

# SONY

3-758-089-21 (1)

**MD**  
**WALKMAN™**



**Portable MiniDisc Recorder**  
**MZ-R2**

---

**Operating Instructions**

©1993 by Sony Corporation

# WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

## Caution

The use of optical instruments with this product will increase eye hazard.

## Information

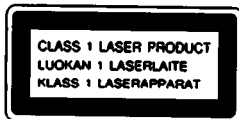
### For Customers in the USA

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

### For Customers in the United Kingdom



This MiniDisc Recorder is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT label is located on the bottom exterior.

The built-in battery should be replaced by qualified personnel only.

## Warning

## For Customers in Australia

If the supply cord of AC power adaptor is damaged the AC power adaptor must be returned to the manufacturer or his agent for the cord to be replaced.

IN NO EVENT SHALL SELLER BE LIABLE FOR ANY DIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE, OR LOSSES OR EXPENSES RESULTING FROM ANY DEFECTIVE PRODUCT OR THE USE OF ANY PRODUCT.

## Owner's Record

The model and serial numbers are located on the bottom. Record the serial number in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. MZ-R2

Serial No. \_\_\_\_\_

"MD WALKMAN" is a trademark of Sony Corporation.

# Welcome!

Welcome to the world of the MiniDisc! The Sony MiniDisc Recorder is the result of Sony's on-going commitment to leadership in audio-video technology. Here are some of the capabilities and features you'll discover with the new MiniDisc Recorder.

### Compact Size MiniDisc Recorder

The 2.5-inch MiniDisc (MD) makes this compact size possible. You can play and record an MD anywhere you go.

### Quick Random Access

MDs offer quick random access to any music track or phrase without waiting for reeling time. This is one of the remarkable features of optical discs.

### Date and Time Stamp Function

The built-in clock allows you to record the date and time whenever you make a recording.

### Title Function

You can see disc and track titles in the display while you are playing an MD.

### Remote Controller

You can play an MD using the remote controller equipped with the stereo headphones.

---

# Table of contents

---

**Let's start!** 6

---

## **Setting up**

---

- Choosing power sources 10
    - Using on AC power 10
    - Using on the rechargeable battery 11
    - Using on dry batteries 13
  - Setting the clock 14
- 

## **Recording an MD**

---

- Recording from a CD, etc. 16
    - Hooking up a digital source 16
    - Hooking up an analog source 17
    - Recording from the first track of an MD 20
    - Recording from a specific point of a previous recording 22
    - Recording on a blank portion of a recorded MD 25
    - Useful tips on recording 27
  - Recording from a microphone 30
    - Recording 30
    - Track marking while recording 34
- 

## **Listening to an MD**

---

- Playing an MD 36
  - Playing tracks repeatedly 39
  - Useful tips on playing an MD 40
- 

## **Editing recorded tracks**

---

- Track marking a recording 44
    - Erasing a track mark 46
  - Erasing recordings 48
-

## **Playing an MD with other equipment**

---

Connecting to a stereo system 49

Using in a car 50

---

## **For your information**

---

Precautions 51

Troubleshooting 54

Error messages 56

Specifications 58

What is the MD? 60

Looking at the controls 62

# Let's Start!

Start recording a MiniDisc (MD) from a CD and play it using your MD recorder and the supplied accessories.

## Unpacking

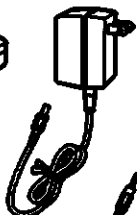
Use the following accessories to start the operation on the next three pages.



MD recorder MZ-R2



Recordable MD (60-minute)



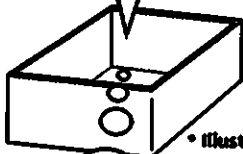
AC Power Adaptor\*



Line Cable



Headphones\* with a Remote Controller



\* Illustrations conform to US model.



Rechargeable Battery (Lithium-ion Battery Pack) LIP-12

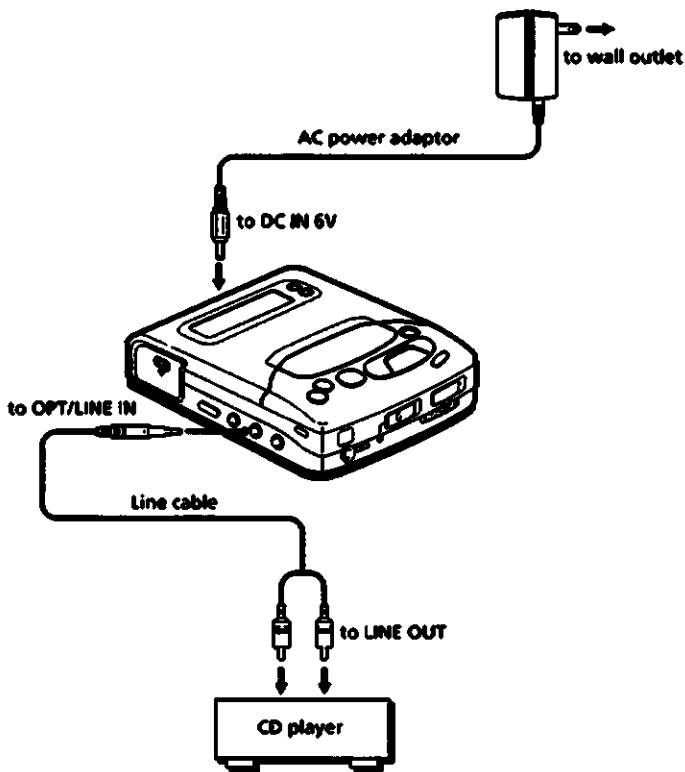


Battery Case



Carrying Case

# → Connecting to a CD player →



To hook up a digital sound source (for example, another MD player, CD player or digital amplifier)

—page 16

To hook up an analog sound source with stereo-mini type line out jacks

—page 17

# Recording an MD

## 1 Insert the MD.

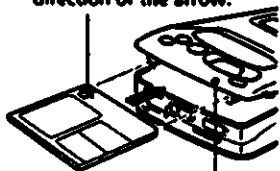
①



③



④ Insert the MD in the direction of the arrow.



⑤ Close the lid.

## 4 Stop recording.



## 2 Start recording.



## 3 Play the CD player.

CD player

### To start recording precisely

While holding down the **||** (pause) button, slide the REC switch to the right. Play the source. When the source comes to the part you want to record, press **||** again.





# Listening to an MD

Play the MD you have just recorded.

**1** Connect the headphones.

**2** Play the MD.

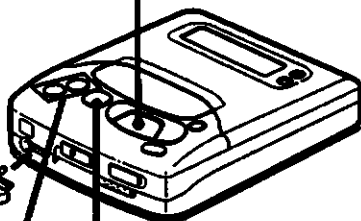
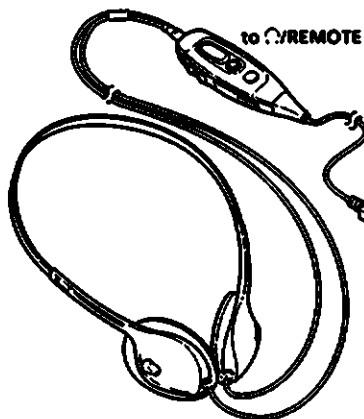


Illustration for the headphones conforms to US model.

**3** Adjust the volume.



**4** Stop playing.



- After you stopped recording, press ►. The recorder will play from the point where you started recording.
- When you have stopped playing the MD partway through, press ► to resume playing from the point where the MD stopped
- If you have opened the lid or taken the MD out after you stopped playing it partway, the recorder will play from the first track when you press ►.

# Choosing power sources

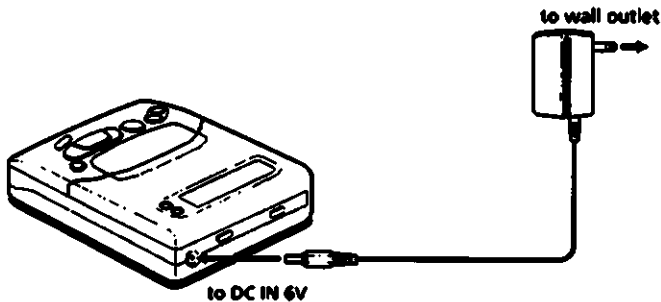
Setting up

The recorder is operable on AC, rechargeable battery, and dry battery power.

## Using on AC power

To record for hours, you should operate the recorder on AC power. If you use the rechargeable battery or dry batteries, the batteries may weaken and interrupt the recording.

**Connect the supplied AC power adaptor to the DC IN 6V jack of the recorder and the wall outlet.**



- After using, leave the recorder connected to the AC power for about 24 hours to charge the built-in battery for the clock and the recorder's memory.

The built-in battery operates the clock and powers the recorder's memory. It requires charging when you use the recorder for the first time or after a long period of disuse.

The recorder will automatically charge the built-in battery while connected to AC power, rechargeable battery, or dry

batteries. Once charged, the built-in battery should last about 2 months without connecting to any of the power sources.

### Note on the AC power adaptor

Use the supplied AC power adaptor only. Do not use any other AC power adaptor

Polarity of the plug

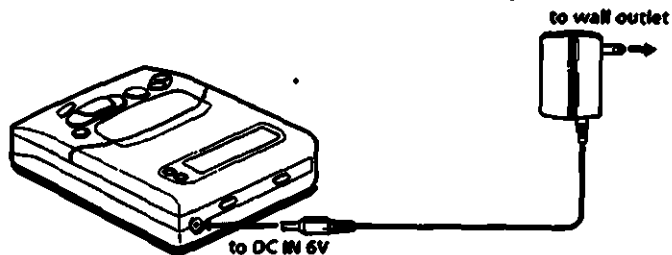


## Using on the rechargeable battery

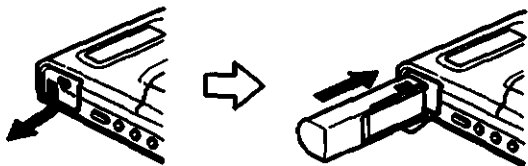
Before using the supplied rechargeable battery for the first time, you must charge it.

The battery can be recharged about 300 times.

### 1 Connect the supplied AC power adaptor.



### 2 Open the battery compartment lid and insert the battery.



"CHG" and the battery indication appear in the display and charging begins.

While  
charging.

Charging  
completed.



"CHG"  
disappears.

Charging a completely discharged battery takes:  
about 3 hours for 80% charging, or  
about 5 hours for 100% charging.

## ⇒ Choosing power sources

### 3 Disconnect the AC power adaptor.

As long as the recorder is connected to the AC power, the power will be supplied from AC.

#### Notes on recharging

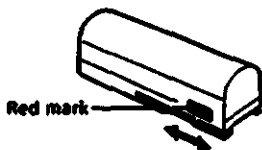
- Be sure to use the supplied AC power adaptor.
- When you use the battery for the first time or after a long period of disuse, the battery life may be diminished. In this case, charge and discharge the battery several times. The battery life will be restored.

#### Notes on the rechargeable battery

- To charge the battery, use only the recorder or the specified charger.
- Do not disassemble or short-circuit the battery.
- Do not leave the battery at high temperature for an extended period of time.
- Keep the battery away from the fire.
- Do not expose the battery to water.
- Do not drop the battery or subject it to mechanical shock.

#### ☞ Battery charging tips

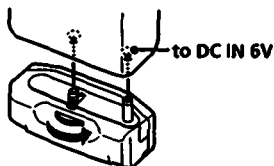
- You can charge the battery at any time.  
The rechargeable battery does not need discharging before recharging. You can recharge a half-charged battery. However, the rechargeable battery discharges little by little even while it is not in use. We recommend that you charge it before every use.
- Keep a few spare batteries.  
To avoid power shortage, prepare a few rechargeable batteries LIP-12 (not supplied). To remind yourself of the battery's condition, set the switch on the battery to the position where no mark is visible when the battery has finished charging. Set the switch to the position where the red mark is visible when the battery has been discharged.



- To ensure the maximum number of chargings and dischargings, we recommend storing the battery in a cool place and charging it under temperatures ranging from 50° to 86°F (10° to 30°C).  
When the battery is not to be used for a long time, be sure to remove it from the recorder.

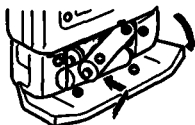
# Using on dry batteries

## 1 Mount the battery case.



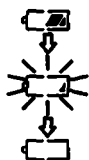
## 2 Install three size AA (R6) alkaline batteries.

After you install a battery in the lower compartment, put the black tape, and install another battery on it. And then, install the other battery as illustrated.



### When to replace the batteries

You can check the battery condition with the battery indication displayed while using the recorder.



Used batteries

Weak batteries. Replace all the batteries.

The batteries have gone out. "LOW BATT" flashes in the display, and the power goes off.

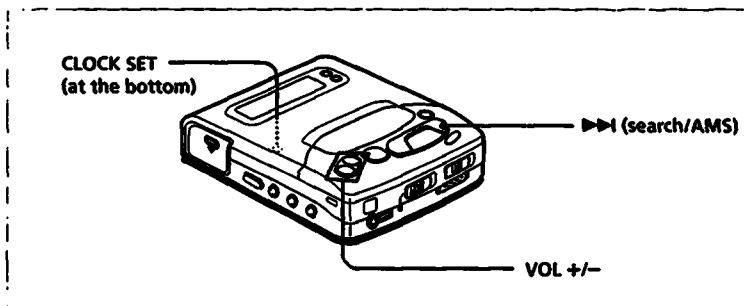
### Battery life\*

Batteries	Recording**	Playback
Rechargeable battery***	Approx. 2 hours	Approx. 2.5 hours
Size AA (R6) alkaline batteries	Approx. 2 hours	Approx. 2.5 hours
Rechargeable and size AA (R6) batteries	Approx. 4.5 hours	Approx. 6.5 hours

- \* The battery life may be diminished due to operating condition and the temperature of the location.
- \*\* When you record, use a fully charged battery or new dry batteries.
- \*\*\* If the rechargeable battery capacity becomes half the normal life, replace it with a new one.

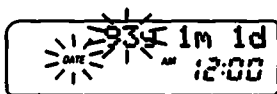
# Setting the clock

To stamp the date and time on the MD when you record, you need to set the time. When you use the recorder for the first time or after a long time of disuse, charge the built-in battery for the clock and the recorder's memory before setting the clock (See *Using on AC power*, page 10.) Set the clock while the recorder isn't operating after connecting to the power source.



## 1 Press **CLOCK SET** at the bottom of the recorder with a pen nib.

The digits of the year flash.

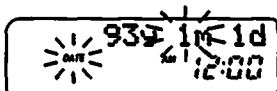


## 2 Enter the current year by pressing **VOL +** or **-**.

To change the digits rapidly, keep pressing + or -.

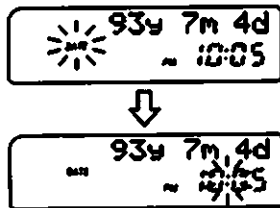
## 3 Press **▶▶**.

The year you set is stored in memory and the digit of the month flashes.



#### **4 Repeating steps 2 and 3, enter the current month, date, hour, and minute.**

The time display appears with "AM" or "PM". ("AM 12:00" means midnight and "PM 12:00" means noon.) When you press ► to set the minute, the clock starts operating.



#### **If you make a mistake while setting the clock**

Press ■, and set the clock again from step 1.

##### **☞ On the clock display**

##### **• To display the time**

Press DISPLAY twice in stop mode. The time indication disappears after 5 seconds.

##### **• If the clock loses time or the display flashes**

The built-in battery is weak. If you keep using the weak battery, the recorder will not record the recorded date and time. Note that the built-in clock normally loses about 2 minutes a month.

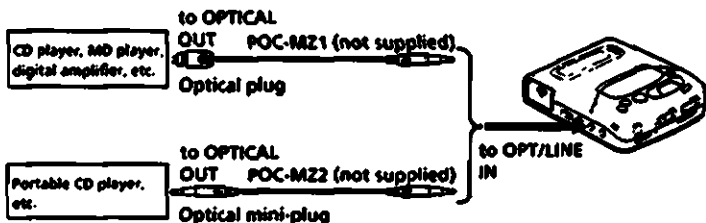
##### **• To display the time in the 24-hour system**

While setting the clock, press DISPLAY. To display the time in the 12-hour system, press DISPLAY again.

# Recording from a CD, etc.

When you connect the MD recorder to a sound source, the recorder automatically recognizes the sound source and switches to digital or analog recording.

## Hooking up a digital source



**Connect the digital connecting cable (POC-MZ1 or POC-MZ2, not supplied) to the OPT/LINE IN jack.**

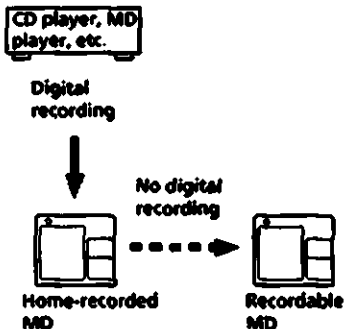
The recorder switches to digital input automatically.

### Notes

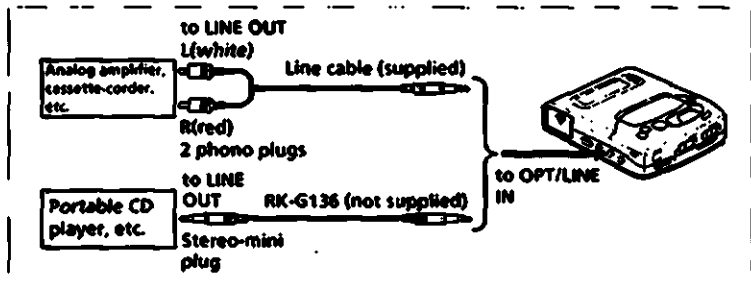
- The MD recorder's sampling frequency is 44.1 kHz. A digital source which has a different sampling frequency (such as the DAT recorder/player) cannot be recorded using the digital connection. Use instead the analog (line out) connection (see the next section).
- You can make a digital recording only from an optical type output



- If you use the digital (optical out) connection to record your MD, you will not be able to make copies from the recorded disc copy. You can only make copies from a home-recorded MD by using the analog (line out) connection.



## Hooking up an analog source



**Connect the supplied line cable (or RK-G136, not supplied) to the OPT/LINE IN jack.**

The recorder switches to analog input automatically.

### Note

If a microphone is connected, the recorder will not switch to analog input. To record from the analog source, you must first disconnect the microphone.

☞ **When the recorder has different sound sources connected at the same time**

The recorder switches to digital, microphone, and analog source in this order of priority.

# Three ways of recording

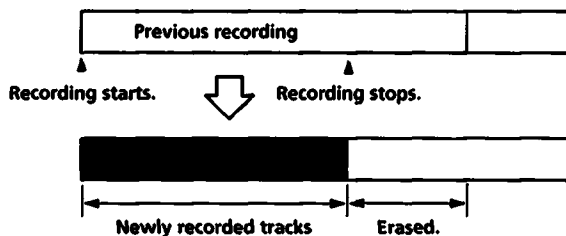
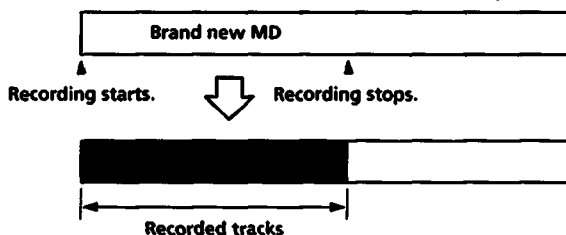
**You can record an MD in three ways according to the points where the recording should start on the MD.**

## ●Recording from the first track of an MD (page 20)

When recording on a brand new MD, recording starts from the first track of the MD. To record over a previous recording to be erased entirely, recording should also start from the first track of the MD.

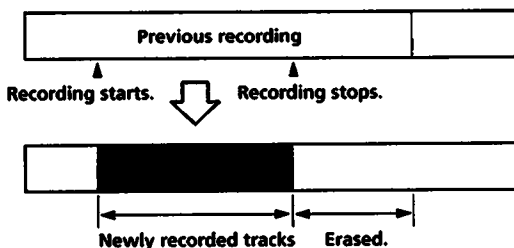
**Note that all the tracks will be erased as soon as you start recording.**

Even if the previous recording is longer than the new tracks you are going to record, all of the previous recording will be erased.



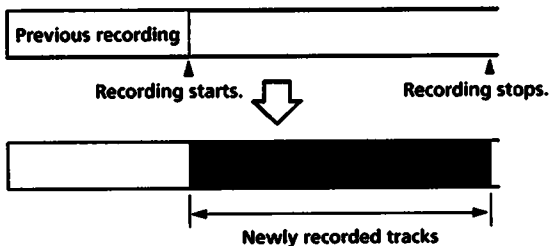
## ●Recording from a specific point of a previous recording (page 22)

To keep a part of a recorded MD and record over the remaining previous recording, start recording at the end of the part you want to keep (at the beginning of the part you want to erase). **Note that all the succeeding tracks will be erased as soon as you start recording.**



## ●Recording on the blank portion of a recorded MD (page 25)

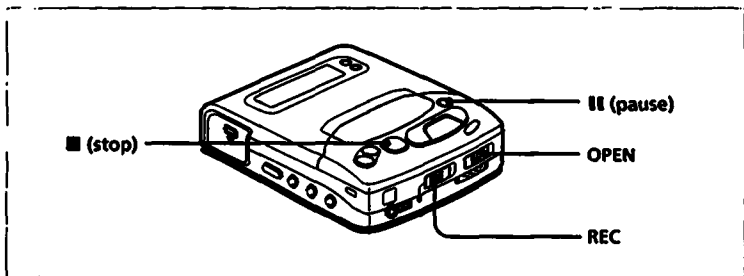
To keep all of the previous recording and record new tracks on the blank portion of the MD, start recording from the last point of the previous recording.



⇒ Recording from a CD, etc.

## Recording from the first track of an MD

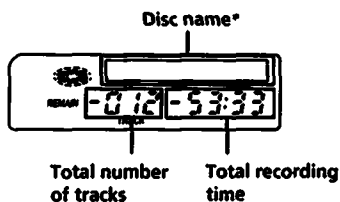
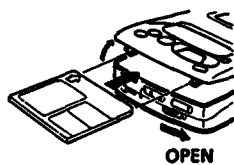
Before you start recording, connect the MD recorder to a sound source. When you record on the first track of a used MD, note that all the succeeding tracks will be erased as soon as you start recording.



### 1 Insert the recordable MD.

Slide OPEN to open the lid, insert the recordable MD with the arrow pointing toward the opening, and close the lid.

Once you open the lid, the recorder will start recording from the beginning of the first track.



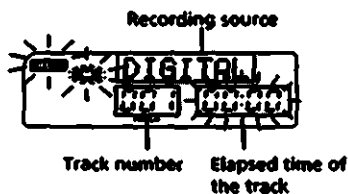
\* No indication appears with MDs that have not been electronically labeled.

## 2 While holding down II, slide REC to the right pressing the red button in the center of REC.

"REC" flashes in the display and the recorder enters recording standby mode.

### Note

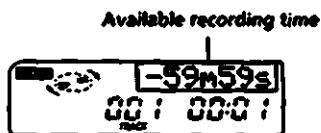
When you record over a previous recording, all the succeeding tracks will be erased as soon as you start recording.



## 3 Play the sound source.

## 4 Press II again to release standby and start recording.

"REC" lights up and recording starts. The recording level is adjusted automatically (AGC—Automatic Gain Control).



## 5 Press ■ to end recording.

"Toc Edit" flashes and the recorder starts writing the new data to the MD. The indication goes out when writing is completed.



### Note

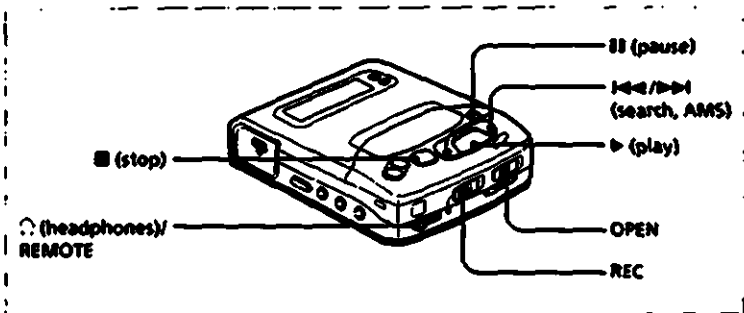
Do not move or jog the recorder while "Toc Edit" is flashing in the display.

To	Press/Slide
Pause/release pause	II
Eject the MD	After stop (■), slide OPEN and open the lid

## ⇒ Recording from a CD, etc.

### Recording from a specific point of a previous recording

You can record over a part of the previous recording. Note that all the succeeding tracks will be erased as soon as you start recording.



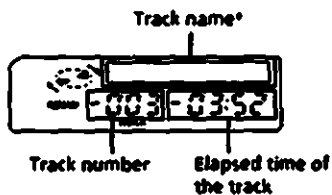
- 1** Connect the headphones to /REMOTE.
- 2** Insert the recordable MD.
- 3** Press ▶ to find the start point of recording.

The recorder plays the previous recording.

To find the beginning of the next track, press ▶▶.

To find the beginning of succeeding tracks, press ▶▶ repeatedly. If you keep pressing ▶▶, you can fast-forward the playback while listening to the sound.

To find the beginning of the current or preceding tracks, use ◀◀.



\* No indication appears with MDs that have not been electronically labeled.

---

**4** Press **■** to stop at the point you want to start recording over.

---

**5** While holding down **II**, slide **REC** to the right pressing the red button in the center of **REC**.

"REC" flashes in the display and the recorder enters recording standby mode. Check the display to make sure the recording will start from the right track.



**Note**

All tracks following this point will be erased as soon as you start recording.

---

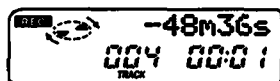
**6** Play the sound source.

---

**7** Press **II** again to release standby and start recording.

The new track is recorded as a succeeding track from this point.

The recording level is adjusted automatically (AGC—Automatic Gain Control).



## 8 Press ■ to end recording.

“Toc Edit” flashes and the recorder starts rewriting the new data to the MD. The indication goes out when rewriting is completed.



### ■ Note

Do not move or jog the recorder while “Toc Edit” is flashing in the display.

To	Press/Slide
Pause/release pause	
Eject the MD	After stop (■), slide OPEN and open the lid

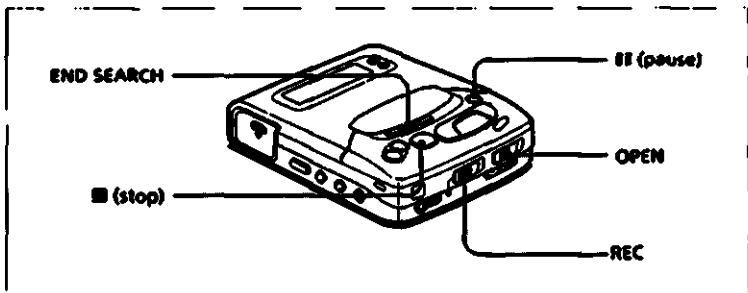
### ☞ If you want to keep the latter tracks of the recorded MD

Erase the preceding tracks so that the latter tracks are renumbered from the beginning of the MD (see *Erasing recordings*, page 48). Then start recording new tracks from the last point of the track you want to keep.



## Recording on a blank portion of a recorded MD

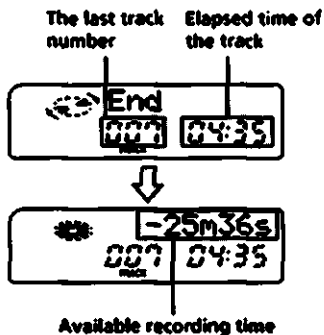
You can record new tracks after the previous recording.



### 1 Insert the recordable MD.

### 2 Press END SEARCH.

The recorder quickly searches for the end of the previous recording and displays the remaining time available for recording. Recording will be made from this point.



⇒Recording from a CD, etc.

**3** While holding down **II**, slide REC to the right pressing the red button in the center of REC.

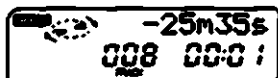
"REC" flashes in the display and the recorder enters recording standby mode.



**4** Play the sound source.

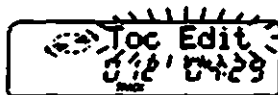
**5** Press **II** again to release standby and start recording.

The recording level is adjusted automatically (AGC—Automatic Gain Control).



**6** Press **■** to end recording.

"Toc Edit" flashes and the recorder starts rewriting the new data to the MD. The indication goes out when rewriting is completed.



**Note**

Do not move or jog the recorder while "Toc Edit" is flashing in the display.

To	Press/Slide
Pause/release pause	<b>II</b>
Eject the MD	After stop ( <b>■</b> ), slide OPEN and open the lid

## Useful tips on recording

### To monitor the sound being recorded

Connect the headphones to  $\Omega$ /REMOTE and adjust the volume by pressing VOL +/- . Sound levels are copied to the MD automatically and independently of the volume for monitoring.

### To check the tracks recorded

Connect the headphones to  $\Omega$ /REMOTE and press  $\blacktriangleright$  after you stop recording. The recorder will play from the point where you stopped recording.

### To resume recording from the point the MD stopped (Resume function)

If you stop recording and do not eject the MD nor open the lid, the recorder will resume recording from the point where the MD stopped.

#### **Note**

As soon as you start recording, all the succeeding tracks of the previous recording will be erased.

### To start recording quickly

You can start recording simply by sliding REC to the right. In some cases, however, the recorder does not enter the recording mode immediately after you slide the switch—when you try to start recording as soon as you insert an MD, when you try to start recording over from a specific point of a previous recording as soon as you search the point, and so on. In these cases, start playing the sound source after the record indicator lights up.

## ⇒ Recording from a CD, etc.

### How sources and their track divisions are marked

Recording source	Track divisions are
Digital source (CDs, MDs)	Marked (copied)
Analog source (tapes)	Marked (copied) after more than 2 seconds of silence
Microphone	Not marked (copied) (can be added manually)

When you press **II** while recording from any source, the recorder recognizes it as a track division. When pause is released, the recording resumes on a new track number.

To add and erase track marks, see *Track marking a recording*, page 44.

#### Track divisions may be copied incorrectly

- when you record from some CD players or multi disc players.
- when the source is in shuffle or program play mode.

In this case, play the source in normal play mode.

### Knowing the recording condition

The record indicator shows the recording condition.

Condition	Record indicator
Recording	lights up
Recording standby	flashes
Recording with less than 3 minutes' recording time available	slowly flashes

## Notes

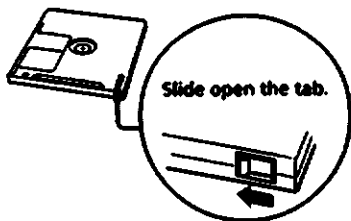
- When you record from a portable CD player using the digital connection, "NO SIGNAL" may appear in the display after you set the recorder to recording standby mode. This happens when the sound source does not send the digital signals correctly. In this case set the CD player to play pause before you start recording.
- This recorder does not label or copy character information such as disc names and track names.

### ☞ Maximum number of tracks

On this MD recorder 254 tracks can be recorded.

### ☞ Protecting a recorded MD

To record-protect an MD, slide open the tab at the side of the MD (so the tab is concealed). In this position, the MD cannot be recorded.

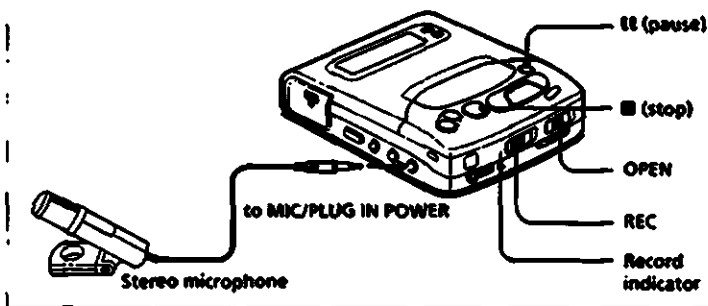


# Recording from a microphone

## Recording

This section explains how to record from the first track of an MD. To record from a specific point of a previous recording, see page 22. To record on a blank portion of a recorded MD, see page 25.

When you record over a previous recording, note that all the succeeding tracks will be erased as soon as you start recording.



### 1 Connect a microphone at MIC/PLUG IN POWER.

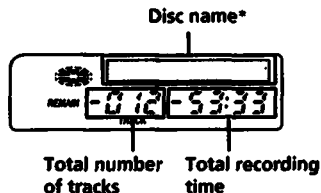
Use a stereo microphone (ECM-909A, ECM-727P, etc., not supplied).

#### ■ Note

To record from a microphone, you must first disconnect the digital source. If connected, the recorder will not switch to microphone input.

## 2 Insert a recordable MD.

Slide OPEN to open the lid, insert a recordable MD (supplied) with the arrow pointing toward the opening, and close the lid. Once you open the lid, the recorder will start recording from the beginning of the first track.



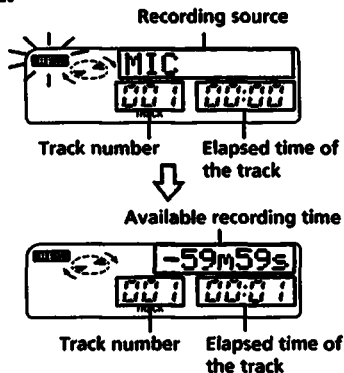
\* No indication appears with MDs that have not been electronically labeled.

## 3 While pressing the red button in the center of REC, slide REC to the right.

Recording starts when the record indicator lights up. The recording level is adjusted automatically (AGC—Automatic Gain Control).

### Note

When you record over a previous recording, all the succeeding tracks will be erased as soon as you start recording.



## 4 Press ■ to end recording.

"Toc Edit" flashes and the recorder starts writing the new data to the MD. The indication goes out when writing is completed.



### Note

Do not move or jog the recorder while "Toc Edit" is flashing in the display.

## ⇒ Recording from a microphone

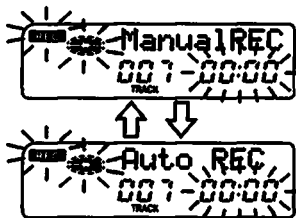
### To start recording precisely

- 1 While holding down II, slide REC to the right pressing the red button in the center of REC.**  
The recorder enters recording standby mode.
- 2 When you want to record, press II again.**

### Adjusting the recording level (Manual recording)

Sound levels of digital sources are automatically copied to the MD. However, if you are recording from a microphone or an analog source, you can set the recording level manually.

- 1 While holding down II, keep sliding REC to the right for more than 2 seconds.**  
“ManualREC” appears. To return to the automatic control, repeat the same operation.



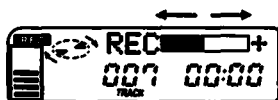
- 2 Play the source.**
- 3 While observing the level meter, adjust the recording level using <math>\lll/rrr</math>.**

Press <math>rrr</math> to increase. Press <math>\lll</math> to decrease.

Adjust the level to around the middle of the level meter.

Excessive level will make the playback sound distorted.

Volume decreases ← increases →



Level meter

#### **Note**

Once you start manual recording, you cannot adjust the recording level or the volume for monitoring. Adjust the level or the volume while the recorder is in standby mode.



**4 Press II to release pause and start recording.**

**5 Press ■ to end recording.**

The recording level control is switched to automatic control.

## **Knowing the recording condition**

The record indicator shows the recording condition while recording from a microphone.

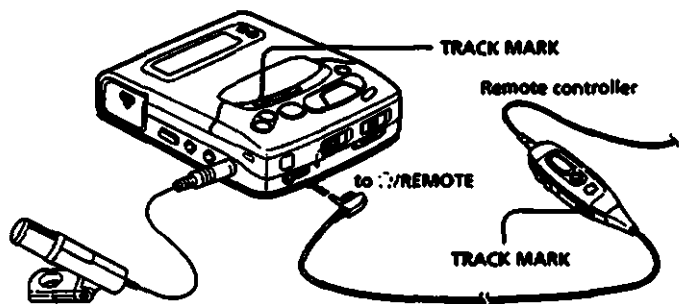
<b>Condition</b>	<b>Record indicator</b>
Recording	flashes according to loudness of the source (voice mirror)
Recording standby	flashes
Recording with less than 3 minutes' recording time available	slowly flashes

## ⇒ Recording from a microphone

### Track marking while recording

Track marking essentially adds tracks while recording and enables you to quickly find and play from the marked position. The track marking feature is useful particularly when recording from a microphone. For example, when recording a discussion where a number of people are speaking, insert a track mark (a new track number) every time the speaker changes. You can also insert a track mark when recording from a digital or analog source connected to the OPT/LINE IN jack.

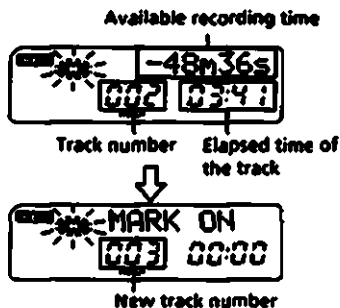
The remote controller will help you easily insert a track mark while recording.



#### While recording, press TRACK MARK.

The record indicator flashes and a short beep sounds in the headphones.

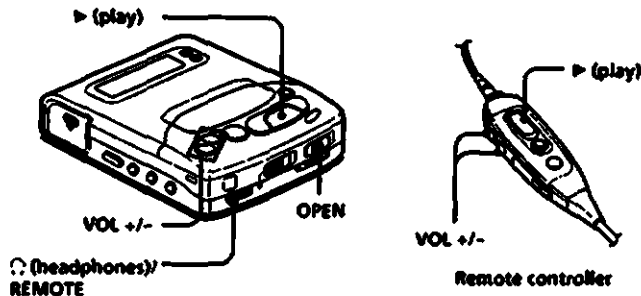
The track number will increase by one



## Searching for the marked point

After recording, press **⏮ / ⏭** to find the points where you inserted track marks.

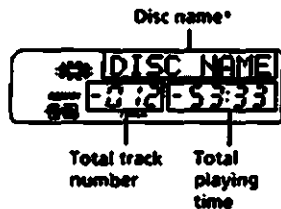
# Playing an MD



**1** Connect the headphones at /REMOTE.

**2** Insert an MD.

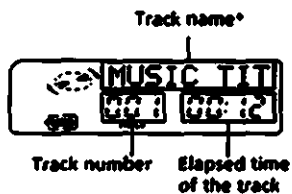
Slide OPEN to open the lid, insert an MD with the label side up and the arrow pointing toward the opening, and close the lid. Once you open the lid, the recorder will start playing from the beginning of the first track.



\* No indication appears with MDs that have not been electronically labeled.

**3** Press ▶.

The recorder will play from the beginning of the first track.



\* No indication appears with MDs that have not been electronically labeled.

## 4 Adjust the volume by pressing VOL +/- .



### Note

If you cannot increase the volume, the AVLS switch on the remote controller is set to ON. Set the switch to OFF. When you try to increase the volume while the switch is set to ON, the volume indication flashes and you cannot increase the volume to the maximum. (See *Useful tips on playing an MD* on page 42.)

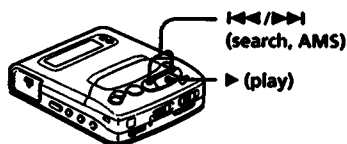
To	Press	Beep on the headphones (when operating on the remote controller)
pause / release pause		----- (continuous short beep)
stop	■	— (one long beep)
search while listening	keep pressing ◀◀ / ▶▶	(none)
quickly search without listening	(pause) and keep pressing ◀◀ / ▶▶	(none)
find the beginning of the current or preced- ing tracks (AMS)	slightly press ◀◀	--- (three short beeps)
find the beginning of the next or succeeding tracks (AMS)	slightly press ▶▶	-- (two short beeps)
eject the MD	after ■ (stop), slide OPEN and open the lid	(none)

## ⇒Playing an MD

### Playing specific tracks

You can find a specific track before playing an MD and start playing from that track. For this operation, only the controls on the recorder can be used.

- 1 Press **▶▶** or **◀◀** on the recorder to find a specific track.



- 2 Press **▶** on the recorder.



### Notes

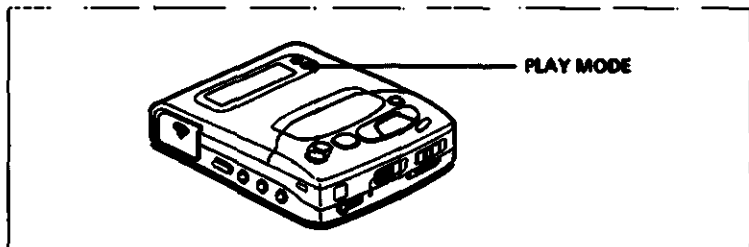
- This recorder has a shock-resistant memory. However, if it is subject to continuous vibration, the sound may skip or mute while playing an MD. In this case, use the recorder in a stable place.
- Tracks that are very short, such as a brief narration or introduction, may cause the sound to skip while being played.

- ☞ **You can resume playing from the point the MD stopped (Resume function).**

If you stop playing partway and do not eject the MD nor open the lid, the recorder will resume playing from the point where the MD stopped. Once you open the lid, the recorder will start playing from the beginning of the first track when you press **▶**.

# Playing tracks repeatedly

You can play tracks repeatedly in three ways—all repeat, single repeat, and shuffle repeat.



Press **PLAY MODE** while the MD is playing.

Each time you press **PLAY MODE**, the play mode indication changes as follows.



Play mode indication

To play	Indication
all the tracks once (normal play)	(none) ←
all the tracks repeatedly (all repeat)	↻
a single track repeatedly (single repeat)	↻ 1
all the tracks in random order repeatedly (shuffle repeat)	↻ SHUF ←

---

# Useful tips on playing an MD

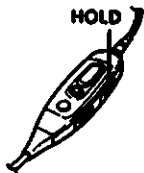
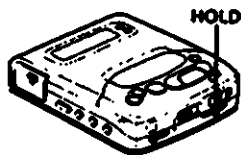
## Locking the controls (Hold function)

To prevent the buttons from being accidentally operated while you are walking, use the Hold function.

**Slide HOLD in the direction of the arrow.**

On the recorder, slide HOLD to lock the controls of the recorder.

On the remote controller, slide HOLD to lock the controls of the remote controller.



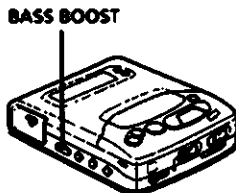


## Emphasizing the bass (Bass Boost feature)

The Bass Boost feature intensifies low frequency sound for richer bass reproduction.

**While the MD is playing, press BASS BOOST.**

Each time you press BASS BOOST, you can get two stages of the Bass Boost.



Bass Boost indication

To emphasize	Indication
no emphasis (normal play)	(none) ←
slightly	BASS █
strongly	BASS █ █

### Note

If the volume is too high, the sound may crack or distort. If this happens, turn down the volume.

## ⇒ Useful tips on playing an MD

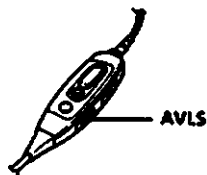
### Adjusting the sound to an appropriate level (AVLS function)

The AVLS (Automatic Volume Limiter System) function allows you to limit the maximum volume of the recorder without degrading the sound quality.

Hearing experts advise against continuous, loud and extended play. Use the AVLS function to avoid excessive pressure to your ears.

#### Set AVLS on the remote controller to ON.

The volume is kept at a moderate level without degradation of the sound quality, even if you attempt to turn the volume up higher.

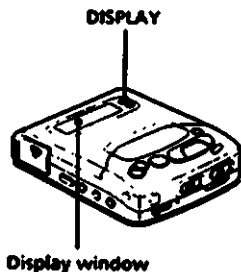


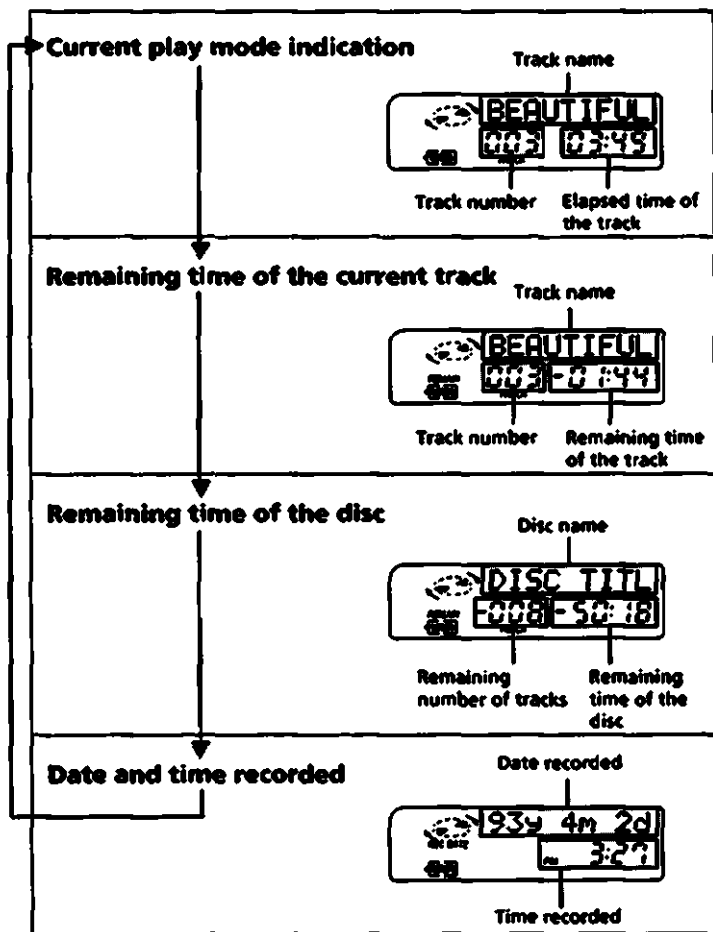
### Displaying disc and track names

If you are playing a premastered or recorded MD that has been electronically labeled, you can display information on the MD while it is playing.

#### While the MD is playing, press DISPLAY.

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





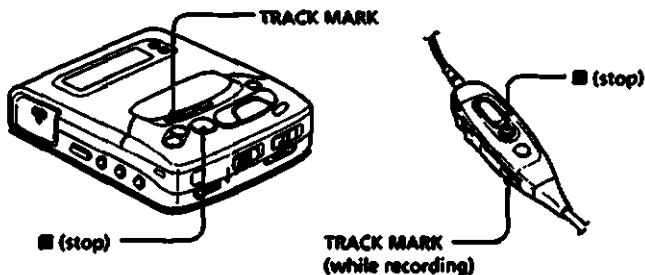
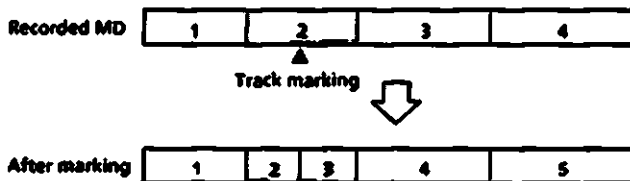
#### Notes

- No character information appears with MDs that have not been electronically labeled.
- This recorder does not label or copy any character information such as disc names and track names.

# Track marking a recording

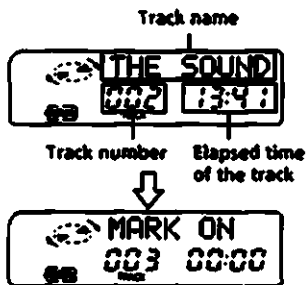
You can add track marks so that you can quickly find and play from the marked position.

The track numbers will increase as follows.



**While playing or recording, press TRACK MARK on the recorder at the point you want to mark.**

The TRACK MARK button on the remote controller can be used only while recording. If you want to add more marks, press the button at the desired points.



## To erase the track mark

Refer to the next section, *Erasing a track mark*, page 46.

### Notes

- When you press **■** after adding track marks, "Toc Edit" flashes and the recorder starts writing the new data to the MD. Do not move or jog the recorder while "Toc Edit" is flashing in the display.
- You cannot add track marks if the MD has the tab open for record-protection. Before adding track marks, close the tab on the side of the MD.

### ☞ Date and time recorded

The recorder adds the elapsed time of the previous track to the date and time it was recorded. These will be stamped on the new track.

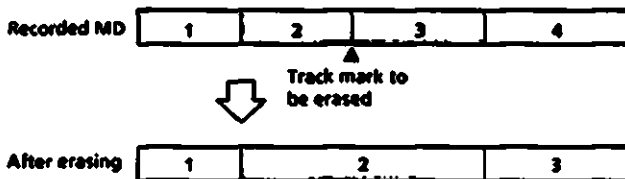
### ☞ Maximum number of tracks

On this recorder 254 tracks can be recorded.

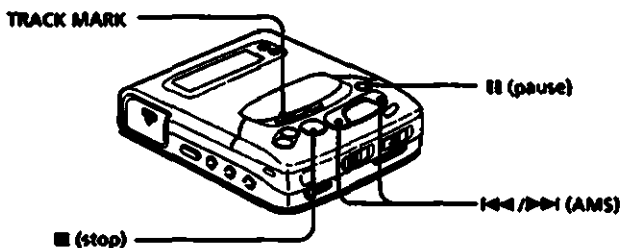
## ⇒ Track marking a recording

### Erasing a track mark

When a track mark is erased, the two tracks preceding and following the mark will be combined. The track numbers will change as follows.



To erase a track mark, use TRACK MARK on the recorder. You cannot erase a track mark with TRACK MARK on the remote controller.



**1** While the MD is playing, press II to pause.

## 2 Find the track mark you want to erase by pressing ◀◀ or ▶▶ slightly.

For example, if you want to erase the third track mark, find the beginning of the third track.

"00:00" flashes in the display.



## 3 Press TRACK MARK on the recorder to erase the mark.

The track mark is erased and the two tracks are combined.

The pause is released and the recorder starts to play from the point you erased the track mark.


If you want to erase more marks, repeat steps 1, 2 and 3.



### To add a track mark again

Search for the position and add a track mark again. Refer to the previous section, *Track marking a recording*.

### Notes

- When you press  after erasing track marks, "Toc Edit" flashes and the recorder starts writing the new data to the MD. Do not move or jog the recorder while "Toc Edit" is flashing in the display.
- You cannot erase track marks if the MD has the tab open for record-protection. Before erasing track marks, close the tab on the side of the MD.
- If you have recorded or erased many times on the same disc, the data of a single track may be scattered throughout the disc.

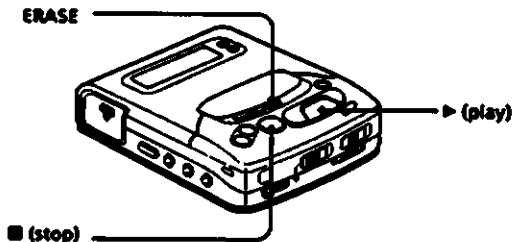
When the data is scattered in groups of less than 8 seconds long, the recorder will not be able to combine the tracks. In this case you cannot erase track marks. This is one of the features of the MD system, not a malfunction.

### Date and time recorded

The combined track whose mark has been erased is recorded with the date and time of the beginning of the first of the two combined tracks.

# Erasing recordings

You can quickly erase a recorded track. Note that once a recording has been erased, you cannot retrieve it.



## 1 Play the track you want to erase.

Check the tracks preceding and succeeding the track you want to erase, and make sure it is the right one.

## 2 Press ERASE.

"Erase OK?" and "PushErase" appear in the display alternately, and the recorder enters pause mode.

Check the track number again in the display.

To cancel erasing, press ■.

## 3 Press ERASE again to erase the track.

The track is erased from the MD and the remaining tracks are renumbered. The recorder then starts to play the succeeding track. If you have erased the last track of the MD, the recorder pauses at the end of the preceding track.

To erase more tracks, repeat steps 1, 2, and 3.

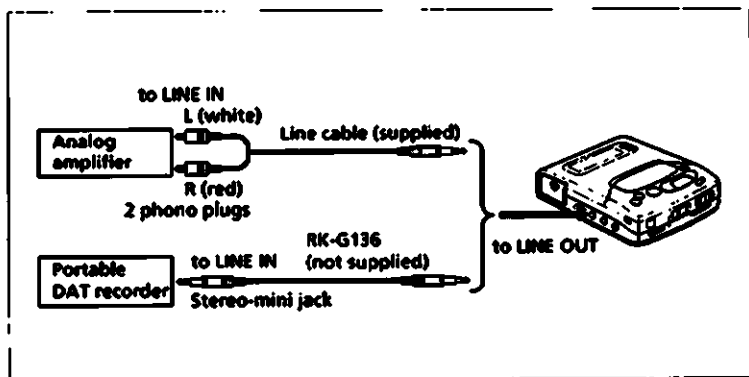
### Notes

- When you press ■ after erasing recordings, "Toc Edit" flashes and the recorder starts writing the new data to the MD. Do not move or jog the recorder while "Toc Edit" is flashing in the display.
- You cannot erase tracks if the MD has the tab open for record-protection. Before erasing tracks, close the tab on the side of the MD.



# Connecting to a stereo system

## Hooking up an amplifier or a tape player



Playing an MD with other equipment

**Connect the line cable (supplied, or RK-G136, not supplied) to the LINE OUT jack of the recorder and the LINE IN jack of your stereo system.**

The output is analog.

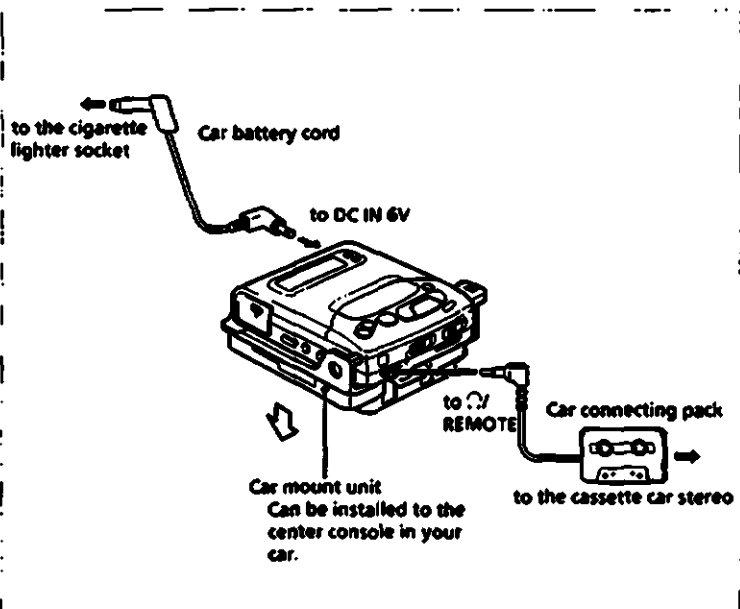
# Using in a car

## Hooking up a car stereo system

You can listen to MDs with your car stereo system using the following equipment.

-Car Mount Kit CPM-MZR2K (not supplied, contents: Car mount unit, Car connecting pack, Car battery cord)

Refer to the operating manual of the equipment for more details.



### Note

Do not put the recorder on a dashboard or leave it in a car parked in direct sunlight since the temperature may rise excessively.

# Precautions

## On safety

- Since the laser beam used in this MD recorder is harmful to the eyes, do not attempt to disassemble the casing. Refer servicing to qualified personnel only.
- Do not put any foreign objects in the DC IN 6 V jack.

## On power sources

- Use the house current, rechargeable battery pack (supplied), three size AA (R6) batteries, or car battery.
- For use in your house: Use the AC power adaptor supplied with this recorder. Do not use any other AC power adaptor since it may cause the recorder to malfunction.
- The recorder is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the recorder itself has been turned off.
- If you are not going to use this recorder for a long time, be sure to disconnect the power supply (AC power adaptor, rechargeable battery pack, size AA (R6) batteries, or car battery cord). To remove the AC power adaptor from the wall outlet, grasp the adaptor plug itself; never pull the cord.
- For use in the car: Use the CPA-8 car connecting pack (not supplied).

## On heat build-up

- Heat may build up in the recorder if it is used for an extended period of time. In this case, leave the recorder to cool down.

## On installation

- Never use the recorder where it will be subject to extremes of light, temperature, moisture or vibration.
- Never wrap the recorder in anything when it is being used with the AC power adaptor. Heat build-up in the recorder may cause malfunction or injury.

## **On the headphones**

### **• Road safety**

Do not use headphones while driving, cycling, or operating any motorized vehicle. It may create a traffic hazard and is illegal in many areas. It can also be potentially dangerous to play your recorder at high volume while walking, especially at pedestrian crossings. You should exercise extreme caution or discontinue use in potentially hazardous situations.

### **• Preventing hearing damage**

Avoid using headphones at high volume. Hearing experts advise against continuous, loud and extended play. If you experience a ringing in your ears, reduce the volume or discontinue use.

Use the AVLS function to avoid excessive pressure to your ears.

### **• Caring for others**

Keep the volume at a moderate level. This will allow you to hear outside sounds and to be considerate of the people around you.

## **On the MiniDisc cartridge**

### **• Do not break open the shutter.**

### **• Do not place the cartridge where it will be subject to light, temperature, moisture or dust.**

## **On cleaning**

### **• Clean the recorder casing with a soft cloth slightly moistened with water or a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzene as it may mar the finish of the casing.**

### **• Wipe the disc cartridge with a dry cloth to remove dirt.**

### **• Dust on the lens may prevent the unit from operating properly. Be sure to close the disc compartment lid after inserting and ejecting an MD.**

### **Notes on the batteries**

Incorrect battery usage may lead to leakage of battery fluid or bursting batteries. To prevent such accidents, observe the following precautions:


- Install the ⊕ and ⊖ poles of the batteries correctly.
- Do not install new and used batteries or different kinds of batteries together.
- Do not try to recharge the batteries.
- When the recorder is not to be used for a long time, be sure to remove the batteries.
- If a battery leak should develop, carefully and thoroughly wipe away battery fluid from the battery compartment before inserting new ones.

If you have any questions or problems concerning your recorder, please consult your nearest Sony dealer.

# Troubleshooting

If you experience any of the following difficulties while using your recorder, use this troubleshooting guide to help you remedy the problem.

If a message flashes in the display, see *Error messages* on pages 56 and 57. If the problem persists, consult your nearest Sony service facility.

Symptom	Cause and/or Solution
The recorder does not operate or operates poorly.	<ul style="list-style-type: none"><li>• Audio sources may not be securely connected.</li><li>• Moisture has condensed inside the recorder. → Take the MD out and leave the recorder in a warm place for several hours until the moisture evaporates.</li><li>• The rechargeable battery or dry batteries are weak (☐ or "LOW BATT" flashes).</li><li>• The dry batteries have been installed incorrectly. → Install the batteries correctly.</li><li>• You pressed a button while the disc indication was rotating quickly. → Wait until the indication rotates slowly.</li><li>• The recording volume is too low.</li><li>• The AC adaptor was unplugged during recording or a power outage occurred.</li><li>• While operating, the recorder received a mechanical shock, too much static, abnormal power voltage caused by lightning, etc → Restart the operation as follows.<ol style="list-style-type: none"><li>1. While the recorder is connected to the power source, press RESET at the bottom of the recorder with a pen nib.</li><li>2. Set the clock again.</li><li>3. Start the operation.</li></ol></li></ul>
No sound comes through the headphones.	<ul style="list-style-type: none"><li>• The headphones plug is not firmly connected to /REMOTE.</li><li>• Adjust the volume by pressing VOL +/-.</li><li>• Slide AVLS to OFF.</li></ul>

Symptom	Cause and/or Solution
An MD is not played from the first track.	<p>Disc playing stopped before it came to the last track.</p> <p>→ Press <b>⏮</b> repeatedly or open and close the lid once to go back to the beginning of the MD, and restart playing after checking the track number in the display.</p>
Sound has a lot of static.	<ul style="list-style-type: none"> <li>• Strong magnetism from a television or such device is interfering with operation</li> <li>→ Move away from the source of strong magnetism.</li> </ul>
Charging the rechargeable battery does not start.	<ul style="list-style-type: none"> <li>• The AC power adaptor has been connected incorrectly.</li> <li>→ Connect the AC power adaptor correctly.</li> </ul>
<ul style="list-style-type: none"> <li>• The clock loses time or the display flashes.</li> <li>• The recording date was not stamped onto the MD.</li> </ul>	<ul style="list-style-type: none"> <li>• The built-in battery for the clock is weak.</li> <li>→ Connect the AC power adaptor to DC IN 6 V on the recorder and the wall outlet to charge the built-in battery. After charging, set the clock again. Note that the clock normally loses about 2 minutes per month</li> </ul>

# Error messages

If the recorder cannot carry out an operation, one of the following error messages may flash in the display window.

This message will flash	If
BLANKDISC	you try to play an MD with no recording on it.
BUSY	you try to operate the recorder while it is accessing the recorded data. Wait until the message goes out (in rare cases, it may take 2-3 minutes).
CANNOT	<ul style="list-style-type: none"><li>• you try to record over or edit a track which has been track protected.*</li><li>• you try to erase a track mark at the beginning of the first track.</li><li>• you try to erase a track mark to combine tracks the recorder cannot combine.**</li></ul>
DISC ERR	the recorder cannot read the MD (it is scratched or dirty). Reinsert the MD. If the same message still appears, replace the MD.
DISC FULL	there is no more space on the MD (less than 12 seconds available).
ERR STOP	<ul style="list-style-type: none"><li>• there is a malfunction while you are recording.</li><li>• the recorder cannot read the recorded data on the MD. Replace the MD.</li></ul>
HOLD	<ul style="list-style-type: none"><li>• you try to operate the recorder with the HOLD switch slid in the direction of the arrow.</li></ul>
LOW BATT	<ul style="list-style-type: none"><li>• the rechargeable battery or dry batteries are weak. Charge the rechargeable battery or replace the dry batteries.</li></ul>
NO COPY	<ul style="list-style-type: none"><li>• you try to make a copy from an MD that is protected by the Serial Copy Management System. You cannot make copies from a digitally connected source which was itself recorded using the digital connection. Use the analog connection instead.</li></ul>
NO DISC	<ul style="list-style-type: none"><li>• you try to play or record with no MD in the recorder.</li></ul>



This message will flash	If
NO SIGNAL	<ul style="list-style-type: none"> <li>the recorder cannot detect digital input signals. Make sure that the source is connected firmly and it has the same sampling frequency as the recorder (44.1 kHz).</li> </ul>
PB DISC	<ul style="list-style-type: none"> <li>you try to record or edit on a pre-mastered MD (PB means playback.)</li> </ul>
PROTECTED	<ul style="list-style-type: none"> <li>you try to record or edit on a MD with the tab in the record-protect position.</li> </ul>
TEMP OVER	<ul style="list-style-type: none"> <li>heat has built up in the recorder. Leave the recorder to cool down.</li> </ul>
TRK FULL	<ul style="list-style-type: none"> <li>there is no more space for new data when you are recording or editing the MD. The MD cannot be edited nor recorded any further.</li> </ul>

\* Track-protected MDs — Some MD recorders will let you protect individual tracks from being recorded over. This recorder, however, does not offer this feature.

\*\* If you have recorded or erased many times on the same MD, the data of a single track may be scattered throughout the MD. When the data is scattered in groups of less than 8 seconds long, the recorder will not be able to combine the tracks.

# Specifications

## System

Audio playing system

MiniDisc digital audio system

Laser diode properties

Material: GaAlAs

Wavelength:  $\lambda = 780 \text{ nm}$

Emission duration: continuous

Laser output: less than  $44.6 \mu\text{W}$

(This output is the value measured at a distance of 200 mm from the lens surface on the optical pick-up block.)

Revolutions

400 rpm to 900 rpm (CLV)

Error correction

Advanced Cross Interleave Reed Solomon Code (ACIRC)

Sampling frequency

44.1 kHz

Coding

Adaptive Transform Acoustic Coding (ATRAC)

Modulation system

EFM (Eight to Fourteen Modulation)

Number of channels

2 stereo channels

Frequency response

20 to 20,000 Hz  $\pm 1 \text{ dB}$

Wow and Flutter

Below measurable limit

## Inputs

	Jack Type	Rated input	Minimum input
Microphone	Stereo mini-jack	0.78 mV	0.22 mV
Line In	Stereo mini-jack	194 mV	69 mV
Optical (Digital) In	Optical (digital) mini-jack	—	—

The input jack can be used both for digital and analog (Line In) inputs

## Outputs

	Jack Type	Rated Output	Maximum Output Level	Load Impedance
Headphones	Stereo mini-jack	—	5 mW - 3 mW	16 ohm
Line Out	Stereo mini-jack	194 mV	—	10 k $\Omega$ -hm

## General

### Power requirements

- LIP-12 Rechargeable Battery (Lithium-ion Battery Pack, supplied)
- Three size AA (R6) batteries (not supplied)
- Sony AC Power Adaptor (supplied) connected at the DC IN 6V jack:  
120 V AC, 60 Hz (US model)  
240 V AC, 50 Hz (UK and Australian models)
- DCC-E260HG Sony Car Battery Cord (not supplied) connected at the DC IN 6 V jack: 12 V/24 V car battery

### Battery operation time

120 minutes of consecutive recording with fully charged LIP-12  
150 minutes of consecutive playback with fully charged LIP-12

### Dimensions

Approx. 84 x 29.9 x 106.8 mm (w/h/d) (3 1/4 x 1 1/16 x 4 1/4 in.)

### Mass

Approx. 310 g (10.9 oz) incl. rechargeable battery

## Accessories

### Optional

- LIP-12 Lithium-ion Battery Pack
- ACP-MZ60A AC Power Adaptor/Battery Charger
- POC-MZ1, POC-MZ2 Digital Connecting Cable
- CPM-MZR2K Car Mount Kit
- CPA-8 Car Connecting Pack
- DCC-E260HG Car Battery Cord
- ECM-909A, ECM-727P Stereo Microphones
- MDR-D55, MDR-D77 Stereo Headphones
- SRS-58 Sony Active Speakers
- Recordable MDs: MDW-60, MDW-74
- CK-MD4 MiniDisc Carrying Case
- CK-MD10 MiniDisc Filing Box

Your dealer may not handle some of the above listed accessories. Please ask the dealer for detailed information about the accessories in your country.

US and foreign patents licensed from Dolby Laboratories Licensing Corporation.

Design and specifications are subject to change without notice

### Note

This appliance conforms with EEC Directive 89/336/EEC regarding interference suppression

# What is the MD?

## How MiniDiscs work

MiniDiscs (MD) come in two types: premastered (pre-recorded) and recordable (blank). Premastered MDs, recorded at music studios, can be played back almost endlessly. However, they cannot be recorded on or over like cassette tapes. To record, you must use a "recordable MD".

### Premastered MDs

Premastered MDs are recorded and played like regular CDs. A laser beam focuses on the pits in the surface of the MD and reflects the information back to the lens in the recorder. The recorder then decodes the signals and plays them back as music.

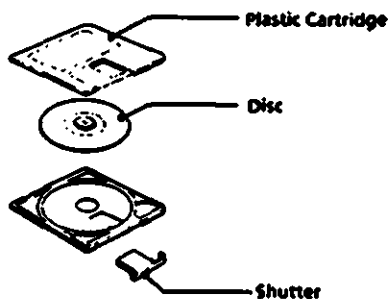
### Recordable MDs

Recordable MDs, which use magneto-optical (MO) technology, can be recorded again and again. The laser inside the recorder applies heat to the MD, demagnetizing the magnetic layer of the MD. The recorder then applies a magnetic field to the layer. This magnetic field corresponds exactly to the audio signals generated by the connected source. (The north and south polarities equate to digital "1" and "0".) The demagnetized MD adopts the polarity of the magnetic field, resulting in a recorded MD.

## How the MiniDisc got so small

The 2.5-inch MiniDisc, encased in a plastic cartridge that looks like a 3.5-inch diskette (see illustration below), uses a new digital audio compression technology called ATRAC (Adaptive TRansform Acoustic Coding). To store more sound in less space, ATRAC extracts and encodes only those frequency components actually audible to the human ear.

### Parts making up a MiniDisc



## **Quick Random Access**

Like CDs, MDs offer instantaneous random access to the beginning of any music track. Premastered MDs are recorded with location addresses corresponding to each music selection.

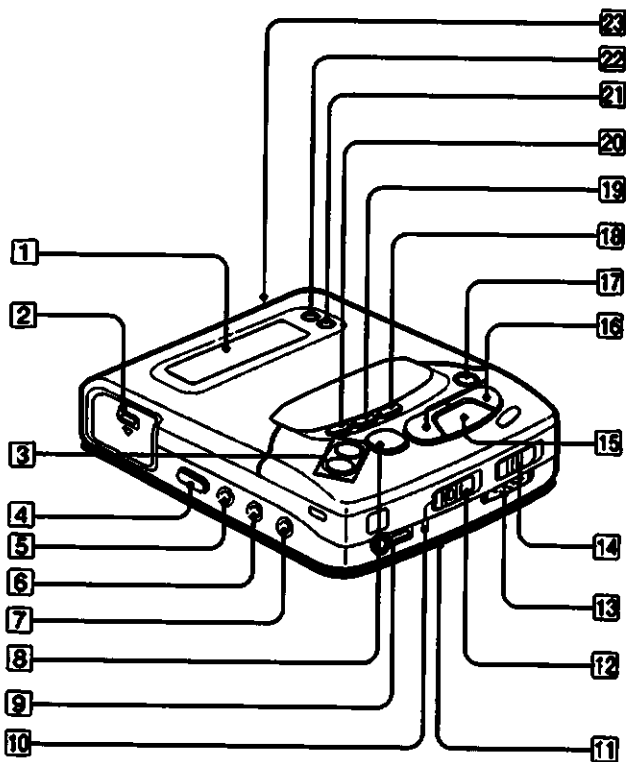
## **Shock-Resistant Memory**

One major drawback of optical read systems is that they can skip or mute when subject to vibration. The MD system resolves this problem by using a buffer memory that stores audio data.

# Looking at the controls

See pages in ( ) for more details.

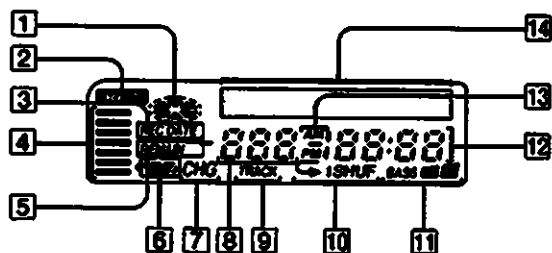
## The recorder



- 1** **Display window (43, 64)**
- 2** **Rechargeable battery compartment (11)**
- 3** **VOL(volume) +/- buttons (14, 36)**
- 4** **BASS BOOST (41)**  
Select to emphasize low frequency (bass) sounds.
- 5** **LINE OUT jack (49)**
- 6** **OPT(optical)/LINE IN jack (7, 16, 17)**
- 7** **MIC PLUG IN POWER jack (30)**
- 8** **■ (stop) button (8, 9, 37)**
- 9** **🎧 (headphones)/REMOTE jack (9, 22, 34, 36, 50)**
- 10** **Record indicator (28, 33)**
- 11** **CLOCK SET (14)**  
Press here with a pen nib to set the clock.
- 12** **REC (record) (8, 20, 22, 25, 27, 30)**
- 13** **HOLD (40)**  
Slide to lock the controls of the recorder.
- 14** **OPEN (8, 20, 21, 24, 26, 37)**  
While pressing the red button in the center, slide here to open the lid and insert or remove an MD.
- 15** **▶ (play) button (9, 22, 36)**
- 16** **⏮/▶⏭ (search, AMS) buttons (14, 22, 35, 37)**
- 17** **⏸ (pause) button (20, 22, 24, 25, 26, 30, 37, 46)**
- 18** **ERASE (48)**  
Press to erase the recorded tracks.
- 19** **END SEARCH (25)**  
Press to search for the end of recording.
- 20** **TRACK MARK (34, 44, 46)**  
Press to add or erase track marks on a recording.
- 21** **PLAY MODE (39)**  
Each time you press here the recorder plays the MD in different play modes: normal play, all repeat, single repeat, or shuffle repeat.
- 22** **DISPLAY (42)**  
Press to display the current play mode, the remaining time of the current track, the remaining time of the disc, or the date and time recorded.
- 23** **DC IN 6 V jack (7, 10, 11, 50)**  
Connect the supplied AC power adaptor here.

## ⇒ Looking at the controls

### The display window



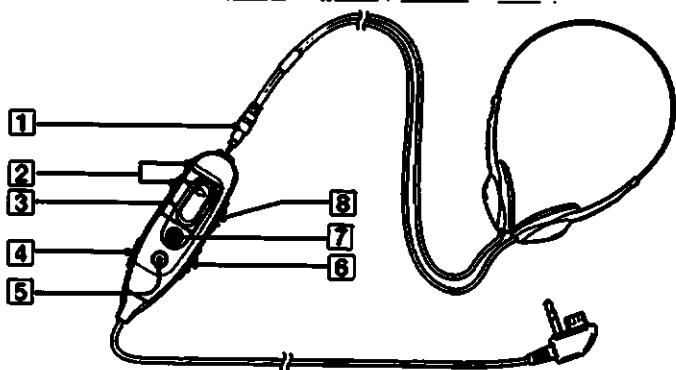
- 1 Disc indication**  
Shows that the MD is rotating for recording, playing or editing.
- 2 REC(record) indication (21, 23, 26, 31, 32, 34)**  
Lights up while recording. When it is flashing, the recorder is in recording standby mode.
- 3 REC DATE (recorded date) indication (14, 43)**  
Lights up along with the date and time the MD was recorded. When only "DATE" lights up, the current date and time are displayed.
- 4 Level meter (32)**  
Shows the volume of the MD being played or recorded.
- 5 REMAIN(remaining time) indication (20, 22, 31, 36, 43)**  
Lights up along with the remaining number of tracks or remaining time of the track or the MD.
- 6 Battery indication (11, 13)**  
Shows battery condition.
- 7 CHG(charging) indication (11)**  
Lights up while the rechargeable battery is charged.
- 8 Track number indication (20, 21, 43)**



- 9 TRACK indication (43)**  
Lights up along with the track number and elapsed time indications.
- 10 Play mode indication (39)**  
Shows the play modes of the MD.
- 11 BASS BOOST indication (41)**  
Lights up when low frequency (bass) sound is emphasized.
- 12 Time display (14, 20, 43)**  
Shows the time recorded and the current time.
- 13 AM/PM indication (14, 15)**  
Lights up along with the time indication in 12-hour system.
- 14 Character information display (14, 20, 21, 34, 36, 43)**  
Displays the disc and track names, date, error messages, etc.

## ⇒ Looking at the controls

### The remote controller



- 1** Microplug (6)
- 2** VOL(volume) +/- buttons (36)
- 3** ► (play)/◄◄/►► (search, AMS) button (37)  
While the recorder isn't operating, press ► to play. While playing, press the ◄◄ side to find the beginning of the current or preceding tracks or search backward, or press the ►► side to find the beginning of the succeeding tracks or search forward.
- 4** TRACK MARK (34, 44)  
Press to add track marks while recording.
- 5** || (pause) button (37)
- 6** AVLS (Automatic Volume Limiter System) (42)  
Slide to ON to limit the maximum volume.
- 7** ■ (stop) button (37)
- 8** HOLD (40)  
Slide to lock the controls of the remote controller.

\* Illustration for the headphones conforms to US model.

**Portable MiniDisc Recorder**  

---

**MZ-R2**

