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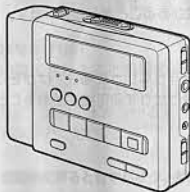
Aiwa

MiniDisc Recorder

AM-F3

User Manual

OPERATING INSTRUCTIONS



Thank you for your purchase.

To ensure proper use, please
carefully.

After reading, please keep this manual

Mini
Disc

For Safe Use

At Aiwa, we are committed to "safety design" to ensure we deliver safe products to our customers; however, improper use can lead to serious accidents such as fire or electric shock. To prevent such accidents, please read and understand the following precautions carefully before use, and be sure to follow them.

This instruction manual displays three levels of precautions based on the severity of accidents that may occur if the product is handled incorrectly



Danger

This symbol indicates that failure to follow the precautions listed here poses an imminent risk of death or serious injury.



Warning

Failure to follow the precautions indicated by this symbol may result in death or serious injury.



Caution

This symbol indicates that failure to follow the precautions listed may result in injury or property damage.

Please note that we assume no responsibility for any damages resulting from missed opportunities to use this product for recording or playback due to product failure, malfunction, or defects. Please be aware of this in advance.



Warning

This unit is intended for use in Japan

Do not connect the included AC adapter to any power outlet other than a 100-volt (AC 100V) household outlet. Using a different voltage may result in fire or electric shock.



Do not disassemble or modify

This may cause electric shock. In addition, exposure of the eyes to the laser beam may cause visual impairment.



Do not expose to water

Water entering the unit may cause electric shock. Do not use this unit in locations where it may be exposed to water, such as in the bathroom, near water, or outdoors in rainy weather.



Never use headphones while riding a bicycle, motorcycle, or driving a car

It will make it difficult to hear surrounding sounds and distract you from traffic, which may cause a traffic accident.

Please also pay close attention to surrounding traffic when using the device while walking.



Requesting repairs

Continuing to use the product while it is malfunctioning may result in fire, electric shock, or injury.

If you notice any of the following symptoms

1. Unusual noises, odors, or smoke
- Water or foreign objects have entered the unit
1. The unit has been dropped, or a part of the unit is damaged
1. The unit does not operate normally
- The AC adapter has become abnormally hot. (It is not a malfunction if the AC adapter feels warm during use.)



Unplug the AC adapter from the power outlet and contact the store where you purchased the unit or Aiwa's customer service center to request repairs



Unplug the power cord



Caution

Do not place the unit in areas with high humidity or dust, where it is exposed to oil fumes or steam, near heating appliances, or in direct sunlight

This may cause a fire or electric shock.



Do not leave the unit in a car with the windows closed

The interior of a car can reach temperatures as high as 100°C, which may cause the device to malfunction or even result in a fire.

Using the AC Adapter Correctly

To prevent accidents such as fires or electric shocks caused by the AC adapter, please observe the following precautions.

- Do not use with devices other than the one provided
 - Do not cover or wrap it in cloth or bedding
 - Do not place near heat-generating appliances
2. Unplug the power cord from the outlet when finished using the device
 2. When unplugging, hold the AC adapter itself and pull it out; do not pull on the cord
 1. Do not plug or unplug the power cord with wet hands



When listening with headphones, keep the volume at a moderate level

Do not listen at high volumes that may be harmful to your ears for extended periods. This may cause hearing damage. Also, in crowded places such as trains, sound leakage from the headphones may be a concern. Please be careful not to turn the volume up too high so as not to disturb those around you.



Start by turning the volume down to the minimum

Sudden loud sounds from the headphones may cause hearing damage.



Keep out of reach of children

Inserting a finger into the MiniDisc slot may result in injury. Please take special care to keep the unit out of reach of small children.



For Safe Use of the Rechargeable Battery

To prevent accidents caused by leakage, overheating, or rupture of the lithium-ion rechargeable battery, please observe the following precautions.

Danger

- Do not charge using any AC adapter other than the one provided.
- Do not use with any devices other than this unit.
- Do not place in fire or expose to heat.

• Do not cause a short circuit. In particular, do not carry or store the unit together with small metal objects (such as ballpoint pens, necklaces, coins, or jewelry).

• Do not use, leave unattended, or charge near fire or in direct sunlight.

• Do not deform, disassemble, or modify the device.

Warning

- Do not charge for longer than the specified time.
- Do not place in a microwave oven or dryer.
- If liquid leaks or an unusual odor is detected, immediately move the unit away from any open flames.

In case of liquid leakage

If liquid comes into contact with your skin or clothing, rinse thoroughly with plenty of water. If liquid gets into your eyes, rinse immediately with clean water and seek medical attention right away.

For Safe Use of Dry Cell Batteries

To prevent accidents caused by battery leakage, overheating, or rupture, please observe the following precautions.

Warning

- Do not throw into fire, heat, or disassemble.
- Do not short-circuit.
- Do not charge.

Caution

- Insert the battery with the + and - marks aligned correctly.
- Do not use batteries other than those specified.
- Do not mix different types of batteries, or use new and old batteries together.
- Remove used batteries immediately.
- Remove the batteries if the device will not be used for a while.

In the event of a leak

Wipe up the leakage thoroughly. If the leakage comes into contact with your skin or clothing, rinse it off with plenty of water.

Key Features

High-Quality Digital Recording and Playback

You can record and play back your favorite music as many times as you like without compromising sound quality.

Mono recording for extended recording time

Using a 74-minute recording disc allows for extended recording of up to 148 minutes. This is ideal for business applications such as recording meetings.

Fast-Forward Playback Function

You can play back audio at approximately twice the normal speed while maintaining clarity.

Versatile Editing Functions

Use the Combine function to join tracks, the Divide function to split a track into two parts, the Rename function to change track numbers, and the Erase function to delete recorded content to create your own original disc. Do not charge using any power adapter other than the included AC adapter.

Track Name/Disc Name Function

You can record names for each song or disc.

3-Track Marking Function

You can record track marks (indicators) in three ways to help you quickly find the part you want to listen to during playback. By using a 74-minute recording disc, you can record for up to 148 minutes.

Auto Mark Function: Automatically records cues based on the recording source.

Time Mark Function: Records time markers every 5 minutes. Ideal for mono recordings such as meetings.

Manual Mark Function: You can record cue marks at desired points while recording.

Other

- Large LCD display with backlight
- Illuminated control buttons
- Key
- New battery level (BATT) indicator

Accessories

The following items are included with this unit. Please check them before use.



Stereo with remote control



AC adapter (1)



Rechargeable battery (1)



Battery case (1)



Headphones (1)



Rechargeable battery cover (1)



Carrying pouch (1)

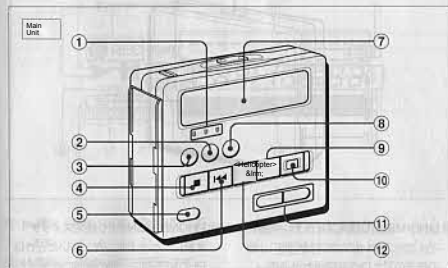


Ear pads (1 pair)
Install as shown in the diagram



Connection cable (1)

This section explains the basic functions of the buttons and switches.



• ① BATT indicator: Displays the remaining battery level.

• ② MODE Button: Selects the recording, playback, or editing mode.

• ③ DISP button: Switches the display. Turns the backlight on or off.

• ④ ■ Button: Stops recording or playback. If no operation is performed for more than 4 seconds after stopping, the power turns off.

• ⑤ DSP/SHIFT Button: Selects the sound suitable for the type of music being played. Also, when naming songs or discs, this button switches between uppercase and lowercase letters, Katakana, and symbols.

• ⑥ << Button: Rewinds during playback or skips to the beginning of a track.

Display

• ⑦ EDIT/ENTER button: Press this simultaneously with the ►|| buttons to start editing.

You can also configure performance, recording methods, and editing operations.
⑧ ►►| button: Fast-forwards during playback or skips to the beginning of a track.

• ⑨ ►►| Button: Fast-forwards during playback or skips to the beginning of a track.

⑩ REC button: Press simultaneously with the ►|| button.

• ⑪ VOLUME (+/-) buttons: Adjust the volume. Also, use these to select characters when naming tracks or discs.

• ⑫ ►|| Button: Starts or pauses recording or playback.

Names and Functions of Parts

About the Power Supply

Setting the Clock

Recording

Recording Types and Transfer

Basic Recording

Automatic Function

Recording Features

Recording Markers Every 5 Minutes (Timeline Function)

Recording with Markers

Recording with Markers (Manual Recording)

Long-Duration Recording (Moral Recording)

Recording Specific Phrases

Basic Playback

Basic Playback

Selecting Sounds Suited to Music (DSP Mode)

Selective Playback (All-Track/Single-Track Playback)

Playback with Different Musical Styles (Single Playback)

Playback with preferred sound settings (Program Playback)

Various

Methods

Search and play tracks (Intell-Search)

Record track and disc names (Track Name/Disc Name)

Complete

Assign names to two tracks (Compact)

Skip tracks (Skip)

Renumber tracks (Renumber)

Delete tracks (Delete Single Track/Delete All)

Prevent accidental operation (Hold)

Change the font (LCD display)

Useful

Tips

To play music (Ikerama function)

Play the track sound through another device (Ryuuma playback function)

Turn on the display backlight (Backlight function)

Listen to MD audio on other devices

Listen to audio in the car

Other

For proper use

What is Meeting?

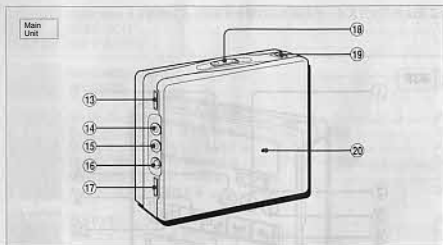
What does the sound do?

Error messages and sounds

Main Specifications

Warranty and After-Sales Service

OPERATING INSTRUCTIONS



• ④ LINE/MIC Switch: Set to the MIC side when connecting a microphone to this unit, and to the LINE side when connecting the analog audio output (LINE OUT) terminal of another device.

• ⑤ OPTICAL IN/LINE IN/MIC Jack: Connect other digital or analog devices, or a microphone.

• ⑥ LINE OUT/PHONES Jack: Connect to the audio input terminal of other analog devices. Also connects the included remote-controlled headphones.

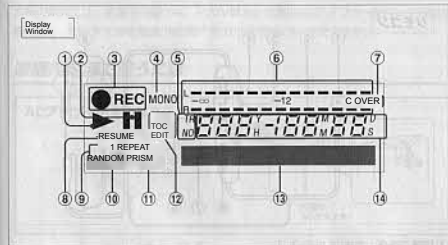
• ⑦ DC 4.5V jack: Connect the included AC adapter here.

• ⑧ PHONES/LINE Switch: When connecting headphones to this unit, set the switch to the PHONES side; when connecting to the audio input terminal of another device, set it to the LINE side.

• ⑨ EJECT ▲/HOLD Switch: To open the disc tray, set it to the EJECT ▲ position; to prevent accidental operation of the unit's buttons, set it to the HOLD position.

• ⑩ RELEASE knob: Turn in the direction of the arrow to remove the rechargeable battery or battery case from the unit.

• ⑪ ←-RESET Switch: Clears all settings, including the time and information read from the disc. Press with the tip of a mechanical pencil or similar object.



• ① ▶ Indicator: Lights up during recording, editing, and playback.

• ② II Indicator: Lights up during pause.

• ③ ● REC Indicator: Lights up during recording.

• ④ MONO indicator: Lights up during extended mono recording/playback.

• ⑤ TR NO Display: Lights up when displaying track numbers.

• ⑥ Level Indicator: Displays the recording input level during recording and the playback level during playback.

• ⑦ OVER Indicator: Lights up when the recording input level is set too high.

• ⑧ RESUME indicator: Lights up immediately before playback begins when the resume function is active.

• ⑨ REPEAT/1 REPEAT Indicator: Lights up during repeat playback of all tracks or a single track.

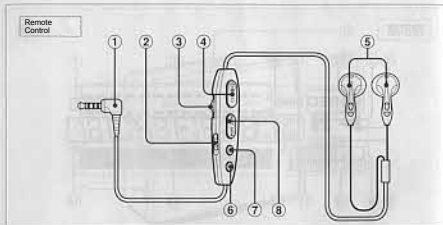
• ⑩ RANDOM indicator: Lights up during random playback.

• ⑪ PRGM indicator: Lights up during program playback.

• ⑫ TOC-EDIT indicator: Lights up when recording or editing begins, and turns off when recording or editing is complete and the information (TOC) has been saved.

• ⑬ Text Display: Displays the disc title, track names, selected editing method, error messages, and more.

• ⑭ Time/Date Display: Displays track playback time, remaining track time, remaining disc time, recording date and time, and the current time.



- ① Connection Plug: Connect to the LINE OUT/PHONES jack on the main unit.
 - ② HOLD Switch: Prevents accidental operation of the remote control buttons.
 - ③ VOL knob: Adjusts the volume. It also allows you to quickly select characters when naming tracks or discs.
 - ④ ■ Button: Stops recording or playback.
 - ▶ Button: Starts recording or playback, or pauses.
 - ⑤ Stereo Headphones: As shown in the illustration, wrap the longer cord around the back of your neck to use.
 - ⑥ DSP/SHIFT Button: Selects the sound best suited to the type of music being played. Also, when naming songs or discs, this button allows you to switch between uppercase letters, lowercase letters, Katakana, and symbols.
 - ⑦ REC/EDIT button: Press this button simultaneously with the ▶|| buttons to start recording or editing.
 - ⑧ SKIP/SEARCH button
- ««: Rewinds playback or skips to the beginning of a track.
- ▶▶: Fast-forwards during playback or skips to the beginning of a track.

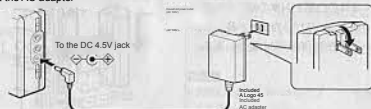


Power Supply

This unit can be powered by a household power source (100 V AC, using the included AC adapter), the included rechargeable battery (LIP-12), or dry cell batteries (two AA alkaline batteries).

To use with household power

Connect the AC adapter



Precautions for Using the AC Adapter

- Be sure to use the supplied AC adapter (unified polarity plug, EIAJ standard). Do not use any AC adapter other than the one supplied.
- When finished using the unit, unplug the AC adapter from both the unit and the power outlet.



THIS IS A TEST
THIS IS A TEST
THIS IS A TEST
THIS IS A TEST

For use with rechargeable batteries

The rechargeable battery is not fully charged at the time of purchase. Be sure to charge it before use.

1. Installing the rechargeable battery in the main unit Align the recessed part and the bottom edge of the rechargeable battery with the protruding part and the "IN" line on the main unit, respectively, and move it in the direction of the arrow until you hear a click, indicating it is securely connected.	
2 Connect the AC adapter to the unit	
3 ■ Press the button Charging will begin, and the BATT signal will change as shown in the lower right. Changes in the BATT signal Charging time takes approximately 2 hours to reach 90% charge and approximately 5 hours to reach 100% charge from a fully discharged state.	
4 充電が完了したら ACアダプタを抜き、時計を押し戻す 4 When charging is complete, disconnect the AC adapter and press the DISP button The clock will be displayed for a few seconds, and the BATT indicator and other lights will turn off.	

Attaching the rechargeable battery cover

Install the included battery cover so that ▲OPEN is facing up, as shown in the illustration.

The battery can be used even without the battery cover attached.

To remove it, hold the side marked ▲OPEN and the opposite side and pull.



Remove the rechargeable battery

While pressing the RELEASE knob in the direction of the arrow, pull the rechargeable battery straight up to remove it.



You can charge at any time

- You can charge the unit at any time, regardless of the remaining battery level.
- When using the unit with the rechargeable battery installed and the AC adapter connected, pressing the ■ button after recording or playback will start charging.

About Rechargeable Battery Life

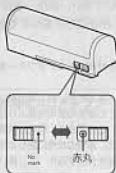
- Rechargeable batteries can be recharged and used approximately 300 times.
- When the operating time is reduced to about half of normal even after a full charge, please replace the rechargeable battery with a new one.
- To maximize the life of your rechargeable batteries, charge them in an environment with an ambient temperature between 10°C and 30°C. Also, store them in a cool place.

Important Notes

- Be sure to use the included AC adapter for charging.
- When charging for the first time or after a long period of inactivity, the battery life may be shorter than usual. In this case, repeating the discharge and charge cycle several times will restore it to normal condition.
- To maintain the performance of the rechargeable battery, please charge it once a year, even if you do not use it for a long time.

Tips for Using the Rechargeable Battery

- For peace of mind, it's a good idea to keep a spare set of commercially available rechargeable batteries (Sony LIP-12) on hand.
- Rechargeable batteries have a "charge indicator." To distinguish between them, manually switch the indicator to the "blank" side for charged batteries and to the "red circle" side for used ones.



If "TEMP OVER" appears in the display window

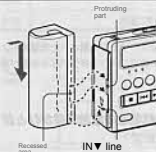
this indicates that the temperature is outside the charging range. Charging is only possible between 0°C and 45°C.

To use with dry-cell batteries

Use two standard AA alkaline batteries. (The device may not work with manganese batteries.)

1 Attaching the battery case

As shown in the figure, align the recessed part and the bottom edge of the battery case with the protruding part and the "IN ▼" line on the main unit, respectively, and while pressing down, move it in the direction of the arrow until you hear a click.



2 Inserting the batteries

- ① Open the cover
- ② Insert two AA alkaline batteries, making sure the + and - terminals are correctly aligned



Remove the battery case

While pressing the RELEASE knob in the direction of the arrow, pull the battery case upward to remove it.



Battery Life

Batteries Used	Continuous operating times for rechargeable and alkaline batteries are as follows.	Continuous Playback time	Continuous recording time
Rechargeable battery		Approx. 6.0 hours	Approx. 3.5 hours
Alkaline batteries		Approx. 4.0 hours	Approx. 1.0 hours

The operating time is based on the use of a fully charged rechargeable battery or new alkaline batteries. However, actual operating time may vary slightly depending on usage conditions and the environment.

You can see the remaining battery level of the rechargeable or alkaline batteries at a glance



The BATT signal changes its lighting pattern during operation according to the remaining battery level as follows.

Battery level	Low	High
BATT signal	(Red) E	(Orange) M (Green) F

Also, when using both the rechargeable battery and the AC adapter, the BATT indicator may light up to check the charge status when playback or recording begins.

If the battery level gets low during use

the red (E) indicator on the BATT signal will light up. Additionally, when the batteries are completely depleted, "BAT1 EMPTY" will be displayed and the power will turn off. In such cases, please recharge the rechargeable batteries or replace all the dry-cell batteries with new ones.

To prevent recording failures due to low battery power

To prevent recording from being interrupted due to low battery power, we recommend connecting the unit to a household power source, especially when recording for long periods.

About the Display Window Illumination

When using AC power, the display window is brightly lit while the power is on. When using rechargeable or dry cell batteries, the display lights up for approximately 4 seconds after pressing the DISP button. If you want to keep the display window lit while using batteries, see "Turning on the Display Window Light" on page 55. In this case, battery consumption will be faster than usual.

Setting the time

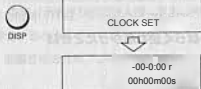
- If you set the clock, the recording date and time will be automatically recorded during recording.
- The time is displayed in 24-hour format.
- Set the clock when the battery level is sufficient, or while using the AC adapter.



1 While the watch

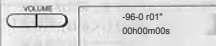
is stopped, press the DISP button until "CLOCK SET" appears (for at least 3 seconds).

The last two digits of the year will flash.



2 Press the VOLUME+ or - button to set the "Year" digit

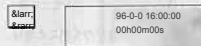
- Press and hold the + or - button to change the digits quickly.



• Press the 3 >>>I button to move to the next item &arr; &arr; &arr;

The "year" is confirmed, and the "month" digits will flash.

- Pressing the I button confirms the currently selected item and moves to the next item.



4. As in steps 2 and 3, use the VOLUME and >>> buttons to set the numbers for "Month," "Day," "Hour," and "Minute."

Make sure the "seconds" digit is flashing.



5 Press the EDIT/ENTER button

The clock starts at 00 seconds.



6 Press the ■ button to clear the clock display



Set the time

If you make a mistake while setting the time

Press the *** button repeatedly to decrease the number of the item you want to correct, then use the VOLUME button to set it again.

To view the time

To view the clock, press the DISP button once while the unit is stopped (when nothing is displayed in the display window). The clock will be displayed for approximately 4 seconds.

If you haven't used the unit for a while

Press the DISP button once to check the clock display.

If the clock display does not appear or is flashing, the clock has stopped. If the clock has stopped, the recording date and time will not be recorded correctly.

Please reset the clock by following the steps in "Setting the Clock."

If the clock is running slow,

If the clock is slow

If the clock is running slow due to a low battery, correct the numbers for the necessary items, such as "Hour" and "Minute," as described in steps 1-4 of "Setting the Clock." Since the "Seconds" continue to advance while you are setting the clock, to start the clock from 00 seconds, press the EDIT/ENTER button at the following timing:

If you press the button while the "seconds" are flashing between 0 and 29, the watch will reset to 00 seconds and start running.

If you press the button while the "seconds" are flashing between 30 and 59, the time will advance by one minute and start running from 00 seconds.

When removing the rechargeable battery from the main unit

When replacing the rechargeable battery in use with a spare rechargeable battery or a battery case, the internal backup battery will operate for about 10 minutes to prevent the watch from stopping.

Within these approximately 10 minutes, attach a battery case containing a fully charged rechargeable battery or dry cell batteries to the main unit.

Connecting the AC adapter to the unit and a household power outlet provides a more reliable power backup.

If the operating time of the internal backup battery becomes extremely short

Please have the internal backup battery replaced at your nearest Aiwa Service Center. (The recommended replacement interval is after 10,000 charge cycles.)

Caution

To prevent the unit's built-in clock from stopping, keep the AC adapter, rechargeable battery, or a battery case containing dry cell batteries connected to the unit.

Record

Recording Types and Connections

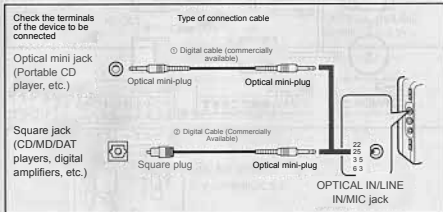
There are two types of recording: "Optical Digital Connection Recording" and "Analog Connection Recording." Since the source devices and connection terminals differ for each, please refer to the following instructions to ensure proper connection.

Optical Digital Connection Recording

This method allows for high-quality recording by capturing the digital signal as-is. Additionally, information identifying the recording content, such as playback time and skip positions (TOC: Table of Contents), is automatically recorded. This is convenient when recording an entire CD or MD.

Connecting to the optical digital output terminal

- Make sure the connection cable is securely plugged in.
- Be sure to insert an optical mini-plug into the OPTICAL IN/LINE IN/MIC jack.



Cannot be connected to digital outputs other than optical (optical) types

Be sure to connect to an optical digital output.

You may not be able to record via a digital connection

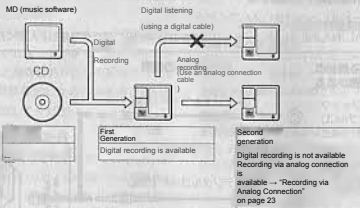
- When attempting to record from a source with a sampling frequency different from the MiniDisc sampling frequency* of 44.1 kHz
- Sources that cannot be recorded: Satellite broadcasts, DAT recorded at 32 kHz or 48 kHz
- When attempting to record a digital recording via a digital connection
- These formats are protected by "SCMS" and cannot be recorded.

In this case, please use the line (analog) input.

*1 Sampling frequency refers to the frequency at which an analog signal is converted into a digital signal. Music CDs, for example, use 44.1 kHz.

*1 The sampling frequency refers to the sampling rate used when converting an analog signal to a digital signal. Music CDs, for example, use 44.1 kHz.

*2 SCMS (Serial Copy Management System) is a standard that limits digital recording between digital AV devices to a single generation for copyright protection.

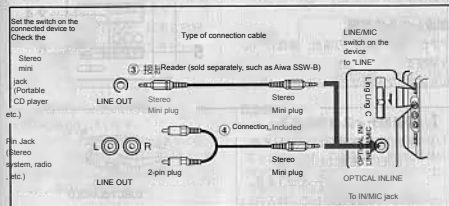


Recording via Analog Connection

You can easily record by connecting to a device with a line output terminal using the included connection cable.

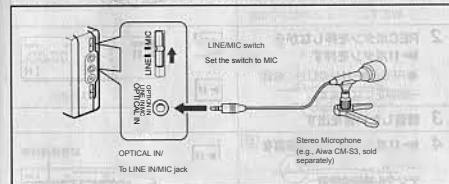
Connecting to the line output terminal

Be sure to insert the connection cable securely.



Connecting a microphone

You can also use plug-in power microphones.



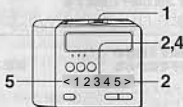
Basic Recording

Before starting recording

Please release the HOLD switch.
("To prevent accidental operation" → page 51)

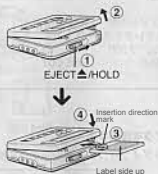
Adjusting the audio level

For analog recordings, you can adjust the recording level
(see "Recording with Adjusted Recording Level" on page 26).



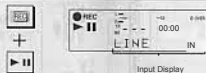
1 Insert a recording disc

- ① Set the EJECT ▲/HOLD switch to the EJECT ▲ side.
- ② Open the disc tray.
- ③ Place the disc with the label side facing up, aligning it with the insertion direction mark.
- Insert it all the way in.
- ④ Press the disc holder to close



2 While holding down the REC button, press the ►|| button

- REC and ►|| will light up, and recording and pause.



3

4 Play the sound you want to record

Press the ►|| button to start recording

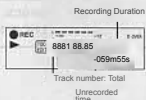


Recording via digital connection

The recording level will match that of the original signal.

Recording via analog connection

The recording level is adjusted automatically.



5 Press the ■ button to stop recording



- ① "See you" is displayed, and information about the recorded content (TOC*) is recorded.
- ② When recording is complete, the total number of tracks and total recording time are displayed.



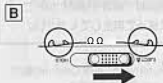
Total tracks Total recording time

• TDC: Stands for Table of Contents and functions as an index of the recorded content.

- In addition to the actual "audio data" (such as music) recorded on the disc, TOC information—which indicates which track is recorded where—is recorded at the beginning of the disc.

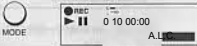
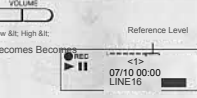
Note

- Hello. When you connect the remote control to the main unit, you may not be able to perform operations such as recording using the remote control. In this case, if you first operate the unit using the buttons on the main unit, you will then be able to use the remote control for subsequent operations.
- If the disc holder lock lever is in the position shown in Figure A, the disc holder will not close. Forcing the disc holder closed may cause it to become deformed, so press EJECT ▲/HOLD to return the lever to the position shown in Figure B before opening the cover.



Record after adjusting the recording level (Recording Level Adjust function)

Although the level is usually adjusted automatically, use this function when you want to adjust the level for analog audio connections.

1. Pause recording and play the sound you want to record (Steps 1–3 in "Basic Recording" → page 24)	
2 Press the MODE button repeatedly to display "A.L.C."*	
3 Press the EDIT/ENTER button to display "LINE 10" or "MIC 10"	
4 While listening to the sound you want to record, press the VOL+/- buttons to adjust the recording level Use the level display "-12" as a reference Adjust to the highest level possible without the "OVER" indicator lighting up. You can adjust it in 21 steps from 00 to 20.	
5 Press the II button to start recording When recording from a CD or similar source, please skip to the desired starting point on the connected device and start playback.	

*A.L.C. stands for Automatic Level Control, which means automatic recording level adjustment.

To return to normal recording (automatic recording level adjustment)

- While recording is paused, press the MODE button until LINE or MIC is displayed, then press the EDIT/ENTER button to display "A.L.C."
- When the power turns off, it will return to normal recording.

For better recordings

If the recording level is too low, the sound will be faint; if it is too high, the sound will be distorted. For the clearest recording, adjust the level as high as possible without the "OVER" indicator lighting up when the sound you want to record is at its loudest.

To temporarily pause recording

Press the ► button. To resume recording, press the ► button again.

To remove the disc

- After pressing the button to stop recording, wait until the "icon" goes out, then set the EJECT ▲/HOLD switch to the ▲ EJECT side to open the disc holder.

During recording, even if you set the EJECT ▲/HOLD switch to the ▲ EJECT side, the disc holder will not open.

The power will turn off automatically

- If you do not perform any operations after pressing the ► button to stop recording, or after recording has finished at the end of the disc, the power will turn off after approximately 4 seconds.

Pressing a button to start an operation will automatically turn the power on.

To listen to the sound being recorded

connect headphones to the LINE OUT/PHONES jack and adjust the headphone volume using the VOLUME button on the unit or the VOL knob on the remote control. Changing the headphone volume does not affect the sound being recorded.

When recording onto a disc that has already been recorded on

- if there is any unrecorded space remaining on the disc, recording will automatically start from the end of the previous recording. Unlike with cassette tapes, you do not need to search for unrecorded space, and there is no risk of accidentally erasing the previous recording.
- If you want to erase a previous recording and make a new one, follow the procedure in "Erasing Tracks" on pages 49–50 to erase the recording, and then start a new recording.

To prevent accidentally erasing important recordings

Move the anti-erase switch on the recording disc as shown in the figure.



When you're ready to record again, turn the knob back to its original position.

Note

- You cannot record onto MiniDiscs intended for playback only (such as commercially available music software).
- Do not subject the unit to strong shocks or unplug the power cord while recording or during TOC recording (Step 5 on page 25). This may prevent the TOC from being recorded correctly, resulting in playback failure.

"NO DISC" appears in the display window
5

No disc is inserted. After about 4 seconds, the power will turn off.

If "PROTECTED" appears in the display window

the disc's anti-erase switch has been moved to the position that protects the recorded content.
To record, remove the disc and move the switch to the opposite side.

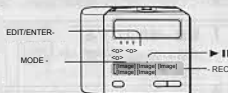
If "PROTECTED" remains displayed for about 4 seconds, the power will turn off.

If "PB DISC" appears in the display window

you are attempting to record on a playback-only disc. Please use a recording disc.

Useful Recording Features

- To help you quickly locate specific sections on a recorded disc, there are three types of markers (track numbers) available (Auto, Time, and Manual Mark functions). You can also record without setting markers.
- You can record for longer periods by using mono recording.
- If the sound you want to record becomes too quiet, you can automatically pause recording.



Auto Mark Function

When recording using "Basic Recording," cue marks (track numbers) are automatically recorded as shown below.

When recording via digital input from CD or MD software

The seek mark information recorded on the CD or MD will be recorded as is.

CDs and MDs	Track 2	3	Track 4
Green Sound (MD)	2-den	3-den-yaku	4th track

▲ : Neck-out mark

When recording via analog or microphone input

If there is no sound for 3 seconds or more, and an audio signal is then input, a cue mark is automatically recorded.

During silence

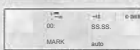


Note

- Even when recording using the auto-mark function, the start mark may not be recorded accurately.
- Cue marks must always be assigned a track number. You cannot record a cue mark as a simple marker without a track number.

Record Cue Marks Every 5 Minutes (Time Mark Function)

When used for recording meetings, this makes it easy to search for specific points in the proceedings.

1 Pause recording (Steps 1–2 of "Basic Recording" → page 24)	 
• Press the MODE button repeatedly to display "MARK auto"	  
3 Press the EDIT/ENTER button repeatedly to display "MARK time"	  
4 ▶ Press the II button to start recording	

To return to normal (auto-mark) recording

While recording is paused, press the MODE button to display "MARK time," then press the EDIT/ENTER button to display "MARK auto."

Also, when the power is turned off, the unit returns to the Auto Mark function.

Record without setting cue marks

This is useful when you want to record using only the manual mark function described on page 32.

1 Pause recording (Steps 1–2 in "Basic Recording" → page 24)	 
2 Press the MODE button repeatedly to display "MARK auto"	  
3 Press the EDIT/ENTER button repeatedly to display "MARK non"	  
4 ▶ Press the II button to start recording	

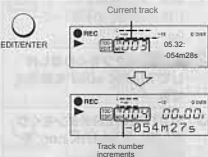
To return to normal (Auto Mark) recording

While recording is paused, press the MODE button to display "MARK non", then press the EDIT/ENTER button to display "MARK auto".

When the power is turned off, the unit will return to Auto Mark mode.

Adding Cue Marks During Recording (Manual Mark Function)

When recording from a CD or other source, you can add a cue mark at any point in a track that you want to listen to repeatedly.

While recording, press the EDIT/ENTER button at the point where you want to set a cue mark The cue mark is recorded, and the track number increases by one.	
---	---

How many cue marks (track numbers) can be recorded?

You can record up to 254 track numbers.

Long-Duration Recording (Mono Recording)

You can record for twice the length of a standard (stereo) recording. This is useful for recording long meetings and similar situations.

1 Pause recording (Steps 1–2 of "Basic Recording" → page 24)	
2 Press the MODE button repeatedly to display "STEREO REC"	
3 Press the EDIT/ENTER button repeatedly to display "MONO REC"	
4 ▶ Press the II button to start recording	

To return to normal (stereo) recording

While recording is paused, press the MODE button to display "MONO REC," then press the EDIT/ENTER button to display "STEREO REC." Recording will also return to stereo mode when the power is turned off.

Track number recording

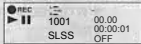
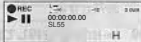
Switching between long-time (mono) recording and normal (stereo) recording increments the track number by one each time.

Note

- Although the sound being recorded is heard in stereo through the headphones, it is actually being recorded in mono.
- When recording a stereo audio input, only the L (left) channel is recorded.
- If you play back a monaural recording made with this unit on another MD player, it will not play back on devices that do not support monaural playback.

Record Only the Desired Sound (SLSS* Function)

During meetings or lectures, recording automatically pauses when there is no speech (or when the environment is nearly silent), and automatically resumes when speech is detected. This eliminates silent sections of the recording, allowing you to use your disk space more efficiently.

1 Pause recording (Steps 1-2 of "Basic Recording" → page 24)	 + 
• Press the MODE button repeatedly until "SLSS OFF" is displayed	 
3 Press the EDIT/ENTER button repeatedly	 
• ③ To start recording in response to even faint sounds Display "SLSS H".	
• ④ To record only loud sounds and ignore soft sounds Display "SLSS L".	
4 Press the II button to start recording	

- SLSS stands for Sound Level Sensor System.

To return to normal recording

While recording is paused, press the MODE button to display "SLSS H" or "SLSS L," then press the EDIT/ENTER button to display "SLSS OFF."

When the power is turned off, the unit returns to normal recording mode.

Basic Playback



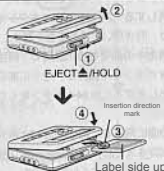
1 Connect headphones

Plug the connector into the LINE OUT/PHONES jack*1.



2 Insert the disc to play

- ① Set the EJECT▲/HOLD switch to the EJECT▲ side.
- ② Open the disc tray.
- ③ Place the disc with the label side up, aligning it with the insertion direction mark. Insert it all the way in.
- ④ Press the disc holder to close it.



3 Press the II button

Playback will begin.



4 Press the VOLUME +/- buttons to adjust the volume

Adjustable in 21 steps from 00 to 20.



* 1 If using headphones other than the included ones, set the PHONES/LINE switch to the PHONES side.

* 2 Not displayed if the song title has not been recorded.



Basic Operation

Pause: Press the **■** button.

- Pause: Press the **▶||** button.
- To resume playback: Press the **▶||** button.

To fast-forward: Press and hold the **>>** button during playback, then release your finger at the point you want to listen to.

Rewind: Press and hold the **<<** button during playback, then release your finger at the point you want to listen to.

To listen to the currently playing track again: While playing, press the **<<** button once. To skip to the beginning of the previous track, press the **<<** button repeatedly.

Skip to the next track: While playing, press the **>>** button once. To skip to a track further ahead, press the **>>** button repeatedly.

To eject the disc: Press the **■** button, then set the EJECT **▲**/HOLD switch to the EJECT **▲** side.

Play at double speed (fast-forward playback function)

During playback, press the

- Press the **II** button.

To return to normal playback

Press the **▶||** button during fast-forward playback.

The power turns off automatically

- If you do not perform any operations after pressing the **■** button to stop playback, or after playback has finished at the end of the disc, the power will automatically turn off after approximately 4 seconds.

When the power turns off, the display window will go dark.

Note

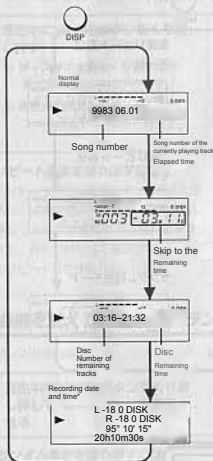
Introduction When you first connect the remote control to the main unit, you may not be able to perform operations such as playback using the remote control. In this case, if you first operate the unit using the buttons on the main unit, you will then be able to operate it using the remote control.

If "NO DISC" appears on the display

No disc is inserted. The power will turn off automatically after approximately 4 seconds.

About the display during playback

Each time you press the DISP button during playback, the display changes as follows.



* When playing commercially available music MiniDiscs or MiniDiscs that do not record the date and time of recording, "—" is displayed.

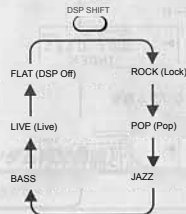
Selecting Sound Suited to the Music Genre (DSP Mode)

You can choose your preferred mode from a total of five DSP modes: three modes that bring out the musical characteristics (Rock,

Pop, Jazz), a mode that emphasizes deep bass, and a mode that recreates the atmosphere of a live concert hall.

< 1 2 3 4 5 >

During playback Each time you press the DSP/SHIFT button, the mode switches as follows.

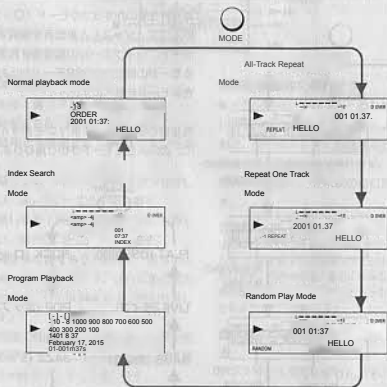


During recording
DSP mode cannot be selected.

Various Playback Methods

Press the MODE button during playback to choose from five playback modes in addition to normal playback.

The display changes as follows each time you press the MODE button.



Repeat Playback

(All-Track Repeat / Single-Track Repeat)

You can repeat all tracks on the disc or just a single track.

Press the MODE button repeatedly during playback

- **Ⓐ** To repeat all tracks on the disc
"REPEAT" will be displayed.
- **Ⓑ** To repeat only the currently playing track: "1 REPEAT" will be displayed.



To cancel repeat playback

Press the MODE button repeatedly until the unit enters Index Search mode (display shows "INDEX"), then press it once more.

Repeat playback is also canceled when playback ends and the power turns off.

Play in a different order (Shuffle)

You can play the tracks on the disc in random order.

Press the MODE button repeatedly during playback to display "RANDOM"

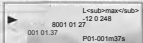
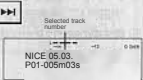
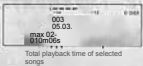


To cancel random playback

Press the MODE button repeatedly until the index search mode ("INDEX" display) appears, then press it once more. Random playback is also canceled when playback ends and the power turns off.

Play in your preferred order (Program Playback)

You can store up to 25 songs in your preferred order and play them back.

1. During playback, press the MODE button repeatedly to display "PRGM."	 
2 Press the <X> or <Y> button to select a track	 
3 Press the EDIT/ENTER button. The selected track will be saved.	 
4 Repeat steps 2 and 3 to continue storing songs	
5 • Press the II button Playback starts from the first track in the order they were stored.	

To cancel program playback

Press the MODE button repeatedly until the index search mode ("INDEX display") appears, then press it once more.

Program playback is also canceled when playback ends and the power turns off. When program playback is canceled, the stored track selections are also canceled.

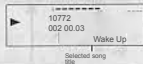
Note

When attempting to store more than 25 songs, the 25th song will always be overwritten with the newest one.

Search and play by song title (Index Search function)

If song titles are recorded on the disc, you can directly select the song you want from the song titles scrolling across the display window.

You can record song titles using the "Track Name Function." (Page 43)

1 During playback, press the MODE button repeatedly to display "INDEX."	 
The disc name and track name will begin scrolling on the display.	
	Three-digit separator
2 When the song you want to listen to is displayed, press the EDIT/ENTER button	 
Playback of the selected song will begin.	Selected song title

When multiple song titles are displayed in the display window, the

the song title on the far left of the display window is selected.

For songs whose titles have not been recorded

will scroll through the recorded song titles in order. You cannot select songs that do not have a recorded title.

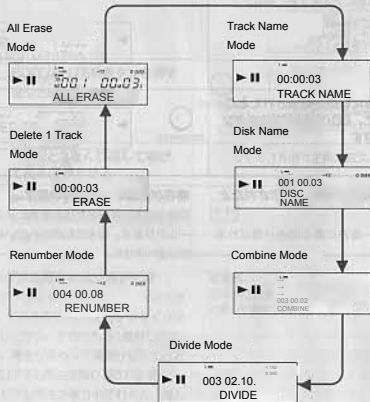
Editing

While playback is paused, press the **▶** button while holding down the EDIT/ENTER button to enter edit mode.

You can then choose from 7 different editing methods.

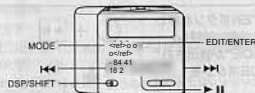


Pressing the MODE button changes the display as follows.



To select an editing method using the remote control

Press and hold the REC/EDIT button and the **▶** button simultaneously, and release both buttons when the desired mode is displayed.



Caution

While "s" is displayed in the display window, the EJECT **▲**/HOLD switch cannot be moved to the EJECT **▲** side. Do not force it.

Recording song and disc names (Track Name/Disc Name Function)

You can record a name for each song or disc.

You can also have fun by recording messages instead of song titles.

- The maximum number of characters that can be recorded as a single name is 50, including uppercase and lowercase letters, Katakana, and symbols.
- A maximum of approximately 1,700 characters can be recorded on a single disc (for uppercase and lowercase letters and symbols; the character count is approximately half that for Katakana).

1 Set to play/pause

② When naming a track

(Track Name):

While playing the track you want to name,

▶ Press the **II** button.

③ When naming a disk

(Disk Name):

While playing any

, press the **▶ II** buttons button.



2 While holding

down the EDIT/ENTER button, press the **■** button.

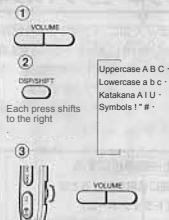
When "EDIT MODE" appears, press the MODE button repeatedly.

- **ⓐ** To name a track:
Display "TRACK NAME".
- **(b)** To name a disc:
Display "DISC NAME".



3 Enter the first character or symbol

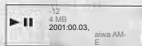
- **①** Press the VOLUME + button to display the first character of each character set (type).
- **②** Press the DSP/SHIFT button to select the character type from uppercase letters, lowercase letters, Katakana, or symbols.
- **③** Press the VOLUME +/- buttons on the unit, or turn the VOL knob on the remote control to select the character or symbol you want to enter.

4 Press the **▶▶** button to confirm the character

The selected character will stop flashing, and the blinking will move to the right.



5 Repeat steps 3 and 4 to enter all the characters or symbols you want to record



6 Press the EDIT/ENTER button

The entered characters or symbols will be recorded.



Types of characters that can be entered

Uppercase letters:

0 (space) ABCDEFGHIJKLMNOPQRSTUVWXYZ

Lowercase letters:

0 (space) abcdefghijklmnopqrstuvwxyz

Katakana:

Ro (space) Aīueokaikukekekoasashisusesotachitsutetotininunenono
Ha Hi Fu He Ho Ma Mi Mu Me Mo Ya Yu Yo Ra Ri Ru Re Ro Wa Ai Ue O Ya Yu Yo

Symbols:

Ro (space) ! " # \$ % & ' () * + , - . / 0 1 2 3 4 5 6 7 8 9 ; : < = > ?

If you notice a mistake while entering text,

Press the or button to make the incorrect character flash, then re-enter it using the VOLUME button on the unit or the VOL knob on the remote control.

Caution

- When "■" is displayed in the display window, do not set the EJECT **▲**/HOLD switch to the EJECT **▲** side to remove the disc.

If you remove the disc while "■" is displayed, the edited content will not be recorded. Press the **■** button until the "■" display disappears before removing the disc.

- Be sure to release the disc's anti-erase lock before starting editing.

To stop playback

- Press the **■** button to cancel the track name/disc name function. Playback will pause.

Raw Precious

Combine two tracks into one (Combine function)

By removing the cue marks, you can connect two songs that are out of order to create a single track.

1 Set the second of the two tracks you want to join to play/pause (Example) To join track 2 and track 3, pause track 3.	 Pause track 3
2 While holding down the EDIT/ENTER button, press the ► button. When "EDIT MODE" appears, press the MODE button repeatedly until "COMBINE" is displayed	
3 Press the EDIT/ENTER button The cue mark for the selected track number disappears, and it merges with the previous track. In addition, the track numbers following this one will be shifted down one by one.	 Previous track number From the previous track Elapsed time

If a song title is present

If both connected songs have names, the name of the previous song remains.

To stop midway

- Press the ►|| button to cancel the combine function.

Playback will pause.

Note

You cannot combine a monaural recording with a stereo recording.

Split tracks (Divide function)

You can split two songs by adding a cue point in the middle of a song. This is useful for creating a section you want to listen to repeatedly.

1. Pause playback at the point where you want to split the track	
2 While holding down the EDIT/ENTER button, press the ► button. When "EDIT MODE" appears, press the MODE button repeatedly to display "DIVIDE"	
3 Press the EDIT/ENTER button The cue mark (track number) is recorded. Additionally, the track numbers for subsequent tracks are incremented one by one.	 Track number increments

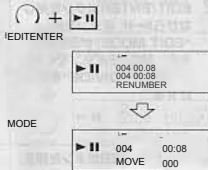
When you want to stop midway

Press the II button to

Playback will pause.

Change the track order (Renumber function)

This is useful when you want to listen to tracks in your preferred order. Once the track order has been changed, it will not revert to the original order even if the power is turned off.

1 Song number: Press to pause the song you want to change Press	
2 Press the EDIT/ENTER button and press the ► button; "EDIT MODE" will be displayed, press the MODE button to display "RENUMBER" to display If "MOVE 000" is displayed Proceed to the next step.	
3 FAILED TO FIND TRANSLATED TEXT FOR s733_seg0 Select a new track number	
4 Press the EDIT/ENTER button The track number will change.	 The track number you changed

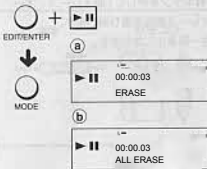
If you want to stop

► - Press the || button to

Playback will pause.

Deleting tracks (Single Track Erase/All Erase function)

This is useful when there is little unused space left for additional recording, or when you want to use the entire disc for a different recording.

1 Set to Play/Pause ① To delete a single track: While the track you want to delete is playing, press the ► button. ② To delete all tracks on the disc: While playing any track, press the ► button.	
2 While holding down the EDIT/ENTER button, press the ► button. When "EDIT MODE" appears, press the MODE button repeatedly ① To delete a single track: Display "ERASE". ② To erase all tracks on the disc: Display "ALL ERASE".	
3 Press the EDIT/ENTER button "ERASE OK?" lights up. Erase Please confirm again whether you want to erase Once you erase it, you cannot undo it. If you don't want to delete it, ► - Press the button.	

4 Press the EDIT/ENTER button

The recording will be deleted.

① When deleting a single track

The selected track is deleted, and playback of the next track will be paused.

In addition, the track numbers following this one will

② When deleting all tracks on the disc:

The power will turn off in approximately 4 seconds.



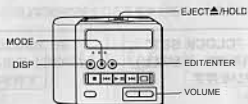
The track number after the deleted one increments

When you want to stop playback

▶ Press the ■ button to cancel the single-track erase or all-erase function. Playback will pause.

Useful Tips

In addition to recording, playback, and editing functions, there are other features designed to enhance usability.



To prevent accidental operation (Hold function)

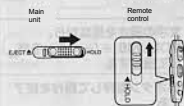
This prevents accidental operation caused by accidentally pressing a button you did not intend to press or by something bumping into a button.

To prevent accidental operation of the unit's buttons

Set the EJECT ▲/HOLD switch on the unit to the HOLD position

To prevent accidental operation of the remote control buttons

Set the remote control's HOLD switch



Adjusting the brightness of the text (LCD display)

You can adjust the brightness of the text (LCD display) in the display window.

1 While the unit is stopped, press the DISP button until "CLOCK SET" appears (for at least 3 seconds).	DISP	CLOCK SET ↓ -00-0'0" 00h00m00s
2 Press the MODE button once	MODE	REC 00:59 00:30 EXTREPEAT RANDOM FCONTRAST A
3 While checking the text brightness, press the VOLUME +/- buttons to adjust	VOLUME Sound becomes fainter Sound becomes muffled	
4 Press the ■ button to finish the operation		

To prevent the volume from getting too loud (Ear Guard Function)

You can set the maximum volume to 2.

1 While the unit is stopped, press the DISP button until "CLOCK SET" is displayed (for at least 3 seconds)	DISP	CLOCK SET ↓ -30° - 0' 0" 00h00m00s
2 Press the MODE button twice "EarGRD OFF" is displayed.	MODE	EarGRD OFF
3 Press the EDIT/ENTER button to select whether to turn the EarGuard function ON or OFF Each press cycles through the following options: "EarGRD OFF" ↔ "EarGRD ON"	EDIT/ENTER	
4. Press the button to finish the operation		

* The volume is set to a maximum of 20 when 'EarGRD OFF' is selected, and to a maximum of 14 when 'EarGRD ON' is selected.

Resuming playback from where you left off (Resume Playback Function)

Start playback from where you left off (Listening Playback Function)

- ▶ When you press the **DISP** button, playback will resume from where it was previously paused.

While paused, until "CLOCK SET" appears (for 3 seconds or more) Press the DISP button	 CLOCK SET  -00-0101 00h00m00s
2 Press the MODE button 3 times "RESUME ON" is displayed.	 RESUME ON
3 Press the EDIT/ENTER button to toggle the resume function ON/OFF Each time you Each time you press the button, the display changes as follows: "RESUME ON" → "RESUME OFF"	
4 Press the ■ button to finish the operation	

Note

If you open the disc tray before starting playback, the resume playback function will not work.

Turn on the display window lighting (backlight function)

You can turn on the display window lighting even when using dry cell or rechargeable batteries. In this case, battery life will be shorter than usual.

1 While the unit is stopped, press the DISP button until "CLOCK SET" is displayed (for at least 3 seconds).	 CLOCK SET  -00-8101 00h00m00s
2 Press the MODE button 4 times. "LIGHT OFF" will be displayed.	 LIGHT OFF
3 Press the EDIT/ENTER button to select ON or OFF for the backlight function Each press cycles through the following: "LIGHT OFF" → "LIGHT ON"	
4 Press the ■ button to finish the operation	

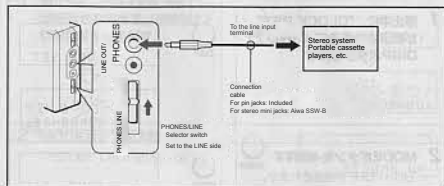
When "LIGHT ON" is selected or while using the AC adapter

During playback or recording, press the **DISP** button for at least 1 second to turn the backlight on or off.

When the power is turned off, the backlight function turns on.

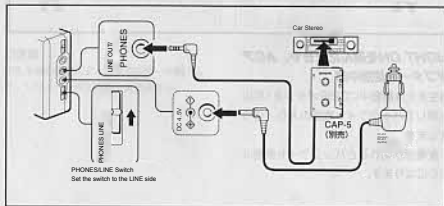
Listening to MDs on Other Devices

- Please use a connection cable that matches the shape of the terminals you are connecting to.
- Make sure to plug the connection cable firmly into each terminal.



Listening in the Car

- Use the optional car power adapter (DC-450) and car audio cassette adapter (CAP-5).
- Please refer to the instruction manuals for the DC-450 and CAP-5.
- When using the DC-450, be sure to remove the rechargeable battery from the main unit.



For Proper Use

If the surface of the unit becomes dirty,

wipe it with a soft, dry cloth. If the dirt is stubborn, dampen a cloth with a small amount of diluted neutral detergent and wipe it gently.

Do not use thinners, benzene, alcohol, or similar substances, as they will damage the surface.

Handling the Unit

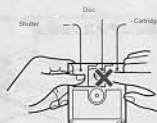
- Be careful not to drop the unit or subject it to strong impacts.
- Avoid using or storing the unit near magnets, televisions, speakers, or other magnetic objects, as this may cause malfunction. Please avoid doing so.

Handling MiniDiscs

Since MiniDiscs are stored in cartridges, they are easy to handle without worrying about dust or fingerprints. However, if the cartridge becomes dirty or damaged, it may cause the unit to malfunction. Please note the following:

- Please store the discs in the included case.

- Do not open the cartridge shutter and touch the disc directly. Dirt on the disc is difficult to remove and may damage the cartridge.



About Condensation

During cold winters, water droplets may form on the windows of a warm room. This is called "condensation." In the following situations, water droplets may form on the internal lens, causing condensation and preventing the unit from operating properly.

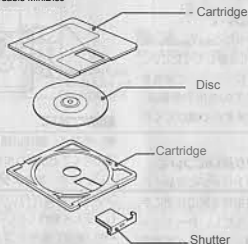
- Immediately after turning on the heat in a cold room
- When the device is suddenly brought from a cold place into a warm one
- When placed in a room with high humidity, such as one filled with steam

In such cases, remove the disc and leave the disc tray open for a few hours. The unit should then function normally.

What is a MiniDisc?

Despite being a compact disc with a diameter of just 64 mm—about half the size of a CD (Compact Disc)—the MiniDisc can record and play back the same amount of data as a CD, or 74 minutes. Furthermore, because it is housed in a cartridge, it is resistant to scratches, dust, and impact, making it easy to handle. It also offers superior durability since, unlike cassette tapes, it does not stretch or get tangled.

Structure of a Recordable MiniDisc



Compact Design Achieved with ATRAC*

The newly developed audio compression technology, ATRAC, extracts frequencies critical to hearing and cuts out sounds that are inaudible to the human ear, compressing the data volume to one-fifth and enabling efficient recording.

Since information is selected based on auditory psychology, the perceived sound quality is not compromised.

- ATRAC: Adaptive TRAnsform Acoustic Coding

High-Speed Access

One of the key advantages of a disc is that you can quickly find the song you want. You can instantly and easily perform random playback, which shuffles the track order, or use editing functions to rearrange songs after recording.

31 Thinking of the past, my heart is heavy

Two Types of Discs

There are two types of MiniDiscs:

- "optical discs" and
- "optical magnetic discs."

Both types use a laser to read signals (optical pickup) for playback, which is a common feature.

Optical Disc

These are discs intended solely for playback. They are the same as CDs and are used for commercially available music software. Recording or editing is not possible.



The shutter is located only on the side opposite the label

Magneto-optical (MO*) disk

- These are so-called "blank discs" that can be recorded on repeatedly, just like cassette tapes
- It uses a magnetic modulation method that records signals using laser light and magnetism, so sound quality does not degrade even after repeated recording and playback.



The shutter is located on the front

+ MO: Magneto-Optical

Before you assume it's broken

Before taking it to a service center, check the table below based on the symptoms, or if an error message is displayed on the screen, refer to pages 62–63 for troubleshooting.

Symptoms	Cause	Treatment
The power does not turn on	The AC adapter is not plugged in securely	Plug the AC adapter in securely. (Page 13)
	The batteries are not inserted correctly	Check the + and – terminals on the batteries and reinsert them. (Page 17)
	The charger or batteries are depleted, or the "BATT" indicator (red) is lit.	Recharge the charger or replace all batteries with new ones. (Page 1)
The unit does not operate	The disc holder is not closed securely	Open the disc holder fully.
	No disc is inserted. "NO DISC" is displayed	Insert a disc.
	The holder (drive stop) function is activated	Release the HOLD switch on the unit or the remote control. (Page 51)
	Condensation (water droplets inside) has formed	Remove the disc, leave the disc tray closed for several hours, and then press the ←RESET switch. (Page 57)
	During use, the unit was subjected to shock, excessive static electricity, or strong external pressure due to an abnormal power button operation caused by wet hands	Remove all batteries and the AC adapter.
	The headphones with remote control are not plugged in securely	Insert them securely.
	(Start) Make sure the remote control is firmly inserted into the main unit	First, operate the unit using the buttons on the main unit, then use the remote control.
There is a lot of noise	Keep away from TVs and other devices that generate strong magnetic fields	Move away from the TV or other sources of strong magnetic fields.

Symptoms	原因	Disposition
Sound cuts out	It is placed in an unstable location with excessive vibration	Place in a location with minimal vibration.
Recording or editing not working	The Hold (anti-misoperation) function is active.	Release the HOLD switch on the main unit or remote control switch on the main unit or remote control. (Page 51)
	Not connected properly to the audio source.	Reconnect the cables correctly. (Pages 21, 23)
	A playback-only disc is inserted.	Replace the disc with a recording disc.
	The power was disconnected	The recording data up to that point has been lost
	Or, there was a power outage.	so record from the beginning again
	The MiniDisc's accidental erasure protection is active.	Move the knob to (Page 28)
No sound	The headphones are not	Plug them in securely.
No sound		
Green sound Date is incorrect / Cannot record	The rechargeable battery is low.	Connect the AC adapter to charge the battery
	The clock is not set correctly. (The clock display is flashing.)	Set the clock. (Page 19)
and the BATT indicator does not light up	The automatic power detection function is not working	Try connecting the AC adapter to see if it works
		Turn it on.
The backlight does not turn off.		

List of Error Messages

Error Message	Meaning	Solution (See page)
BLANK DISC	Nothing has been recorded.	
Can't COPY	Copying is not possible due to SCMS standards	Replace with another disc. (page 22)
Can't EDIT	*The track is too short to be combined. I tried to use the combine function while the first track was playing. I tried to use the split function	
	Mono recording and stereo using the Combine using the combine function.	(page 46)
DISC ERROR	There is a scratch on the disc. The TOC information has not been recorded	Replace the disc.
DISC FULL	The remaining time on the disc is 12 seconds or less, recording is not possible.	Replace with another recording disc
HOLD	The unit's hold function is	Release the hold switch. (Page 51)
NO DISC	No disc inserted.	Insert a disc.
No Signal	The optical digital cable is not securely connected	Reconnect everything securely.
	Recording a digital source with a sampling frequency of 44.1 kHz	Switch to analog input for recording
TEMP OVER	The unit has become too hot. The ambient temperature is too high or too low	Leave the unit in a cool place for a while before operating it. Operate the unit in a location with a suitable temperature
Emergency !	Due to scratches on the disc or strong impact, recording cannot continue.	Replace the disc. Do not subject the unit. Do not subject the unit to strong impacts.

Error message	Meaning	Solution (Reference Page)
Caution!	Abnormal operation is occurring.	← Press the RESET button.
BATT EMPTY	The battery is low.	Recharge the rechargeable battery. Or replace the battery. Or replace the battery. (Page 14)
PB DISC	You tried to play audio on a playback disc.	Record onto a recording disc.
PROTECTED	The disc is in error-proof mode.	Disable protection against accidental erasure. (Page 26)
TDC FULL	Recording and editing have used up all available tracks and characters, so no further recording is possible.	
LINE OUT	Adjusted the volume while the PHONES/LINE switch was set to LINE.	To listen through headphones, set the PHONES/LINE switch to the PHONES position.

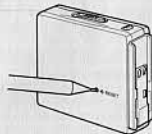
• Minidiscs have the following limitations:

If you repeatedly record, erase, or edit on the same disc, gaps will appear in the middle of continuous data. When recording a song, the data for that song may be split and recorded across these gaps.

If a single piece of data is recorded in this fragmented manner and is 8 seconds or shorter, you cannot use the Combine function to join the tracks. Additionally, the total recording time may be shorter than what is displayed.

About Resetting

If the unit does not display or operate normally, please press the ← reset switch with the tip of a mechanical pencil or similar object as shown in the figure to restore the unit to its initial state before use (Reset).



Main Specifications

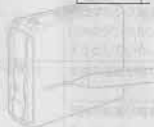
Model	MiniDisc Digital Audio System
Reading method	Contactless optical reading (using a semiconductor laser)
Recording method	Magnetic field modulation overwrite method
Rotation speed	Approx. 400~900 rpm (CLV) 441 kHz
Sampling frequency	2 stereo channels
Number of channels	Mono 1 channel
Modulation method	EFM
A/D, D/A converters	1 bit
Frequency response	20~20,000 Hz ± 1 dB
Wobble and flutter	Below measurement limit ($\pm 0.001\%$ W.P.EAK)

Input terminals

	Terminal type	Reference input level	Minimum input level
Microphone	Stereo mini jack	1.0 mV	0.5 mV
Line input	Stereo mini jack	250 mV	125 mV
Digital input	Optical mini jack	—	—

Output Terminals

	Connector Type	Specified Output Level	Maximum Output Level	Load Impedance
Headphones	Stereo mini jack	—	10 mW+	16 Ω
Line output	Stereo mini Jack	250 mV	10 mW	10 k Ω



電源

Rechargeable battery (Lithium-ion battery LIP-12) DC 3.6V
Alkaline AA batteries (2) DC 3V
Household power supply (using AC adapter AC-421) AC 100V,
50/60 Hz
Car power supply (car power adapter, DC-450 sold separately) DC

12V/24V

Battery life

	Continuous playback time	Continuous recording time
Rechargeable battery	Approx. 60 hours	Approx. 3.5 hours
Alkaline batteries	Approx. 4.0 hours	Approx. 1.0 hours

* Rechargeable battery when fully charged

Maximum external dimensions

Approx. 109.3 $\times$ 81.8 $\times$ 26.5 mm (W $\times$ D $\times$ H) (Rechargeable battery compartment
- including battery)

重量

Approx. 290 g (including rechargeable battery)

- Please note that the specifications and appearance of this unit are subject to change without notice for improvement purposes.
- This unit is a licensed product based on U.S. and foreign patents held by Dolby Laboratories Licensing Corporation.

About the Warranty

This product comes with a warranty card.

At the time of purchase, the retailer will fill in the "date of purchase" and "retailer name" on the warranty certificate and provide it to you. Please check the entries and details, and keep it in a safe place. The

The warranty period is one year from the date of purchase.

About After-Sales Service

If the Product Is Not Working Properly

Before requesting repairs, please refer to this user manual.

If the problem persists, please consult the store where you purchased the product or an Aiwa Service Station (see attached list).

During the warranty period,

repairs will be performed in accordance with the terms of the warranty.

If the warranty period has expired

If the product can be restored to working order through repair, we will repair it for a fee upon request.

Retention Period for Replacement Parts
The minimum retention period for replacement parts (parts necessary to maintain the product's functionality) for this unit is 8 years after production has been discontinued. Repairs may still be possible after this period has elapsed; please contact the Aiwa Service Station listed in the attached document.

Copyright Notice

Under copyright law, recordings you have made may not be used without the rights holder's permission, except for personal enjoyment.

Please note that the price of this product includes

- <Contact: Private Recording Compensation Association
- ☎ (03)3506-8407>

Furthermore, musical works such as broadcasts, records, discs, and tapes are also protected by copyright law. Therefore, you may not

- Selling, distributing, transferring, or lending
- Using them for commercial purposes (such as background music in stores)
- requires the permission of the rights holder.

For detailed information, applications, and other procedures, please contact the "Japan Society for Rights of Authors, Composers and Publishers"

<JASRAC: Tel. (03) 3502-6551>.

OPERATING INSTRUCTIONS

TO OPERATE CORRECTLY

CAUTION

- This unit is for domestic use only. Connect the supplied AC adapter to an AC 100 V wall outlet only. Using the AC adapter with other voltages may cause electric shock or fire.
- Never attempt to disassemble or tamper with this unit, as the laser beam used in the mechanism can be extremely harmful to the naked eye.
- Do not allow any foreign objects or liquids to fall into the jacks or openings of this unit, as you may be electrocuted or the unit may be damaged.
- Do not expose the unit to excessive heat, direct sunlight, dust, moisture, or mechanical shock.
- Surrounding sounds may become inaudible when listening to this unit at high volumes. Avoid listening to the unit in situations where hearing must not be impaired, such as while driving or cycling.

Caution regarding batteries

Note on the rechargeable battery The included AC adapter is

- Note on the rechargeable battery
- Use only the supplied AC adapter for charging. Do not use any other AC adapter.
- Do not use the rechargeable battery with other equipment.
- Do not carry the battery together with metal objects.
- Do not short-circuit the terminals.
- Do not disassemble the battery, expose it to heat, or submerge it in water.
- Do not expose it to excessive vibration or shock.

Note on optional dry cell batteries

- Do not mix old batteries with new ones or mix different types of batteries together.
- Do not disassemble the battery, heat it, or submerge it in water.
- Do not attempt to charge the battery.
- If the unit will not be used for an extended period, remove the batteries. If battery leakage occurs, wipe the fluid from the battery compartment thoroughly with a dry, soft cloth.

Note on the MiniDisc

- Do not touch the disc inside the MiniDisc cartridge.
- Do not expose MDs to excessive heat, direct sunlight, dust, or moisture.

Cleaning

Wipe the cabinet with a dry, soft cloth. If it is very dirty, wipe it with a cloth slightly moistened with a mild detergent solution. Do not use thinner, benzene, or alcohol, as doing so may damage the finish.

NAMES OF PARTS

(Refer to the illustrations on page 9 to 12.)

Main unit

- ① **BATT indicators:** Indicates the remaining power of the batteries.
E (Empty)/red→M (Medium)/orange→F (Full)/green
- ② **MODE button:** Press to select the record/playback modes.
- ③ **DISP button:** Press to change the indications on the display window.
- ④ **■ button:** Press to stop recording/playback. If the unit is left untouched for more than four seconds after pressing this button, the power is shut off automatically.
- ⑤ **DSP/SHIFT button:** Press to select the DSP sound effect that fits best to the music. Press to select the type of letters and characters when you put names to the tracks and a disc.
- ⑥ **◀▶ button:** Press to rewind or cue playback.
- ⑦ **Display window**
- ⑧ **EDIT/ENTER button:** Press together with the ▶|| button when editing.
- ⑨ **▶|| button:** Press to fast-forward or cue playback.
- ⑩ **REC button:** Press together with the ▶|| button when recording.
- ⑪ **VOLUME (+/-) buttons:** Press to adjust the volume. Press to select the letters and characters when you put names to the tracks and a disc.
- ⑫ **▶|| button:** Press to start or pause recording/playback.
- ⑬ **LINE/MIC switch:** Set to MIC when you connect a microphone, or set to LINE when you connect an analog output of other audio equipment.

- ⑭ **OPTICAL IN/LINE IN/MIC jack:** Input jack for the digital/analog signals and also accepts an electret condenser microphone or a dynamic microphone.
- ⑮ **LINE OUT/PHONES jack:** Output jack for analog signals. Connect the supplied headphones with remote control here.
- ⑯ **DC 4.5V jack:** Connect the supplied AC adaptor here.
- ⑰ **PHONES/LINE switch:** Set to PHONES when you connect the headphones, or set to LINE when you connect an input of other audio equipment.
- ⑱ **EJECT ▲ /HOLD switch:** Slide to EJECT ▲ to open the disc holder. Set to HOLD to prevent accidental operation of the buttons on the main unit.
- ⑲ **RELEASE switch:** Slide in the direction of the arrow to detach the rechargeable battery or battery case.
- ⑳ **◀—RESET switch:** Press to reset the memory (clock and TOC information etc.) of the unit with the tip of a mechanical pencil etc.

Display window

- ① **▶ indicator:** Comes on during recording, editing or playback.
- ② **|| indicator:** Comes on during pause.
- ③ **● REC indicator:** Comes on while recording.
- ④ **MONO indicator:** Comes on while recording in the extended monaural recording or playback mode.
- ⑤ **TR NO indicator:** Indicates that a track number is being displayed.
- ⑥ **Level indicator:** Indicates the input level while recording and the output level during playback.

- ⑦ **OVER indicator:** Comes on when the recording level is set too high.
- ⑧ **RESUME indicator:** Comes on at the beginning of playback during resume play.
- ⑨ **REPEAT indicator:** Comes on during all track repeat play.
1 REPEAT indicator: Comes on during one track repeat play.
- ⑩ **RANDOM indicator:** Comes on during random play.
- ⑪ **PRGM indicator:** Comes on during program play.
- ⑫ **TOC-EDIT indicator:** Comes on when the recording/editing has started and goes off when the TOC information has been registered.
- ⑬ **Letter/character information:** Displays the title of a track or disc, the selected editing method and error messages.
- ⑭ **Time/date indicator:** Indicates the playback time of a track, the remaining time of a track, the remaining time of a disc, the date of a recording and the current time.

Headphones with remote control

- ① **Plug:** Connect this plug to the PHONES/ LINE jack of the main unit.
- ② **HOLD switch:** Slide to stop the operational buttons on the remote control from functioning.
- ③ **VOL control:** Rotate to adjust the volume or to search letters and characters quickly.
- ④ **■ STOP button:** Press to stop recording/playback. If the unit is left untouched for more than four seconds after pressing this button, the power is shut off automatically.
▶|| button: Press to start or pause recording/playback.
- ⑤ **Stereo headphones:** Neck-chain type headphones designed to be worn around your neck.

- ⑥ **DSP/SHIFT button:** Press to select the DSP sound effect that fits best to the music. Press to select the type of letters and characters when you put names to the tracks and a disc.
- ⑦ **REC/EDIT button:** Press together with the ▶|| button when recording or editing.
- ⑧ **SKIP/SEARCH buttons:**
◀◀: Press to rewind or cue playback.
▶▶: Press to fast-forward or cue playback.

POWER SOURCES

Using on AC power

(Refer to the illustration on page 13.)

Plug the supplied AC adaptor into a wall outlet (AC 100V) and connect the cord to the DC 4.5 V jack of the unit.

Note

- Use the supplied AC adaptor only.
- Disconnect the AC adaptor from the unit as well as the wall outlet after use.

Using on the rechargeable battery

(Refer to the illustrations on page 14 to 16.)

When the rechargeable battery is used for the first time or after a long period of time, charge the battery fully.

- 1 **Attach the rechargeable battery to the main unit.**
- 2 **Connect the supplied AC adaptor.**
- 3 **Press the ■ button to start charging.**
The BATT indicators light up in order: E (red) → M (orange) → F (green). When the F (green) indicator goes out, charging is completed.
- 4 **Disconnect the AC adaptor.**

Guideline to charging times

Charging the supplied lithium-ion battery from the completely discharged state takes about five hours.

To attach the rechargeable battery cover

(Refer to illustrations on page 15.)

By holding the rechargeable battery cover with "▲ OPEN" mark facing upwards, attach the cover to the main unit.

To release the rechargeable battery cover, hold the top and the bottom of the rechargeable battery cover and pull away from the main unit.

To detach the rechargeable battery

(Refer to illustrations on page 15.)

While sliding RELEASE switch in the direction of the arrow, push the rechargeable battery up.

When to charge

You can start recharging the battery regardless of which BATT indicator is lit.

Rechargeable battery life

- The supplied rechargeable battery can be charged approximately 300 times.
- When the operating time of the fully charged battery decreases to about half, replace it with a new one (Sony LIP-12).
- To prolong the performance of the rechargeable battery, charge it in the ambient temperature of approximately 10 to 30°C (50 to 86°F) and keep it in a cool location when storing it.

Useful tip

There is a manually operated charge status indicator switch on the rechargeable battery. Slide the switch so that the red dot is visible when the battery power is used up. Slide the switch in the other direction so that the red dot is not visible when the battery is fully charged.

Note

- Use only the supplied AC adaptor to charge the rechargeable battery.
- When the rechargeable battery is used for the first time or after a long period of time, the battery life may become shorter than normal. In this case, discharge and charge the rechargeable battery alternately several times.
- To maintain the performance of the rechargeable battery, charge it at least once a year even when it will not be used for a long period of time.

Using on dry cell batteries

(Refer to the illustrations on page 17.)

Use two LR6 (size AA) alkaline batteries (not supplied).

- 1 Attach the battery case.
- 2 Insert the dry cell batteries into the battery case.

Two LR6 (size AA) alkaline batteries with the  and  on the batteries aligned to the  and  in the battery case.

Battery life

Battery type	Continuous playback (Approx.)	Continuous recording (Approx.)
With a fully charged rechargeable battery	6.0 hours	3.5 hours
With alkaline batteries	4.0 hours	1.0 hours

When the batteries become weak while operating

The E (red) BATT indicator lights up. If you continue to operate the unit, "BATT EMPTY" comes on the display window and the power will be turned off. In this case, charge the rechargeable battery or replace both of the alkaline batteries with new ones.

The back-light function

When operating the unit on AC power, the display window is illuminated continually.

When operating the unit on battery power, the display window is illuminated for approximately four seconds every time you press the DISP button.

SETTING THE TIME AND DATE

(Refer to the illustrations on page 19.)

- If the built-in clock is set in advance, the time and date will be recorded automatically every time a recording is made.
- The clock has a 24-hour digital readout.
- Charge the rechargeable battery fully before setting the clock.

- 1 Press the DISP button for more than three seconds until "CLOCK SET" appears on the display.
- 2 Press either the + or - VOLUME buttons to set the year.
If the button is held down, the figures change rapidly.
- 3 Press the ►► button.
- 4 Repeat steps 2 and 3, and set the month, date, hour and minute.
- 5 Press the EDIT/ENTER button.
- 6 Press the ■ button.

To correct a setting error

Press the ►► button repeatedly until the digits to be corrected start flashing, then use the VOLUME buttons to reset those digits.

To display the time

Press the DISP button once while there is nothing displayed on the display window (when the unit is not in any particular operational mode). The time will be displayed for approximately four seconds.

Note

- If the digits are flashing when the time is displayed, this indicates that the clock has stopped because the rechargeable battery or the dry cell batteries are weak or the power source has been disconnected. In this case, reset the clock.
- When you remove the rechargeable battery from the unit, be sure to connect the unit to AC power or attach the battery case with the dry cell batteries to prevent the clock from stopping.

RECORDING

Recording methods

(Refer to the illustrations on page 21 to 23.)

Recording from the digital output jack

Connecting cord:

- ① Digital (OPTICAL mini-plug ↔ OPTICAL mini-plug)
- ② Digital (OPTICAL mini-plug ↔ square shaped plug)

Note

There may be cases where a digital input cannot be recorded:

- When a recording is attempted from a sound source whose sampling frequency is different from 44.1 kHz. For example, satellite broadcasts and DAT tapes which are recorded at either 32 kHz or 48 kHz.
- When a digital recording is attempted from another digitally recorded MD.

To protect the copyrights of recorded material, a digital dubbing cannot be performed to a recordable MD from another digitally recorded MD because of the built-in record restriction function which complies with the SCMS (Serial Copy Management System) standard.

Recording from the analog output jack

Connecting cord:

- ③ Analog (stereo mini-plug ↔ stereo mini-plug) (Aiwa SSW-8, etc.)
- ④ Analog (stereo mini-plug ↔ phono plugs) (supplied)

Recording from the microphone
-Connecting a microphone:
You can use a plug-in-power type microphone with this unit.

Connect the stereo microphone CM-S3 (not supplied) etc. to the OPTICAL IN/LINE IN/MIC jack of the unit.

Basic operation

(Refer to the illustrations on page 24 to 25.)

1 Insert a recordable MD.

- ① Slide the EJECT ▲/HOLD switch to EJECT ▲.
- ② Open the disc holder.
- ③ Insert the MD with the label side up and in the direction of the arrow mark.
- ④ Close the disc holder.

2 While pressing down the REC button, press the ►II button.

The ●REC and ►II indicator comes on and the unit enters standby (pause) mode.

3 Start playing the source equipment.

4 Press the ►II button to start recording.

Digital recording

The recording level is the same as the source signals.

Analog recording

The recording level is adjusted automatically.

5 Press the ■ button to stop recording.

- ① When you press the ■ button, the "See you!" indicator comes on the display.
- ② When the TOC* information has been registered, the total number of the recorded tracks and the total time of recording are displayed.

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Adjusting the recording level

(Refer to the illustrations on page 26.)

- 1 Start playing the source equipment while the unit is in the record standby mode (pause mode).
- 2 Press the MODE button so that "A.L.C." indication comes on.
- 3 Press the EDIT/ENTER button so that "LINE 10" or "MIC 10" indication comes on.
- 4 Press the VOLUME +/- buttons to adjust the recording level while hearing the source sound.

Adjust the level as high as possible without the "OVER" indicator coming on the display. (The recommended level is around the -12 degree.)

The recording level can be adjusted between 0 and 20 degrees.

5 Press the ►II button to start recording.

To cancel

- While in step 3, press the MODE button so that "A.L.C." indication comes on.
- When the power is turned off, this function is also canceled.

To stop recording temporarily

Press the ►II button. To resume recording, press the ►II button again.

To eject the MD

Press the ■ button to stop recording. After the "■" indicator goes off, slide the EJECT ▲/HOLD switch to open the disc holder.

To turn the power off

If the unit is left untouched after you have pressed the ■ button to stop recording or if you have recorded an MD to the end, the unit is turned off automatically after approximately four seconds. When the unit turns off, the information on the display window goes off.

To monitor the sound being recorded

Connect the headphones to the LINE OUT/PHONES jack of the main unit. Even if you change the headphones volume, the recorded sound is unaffected.

To record on the previously recorded MD

If there is an unrecorded section left on the MD, the new recording automatically starts just after the end of the previous recording. If you want to record after erasing the previous recording completely, follow the procedure described on page 80 to erase the recorded material, then start the new recording afresh.

To prevent accidental erasure of recorded material

- A recordable MD is equipped with a record-protect tab which prevents the accidental erasure of recorded material.
- To protect the recorded contents → Slide the tab to the right.
- To record → Slide the tab to the left.

Note

- During recording or editing, you cannot open the disc holder even if you attempt to slide the EJECT ▲/HOLD switch.
- You cannot record on premastered MDs.
- Do not subject the unit to strong shocks or disconnect the power while the unit is writing the TOC information (step 5 on page 72). If you do so, the TOC information will not be written properly and playback of the recorded material will not be possible.

Registering the index codes

These are four methods to register the index codes.

- ① Automatic marker function
- ② Time marker function
- ③ Non marker function
- ④ Manual marker function

Note

- There may cases where the index codes are not registered accurately even if the automatic marker function is activated.
- You cannot register the index codes without registering the track numbers.

① To register index codes automatically (Automatic marker function)

(Refer to the illustrations on page 29.)

Normally, the index codes and track numbers are recorded automatically during recording.

When you record using a microphone, the index codes and track numbers are recorded automatically every time the recordings restart after more than approximately three seconds of blank.

② To register index codes every five minutes (Time marker function)

(Refer to the illustrations on page 30.)

- 1 While pressing down the REC button, press the ►II button.
- 2 Press the MODE button repeatedly until the "MARK auto" comes on.
- 3 Press EDIT/ENTER button until the MARK Time" indication comes on.
- 4 Press the ►II button to start recording.

To cancel

While in step 3, press EDIT/ENTER button so that the "MARK auto" indication comes on. If the power is turned off, the automatic marker function will be selected automatically the next time a recording is made.

③ To record without registering the index codes (Non marker function)

- 1 While pressing down the REC button, press the ►II button.
- 2 Press the MODE button repeatedly until the "MARK auto" comes on.
- 3 Press EDIT/ENTER button until the "MARK non" indication comes on.
- 4 Press the ►II button to start recording.

To cancel

While in step 3, press EDIT/ENTER button so that the "MARK auto" indication comes on. If the power is turned off, the automatic marker function will be selected automatically the next time a recording is made.

④ To add some index codes during a recording (Manual marker function)

(Refer to the illustrations on page 32.)

Press the EDIT/ENTER button where you want to register an index code while recording.

Each time the index code is registered, the track number advances by one. You can register up to a maximum of 254 codes (track numbers).

Extended recording (Monaural recording)

(Refer to the illustrations on page 33.)

- 1 While pressing down the REC button, press the ►II button.
- 2 Press the MODE button repeatedly until the "STEREO REC" indicator comes on.
- 3 Press the EDIT/ENTER button until the "MONO REC" indicator comes on.
- 4 Press the ►II button to start recording.

To cancel

While in step 3, press EDIT/ENTER button so that the "MODE STEREO" indicator comes on. When the power is turned off, the monaural recording mode is canceled automatically, so that it does not affect the next recording.

Note

- If you listen to the sound which is being recorded through the headphones, the sound will be in stereo. However the recorded sound will be monaural.
- Every time you switch between the monaural recording mode and stereo recording mode, the track number advances by one.
- If a stereo microphone is used, only the L (left) channel sound will be recorded.
- With some MD players, you may not be able to play the MD recorded with this unit in the monaural recording mode.

To pause the recording automatically while the source sound is low (SLSS function)

(Refer to the illustrations on page 34.)

- 1 While pressing down the REC button, press the ►II button.
- 2 Press the MODE button repeatedly until the "SLSS OFF" indicator comes on.
- 3 Press the EDIT/ENTER button repeatedly.
 - a Recording in a quiet place
Press until the "SLSS H" indicator comes on.
 - b Recording in a noisy place
Press until the "SLSS L" indicator comes on.
- 4 Press the ►II button to start recording.

To cancel

While in step 3, press EDIT/ENTER button so that the "SLSS OFF" indication comes on. If the power is turned off, the SLSS function is canceled automatically, so that it does not affect the next recording.

PLAYBACK

Basic operation

(Refer to the illustrations on page 35 to 36.)

- 1 Connect the supplied headphones to the LINE OUT/PHONES jack of the unit.
- 2 Insert an MD.
- 3 Press the **▶||** button. Playback starts.
- 4 Adjust the volume with the **VOLUME +/-** buttons.

The volume level can be adjusted between 0 and 20.

Other basic operations

To stop: press the **■** button.

To pause: press the **▶||** button.

To release pause: press the **▶||** button.

To fast forward: keep the **▶▶** button pressed during playback.

To rewind: keep the **◀◀** button pressed during playback.

To repeat the current track: press the **◀◀** button once during playback.

To skip a track: press the **▶▶** button once during playback.

To cue up the beginning of a track: Press either the **◀◀** or **▶▶** button repeatedly during playback or pause.

To eject an MD: After pressing the **■** button, slide the **EJECT ▲/HOLD** switch to **EJECT ▲**.

Note

When you connect other than the supplied headphones, set the **PHONES/LINE** switch to **PHONES**.

Playing back at double speed (Rapid-playback function)

Press the **▶||** button for a short time during playback.

Press and hold the button down until the "x2 PLAY" indication comes on, then release the button. The rapid playback function is activated.

To cancel

Press the **▶||** button. Normal playback resumes from the point where the button is pressed.

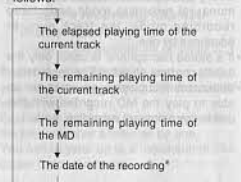
To turn the power off

If the unit is left untouched after you have pressed the **■** button to stop playback or if you have played the MD to the end, the unit is turned off automatically after approximately four seconds. When the unit is turned off, the information on the display window goes off as well.

The indications during playback

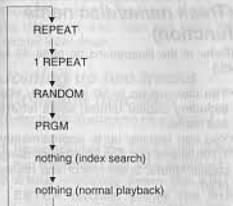
(Refer to the illustrations on page 37.)

- Each time you press the **DISP** button, the indication changes cyclically as follows.



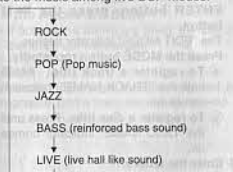
- If you play back a premastered MD or a recordable MD without the date and time of the recording registered, "..." indication will come on.

- If you press the **MODE** button repeatedly, the indication changes cyclically as follows.



Selecting the sound effect (DSP mode)

Each time you press the **DSP** button, you can select the sound effect that fits best to the music among five DSP modes.



Playing back repeatedly (Repeat function)

(Refer to the illustrations on page 39.)

Press the **MODE** button repeatedly during playback.

- To repeat all the tracks on the disc:** Press until the "REPEAT" indicator comes on.
- To repeat the currently played track:** Press until the "1 REPEAT" indicator comes on.

To cancel

Press the **MODE** button repeatedly until the "INDEX" indicator comes on and press the button again. When the power is turned off at the end of playback, the repeat function is also canceled.

Playing back tracks randomly (Random playback)

(Refer to the illustrations on page 39.)

Press the **MODE** button repeatedly during playback until the "RANDOM" indicator comes on.

To cancel

Press the **MODE** button repeatedly until the "INDEX" indicator comes on and press the button again. When the power is turned off at the end of playback, the random playback is also canceled.

Playing back tracks in the desired order (Programed playback)

(Refer to the illustrations on page 40.)

- 1 Press the MODE button repeatedly during playback until the "PRGM" indicator comes on.
- 2 Press either the **◀◀** or **▶▶** button to select the track.
- 3 Press the EDIT/ENTER button.
The track is memorized.
- 4 Repeat steps 2 and 3 and continue memorizing the tracks.
- 5 Press the **▶▶** button.
The tracks will be played back in the programmed order from the first track.

To cancel

Press the MODE button repeatedly until the "INDEX" indicator comes on and press the button again. When the power is turned off at the end of playback, the programmed playback is also canceled. When the programmed playback is canceled, the contents of the program are canceled as well.

Playing back a desired track after selecting it by its title (Index search function)

(Refer to the illustrations on page 41.)

- 1 Press the MODE button repeatedly during playback until the "INDEX" indicator comes on.
- 2 Press the EDIT/ENTER button when the track you want to playback comes on.
The selected track is played back.

Note

You cannot select tracks whose titles are not registered.

EDITING

Registering track and disc titles (Track name/disc name function)

(Refer to the illustrations on page 43 to 45.)

- You can use up to 50 letters per title including capital letters, small letters and marks.
- You can register up to approximately 1,700 letters per disc (in case of using capital letters, small letters and marks only).

1 Pause playing the track you want to assign a title to.

- You can put a title to a disc while any of the tracks on that disc are being played back.

2 While pressing down the EDIT/ENTER button, press the **▶▶** button.

The "EDIT MODE" indicator flashes. Press the MODE button repeatedly.

- a To register a track title: Press until the "TRACK NAME" indication comes on.
- b To register a disc title: Press until the "DISC NAME" indicator comes on.

3 Enter the letters.

- ① Press the VOLUME + button once to come on the first letter/character.
- ② Press the DSP/SHIFT button to select a desired letter/character.
- ③ Press the VOLUME +/- buttons on the main unit or rotate the VOL control on the remote control to select a letter/character.

4 Press the **▶▶** button after you have selected a letter/character.

5 Repeat steps 3 and 4 to enter all the letters.

6 Press the EDIT/ENTER button.

The input letters are registered.

When you have accidentally selected an unwanted letter

Press either **◀◀** or **▶▶** button to make the unwanted letter flash and enter the desired letter again.

Joining up two tracks (Combine function)

(Refer to the illustrations on page 46.)

1 Pause playing the latter track of the two tracks that you want to join up.

2 While pressing down the EDIT/ENTER button, press the **▶▶** button.

The "EDIT MODE" indicator flashes.

Press the MODE button repeatedly to make the "COMBINE" indication come on.

3 Press the EDIT/ENTER button.

If the tracks are titled

- If both of the tracks are titled: the title of the first track will remain.

Note

You cannot merge a track recorded in monaural and a track recorded in stereo.

Dividing up a track (Divide function)

(Refer to the illustrations on page 47.)

1 Pause playing back at the point where you want to register the index code.

2 While pressing down the EDIT/ENTER button, press the **▶▶** button.

The "EDIT MODE" indicator flashes.

Press the MODE button repeatedly to make the "DIVIDE" indication come on.

3 Press the EDIT/ENTER button.

Changing the order of the tracks (Renumber function)

(Refer to the illustrations on page 48.)

1 Pause playing the track that you want to move.

2 While pressing down the EDIT/ENTER button, press the **▶▶** button.

The "EDIT MODE" indicator flashes.

Press the MODE button repeatedly to make the "RENUMBER" indication come on.

The indication changes to that of "MOVE000".

3 Press either the **◀◀** or **▶▶** button to select the position that you want to move the track to.

4 Press the EDIT/ENTER button.

The track number changes to that of the selected position.

Erasing tracks (Erase/All erase function)

(Refer to the illustrations on page 49 to 50.)

- 1 Pause playing back.
 - a To erase one track:
Press the ►|| button at the track that you want to erase.
 - b To erase all the tracks on the disc:
Press the ►|| button at any track on the disc.
- 2 While pressing down the EDIT/ENTER button, press the ►|| button.
The "EDIT MODE" indicator flashes.
Press the MODE button repeatedly.
 - a Press until the "ERASE" indicator comes on.
 - b Press until the "ALL ERASE" indicator comes on.
- 3 Press the EDIT/ENTER button.
The "ERASE OK?" indicator flashes.
If you decide that you do not want to erase them, press the ►|| button.
- 4 Press the EDIT/ENTER button again.
 - a When one track is erased:
The selected track is erased and the playback standby on the next track.
 - b When all of the tracks on the disc are erased:
The unit is turned off after approximately four seconds.

USEFUL OPERATIONS

Preventing accidental operation (Hold function)

(Refer to the illustrations on page 51.)

Set the EJECT ▲/HOLD switch on the main unit to HOLD.
The EJECT ▲/HOLD switch on the main unit works only with the main unit.
Slide the HOLD switch on the remote control in the direction of the ◀ mark.
The HOLD switch on the remote control works only with the remote control.

Adjusting the contrast of the LCD display

(Refer to the illustrations on page 52.)

- 1 Press and hold the DISP button until the "CLOCK SET" comes on when the unit is turned off.
- 2 Press the MODE button once.
- 3 Press the VOLUME +/- buttons to adjust the contrast checking the display.
- 4 Press the ■ button.

Limiting the maximum sound volume

(Refer to the illustrations on page 53.)

- 1 Press and hold the DISP button until the "CLOCK SET" comes on when the unit is turned off.
- 2 Press the MODE button twice.

- 3 Press the EDIT/ENTER button to select the maximum sound volume.

To select "EarGRD ON":

Max. 14 degree

To select "EarGRD OFF":

Max. 20 degree

- 4 Press the ■ button.

Restarting playback at the previous stopped point (Resume playback)

(Refer to the illustrations on page 54.)

- 1 Press and hold the DISP button until the "CLOCK SET" comes on when the unit is turned off.
- 2 Press the MODE button three times.
- 3 Press the EDIT/ENTER button to switch the function.
- 4 Press the ■ button.

Illuminating the display (Back-light function)

(Refer to the illustrations on page 55.)

- 1 Press and hold the DISP button until the "CLOCK SET" comes on when the unit is turned off.
- 2 Press the MODE button four times.
- 3 Press the EDIT/ENTER button to switch the function.
- 4 Press the ■ button.

While using on AC power or back-light on mode

You can switch the back-light function on and off while using on AC power or back-light on mode. Press and hold the DISP button for a short time during recording or playback.
Turning off the power makes the back-light function turn on.

Listening with other equipment

(Refer to the illustrations on page 56.)

Connect the connecting cord (for a phono jack) (supplied) or Aiwa SSW-8 (for a stereo mini-plug) (not supplied) to the line input jack of the stereo set, etc. and the LINE OUT/PHONES jack of the unit.

Listening in a car

(Refer to the illustrations on page 56.)

- This unit can be use in a car with the use of the Car power adaptor DC-450 (no supplied) and the car audio cassette adaptor CAP-5 (not supplied).
- Refer to the operating instructions manual of the DC-450 and CAP-5.
- When using DC-450, detach the rechargeable battery.