press of this button changes the illumination and display status as follows:
① Brighter display with blue illumination turned on
② Brighter display with blue illumination turned off
③ Darker display with blue illumination turned off

If the power is turned off after changing the illumination and display brightness, they return to the last status when the power is turned on the next time.

NOTE

The above operation is not possible when the ENTER/ILLUMINATION button is used as the ENTER button, i.e. when setting the clock, etc.

ADJUSTING THE SOUND

VOLUME/
MULTI JOG
Q SURROUND
JOG MODE
EQ
VOL
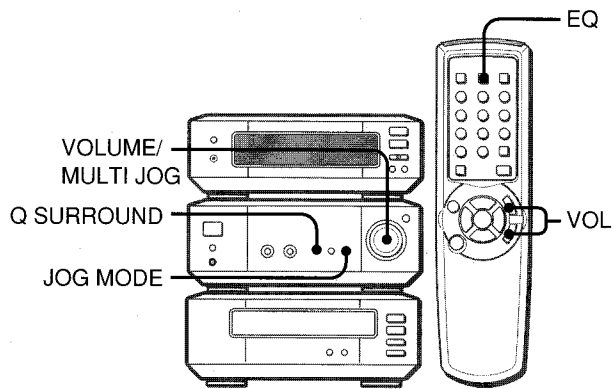
ADJUSTING THE VOLUME

Turn the VOLUME/MULTI JOG dial on the Stereo Integrated Amplifier, or press the VOL buttons on the remote control.
The volume level is shown on the display for 4 seconds. It can be set from 0 (minimum) to 30, and then MAX (maximum).
The volume remains memorized even after the power is turned off. However, if the power is turned off when the volume is set to more than 21, it is automatically set to 21 the next time the power is turned on.

ENHANCING THE BASS SOUND

The T-BASS system enhances the realism of low-frequency sound.
Press the JOG MODE button repeatedly until "T-BASS" appears on the display. Then, **turn the VOLUME/MULTI JOG dial** right or left to select one of the three levels, or off position within 6 seconds. The T-BASS level does not change cyclically.
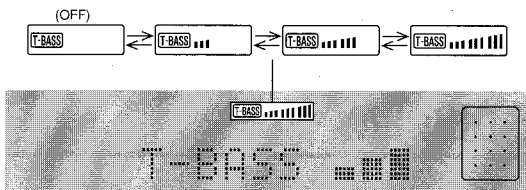

NOTE

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.
* Cassette tapes can be played back with this system when the FX-LM99 optional Stereo Cassette Deck is connected.

ENHANCING THE TREBLE SOUND

The BBE system enhances the clarity of high-frequency sound.
Press the JOG MODE button repeatedly until "BBE" appears on the display. Then, **turn the VOLUME/MULTI JOG dial** right or left to select one of the three levels, or off position within 6 seconds. The BBE level does not change cyclically.
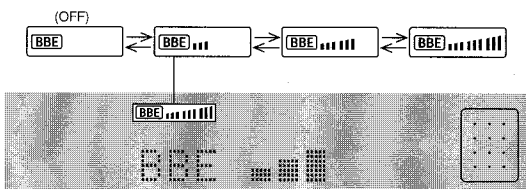
EQ (EQUALIZER)

This system provides the following three different equalization curves.
ROCK: Powerful sound emphasizing treble and bass
POP: More presence in the vocals and midrange
JAZZ: Accented lower frequencies for jazz-type music

Press the JOG MODE button repeatedly until "EQ OFF" (or the current EQ setting) appears on the display. Then, **turn the VOLUME/MULTI JOG dial** right or left to select one of the three kinds, or off position within 6 seconds.
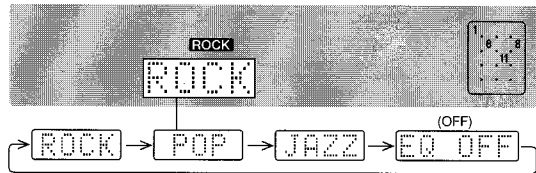
The graphic curve corresponding to the selected equalization mode will be displayed on the display.

When using the remote control, press the EQ button repeatedly.

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.

To turn on the Q SURROUND system
Press the Q SURROUND button so that "Q-SUR ON" appears on the display.

To cancel the Q SURROUND effect
Press the Q SURROUND button again so that "Q-SUR OFF" is displayed.

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.

SOUND ADJUSTMENT DURING RECORDING

(When the FX-LM 99 optional Stereo Cassette Deck or the AM-LM99 optional Mini Disc Recorder is connected)
The output volume and tone of the speakers or headphones may be freely varied without affecting the level of the recording.

MANUAL TUNING
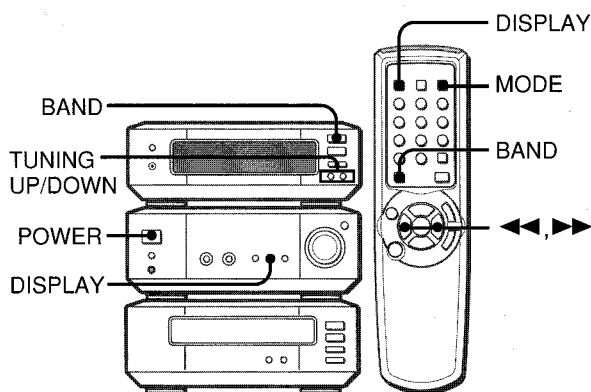
1 **Press the BAND button on the Stereo Tuner or on the remote control repeatedly to select the desired band.**

$$\boxed{\rightarrow FM \rightarrow AM}$$
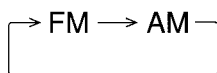
If you press the button while the system is turned off, the previously tuned station will be played (Direct Play Function).

2 **Press the TUNING UP or DOWN button on the Stereo Tuner or the ◄◄ or ►► button on the remote control 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.
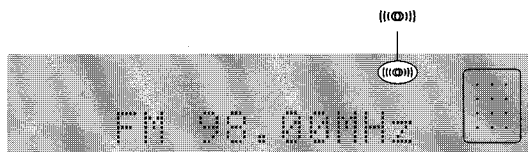
About the level indicator
The above display automatically changes to the level indicator after 4 seconds.
The level indicator shows an approximate playback sound level.

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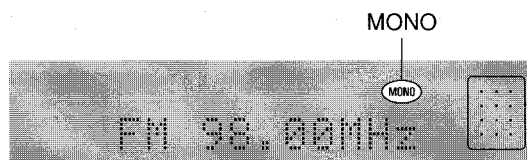• The Auto Search may not stop at stations with very weak signals.

When an FM stereo broadcast contains noise
Press the MODE button on the remote control.
"MONO" appears on the display.
Noise is reduced, although reception is monaural.

To restore stereo reception, repeat the above again.

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

NOTE

When the AM tuning interval is changed, all preset stations (see "PRESETTING STATIONS") are cleared. The preset stations have to be set again.

To change the display
Press the DISPLAY button. With each press of the button, the display changes in the following order.
① Level indicator
② Frequency of the tuned station
(Example: FM 90.00MHz)
③ Remaining recordable time of MD*
(Example: Rem   −48:07)
* Displayed for 4 seconds, only when the AM-LM99 optional Mini Disc Recorder is connected and an MD is loaded into the Mini Disc Recorder.

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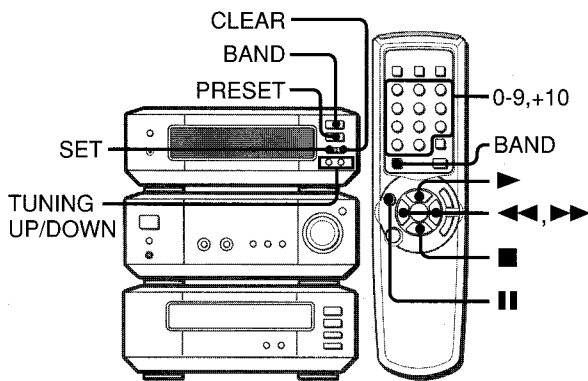
The system can store a total of 32 preset stations. When a station is stored, a preset number is assigned to the station. Use the preset number to tune in to a preset station directly.

1 **Press the BAND button on the Stereo Tuner or on the remote control to select a band.**

2 **Press the TUNING UP or DOWN button on the Stereo Tuner or the ◄◄ or ►► button on the remote control to select a station.**

3 **Press the SET button on the Stereo Tuner or the II button on the remote control to store the station.**
A station is assigned a preset number, beginning from 1 in consecutive order for each band.

Preset number

Frequency
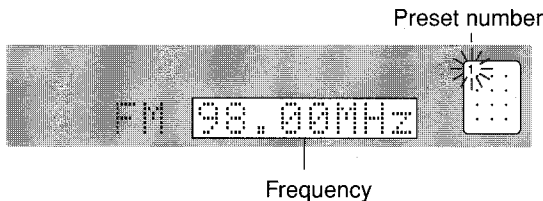
4 **Repeat steps 1, 2 and 3.**
The next station will not be stored if 32 preset stations have already been stored ("PRST FULL" will be displayed).

PRESET NUMBER TUNING

1 **Press the BAND button on the Stereo Tuner or on the remote control to select a band.**

2 **Press the PRESET button on the Stereo Tuner or the ► button on the remote control.**
Each time the button is pressed, the next ascending preset number is selected.

Tuning by preset number
1 Press the BAND button to select a band.
2 Press the numbered buttons on the remote control to select a preset number:
Example:
To select preset number 10, press the +10 and 0 buttons.
To select preset number 15, press the +10 and 5 buttons.

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

NOTE

If there is a long period of power failure or disconnection of AC cord, the presetting of the stations is canceled. In this case, preset again.

OPERATION

DISPLAY

0-9,+10

DISPLAY

FUNCTION

FUNCTION
UP/DOWN

◄◄,►►

II

►

◄◄,►►

■

II

■
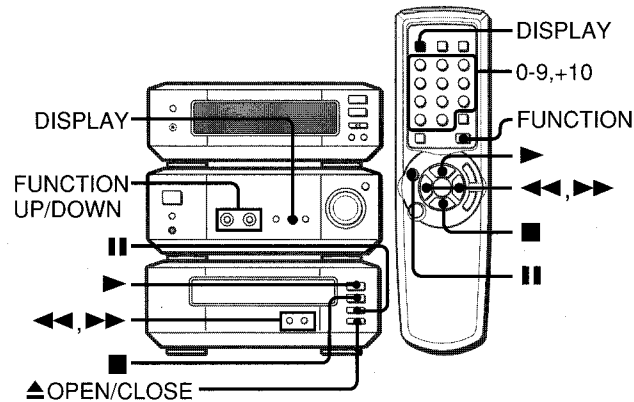
▲OPEN/CLOSE

LOADING A DISC

1 Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control repeatedly so that "CD" appears.

2 Press the ▲ OPEN/CLOSE button on the Compact Disc Player to open the disc compartment. Load a disc with the label side up, and close the disc compartment by pressing the ▲ OPEN/CLOSE button.

▲OPEN/CLOSE

Total number of tracks

Music calender (only the first 20 tracks are displayed)

Total playing time

PLAYING A DISC

Load a disc.

Press the ► button.

Play begins with the first track.

Number of track being played

Elapsed playing time

About the level indicator

The above display automatically changes to the level indicator after 4 seconds.
The level indicator shows an approximate playback sound level.
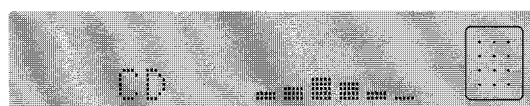
To stop play, press the ■ button.

To pause play, press the II button. To resume play, press again.

To search for a particular point during playback, keep the ◄◄ or ►► button pressed and release the button at the desired point.

To skip to the beginning of a track during playback, press the ◄◄ or ►► button repeatedly.

To remove the disc, press the ▲ OPEN/CLOSE button.

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

Press the ► button on the Compact Disc Player. The power is turned on and play of the loaded disc begins.
To replace the disc before play, press the ▲ OPEN/CLOSE button to open the disc compartment.

Selecting a track with the remote control

Press the numbered buttons and the +10 button to select a track.
Example:
To select the 25th track, press the +10, +10 and 5 buttons.
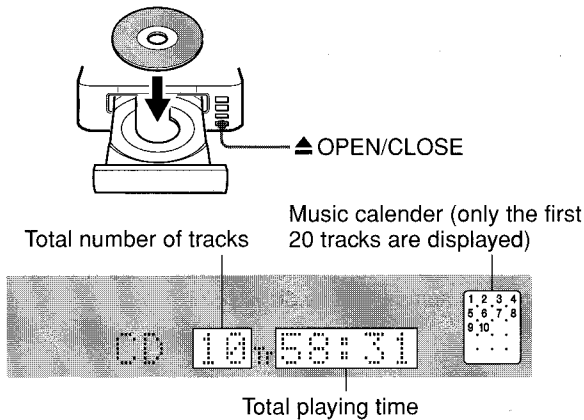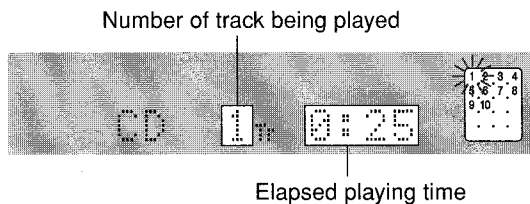To select the 10th track, press the +10 and 0 buttons.
The selected track starts to play and play continues to the end of that disc.

To change the display in stop mode

Press the DISPLAY button. With each press of the button, the display changes in the following order.

① Total number of tracks and total playing time of the CD
(Example: CD 10Tr   58:31)
② Remaining recordable time of MD*
(Example: Rem   −48:07)
* Displayed for 4 seconds, only when the AM-LM99 optional Mini Disc Recorder is connected and an MD is loaded into the Mini Disc Recorder.

To change the display in playback mode

Press the DISPLAY button. With each press of the button, the display changes in the following order.

① Level indicator
② Track number being played and elapsed playing time
(Example: CD 3Tr   3:43)
③ Remaining time of playback
(Example: CD   −26:15)
④ Remaining recordable time of MD*
(Example: Rem   −48:07)
* Displayed for 4 seconds, only when the AM-LM99 optional Mini Disc Recorder is connected and an MD is loaded into the Mini Disc Recorder.

NOTE

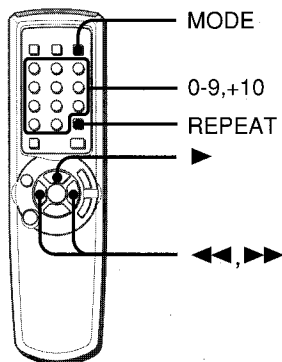• Do not use irregular shape CDs (example: heart-shaped, octagonal ones). It may result in malfunction.
• When loading an 8-cm (3-inch) disc, put it onto the inner circle of the tray.
• Do not place more than one compact disc on the disc tray.

En

MODE
0-9,+10
REPEAT
▶
◀◀,▶▶

RANDOM/REPEAT PLAY

Use the remote control.

RANDOM play
All the tracks on the disc can be played randomly.
Press the MODE button repeatedly until "RANDOM" lights up on the display.
To cancel random play, press the MODE button repeatedly until the normal display appears and "RANDOM" disappears.

NOTE

- Even if the ◀◀ button is pressed, a previously played track cannot be skipped. The unit returns to the beginning of the current track only.
- When you select a track with the numbered buttons on the remote control during the random play mode, the selected track starts to play and the random play mode is canceled.

REPEAT play
A single track or all tracks can be played back repeatedly.
Press the REPEAT button repeatedly.
"⟳1" lights up when the single track repeat play is selected, and "⟳" lights up when the all tracks repeat play is selected.
To cancel repeat play, press the REPEAT button repeatedly until "⟳" and "1" disappear.

To repeat random play
First press the MODE button to activate random play.
Then press the REPEAT button so that "⟳" lights up.

PROGRAMMED PLAY

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

1 In stop mode, press the MODE button repeatedly until "PRGM" appears on the display.
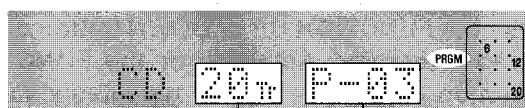

If you press the ▶ button before going to step 2, the programming mode is canceled and the first track of the CD starts to play.

2 Press the numbered buttons and the +10 button to program a track.
Example:
To select the 12th track, press the +10 and 2 buttons.
To select the 20th track, press the +10, +10 and 0 buttons.

Selected track number   Program number

⇩
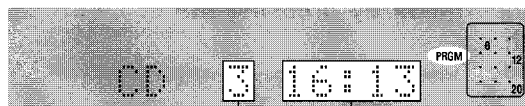
Total number of selected tracks   Total playing time of the selected tracks

3 Repeat step 2 to program other tracks.

4 Press the ▶ button to start play.

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

To clear the program
Press the ■ button in stop mode.

To add tracks to the program
Before playing, repeat step 2. The track will be programmed after the last track.

To change the programmed tracks
Clear the program and repeat all the steps again.

NOTE

- During the programmed play, the MODE and numbered buttons do not function.
- Repeating programmed play is also possible.
- If the programmed time exceeds 99 minutes 59 seconds, or the disc track number 31 or above is programmed, the display shows --:-- as the total playing time.

CONNECTIONS

NOTE

For how to hook up the entire system, refer to page 6.

CAUTION

Before connecting the Stereo Cassette Deck, disconnect the AC cord from the AC outlet.
After making connections, re-connect the AC cord.

CONNECTING THE STEREO CASSETTE DECK

Connect the Stereo Cassette Deck's flat cable to the FROM DECK terminal on the rear of the Compact Disc Player.

Cassette Deck

Compact Disc Player
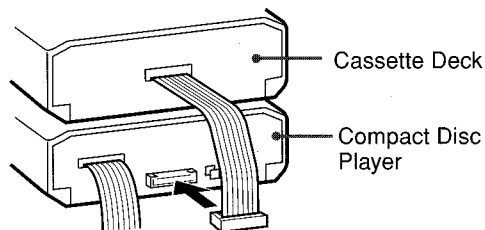
Recommended positioning
Place the Stereo Cassette Deck on top of the Compact Disc Player.

AM antenna

FM antenna

Right speaker

Left speaker

Stereo Tuner

Stereo Integrated Amplifier

Stereo Cassette Deck

Compact Disc Player

to an AC outlet

AC cord
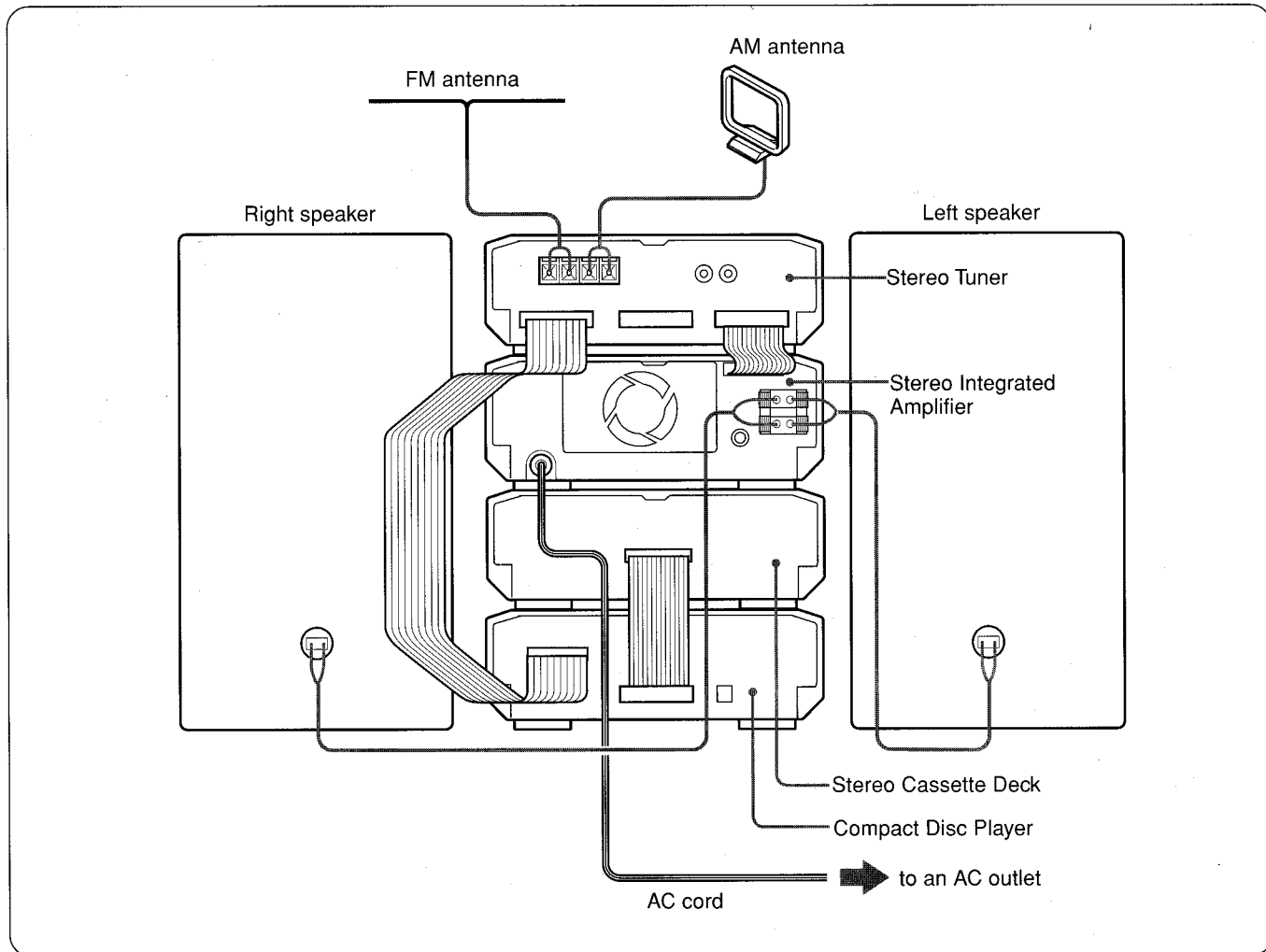
En
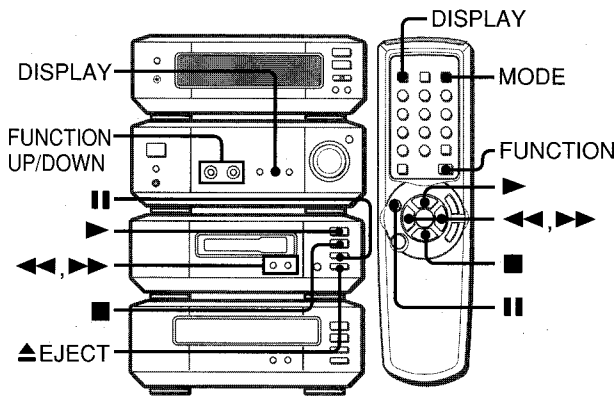
TAPE PLAYBACK

LOADING A TAPE

- You can select a reverse mode to play back one or both sides.
- Use Type I (normal) or Type II (high/CrO₂) tapes for playback.

NOTE

Be sure not to load a tape while the system is turned off.
Otherwise, the loaded tape might not be ejected even the system
is turned on.

**1 Press the FUNCTION UP or DOWN button on the
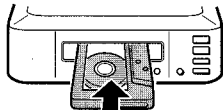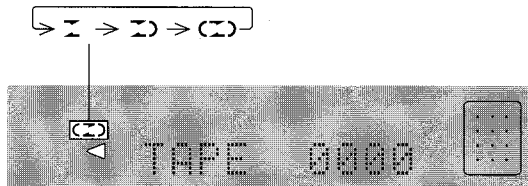Stereo Integrated Amplifier or the FUNCTION
button on the remote control repeatedly so that
"TAPE" appears.**

**2 Insert a tape with the exposed side facing to the
right and push it gently until it is loaded
automatically inside the Stereo Cassette Deck.**

To select a reverse mode
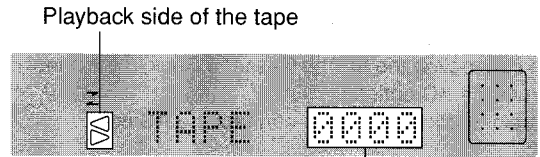Each time the MODE button on the remote control is pressed,
the reverse mode changes.

To play one side only, select ⊐.
To play from front side to back side once only, select ⊐⊃.
To play both sides repeatedly, select ⊂⊃.

PLAYING BACK A TAPE

Load a tape.

Press the ◄► button to start play.
To start play with the remote control, press the ► button.

Playback side of the tape

The tape counter indicates the tape
running length. (It disappears when
no tape is inserted.)

▷: The side facing upward is being played (forward).
◁: The side facing downward is being played (reverse).

About the level indicator
The above display automatically changes to the level indicator
after 4 seconds.
The level indicator shows an approximate playback sound level.

To stop play, press the ■ button.
To pause play, press the II button. To resume play, press again.
To change the playback side, press the ◄► button in play or
pause mode.
To fast forward or rewind, press the ◄◄ or ►► button in stop
mode. Then press the ■ button to stop the tape.
To eject the tape, press the ▲ EJECT button.

To start play when the power is off (Direct Play Function)
Press the ◄► button. The power is turned on and play of the
loaded tape begins.

To set the tape counter to 0000
Press the ■ button in stop mode.
The counter is also set to 0000 when the tape is ejected.

To change the display in stop mode
Press the DISPLAY button. With each press of the button, the
display changes in the following order.
- ① Tape counter
- ② Remaining recordable time of MD*
  (Example: Rem   −48:07)
* Displayed for 4 seconds, only when the AM-LM99 optional Mini
  Disc Recorder is connected and an MD is loaded into the Mini
  Disc Recorder.

To change the display in playback mode
Press the DISPLAY button. With each press of the button, the
display changes in the following order.
- ① Level indicator
- ② Tape counter
  (Example: TAPE   0185)
- ③ Remaining recordable time of MD*
  (Example: Rem   −48:07)
* Displayed for 4 seconds, only when the AM-LM99 optional Mini
  Disc Recorder is connected and an MD is loaded into the Mini
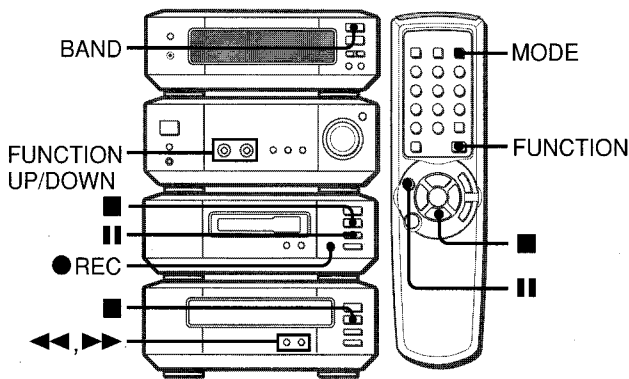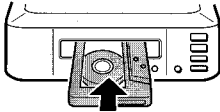 Disc Recorder.

BASIC RECORDING

Preparation
• Set the tape to the point where recording will start.
• Use Type I (normal) and Type II (high/CrO2) tapes for recording.

1 Load the tape to be recorded on into the deck.
Load the tape with the side to be recorded on first facing upward and the exposed side facing to the right.

2 Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control repeatedly so that "TAPE" appears.

3 Press the MODE button on the remote control to select the reverse mode.
To record on one side only, select ⊏.
To record on both sides, select ⊐⊃ or (⊐⊃).
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 (⊐⊃).

4 Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control to select the source to be recorded.

5 Prepare the source to be recorded.
To record from a radio broadcast, press the BAND button to select the desired band and tune in to a station.
To record from a CD, load the disc, then press the ◄◄ or ►► button on the Compact Disc Player to select the track to be recorded first.
To record from the connected equipment, prepare the equipment for playback.
To record from an MD, load the disc, then press the ◄◄ or ►► button on the Mini Disc Recorder to select the track to be recorded first.*
  * Available only when the optional Mini Disc Recorder is connected.

6 Press the ● REC button to start recording.
"TAPE▮▮▮" appears on the display.
When the selected source is CD or MD, playback and recording start simultaneously.
When the selected source is connected equipment, start playback.

To stop recording, press the ■ button on the Stereo Cassette Deck. When recording from a CD or an MD, press the ■ button on the Compact Disc Player or the Mini Disc Recorder to stop playback.
To pause recording, press the ❚❚ button. (Available only when the source is a radio broadcast or connected equipment.) To resume recording, press again.

INSERTING BLANK SPACES
Insertion of a 4-second blank spaces may help you locate the beginning of the track when the tape is played back on other equipment. (Available only when the source is a radio broadcast or connected equipment.)

1 Press the ● REC button during recording or while in recording pause mode.
"TAPE▮▮▮" flashes for 4 seconds and the tape runs without recording. After 4 seconds, the deck enters the recording pause mode.

2 Press the ❚❚ button to resume recording.

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

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.
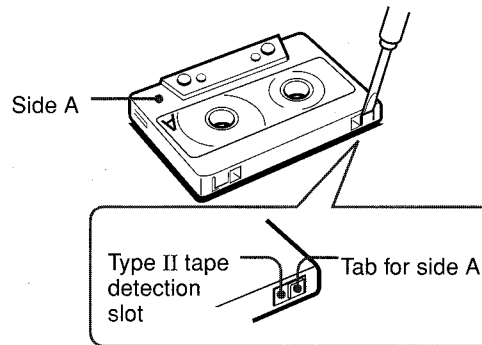
To record on the tape again, cover the tab openings with adhesive tape, etc. (On Type II tapes, take care not to cover the Type II tape detection slot.)
• **120-minute or longer tapes** are extremely thin and easily deformed or damaged. They are not recommended.
• **Take up any slack** in the tape with a pencil or similar tool before use. Slack tape may break or jam in the mechanism.
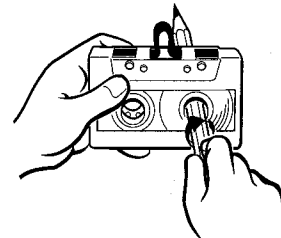
To erase a recording
1 Insert the tape to be erased into the deck.
2 Set the tape to the point where the erasure is to be started.
3 Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control so that "AUX" or "D-IN" appears.
4 If an external equipment is connected to the system, turn the equipment off.
5 Press the ● REC button to start the erasure.

AI EDIT RECORDING
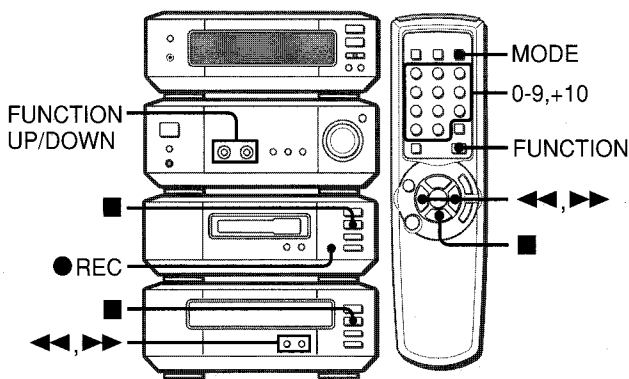
The AI edit function enables CD recording without worrying about tape length and track length. When a CD is inserted, the system automatically calculates track lengths. If necessary, the order of tracks is rearranged so that no track is cut short.
(AI: Artificial Intelligence)

NOTE

AI edit recording will not start from a point halfway into the tape. The tape must be recorded from the beginning of either side.

1 Insert the tape into the deck.
Insert the tape with the side to be recorded on first facing upward.

2 Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control repeatedly so that "CD" appears. Then load the disc.
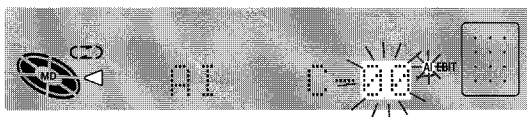
3 Press the MODE button on the remote control repeatedly until "EDIT" lights up and "AI" flashes on the display.


4 Press the numbered buttons to designate the tape length.
10 to 99 minutes can be specified.
Example: When using a 60-minute tape, press the 6 and 0 buttons.
In a few seconds, the microcomputer determines the tracks to be recorded on each side of the tape.
• The ◄◄ and ►► buttons on the Compact Disc Player or the remote control are also available to designate the tape length.

Tape side A ⬇ Tape length

Number of   Remaining time of side A
programmed
tracks
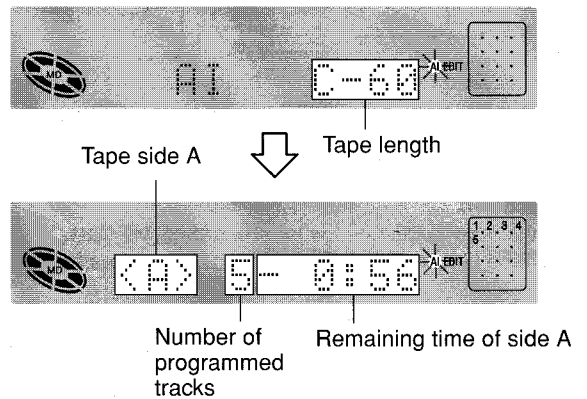
5 Press the ● REC button to start recording.
The tape is rewound to the beginning of the side facing upward, the lead segment is played through for 10 seconds, and recording starts. When recording on the side facing upward (side A) ends, recording on the opposite side (side B) starts.

To stop recording
Press the ■ button on the Stereo Cassette Deck or the remote control. Recording and CD play stop simultaneously.

To clear the edit program
Press the ■ button on the Compact Disc Player or the remote control twice so that "EDIT" disappears on the display.

To check the order of the programmed track numbers
Before recording, press the MODE button to select side A or B, and press the ►► button repeatedly.

Tape side   Program number

Track number   Programmed track
                     numbers
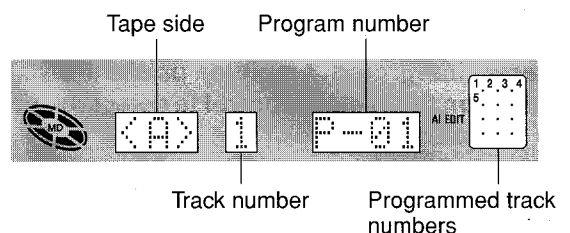
Time on cassette tapes and editing time
The actual cassette recording time is usually a little longer than the specified recording time printed on the label. This unit can program tracks to use the extra time.

NOTE

• Recording is inhibited if the erasure prevention tab on either side of the tape is broken off.
• The AI edit function cannot be used with discs containing 31 tracks or more.

PROGRAMMED EDIT RECORDING
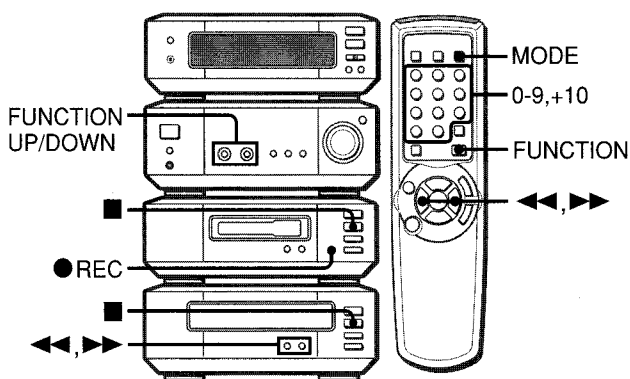
Programmed edit function enables CD recording while checking the remaining time on each side of the tape as the tracks are programmed.

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.

1 Insert the tape into the deck.
Insert the tape with the side to be recorded on first facing upward.

2 Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control repeatedly so that "CD" appears. Then load the disc.

3 Press the MODE button on the remote control repeatedly until "EDIT" lights up and "PRGM" flashes on the display.

4 Press the numbered buttons to designate the tape length.
10 to 99 minutes can be specified.
Example: When using a 60-minute tape, press the 6 and 0 buttons.
• The ◄◄ and ►► buttons on the Compact Disc Player or the remote control are also available to designate the tape length.

Tape side A (front side)

Maximum recording time for side A

5 Press the numbered buttons to program a track.
Example: To select the 10th track, press the numbered buttons +10 and 0.

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 track

Program number

Total number of programmed tracks   Remaining time of side A

7 Press the MODE button to select side B and program the tracks for side B.
After confirming B on the display, repeat step 5.

Tape side B (opposite side)
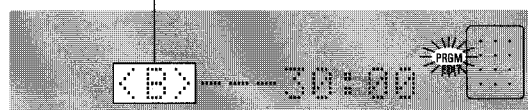
8 Press the ● REC button to start recording.
The tape is rewound to the beginning of the side facing upward, the lead segment is played through for 10 seconds, and recording starts. When recording on the side facing upward (A) ends, recording on the opposite side (B) starts.
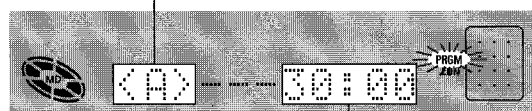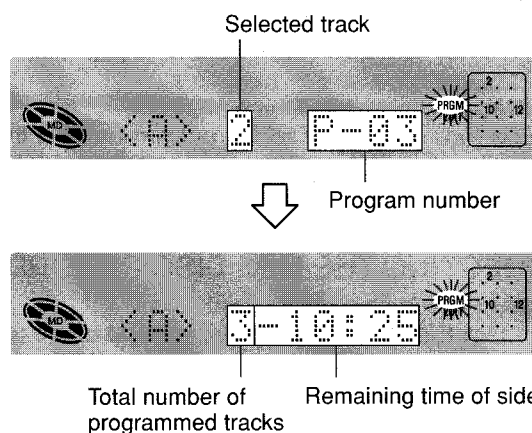
To stop recording
Press the ■ button on the Stereo Cassette Deck or the remote control. Recording and CD play stop simultaneously.

To check the order of the programmed track numbers
Before recording, press the MODE button to select side A or B, and press the ►► button repeatedly.

Track number   Programmed track numbers

Program number
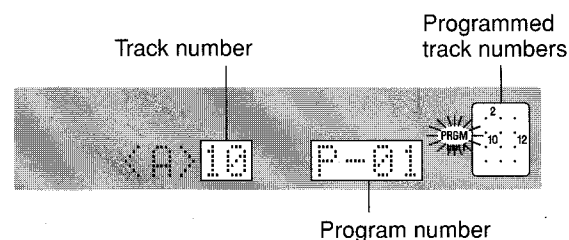
To change the program of each side
Press the MODE button to select side A or B, and press the ■ button to clear the program of the selected side. Then program tracks again.

To clear the edit program
Press the ■ button on the Compact Disc Player or the remote control repeatedly so that "EDIT" disappears on the display.

NOTE

Recording is inhibited if the erasure prevention tab on either side of the tape is broken off.

CONNECTIONS

NOTE

For how to hook up the entire system, refer to page 6.

CAUTION
Before connecting the Mini Disc Recorder, disconnect the AC cord from the AC outlet.
After making connections, re-connect the AC cord.

CONNECTING THE MINI DISC RECORDER

1 Connect the Mini Disc Recorder's flat cable to the FROM MD terminal on the rear of the Stereo Tuner.

Stereo Tuner

Flat Cable
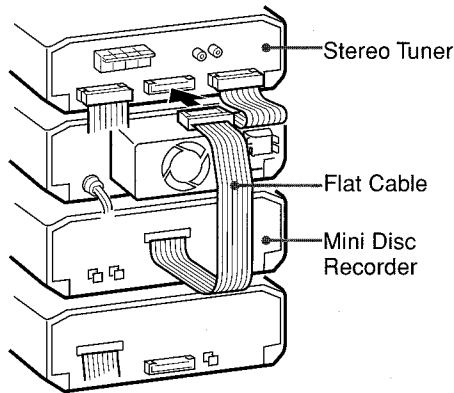
Mini Disc Recorder

2 Connect the Mini Disc Recorder's CD DIGITAL IN jack and the Compact Disc Player's DIGITAL OUT jack using the optical cable supplied with the Mini Disc Recorder.
Before making connection, remove the dust cap from each jack.

Mini Disc Recorder

Compact Disc Player

Optical cable
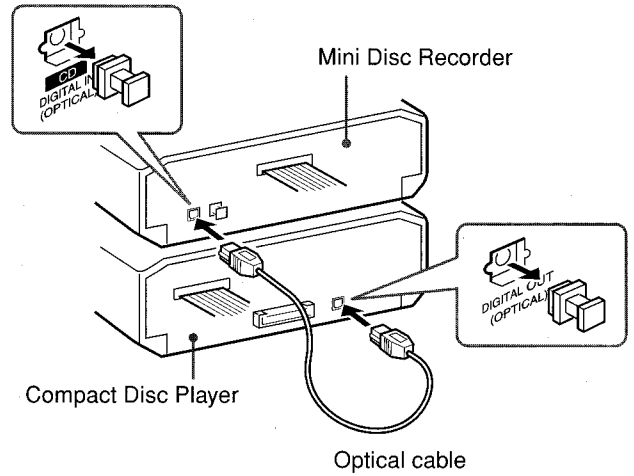
NOTE

When the CD DIGITAL IN jack and the DIGITAL OUT jack are not used, attach the supplied dust cap to each jack.

Recommended positioning
Place the Mini Disc Recorder on top of the Compact Disc Player.

FM antenna

AM antenna

Right speaker

Left speaker

Stereo Tuner

Stereo Integrated Amplifier

Mini Disc Recorder

Compact Disc Player

to an AC outlet

AC cord

WHAT IS AN MD (MINI DISC)?

An MD is only 64 mm (2 ⅝ inches) in diameter, about half the size of a conventional CD. But MD can be used to store and play back a full 74 minutes of data such as a CD. Unlike a CD, MD comes in a plastic cartridge, so that it can be handled with ease. The cartridge also protects the disc inside from shocks, dust and scratches. Unlike cassette tapes, which can become stretched or tangled, an MD is an excellent durable media.

TYPE OF MD

There are two types of MDs: "Optical discs" and "Magneto-optical discs". Both types use laser beams and optical pick-up technology to read recorded data during playback.

Optical discs

These are playback only discs. Like CDs, they are used as prerecorded music discs. You cannot record on or edit them.
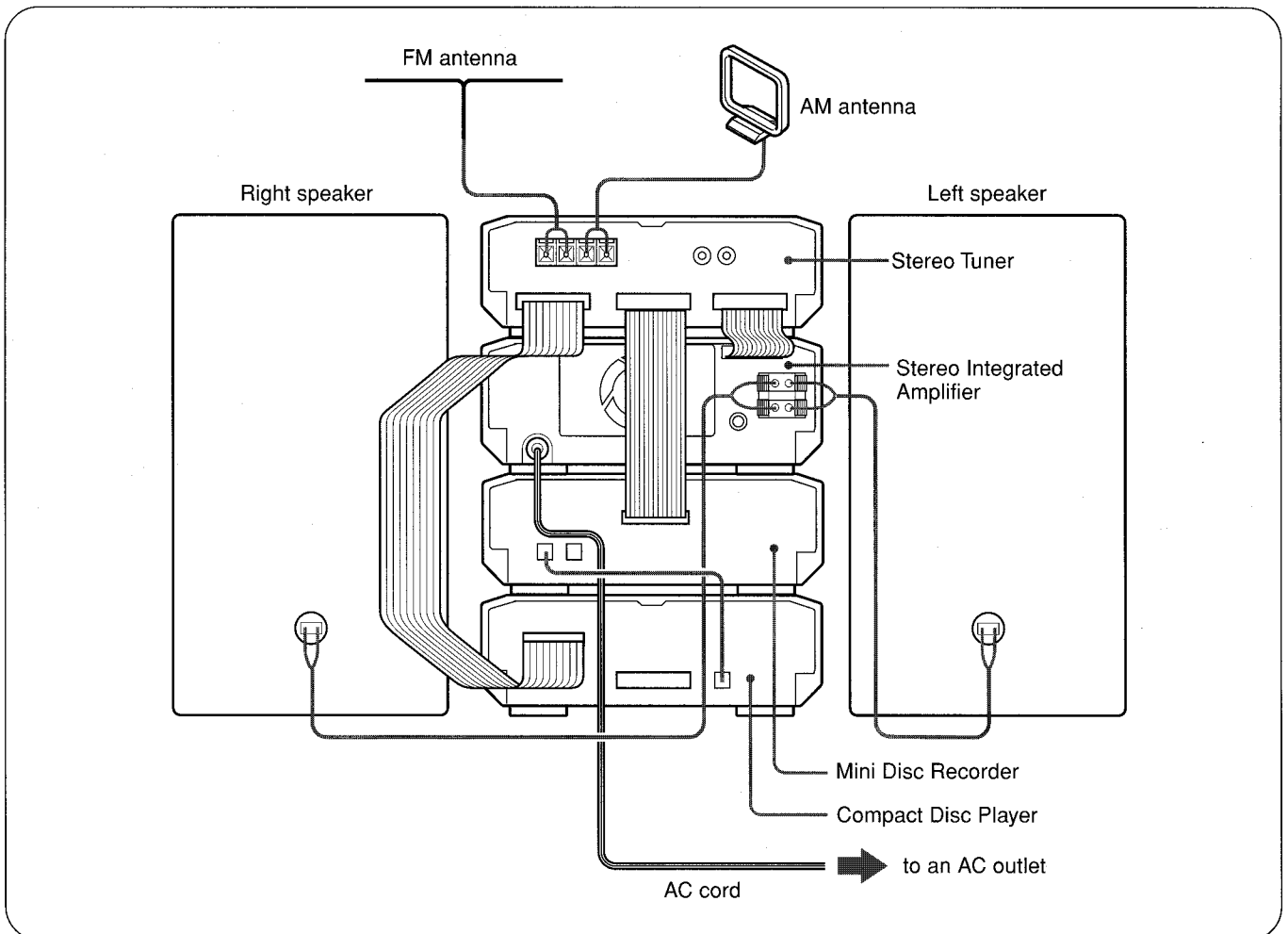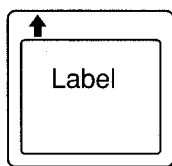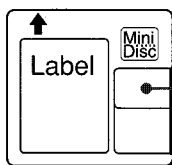

The shutter covers the opening only on the non-labeled side of the MD.

Recordable MO*¹ discs

These are recordable discs which can be recorded on again and again, like cassette tapes. The recording method called magneto-optical technology employs a laser and magnetism to record signals. Therefore, the quality of recorded sound does not deteriorate even after many playbacks and recordings.

The shutter covers the opening on the both sides of the MD.

*¹ MO: An abbreviation of Magneto Optical

Ultra compact size made possible by ATRAC*² technology

A newly developed digital audio compression technology called the ATRAC system automatically extracts only the frequencies that are actually audible to the human ear and cuts the frequencies which are inaudible. This compresses the amount of data to be recorded to 1/5 of the normal amount. The ATRAC system is based upon studies carried out in the field of auditory psychology and does not impair the quality of the audible sound.

*² ATRAC: An abbreviation of Adaptive TRansform Acoustic Coding

Quick random access

One of the great features of the MD is that you can search for desired tracks quickly. There are also quick and easy functions for random playback in which the order of the tracks can be rearranged at random, and for renumbering tracks which enables them to be played in any order.

THE LIMITATIONS OF MD

Recording on the MD is performed differently from that of a cassette tape or a DAT. Therefore, the MD system is subject to the following restrictions.

"TOC* Full" is displayed even if the recording time does not reach the maximum recordable time of the disc (60-minute or 74-minute).
"TOC Full" is displayed when 254 tracks are already recorded on a disc, without respect of the recording time.
*TOC: An abbreviation of Table Of Contents.

"TOC Full" is displayed even if a disc is not fully recorded on.
If there are lots of emphasis data in a particular track, the unit handles the data as index codes, and tracks are counted, in addition, without respect of the time and number of tracks.

The remaining time on a disc is not increased even after some short tracks have been erased.
When the remaining time on a disc is displayed, which may not be increased even after erasing short tracks because the sections less than eight seconds are not counted.

Certain tracks cannot be joined (the COMBINE function does not function).
• Tracks created by editing may not be joined.
• It is not possible to combine a track recorded in monaural and a track recorded in stereo.

The total of the recorded time and the remaining time on a disc does not match with the maximum recordable time of the disc (60-minute or 74-minute).
Recording is performed by the minimum unit of one cluster (two seconds). Even if the recorded section is shorter than two seconds, a two-second space is needed in recording. Therefore, the available time becomes shorter. If there are scratches on a disc, the available time becomes shorter as well, because the sections which are scratched are automatically erased.

Track numbers may not be registered properly.
When recording from a CD through digital inputs (using the ● CD ► MD (DIGITAL) button), small tracks may be created depending on the contents of a CD.
When using the AUTO MARK function, track numbers may not be registered properly depending on the contents of the CD.

Digital inputs may not be acceptable.
When digital recording is attempted from recorded material with copyrights, digital dubbing cannot be performed to a recordable MD from another MD recorded in digital, because of the built-in record restriction function which complies with the SCMS* standard.

* SCMS (Serial Copy Management System) is the standard to restrict single digital dubbing between the digital audio system thus protecting copyrights.

MD (prerecorded sound source)
Digital dubbing
Digital dubbing
Recording through analog inputs
CD

MD PLAYING

DISPLAY — [diagram]
FUNCTION UP/DOWN
Disc drive
◄◄, ►►
■
▲ EJECT
II

DISPLAY
MODE
0-9,+10
REPEAT
FUNCTION
►
◄◄, ►►
■
II
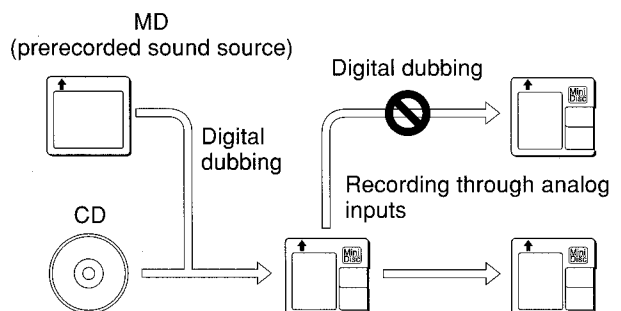
INSERTING AN MD

1 **Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control repeatedly so that "MD" appears.**

2 **Insert a disc into the disc drive fully with the label side up and in the direction of the arrow.**
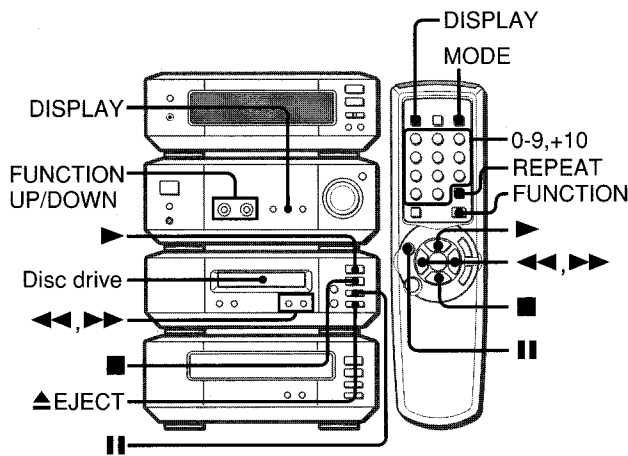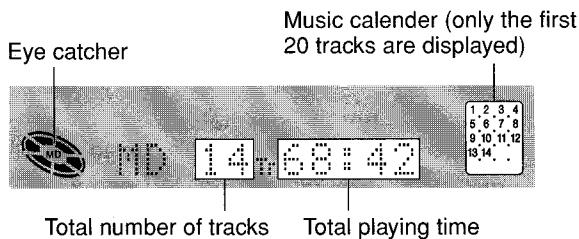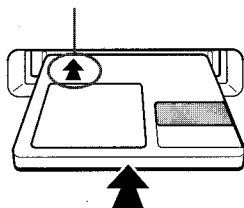"TOC READING" appears on the display while the Mini Disc Recorder reads the data of the inserted disc. Then the information contained in the disc appears.
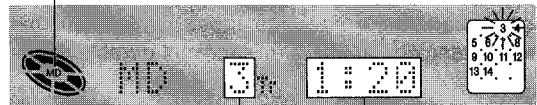
Direction guide

[diagram]

Eye catcher
Music calender (only the first 20 tracks are displayed)

[display diagram]

Total number of tracks   Total playing time

PLAYING AN MD

Insert an MD.

Press the ► button.
Playback begins.

The inner circle of the eye catcher rotates.

[display diagram]

Number of track being played   Elapsed playing time

When an MD recorded in monaural is played back, "MONO" appears.

About the level indicator
The above display automatically changes to the level indicator after 4 seconds.
The level indicator shows an approximate playback sound level.

[display diagram]

To stop play, press the ■ button.
To pause, press the II button. To resume play, press it again.

To search for a particular point during playback, keep the ◄◄ or ►► button pressed and release the button at the desired point.
To skip to the beginning of a track during playback, press the ◄◄ or ►► button repeatedly.

To eject a disc, press the ▲ EJECT button.
Do not hold the disc when ejecting the disc.
The disc can be ejected by pressing the ▲ EJECT button even when the unit is turned off.

[diagram]
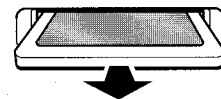
Pull the disc out.

Selecting a track with the remote control
Press the numberd buttons and the +10 button to select a track.
Example:
To select the 25th track, press the +10, +10 and 5 buttons.
To select the 10th track, press the +10 and 0 buttons.
The selected track starts to play and play continues to the end of that disc.

To start play when the power is off (Direct Play Function)
Press the ► button on the Mini Disc Recorder. The power is turned on and play of the inserted disc begins.
Pressing the ▲ EJECT button while the power is off also turns the system on and ejects the inserted MD.

To play a disc at the double speed
During play, keep the ► button on the Mini Disc Recorder pressed for more than two seconds.
To resume normal play, press the ► button again .
Stopping play with the ■ button also releases the double-speed playback mode.

To change the display in stop mode
Press the DISPLAY button. With each press of the button, the display changes in the following order.
- ① Total number of tracks and total playing time of the MD
  (Example: MD 10Tr   58:31)
- ② Disc title
  (If the disc title is not registered, "No Title" is displayed.)
- ③ Remaining recordable time of MD
  (Example: Rem   −48:07)

The remaining recordable time of MD changes automatically to the total number of tracks and total playing time after 4 seconds.

To change the display in playback mode
Press the DISPLAY button. With each press of the button, the display changes in the following order.
- ① Level indicator
- ② Track number being played and elapsed playing time
  (Example: MD 3Tr   3:43)
- ③ Track title
  (If the track title is not registered, the track number is displayed.)
- ④ Remaining time of playback
  (Example: MD   −26:15)

NOTE
- Nothing other than an MD should be inserted in the disc drive, otherwise the disc may become scratched, causing a malfunction or a safety hazard such as an electric shock.
- Do not attempt to insert another MD while a disc is already inside the drive.
- Do not tilt the MD Deck with a disc inserted. Doing so may cause malfunctions.

RANDOM/REPEAT PLAY

Use the remote control.

RANDOM play
All the tracks on the disc can be played randomly.
Press the MODE button repeatedly until "RANDOM" lights up on the display.
To cancel random play, press the MODE button repeatedly until the normal display appears and "RANDOM" disappears.

NOTE
- Even if the ◄◄ button is pressed, a previously played track cannot be skipped. The unit returns to the beginning of the current track only.
- When you select a track with the numbered buttons on the remote control during the random play mode, the selected track starts to play and the random play mode is canceled.

REPEAT play
A single track or all tracks can be played back repeatedly.
Press the REPEAT button repeatedly.
"↻1" lights up when the single track repeat play is selected, and "↻" lights up when the all tracks repeat play is selected.
To cancel repeat play, press the REPEAT button repeatedly until "↻" and "1" disappear.
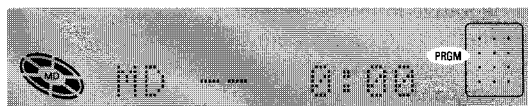
To repeat random play
First press the RANDOM button to activate random play.
Then press the REPEAT button so that "↻" lights up.

PROGRAMMED PLAY

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

1 In stop mode, press the MODE button repeatedly until "PRGM" appears on the display.

2 Press the numbered buttons and the +10 button to program a track.
Example:
To select the 12th track, press the +10 and 2 buttons.
To select the 20th track, press the +10, +10 and 0 buttons.

Selected track number   Program number

⇩

Total number of   Total playing time of
selected tracks   the selected tracks

3 Repeat step 2 to program other tracks.

4 Press the ► button to start play.

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

To clear the program
Press the ■ button in stop mode.

To add tracks to the program
Before playing, repeat step 2. The track will be programmed after the last track.

To change the programmed tracks
Clear the program and repeat all the steps again.

NOTE
- During the programmed play, the MODE and numbered buttons do not function.
- Repeating programmed play is also possible.
- If the programmed time exceeds 255 minutes 59 seconds, or the disc track number 31 or above is programmed, the display shows --:-- as the total playing time.

VARIOUS WAYS OF MD RECORDING

Recording through digital inputs
Digital recording of CD audio signals to MDs gives recordings with no degradation in sound quality. You can use any of the following methods to record from CDs to MDs.
• Record a complete CD onto an MD
• Record only one track from a CD
• Record your favorite CD tracks in any order

Recording through analog inputs
Recording through analog inputs from the tuner, cassette tape* or the external equipment connected to the AUX IN jacks on the rear of the Stereo Tuner can be made easily. Recording through analog inputs from a CD is also possible.
* Available only when the FX-LM99 optional Stereo Cassette Deck is connected.

Extended recording
Twice as long as the time printed on the MD can be obtained by using the monaural recording mode.

NOTE

• Nothing other than an MD should be inserted in the disc drive, otherwise the disc may become scratched, causing a malfunction.
• Do not give a strong shock or disconnect the AC cord during recording or a TOC* recording. Doing so may cause the errors in the TOC recording and the contents cannot be played back.
• During recording, the outer circle of the eye catcher lights up in red.

* TOC : An abbreviation of Table Of Contents
The TOC data functions as a coded index of the recorded material. The Mini Disc Recorder records the TOC data such as a playing time and recorded address on an MD.

To prevent accidental erasure of recorded material
Slide the record-protect tab as shown below.
Slide the tab so that it is completely locked.

To protect recorded contents
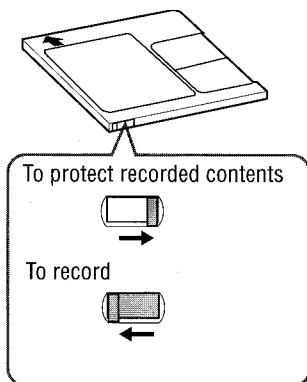
To record

If a recording is attempted when the tab is set to the protected position, "Protected" appears on the display. Move the protect-tab to the original position.
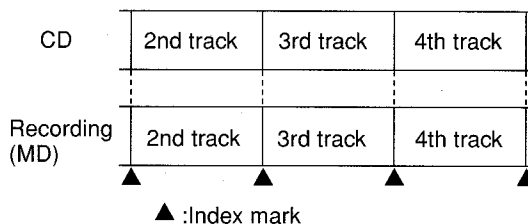

ABOUT THE INDEX MARK

You can easily select the desired tracks by registering index marks during recording.
Choose the appropriate method to register index marks.

AUTO MARK FUNCTION

When recording from a CD using the ● CD ► MD (DIGITAL) button
The index mark information recorded on the CD is copied.

| CD	2nd track	3rd track	4th track
Recording (MD)	2nd track	3rd track	4th track

▲ :Index mark

The auto mark function is applied in the following cases:
−When recording a whole CD onto an MD (page 25)
−When recording one track of a CD onto an MD (page 26)
−When performing programmed recording of a CD (page 27)
You cannot add the index marks using the time mark function described below.

When recording CDs or other sources using the ● REC button
An index mark is registered automatically when a sound signal is input after a blank section lasting more than 2 seconds.

Blank

| Input sound | ♫♪ | ♫♪ | ♪♪ | |

| Recording (MD) | 2nd track | 3rd track | 4th track |
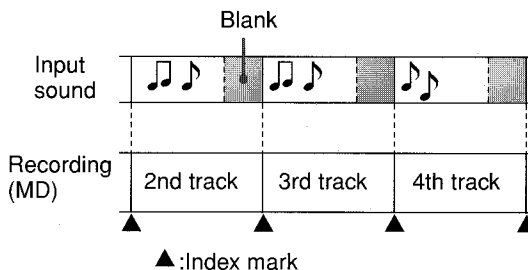
▲ :Index mark

TIME MARK FUNCTION

When recording CDs or other sources using the ● REC button (pages 28 and 29), you can optionally record index mark information at an interval of 5 minutes.
This makes it easy to locate recorded radio broadcast material, etc.

MANUAL MARK FUNCTION

Regardless of the source to be recorded and the button used to start MD recording, you can record index mark information anytime you want by pressing the ENTER/ILLUMINATION button on the Stereo Integrated Amplifier.
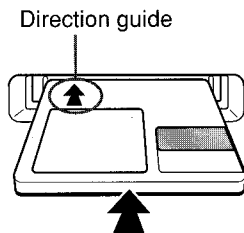
RECORDING A WHOLE CD
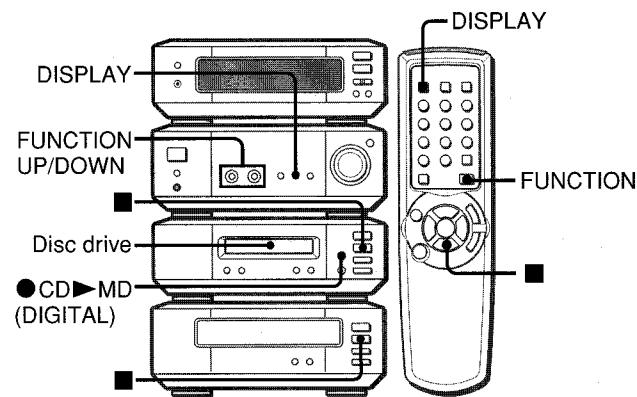
To check the recordable time of the MD
Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control to select a source other than MD.
Then press the DISPLAY button.
The recordable time on the MD is displayed.

1 Load a recordable MD into the disc drive with the label side up and in the direction of the arrow.

Direction guide

2 Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control repeatedly so that "CD" appears.

3 Load the CD to be recorded.

▲ OPEN/CLOSE
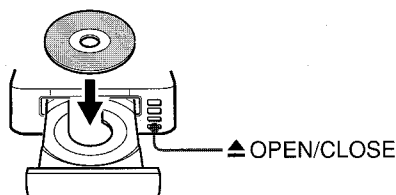
4 Press the ● CD ► MD (DIGITAL) button to start recording.

Recording stops automatically when the music on the CD ends. When recording stops, "TOC EDIT" is displayed and the contents (TOC) of the recording are recorded on the MD.

To stop recording before the end of the CD
Press the ■ button on the Mini Disc Recorder or on the remote control. Recording to the MD stops, and the contents (TOC) of the recording are recorded on the MD.
To stop play of the CD, press the ■ button on the Compact Disc Player.

To record on a previously recorded MD
If there is an unrecorded section left on the MD, the new recording automatically starts from where the previous recording finished. If you want to start recording from the beginning of a previously recorded MD, erase the previous recording completely. (See page 33.)

To change the display during recording
Press the DISPLAY button. With each press of the button, the display changes in the following order.
- ① Level indicator for CD
- ② Track number and elapsed time of CD
  (Example: CD 1Tr   1:23)
- ③ Remaining playback time of CD
  (Example: CD   -32:37)
- ④ Recordable time on MD
  (Example: MD   -36:15)
- ⑤ Track number and elapsed recording time of MD
  (Example: MD 5Tr   2:27)

When "LONG CD" is displayed
The remaining recordable time of the MD is shorter than the total playing time of CD.
If you press the ● CD ► MD (DIGITAL) button again, recording will be made up to the limit of the recordable time of the MD.

En

RECORDING ONLY ONE TRACK OF A CD
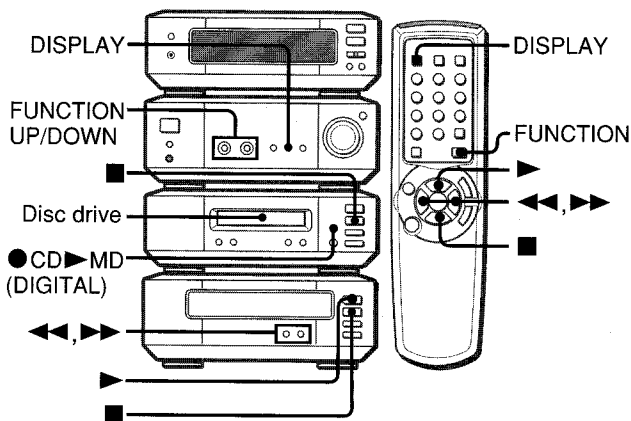
DISPLAY
FUNCTION UP/DOWN
■
Disc drive
●CD►MD (DIGITAL)
◄◄,►►
►
■
DISPLAY
FUNCTION
►
◄◄,►►
■

## To check the recordable time of the MD
Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control to select a source other than MD.
Then press the DISPLAY button.
The recordable time on the MD is displayed.

1 Load a recordable MD into the disc drive with the label side up and in the direction of the arrow.

Direction guide

2 Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control repeatedly so that "CD" appears.

3 Load the CD to be recorded.

▲OPEN/CLOSE
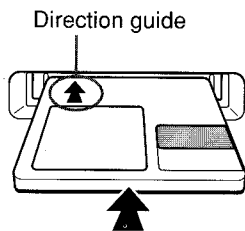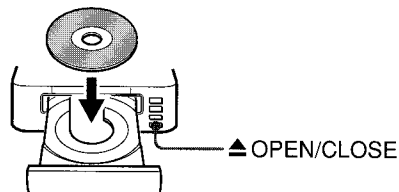
4 Play back the track to record.
Press the numbered buttons on the remote control. Or select the track with the ◄◄ / ►► buttons and press the ► button on the Compact Disc Player.

5 Press the ● CD ► MD (DIGITAL) button to start recording.
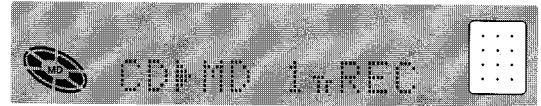
The CD returns to the beginning of the track being played and recording starts.
Recording stops automatically when the track ends.
When recording stops, "TOC EDIT" is displayed and the contents (TOC) of the recording are recorded on the MD.

To stop recording before the end of the track
Press the ■ button on the Mini Disc Recorder or on the remote control. Recording to the MD stops, and the contents (TOC) of the recording are recorded on the MD.
To stop play of the CD, press the ■ button on the Compact Disc Player.

To record on a previously recorded MD
If there is an unrecorded section left on the MD, the new recording automatically starts from where the previous recording finished.
If you want to start recording from the beginning of a previously recorded MD, erase the previous recording completely. (See page 33.)

To change the display during recording
Press the DISPLAY button. With each press of the button, the display changes in the following order.
- ① Level indicator for CD
- ② Track number and elapsed time of CD
  (Example: CD 1Tr 1:23)
- ③ Recordable time on MD
  (Example: MD -36:15)
- ④ Track number and elapsed recording time of MD
  (Example: MD 5Tr 2:27)

PROGRAMMED RECORDING OF A CD

Up to 30 tracks can be programmed and recorded on an MD.

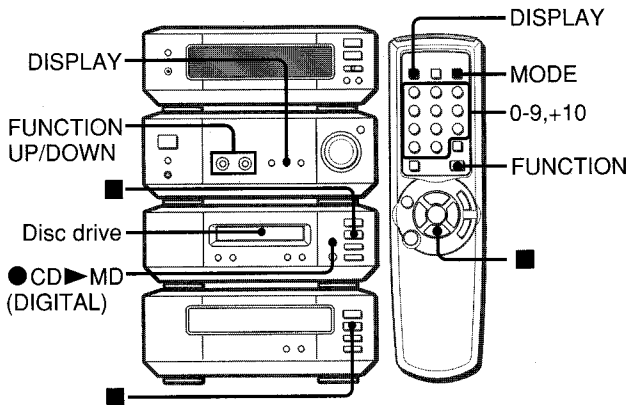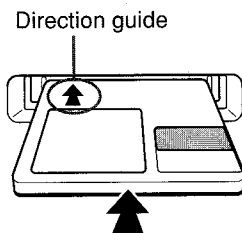## To check the recordable time of the MD

Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control to select a source other than MD.
Then press the DISPLAY button.
The recordable time on the MD is displayed.

1 Load a recordable MD into the disc drive with the label side up and in the direction of the arrow.

Direction guide

2 Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control repeatedly so that "CD" appears.

3 Load the CD to be recorded.

▲ OPEN/CLOSE
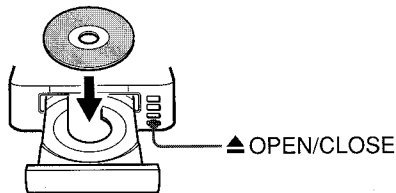
4 Press the MODE button on the remote control repeatedly until "PRGM" flashes on the display.

5 Press the numbered button and the +10 button to program a track to record.
Example:
To select the 12th track, press the +10 and 2 buttons.
To select the 20th track, press the +10, +10 and 0 buttons.

Selected track number   Program number

Total number of selected   Total playing time of the
tracks   selected tracks

6 Repeat step 5 to program other tracks.

7 Press the ● CD ► MD (DIGITAL) button to start recording.
Recording begins.
When the programmed tracks finish playing, the recording stops automatically.
Then "TOC EDIT" is displayed and the contents (TOC) of the recording are recorded to the MD.

To stop recording halfway

Press the ■ button on the Mini Disc Recorder or on the remote control. Recording to the MD stops, and the contents (TOC) of the recording are recorded on the MD.
To stop play of the CD, press the ■ button on the Compact Disc Player.

To record on a previously recorded MD

If there is an unrecorded section left on the MD, the new recording automatically starts from where the previous recording finished.
If you want to start recording from the beginning of a previously recorded MD, erase the previous recording completely. (See page 33.)

To change the display during recording

Press the DISPLAY button. With each press of the button, the display changes in the following order.
- ① Level indicator for CD
- ② Track number and elapsed time of CD
  (Example: CD 1Tr   1:23)
- ③ Recordable time on MD
  (Example: MD   –36:15)
- ④ Track number and elapsed recording time of MD
  (Example: MD 5Tr   2:27)

RECORDING FROM A TAPE, A CD, THE RADIO OR CONNECTED EQUIPMENT
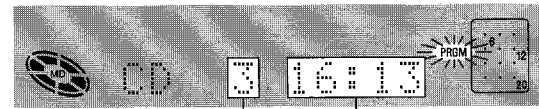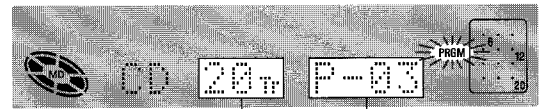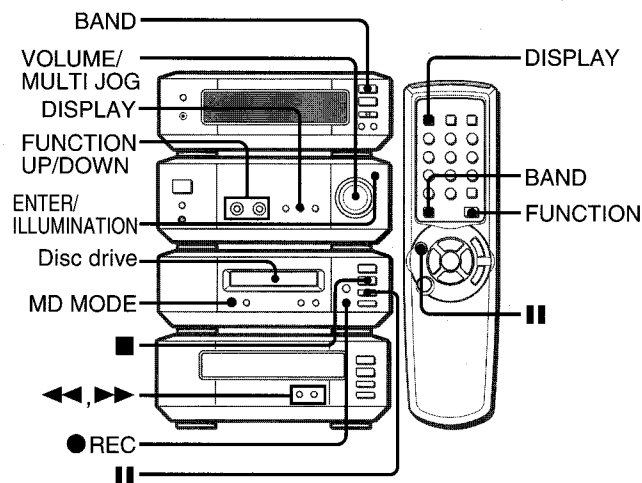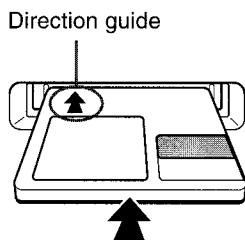

To check the recordable time of the MD
Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control to select a source other than MD.
Then press the DISPLAY button.
The recordable time on the MD is displayed.

1 Load a recordable MD into the disc drive with the label side up and in the direction of the arrow.

Direction guide

2 Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control to select the source to be recorded.

3 Prepare the source to be recorded.
To record form a radio broadcast, press the BAND button to select the desired band and tune in to a station.
To record from a CD, load the disc, then press the ◄◄ or ►► button on the Compact Disc Player to select the track to be recorded first.
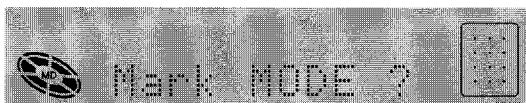**To record from the connected equipment,** prepare the equipment for playback.
To record from a tape, load the tape.*
* Available only when the FX-LM99 optional Stereo Cassette Deck is connected.

4 Press the MD MODE button.
"Mark MODE?" is displayed for 10 seconds.

5 Within 10 seconds, press the ENTER/ ILLUMINATION button and turn the VOLUME/ MULTI JOG dial to select an index mark mode.
To register index marks automatically at the beginning of each track, select "Mark: AUTO?".
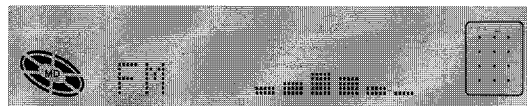To register index marks every 5 minutes, select "Mark: TIME?".
To record without registering index marks automatically, select "Mark: OFF?".

6 Within 10 seconds, press the ENTER/ ILLUMINATION button.

7 Press the ● REC button.
The Mini Disc Recorder enters the standby mode. Wait until the source name selected at step 2 is displayed.

8 Press the II button on the Mini Disc Recorder or on the remote control to start recording.
When recording from connected equipment, start playback of the connected equipment.

To stop recording
Press the ■ button on the Mini Disc Recorder or on the remote control. When recording stops, "TOC EDIT" is displayed and the contents (TOC) of the recording are recorded on the MD.

To add index marks during recording
Press the ENTER/ILLUMINATION button, and an index mark is registered regardless of the index mark mode selected at step 5.

To record on a previously recorded MD
If there is an unrecorded section left on the MD, the new recording automatically starts from where the previous recording finished. If you want to start recording from the beginning of a previously recorded MD, erase the previous recording completely. (See page 33.)

To change the display during recording
Press the DISPLAY button. With each press of the button, the display changes in the following order.
① Level indicator for the source
② Source
(Example: AUX)
③ Recordable time on MD
(Example: MD   −36:15)
④ Track number and elapsed recording time of MD
However, see page 25 for the display when the source is a CD.

EXTENDED (MONAURAL) RECORDING

Twice as long as the time printed on the MD can be obtained if you select the monaural recording mode.

1 Load a recordable MD into the disc drive with the label side up and in the direction of the arrow.

Direction guide

2 Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control to select the source to be recorded.

3 Prepare the source to be recorded.
To record form a radio broadcast, press the BAND button to select the desired band and tune in to a station.
To record from a CD, load the disc, then press the ◄◄ or ►► button on the Compact Disc Player to select the track to be recorded first.
To record from the connected equipment, prepare the equipment for playback.
To record from a tape, load the tape.*
* Available only when the FX-LM99 optional Stereo Cassette Deck is connected.

4 Press the MD MODE button twice.
"REC MODE?" is displayed for 10 seconds.

5 Within 10 seconds, press the ENTER/ILLUMINATION button and turn the VOLUME/MULTI JOG dial so that "REC:MONO?" is displayed.

6 Within 10 seconds, press the ENTER/ILLUMINATION button.
"MONO" flashes on the display.

7 Press the MD MODE button.
"Mark MODE?" is displayed for 10 seconds.

8 Within 10 seconds, press the ENTER/ILLUMINATION button and turn the VOLUME/MULTI JOG dial to select an index mark mode.
To register index marks automatically at the beginning of each track, select "Mark: AUTO?".
To register index marks every 5 minutes, select "Mark: TIME?".
To record without registering index marks automatically, select "Mark: OFF?".

9 Within 10 seconds, press the ENTER/ILLUMINATION button.

10 Press the ● REC button.
The Mini Disc Recorder enters the standby mode. Wait until the source name selected at step 2 is displayed.
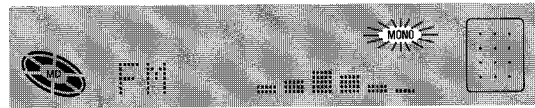
11 Press the II button on the Mini Disc Recorder to start recording.
When recording from connected equipment, start playback of the connected equipment.

To stop recording
Press the ■ button on the Mini Disc Recorder or on the remote control. When recording stops, "TOC EDIT" is displayed and the contents (TOC) of the recording are recorded on the MD.

To add index marks during recording
Press the ENTER/ILLUMINATION button, and an index mark is registered regardless of the index mark mode selected at step 8.

To record on a previously recorded MD
If there is an unrecorded section left on the MD, the new recording automatically starts from where the previous recording finished. If you want to start recording from the beginning of a previously recorded MD, erase the previous recording completely. (See page 33.)
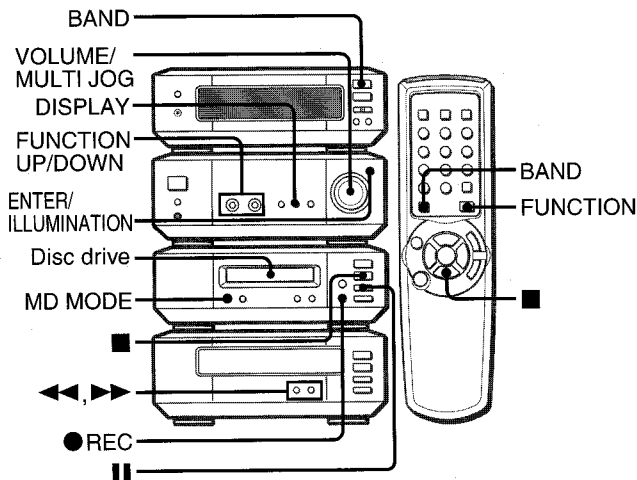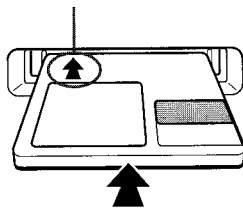
To cancel the extended recording mode
If "MONO" flashes on the display, proceed as follows to cancel the extended (monaural) recording mode.

1 Press the MD MODE button twice, and within 10 seconds, press the ENTER/ILLUMINATION button.
"REC STEREO?" is displayed.

2 Within 10 seconds, press the ENTER/ILLUMINATION button.
"MONO" disappears on the display.

The succeeding pages (pages 30 to 33) describe how to edit a recorded MD.
Editing an MD allows you to:
• register the disc title and track title (this page)
• divide a track into two tracks (page 31)
• combine two tracks (page 32)
• change the order of the tracks (page 32)
• erase tracks (page 33)

REGISTERING THE DISC TITLE AND TRACK TITLE

You can register the titles of the discs and tracks.
The registered disc title and track titles can be displayed using the DISPLAY button. See page 23 for detailed explanation.
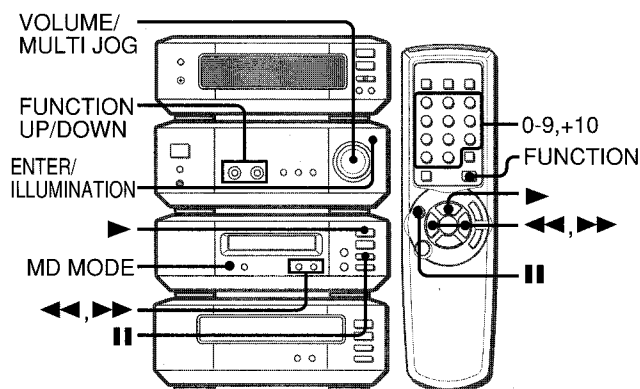
1 **Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control repeatedly so that "MD" appears, then load an MD to register the disc or track title.**

2 **To register a disc title, press the MD MODE button in stop mode.**
"Disc title?" is displayed for 10 seconds.

To register a track title, select a track to register the title using the ◄◄ or ►► button, or the numbered buttons on the remote control. Then press the MD MODE button.
"Title?" is displayed for 10 seconds.

**Example:** When registering a title for the 3rd track

3 **Within 10 seconds, press the ENTER/ ILLUMINATION button.**
The system turns into character entry mode.

4 **Press the MD MODE button repeatedly to select the kind of character.**
Each time the MD MODE button is pressed, the kind of character changes in the following order.


```
→ Capital letters → Small letters → Numbers/ ┘
  (A)                (a)              symbols (0)
```
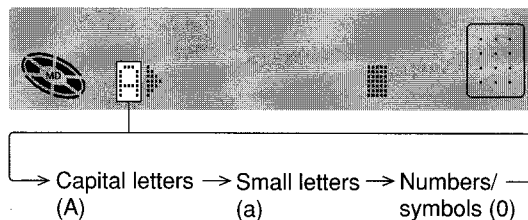
5 **Turn the VOLUME/MULTI JOG dial to select a desired character, then press the ►► button.**
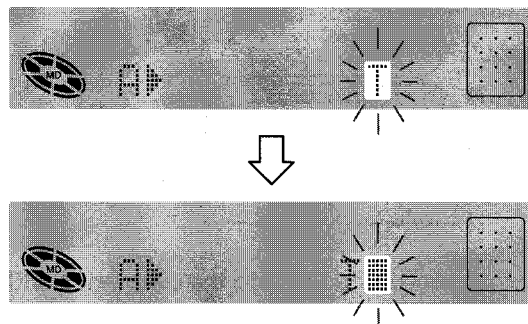
When you press the ►► button, the selected character moves one column to the left.

6 **Repeat steps 4 and 5 to enter all the required characters (up to 50 characters).**
If you leave the system without performing any operation for one minute in steps 4 and 5, the character entry mode will be canceled. If this happens, repeat from step 2.

7 **Press the ENTER/ILLUMINATION button.**

8 **Remove the MD from the Mini Disc Recorder.**
"TOC EDIT" is displayed and the entered title is registered.
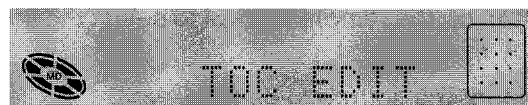
To change a character
Press the ◄◄ or ►► button repeatedly until the character to be changed flashes. Then enter the desired character again.

To delete characters
Press the ◄◄ or ►► button repeatedly until the character to be deleted flashes. Then press the II button.

To insert a space between the characters
Press the ◄◄ or ►► button repeatedly until the part to be entered as a space flashes. Then press the ► button.

To add a character between two characters
First, insert a space between two characters as described above. Then change the space to the desired character by entering it.

• While "TOC EDIT" is displayed, do not disconnect the AC cord or do not give a strong shock to the Mini Disc Recorder. If this happens, the data of TOC will not be recorded properly and the edited contents on a disc will not be able to be played.
• A title cannot be registered in the following cases:
  −When a prerecorded disc is inserted ("PB DISC" appears on the display.)
  −When the protect-tab on an inserted disc is moved to the protected position ("Protected" appears on the display.)
  −During programmed play

CHARACTERS THAT CAN BE REGISTERED

Capital letters
□ (space) A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Small letters
□ (space) a b c d e f g h i j k l m n o p q r s t u v w x y z

Numbers and symbols
□ (space) 0 1 2 3 4 5 6 7 8 9 ! " # $ % & ' ( ) * + , - . / : ; < = > ? @ _ `

DIVIDING A TRACK

You can divide a track into two tracks by registering an index mark.

Example
To divide the 3rd track into two tracks at 2 minutes 30 seconds:
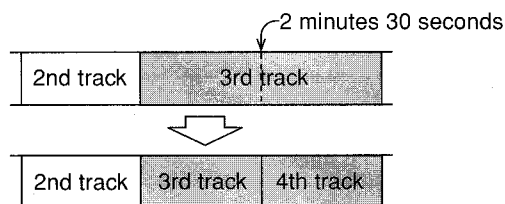
1 **Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control repeatedly so that "MD" appears, then load an MD.**

2 **During playback, press the ▐▐ button at the point where you want to divide the track.**
The Mini Disc Recorder enters the playback pause mode.

3 **Press the MD EDIT button so that "Divide" is displayed.**
"Divide" is displayed for 10 seconds.
Example:
When dividing the 3rd track

4 **Within 10 seconds, press the ENTER/ILLUMINATION button.**
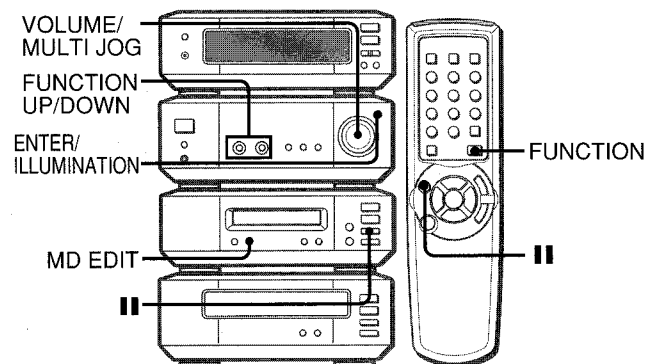The Mini Disc Recorder plays repeatedly the 2 seconds after the point where you pressed the ▐▐ button.

5 **Adjust the point to be divided with the ◄◄ or ►► button or the VOLUME/MULTI JOG dial referring to the playback sound.**

6 **Within 1 minute, press the ENTER/ILLUMINATION button.**
An index mark is registered and the track number advances by one.

7 **Remove the MD from the MD Deck.**
"TOC EDIT" is displayed and the data concerning the contents of the editing are registered.

• If the track had a title before the division, the title is assigned to the first of the two divided tracks.
• A track cannot be divided when an inserted disc already contains 254 tracks.

COMBINING TWO TRACKS

You can combine two tracks by erasing the index mark in between.

Example
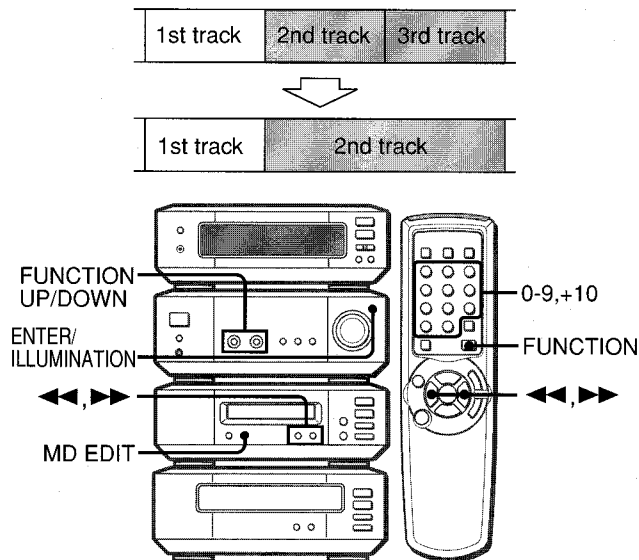To combine the 2nd track and the 3rd track by erasing the index mark at the beginning of the 3rd track:

1 **Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control repeatedly so that "MD" appears, then load an MD.**

2 **Select or play back the latter track of the two tracks to be combined using the ◄◄ or ►► button, or the numbered buttons on the remote control.**
   Example:
   To combine the 2nd and 3rd tracks, select or play back the 3rd track.

3 **Press the MD EDIT button repeatedly so that "Combine" is displayed.**
   Example:
   When combining the 2nd and 3rd tracks

4 **Within 10 seconds, press the ENTER/ ILLUMINATION button.**
   The two tracks are combined.
   The track numbers from this point forward are decreased by 1.

5 **Remove the MD from the Mini Disc Recorder.**
   "TOC EDIT" is displayed and the data concerning the contents of the editing are registered.

NOTE
• If both of the tracks are titled, the title of the lower numbered track remains. If only one track is titled on the tracks to be combined, this title remains.
• You cannot combine a track recorded in monaural and a track recorded in stereo.

CHANGING THE ORDER OF THE TRACKS

You can change the order of tracks after completing a recording.

Example
To move the 3rd track to the 1st position
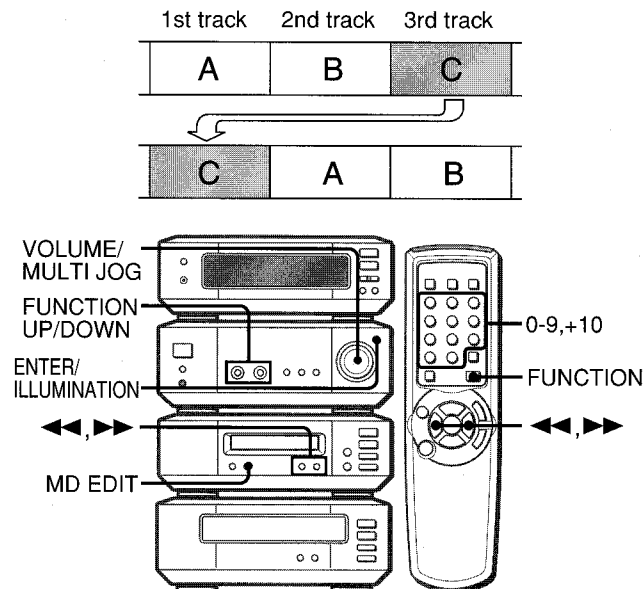
1 **Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control repeatedly so that "MD" appears, then load an MD.**

2 **Select or play back the track to be moved using the ◄◄ or ►► button, or the numbered buttons on the remote control.**

3 **Press the MD EDIT button repeatedly so that "Move" is displayed.**
   Example:
   When moving the 3rd track

4 **Within 10 seconds, press the ENTER/ ILLUMINATION button.**

5 **Turn the VOLUME/MULTI JOG dial to select the desired track number to move the track to.**
   Example:
   When moving to the 1st position

6 **Within 10 seconds, press the ENTER/ ILLUMINATION button.**

7 **Remove the MD from the Mini Disc Recorder.**
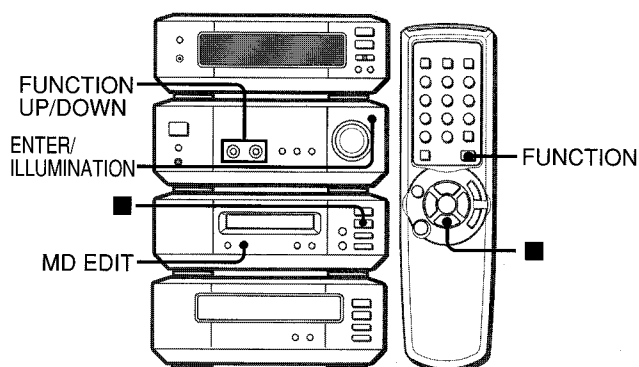   "TOC EDIT" is displayed and the data concerning the contents of the editing are registered.

ERASING TRACKS

ERASING ALL TRACKS ON A DISC

NOTE

If you erase all the tracks, you cannot retrieve them again.

1 **Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control repeatedly so that "MD" appears, then load an MD.**

2 **In stop mode, press the MD EDIT button repeatedly until "Erase All?" is displayed.**

3 **Within 10 seconds, press the ENTER/ ILLUMINATION button.**
The display changes to "Erase?All?".

Make sure that it is all right to erase all tracks.
To cancel erasing tracks, press the ■ button.

4 **Within 1 minute, press the ENTER/ILLUMINATION button.**
"TOC EDIT" is displayed and all tracks on the inserted disc are erased.
After completion of the erasure, "Blank Disc" is displayed.

ERASING A SINGLE TRACK

1 **Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control repeatedly so that "MD" appears, then load an MD.**

2 **Select or play back the track to be erased using the ◄◄ or ►► button, or the numbered buttons on the remote control.**

3 **Press the MD EDIT button repeatedly so that "Erase" is displayed.**
Example:
When erasing the 3rd track

4 **Within 10 seconds, press the ENTER/ ILLUMINATION button.**
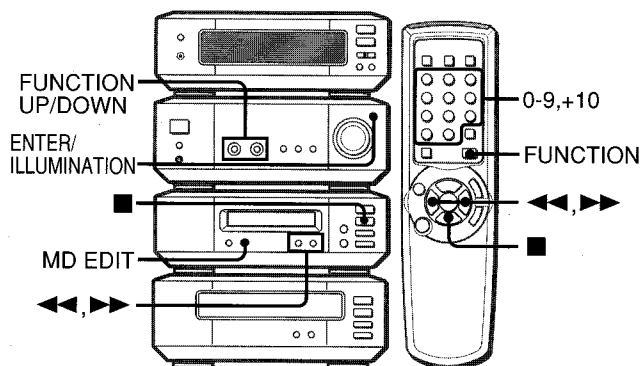The display changes to "Erase?".

Make sure that it is all right to erase the track.
To cancel erasing the track, press the ■ button.

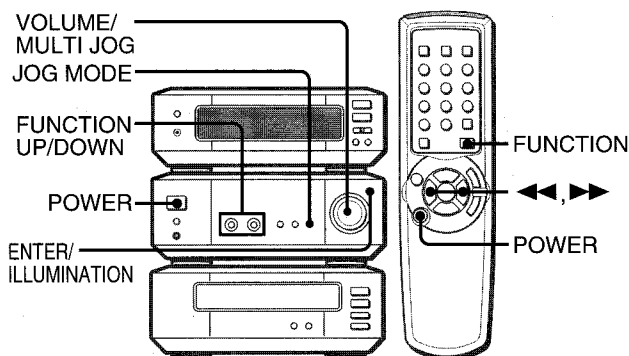5 **Within 1 minute, press the ENTER/ILLUMINATION button.**
The selected track is erased and all the succeeding track numbers are decreased by 1.
"TOC EDIT" is displayed and the data concerning the contents of the editing are registered.

TIMER PLAY AND TIMER RECORDING

VOLUME/
MULTI JOG
JOG MODE
FUNCTION
UP/DOWN
POWER
ENTER/
ILLUMINATION

FUNCTION
◄◄ ,►►
POWER

The system can be turned on at a specified time every day with the built-in timer.
Make sure the clock is set correctly. (See page 9.)

NOTE

Timer playback of a tape and timer recording onto a tape can be performed only when the FX-LM99 optional Stereo Cassette Deck is connected.
Timer playback of an MD and timer recording onto an MD can be performed only when the AM-LM99 optional Mini Disc Recorder is connected.

Preparation for timer recording

• To record from a radio broadcast, press the BAND button to select FM or AM.
• To record from connected equipment, press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control to select "AUX" or "D-IN."
AUX : for the equipment connected to the AUX IN jacks on the Stereo Tuner
D-IN : for the equipment connected to the AUX DIGITAL IN jack on the Mini Disc Recorder
It is possible to change the band and select a station, or re-select the connected equipment, that is, "D-IN" or "AUX," at step 6 below.

1 Select the timer playback or the timer recording.
Press the JOG MODE button repeatedly so that "TIMER" is displayed, and within 6 seconds, turn the VOLUME/MULTI JOG dial to select the timer playback or the timer recording.
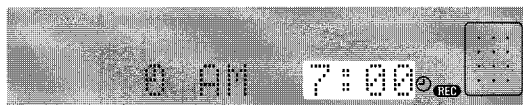

"TIMER ⊙ PLAY" for timer playback
"TIMER ⊙ REC" for timer recording

2 Within 6 seconds, press the ENTER/ILLUMINATION button.
Time and audio source display flash alternately.

3 Set the timer-on time.
Turn the VOLUME/MULTI JOG dial 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 according to how fast you turn the VOLUME/MULTI JOG dial. You can also press the TUNING UP/DOWN buttons on the Stereo Tuner or the ◄◄ or ►► button on the remote control. Holding these buttons down will vary the time in 10-minute units.

4 Select a source for timer play, or a source and a recording destination (Tape or MD) for timer recording.
When selecting timer play
Press the FUNCTION UP or DOWN button to select the desired source and press the ENTER/ILLUMINATION button.
When selecting timer recording
Press the FUNCTION DOWN button to specify the source, and press the FUNCTION UP button to specify the recording destination, and then press the ENTER/ILLUMINATION button.
The display will show one of the followings:
FM (or AM) ► MD:when recording from a radio broadcast on an MD
FM (or AM) ► TP:when recording from a radio broadcast on a tape
AUX (or D-IN) ► MD:when recording from connected equipment on an MD
AUX (or D-IN) ► TP:when recording from connected equipment on a tape

5 Select the duration for the timer-activated period with the VOLUME/MULTI JOG dial, TUNING UP/DOWN buttons or the ◄◄ or ►► button on the remote control, and press the ENTER/ILLUMINATION button.

The duration for the timer-activated period can be set between 5 and 240 minutes in 5-minute steps.

6 Prepare the source and the recording destination.
To listen to a CD, load the disc.
To listen to a radio broadcast, select the desired band and tune in to a station.
To listen to a tape, load the tape into the Stereo Cassette Deck.
To listen to an MD, insert the MD into the Mini Disc Recorder.
To listen to the connected equipment, set the timer of the connected source (with an external timer) and prepare for the play.
To record from a radio broadcast on a tape or an MD, select the desired band and tune in to a station and load the tape or insert the MD.
To record from the connected equipment on a tape or an MD, set the timer of the connected source (with an external timer) and prepare for the play, then load the tape or insert the MD.

7 Press the POWER button to turn the system off after adjusting the volume and tone.

⊕ or ⊕**REC** remains on the display after the power is turned off (timer standby mode).

Note, however, that everything on the display will clear if the power economizing mode (see page 9) is activated. To confirm the timer standby mode, turn on the system and press the ECO button to deactivate the power economizing mode, i.e., select "ECO OFF," then turn off the system again.

When the timer-on time is reached, the unit turns on and begins play (or recording) with the selected source.

If the volume level was set to higher than 21 when the power was turned off, it is automatically set to 21 when the system turns on by the timer.

However, when the power economizing mode (page 9) has been turned on, sound will not be heard during timer recording. To monitor the sound being recorded, deactivate the power economizing mode.

To check the specified time and source

Press the JOG MODE button again and display the timer mode you have selected, then press the ENTER/ILLUMINATION button. The selected source name, the timer-on time and the duration for the timer-activated period are displayed. Press the JOG MODE button to return to the previous display.

To change the timer setting

Set the timer again from the beginning.

To cancel timer standby mode temporarily

Press the JOG MODE button to display the timer mode, then turn the VOLUME/MULTI JOG dial to display "TIMER OFF." And then press the ENTER/ILLUMINATION button within 6 seconds. To restore the timer standby mode, select "TIMER ⊕ REC" or "TIMER ⊕ PLAY" instead of "TIMER OFF."

Using the system while the timer is set

You can use the system normally after setting the timer. Before turning off the power, repeat step 6 to prepare the source and the recording destination, and adjust the volume and tone.

NOTE

* Timer play and timer recording will not begin unless the power is turned off.
* Connected equipment cannot be turned on and off by the built-in timer of this system. Use an external timer.

SETTING THE SLEEP TIMER

JOG MODE

VOLUME/
MULTI JOG

◄◄,►►
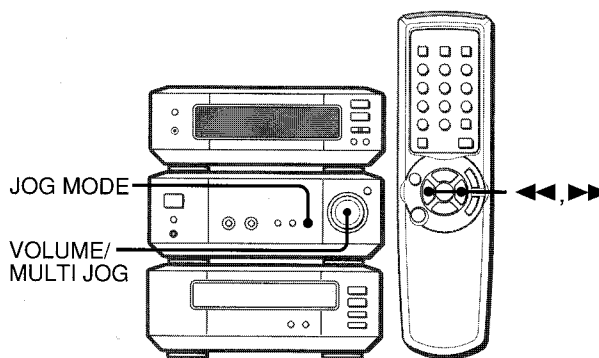
The system can be turned off automatically at a specified time.

1 Press the JOG MODE button repeatedly so that "SLEEP OFF" is displayed.

2 Within 6 seconds, turn the VOLUME/MULTI JOG dial or press the ◄◄ or ►► button on the remote control to specify the time until the power is turned off.

Each time the button is pressed, the time changes between 5 and 240 minutes in 5-minute steps.

Specified time

To check the time remaining until the power is turned off

Press the JOG MODE button repeatedly so that "SLEEP xx" (xx is the time until the power is turned off.) is displayed. The remaining time is displayed for 6 seconds.

To cancel the sleep timer

Press the JOG MODE button repeatedly so that "SLEEP xx" is displayed. Then turn the VOLUME/MULTI JOG dial or press the ◄◄ or ►► button on the remote control to display "SLEEP OFF." The "SLEEP" on the display disappears.

CONNECTING AUDIO/VIDEO EQUIPMENT

The Stereo Tuner is equipped with the AUX IN jacks.
The Stereo Integrated Amplifier is equipped with the SUPER WOOFER jack.
The AM-LM99 optional Mini Disc Recorder is equipped with the AUX DIGITAL IN jack.
These jacks allow you to connect commercially available audio/video equipment to the system.

Stereo Tuner — AUX IN
Stereo Integrated Amplifier — SUPER WOOFER
Compact Disc Player
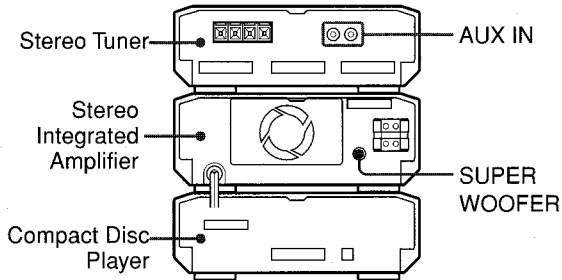
Refer to the operating instructions of the connected equipment for details.
• The connecting cords are not supplied. Obtain the necessary connecting cords.
• Consult your local Aiwa dealer for optional equipment.

AUX IN JACKS

Analog sound signals can be input to the system through the AUX IN jacks on the rear of the Stereo Tuner.
Use a cable with RCA phono plugs to connect audio equipment (turntables, LD players, VCRs, TV, etc.).
Connect the red plug to the R jack, and the white plug to the L jack.
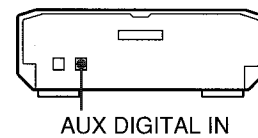
When connecting a turntable
Use an Aiwa turntable equipped with a built-in equalizer amplifier.

◁ SUPER WOOFER JACK

Connect an optional powered sub woofer with a built-in amplifier to the jack.

AUX DIGITAL IN JACK

Optional Mini Disc Recorder

AUX DIGITAL IN

Digital sound signals can be input to the AM-LM99 optional Mini Disc Recorder through the AUX DIGITAL IN jack.
This system has a built-in sampling frequency rate converter, which converts the sampling frequency rates that are different from the MD sampling frequency rate (BS/CS tuner, DAT and other digital signals) into a sampling frequency rate that can be recorded on an MD.
Use an optical cable to connect digital audio source equipment (DAT deck, MD player, etc.).
Remove the dust cap ⓐ from **AUX DIGITAL IN** jack. Then, connect an optical cable plug to **AUX DIGITAL IN** jack.
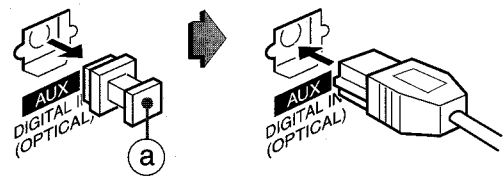
When AUX DIGITAL IN jack is not being used
Attach the supplied dust cap.

NOTE

The sound input via this jack may be cut off while an MD is being loaded or ejected.

LISTENING TO EXTERNAL SOURCES

TO PLAY EQUIPMENT CONNECTED TO THE AUX IN JACKS

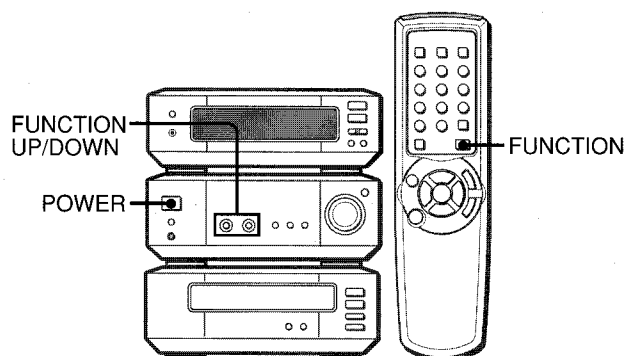*1* **Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control repeatedly so that "AUX" is displayed.**

2 **Play the connected equipment.**

To change a source name in the display window
Press the FUNCTION UP or DOWN button repeatedly until "AUX/D-IN" is displayed, and when "AUX/D-IN" is displayed, keep the button pressed and press the POWER button on the Stereo Integrated Amplifier.
This operation changes the displayed source name cyclically as follows:

$$\rightarrow AUX \rightarrow VIDEO \rightarrow TV \rightarrow$$

TO PLAY EQUIPMENT CONNECTED TO THE AUX DIGITAL IN JACK

1 **Press the FUNCTION UP or DOWN button on the Stereo Integrated Amplifier or the FUNCTION button on the remote control repeatedly so that "D-IN" is displayed.**

2 **Play the connected equipment.**

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.

Care of the system
• Do not give the system a strong shock, i.e., drop or hit.
• Do not use the system close to a strong magnetic field such as a television. Doing so may cause malfunctions.

To clean the heads and tape paths of the optional Stereo Cassette Deck
After every 10 hours of use, clean the heads and tape paths with a commercially available head cleaning cassette.

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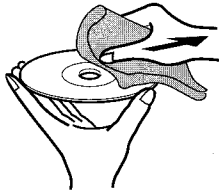
• After playing a disc, store the disc in its case. Do not leave the disc in places that are hot or humid.

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.

Care of MDs
Since MDs come in a cartridge which protects the discs inside from fingerprints and dust, you do not have to be overly careful when handling them. However, soiled or damaged cartridges can lead to malfunctions in the unit. Observe the following tips when handling MDs.
• Keep a cartridge in the attached case.
• Do not open the shutter of the cartridge to touch the disc directly. If the disc inside becomes soiled, it is very difficult to clean. The cartridge can also be damaged.
• Close the shutter if it opens while handling or ejecting a disc. Otherwise dust may enter inside or a disc may become scratched.

Shutter

Cartridge
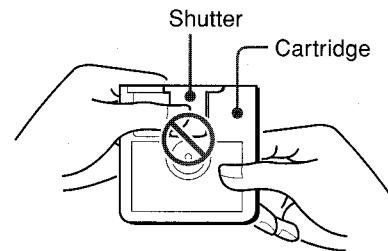
MD GUIDE MESSAGES

Message	Cause	Solution
Blank Disc	Nothing is recorded on the disc.	—
Can't Edit	Tracks are too short to be joined up.	See "THE LIMITATIONS OF MD" on page 21.
	The combine function was used while playing back the first track.	
	The divide function is used at the beginning of the track.	
	The combine function was used to join a track recorded in monaural with a track recorded in stereo.	
Disc Error	The disc is damaged by scratches.	Replace the disc.
	The unit received a strong shock during a TOC reading.	Do not subject the disc to strong shock during a TOC reading.
Disc Full	There are not enough time to record remaining on the disc.	Replace the disc with another recordable disc.
Temp Over	The temperature of the unit is too high.	Leave the unit in a cool place for a while before operating it again.
	The surrounding temperature is too high or too low.	Operate the unit at moderate room temperature.
PB Disc	A prerecorded disc is attempted to edit.	Replace the disc with a recordable one.
Protected	The disc is record-protected.	Slide the record-protect tab on the disc. (See page 24.)
TOC Full	There are too many tracks or emphasis data to be recorded or edited, or there is no room on the disc.	Erase tracks.
Mecha Err	Error occurred in the loading mechanism. (All functions are disabled.)	Turn the power off and disconnect the AC cord once. Then turn it on again. If this message still appears, consult your local Aiwa dealer.
MD Error	An error occurred in the MD unit of this unit.	Contact an Aiwa service representative.
UTOC Error	An error occurred in the TOC of the MD because the unit was subjected to a strong shock during recording, or during recording or reading of the TOC.	Exchange the MD. Do not subject the unit to strong shocks during recording, or during recording or reading of the TOC.

GENERAL

En

SPECIFICATIONS

STEREO TUNER TX-LM99
FM tuner section
Tuning range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	13.2 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

Input
AUX IN	500 mV

General
Dimensions (W × H × D)	210 × 71 × 247 mm
	(8³/₈ × 2⁷/₈ × 9³/₄ in.)
Weight	0.9 kg (2 lbs)

STEREO INTEGRATED AMPLIFIER MX-LM99
Amplifier section
Power output	25 watts per channel RMS at 6 ohms, from 65 Hz to 10 kHz, with no more than 1% Total Harmonic Distortion
Total harmonic distortion	0.08% (1W, 1 kHz, 6 ohms, DIN AUDIO)

Outputs
SUPER WOOFER	1.4 V
SPEAKERS	Accept speakers of 6 ohms or more
PHONES	Stereo mini jack : accepts headphones of 16 ohms or more

General
Power requirements	120 V AC, 60 Hz
Power consumption	67 W
Standby power consumption	1.9 W (power economizing mode set to ON)
Dimensions (W × H × D)	210 × 81 × 282.5 mm
	(8³/₈ × 3¹/₄ × 11¹/₈ in.)
Weight	3.0 kg (6 lbs 10 oz)

COMPACT DISC PLAYER DX-LM99
Compact disc player section
Laser	Semiconductor laser ($\lambda = 780$ nm)
D-A converter	1 bit dual
Signal-to-noise ratio	90 dB (1 kHz, 0 dB)
Harmonic distortion	0.05 % (1 kHz, 0 dB)
Wow and flatter	Unmeasurable

Output
DIGITAL OUT
General
Dimensions (W × H × D)	210 × 81 × 244.5 mm
	(8³/₈ × 3¹/₄ × 9³/₄ in.)
Weight	1.3 kg (2 lbs 14 oz)

STEREO CASSETTE DECK FX-LM99
Cassette deck section
Track format	4 tracks, 2 channels stereo
Frequency response	CrO₂ tape: 50 Hz to 16000 Hz
	Normal tape: 50 Hz to 15000 Hz
Signal-to-noise ratio	60 dB (CrO₂ tape peak level)
Recording system	AC bias
Heads	Recording/playback head × 1
	Erase head × 2

General
Dimensions (W × H × D)	210 × 71 × 243 mm
	(8³/₈ × 2⁷/₈ × 9¹/₂ in.)
Weight	1.3 kg (2 lbs 14 oz)

MINI DISC RECORDER AM-LM99
MD recorder section
Scanning method	Non-contact optical scanner (Semiconductor laser application)
Recording system	Magnetic polarity modulation overwrite system
Rotation speed	Approx. 400 to 900 rpm (CLV)
Sampling frequency	44.1 kHz
No. of channels	Stereo: 2 channels
	Monaural: 1 channel
A-D D-A converter	1-bit
Frequency	20 to 20000 Hz +0.2 - −1.5 dB
Wow and flatter	Unmeasurable

Input
AUX DIGITAL IN	Sampling frequency: 48 kHz/32 kHz
	Optical input level: more than −21 dBm

General
Dimensions (W × H × D)	210 × 71 × 243 mm
	(8³/₈ × 2⁷/₈ × 9¹/₂ in.)
Weight	1.3 kg (2 lbs 14 oz)

SPEAKER SYSTEM SX-LM99
Cabinet type	2 way, bass reflex (magnetic shielded type)
Speakers	Woofer:
	100 mm cone type x 2
	Tweeter:
	22 mm dome type
Impedance	6 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W × H × D)	152 × 301 × 202 mm
	(6 × 12 ¹/₄ × 8 in.)
Weight	3.8 kg (8 lbs 6 oz)

- Specifications and external appearance are subject to change without notice.
- US AND FOREIGN PATENTS LICENSED FROM DOLBY LABORATORIES LICENSING CORPORATION.

BBE SYSTEM
The word "BBE" and the "BBE symbol" are trademarks of BBE Sound, Inc.
Under license from BBE sound, Inc.

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.

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 6)
• Was an incorrect function button pressed?

The sound becomes inaudible or the unit is turned off suddenly.
• There may be a short circuit in the speaker terminals.
→ Disconnect the AC cord from the AC outlet and re-connect the speaker cords correctly. Then connect the AC cord and turn the unit on again.

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.

STEREO TUNER

There is constant, wave-like static.
• Is the antenna connected properly? (→ page 6)
• Is the signal weak?
→ Connect an outdoor antenna.

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

To reset

If an unusual condition occurs in the display window or the cassette deck, reset the unit as follows.
1 Press the POWER button to turn off the power.
2 Press the POWER button to turn the power back on while pressing the CLEAR button on the Stereo Tuner. Everything stored in memory after purchase is canceled.
If the power cannot be turned off in step 1 because of a malfunction, reset by disconnecting the AC cord and repeat step 2.

COMPACT DISC PLAYER

The CD player does not play.
• Is the disc correctly inserted? (→ page 13)
• Is the disc dirty? (→ page 38)
• Is the lens affected by condensation?
→ Wait approximately one hour and try again.

STEREO CASSETTE DECK

The tape does not run.
• Is the deck in pause mode? (→ page 16)

The sound is off-balance or not adequately high.
• Is the playback head dirty? (→ page 38)

Recording is not possible.
• Is the erasure prevention tab on the tape broken off? (→ page 17)
• Is the recording head dirty? (→ page 38)

Erasure is not possible.
• Is the erasure head dirty? (→ page 38)
• Is a metal tape being used?

High frequency sound is not emitted.
• Is the recording/playback head dirty? (→ page 38)

MINI DISC RECORDER

The MD recorder cannot be operated
• Is there a disc inside the Mini Disc Recorder?
→ Insert a disc.
• Is the lens affected by condensation?
→ Wait approximately one hour and try again.

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

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

Recording is not possible
• Is the digital recording attempted from the source other than CD?
• Is a prerecorded disc inserted?
→ Change to a recordable disc.
• Is the disc protected by the record-protected tab on the disc? (→ page 24)

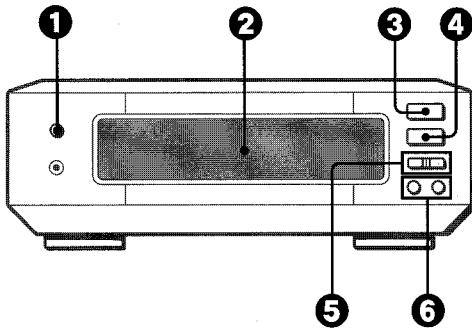# PARTS INDEX

MX-LM99 STEREO INTEGRATED AMPLIFIER
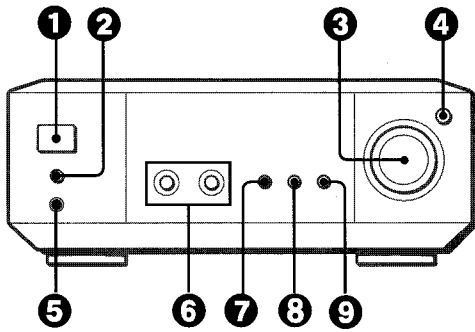
❶ POWER button   8, 34
❷ ECO button   9
❸ VOLUME/MULTI JOG dial   8, 9, 10, 28-32, 34, 35
❹ ENTER/ILLUMINATION button   9, 28-34
❺ PHONES jack   8
❻ FUNCTION UP/DOWN buttons   13, 16, 22, 34, 37
❼ Q SURROUND button   10
❽ DISPLAY button   11, 13, 16, 23, 25-28
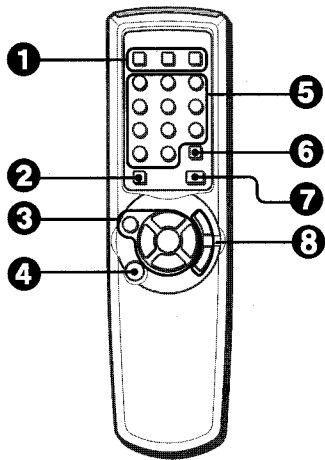❾ JOG MODE button   10, 34, 35

TX-LM99 STEREO TUNER

❶ DEMO button   7
❷ Display window
❸ BAND button   8, 11
❹ PRESET button   12
❺ SET button   12
   CLEAR button   12
❻ TUNING UP/DOWN buttons   11

DX-LM99 COMPACT DISC PLAYER
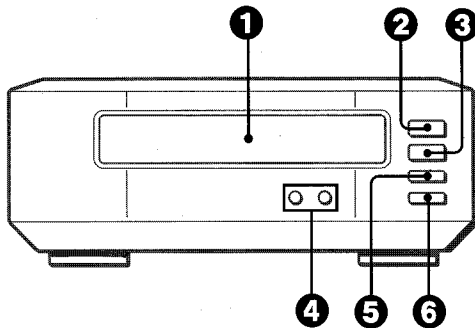
❶ Disc compartment   13
❷ ► PLAY button   8
❸ ■ STOP button   13
❹ ◄◄/I◄◄, ►►I/►► SKIP/SEARCH buttons
                                    13
❺ II PAUSE button   13
❻ ▲ OPEN/CLOSE button   13

REMOTE CONTROL

❶ DISPLAY button	11, 13, 16, 23, 25-28
EQ button	10
MODE button	11, 14, 16, 18, 19, 23
❷ BAND button	11
❸ ◄◄/I◄◄, ►►I/►► SKIP/SEARCH buttons	
	9, 11, 13, 16, 22, 34, 35
II PAUSE button	9, 12, 13, 16, 22
■ STOP button	12, 13, 16, 22
► PLAY button	12, 13, 16, 22
❹ POWER button	8, 34
❺ Numbered buttons	12, 14, 18, 19, 23
❻ REPEAT button	14
❼ FUNCTION button	8
❽ VOL ∧/∨ buttons	10

FX-LM99 OPTIONAL STEREO CASSETTE DECK
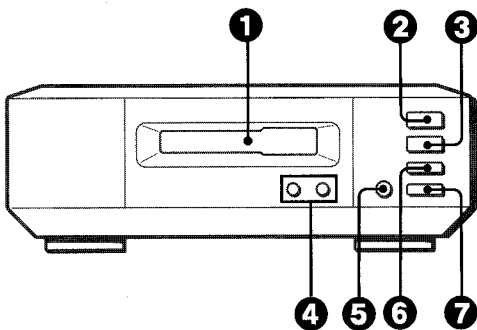
❶ Cassette insertion slot	16
❷ ◄► PLAY/DIR button	16
❸ ■ STOP button	16
❹ ◄◄, ►► REW/FF buttons	16
❺ ● REC button	17-19
❻ II PAUSE button	16
❼ ▲ EJECT button	16

AM-LM99 OPTIONAL MINI DSIC RECORDER
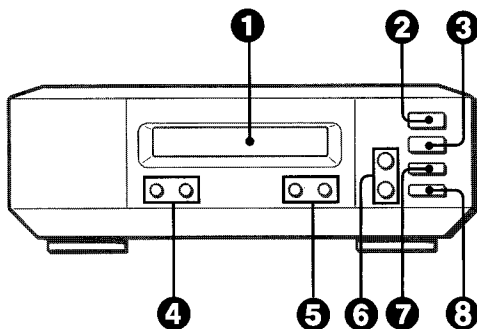
❶ Disc drive	22
❷ ► PLAY/INSERT button	22
❸ ■ STOP button	22
❹ MD MODE button	28, 29, 30
MD EDIT button	31, 32, 33
❺ ◄◄,►► SKIP/SEARCH buttons	
	22
❻ ● SYNCHRO REC	
CD ► MD (DIGITAL) button	25-27
● REC button	28, 29
❼ II PAUSE/DELETE button	22
❽ ▲ EJECT button	22

En

For assistance and information,

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

AIWA CO.,LTD.