SONY®

Portable MiniDisc Recorder

Operating Instructions

MZ-R90
MZ-R91

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.

Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.

Caution

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

CAUTION — INVISIBLE LASER RADIATION WHEN OPEN

AVOID EXPOSURE TO BEAM

Information

For customers in the USA

DISPOSAL OF NICKEL METAL HYDRIDE BATTERY.

NICKEL METAL HYDRIDE BATTERY. DISPOSE OF PROPERLY.
You can return your unwanted nickel metal hydride batteries to your nearest Sony Service Center.
Note: In some areas the disposal of nickel metal hydride batteries in household or business trash may be prohibited.
For the Sony Service Center nearest you call 1-800-222-SONY (United States only).
Caution: Do not handle damaged or leaking nickel metal hydride battery.

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

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

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 serial number is located at the rear of the disc compartment lid and the model number is located at the top and 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-R90/R91
Serial No. _____

For Customers in Australia

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

"MD WALKMAN" is a trademark of Sony Corporation.

Welcome!

Welcome to the world of the MiniDisc! Here are some of the capabilities and features you'll discover with the new MiniDisc Recorder.

- Recording MD Walkman in an ultra-compact body — Almost as small as a playback-only MD Walkman; easy to carry in your pocket or bag.
- Ultra-light body (MZ-R90) — Magnesium lid for extra lightness.
- Ultra-compact body (MZ-R91) — Fashionable design and colors.
- Low power consumption design — Less drain and the longer service life for the rechargeable battery.
- 9-letter, backlit LCD remote control with editing capabilities — You can now label tracks and discs, change track sequence, etc., with the easy-to-operate stick remote control.

- Simultaneous labeling feature — No more waiting for the recording to end; you can label tracks and discs while the MD is being recorded.
- Phrase bank function — Phrases that you often use in track or disc names can be stored in the recorder's memory and retrieved whenever you need them.
- Copying CD text — If you use a CD text connecting cord (not supplied) to connect a Joint Text-compatible portable CD player to the recorder, CD text data (such as track and disc names) on the CD that is compatible to CD-TEXT display will be recorded automatically during recording.
- Shock-resistant memory — Offsets up to 40 seconds of optical read errors.
- High-fidelity recording — Low-noise, low-distortion, high-fidelity recording through the optical digital input jack.
- Digital synchro-recording — When recording from a digital equipment with optical output, the recorder automatically starts and pauses recording in sync with operation on the digital source.
- Digital REC level control.
- Long-time recording with monaural sound — You can record up to 160 minutes (when using 80 minutes recordable MD) on a disc using monaural recording.
- Date and time stamp function — The built-in clock automatically records the date and time whenever you make a recording.
- Digital AGC (Auto Gain Control) — Automatic recording level adjustment without sacrificing superb digital sound.
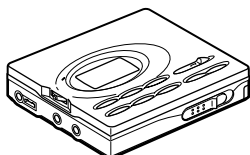
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This manual is for models MZ-R90 and MZ-R91.

The MZ-R90 appears in the instructions for illustration purposes. Though they differ in appearance, the models share the same functions and are operated in the same way.
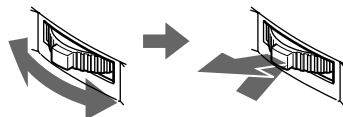For detailed specifications, see page 50.
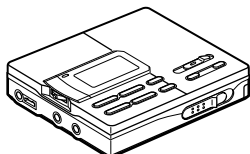
MZ-R90

MZ-R91

How to use the jog lever.

Flip to select   **Push to enter**

The jog lever can be used to perform various operations during playback, recording, and editing, as well as when the recorder is stopped. Flip the jog lever to select an item in the display. Then press the jog lever to enter your selection.

About the ∩/LINE OUT jack on the recorder.

The parameter ("AUDIO OUT") for the ∩/LINE OUT jack must be set to "HeadPhone" if you want to connect headphones other than the supplied set, or to "LINE OUT" if you want to connect another component to the recorder through a line cable. There is no need to make this when using the supplied headphones with remote control since it is done automatically.
To set the "AUDIO OUT" parameter for the ∩/LINE OUT jack, do the following procedure:

1 Press the jog lever, flip until "AUDIO OUT" flashes in the display, and then press the lever again.
2 Flip the jog lever until "HeadPhone" or "LINE OUT" flashes in the display.
3 Press the jog lever when the item you want to select is flashing.

Notes

• When the "AUDIO OUT" parameter is set to "LINE OUT", the VOL +/– buttons and the Mega Bass function become inoperative. To make them operative, set the "AUDIO OUT" parameter to "HeadPhone".
• The "AUDIO OUT" parameter is automatically set to "HeadPhone" when you turn off the power.

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Recording an MD right away!

The sound will be sent from the connected equipment as analog signal but will be recorded digitally on the disc. To record from a digital source, see "Recording with digital (optical) input (optical cable required)" (page 15). To record from an MD, see "Note on digital recording" (page 43).

1 Make connections. (Insert the cables firmly and completely into the appropriate jacks.)

R (red)

CD player, cassette recorder, etc. (source)

Line cable (RK-G129, not supplied)*

to a wall outlet

to LINE OUT

L (white)

to DC IN 3V

AC power adaptor (supplied)

* Use the connecting cords without an attenuator. To connect to a portable CD player having a stereo mini-jack, use the RK-G136 connecting cord (not supplied).

to LINE IN (OPTICAL)
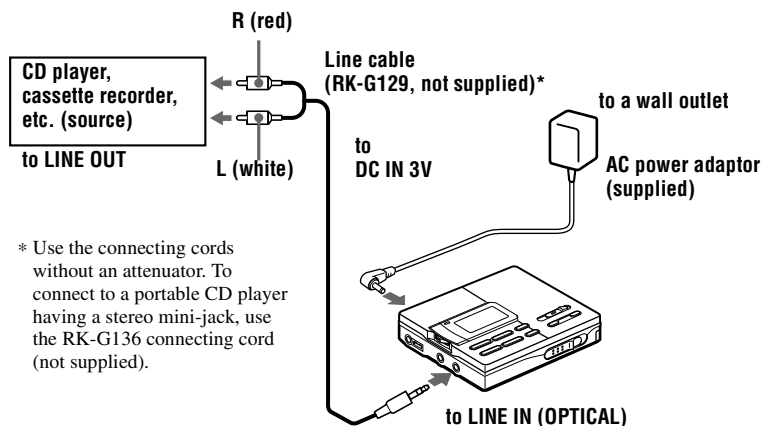
2 Insert a recordable MD.
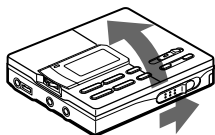
① **Slide OPEN to open the lid.**
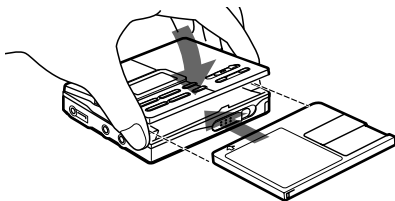
② **Insert a recordable MD with the label side facing up, and press the lid down to close.**

3 Record an MD.

CD player, cassette recorder, etc. (source)
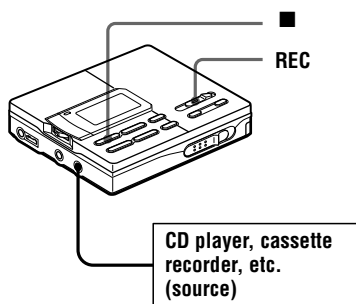
① **Slide REC to the right.**
"REC" lights up and recording starts.

② **Play the CD or tape you want to record.**

To stop recording, press ■.
After you press ■, the recorder will automatically turn off in about 10 seconds (when using batteries) or about 5 minutes (when using AC power adaptor).

Notes
• "Data Save" or "TOC Edit" flashes while data of the recording (the track's start and end points, etc.) is being recorded. Do not move or jog the recorder or disconnect the power source while the indication is flashing in the display.
• The lid does not open until "TOC Edit" disappears in the display.

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To	Press
Record from the end of the previous recording	END SEARCH and slide REC.
Record partway through the previous recording	►, ►►I or I◄◄ to find the start point of recording and press ■ to stop. Then slide REC.
Pause	❚❚[1]) Press ❚❚ again to resume recording.
Remove the MD	■ and open the lid.[2]) (The lid does not open while "TOC Edit" flashing in the display.)

[1]) A track mark is added at the point where you press ❚❚ again to resume recording while pausing; thus the remainder of the track will be counted as a new track.

[2]) Once you open the lid, the point to start recording will change to the beginning of the first track. Check the point to start recording on the display.

If the recording does not start
- Make sure the recorder is not locked (page 29).
- Make sure the MD is not record-protected (page 43).
- Premastered MDs cannot be recorded over.

For the models supplied with the AC plug adaptor
If the AC power adaptor does not fit the wall outlet, use the AC plug adaptor.

Note
If the power supply is disrupted (i.e. the battery is removed or becomes exhausted or the AC power adaptor is disconnected) during a recording or editing operation, or while "TOC Edit" appears in the display, then it will not be possible to open the lid until power is restored.

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- The level of the recorded sound is adjusted automatically.
- You can monitor the sound during recording. Connect the supplied headphones with remote control to ∩/LINE OUT and adjust the volume by pressing VOL +/–. This does not affect the recording level.

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Playing an MD right away!

To use the recorder on a rechargeable battery or dry batteries, see "Power sources" (page 40).

1 **Make connections.** (Insert the cables firmly and completely into the appropriate jacks.)

to a wall outlet

AC power adaptor (supplied)

to DC IN 3V

Headphones with a remote control (supplied)
Wear the earpiece marked ℝ in your right ear and the one marked 𝕃 in your left ear.

to ⌂/LINE OUT
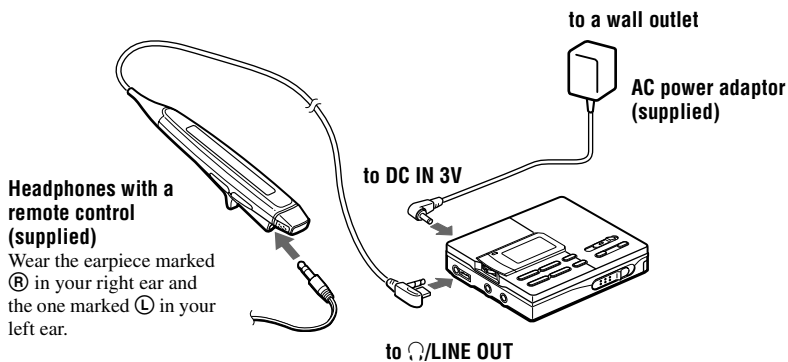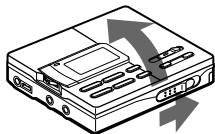
2 **Insert an MD.**

① **Slide OPEN to open the lid.**
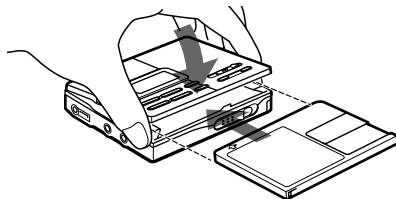
② **Insert an MD with the label side facing up, and press the lid down to close.**

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3 Play an MD.

VOL +/−

▶

■

VOL +/−

■
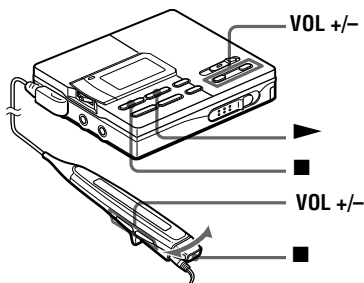
① **Press ▶ (Press the control towards ▶ • ▶▶I on the remote control).**

A short beep sounds in the headphones when you operate on the remote control.

② **Press VOL +/− to adjust the volume.**

The volume will be shown in the display.

To stop play, press ■.

A long beep sounds in the headphones when you operate on the remote control.
Playback starts from the point you last stopped playing.
After you press ■, the recorder will automatically turn off in about 10 seconds (when using batteries) or about 5 minutes (when using AC power adaptor).

To	Press (Beeps in the headphones)
Find the beginning of the current track	I◀◀ once (Press the control towards I◀◀ on the remote control). (Three short beeps)
Find the beginning of the next track	▶▶I once (Press the control towards ▶ • ▶▶I on the remote control). (Two short beeps)
Pause	II (Continuous short beeps) Press II again to resume play.
Go backwards while playing[1]	keep pressing I◀◀ (Press and hold the control towards I◀◀ on the remote control)
Go forward while playing[1]	keep pressing ▶▶I (Press and hold the control towards ▶ • ▶▶I on the remote control)
Remove the MD	■ and open the lid.[2]

[1] To go backward or forward quickly without listening, press II and keep pressing I◀◀ or ▶▶I (press and hold the control towards I◀◀ or ▶ • ▶▶I on the remote control).
[2] Once you open the lid, the point to start play will change to the beginning of the first track.

If the play does not start
Make sure the recorder is not locked (page 29).

When using optional headphones
• Use only headphones with stereo mini plugs. You cannot use headphones with micro plugs.

Stereo mini plug   **Micro plug**

• The VOL +/– buttons and the Mega Bass function may become inoperative. In this case, do the procedure below.

1 Press the jog lever, flip the jog lever until "AUDIO OUT" flashes in the display, and then press the lever again.
   "LINE OUT" flashes in the display.
2 Flip the jog lever until "HeadPhone" appears in the display.
3 Press the jog lever again.

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Playback will switch automatically between stereo and monaural according to the sound source.

Notes
• The sound may skip during playback when the recorder is exposed to continuous vibration, such as while jogging.
• If the power supply is disrupted (i.e. the battery is removed or becomes exhausted or the AC power adaptor is disconnected) when the recorder is operating, the lid may not open until the power is restored.

Various ways of recording

Two ways of connecting to a sound source

The input jack of this recorder works as both digital and analog input jacks. Connect the recorder to a CD player or a cassette recorder using either digital (optical) input or analog (line) input. To record, see "Recording with digital (optical) input (optical cable required)" (page 15) to record using digital (optical) input, and "Recording an MD right away!" (page 8) to record using analog (line) input.

Difference between digital (optical) and analog (line) inputs

Difference	Digital (optical) input	Analog (line) input
Connectable source	Equipment with a digital (optical) output jack	Equipment with an analog (line) output jack
Usable cord	Optical cable (with an optical or an optical-mini plug)(page 15)	Line cable (with 2 phono plugs or a stereo-mini plug)(page 8)
Signal from the source	Digital	Analog Even when a digital source (such as a CD) is connected, the signal sent to the recorder is analog.
Recorded track numbers	Marked (copied) automatically • at the same positions as the source. • after more than 2 seconds of blank or low-level segment[1]. • when the recorder is paused while recording. You can erase unnecessary marks after recording. ("Erasing a track mark", page 32).	Marked automatically • after more than 2 seconds of blank or low-level segment. • when the recorder is paused while recording. You can erase unnecessary marks after recording ("Erasing a track mark", page 32).
Recorded sound level	Same as the source. Can also be adjusted manually (Digital REC level control) ("Adjusting the recording level manually (Manual recording)", page 18).	Adjusted automatically. Can also be adjusted manually ("Adjusting the recording level manually (Manual recording)", page 18).

[1] When recording a CD or an MD, track numbers are automatically marked in the order of the original disc.
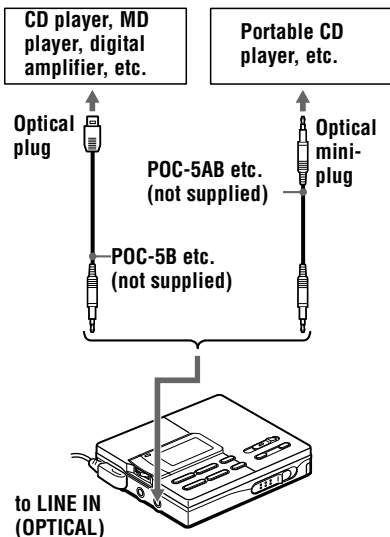
Note

Track marks may be copied incorrectly:
• when you record from some CD players or multi disc players using digital (optical) input.
• when the source is in shuffle or program play mode while recording using digital (optical) input. In this case, play the source in normal play mode.
• when recording BS or CS programs through digital (optical) input.

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Recording with digital (optical) input (optical cable required)

Connect to a digital source using an optical cable (POC-5B or POC-5AB, not supplied) to make digital recordings. Digital recording is possible even from digital equipment with different sampling rates, such as a DAT deck or a BS tuner, using the built-in sampling rate converter.

CD player, MD player, digital amplifier, etc.

Portable CD player, etc.

Optical plug

Optical mini-plug

POC-5AB etc. (not supplied)

POC-5B etc. (not supplied)

to LINE IN (OPTICAL)

1 Insert a recordable MD and start recording.

For recording operations, see "Recording an MD right away!" (page 8). To record from a portable CD player, set the CD player to pause and then start recording.

LINE IN (OPTICAL) jack is for both digital and analog input
The recorder automatically recognizes the type of line cable and switches to digital or analog input.

Notes
- You can make a digital recording only from an optical type output.
- When recording from a portable CD player, play it on AC power and disable the anti-skip function (such as ESP*).
- Digital output may be disabled on some portable CD players when the player is not run on AC power.

  ∗ Electronic Shock Protection

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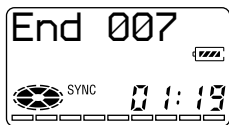## To start/stop recording in sync with the source player (Synchro-recording)

You can easily make digital recordings of a digital source on an MD.
Before synchro-recording, make connections to the digital source with a digital cable, and insert a recordable MD.
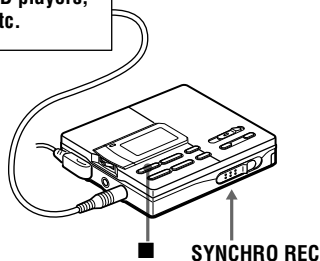
SYNCHRO REC

1 Slide SYNCHRO REC to ON.
"SYNC" appears in the display.

"SYNC" doesn't appear if optical cable is not connected to the recorder.

2 Slide REC to the right.
The recorder stands by for recording.

3 Play the source sound.
The recorder starts recording when it receives the playing sound.

To stop recording, press ■.

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• You cannot pause manually during synchro-recording.
• When there is no sound from the player for more than 3 seconds during synchro-recording, the recorder goes into the standby mode automatically. When the sound comes from the player again, the recorder resumes synchro-recording. If the recorder is kept in the standby mode for 5 minutes or longer, the recorder stops automatically.

Notes
• Do not switch SYNCHRO REC after step 3. Recording may not be done properly.
• When recording in monaural, follow steps 1 to 3 of "Recording in monaural for double the normal recording time" (page 17), and then do steps 1 and 3 of synchro-recording.
• Even when there is no recorded sound on the sound source, there may be cases when recording does not pause automatically during synchro-recording due to the noise level emitted from the sound source.
• If a silent portion is encountered for 2 seconds or more during synchro-recording, a new track mark is automatically added at the point where the silent portion ends.
• Synchro-recording cannot be done if the connecting cord is not an optical cable, or if the cable is connected to the MIC (PLUG IN POWER) jack.
• You cannot adjust the recording level manually during synchro-recording.

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Recording from a microphone

Connect a stereo microphone (ECM-717, ECM-MS907, ECM-MS957, etc.; not supplied) to the MIC (PLUG IN POWER) jack.

Stereo microphone

to MIC (PLUG IN POWER)
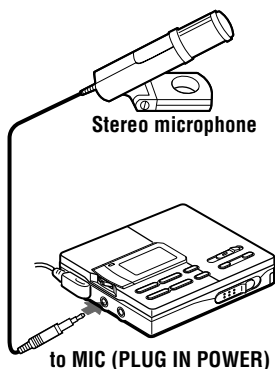
1 Insert a recordable MD and start recording.

Slide REC to the right.
For other operations, see "Recording an MD right away!" (page 8).

Notes
• You cannot record through the microphone while an optical cable is connected to the LINE IN (OPTICAL) jack. The recorder automatically switches input in the following order; optical input, microphone input, and analog input.
• The microphone may pick up the operating sound of the recorder itself. Use the microphone away from the recorder in such cases.

Recording in monaural for double the normal recording time

For longer recordings, choose to record in monaural. The recording time becomes double the normal.

Jog lever

REC

II
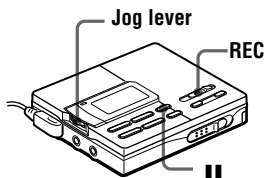
1 While pressing **II**, slide REC to the right.

The recorder stands by for recording.

2 Press the jog lever, flip until "REC MODE" flashes in the display, and then press the lever again.

3 Flip the jog lever until "Mono REC" flashes in the display, and then press the lever.

To switch back to stereo recording, press the lever while "Stereo REC" flashes in the display.

4 Press **II** again to start recording.

5 Play the sound source.

To stop recording, press ■.
The recorder switches back to stereo recording when you record the next time.

Notes
• If you record a stereo source in monaural, the sounds from left and right will be mixed.
• You cannot record in monaural if SYNCHRO REC is slid to ON. If you are recording digital input, make sure to slide SYNCHRO REC to OFF before you begin recording.
• The MDs recorded in monaural can be played back only with an MD player/recorder that has the monaural playing function.

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• Sound recorded through digital (optical) input can be monitored in stereo through headphones, etc.

Adjusting the recording level manually (Manual recording)

When you record, the sound level is adjusted automatically. If necessary, you can set the level manually.

Note
Adjust the recording level while the recorder is in standby mode. You cannot adjust it while recording.
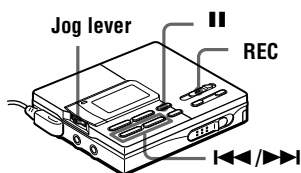
Jog lever **∥** **REC** **⊲⊲/▷▷**

1 While holding down ∥, slide REC to the right.
   The recorder stands by for recording.

2 Press the jog lever, flip until "RecVolume" flashes in the display, and then press the lever again.

3 Flip the jog lever until "ManualREC" flashes in the display, and then press the lever.


ManualREC

To switch back to the automatic control, flip the jog lever until "Auto REC" flashes in the display, and then press the lever.

4 Play the source.

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5 While observing the level meter in the display, adjust the recording level by flipping the jog lever or pressing ►►I (+) or I◄◄ (–).

Set the level so that the level meter reaches around ▬ (–12 dB) mark beneath the display window.
If the sound is too high, lower the recording level until the level meter just barely reaches the ▭ (OVER) mark beneath the display window.

Volume decreases   increases

—12 dB   OVER
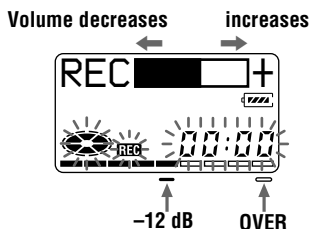
Recording doesn't start in this step. If your source is an externally connected component, be sure to cue the source to the beginning of the material to be recorded before you start playback.

6 Press **II** again to start recording.

To stop recording, press ■.

The recording level control is switched back to automatic control when you record the next time.

Notes
• The recording level cannot be adjusted while recording is in progress. If you want to adjust the recording level after you have started the recording, press **II** to pause the recorder. Then do the procedure from step 5.
• You cannot adjust the recording level manually during synchro-recording.

Checking the remaining time or the recording position

You can check the remaining time, track number, etc. when recording or during stop.

On the recorder
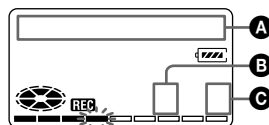
REC indicator
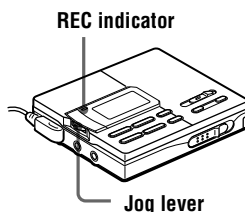
Jog lever

1 While the recorder is recording or stopped, press the jog lever, flip until "DISPLAY" flashes in the display, and then press the lever again.

2 Flip the jog lever until the information you want flashes in the display.

Each time you flip the lever, the display changes as follows.

Display window on the recorder

While recording

Ⓐ	Ⓑ¹⁾	Ⓒ²⁾
LapTime	1	3
RecRemain	2	3
Clock	3	3

¹⁾ Display order

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In stop mode

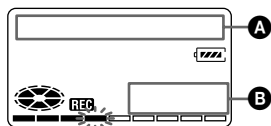| Ⓐ	Ⓑ1)	Ⓒ2)
LapTime	1	4
RecRemain	2	4
AllRemain	3	4
Clock	4	4

1) Display order
2) Number of displayed items

3 Press the jog lever.

The display changes as follows.

Display window on the recorder

While recording

Ⓐ	Ⓑ
Track number	Elapsed time
Track number	Remaining time for recording
Current date1)	Current time1)

1) Appears only when the clock is set.

In stop mode

Ⓐ	Ⓑ
Track number	Elapsed time
Track name1)	Remaining time for recording
Disc name1)	Remaining time after the current location
Current date2)	Current time2)

1) Appears only if the track has been labeled.
2) Appears only when the clock is set.

ϙ̈́
The display that appears on the remote control is different from the ones on the recorder. See "On the remote control" (page 21) to check the display that appears on the remote control.

To know the recording condition

The indicator lights up or flashes according to the recording condition.

Recording condition	REC indicator
While recording	lights up flashes according to the loudness of the source while recording with a microphone (voice mirror)
Recording standby	flashes
Less than 3 minutes' recording time available	flashes slowly
A track mark has been added (when controlling by the recorder only)	goes off momentarily

Whether you use the controls on the recorder or the remote control, the REC indicator lights up or flashes in the same way.

ϙ̈́
If you want to check the playing position or track name while playing, see page 28.
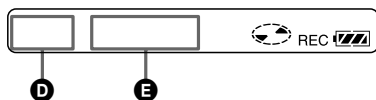
On the remote control
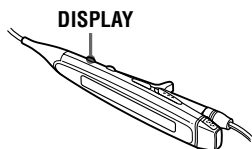
DISPLAY

1 Press DISPLAY while recording or in
stop mode.

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

Display window on the remote control

While recording

ⓓ	ⓔ
Track number	Elapsed time
Track number	Remaining time for recording
—	Current time[1]

[1] Appears only when the clock is set.

In stop mode

ⓓ	ⓔ
Track number	Elapsed time
Track number	Track name[1]
Number of tracks in the disc	Disc name[1]
—	Current time[2]

[1] Appears only if the track has been labeled.
[2] Appears only when the clock is set.

ﾞﾞ
• If you want to check the playing position or
track name while playing, see page 29.

• The display that appears on the recorder is
different from the ones on the remote control.
See "On the recorder" (page 19) to check the
display that appears on the recorder.

21

Setting the clock to stamp the recorded time

To stamp the date and time on the MD when you record, you first need to set the clock.
Once you set the clock, the recorder will include a time stamp each you record something. If you don't want to include a time stamp on the track, skip this operation.
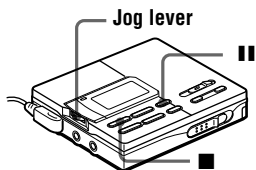
Jog lever

1 Connect the power source.
Use the supplied AC power adaptor.

2 Press the jog lever while no disc is inserted or the recorder is stopped.

3 Flip the jog lever until "CLOCK SET" flashes in the display, and then press the lever.
The digits of the year flash.
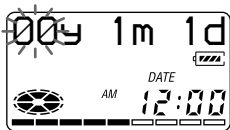
4 Change the current year by flipping the jog lever, and then press the lever.
The digit of the month flashes.

5 Repeat step 4 to enter the current month, date, hour, and minute.
When you press the jog lever to enter the minute, the clock starts operating.

If you make a mistake while setting the clock

Press ■, and set the clock again from step 2. You can skip a step by pressing the jog lever.

To display the current time

When the recorder is not operating or while recording, press the jog lever, flip until "DISPLAY" appears in the display, and then press the lever again.
Flip the jog lever until "CLOCK" flashes in the display, and then press the lever again. The current time appears in the display.

To display the time in the 24-hour system

While setting the clock, press �Ⅱ. To display the time in the 12-hour system, press ▲Ⅱ again.
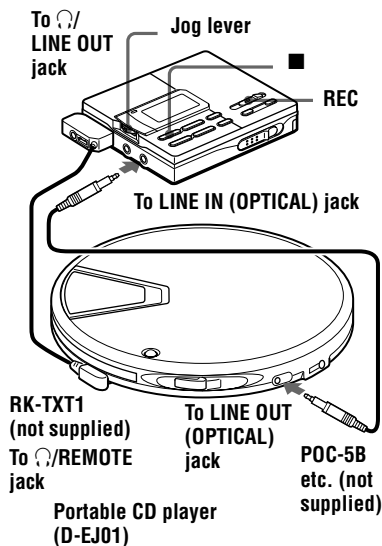
Charging the built-in battery for the clock

When you use the recorder for the first time or after a long period of disuse, charge the built-in battery. After setting the clock, leave the recorder connected to the AC power for about 2 hours to charge the built-in battery. Once charged, the built-in battery should last about a month without connecting to any of the power sources. The recorder will automatically charge the built-in battery while connected to AC power, dry battery or a rechargeable battery.

22

Copying CD text information while recording (Joint Text)

CD text connecting cable, CD that support CD-TEXT, and the CD player that support Joint Text required

By connecting the recorder to a Sony portable CD player that supports Joint Text (the CD text copying function) (D-EJ01), you can copy track and disc names automatically during recording. In addition to the CD text connecting cable (RK-TXT1), make sure to connect the recorder to the portable CD player with an optical cable.

To ∩/
LINE OUT
jack

Jog lever

REC

To LINE IN (OPTICAL) jack

RK-TXT1
(not supplied)
To ∩/REMOTE
jack

To LINE OUT
(OPTICAL)
jack

POC-5B
etc. (not
supplied)

Portable CD player
(D-EJ01)

1 Slide REC to the right to start recording on the recorder, and start playing the CD in the portable CD player.

"SYNC", "REC" and " ♪ " lights up in the display.
"CD TEXT" appears for a few seconds, then "001 TEXT?" and "PushENTER" alternate in the display.
"NO TEXT" appears at this time if no track name information exists in the CD. In this case, the track name will not be copied.

2 Press the jog lever.

Track name scrolls, and then the track name and "PushENTER" alternate in the display.

3 Press the jog lever.

Track name scrolls in the display while the name is copied.

4 Follow steps 2 and 3 to copy each new track name that appears.

5 Press ■ on the recorder at the point you want to stop recording.

" ◯ " lights up, and then "000 TEXT" and "PushENTER" alternate in the display.
If you don't want to copy the disc name information, press ■ again. The disc name is not copied and the operation ends.
"NO TEXT" appears at this time if no disc name information exists in the CD. In this case, the operation ends without copying the disc name.

6 Press the jog lever.

Disc name scrolls, and then disc name and "PushENTER" alternate in the display.

23

7 Press the jog lever.
"TOC Edit" flashes.
Afterwards, the disc name scrolls in the display.

ᄒᄆᄋᄆ

If the disc or track name appears in the display in step 1, the music tracks and CD text information on some CDs are automatically recorded from start to finish. If the CD is this type, press ■ on the recorder at the point you want to stop recording, or after all tracks have been recorded. "TOC Edit" flashes. Afterwards, the disc name scrolls in the display.

Notes
• If you copy disc name information to a disc with a previously recorded disc name, the old disc name will be overwritten with the new one.
• When the CD text copying function is on, various settings and editing functions cannot be accessed with the jog lever.

ᄒᄆᄋᄆ

You can monitor the sound during recording. Connect the supplied headphones with remote control on to the CD text connecting cable and adjust the volume by pressing the VOL +/– buttons on the recorder.
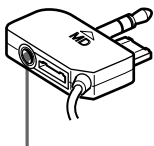
Connect the supplied headphones with remote control

Notes
• The CD text copying function can only be used with component (D-EJ01) with the logo shown below.


JOINT TEXT
CD ➔ MD

• The CD text copying function can only be used with CDs that support CD-TEXT.


COMPACT
disc
DIGITAL AUDIO
TEXT

• The RK-TXT1 CD text connecting cable is designed for exclusive use with this recorder and Sony portable CD player (D-EJ01). Do not use a connecting cable of another make to copy CD text information.
• The remote becomes inoperative when the CD text connecting cable (RK-TXT1) is connected to the recorder.
• Stopping or pausing playback on the CD player automatically causes recording on the recorder to pause. A new track mark is automatically added when you resume recording.
• The track name of the track currently played will not be recorded if you stop or pause CD playback in the middle of the copying process on the recorder.

24

Various ways of playback

Selecting a track directly

You can select a desired track directly by using the jog lever.
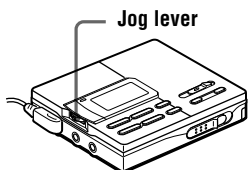
Jog lever

1 Flip the jog lever until the desired track appears in the display, and then press the jog lever.

Flip to select   **Press to enter**
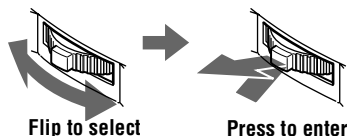
The selected track name appears in the display and the recorder starts playing by pressing the jog lever. If the track has no name, the track number appears in the display.
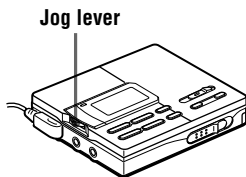
ϔ
If you do step 1 while the recorder is shuffling the tracks, shuffle play starts from the track that you selected.

Playing tracks repeatedly

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

On the recorder

Jog lever

1 While the recorder is playing or stopped, press the jog lever, flip until "PLAY MODE" flashes in the display, and then press the lever again.

2 Flip the jog lever to select the play mode, and then press the lever.

Each time you flip the lever, the display item indicated by Ⓐ changes as shown in the table below. Pressing the jog lever while Ⓐ is flashing causes the play mode to change.
The new mode then appears in the window indicated by Ⓑ.
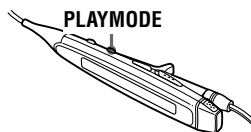
Display window on the recorder
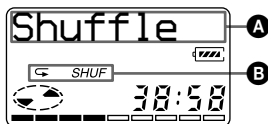
Indication Ⓐ/Ⓑ	Play mode
No Repeat/—	All the tracks are played once.

continued

Indication Ⓐ/Ⓑ	Play mode
AllRepeat/⟲	All the tracks are played repeatedly.
1 Repeat/⟲ 1	A single track is played repeatedly.
Shuffle/ ⟲ SHUF	After the currently selected track finishes playing, the remaining tracks are played repeatedly in random order.

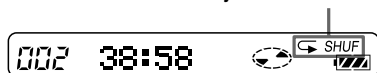| Indication	Play mode
⟲ SHUF (shuffle repeat)	After the currently selected track finishes playing, the remaining tracks are played repeatedly in random order

On the remote control

PLAYMODE

1 Press PLAYMODE while the recorder is playing or stopped.

Each time you press the button, the play mode indication changes as follows.
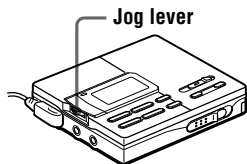
Display window on the remote control

Play mode indication


```
002  38:58        ⟲ [↻ SHUF]
                        ▮▰▰▰
```

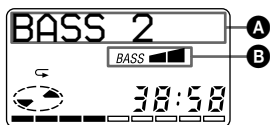| Indication	Play mode
none (normal play)	All the tracks are played once.
⟲ (all repeat)	All the tracks are played repeatedly.
⟲ 1 (single repeat)	A single track is played repeatedly.

26

Emphasizing bass (DIGITAL MEGA BASS)

The Mega Bass function intensifies low frequency sound for richer quality audio reproduction. It affects only the sound from the headphones.

Jog lever

1 Press the jog lever, flip until "MEGA BASS" flashes in the display, and then press the lever again.

2 Flip the jog lever to select the play mode, and then press the lever.

Each time you flip the lever, **A** and **B** change as follows.

Display window on the recorder

A
B

Indication **A**/**B**	Play mode
BASS 0/—	Normal play
BASS 1/ BASS ◼	Mega Bass (moderate effect)
BASS 2/ BASS ◼◼	Mega Bass (strong effect)

Notes
- If the sound becomes distorted when emphasizing bass, turn down the volume.
- The Mega Bass function does not affect the sound being recorded.
- The Mega Bass function becomes inoperative when the "AUDIO OUT" parameter for the ∩/LINE OUT jack is set to "LINE OUT". If you attempt to set the Mega Bass function at this time, "SORRY" appears in the display. The Mega Bass function, however, is operative at all times when the supplied remote is connected to the ∩/LINE OUT jack.

Protecting your hearing (AVLS)

The AVLS (Automatic Volume Limiter System) function keeps down the maximum volume to protect your ears.
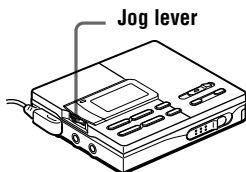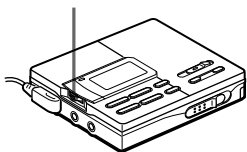

Jog lever

1 Press the jog lever, flip until "AVLS" flashes in the display, and then press the lever again.

2 Flip the jog lever until "AVLS ON" flashes in the display, and then press the lever again.

When you try to turn the volume too high, "AVLS" appears in the display. The volume is kept to a moderate level.

Checking the remaining time or the playing position

You can check the track name, disc name, etc. during playback.
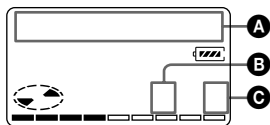
On the recorder

Jog lever

1 While the recorder is playing, press the jog lever, flip until "DISPLAY" flashes in the display, and then press the lever again.

2 Flip the jog lever until the information you want flashes in the display.

Each time you flip the lever, the display changes as follows.

Display window on the recorder

Ⓐ	Ⓑ1)	Ⓒ2)
LapTime	1	4
1 Remain	2	4
AllRemain	3	4
RecDate	4	4

1) Display order
2) Number of displayed items

3 Press the jog lever.

The display changes as follows.

Display window on the recorder

| Ⓐ	Ⓑ
Track number	Elapsed time
Track name1)	Remaining time of the current track
Disc name1)	Remaining time after the current location
Recorded date2)	Recorded time2)

1) Appears only if the track has been labeled.
2) Appears only when the clock is set.

ϔ
- If you want to check the remaining time or the recording position while recording or in stop mode, see page 19.
- The display that appears on the remote control is different from the ones on the recorder. See "On the remote control" (page 29) to check the display that appears on the remote control.

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On the remote control
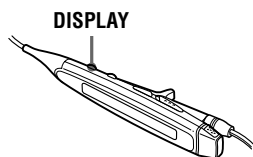
DISPLAY

1 Press DISPLAY while playing.

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

Display window on the remote control

Ⓓ   Ⓔ

Ⓓ	Ⓔ
Track number	Elapsed time
Track number	Track name[1]
The number of tracks in the disc	Disc name[1]
—	Recorded time[2]

[1] Appears only if the track has been labeled.
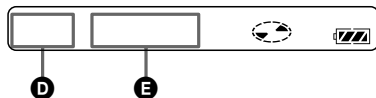[2] Appears only when the clock is set.

💡
• If you want to check the remaining time or the recording position while recording or in stop mode, see page 21.
• The display that appears on the recorder is different from the ones on the remote control. See "On the recorder" (page 28) to check the display that appears on the recorder.

Locking the controls (HOLD)

To prevent the buttons from being accidentally operated when you carry the recorder, use this function.
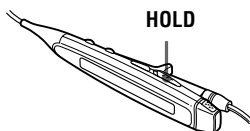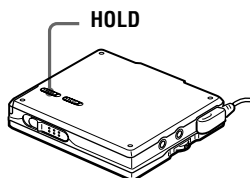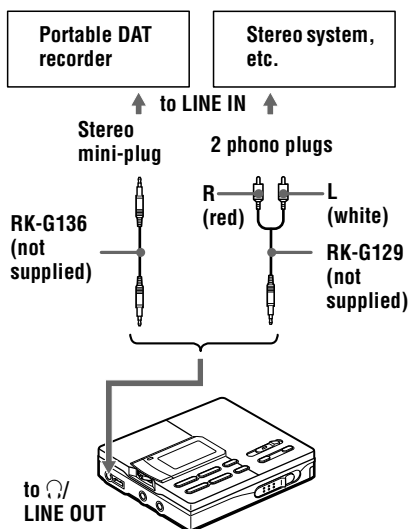

HOLD

HOLD

1 Slide HOLD in the direction of the ➤.

On the recorder, slide HOLD to lock the controls of the recorder. On the remote control, slide HOLD to lock the controls of the remote control. Slide HOLD in the opposite direction of the arrow to unlock the controls.

29

Connecting to a stereo system (LINE OUT)

Connect the ⌒/LINE OUT jack of the recorder to the LINE IN jacks of an amplifier or a tape player with a line cable (RK-G129 or RK-G136, not supplied). The output is analog. The recorder plays the MD digitally and sends analog signals to the connected equipment.

Portable DAT recorder

Stereo system, etc.

↟ to LINE IN ↟

Stereo mini-plug

2 phono plugs

R (red) — L (white)

RK-G136 (not supplied)

RK-G129 (not supplied)

to ⌒/ LINE OUT

When connecting a line cable (not supplied) to the ⌒/LINE OUT jack of the recorder, be sure to set the "AUDIO OUT" parameter for the ⌒/LINE OUT jack.

1 Press the jog lever, flip until "AUDIO OUT" flashes in the display, and then press the lever again.

2 Flip the jog lever until "LINE OUT" flashes in the display, and then press the lever.

Notes
- If the "AUDIO OUT" parameter for the ⌒/ LINE OUT jack is set to "LINE OUT", VOL +/– or DIGITAL MEGA BASS will not function.
- The "AUDIO OUT" parameter for the ⌒/ LINE OUT jack cannot be set to "LINE OUT" when the supplied remote control is connected.
- When you turn off the power, the "AUDIO OUT" parameter for the ⌒/LINE OUT jack automatically switches to "HeadPhone".

30

You can edit your recordings by adding/
erasing track marks or labeling tracks and
MDs. Premastered MDs cannot be edited.

Notes on editing
- Do not move or jog the recorder while "TOC
  Edit"* is flashing in the display.
- You cannot edit tracks on an MD that is
  record-protected. Before editing tracks, close
  the tab on the side of the MD.
- If you perform an editing operation while
  playing, be sure not to turn the power off until
  "TOC Edit" disappears in the display.
- The lid does not open until "TOC Edit"
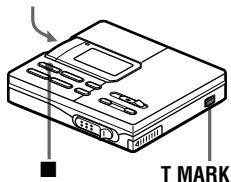 disappears in the display after editing.

  ∗ TOC = Table of Contents

Erasing tracks

To erase a track

Note that once a recording has been
erased, you cannot retrieve it. Make sure
of the track you are erasing.

Jog lever

■   T MARK

1 While playing the track you want to
erase, press the jog lever so that
"EDIT" flashes in the display, and
then press the lever again.

" ♫ : Name" flashes in the display,
and the recorder plays the selected
track repeatedly.

2 Flip the jog lever until " ♫ : Erase"
flashes in the display, then press
the lever.

"Erase OK?" and "PushENTER"
appear alternately in the display.
To cancel erasing, press ■ or T
MARK.

3 Press the jog lever again.

The track is erased and the next track
starts to play. All the tracks after the
one erased are automatically
renumbered.

To erase a part of a track

Add track marks at the beginning and the
end of the part you want to erase, then
erase the part.

To erase the whole disc

You can quickly erase all the tracks and
data of the MD at the same time.
Note that once a recording has been
erased, you cannot retrieve it. Be sure to
check the contents of the disc you want to
erase.

Jog lever

■   T MARK
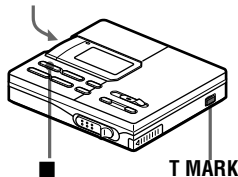
1 While the recorder is stopped, press
the jog lever so that "EDIT" flashes in
the display, and then press the lever
again.

" ⬌ : Name" flashes in the display.

2 Flip the jog lever until " ⬌ : Erase"
flashes in the display, and then press
the lever.

"All Erase?" and "PushENTER"
appear alternately in the display.
To cancel erasing, press ■ or T
MARK.

3 Press the jog lever again.

"TOC Edit" flashes in the display, and all the tracks will be erased. When erasing is complete, "BLANKDISC" appears in the display.

Adding a track mark

You can add track marks so that the part after the new track mark is counted as a new track.

The track numbers will increase as follows.

Track marking

Track numbers increase
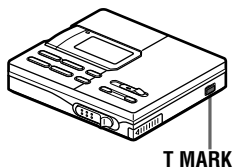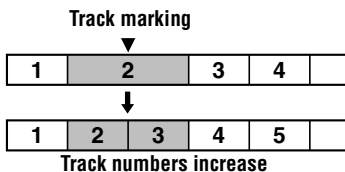
T MARK

1 While playing or pausing an MD, press T MARK on the recorder at the point you want to mark.

"MARK ON" appears in the display, and a track mark is added. The track number will increase by one.

To add track marks while recording

Press T MARK on the recorder at the point you want to add a track mark.

Erasing a track mark

When you record with analog (line) input, unnecessary track marks may be recorded where recording level is low. You can erase a track mark to combine the tracks before and after the track mark. The track numbers will change as follows.

Erase a track mark

Track numbers decrease

◄◄   T MARK
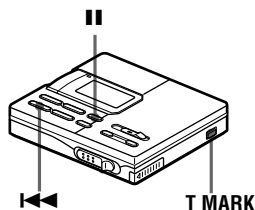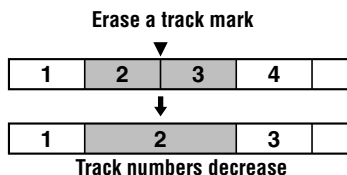
1 While playing the track with the track mark you want to erase, press **II** to pause.

2 Find the track mark by pressing ◄◄ slightly.

For example, to erase the third track mark, find the beginning of the third track. "00:00" appears in the display. "MARK" appears in the display for 2 seconds.

3 Press T MARK to erase the mark.

"MARK OFF" appears in the display. The track mark is erased and the two tracks are combined.

ϒ
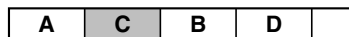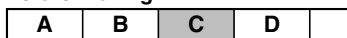When you erase a track mark, the date, time, and name assigned to the mark are also erased.

32

Moving recorded tracks

You can change the order of the recorded tracks.

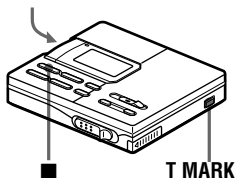**Example**
Move track C from the third to the second track.

Before moving

A	B	C	D	

A	C	B	D	

After moving

On the recorder

Jog lever

■   **T MARK**

1 While playing the track you want to move, press the jog lever so that "EDIT" flashes in the display, and then press the lever again.

" ♪ : Name" flashes in the display and the recorder plays the selected track repeatedly.

2 Flip the jog lever until " ♪ : Move" flashes in the display, and then press the lever.

For the example above, "MV 003 → 003" appears in the display.

3 Flip the jog lever to select the destination track number.

For the example above, "MV 003 → 002" appears in the display.
To cancel moving, press ■ or T MARK.

4 Press the jog lever again.

The track moves to the selected destination track.

On the remote control

DISPLAY

Control

■
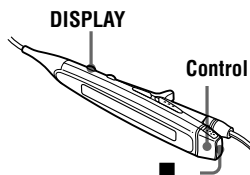
1 Press DISPLAY for 2 seconds or more while playing the track you want to move.

" ♪ : Name" flashes in the display and the recorder plays the selected track repeatedly.

2 Press the control towards ◄◄ or towards ► • ►►► repeatedly until " ♪ : Move" appears in the display.

3 Press ■.

For the example above, "MV 003 → 003" appears in the display.

4 Press the control towards ◄◄ or towards ► • ►►► repeatedly to select the destination track number.

For the example above, "MV 003 → 002" appears in the display.
To cancel moving, press DISPLAY for 2 seconds or more.

5 Press ■ again.

The selected track moves just before the destination track.

33

Labeling recordings

You can name tracks during playback, discs during stop, and both during recording. Each name can be as long as 200 letters.
Each disc can hold up to 1700 alphanumeric letters during playback or stop.

On the recorder

Jog lever

▐◀◀ /▶▶▐
END SEARCH
VOL +/–
■
▐▐
T MARK
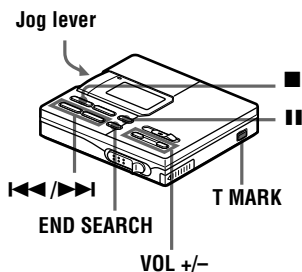
Labeling a disc during stop

1 Insert a disc.

2 Press the jog lever so that "EDIT" flashes in the display, and then press the lever again.

" ⬡ : Name" flashes in the display.

3 Press the jog lever.

The disc is ready to be labeled.

4 Flip the jog lever to select a letter and press the lever to enter.

The selected letter stops flashing and the cursor moves to the next input position.

Press	To
▐▐	Switch between capital letters, small letters, marks / numbers, and phrases.[1]
VOL +/–	Move the cursor to the left or right.
▐◀◀ /▶▶▐	Change the letter to the one before / next one.
END SEARCH/ VOL +	Insert a blank space to type in a new letter pressing both buttons together.
END SEARCH/ VOL –	Delete a letter and move back all following letters to the left pressing both buttons together.
■	Cancel labeling.
T MARK	Cancel labeling.

[1] If phrases are stored in the phrase bank, the first phrase stored appears in the display(page 37).

5 Repeat step 4 and enter all characters of the label name.

To cancel labeling, press ■ or T MARK

6 Press the jog lever for 2 seconds or more.

The track or disc is labeled.

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Labeling a track during playback

1 Insert a disc and play the track you want to label.

2 Press the jog lever so that "EDIT" flashes in the display, and then press the lever again.

" 🎵 : Name" flashes in the display.

3 Press the jog lever.

The track is ready to be labeled.

4 Follow steps 4 to 6 of "Labeling a disc during stop".

Labeling a track or a disc during recording

**1** While recording, press the jog lever so that "EDIT" flashes in the display, and then press the lever again.

" 🎵 : Name" flashes in the display.

2 To label a track, press the jog lever again.

To label a disc, flip the jog lever until " 😊 : Name" flashes in the display, then press the lever.

The track or disc is ready to be labeled.

3 Follow steps 4 to 6 of "Labeling a disc during stop".

To cancel labeling, press ■ or T MARK.

Note
When the recording is stopped while labeling a track or a disc during recording, or when the playback moves on to the next track while labeling a track, the input at that point is entered automatically.

On the remote control

DISPLAY
PLAYMODE
❚❚
Control
VOL +/–
■
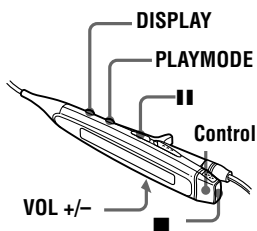
Labeling a disc during stop

1 Insert a disc.

To label a disc that is already in the recorder, press ■ to stop.

2 Press DISPLAY for 2 seconds or more.

" 😊 : Name" flashes in the display.

3 Press ■.

The disc is ready to be labeled.

4 Press the control towards |◀◀ or towards ▶ • ▶▶| to select a letter and press ■ to enter.

The selected letter stops flashing and the cursor moves to the next input position.

Press/ Turn	To
❚❚	Switch between capital letters, small letters, marks / numbers, and phrases.[1]
VOL +/–	Move the cursor to the left or right.
|◀◀ / ▶ • ▶▶|	Change the letter to the one before / next one.

Press/ Turn	To
DISPLAY	Insert a blank space to type in a new letter by pressing within 2 seconds. Cancel labeling by pressing for 2 seconds or more.
PLAYMODE	Delete a letter and move back all following letters to the left.

1) If phrases are stored in the phrase bank, the first phrase stored appears in the display(page 39).

5 Repeat step 4 and enter all characters of the label name.

To cancel labeling, press DISPLAY for 2 seconds or more.

6 Keep pressing the ■ for 2 seconds or more.

The track or disc is labeled.

Labeling a track during playback

1 Insert a disc and play the track you want to label.

2 Press DISPLAY for 2 seconds or more.

" ♪ : Name" flashes in the display.

3 Press ■.

The track is ready to be labeled.

4 Follow steps 4 to 6 of "Labeling a disc during stop" (page 35).

Labeling a track or a disc during recording

1 Press DISPLAY for 2 seconds or more during recording.

" ♪ : Name" flashes in the display.

2 To label a track, press ■.

To label a disc, press the control towards ▐◀◀ or towards ▶ • ▶▶▐ until " ⬡ : Name" flashes in the display, then press ■.
The track or disc is ready to be labeled.

3 Follow steps 4 to 6 of "Labeling a disc during stop" (page 35).

To cancel labeling, press DISPLAY for 2 seconds or more.

Note
When the recording is stopped while labeling a track or a disc during recording, or when the recording moves on to the next track while labeling a track, the input at that point is entered automatically.

Available characters
- Capital and small letters of the English alphabet
- Numbers 0 to 9
- ! " # $ % & ( ) * . ; < = > ?
  @ _ ` + – ' , / : _ (space)

Relabeling recordings
Follow the steps corresponding to the labeling method until the disc or track is ready to be labeled. Enter a new character over the one you want to change, then press the jog lever (keep pressing ■ for 2 seconds or more on the remote control).

Notes
- You cannot relabel premastered MDs or label MDs that have not been recorded.
- The recorder is able to display, but cannot label using Japanese "Katakana" characters.
- The recorder cannot rewrite a disc or track name of more than 200 letters that was created by another device.

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Storing phrases frequently used in labeling (Phrase Bank)

Phrases that you often use in track or disc labeling can be stored in the recorder's memory. There are two ways to store phrases: storing a phrase while performing the labeling procedure, or storing a phase using the EDIT menu. Approximately 40 phrases of about 10 characters each (with a total character count of about 600) can be stored in the phrase bank. The actual number will depend on the length of each phrases.

On the recorder

Jog lever

144 /►►I
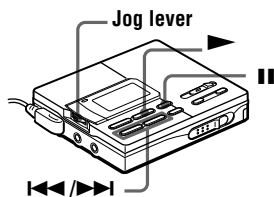
Storing phrases while labeling a track or disc

1 Do the procedure "Labeling recordings" (page 34) to enter a phrase.

2 After entering the phrase, press ❚❚ for 2 seconds or more.

"Entry!" appears in the display and the cursor flashes after the phrase you just stored. You can then continue with labeling operation.

ᾧ
You can store phrases from a previously labeled track or disc.
Do the procedure "Relabeling recordings" (page 36) and display the track or disc name that contains the phrase that you want to store. Press VOL +/– repeatedly to move the cursor to the right of the phrase. Then press ❚❚ for 2 seconds or more to store the phrase.

Storing phrases using the EDIT menu

1 Press the jog lever so that "EDIT" flashes in the display, and then press the lever again.

2 Flip the jog lever until "Name Bank" flashes in the display, and then press the jog lever.

3 Enter the phrase you want to store, and then press the jog lever for 2 seconds or more.

"Entry" appears in the display and the phrase is stored.

Retrieving phrases stored in the phrase bank

You can retrieve a phrase stored in the phrase bank anytime you want to use it in a track or disc name.
There are two ways to retrieve a stored phrase: by displaying the stored phrases one by one during the labeling procedure, or by searching the phrase bank by the first letter of the desired phrase.

Searching for a phrase by displaying the stored phrase one by one

1 Do the procedure "Labeling recordings" (page 34) until "⭗: Name" or " ♪ : Name" flashes in the display. Then press the jog lever.

2 Press ❚❚ repeatedly until the first phrase stored in the phrase bank appears in the display.

3 Flip the jog lever or press ►◄◄ /►►► repeatedly.

Flipping the jog lever or pressing the buttons causes the phrases stored in the phrase bank to appear one by one in sequential order. If you press ❚❚ at this time, the first phrase stored in the phrase bank retrieved.

4 Press the jog lever while the phrase you want is shown in the display.

The cursor flashes after the phrase you just retrieved. You can then continue with labeling operation.

Searching for a phrase by its first letter

1 When labeling a track or disc, use VOL +/– to move the cursor to the letter which the desired phrase begins with.

2 Press ❚❚ to search.

The phrase for that letter appears in the display. If there are two or more phrases that start with that letter, press ❚❚ to see the next phrase.

3 Press the jog lever while the phrase you want is shown in the display.

The cursor flashes after the phrase you just retrieved. You can then continue with labeling operation.

Erasing phrases

You can erase phrases from the phrase bank while the recorder is stopped. You can also erase phrases when the recorder is empty.

**1** Press the jog lever so that "EDIT" appears, and then press the lever again.

2 Flip the jog lever until "BankErase" appears, and then press the lever.

3 Flip the jog lever until the phrase you want to erase appears, and then press the lever.

"Erase!" appears and the phrase is erased. If no phrase is stored in the phrase bank, "EMPTY" appears in the display.

To cancel the operation, press ■ or T MARK

On the remote control

DISPLAY

❚❚

control

■
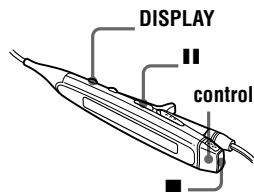
Storing phrases while labeling

1 Do the procedure "On the remote control" in "Labeling recordings" (page 35) to enter a phrase.

2 After entering the phrase, press ❚❚ for 2 seconds or more.

"Entry!" appears in the display and the cursor flashes after the phrase you just stored. You can then continue with labeling operation.

ῼ̣
You can store phrases from a previously labeled track or disc.
Do the procedure "Relabeling recordings" (page 36) and display the track or disc name that contains the phrase that you want to store. Press VOL +/– repeatedly to move the cursor to the right of the phrase. Then press ❚❚ for 2 seconds or more to store the phrase.

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Storing phrases using the EDIT menu

1 Press DISPLAY for 2 seconds or more.

2 Press the control towards ◄◄ or towards ► • ►►► repeatedly until "Name Bank" flashes in the display, and then press ■.

3 Enter the phrase you want to store, then press ■ for 2 seconds or more.

"Entry" appears in the display and the phrase is stored.

Retrieving phrases stored in the phrase bank

Searching for a phrase by displaying the stored phrase one by one

1 Do the procedure "On the remote control" in "Labeling recordings" (page 35) until " ⬯ : Name" or " ♪ : Name appears in the display. Then press ■.

2 Press �𝐈𝐈 repeatedly until the first phrase stored in the phrase bank appears in the display.

3 Press the control towards ◄◄ or towards ► • ►►► repeatedly.

Pressing the control towards ◄◄ or towards ► • ►►► causes the phrases stored in the phrase bank to appear one by one. If you press ⠀𝐈𝐈 at this time, the first phrase stored in the phrase bank retrieved.

4 Press ■ while the phrase you want is shown in the display.

The cursor flashes after the phrase you just retrieved. You can then continue with labeling operation.

Searching by the first letter of a phrase

1 When labeling a track or disc, use VOL +/– to move the cursor to the letter which the desired phrase begins with.

2 Press ⠀𝐈𝐈 to search.

The phrase for that letter appears in the display. If there are two or more phrases that start with that letter, press ⠀𝐈𝐈 to see the next phrase.

3 Press ■ while the phrase you want is shown in the display.

The cursor flashes after the phrase you just retrieved. You can then continue with labeling operation.

Erasing phrases

You can erase phrases from the phrase bank while the recorder is stopped. You can also erase phrases when the recorder is empty.

1 Press DISPLAY for 2 seconds or more.

2 Press the control towards ◄◄ or towards ► • ►►► repeatedly until "BankErase" appears in the display, and then press ■.

3 Press the control towards ◄◄ or towards ► • ►►► repeatedly until the phrase you want to erase appears, and then press ■.

"Erase!" appears in the display and the phrase is erased.
If there is no phrase stored in the phrase bank, "EMPTY" appears in the display.

To cancel the operation, press DISPLAY for 2 seconds or more.

Power sources

You can use the recorder on house current or as follows.
In the recorder …
— a nickel metal hydride rechargeable battery NH-14WM (supplied)
With supplied battery case …
— LR6 (size AA) alkaline battery (not supplied)

It is preferable to use the recorder on house current when recording for a long time.
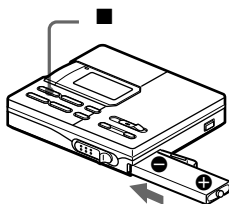
Charging the nickel metal hydride rechargeable battery

Before using the supplied NH-14WM nickel metal hydride rechargeable battery for the first time, charge it in the recorder.
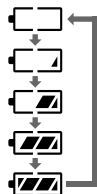
1 Connect the supplied AC power adaptor.

to wall output

AC power adaptor (supplied)

to DC IN 3V
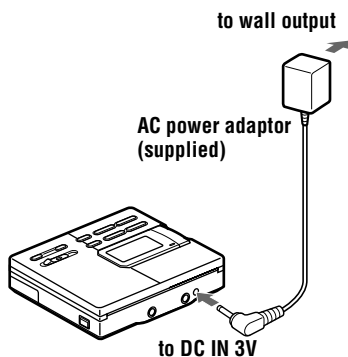
2 Insert the NH-14WM into the recorder and close the lid.

3 Press ■.
"Charging" flashes, ⊏⊐ appears in the display, and charging starts.

Full charging of a completely discharged rechargeable battery takes about 3 hours. To cancel charging, press ■.

Notes
• If you press ■/CHARGE immediately after charging has completed, charging will begin again, even though the battery is already fully charged.
• Charging stops when you try to operate the recorder during charging.
• Be sure to use the supplied AC power adaptor.
• Charging time may vary depending on the battery condition.
• When a rechargeable battery is charged for the first time or charged after a long period of disuse, battery life may be shorter than usual. Repeat discharging and recharging a few times. The battery life should return to normal.
• When the battery life of a fully charged rechargeable battery becomes about half the normal life, replace it.

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• When carrying the rechargeable battery, keep it in the supplied carrying case. It is dangerous to carry the battery out of its case in your pocket or a bag together with metallic objects such as key rings, as this may cause a short circuit.
• Remove the rechargeable battery from the recorder when it is not to be used for a long time.

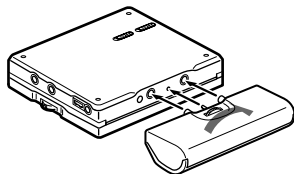# Using on a nickel metal hydride rechargeable battery

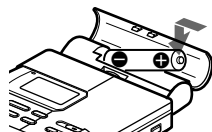Be sure the rechargeable battery is fully charged.
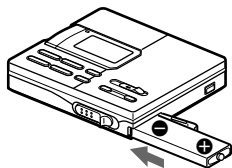
1 Insert the fully charged nickel metal hydride rechargeable battery with correct polarity.

Using dry battery

1 Attach the supplied battery case.

2 Insert LR6 (size AA) dry battery (not supplied) with correct polarity.


Battery life[1]

Batteries	Recording [3]	Playback
NH-14WM nickel metal hydride rechargeable battery	Approx. 6.5 hours	Approx. 12 hours
LR6 (size AA) Sony alkaline dry battery[2]	Approx. 4 hours	Approx. 16.5 hours
NH-14WM nickel metal hydride rechargeable battery + One LR6 (size AA)[2]	Approx. 14.5 hours	Approx. 29 hours

[1] The battery life may be shorter due to operating conditions and the temperature of the location.
[2] When using a LR6 (SG) Sony "STAMINA" alkaline dry battery (produced in Japan).
[3] When you record, use a fully charged rechargeable battery.

When to replace the batteries

When the dry battery or rechargeable battery are weak, flashing ⊂▭ or "LOW BATT" appears in the display. Replace the dry battery or charge the rechargeable battery.
The battery level indicator is approximate.

Note
Stop the recorder before replacing battery.

Precautions

On safety

Do not put any foreign objects in the DC IN 3V
jack.

On power sources

• Use house current, nickel metal hydride
  rechargeable battery, LR6 (size AA) battery,
  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.

**Polarity of the
plug**

• 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, dry battery,
  rechargeable battery, or car battery cord). To
  remove the AC power adaptor from the wall
  outlet, grasp the adaptor plug itself; never pull
  the cord.

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 turned off until it cools down.

On installation

• Never use the recorder where it will be
  subjected 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 damage.

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.

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

• When carrying or storing the MiniDisc, keep
  it in its case.
• Do not break open the shutter.
• Do not place the cartridge where it will be
  subject to light, extreme temperatures,
  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 or ejecting an
  MD.

Notes on 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 try to recharge dry battery.
• 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.

Note on mechanical noise

The recorder gives off mechanical noise while operating, which is caused by the power-saving system of the recorder and it is not a problem.

To protect a recorded MD

To record-protect an MD, slide open the tab at the side of the MD. In this position, the MD cannot be recorded. To record again, slide the tab back so the tab is visible.
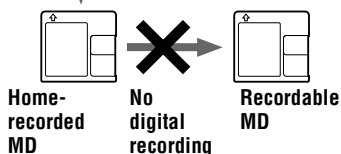
Back of the MD

Tab

Record-protect
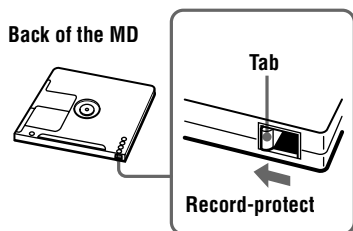
Note on digital recording

This recorder uses the Serial Copy Management System, which allows only first-generation digital copies to be made from premastered software. You can only make copies from a home-recorded MD by using the analog (line out) connections.
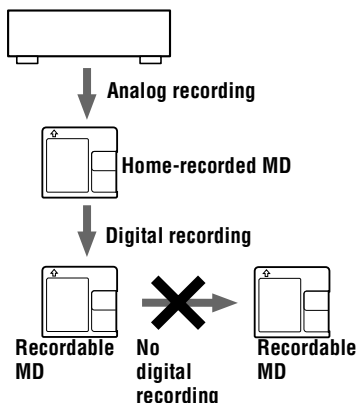
Premastered software such as CDs or MDs.

Digital recording

Home-recorded MD   No digital recording   Recordable MD
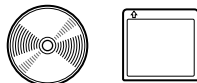
Microphone, record player, tuner, etc (with analog output jacks).

Analog recording

Home-recorded MD

Digital recording

Recordable MD   No digital recording   Recordable MD

If you have any questions or problems concerning your recorder, please consult your nearest Sony dealer. (If a trouble occurred when the disc was in the recorder, we recommend that the disc be left in the recorder when you consult your Sony dealer so that the cause of trouble may be better understood.)

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Troubleshooting

Should any problem persist after you have made these checks, consult your nearest Sony dealer.

Symptom	Cause/Solution
The recorder does not work or works poorly.	• Audio sources may not be securely connected. ➡ Disconnect the audio sources once and connect them again (pages 8, 15). • The HOLD function is turned on ("HOLD" appears in the display when you press an operation button on the recorder). ➡ Disable HOLD by sliding the HOLD switch in the opposite direction of the arrow (page 29). • 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. • The rechargeable battery or dry battery is weak ($\square$ or "LOW BATT" flashes). ➡ Charge the rechargeable battery or replace the dry battery (page 40). • The rechargeable battery or dry battery have been inserted incorrectly. ➡ Insert the battery correctly (page 41). • You pressed a button while the disc indication was rotating quickly. ➡ Wait until the indication rotates slowly. • When recording digitally from a portable CD player, you did not use AC power or did not disable the anti-skip function such as ESP (page 15). • The analog recording was made using a connecting cord with an attenuator. ➡ Use a connecting cord without an attenuator (page 8). • The AC power adaptor was unplugged during recording or a power outage occurred. • While operating, the recorder received a mechanical shock, too much static, abnormal power voltage caused by lightning, etc. ➡ Restart the operation as follows. 1 Disconnect all the power sources. 2 Leave the recorder for about 30 seconds. 3 Connect the power source. • The disc is damaged or does not contain proper recording or editing data. ➡ Reinsert the disc. If this fails, rerecord.
The lid does not open.	• The power sources have been disconnected during recording or editing, or the battery have been exhausted. ➡ Set the power sources again, or replace the exhausted battery with new ones.

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Symptom	Cause/Solution
No sound comes through the headphones.	• The headphones plug is not firmly connected. ➡ Plug in the plug of the headphones firmly to the remote control. Plug in the plug of the remote control firmly to ⌒/LINE OUT. • Volume is too low. ➡ Adjust the volume by pressing VOL +/–. • AVLS is on. ➡ Set AVLS to "AVLS OFF" (page 27).
An MD is not played from the first track.	• Disc playing stopped before it came to the last track. ➡ Flip the jog lever (press the control towards ◄◄ repeatedly on the remote) or open and close the lid once to go back to the beginning of the disc, and restart playing after checking the track number in the display.
Playback sound skips.	• The recorder is placed where it receives continuous vibration. ➡ Put the recorder on a stable place. • A very short track may cause sound to skip.
Sound has a lot of static.	• Strong magnetism from a television or such device is interfering with operation. ➡ Move the recorder away from the source of strong magnetism.
Cannot find the track marks.	• You pressed ❚❚ after pressing ◄◄ or ►►❙. ➡ Press ❚❚ before flipping the jog lever or pressing ◄◄ or ►►❙.
The rechargeable battery does not start charging.	• The rechargeable battery has been inserted incorrectly or the AC power adaptor has been connected incorrectly. ➡ Insert the battery correctly or connect the AC power adaptor correctly.
The clock loses time or the display flashes. The recording date was not stamped onto the disc.	• The built-in battery for the clock is weak. ➡ Connect the AC power adaptor to DC IN 3V on the recorder and the wall outlet to charge the built-in battery. After charging, set the clock again (page 22). Note that the clock may gain or lose up to about 2 minutes per month under normal condition. • The clock is not set. ➡ Set the clock (page 22).
CD text information cannot be recorded.	• The cable connecting the devices is not an optical cable. ➡ Use an optical cable to connect the devices. • The connected portable CD player does not supports CD-TEXT. ➡ Connect a portable CD player (such as D-EJ01) that supports CD-TEXT (page 23). • The inserted CD does not supports CD-TEXT. ➡ Insert a CD that supports CD-TEXT.
VOL +/– or DIGITAL MEGA BASS does not function	• The "AUDIO OUT" parameter is set to "LINE OUT". ➡ Set the "AUDIO OUT" parameter to "HeadPhone"(page 4).

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System limitations

The recording system in your MiniDisc recorder is radically different from those used in cassette and DAT decks and is characterized by the limitations described below. Note, however, that these limitations are due to the inherent nature of the MD recording system itself and not to mechanical causes.

Symptom	Cause
"TR FULL" appears even before the disc has reached the maximum recording time (60, 74, or 80 minutes).	When 254 tracks have been recorded on the disc, "TR FULL" appears regardless of the total recorded time. More than 254 tracks cannot be recorded on the disc. To continue recording, erase unnecessary tracks.
"TR FULL" appears even before the disc has reached the maximum track number or recording time.	Repeated recording and erasing may cause fragmentation and scattering of data. Although those scattered data can be read, each fragment is counted as a track. In this case, the number of tracks may reach 254 and further recording is not possible. To continue recording, erase unnecessary tracks.
Track marks cannot be erased. The remaining recording time does not increase even after erasing numerous short tracks.	When the data of a track is fragmented, the track mark of a fragment under 12 seconds long cannot be erased. You cannot combine a track recorded in stereo and a track recorded in monaural; nor can you combine a track recorded with digital connection and a track recorded with analog connection. Tracks of under 12 seconds in length are not counted and so erasing them may not lead to an increase in the recording time.
The total recorded time and the remaining time on the disc may not total the maximum recording time (60, 74, or 80 minutes).	Normally, recording is done in minimum units of approximately 2 seconds. When recording is stopped, the last unit of recording always uses this unit of 2 seconds even if the actual recording is shorter. Likewise, when recording is restarted after the stop, the recorder will automatically insert a blank space amounting to 2 seconds before the next recording. (This is to prevent accidental erasing of a previous track whenever a new recording is started). Therefore, the actual recording time will decrease whenever a recording is stopped; a maximum of 6 seconds compared to the potential recording time for each stop.
The edited tracks may exhibit sound dropout during search operations.	The fragmentation of data may cause sound dropout while searching because the tracks are played in higher speed than normal playback.

Messages

If the following error messages flash in the display window, check the chart below.

Error message	Meaning/Remedy
BLANKDISC	• An MD with no recording on it is inserted. ➡ Insert a recorded MD.
DISC ERR	• The disc is damaged or does not contain proper recording or editing data. ➡ Reinsert the disc. If this fails, rerecord.
DISC FULL	• There is no more space to record on the disc (less than 12 seconds available). ➡ Replace the disc.
Data Save	• The MD player is recording information (sounds) from the memory to the disk. ➡ Wait until this process is completed. Do not expose the player to any physical shock, nor disrupt power supply.
TOC Edit	• The MD player is recording information (track start and end position) from the memory to the disk. ➡ Wait until this process is completed. Do not expose the player to physical shock, nor disrupt power supply.
BUSY	• You tried to operate the recorder while it was accessing the recorded data. ➡ Wait until the message goes out (in rare cases, it may take 2–3 minutes).
NAME FULL	• You tried to enter more than 200 letters to label a single track or disc. • You tried to enter a total of more than 1700 letters for track or disc names during playback or stop. ➡ Enter the characters within the limit.
Hi DC in	• Voltage of the power supply is too high (The supplied AC power adaptor or the recommended car battery cord is not used). ➡ Use the supplied AC power adaptor or the recommended car battery cord.
HOLD	• The recorder is locked. ➡ Slide HOLD against the arrow to unlock the recorder (page 29).
LOW BATT	• Batteries are weak. ➡ Charge the rechargeable battery or replace the dry battery (page 40).
MEM OVER	• You tried to record with the recorder placed where it receives continuous vibration. ➡ Put the recorder on a stable place, and start recording again.

Error message	Meaning/Remedy
NO COPY	• You tried to make a copy from a disc that is protected by the Serial Copy Management System. You cannot make copies from a digitally connected source which was itself recorded using digital connection. ➡ Use analog connection instead (page 8).
NO DISC	• You tried to play or record with no disc in the recorder. ➡ Insert an MD.
NO SIGNAL	• The recorder could not detect digital input signals. ➡ Make sure that the source is connected firmly (page 15).
P/B ONLY	• You tried to record or edit on a premastered MD (P/B stands for "playback"). ➡ Insert a recordable MD.
PROTECTED	• You tried to record or edit on a MD with the tab in the record-protect position. ➡ Slide the tab back (page 43).
SORRY	• You tried to erase the track mark at the beginning of the first track. • You tried to erase a track mark to combine tracks the recorder cannot combine (a track recorded in stereo and in mono, for example). • You tried to set DIGITAL MEGA BASS while the "AUDIO OUT" parameter was set to "LINE OUT". ➡ Use the jog lever to set the "AUDIO OUT" parameter to "HeadPhone" (page 4, 13). • You tried to press ❚❚ or T MARK during synchro-recording.
TEMP OVER	• Heat has built up in the recorder. ➡ Let the recorder cool down.
TR FULL	• There is no more space for new data when you are editing the MD. ➡ Erase unnecessary tracks (page 31).
TrPROTECT	• You tried to record or edit on a track that is protected from erasing. ➡ Record or edit on other tracks.
EDITING	• You pressed a key on the recorder while editing on the remote control.
MENU	• You pressed a key on the remote control while selecting a menu on the recorder.
LINE OUT	• You pressed VOL +/– while the "AUDIO OUT" parameter was set to "LINE OUT." ➡ Use the jog lever to set the "AUDIO OUT" parameter to "HeadPhone" (page 4, 13).
NO TEXT	• You tried to use the CD text copying function to copy a track or disc name from a CD that has no text data (page 23).

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Error message	Meaning/Remedy
EMPTY	• You tried to erase data in the phrase bank but no data have been recorded.
BANK FULL	• The phrase bank is almost full and cannot store the phrase you tried to enter. ➡ Delete some phrases from the phrase bank, and then reenter the new phrase.

Specifications

System
Audio playing system
MiniDisc digital audio system
Laser diode properties
Material: GaAlAs
Wavelength: λ = 790 nm
Emission duration: continuous
Laser output: less than 44.6 μW
(This output is the value measured at a distance
of 200 mm from the lens surface on the optical
pick-up block with 7 mm aperture.)
Recording and playback time
Maximum 80 minutes (MDW-80, stereo
recording)
Maximum 160 minutes (MDW-80, monaural
recording)
Maximum 74 minutes (MDW-74, stereo
recording)
Maximum 148 minutes (MDW-74, monaural
recording)
Revolutions
400 rpm to 1800 rpm (CLV)
Error correction
Advanced Cross Interleave Reed Solomon
Code (ACIRC)
Sampling frequency
44.1 kHz
Sampling rate converter
Input: 32 kHz/44.1 kHz/48 kHz
Coding
Adaptive TRansform Acoustic Coding
(ATRAC)
Modulation system
EFM (Eight to Fourteen Modulation)
Number of channels
2 stereo channels
1 monaural channel
Frequency response
20 to 20,000 Hz ± 3 dB
Wow and Flutter
Below measurable limit
Inputs
Microphone: stereo mini-jack, 0.35–1.38 mV
Line in: stereo mini-jack, 69–194 mV
Optical (Digital) in: optical (digital) mini-jack
Outputs
Ω/LINE OUT*: stereo mini-jack
   Headphones: maximum output level 5 mW +
   5mW, load impedance 16 ohm

   LINE OUT: 194 mV, load impedance 10
   kilohm
* The Ω/LINE OUT jack connects either
   headphones or a line cable.

General
Power requirements
Sony AC Power Adaptor (supplied) connected
at the DC IN 3 V jack:
   120 V AC, 60 Hz (US model)
   240 V AC, 50/60 Hz (Australia and New
   Zealand model)
   220 V AC, 50 Hz (China model)
Nickel metal hydride rechargeable battery NH-
14WM (supplied)
LR6 (size AA) alkaline battery (not supplied)
Battery operation time
See "Battery life" (page 41)
Dimensions
MZ-R90
Approx. 78.9 × 17.3 × 72.0 mm (w/h/d)
(3^1/8 × ^{11}/16 × 2^7/8 in.)
MZ-R91
Approx. 78.9 × 18.0 × 72.0 mm (w/h/d)
(3^1/8 × ^{23}/32 × 2^7/8 in.)
Mass
MZ-R90
Approx. 105 g (3.7 oz) the recorder only
Approx. 148 g (5.2 oz) incl. a recordable MD,
and NH-14WM nickel metal hydride
rechargeable battery
MZ-R91
Approx. 110 g (3.8 oz) the recorder only
Approx. 153 g (5.4 oz) incl. a recordable MD,
and NH-14WM nickel metal hydride
rechargeable battery
Supplied accessories
AC power adaptor (1)
Headphones with a remote control (1)
NH-14WM nickel metal hydride rechargeable
battery (1)
Dry battery case (1)
Rechargeable battery carrying case (1)
Carrying pouch (1)
AC plug adaptor (China model only) (1)

Optional accessories
Optical Cable
   POC-151HG, POC-152HG, POC-MZ1,
   POC-MZ2, POC-15B, POC-15AB, POC-
   DA12SP
Line Cable RK-G129, RK-G136

Stereo Microphones ECM-717, ECM-MS907, ECM-MS957
Stereo Headphones* MDR-series
CD text connecting cable RK-TXT1
Active Speakers SRS-Z500
Recordable MDs MDW-series

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

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Design and specifications are subject to change without notice.

 ∗ Whether you should plug the headphones directly to ∩/LINE OUT on the main unit or to a remote control, use only headphones with stereo mini plugs.

stereo mini plugs
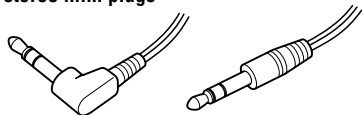
What is an MD?

How MiniDisc works

MiniDisc (MD) comes in two types: premastered (prerecorded) and recordable (blank). Premastered MDs, recorded at music studios, can be played back almost endlessly. However, they can't 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.
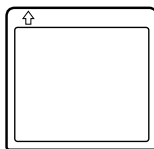
Recordable MDs

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.
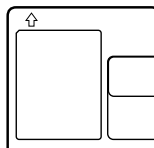
How the MiniDisc got so small

The 2.5-inch MiniDisc, encased in a plastic cartridge that looks like a 3.5-inch diskette (see illustration above), 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.
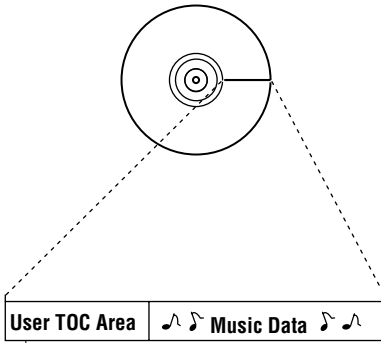
Quick Random Access

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.
Recordable MDs are manufactured with a "User TOC Area" to contain the order of the music. The TOC (Table of Contents) system is similar to the "directory management system" of floppy disks. In other words, starting and ending addresses for all music tracks recorded on the disc are stored in this area. This lets you randomly access the beginning of any track as soon as you enter the track number (AMS), as well as label the location with a track name as you would a file on a diskette.

User TOC Area	♪ ♪ Music Data ♪ ♪

Contains the order and start/end points of the music.

Shock-Resistant Memory

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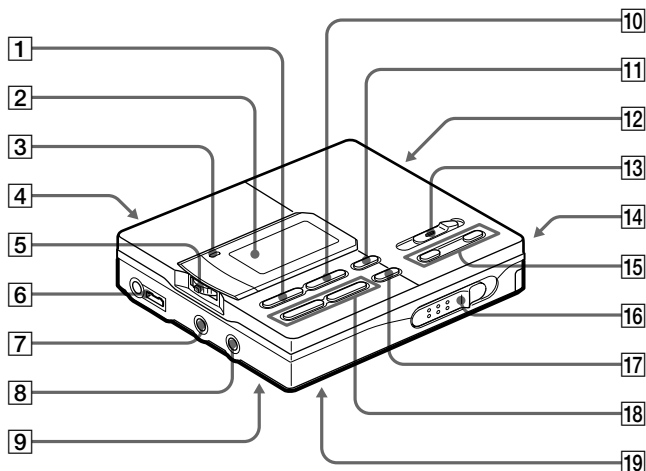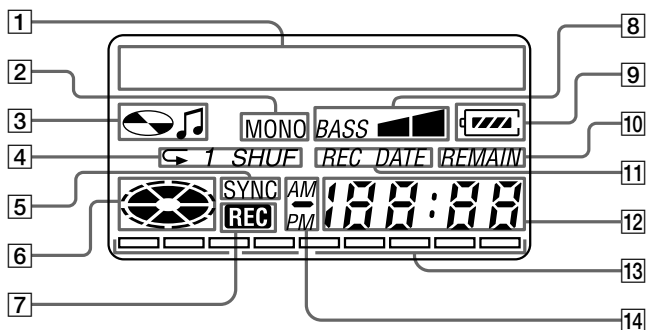
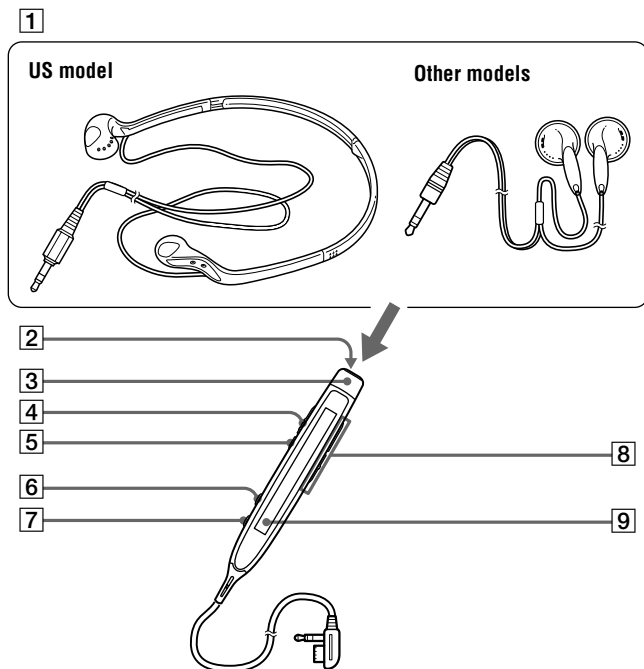## Looking at the controls

See pages in ( ) for more details.

The recorder

1. ■/CHARGE button (9)(12)(31)(40)
2. Display window (16)(25)
3. REC indicator (20)
4. DC IN 3V jack (at the rear) (8)(11)(40)
5. Jog lever (12)(17)(25)(34)
6. ⌒ (headphones)/LINE OUT jack (11)(23)(30)
7. MIC (PLUG IN POWER) jack (17)
8. LINE IN (OPTICAL) jack (8)(15)
9. HOLD switch (29)
10. ► (play) button (10)(12)(38)
11. ❚❚ (pause) button (10)(12)(22)(34)(37)
12. T MARK button (31)
13. REC (record) switch (9)

14. Battery compartment (at the rear) (40)
15. VOL +/– button (12)(34)
16. OPEN switch (9)(11)
17. END SEARCH button (10)(34)
18. ❙◄◄ /►►❙ (search /AMS) button (10)(12)(32)(34)(38)
19. SYNCHRO REC (synchro-recording) switch (16)

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The display window

1 Character information display (19)(25)
Displays the disc and track names, date, error messages, track numbers, etc.

2 MONO (monaural) indication

3 Disc name/track name indication
Lights up when labeling a disc or a track.

4 Play mode indication (25)
Shows the play mode of the MD.

5 SYNC (synchro-recording) indication

6 Disc indication
Shows that the disc is rotating for recording, playing or editing an MD.

7 REC indication (9)
Lights up while recording. When flashing, the recorder is in record standby mode.

8 Mega bass indication (27)

9 Battery indication (40)
Shows approximate battery condition.

10 REMAIN (remaining time/tracks) indication (19)(28)
Lights up along with the remaining time of the track, the remaining time of the MD, or the remaining number of tracks.

11 REC DATE (recorded/current date) indication
Lights up along with the date and time the MD was recorded. When only "DATE" lights up, the current date and time are displayed.

12 Time display (20)(28)
Shows the recorded time, current time, elapsed time of the track or MD being recorded or played.

13 Level meter (19)
Shows the volume of the MD being played or recorded.

14 AM/PM indication (22)
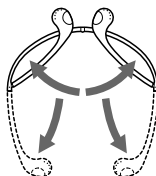Lights up along with the time indication in the 12-hour system.

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The headphones with a remote control

1 Headphones
Can be replaced with optional headphones.

2 ■ (stop) button (12)(33)(35)

3 Control (12)(33)(35)(39)
To play, press towards ▶ • ▶▶Ι during stop.
Press towards ▶ • ▶▶Ι during play to search the beginning of the succeeding track; hold in this position to fast-forward. Press towards Ι◀◀ during play to search the beginning of the preceding track; hold in this position to rewind.

4 HOLD switch (29)
Slide to lock the controls of the remote control.

5 ΙΙ (pause) button (12)(35)(38)

6 PLAYMODE button (26)(36)

7 DISPLAY button (21)(29)(33)(36)

8 VOL +/–buttons (12)(35)

9 Display window (21)(26)

For Customers in the USA
Unfold the supplied headphones as shown in the illustration below.

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