

# Portable MiniDisc Recorder

## Operating Instructions

Recorder Operation \_\_\_\_\_ **page 11**


Software Operation \_\_\_\_\_ **page 68**



NetMD



MDLP

"WALKMAN" is a registered trademark of Sony Corporation to represent Headphone Stereo products.  is a trademark of Sony Corporation.

## MZ-S1

## WARNING

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

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

To prevent fire, do not cover the ventilation of the apparatus with news papers, table cloths, curtains, etc. And don't place lighted candles on the apparatus.

To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the apparatus.

Certain countries may regulate disposal of the battery used to power this product. Please consult with your local authority.

### Caution

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

**CAUTION — INVISIBLE LASER RADIATION WHEN OPEN**

**AVOID EXPOSURE TO BEAM**

### Information

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.

For customers who purchased this product in the USA

### Owner's Record

The serial number is located at the rear of the buckle 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-S1

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

### Product registration

Please register this product on line at [www.sony.com/walkmanreg](http://www.sony.com/walkmanreg)  
<<http://www.sony.com/walkmanreg>>

Proper registration will enable us to send you periodic mailings about software upgrades, new products, services and other important announcements. Thank you.

**If you have any questions about this product, contact:**

- <http://www.sony.com/walkmansupport>
- **Sony Network Portable Audio Support Line**  
**1-(866)-456-7669**
- **Sony Customer Information Services Center**  
**12451 Gateway Blvd. Fort Myers, FL 33913**

## Declaration of Conformity

Trade Name: SONY

Model No.: MZ-S1

Responsible Party: Sony Electronics Inc.

Address: 680 Kinderkamack Road,  
Oradell, NJ 07649 USA

Telephone No.: 201-930-6972

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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.

SONY MZ-S1



**Tested To Comply  
With FCC Standards**

**FOR HOME OR OFFICE USE**

The validity of the CE marking is restricted to only those countries where it is legally enforced, mainly in the countries EEA (European Economic Area).

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## Notice for users

### On the supplied software

- Copyright laws prohibit reproducing the software or the manual accompanying it in whole or in part, or renting the software without the permission of the copyright holder.
- In no event will SONY be liable for any financial damage, or loss of profits, including claims made by third parties, arising out of the use of the software supplied with this recorder.
- In the event a problem occurs with this software as a result of defective manufacturing, SONY will replace it. However, SONY bears no other responsibility.
- The software provided with this recorder cannot be used with equipment other than that which is so designated.
- Please note that, due to continued efforts to improve quality, the software specifications may be changed without notice.
- Operation of this recorder with software other than that provided is not covered by the warranty.

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Documentation © 2003 Sony Corporation



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## Before using this product

This manual explains the recorder operations and the installation and basic use of the supplied SonicStage software. For details on the various operations, refer to the pages indicated below.

## When using the recorder

Recorder Operation (pages 11 to 66)

Pages 11 to 66 in this manual explain the use of the Net MD as an ordinary MiniDisc Walkman.

### Additional information (page 49)

This section shows the troubles you may find while using the recorder, and their solutions.



## When using the Net MD (the recorder) connected to your computer

Software Operation (pages 68 to 101)

Pages 68 to 101 in this manual explain the installation and basic operations of the supplied SonicStage software. Refer to these pages for details.

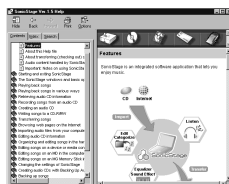
### Other information (page 86)

This section shows the troubles you may find while using the SonicStage software, and their solutions. It also has the list of frequently asked questions and answers.

## SonicStage Ver. 1.5 Help

This is an online help that you can view on your computer screen.

Refer to online help for details on the use of the software. To display the help window, see page 84.



### Notes on the "Software Operation" section

- The displayed items in the illustrations that appear in this section may differ from the actual items displayed by the software.
- Explanations in this section assume familiarity with basic Windows operations. For details on the use of your computer and the operating system, please refer to the respective manuals.
- Explanations in this section cover general Net MD products. For this reason, some explanations (and some illustrations) may not be applicable to your Net MD. Please refer to the operating instructions of your Net MD as well.

## Checking the supplied accessories

### Supplied accessories

AC power adaptor (1)

Headphones/earphones (1)

Dedicated USB cable (1)

CD-ROM (SonicStage Ver. 1.5) (1)\*

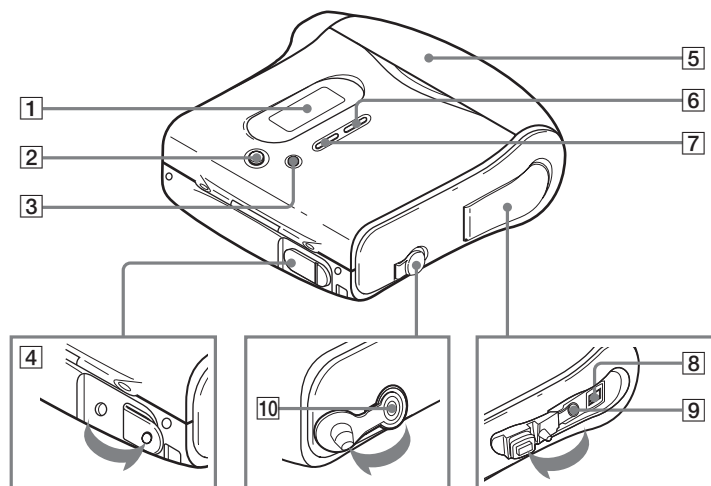
Hand strap (1)


Blank Minidisc (1)

\* Do not play a CD-ROM on an audio CD player.

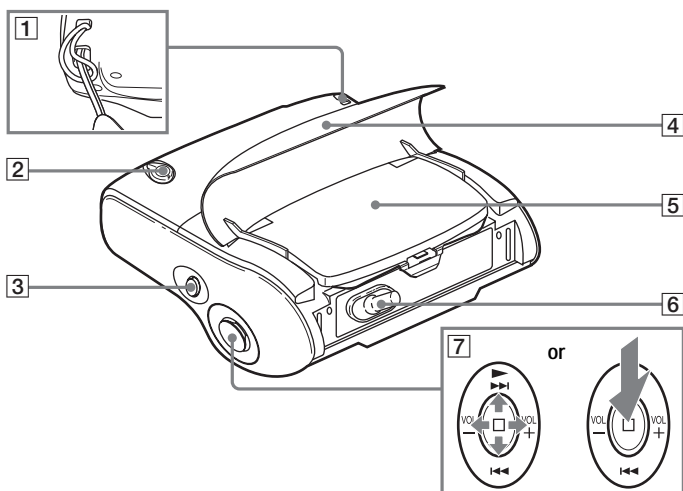
# Looking at the controls

## Front of the recorder



- |                       |  |
|-----------------------|--|
| 1 Display window      | 6 T MARK/REC button  |
| 2 GROUP/CANCEL button | 7 END SEARCH button  |
| 3 MENU/ENTER button   | 8 USB connecting jack  |
| 4 DC IN 3V jack       | 9 LINE IN (OPTICAL) jack   |
| 5 Buckle              | 10  (headphones/earphones) jack |

## Rear of the recorder



- 1** Hand strap attachment point
- 2** HOLD switch
- 3** **||** (pause) button
- 4** Buckle
- 5** Battery compartment lid
- 6** OPEN switch

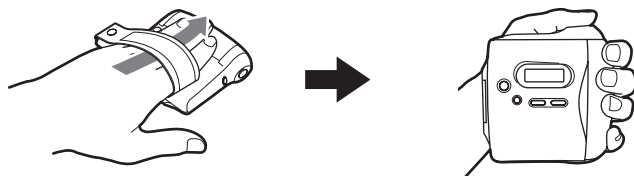
- 7** 5 way thumb control key  
Push the key in any of the four directions or press down the **■** button for various operations.
- ▶\*** (play)
- ◀◀/▶▶** (search/AMS)
- (stop)
- VOL +\*/-

\*There is a tactile dot above **▶** and to the right of VOL +.

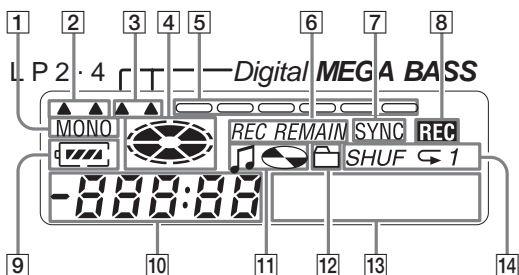
## Using the hand strap

While jogging, use the supplied hand strap.

Put your hand between the recorder and the strap, and then hold the recorder as the illustrations below:



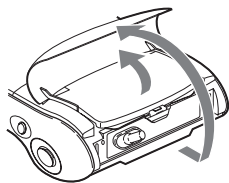
## The display window of the recorder



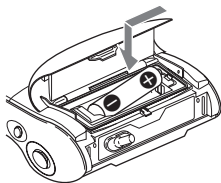
- |  |  |
|--|--|
| <p><b>1</b> MONO (monaural) indication</p> <p><b>2</b> LP mode indication</p> <p><b>3</b> Mega bass indication</p> <p><b>4</b> Disc indication<br/>Shows that the disc is rotating for recording, playing or editing an MD.</p> <p><b>5</b> Level meter<br/>Shows the volume of the MD being played or recorded.</p> <p><b>6</b> REC REMAIN/REMAIN (remaining time/tracks) indication<br/>Lights up along with the remaining time of the track, the remaining time of the MD, or the remaining number of tracks.</p> <p><b>7</b> SYNC (synchro-recording) indication</p> | <p><b>8</b> REC indication<br/>Lights up while recording. When flashing, the recorder is in record standby mode.</p> <p><b>9</b> Battery indication<br/>Shows approximate battery condition.</p> <p><b>10</b> Time display</p> <p><b>11</b> Disc name/track name indication<br/>Lights up when labeling a disc or a track.</p> <p><b>12</b> Group indication<br/>Lights up when group mode is on.</p> <p><b>13</b> Character information display<br/>Displays the disc and track names, error messages, track numbers, etc.</p> <p><b>14</b> Play mode indication<br/>Shows play mode of the MD.</p> |
|--|--|

# Getting started!

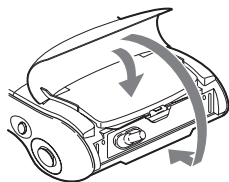
## 1 Insert an alkaline dry battery.



Lift up the buckle and the battery compartment lid to open.

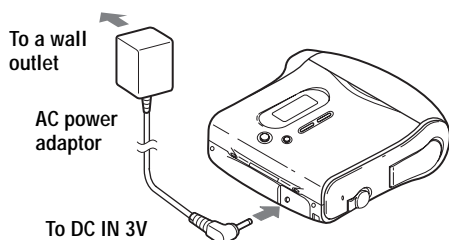


Insert an LR6 (SG) alkaline dry battery minus end first.



Close the lid and the buckle.

Using on a house current  
Connect the AC power adaptor.  
It is preferable to use the recorder on house current when recording for a long time.



### Battery life



For details, refer to "Battery life" (page 48).

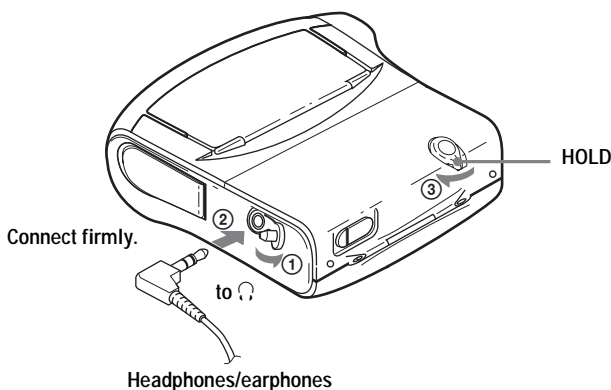
(Unit: Approx. hours)

LR6 (SG) alkaline dry battery	Normal	LP2	LP4
Recording	9	13	16
Playback	40	49	54

## 2

Connect the headphones/earphones and unlock the HOLD control.

- ① Pull off the rubber cap that covers the  jack.
- ② Connect the headphones/earphones to the  jack.
- ③ Slide the HOLD switch in the direction shown in the illustration below:



# Recording an MD right away! (Synchro-recording)

This section explains the basic procedure for making digital recordings using an optical cable connected to a CD player, Digital TV or other digital equipment. (For further information, see “System limitations” (page 52)) During synchro-recording, the recorder starts and stops recording in sync with the sound source. Track marks are added wherever they appear in the sound source. It is recommended to use the AC power adaptor when recording.

To record from an analog source such as a cassette deck or a radio → “Recording in analog (Analog Recording)” (page 25).

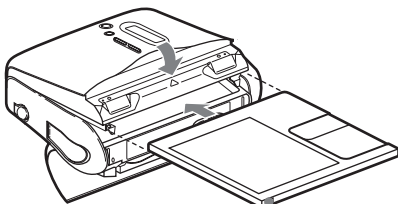
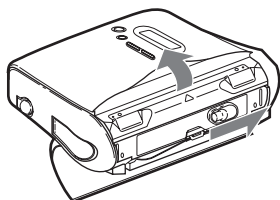
To record using group mode → “Recording tracks using the group function (Group Mode Recording)” (page 27).

## 1 Insert an MD.

### (Use a recordable MD for recording)

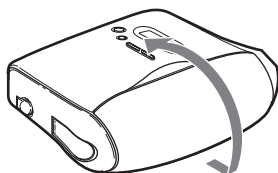
Before you open the MD disc lid, open the buckle first.

- ① Slide the OPEN switch to the direction of the arrow shown in the illustration below.
- ② Insert an MD with the label side facing front, and press the lid down to close.

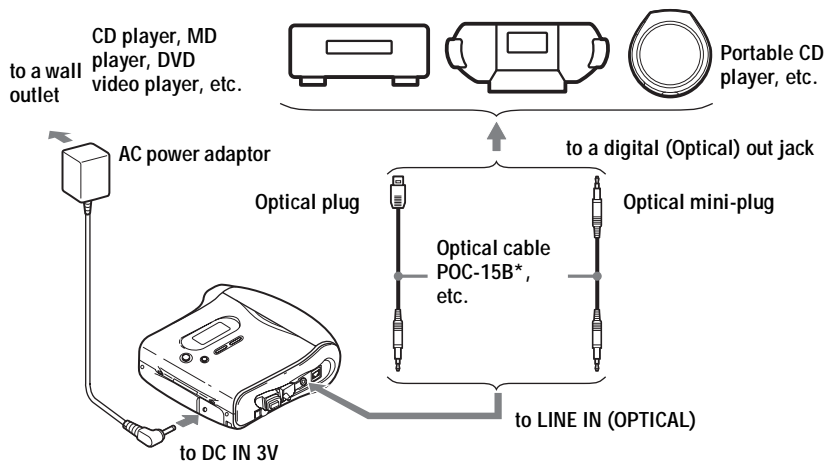


Make sure to check the record-protect tab is closed.

- ③ Close the buckle.

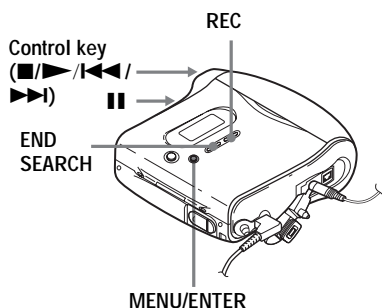


## 2 Make connections. (Insert the cables firmly and completely into the appropriate jacks)



\* See "Optional accessories" (page 64)

## 3 Record an MD.



- ① While the recorder is stopped, press **MENU**.  
Menu items appear in the display.
- ② Press **◀◀** or **▶▶** repeatedly until "SYNC-R" flashes in the display, and then press **ENTER**.
- ③ Press **◀◀** or **▶▶** repeatedly until "ON" flashes in the display, and then press **ENTER**.
- ④ Press **▶** while pressing **REC**.  
The recorder pauses and stands by for recording.
- ⑤ Play the source you want to record.  
The recorder starts recording automatically when it receives the playing sound.

### To stop recording, press ■.

After you press **■** to stop, the recorder will automatically turn off in about 10 seconds (when using the dry battery) or about 3 minutes (when using the AC power adaptor).

### To cancel synchro-recording

Press **◀◀** or **▶▶** repeatedly until "OFF" flashes in the display in step ③, and then press **ENTER**.

### Note

If you record on a previously recorded disc, the recorder is factory set to overwrite the entire contents of the disc. If you want the recording to start after the existing contents, do the procedure "Recording without overwriting existing material" (page 29) before doing step 3, ("Record an MD.", page 19).

To	Press
Record from the end of the current contents <sup>1)</sup>	If "R-Posi" (the record-starting position setting) is set to "FrHere", press <b>END SEARCH</b> , and then press <b>▶</b> while pressing <b>REC</b> . If "R-Posi" is set to "Fr End", press <b>▶</b> while pressing <b>REC</b> .
Record over partway through the previous recording <sup>1)</sup>	<b>▶▶</b> , <b>◀◀</b> , or <b>▶▶</b> to find the start point of recording and press <b>■</b> to stop. Then press <b>▶</b> while pressing <b>REC</b> .
Pause	<b>  </b> <sup>2)</sup> . Press <b>  </b> again to resume recording.
Remove the MD	<b>■</b> , and open the lid. <sup>3)</sup> (The lid does not open while "Edit" is flashing in the display.)

- 1) If “R-Posi” is set to “Fr End”, recording operations will always start from the end of the previously recorded material without pressing END SEARCH button (page 29).
- 2) A track mark is added at the point where you press **II** again to resume recording while pausing; thus the remainder of the track will be counted as a new track.
- 3) If you open the lid while “R-Posi” is set to “FrHere”, recording will begin from the top of the disc the next time you record. Check the point to start recording on the display.

### ***If the recording does not start***

- Make sure the recorder is not locked (page 16, 47).
- Make sure the MD is not record-protected (page 50).
- Premastered MDs cannot be recorded over.

### **About the DSP TYPE-R for ATRAC**

“TYPE-R” is a high-level Sony specification used in the Digital Signal Processor (DSP), which is the heart of the MiniDisc sound. This technology gives the MiniDisc recorder twice the signal processing capability as previous MiniDisc Walkman models, producing a sound quality close to that of MiniDisc decks. This unit supports the “TYPE-R” function only during recording or playback in normal stereo (or monaural) mode. It does not support this function in MDLP mode, or during the checking out of audio data from the computer in normal stereo (or monaural) mode using SonicStage.

### **Notes**


- The pause function cannot be turned on or off manually during synchro-recording. Press **■** to stop recording.
- Do not change SYNC-R setting while recording. Recording may not be done properly.
- 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 approximately 2 seconds during synchro-recording from a sound source other than a CD or an MD, a new track mark is automatically added at the point where the silent portion ends.
- You cannot change the recording mode during recording.
- “Saving” or “Edit” flashes while data of the recording (the track’s start and end points, etc.) is being recorded. Do not move the recorder or disconnect the power source while the indication is flashing in the display.

- The lid does not open until “Edit” disappears in the display.
- 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 “Edit” appears in the display, then it will not be possible to open the lid until power is restored.
- You can make a digital recording only from an optical type output.
- When recording from a portable CD player, set the CD player to pause, and then do the recording procedure on the recorder.
- Note the following when recording from a portable CD player:
  - Some portable CD players may not be capable of digital out when the AC power adaptor is disconnected. If this is the case, connect the AC power adaptor to the portable CD player and use it on AC power as the power source.
  - On some portable CD players, optical output may not be possible when using an anti-skip function (e.g., ESP\* or G-PROTECTION). If this is the case, turn off the anti-skip function.

\* Electronic Shock Protection



- 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.

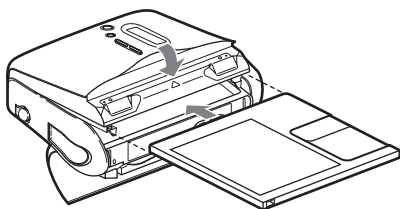
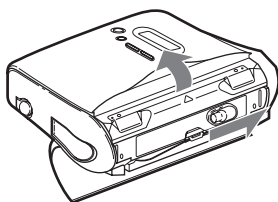
- For longer recording, follow step 1 of “Long-time recording (MDLP)” (page 26) to select the recording mode, and then start the procedure of synchro-recording.
- LINE IN (OPTICAL) jack is for both digital and analog input. The recorder automatically recognizes the type of line cable and switches to digital or analog input.
- The recording level is adjusted automatically. To adjust the level manually, see “Adjusting the recording level manually (Manual Recording)” (page 31).
- You can monitor the sound during recording. Connect the headphones/earphones to  and adjust the volume by pressing VOL +/- . This does not affect the recording level.

# Playing an MD right away!

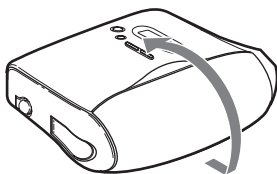
## 1 Insert an MD.

Before you open the MD disc lid, open the buckle first.

- ① Slide the OPEN switch to the direction of the arrow shown in the illustration below.
- ② Insert an MD with the label side facing front, and press the lid down to close.

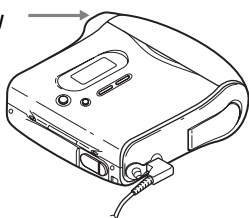


- ③ Close the buckle.



## 2 Play an MD.

Control key  
(VOL +/-/  
▶/■)



### ① Press ▶.

A short beep sounds in the headphones/earphones.

### 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/earphones.

After you press ■ on the recorder to stop, the recorder will automatically turn off in about 10 seconds (when using the dry battery) or about 3 minutes (when using the AC power adaptor). Playback starts from the point you last stopped playing. To start playback from the beginning of the first track, press and hold ▶ for 2 seconds or more on the recorder.

To	Press
Find the beginning of the current track or a previous track <sup>1)</sup>	◀◀. Press ◀◀ repeatedly until the beginning of the desired track.
Find the beginning of the next track <sup>2)</sup>	▶▶ once.
Go backwards while playing	Press and hold ◀◀.
Go forward while playing	Press and hold ▶▶.
Pause	. Press    again to resume play.
Remove the MD	■, and open the lid. <sup>3)</sup>

<sup>1)</sup> If you press ◀◀ twice continuously while playing the first track of the disc, the recorder goes to the beginning of the last track on the disc.

<sup>2)</sup> If you press ▶▶ during the last track of the disc, the recorder goes to the beginning of the first track on the disc.

<sup>3)</sup> 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 16, 47).

### Suppressing the skips of the sound (G-PROTECTION)

The G-PROTECTION function was developed to provide a higher level of shock resistance than that of existing players.

### Note

The playback sound may skip if:

- the recorder receives stronger continuous shock.
- a dirty or scratched MiniDisc is played.



- The playback mode will switch automatically (stereo, LP2 stereo, LP4 stereo, or monaural).
- To play only the tracks in a certain group, see "Using the group function (Group Mode)" (page 33).

### Note on digital and analog recording (Digital input and analog input)

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 an MD right away! (Synchro-recording)” (page 17) to record using digital (optical) input, and “Recording in analog (Analog Recording)” (page 25) 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 (CD player, DVD player, etc.)	Equipment with an analog (line) output jack (Cassette deck, radio, record player, etc.)
Usable cord	Optical cable (with an optical or an optical-mini plug) (page 18)	Line cable (with 2 phono plugs or a stereo-mini plug) (page 25)
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.
Track marks <sup>1)</sup>	Marked (copied) automatically <ul style="list-style-type: none"><li>• at the same positions as the source (when the sound source is a CD or an MD).</li><li>• after more than 2 seconds of blank (page 66) or low-level segment (with a sound source other than a CD or an MD).</li><li>• when the recorder is paused (3 seconds of no sound is encountered while synchro-recording)</li></ul>	Marked automatically <ul style="list-style-type: none"><li>• after more than 2 seconds of blank (page 66) or low-level segment.</li><li>• when the recorder is paused while recording.</li></ul>
Recorded sound level	Same as the source. Can also be adjusted manually (Digital REC level control) (“Adjusting the recording level manually (Manual Recording)”, page 31).	Adjusted automatically. Can also be adjusted manually (“Adjusting the recording level manually (Manual Recording)”, page 31).

<sup>1)</sup> You can erase unnecessary marks after recording. (“Erasing a track mark”, page 43).

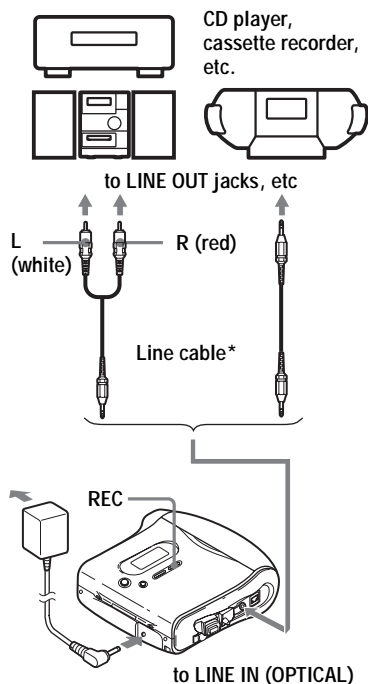
#### Note

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 programs with audio that is digitally broadcast (e.g., digital TV) are recorded through the digital (optical) input.

## Recording in analog (Analog Recording)

The sound will be input from the connected equipment as an analog signal, but recorded digitally to the disc.  
To connect to a sound source, an optional line cable is required. When connecting the cable, make sure to insert the connectors firmly.



\* Use the connecting cords without an attenuator. To connect to a portable CD player with a stereo mini-jack, use the RK-G136 connecting cord. For more information on connecting cords, see (“Optional accessories”, page 64).


1 Press **▶** while pressing REC.  
REC indication lights up in the display and recording starts.

2 Play the source you want to record.  
For other recording operations, see “Recording an MD right away! (Synchro-recording)” (page 17).



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.

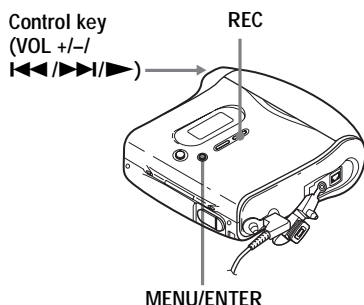
### Notes

- If you temporarily stop a recording operation by pressing **||**, a track mark will be added at that point when you press **||** again to resume recording. The recording continues from a new track.
- When the jacks (DC IN 3V, USB connecting jack, LINE IN (OPTICAL) jack, ) are not in use, cover them with rubber caps.

## Long-time recording (MDLP)

Select each recording mode according to the recording time that you want. Stereo recording is possible at 2 times (LP2) or 4 times (LP4) the normal (stereo) recording time. Monaural recording at 2 times normal recording time is also possible.

**MDs recorded in monaural, LP2, or LP4 mode can be played back only on MD players or recorders with monaural, LP2, or LP4 playback mode.**



- 1 While the recorder is stopped, press MENU.
- 2 Press **◀◀** or **▶▶** repeatedly until "R-MODE" flashes in the display, and then press ENTER.
- 3 Press **◀◀** or **▶▶** repeatedly to select the desired recording mode, and then press ENTER.  
Each time you press **◀◀** or **▶▶**, the display changes as follows:

Recording mode <sup>1)</sup>	Display	Recording time <sup>3)</sup>
SP stereo	SP	Approx. 80 min.
LP2 stereo	LP2	Approx. 160 min.

Recording mode <sup>1)</sup>	Display	Recording time <sup>3)</sup>
LP4 stereo	LP4	Approx. 320 min.
Monaural <sup>2)</sup>	MONO	Approx. 160 min.

<sup>1)</sup> For better sound quality, record in normal stereo (SP) or LP2 stereo mode.

<sup>2)</sup> If you record a stereo source in monaural, the sound from left and right will be mixed.

<sup>3)</sup> When using an 80-minute recordable MD

4 Press **▶** while pressing REC.

5 Play the sound source.

To stop recording, press **■**.

The recorder remains at the previous setting of the recording mode when you record the next time.

## When you do not want "LP:" added automatically at the beginning of a track

When "LP:" is added to the beginning of a track, "LP:" is displayed whenever an attempt is made to play or edit the disc on a unit that does not support MDLP mode. This display lets you know that playback or editing of the track is not possible on the machine being used. The recorder is factory set to add "LP:" at the start of each track.

- 1 While the recorder is stopped, press MENU.
- 2 Press **◀◀** or **▶▶** repeatedly until "OPTION" flashes in the display, and then press ENTER.
- 3 Press **◀◀** or **▶▶** repeatedly until "LPStmp" flashes in the display, and then press ENTER.

- 4 Press **◀◀** or **▶▶** repeatedly until “OFF” flashes in the display, and then press **ENTER**.

If you want “LP:” added, select “ON” in this step, and then press **ENTER**.

### Note

“LP:” is added to tracks checked-out in LP stereo from your computer regardless of the “LP Stamp” setting. If you want to delete “LP:”, do the procedure “Relabeling recordings” (page 39)



- Audio components that support the LP2 stereo or LP4 stereo modes are indicated by the **MDLP** or **MDLP** logo marks.
- If you set the recorder so that “LP:” is not added at the beginning of the track, you will be able to enter longer track names by using the full length of the text string “Relabeling recordings” (page 39).
- You can achieve high sound quality and rich tones when recording in SP stereo (or monaural) thanks to the newly developed DSP TYPE-R for ATRAC (Adaptive Transform Acoustic Coding) (page 20).

### Notes

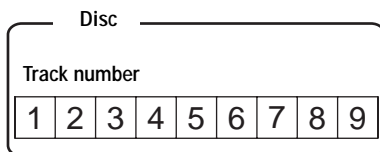
- It is recommended that you use the AC power adaptor for long recordings.
- During monaural recording of a stereo sound source connected through the digital (optical) input jack, you can still monitor the recorded sound in stereo by using headphones or earphones connected to the jack.
- Sound recorded through digital (optical) input can be monitored in stereo through headphones/earphones, etc.
- When you record in LP4 mode, momentary noise may be produced on very rare occasions with certain sound sources. This is because of the special digital audio compression technology that enables a recording time of 4 times longer than normal. If noise is produced, it is recommended that you record in normal stereo or LP2 mode to obtain better sound quality.

## Recording tracks using the group function (Group Mode Recording)

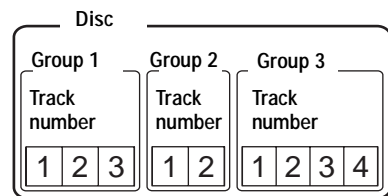
What is the group function (Group Mode)?

It is a function that allows you to separate tracks on a disc into different groups for playback, recording and editing.

When group mode is OFF.



When group mode is ON.



It is convenient for managing multiple CD albums recorded in MDLP (LP2 stereo/LP4 stereo) mode onto a single MD. You can create a maximum of 99 groups on a disc.

How is group information recorded?

When recording in group mode, the group information is written to the disc name recording area.

This information consists of text strings that are written as shown in the following example.

**Disc name recording area**

**Example**

0;Favorites//1-5;Rock//6-9;Pops//

①

②

③

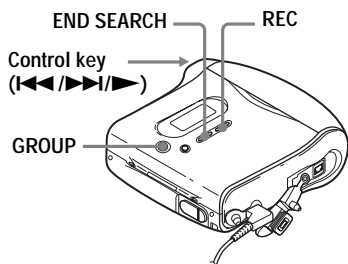
- ① Disc name: "Favorites"
- ② Group name for tracks 1 to 5: "Rock"
- ③ Group name for tracks 6 to 9: "Pops"

Therefore, the above character string is displayed in its entirety as the disc name if you load an MD recorded in group mode into a system that does not support group mode, or if you try to edit the contents of a disc on this recorder with group mode turned off.

**It is possible to change the character string by doing "Relabeling recordings" procedure in the "Labeling/relabeling recordings" (page 37). Note that if you rewrite this character string by mistake, you may be unable to use the group function of that MD.**

#### Notes

- The group function setting is stored even if you eject the MD or turn off the recorder.
- In group mode, the recorder treats all tracks without group settings as belonging to the last group on the disc. The last group is indicated in the display window on the recorder as "GP --". Within a group, the tracks appear in their order on the disc, not their order within the group.



---

## To activate group mode (Group Mode Recording)

To record tracks in group mode, you must first turn group mode on before the start of recording.

- 1 Press GROUP for 2 seconds or more. " " and "GP ON" light up and group mode turns on.

To cancel group mode, press GROUP for 2 seconds or more again.

---

## Recording a track into a new group

- Turn group mode on.


- 1 Press END SEARCH while the recorder is stopped.
- 2 Press ► while pressing REC.
- 3 Play the source sound.

### To stop recording

Press ■. The material that was recorded up until ■ was pressed is entered as a new group.

## Recording a track into an existing group

- Turn group mode on.
- Insert a disc with group settings.

- 1 Press **GROUP**.  
“” flashes in the display and you can select a group directly (Group Skip Mode) (page 33).
- 2 Within 5 seconds, press **◀◀** or **▶▶** repeatedly until the group you want the track to belong to appears.
- 3 Press **▶** while pressing **REC**.
- 4 Play the source sound.  
The newly recorded track is added after the current contents.

### Notes

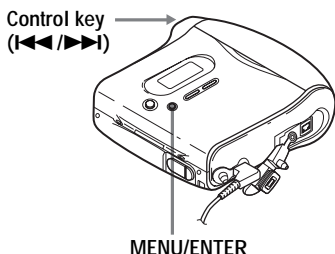
- Even if “R-Posi” is set to “FrHere”, newly recorded tracks are inserted after the existing tracks in the specified group without recording over the current contents.
- Group skip mode turns off automatically in step 2 if nothing is done within 5 seconds.  
To continue the procedure, do step 1 again.



To add a track that is playing to a group, stop playing the track first, and then do the procedure from step 3.

## Recording without overwriting existing material

If you wish to avoid overwriting the current contents of an MD, do the following procedure. All new material will then be recorded from the end of the current contents. The recorder is factory set to record over existing material.



- 1 While the recorder is stopped, press **MENU**.
- 2 Press **◀◀** or **▶▶** until “OPTION” flashes in the display, and then press **ENTER**.
- 3 Press **◀◀** or **▶▶** repeatedly until “R-Posi” flashes in the display, and then press **ENTER**.
- 4 Press **◀◀** or **▶▶** repeatedly until “Fr End” flashes in the display, and then press **ENTER**.

To start recording from the current point

Select “FrHere” in step 4.



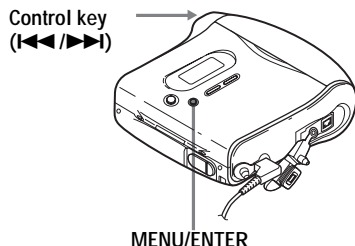
To temporarily record without recording over the current contents, press **END SEARCH** before the start of recording. The recording will begin after the last track, even if “R-Posi” is set to “FrHere” (factory setting). The remaining recordable time on the disc will appear in the display when you press **END SEARCH**.

## Notes

- The setting will remain even after the power is turned off.
- If you start recording while the recorder is in play-pause mode, the recording will begin from the point at which it is paused even when the “R-Posi” is set to “Fr End”.

## Adding track marks automatically (Auto Time Mark)

Use this feature to add track marks automatically at specified intervals when recording through the analog input connector.



- 1 While the recorder is recording or in recording pause, press MENU.
- 2 Press ◀◀ or ▶▶ repeatedly until “TimeMk” flashes in the display, and then press ENTER.
- 3 Press ◀◀ or ▶▶ repeatedly until the desired time interval flashes in the display, and then press ENTER.

Select one of the following intervals:

Display	Time
OFF	—
5 min	Approx. 5 min.
10 min	Approx. 10 min.
15 min	Approx. 15 min.

To cancel Auto Time Mark

Select “OFF”, and then press ENTER in step 3, or stop recording.

Using Auto Time Mark to add track marks while recording

### When the elapsed recording time exceeds the time interval for Auto Time Mark:

The recorder adds track marks at the point you set the time interval and from that point the recorder adds a track mark whenever the time interval has elapsed.

Example: Eight minutes of recording has been completed when the Auto Time Mark time interval is set to 5 minutes. A track mark will be added at the 8-minute point (after the start of recording) and after each 5-minute interval thereafter.

### When the time interval set for Auto Time Mark exceeds the elapsed recording time:

The recorder adds a track mark when the set Auto Time Mark time interval has elapsed.

Example: Three minutes of recording has been completed when the Auto Time Mark time interval is set to 5 minutes. A track mark will be added at the 5-minute point (after the start of recording) and after each 5-minute interval thereafter.



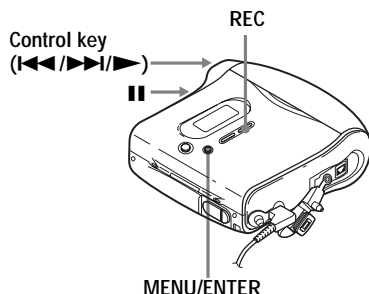
“T” appears before the track display on the recorder for track marks added by Auto Time Mark.

## Notes

- Automatic track marking by Auto Time Mark starts when you add a normal track mark to the disc (i.e., by pressing T MARK or II, etc.).
- The setting will be lost when the recording is stopped.

## Adjusting the recording level manually (Manual Recording)

When you record, the sound level is adjusted automatically. If necessary, you can set the recording level manually during both analog and digital recording.



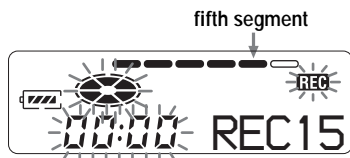
- 1 Press REC while pressing **II**.  
The recorder stands by for recording.
- 2 Press MENU.
- 3 Press **I◀◀** or **▶▶I** repeatedly until "RecVol" flashes in the display, and then press ENTER.
- 4 Press **I◀◀** or **▶▶I** repeatedly until "Manual" flashes in the display, and then press ENTER.



- 5 Play the source.

- 6 While observing the level meter in the display, adjust the recording level by pressing **I◀◀** or **▶▶I**.

Set the level so that the maximum input lights up the fifth segment on the level meter. If the sixth segment lights up, lower the level by pressing **I◀◀**.



Recording does not 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.

- 7 Press **II** again to start recording.

To switch back to automatic level control

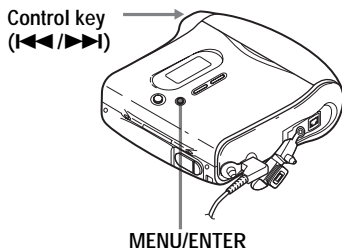
Select "Auto" in step 4.

### Notes

- If you press **II** during recording operation, the recorder will revert to automatic recording level adjustment mode the next time you start a recording operation.
- To set the recording level manually during synchro-recording, do the procedure below.
  - 1 Select "OFF" in step 3 of "Record an MD." (page 19).
  - 2 Do steps 1 to 6 of manual recording procedure (page 31). Then do steps 2 and 3, and select "ON" in the synchro-recording procedure (page 19).  
Recording starts automatically whenever the source sound is played.
- You cannot switch from "Auto" to "Manual" (or vice-versa) during recording.

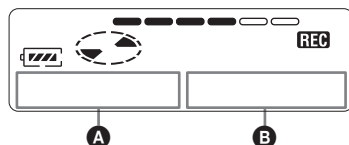
## Checking the remaining recordable time

You can check the remaining time, track number, etc. when recording or during stop. Group-related items appear only when a track with group settings is played and then stopped.



- 1 While the recorder is recording or stopped, press MENU.
- 2 Press **◀◀** or **▶▶** repeatedly until “DISP” flashes in the display, and then press ENTER again.
- 3 Press **◀◀** or **▶▶** repeatedly until the information you want flashes in the display.  
Each time you press **▶▶**, the display changes as follows:

### Display window on the recorder



#### On B

##### LapTim

The elapsed time of the current track.

##### RecRem

The remaining recordable time.

##### GP Rem

The remaining time after the current track in a group.

##### AllRem

The remaining time after the current location.

### Note

Items may not be selectable depending on group mode's on/off status or the recorder's operating status.

#### 4 Press ENTER.

The information selected in step 3 appears in **A** and **B**.

**A** — track number, track name, group name, or disc name.

**B** — the information selected in step 3.

### Note

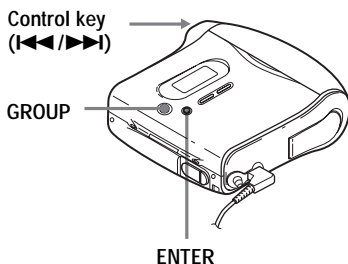
Items may appear differently depending on group mode's on/off status, the recorder's operating status, or the recorder settings.



If you want to check the playing position or track name while playing, see page 36.


### Using the group function (Group Mode)

The recorder can operate various playback with a disc which has group settings. For more information on group mode, see “Recording tracks using the group function (Group Mode Recording)” (page 27)





### Listening to tracks in a specific group (Group Mode Playback)

- Insert a disc with group settings.

- 1 Start playback.
- 2 Press GROUP for 2 seconds or more. “” and “GP ON” light up in the display and the group mode turns on. Playback stops at the end of the last track in the selected group. For details on selecting another group, see “Selecting and playing groups (Group Skip Mode)” (page 33).



- You can also change play modes (repeat play, or shuffle play) in the selected group. After the procedures here, follow the steps of “Changing play modes” (page 34).
- In group mode, pressing  on the recorder during the last track of the group moves playback to the first track of the group, and pressing  twice continuously on the recorder or the remote control during the first track of the group moves playback to the last track of the group.

To turn off the group function  
Press GROUP for 2 seconds or more again.

#### Note

In group mode, the recorder treats all tracks without group settings as belonging to the last group on the disc. The last group is indicated in the display window on the recorder as “GP --”. Within a group, the tracks appear in their order on the disc, not their order within the group.

### Selecting and playing groups (Group Skip Mode)

Operations are possible regardless of whether group mode is on or off. However, playback on the recorder will differ, depending on whether group mode is on or off.

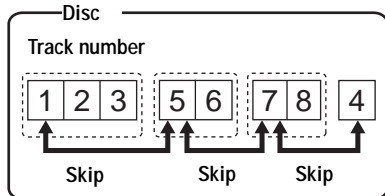
#### • When group mode is on:

Playback starts from the first track of the selected group and ends with the last track in the group.

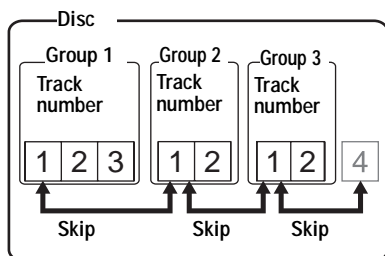
#### • When group mode is off:

Playback starts from the first track of the selected group and ends with the last track in the disc.

When group mode is off:



When group mode is on:



- Insert a disc with group settings.

- 1 Press GROUP.  
“” flashes in the display and groups become selectable.
- 2 Within 5 seconds, press or repeatedly to select your desired group, and then press ENTER.  
The recorder starts playing from the first track in the group.

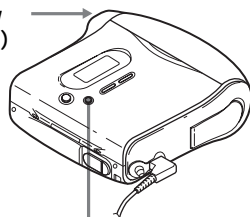
#### Note

If no operation is performed within 5 seconds after step 1, group skip mode will be canceled and you will not be able to perform step 2 thereafter. To continue with step 1 at this point, repeat from the beginning of the procedure.

## Changing play modes

You can select from various play modes such as repeat play (AllRep), single repeat (1 Rep), and shuffle repeat (Shuf.R).

Control key  
( )



MENU/ENTER

- 1 While the recorder is playing, press MENU.
- 2 Press or repeatedly until “P-MODE” flashes in the display, and then press ENTER again.
- 3 Press or repeatedly to select play mode, and then press ENTER.

### Display window on the recorder



When you press , B changes.  
When you press ENTER, A appears.

On **B/A**

**Normal**/(none)

All the tracks are played once.

↓  
**AllRep**/↺

All the tracks are played repeatedly.

↓  
**1 Rep**/↺ 1

A single track is played repeatedly.

↓  
**Shuf.R/Shuf**↺

After the currently selected track finishes playing, the remaining tracks are played repeatedly in random order.

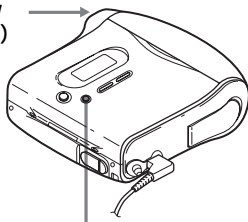


You can specify play mode for a selected group when group mode is on. To activate group mode, see “Selecting and playing groups (Group Skip Mode)” (page 33).

## 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/earphones.

Control key  
(**◀◀/▶▶**)



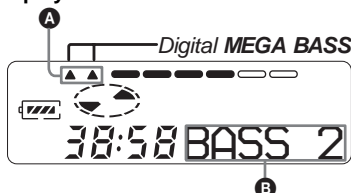
**MENU/ENTER**

- 1 Press **MENU**, press **◀◀** or **▶▶** repeatedly until “**BASS**” flashes in the display, and then press **ENTER** again.

- 2 Press **◀◀** or **▶▶** to select the item, and then press **ENTER**.

Each time you press **▶▶**, **A** and **B** change as follows:

### Display window



On **B/A**

**OFF**/(none)

Normal play

↓  
**BASS 1**/ ▲

Mega Bass (moderate effect)

↓  
**BASS 2**/ ▲▲

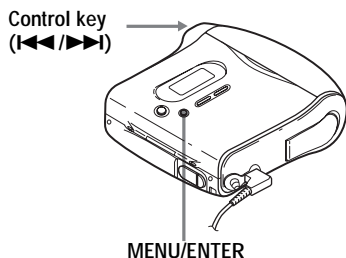
Mega Bass (strong effect)

### Notes

- If the sound becomes distorted when emphasizing bass, turn down the volume.
- The Mega Bass function does not affect the sound that is being recorded.

## Checking the remaining time or the playing position

You can check the track name, disc name, etc. during playback. Group-related items appear only when a track with group settings is played.



- 1 While the recorder is playing, press MENU.
- 2 Press ◀◀ or ▶▶ repeatedly until "DISP" flashes in the display, and then press ENTER again.
- 3 Press ◀◀ or ▶▶ repeatedly until the information you want flashes in the display.  
Each time you press ▶▶, the display changes as follows:

Display window on the recorder



### On B

#### LapTim

The elapsed time of the current track.

#### 1 Rem

The remaining time of the current track.

#### GP Rem

The remaining time after the current location in the group.

#### AllRem

The remaining time after the current location.

- 4 Press ENTER (ENTER).

The display changes as follows:  
The information selected in step 3 appears in A and B.

A — the information selected in step 3.

B — track number, track name, group name, or disc name.

### Note

Items may appear differently or may not be selectable, depending on the group mode's on/off status or the recorder's operating status.



If you want to check the remaining time or the recording position while recording or in stop mode, see page 32.

# Editing recorded tracks

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

- You cannot edit tracks on an MD that is record-protected. Before editing tracks, close the tab on the side of the MD (page 50).
- If you perform an editing operation while playing, be sure not to turn the power off until "Edit" disappears in the display.
- Do not move the recorder while "Edit"\* is flashing in the display.
- The lid will not open until "Edit" disappears in the display after editing.
- When group mode is on, editing can be performed only for the tracks registered into the selected group.

## Labeling/relabeling recordings

You can name tracks, groups and discs using the recorder's character palette.

### Available characters

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

### Numbers of characters you can input

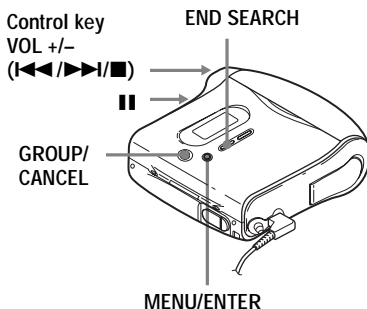
Track, group, or disc name: Approx. 200 each

### Numbers of characters you can input in a disc

Numbers/marks: Approx. 1,700

## Notes

- "FULL" appears when you try to enter more than 1,700 characters on a disc. Enter a shorter name for the track, group, or disc, or set the "LPStmp" setting to "OFF" when recording in MDLP mode so that "LP:" is not be added at the beginning of the track name (page 26).
- When labeling a disc which has been recorded using the group function, make sure group mode is on in order to prevent the group management information from being overwritten by mistake.
- If you enter the symbol "/" between the characters in disc names such as "abc//def", you may be unable to use the group function.



## Labeling recordings

- 1 Insert a disc and do the following operations:

### To label a track

Start playing or recording a track you want to label, and label the track while playing or recording operations.

### To label a group

Turn group mode on (page 28) and start playing or recording a track within the group you want to label, and label the group while playing or recording operations.

### To label a disc

If a disc is already recorded, follow the procedures from step 2 while the recorder is stopped. If a disc is new, start recording and label a disc while recording.

If you label a disc with group settings, turn group mode on (page 28).

- 2 Press MENU.
- 3 Press ◀◀ or ▶▶ repeatedly until "EDIT" flashes in the display, and then press ENTER.
- 4 Press ◀◀ or ▶▶ repeatedly until the following item appears in the display, and then press ENTER.

### When labeling a track

"T: Name"

### When labeling a group

"G: Name"

### When labeling a disc

"D: Name"

The cursor flashes and the track, group, or disc is ready to be labeled. The disc is ready to be labeled.

- 5 Press VOL + or VOL – repeatedly to select a letter and press ENTER. The selected letter stops flashing and the cursor moves to the next input position.

The buttons used for character input and their functions are listed below:

Functions	Operations
To select a character	Press VOL + or VOL –.
To enter a letter	Press ENTER .
To enter a name	Press ENTER for 2 second or more.
To insert a blank space to type in a new letter	Press VOL + and END SEARCH at the same time.
To delete a letter and move back all following letters to the left	Press VOL – and END SEARCH at the same time.
To cancel labeling	Press CANCEL.

- 6 Repeat step 5 and enter all characters of the label name.
- 7 Press ENTER for 2 seconds or more. The track or disc is labeled.

### To cancel labeling

Press CANCEL in step 6.

### Notes

- When the recording is stopped while labeling a track, a group, 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.
- "LP:" is automatically added at the beginning of the track name for tracks recorded in MDLP mode (page 26).
- You cannot label or relabel the premastered disc or blank disc.

## Relabeling recordings

- 1 Insert a disc and do the following operations:

### To relabel a track

Start playing a track you want to relabel, and change a track name during playback operation.

### To relabel a group

Turn group mode on (page 28) and start playing or recording a track within the group you want to relabel, and change the group name while playing or recording operations.

### To relabel a disc

If the disc is already recorded, follow the procedures from step 2 while the recorder is stopped.

If you relabel a disc with group settings, turn group mode on (page 28).

- 2 Follow steps 2 to 4 of “Labeling recordings” (page 38) to display a track, group, or disc name.
- 3 Follow steps 5 to 7 of “Labeling recordings” (page 38), and then keep pressing ENTER for 2 seconds or more.

### Notes

- You cannot relabel premastered MDs.
- The recorder cannot rewrite a disc or track name of more than 200 letters that was created by another device.

To cancel labeling

Press CANCEL.

## Registering tracks or groups as a new group (Group Setting)

Do the following procedure to register tracks or groups as a new group. The tracks or groups must, however, be sequential. If the desired tracks or groups are not consecutive, you must move them to make them consecutive before you can register them (“Moving recorded tracks”, page 41). The operation of this function depends on whether group mode is on or off.

- When group mode is ON:  
Several groups are registered as one group.
- When group mode is OFF:  
Several tracks are registered as one group.

The following section explains the operation when group mode is on.

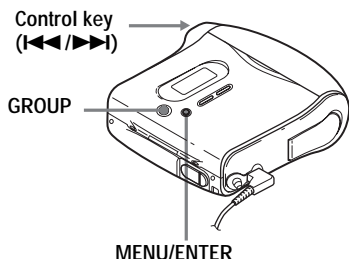
Group				Group				
1	2	3	4	5	6	7	8	9

Making a new group with tracks 1 to 3.

Making a new group with 2 groups.

Group				Group				
1	2	3	4	5	6	7	8	9

- Registration of non-consecutive tracks is not possible (for example, track 3 cannot be registered into a group with track 5 to 7).
- Tracks always appear according to their order on the disc, not their order within the group (even when group mode is on)
- Insert a disc.



1 While the recorder is stopped, press MENU.

2 Press I◀◀ or ▶▶I repeatedly until “EDIT” flashes in the display, and then press ENTER.

3 Press I◀◀ or ▶▶I repeatedly until “G:Set” flashes in the display, and then press ENTER.

The track number of the first track (“STR”) appears in the display.



4 Press I◀◀ or ▶▶I repeatedly until the number or name of the desired first track flashes in the display, and then press ENTER.

This selects the first track of the new group.

Even when group mode is on, track numbers appear according to their order on the disc, not their order within the group.

5 Press I◀◀ or ▶▶I repeatedly until the number or name of the desired last track flashes in the display, and then press ENTER.

The track number of the last track in the group (“END”) appears in the display.

This selects the last track of the new group.

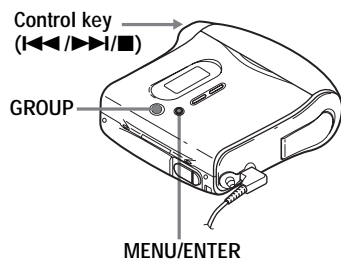
6 Follow steps 4 to 7 of “Labeling recordings” (page 38) to label a group.

### Notes

- In step 4, the first track must either be the first track of an existing group or a track that does not belong to a group.
- When selecting the last track in step 5, make sure the track comes after the one selected in step 4. The last track must either be the last track of an existing group or a track that does not belong to a group.

## To release a group setting

- Insert a disc with group settings.



1 Press GROUP for 2 seconds or more to turn on group mode.

2 Select a group that you want to release and check the contents (see “Selecting and playing groups (Group Skip Mode)” (page 33)).

- 3 Press ■.
- 4 Press MENU.
- 5 Press ◀◀ or ▶▶ repeatedly until “EDIT” flashes in the display, and then press ENTER.
- 6 Press ◀◀ or ▶▶ repeatedly until “G:Rls” flashes in the display, and press ENTER.  
“G:Rls?” and “ENTER” appear in the display.
- 7 Press ENTER.  
The group setting of the selected group is released.

## Moving recorded tracks

You can change the order of the recorded tracks.

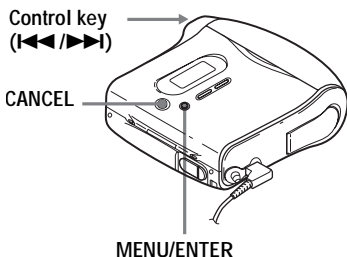
### Example

Move track C from the third to the second track.

#### Before moving



#### After moving



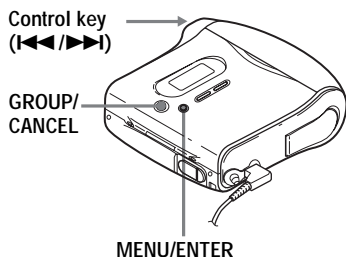
- 1 While playing the track you want to move, press MENU.
- 2 Press ◀◀ or ▶▶ repeatedly until “EDIT” flashes in the display, and then press ENTER again.  
“♪” and “T:Name” flashes in the display and the recorder plays the selected track repeatedly.
- 3 Press ◀◀ or ▶▶ repeatedly until “♪” and “T:Move” flashes in the display, and then press ENTER.  
For the example above, “003 →” and “→ 003” appear alternately in the display.
- 4 Press ◀◀ or ▶▶ to select the destination track number.  
For the example above, “003 →” and “→ 002” appear alternately in the display.
- 5 Press ENTER again.  
The track moves to the selected destination track.

To cancel moving

Press CANCEL in step 4.

## Moving a track to a different group

- Insert a disc with group settings



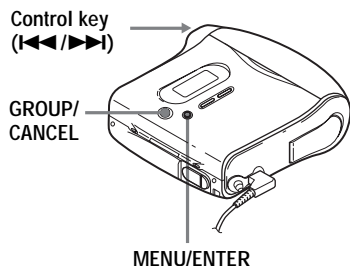
- 1 Press GROUP for 2 seconds or more. "⎓" lights up in the display group mode turns on.
- 2 While playing the track you want to move, press MENU.
- 3 Press ◀◀ or ▶▶ repeatedly until "EDIT" flashes in the display, and then press ENTER.  
The recorder plays the selected track repeatedly.
- 4 Press ◀◀ or ▶▶ repeatedly until "T:Move" flashes in the display, and then press ENTER.
- 5 Press ◀◀ or ▶▶ repeatedly until the destination group flashes in the display, and then press ENTER.
- 6 Press ◀◀ or ▶▶ repeatedly until the number of the destination track within the group flashes in the display, and then press ENTER.

To cancel moving

Press CANCEL in step 5.

## Changing the order of a group on a disc (Group Move)

- Insert a disc with group settings



- 1 Press GROUP for 2 seconds or more. "⎓" lights up in the display and group mode turns on.
- 2 While playing a track within a group whose order you want to change, press MENU.
- 3 Press ◀◀ or ▶▶ repeatedly until "EDIT" flashes in the display, and then press ENTER.
- 4 Press ◀◀ or ▶▶ repeatedly until "G:Move" flashes in the display, and then press ENTER.  
You can now move the selected group.
- 5 Press ◀◀ or ▶▶ repeatedly to select the destination point on the disc, and then press ENTER.

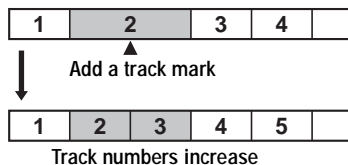
To cancel moving

Press CANCEL in step 5.

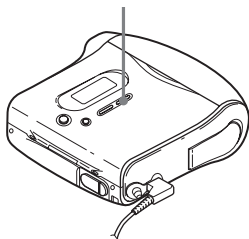
## Adding a track mark

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:

You cannot add a track mark on a track that has been checked-out from your computer.



T MARK



- 1 While playing or pausing an MD, press T MARK on the recorder at the point you want to mark.  
“MK ON” appears in the display, and a track mark is added. The track number will increase by one.

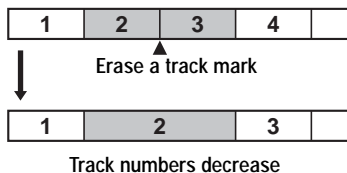
To add track marks while recording (except while synchro-recording)

Press T MARK on the recorder at the point you want to add a track mark. You can use Auto Time Stamp to add track marks automatically at specified intervals (except while digital recording) (page 30).

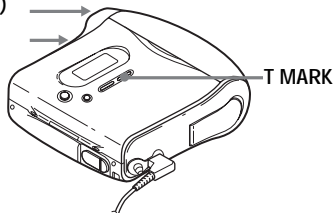
## Erasing a track mark

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:

You cannot erase a track mark on a track that has been checked-out from your computer.



Control key  
(◀◀)



- 1 While playing the track with the track mark you want to erase, press || 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. “MK 003” appears in the display for 2 seconds.

- 3 Press T MARK to erase the mark. “MK OFF” appears in the display. The track mark is erased and the two tracks are combined.



When you erase a track mark, name assigned to the mark is also erased.

### Notes

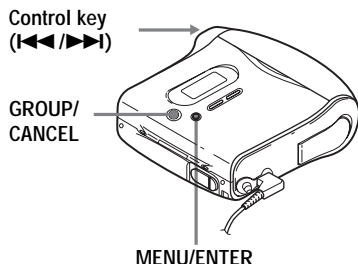
- When you erase a track mark between the two consecutive tracks that are registered into different groups while group mode is off, the second track is re-registered into the group containing the first track. In addition, if you combine a track that is registered to a group with a track that is not registered to a group (two consecutive tracks), the second track takes the same registration setting as the first track. However, when group mode is on, you can only combine tracks within the selected group.
- You cannot erase track marks according to the system limitations. For details, see “System limitations” (page 52).

---

## Erasing tracks

### Note

You can not erase tracks that have been checked out from your computer. You can not erase a group or an entire disc if it contains a checked-out track. In this case, check in the track or tracks to SonicStage.




---

### To erase a track

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

- 1 While playing the track you want to erase, press MENU.
- 2 Press ◀◀ or ▶▶ repeatedly until “EDIT” flashes in the display, and then press ENTER again.  
“♪” and “T:Name” flash in the display, and the recorder plays the selected track repeatedly.
- 3 Press ◀◀ or ▶▶ repeatedly until “♪” and “T:Ers” flash in the display, and then press ENTER.  
“Erase?” and “ENTER” appear alternately in the display.
- 4 Press ENTER 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 (page 43), then erase the part.

To cancel erasing  
Press CANCEL in step 3.

---


### 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 before you erase it.**

- 1 Play the disc you want to erase to check the contents.
- 2 Press ■ to stop.
- 3 While the recorder is stopped, press MENU.

4 Press **◀◀** or **▶▶** repeatedly until “EDIT” flashes in the display, and then press ENTER.

“” and “D:Name” flash in the display.

5 Press **◀◀** or **▶▶** repeatedly until “” and “D:Ers” flash in the display, and then press ENTER.

“Erase?” and “ENTER” appear alternately in the display.

6 Press ENTER again.

“Edit” flashes in the display, and all the tracks will be erased.

When erasing is complete, “BLANK” appears in the display.

To cancel erasing

Press CANCEL in step 5.

6 Press **◀◀** or **▶▶** repeatedly until “G:Ers” flash in the display, and then press ENTER.

“Erase?” and “ENTER” appear alternately in the display.

7 Press ENTER again.

The group is erased.

To cancel erasing

Press CANCEL in step 6.


---

## To erase a group

You can erase tracks in a selected group.

**Note that once a recording has been erased, you cannot retrieve it. Be sure to check the contents of the group before you erase it.**

- Insert a disc with group settings.

1 Press GROUP for 2 seconds or more.  
“” lights up in the display and group mode turns on.

2 Select a group you want to erase (“Selecting and playing groups (Group Skip Mode)”, page 33) to check the contents.

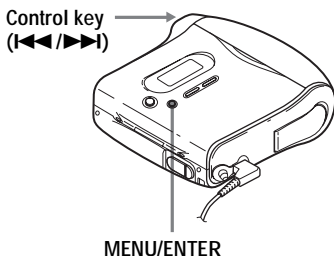
3 Press **■** to stop.

4 While the recorder is stopped, press MENU.

5 Press **◀◀** or **▶▶** repeatedly until “EDIT” flashes in the display, and then press ENTER.

### Protecting your hearing (AVLS)

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



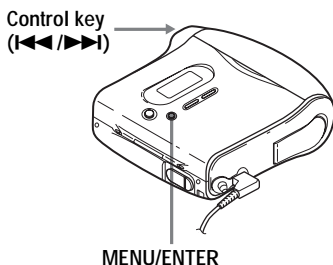
- 1 Press MENU.
- 2 Press I◀◀ or ▶▶I repeatedly until "OPTION" flashes in the display, and then press ENTER again.
- 3 Press I◀◀ or ▶▶I repeatedly until "AVLS" flashes in the display, and then press ENTER again.
- 4 Press I◀◀ or ▶▶I repeatedly until "ON" flashes in the display, and then press ENTER.

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

To cancel AVLS  
Select "OFF" in step 4.

### Turning off the beep sound

You can turn off the beep sound.



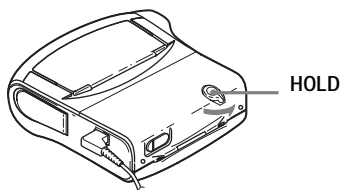
- 1 Press MENU.
- 2 Press I◀◀ or ▶▶I repeatedly until "OPTION" flashes in the display, and then press ENTER.
- 3 Press I◀◀ or ▶▶I repeatedly until "BEEP" flashes in the display and then press ENTER.
- 4 Press I◀◀ or ▶▶I repeatedly until "OFF" flashes in the display, and then press ENTER.


To turn on the beep sound  
Select "ON" in step 4.

---

## Locking the controls (HOLD)

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



- 1 Move HOLD in the direction of the .

To unlock the controls

Move HOLD in the opposite direction of the arrow to unlock the controls.

You can use the recorder on house current or LR6 (size AA) alkaline dry battery (not supplied).

It is preferable to use the recorder on house current when recording for a long time.

### Battery life<sup>1)</sup>

(Unit: Approx. hours) (JEITA<sup>2)</sup>)

LR6 (SG) alkaline dry battery <sup>3)</sup>	Normal	LP2	LP4
Recording <sup>4)</sup>	9	13	16
Playback	40	49	54


<sup>1)</sup> The battery life may be shorter due to operating conditions, the temperature of the location, and varieties of batteries.

<sup>2)</sup> Measured value by the standard of JEITA (Japan Electronics and Information Technology Industries Association).

<sup>3)</sup> When using a Sony LR6 (SG) “STAMINA” alkaline dry battery (produced in Japan).

<sup>4)</sup> To prevent interrupted recording due to drained battery, use new battery for recording operations.

### When to replace the battery

When the dry battery is weak, flashing  or “LoBATT” appears in the display. Replace the dry battery.

Note that the battery level indicated by the battery indication is only approximate and varies with the recorder condition.

### Notes

Stop the recorder before replacing battery.

- Be sure to use the supplied AC power adaptor.
- If the recorder will not be used for a long period of time, disconnect the AC power adaptor from a wall outlet.

### Precautions

#### On safety

- Do not put any foreign objects in the DC IN 3V jack.
- Keep the terminals on the recorder away from metallic objects or surfaces. Such contact may short-circuit the terminals and cause dangerous heat generation.

#### On water resistance

- Before opening or closing the buckle, be sure to wipe off water, dust or sand on the exterior of the unit. (The unit is not water-resistant with the upper lid open.)
- Since water in the headphones/earphones jack, the USB connecting jack, LINE IN (OPTICAL) jack, or DC IN 3V jack may cause rust, cover them with the attached rubber caps when the jacks are not in use.
- Since the unit is airtight, you may not be able to open disc lid because of sudden change in air pressure inside the unit, which happens after being transported on a plane or moving from a warm place to a cold place. To open the lid in this case, pull off the rubber cap that covers the DC IN 3V jack, and then open the lid. After you open the lid, make sure to cover the jack with rubber cap again.
- The supplied headphones/earphones are not meant to be immersed in water or come in continuous contact with water. If they are accidentally dropped into water or get wet, dry them with a soft cloth. Never use an electric hair dryer.
- If the unit or the headphones/earphones are immersed in salt water, be sure to wash them in non-running fresh water. Never wash them under running water, and never use soap or detergent.
- Any sand or dust on the rubber packing will prevent the lid from closing tightly, and water may leak in. Brush off the dust once in a while.
- We recommend the packing to be changed every year. Change the packing at an authorized Sony Service Facility.

#### On power sources

- Use house current, LR6 (size AA) 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, 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/earphones

##### Road safety

Do not use headphones/earphones 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/earphones 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.
- Attach the supplied MD label only in the space designated for it on the disc. Do not stick it on any other disc surface.

## 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.
- To obtain the best sound quality, use a dry cloth to wipe the plugs of the headphones/earphones. Dirty plugs may cause sound distortion or intermittent breaks in the sound.

## Notes on battery

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

- Install the + and – poles of the battery correctly.
- When the recorder is not to be used for a long time, be sure to remove the battery.
- Do not carry or store the dry battery with metallic objects such as coins, key rings, or necklaces. This may cause a short-circuit and the generation of heat.

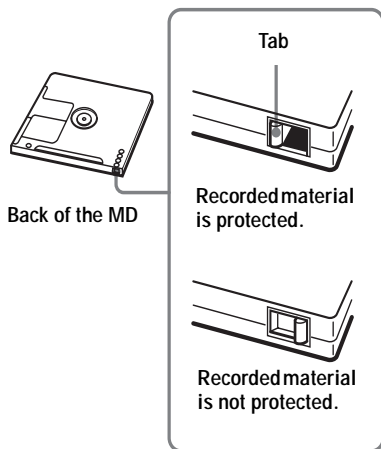
- If a battery leak should develop, carefully and thoroughly wipe away battery fluid from the battery compartment before inserting new ones.

## 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.

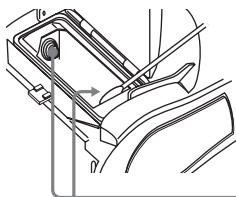
## To protect a recorded MD

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



## Note on maintenance

Clean the terminals periodically with a cotton swab or a soft cloth as illustrated.



Terminals

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.)

## 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
“TrFULL” 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, “TrFULL” appears regardless of the total recorded time. More than 254 tracks cannot be recorded on the disc. To continue recording, erase unnecessary tracks.
“TrFULL” 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 (recorded in stereo), 24 seconds long (recorded in monaural or LP2 mode), or 48 seconds long (recorded in LP4 mode) cannot be erased. You cannot combine a track recorded in different recording mode, e.g., 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, 24 seconds, or 48 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 (in stereo), 4 seconds (in monaural or LP2 mode), or 8 seconds (in LP4 mode). When recording is stopped, the last unit of recording always uses this unit of 2 seconds, 4 seconds, or 8 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, 4 seconds, or 8 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 by a maximum of 6 seconds, 12 seconds, or 24 seconds.
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.

Symptom	Cause
The playing time of a checked-out track is different from the time that appears on your computer monitor.	This is due to a calculation discrepancy between the recorder and the computer.
You cannot check out tracks that will fill up the remaining recording time on the disc. (For example, you cannot check-out tracks that total 160 minutes to an 80-minute disc in LP2 stereo mode.)	The minimum recordable time on the disc is normally 2 seconds in stereo, 4 seconds in LP2 stereo mode, and 8 seconds in LP4 stereo mode. When you check-out a track from your computer the recorder needs 2 seconds (4 or 8 seconds)-space for one track even though the track is under 2 seconds (4 or 8 seconds) length. Also the recorder inserts 2 seconds (4 or 8 seconds)-space between tracks when checking out in order not to erase the previously recorded track or not to be erased by recorded over. For this reason, the recorder needs 6 seconds (12 or 24 seconds) longer time for a track so that as a result, the recordable time of the disc become 6 seconds (12 or 24 seconds) shorter than the maximum recordable time of the disc when checking out.
You cannot erase a track checked out from your computer.	To erase a track that has been checked out from your computer, check it back in first, and then erase it using the SonicStage software.

## Troubleshooting

Should any problem persist after you have made these checks, consult your nearest Sony dealer. Refer to "Messages" (page 62) as well.

Symptom	Cause/Solution
The recorder does not work or works poorly.	<ul style="list-style-type: none"><li>• Audio sources may not be securely connected. ➔ Disconnect the audio sources once and connect them again (pages 18, 25).</li><li>• The HOLD function is turned on ("HOLD" appears in the display when you press an operation button on the recorder). ➔ On the recorder, disable HOLD by sliding the HOLD switch to the opposite direction of the arrow (pages 16, 47).</li><li>• The lid is not firmly closed. ➔ Close the lid until it clicks.</li><li>• Moisture has condensed inside the recorder. ➔ Take the MD out and leave the recorder in a warm place for several hours until the moisture evaporates.</li><li>• The dry battery is weak ("LoBATT" flashes or nothing appears). ➔ Replace the dry battery with the new one (page 15), or connect the supplied AC power adaptor to the recorder.</li><li>• The dry battery have been inserted incorrectly. ➔ Insert the battery correctly (page 15).</li><li>• You pressed a button while the disc indication was rotating quickly. ➔ Wait until the indication rotates slowly.</li><li>• When recording digitally from a portable CD player, you did not use the AC power adaptor or did not disable the anti-skip function such as ESP (page 20).</li><li>• The analog recording was made using a connecting cord with an attenuator. ➔ Use a connecting cord without an attenuator (page 25).</li><li>• The AC power adaptor was unplugged during recording or a power outage occurred.</li><li>• While operating, the recorder received a mechanical shock, too much static, abnormal power voltage caused by lightning, etc. ➔ Restart the operation as follows.<ol style="list-style-type: none"><li>1 Disconnect all the power sources.</li><li>2 Leave the recorder for about 30 seconds.</li><li>3 Connect the power source.</li></ol></li><li>• The disc is damaged or does not contain proper recording or editing data. ➔ Reinsert the disc. Rerecord the disc. If the error message still appears, replace it with another disc.</li></ul>

Symptom	Cause/Solution
The recorder does not work or works poorly.	<ul style="list-style-type: none"> <li>The disc is record-protected ("SAVED" appears). ➔ Slide the tab (page 50).</li> <li>Recording level is too small to record (when recording manually). ➔ Pause the recorder and adjust the recording level.</li> <li>A Premastered MD is inserted ("PbONLY" appears) when recording. ➔ Insert a recordable MD</li> <li>You tried to turn group mode on while setting the program. ➔ Turn group mode on before setting the program.</li> </ul>
The recorder overwrites existing materials when record.	<ul style="list-style-type: none"> <li>The record starting-position setting ("R-Posi") is set to "FrHere". ➔ Set "R-Posi" setting to "Fr End".</li> </ul>
The recorder does not work while connected to the computer.	<ul style="list-style-type: none"> <li>The computer does not recognize the recorder. ➔ Verify that the recorder is correctly connected. ➔ Install the driver correctly into your computer. ➔ Install the SonicStage software into your computer first, and then connect the recorder.</li> </ul>
"No SIG" appears in the display when recording from a portable CD player.	<ul style="list-style-type: none"> <li>There is no digital signal from the portable CD player. ➔ When recording digitally from a portable CD player, use the AC power adaptor and disable the anti-skip function (such as ESP) on the CD player (page 20).</li> </ul>
There is no recording on the MD after a recording operation.	<ul style="list-style-type: none"> <li>The AC power adaptor was unplugged or a power outage occurred during recording.</li> </ul>
The lid does not open.	<ul style="list-style-type: none"> <li>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.</li> <li>The lid is not firmly closed. ➔ Close the lid until it clicks. Then pull the OPEN switch to open the lid.</li> </ul>
No sound comes through the headphones/earphones.	<ul style="list-style-type: none"> <li>The headphones/earphones plug is not firmly connected. ➔ Plug in the plug of the headphones/earphones firmly to .</li> <li>Volume is too low. ➔ Adjust the volume by pressing VOL +/-.</li> <li>The plug is dirty. ➔ Clean the plug.</li> </ul>
Volume cannot be turned up.	<ul style="list-style-type: none"> <li>AVLS is on. ➔ Set AVLS to "OFF" (page 46).</li> </ul>
An MD is not played normally.	<ul style="list-style-type: none"> <li>Playback mode is changed. ➔ Change to the normal play.</li> </ul>

Symptom	Cause/Solution
An MD is not played from the first track.	<ul style="list-style-type: none"> <li>• Disc playing stopped before it came to the last track. ➡ Press ► for 2 seconds or more to start playing.</li> <li>• Group mode is turned on. ➡ Turn group mode off and play from the first track (press ► for 2 seconds or more to start playing).</li> </ul>
Playback sound skips.	<ul style="list-style-type: none"> <li>• The recorder is placed where it receives continuous vibration. ➡ Put the recorder on a stable place.</li> <li>• A very short track may cause sound to skip. ➡ Try not to create a track under one second long.</li> </ul>
Sound has a lot of static.	<ul style="list-style-type: none"> <li>• Strong magnetism from a television or such device is interfering with operation. ➡ Move the recorder away from the source of strong magnetism.</li> </ul>
Cannot find the track marks.	<ul style="list-style-type: none"> <li>• You pressed II after pressing ◀◀ or ▶▶. ➡ Press II before pressing ◀◀ or ▶▶.</li> </ul>
The disc cannot edit on other component.	<ul style="list-style-type: none"> <li>• The component does not support LP2 stereo or LP4 stereo. ➡ Edit on other component that support LP2 stereo or LP4 stereo.</li> </ul>
Momentary noise is heard.	<ul style="list-style-type: none"> <li>• Due to the special digital audio compression technology used in LP4 stereo mode, momentary noise may occur on very rare occasions with certain sound sources. ➡ Record in normal stereo or LP2 stereo mode.</li> </ul>
The display window is not normal.	<ul style="list-style-type: none"> <li>• The recorder was disconnected from the power source. ➡ Let the recorder sit for a while, or disconnect the power source, reconnect it, and then press any of the operation buttons.</li> </ul>

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## List of menus

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### Menu functions

Press MENU, and press ◀◀ or ▶▶.

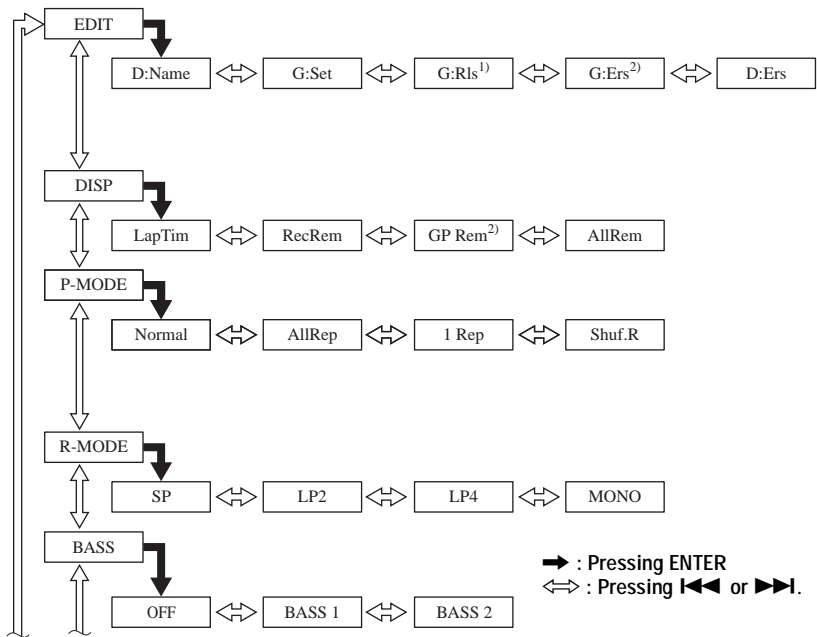
Menu on the recorder <sup>1)</sup>	Functions
EDIT	Selecting editing operations (labeling, erasing tracks, discs, or groups, etc.) (page 38 to 42, 44 and 45).
DISP	Displaying elapsed playing time, remaining playing time, etc. (page 32 and 36).
P-MODE	Selecting play mode (repeat play, shuffle play, etc.) (page 34).
RecVol	Selecting the automatic or manual recording level adjustment (page 31).
R-MODE	Selecting recording mode (SP stereo, LP2 stereo, LP4 stereo, or monaural) (page 26).
BASS	Selecting “BASS 1” or “BASS 2” (DIGITAL MEGA BASS) (page 35).
TimeMk	Selecting the Auto Time Mark setting (page 30).
SYNC-R	Selecting “ON” or “OFF” of synchro recording (page 19).
OPTION	<ul style="list-style-type: none"><li>• AVLS (Automatic Volume Limiter System) — Selecting “ON” or “OFF” (page 46).</li><li>• BEEP — Selecting “ON” or “OFF” (page 46).</li><li>• R-Posi — Selecting the start point when recording (page 29).</li><li>• LPStmp — Selecting “ON” (“LP:” will be added at the beginning of the track name) or “OFF” (page 26).</li></ul>

<sup>1)</sup> The menu items that can be selected vary according to the on/off status of group mode or the operating status of the recorder.

# Tables of Menus

The menus provided on the recorder for each operating status are shown on this and the following pages. Each chart shows the various menus and the menu items that can be selected at each menu level. See “List of menus” (page 57) for details on menu operations. Menus and menu items toggle in the display.

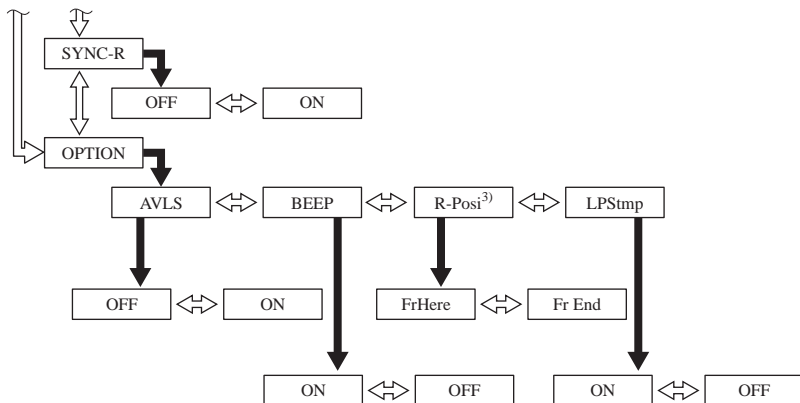
Menus and menu items selected while the recorder is stopped



continued to the next page

continued from the previous page

➡ : Pressing ENTER  
↔ : Pressing I◀◀ or ▶▶I.



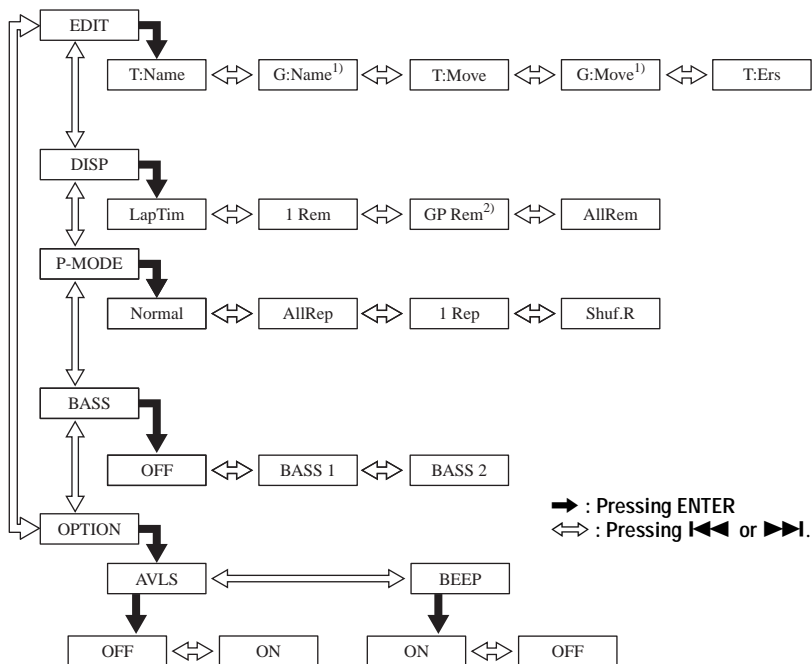
<sup>1)</sup> Appears only when the recorder is in group mode and a group other than “GP --” is selected.

<sup>2)</sup> Appears only when the recorder is in group mode.

<sup>3)</sup> Selectable only when group mode is turned off.

**Press CANCEL on the recorder to cancel a menu operation.**

Menus and menu items selected while the recorder is playing

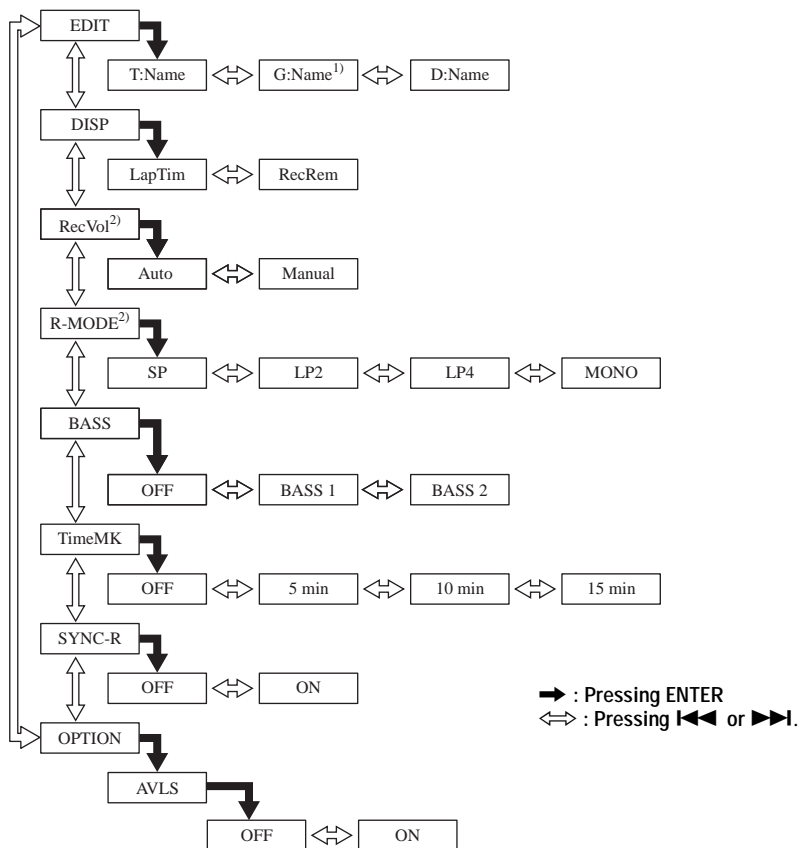


<sup>1)</sup> Appears only when the recorder is in group mode and a group other than “GP --” is selected.

<sup>2)</sup> Appears only when the recorder is in group mode.

**Press CANCEL on the recorder to cancel a menu operation.**

Menus and menu items selected while the recorder is recording



¹) Appears only when the recorder is in group mode.

²) Appears only when the recorder is in standby mode.

**Press CANCEL on the recorder to cancel a menu operation.**

## Messages

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

Error message	Meaning/Remedy
BLANK	<ul style="list-style-type: none"><li>• An MD with no recording on it is inserted.</li></ul>
BUSY	<ul style="list-style-type: none"><li>• You tried to operate the recorder while it was accessing the recorded data.<ul style="list-style-type: none"><li>➔ Wait until the message goes out (in rare cases, it may take a few minutes).</li></ul></li></ul>
Saving	<ul style="list-style-type: none"><li>• The MD player is recording information (sounds) from the memory to the disc.<ul style="list-style-type: none"><li>➔ Wait until this process is completed. Do not expose the player to any physical shock, nor disrupt power supply.</li></ul></li></ul>
ERROR	<ul style="list-style-type: none"><li>• Recording was not correctly done.<ul style="list-style-type: none"><li>➔ Place the recorder at a place with no vibrations and record again.</li></ul></li><li>• The disc is soiled with an oil film or finger prints, is scratched, or is not a standard disc.<ul style="list-style-type: none"><li>➔ Try recording again with another disc.</li></ul></li><li>• The recorder cannot read the disc information correctly.<ul style="list-style-type: none"><li>➔ Reinsert the disc.</li></ul></li><li>• The recorder cannot read the disc information correctly.<ul style="list-style-type: none"><li>➔ Insert another disc.</li><li>➔ If it is no problem to erase the entire disc, do so (page 44).</li></ul></li></ul>
FULL	<ul style="list-style-type: none"><li>• The remaining recording time on the disc is 12 seconds (stereo), 24 seconds (LP2 stereo or monaural), 36 seconds (LP4 stereo), or less.<ul style="list-style-type: none"><li>➔ Replace the disc.</li></ul></li></ul>
HiDCin	<ul style="list-style-type: none"><li>• Voltage of the power supply is too high (The supplied AC power adaptor or the recommended car battery cord is not used).<ul style="list-style-type: none"><li>➔ Use the supplied AC power adaptor or the recommended car battery cord.</li></ul></li></ul>
HOLD	<ul style="list-style-type: none"><li>• The recorder is locked.<ul style="list-style-type: none"><li>➔ Slide HOLD against the arrow to unlock the recorder (page 16, 47).</li></ul></li></ul>
LoBATT	<ul style="list-style-type: none"><li>• Battery is weak.<ul style="list-style-type: none"><li>➔ Replace the dry battery (page 15).</li></ul></li></ul>
MEMORY	<ul style="list-style-type: none"><li>• You tried to record with the recorder placed where it receives continuous vibration.<ul style="list-style-type: none"><li>➔ Put the recorder on a stable place, and start recording again.</li></ul></li></ul>

Error message	Meaning/Remedy
FULL	<ul style="list-style-type: none"> <li>You tried to enter more than 200 letters to label a single track or disc.</li> <li>You tried to enter a total of more than 1,700 letters for track or disc names. <ul style="list-style-type: none"> <li>➡ Enter a shorter name for the track, group, or disc (page 37), or set the "LPStmp" setting to "OFF" so that "LP:" is not added at the beginning of the track name (page 26).</li> </ul> </li> </ul>
NoCOPY	<ul style="list-style-type: none"> <li>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. <ul style="list-style-type: none"> <li>➡ Use analog connection instead (page 25).</li> </ul> </li> </ul>
NoDISC	<ul style="list-style-type: none"> <li>You tried to play or record with no disc in the recorder. <ul style="list-style-type: none"> <li>➡ Insert an MD.</li> </ul> </li> </ul>
No SIG	<ul style="list-style-type: none"> <li>The recorder could not detect digital input signals. <ul style="list-style-type: none"> <li>➡ Make sure that the source is connected firmly (page 18).</li> </ul> </li> </ul>
PbONLY	<ul style="list-style-type: none"> <li>You tried to record or edit on a pre mastered MD (Pb stands for "playback"). <ul style="list-style-type: none"> <li>➡ Insert a recordable MD.</li> </ul> </li> </ul>
SAVED	<ul style="list-style-type: none"> <li>You tried to record or edit on a MD with the tab in the record-protect position. <ul style="list-style-type: none"> <li>➡ Slide the tab back (page 50).</li> </ul> </li> </ul>
SORRY	<ul style="list-style-type: none"> <li>You tried to erase the track mark at the beginning of the first track.</li> <li>You tried to erase a track mark to combine tracks the recorder cannot combine (a track recorded in stereo and in mono, for example).</li> <li>You tried to overwrite a track marks.</li> <li>You tried to press <b>II</b> or T MARK during synchro-recording.</li> <li>You tried to turn on the group function while programming. <ul style="list-style-type: none"> <li>➡ Turn the group function on before programming.</li> </ul> </li> </ul>
TEMP	<ul style="list-style-type: none"> <li>Heat has built up in the recorder. <ul style="list-style-type: none"> <li>➡ Let the recorder cool down.</li> </ul> </li> </ul>
Edit	<ul style="list-style-type: none"> <li>The MD player is recording information (track start and end position) from the memory to the disk. <ul style="list-style-type: none"> <li>➡ Wait until this process is completed. Do not expose the player to physical shock, nor disrupt power supply.</li> </ul> </li> </ul>
TrFULL	<ul style="list-style-type: none"> <li>Track number 254 has been reached. <ul style="list-style-type: none"> <li>➡ Erase unnecessary tracks (page 44).</li> </ul> </li> </ul>
TrPROT	<ul style="list-style-type: none"> <li>You tried to record or edit on a track that is protected from erasing. <ul style="list-style-type: none"> <li>➡ Record or edit on other tracks.</li> </ul> </li> <li>You tried to edit a track that has been checked out from a computer. <ul style="list-style-type: none"> <li>➡ Check the track back in to the computer and then edit.</li> </ul> </li> </ul>

# Specifications

## MD Recorder

### Audio playing system

MiniDisc digital audio system

### Laser diode properties

Material: GaAlAs MQW

Wavelength:  $\lambda = 790 \text{ nm}$

Emission duration: continuous

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

(This output is the value measured at a distance of 200 mm from the lens surface on the optical pick-up block with 7 mm aperture.)

### Recording and playback time

When using MDW-80

Maximum 160 min. in monaural

Maximum 320 min. in stereo

### Revolutions

Approx. 380 rpm to 2,700 rpm (CLV)

### Error correction

ACIRC (Advanced Cross Interleave Reed

Solomon Code)

### Sampling frequency

44.1 kHz

### Sampling rate converter

Input: 32 kHz/44.1 kHz/48 kHz

### Coding

ATrac (Adaptive TRansform Acoustic Coding)

ATrac3 — LP2/LP4

### Modulation system

EFM (Eight to Fourteen Modulation)

### Number of channels

2 stereo channels

1 monaural channel

### Frequency response

20 to 20,000 Hz  $\pm 3 \text{ dB}$

### Wow and Flutter

Below measurable limit

### Inputs

Line in: stereo mini-jack, minimum input level 49 mV

Optical (Digital) in: optical (digital) mini-jack

### Outputs

$\phi$ : stereo mini-jack, maximum output level 5 mW + 5 mW, load impedance 16 ohm

## General

### Power requirements

Sony AC Power Adaptor connected at the DC IN 3 V jack:

120 V AC, 60 Hz (Models for USA, Canada, Mexico, and Taiwan)

230 V AC, 50/60 Hz (Models for continental Europe and Chili)

240 V AC, 50 Hz (Model for Australia)

220 V AC, 50 Hz (Model for China)

230 V AC, 50 Hz (Models for U.K. and Hong Kong)

220 V AC, 60 Hz (Model for Korea)

100 - 120 V/220 - 240 V AC, 50/60 Hz (Other models)

The recorder:

LR6 (size AA) alkaline battery (not supplied)

### Battery operation time

See "Battery life" (page 15)

### Dimensions

Approx.  $97.3 \times 40 \times 104 \text{ mm}$  (w/h/d) ( $37/8 \times 15/8 \times 41/8 \text{ in.}$ ) (including projects parts and controls)

### Mass

Approx. 215 g (7.6 oz) the main unit only

US and foreign patents licensed from Dolby Laboratories.

Design and specifications are subject to change without notice.

## Optional accessories

Optical Cable

POC-15B, POC-15AB, POC-DA12SP

Stereo Headphones/earphones\*

MDR-EX70LP, MDR-G72LP, MDR-A34L (except for customers in France)

MDR-E808LP (for customers in France)

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.

\* When using the optional headphones, use only headphones/earphones with stereo mini plugs. You cannot use headphones/earphones with micro plugs.

## Explanations

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

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 an MD right away! (Synchro-recording)” (page 17) to record using digital (optical) input, and “Recording in analog (Analog Recording)” (page 25) to record using analog (line) input.

Difference	Digital (optical) input	Analog (line) input
Connectable source	Equipment with an digital (optical) output jack (CD player, DVD player, etc.)	Equipment with an analog (line) output jack (Cassette deck, radio, record player, etc.)
Usable cord	Optical cable (with an optical or an optical-mini plug) (page 25)	Line cable (with 2 phono plugs or a stereo-mini plug) (page 25)
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.
Track marks <sup>1)</sup>	Marked (copied) automatically <ul style="list-style-type: none"><li>• at the same positions as the source (when the sound source is a CD or an MD).</li><li>• after more than 2 seconds of no sound (page 66) or low-level segment (with a sound source other than a CD or an MD).</li><li>• when the recorder is paused (3 seconds of no sound is encountered while synchro-recording)</li></ul>	Marked automatically <ul style="list-style-type: none"><li>• after more than 2 seconds of no sound (page 66) or low-level segment.</li><li>• when the recorder is paused while recording.</li></ul>
Recorded sound level	Same as the source. Can also be adjusted manually (Digital REC level control) (“Adjusting the recording level manually (Manual Recording)”, page 31).	Adjusted automatically. Can also be adjusted manually (“Adjusting the recording level manually (Manual Recording)”, page 31).

<sup>1)</sup> You can erase unnecessary marks after recording. (“Erasing a track mark”, page 43).

### 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 programs with audio that is digitally broadcast (e.g., digital TV) are recorded through the digital (optical) input.

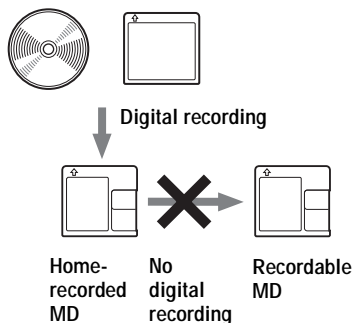
## The meaning of “no sound”

“No sound” describes a recorder condition in which the input level is about 4.8 mV during analog input or less than -89 dB during optical (digital) input (with 0 dB as full bit (the maximum recordable level for a MiniDisc)).

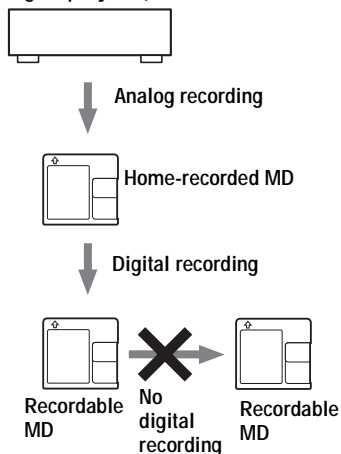
## Note on digital recording

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.



Microphone, record player, tuner, etc. (with analog output jacks).



## Restrictions on the editing of tracks checked out from your computer

This unit was designed so that editing functions (i.e., erasing tracks, adding track marks, and erasing track marks) do not function for tracks that have been checked out from your computer. This is to prevent the loss of check-in authorization by the checked-out tracks. To edit these tracks, first check them back into the computer, and then edit them on the computer.

## About the DSP TYPE-S for ATRAC/ATRAC3

This recorder supports DSP TYPE-S, a specification for high-level Sony MiniDisc decks equipped with digital signal processors (DSP). This specification allows the recorder to produce high-quality sound from tracks recorded in MDLP mode. Since it retains DSP TYPE-R support, the recorder produces superior results during recording or playback in SP (normal stereo) mode.

## Suppressing the skips of the sound (G-PROTECTION)

The G-PROTECTION function was developed to provide a higher level of shock resistance than that of existing players.



## Recording audio data to your computer

You can record audio data to your computer from sources such as audio CDs and the Internet (page 76).



Audio CDs



Internet



On the computer

### Listening

You can listen to an audio CD in the CD-ROM drive of your computer, or audio data in the hard disk drive (page 83).



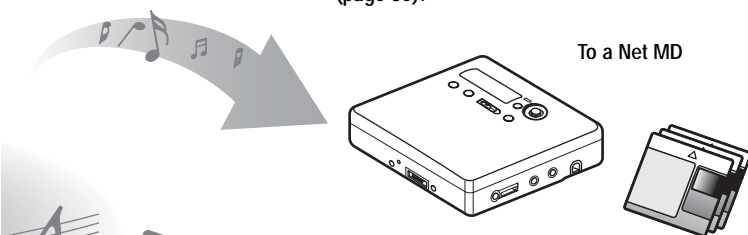
# What is a Net MD?

Net MD is a standard that enables the transfer of audio data from a computer to a MiniDisc device. To use this Net MD with your computer requires a software application called “SonicStage”.

SonicStage software provides a database for managing audio data in the computer and functions for playing the audio data in various play modes, editing the data, and transferring the results to other devices and hardware connected to the computer. It is an integrated software application with a variety of functions for enjoying music.

## Transferring audio data to the Net MD

You can transfer audio data stored in your computer to an MD (page 80).



### Editing

You can easily edit audio data or add labels from the keyboard (page 79).



### Creating a music library

You can create a music library of your favorite songs on your computer.



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### Basic operational flow using the Net MD

The following is the basic steps that you will take following the purchase of your recorder. Through these steps, you will prepare and set up your computer for use of your recorder as a Net MD. Do the following steps, and refer to the indicated pages for details.

#### 1 Providing the required system environment.

(page 71)

#### 2 Installing the software onto your computer.

(page 72)

#### 3 Connecting the Net MD to your computer.

(page 75)

#### 4 Storing audio data to your computer.

In this manual, recording from an audio CD is explained.

(page 76)

#### 5 Transferring audio data from your computer to an MD (Check-out).

(page 80)

#### 6 Listening to an MD.

You can listen to audio data that have been checked out from your computer to your Net MD.

(page 83)

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## Providing the required system environment

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### System requirements

The following hardware and software are required in order to use the SonicStage software for the Net MD.

Computer	IBM PC/AT or Compatible
	<ul style="list-style-type: none"><li>• CPU: Pentium II 400 MHz or higher (Pentium III 450 MHz or higher is recommended.)</li><li>• Hard disk drive space<sup>1)</sup>: 120 MB or more</li><li>• RAM: 64 MB or higher (128 MB or higher is recommended)</li></ul>
	Others
	<ul style="list-style-type: none"><li>• CD-ROM drive (capable of digital playback by WDM)</li><li>• Sound Board</li><li>• USB port (supports USB (previously USB 1.1))</li></ul>
Operating System	Factory installed: Windows XP Home Edition/Windows XP Professional/Windows Millennium Edition/Windows 2000 Professional/Windows 98 Second Edition
Display	High Color (16bit) or greater, 800 × 480 dots or more (800 × 600 dots or more is recommended)
Others	<ul style="list-style-type: none"><li>• Internet access: for Web registration and EMD services</li><li>• Windows Media Player (version 7.0 or higher) installed for playing WMA files</li></ul>

<sup>1)</sup> See page 89 for details.

This software is not supported by the following environments:

- Macintosh
- Windows XP versions other than Home Edition or Professional
- Windows 2000 versions other than Professional
- Windows 98 versions other than Second Edition
- Windows NT
- Windows 95
- Personally constructed PCs or operating systems
- An environment that is an upgrade of the original manufacturer-installed operating system
- Multi-boot environment
- Multi-monitor environment

### Notes

- We do not ensure trouble-free operation on all computers that satisfy the system requirements.
- We do not ensure trouble-free operation of the system suspend, sleep, or hibernation function on all computers.

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# Installing the software onto your computer

This section explains the installation of the SonicStage Ver.1.5 software supplied with your Net MD.

---

## Before installing the software

### 1 Make sure to note the following before installing the software.



#### **Do not connect the dedicated USB cable before the installation!**

The SonicStage software may not correctly load or operate if the dedicated USB cable is connected to your computer during the installation.



#### **Close all other Windows applications before starting the installation!**

Make sure to close any virus-check software, as such software usually demand large amounts of system resources.

### 2 Depending on the following operating system or software already installed on your computer, refer to the reference pages before installing the software.

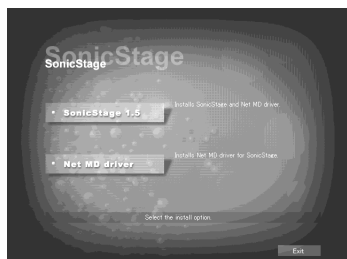
<b>Windows XP</b> → page 86	<ul style="list-style-type: none"><li>• To install this software, you must log on with a user name with "Computer Administrator".</li><li>• If you perform the "System Restore" function in the Windows "System Tools" menu, the tracks managed by SonicStage may become corrupted and rendered unplayable.</li></ul>
<b>Windows Millennium Edition</b> → page 87	<ul style="list-style-type: none"><li>• If you perform the "System Restore" function of the Windows "System Tools" menu, the tracks managed by SonicStage may become corrupted and rendered unplayable.</li></ul>
<b>Windows 2000</b> → page 87	<ul style="list-style-type: none"><li>• You must log on as "Administrator" before installing the software.</li></ul>
<b>OpenMG Jukebox, SonicStage, or SonicStage Premium</b> → page 88	<ul style="list-style-type: none"><li>• Depending on the version of your software, the existing software may be overwritten by the new version or it may co-exist with SonicStage Ver.1.5. As the installation process will depend on the version, see the reference page for details.</li></ul>

---

## Installing SonicStage Ver.1.5

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- 1 Turn on your computer and start up Windows.
- 2 Insert the installation CD-ROM for SonicStage into the CD-ROM drive of your computer.

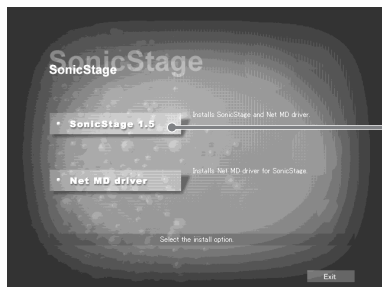


The setup program starts up automatically and the SonicStage Ver.1.5 installation window appears.

- 3 Click to select [SonicStage 1.5].

To use this software with the Net MD, you must install SonicStage Ver.1.5 and the Net MD driver.

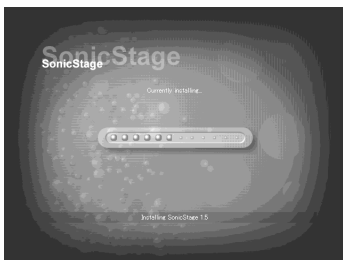
Click [SonicStage 1.5]



- When installing SonicStage for the first time
- When SonicStage, SonicStage Premium, or OpenMG Jukebox is installed on the computer

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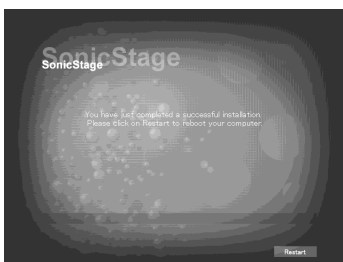
## 4 Follow the displayed instructions.



Read the instructions carefully.  
The installation may take 20 to 30 minutes,  
depending on your system environment  
(page 95).

---

## 5 After the installation is completed, click [Restart] to restart the computer.



Make sure to restart your computer only after  
the installation has completed.

---

Was the installation successful?

If any trouble occurs during the installation, see “Troubleshooting” (page 92).

### Notes

- Do not delete, move, or edit any of the installed folders using Explorer or any other application. Doing so could cause the SonicStage database to become unstable or corrupted.
- While the installation is still in progress, do not interrupt the operation or take the CD-ROM out of the CD-ROM drive. Doing so may render it impossible to install the software thereafter.

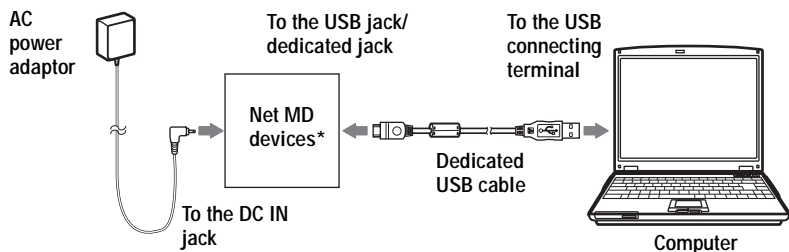
---

## Connecting the Net MD to your computer

After the software installation is completed, connect the Net MD to your computer. Refer to the operating instructions of the Net MD as well.

---

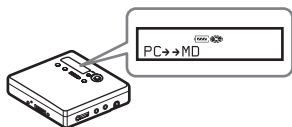
- 1 Insert a recordable disc into the Net MD.
  - 2 Make the power source and the dedicated USB cable connections with the Net MD and the computer.
- 



\* If a cradle is supplied with your Net MD, connect the dedicated USB cable to the USB cradle and place the Net MD onto the USB cradle.

---

- 3 Check the connections.



When the connections have been properly made, "PC→MD"\* appears in the display of the Net MD.

\*Depending on the device, "Net MD" may be displayed.

---

### Notes

- When using the Net MD connected to your computer, it is recommended that you run the recorder from an AC outlet. If you use a battery to run the Net MD, be sure to use a new dry cell or a fully charged rechargeable battery. We do not assure the results should there be a mis-operation, check-out failure, or destruction of audio data caused by insufficient battery power.
- When using the Net MD with the cradle, place the cradle on a stable surface so that the dedicated USB cable does not become detached.

---

## Storing audio data to your computer

This section explains how to record and store audio data from an audio CD to the hard disk drive of your computer.

The procedure in this section is used to record all tracks on an audio CD. To record only specific tracks from a CD, or from other sound sources, see the online help for details (page 84).

### Note


The system may malfunction if your computer changes to system suspend or hibernation mode while the software is playing, recording, or connecting to an external device or media\* such as a Net MD. Make sure to disable any changes to suspend or hibernation mode. See page 89 for details.

\* For this software, the word “MD” refers to the built-in MD slot on the computer, and “Device/Media” to a Net MD that is externally connected over a USB cable.

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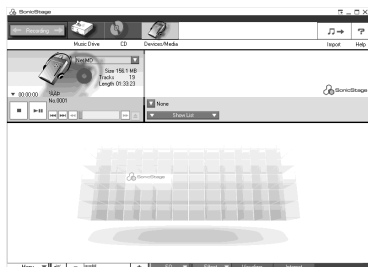
## Starting SonicStage

Do one of the following:

- Double click  ([SonicStage] icon) on the computer.
- Select [Start] - [Programs]\* - [SonicStage] - [SonicStage].

\* [All Programs] in the case of Windows XP

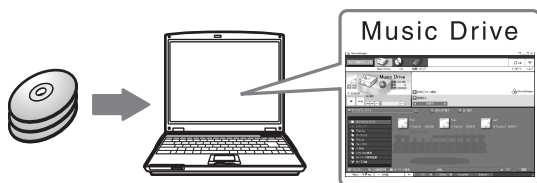
SonicStage starts up and the main window appears.



---

## Recording audio CDs to the hard disk drive

In SonicStage Ver.1.5, the hard disk drive is called the “Music Drive”. The Music Drive manages all audio data stored by SonicStage.



- 1 Insert the audio CD that you want to record into the CD-ROM drive of your computer.

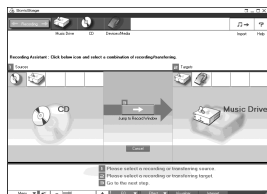


The CD window appears in the display.

### Note




When you record an audio CD from your CD-ROM drive for the first time, the “CD Drive Optimization” dialog box appears when you insert the audio CD. Clicking [Start] initiates a check of the CD-ROM drive to verify that the CD-ROM drive is able to perform the recording properly.

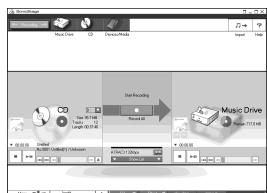
- 2 Click .




The recording navigation window\* appears in the display.

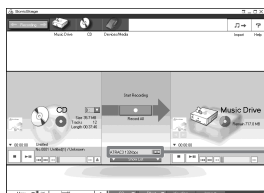
\*The recording navigation window makes it easy to make a recording. Simply by doing **1**, **2** and **3** in the next step, you can select the audio source in the left panel and the recording destination in the right panel.

- 3 Select  (CD) for [**1** Sources] and  (Music Drive) for [**2** Targets], then click **3**  [Jump to Record Window].




The display changes to the recording window.

- 
- 4 Click **ATRAC3 132kbps**  in the middle of the recording window and select the recording mode.



When recording data in LP2 mode:  
select ATRAC3 132kbps

When recording data in LP4 mode:  
select ATRAC3 66kbps

- 
- 5 If the list panel is not displayed, click .



List panels appear under the recording window. The contents of the audio CD appear in the left list panel.

- 
- 6 Click  [Record All].


Recording starts.

Upon completion, recorded tracks appear in the right list panel.

---

To stop recording

Click  ([Stop]).


To resume recording, click . When recording is resumed, it starts from the beginning of the track that was last stopped.

---

## Labeling audio data

After recording has completed, you can label the audio data in the Music Drive. Once audio data in the Music Drive is labeled, the label information will be transferred to a disc along with the audio data, allowing you to view the data on your Net MD.

---

- 1 Start up SonicStage (page 76) and click  (Music Drive).




“All Playlists” appears and all the albums stored on the Music Drive appear in the Music Drive window.

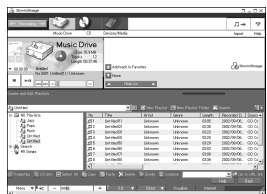
---

- 2 Double click the desired album name.

A list of the audio files in that album appears.

---

- 3 Click  in the lower right part of the display.



The editing panel appears in the display.

---


- 4 Select an item by clicking [Title], [Album], [Artist], or [Genre], and then right-click and select [Rename].

You can also click [▼] at [Album] or [Artist] to display a dropdown list, and then select an item from the list.

---

- 5 When the track title is highlighted, enter the text data from the keyboard.
- 



You can also import names from a database with the  ([CD Info]) button for use in labeling tracks or albums. See the online help for details (page 84).

---

## Transferring audio data from your computer to the Net MD (Check-out)

Audio data stored on the Music Drive can be transferred to your Net MD. This process is called “Check-out”. The number of times a track can be checked out is restricted in this software for the protection of copyrights (page 98).




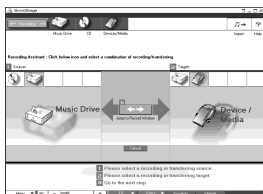
---




### Checking out audio files to the Net MD

This section explains how to check out all audio files in a playlist\*.

\* A playlist is a container that allows the stored audio files in the Music Drive to be classified by genre, artist, etc.


- 
- 1 Click  to display the recording navigation window.



- 
- 2 Select  (Music Drive) for [1 Sources] and  (Device/Media) for [2 Targets], then click  ([Jump to Record Window]).

The display changes to the recording window.

---


- 
- 3 Click **Normal**  in the middle of the display and select the recording mode (page 78).

Standard transfer mode: Data are transferred in the format of the original files.

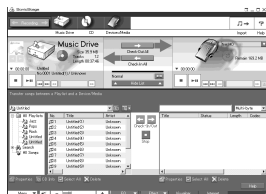
Maximum available transfer space: All data are transferred in LP4 mode.

SP transfer mode: All data are converted and transferred in normal stereo mode. Select this mode if you listen to checked-out data on equipment that does not support MDLP mode.

---



- 4 If the list panel is not displayed, click  .

A playlist appears in the display.



- 
- 5 Confirm that the audio files you are about to check out are okay for checking out.



The music notations beside the track number in the left panel of the list represent the number of times the file can be checked out (e.g.  = the track can be checked out three more times). If  appears beside the track number, the file cannot be checked out.

- 
- 6 Click  [Check-Out All].

Checking out of the files starts.

All files in the playlist are checked out to the connected Net MD.

---

To cancel a check-out

Click  ([Stop]).

## **Notes**

- Once a check-out (or check-in) has started, do not disconnect the dedicated USB cable or power source until the check-out operation has completed. These actions may damage the data or cause the system to malfunction.
- Make sure not to bump the Net MD after check-out has started. If you do, the contents of the recording may not be stored correctly.
- Due to the limitations of the MD system, you may not be able to record the full amount of remaining recording time.
- Due to the limitations of the MD system, a maximum of about 1,700 characters can be stored for disc name, group names and track names on the disc. Take note of this fact when checking out a large number of tracks.

---

## Listening to an MD

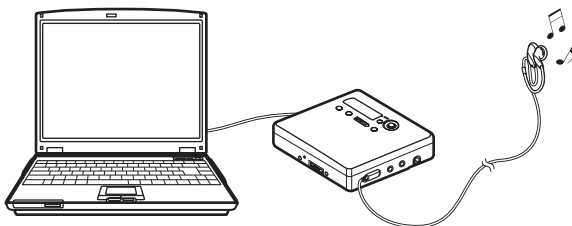
You can listen to an MD on the Net MD while it is connected to your computer. When disconnected from your computer, the Net MD can be used as an ordinary MiniDisc device.

For details on Net MD operations, refer to the “Recorder Operations” section.

---

### Listening to an MD with the Net MD connected to the computer

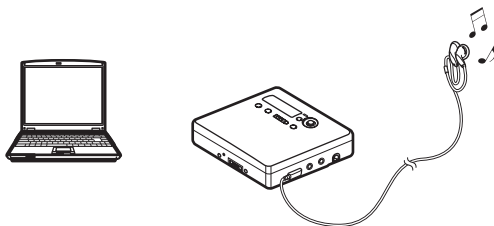
If you listen to an MD with the Net MD connected to the computer, be sure to listen with the Net MD itself (connecting to the headphones/earphones, speakers, etc.). The MD sound cannot be heard from headphones/earphones that are connected to the computer.



---

### Listening to an MD with the Net MD disconnected from the computer

Listen to the MD after disconnecting the dedicated USB cable from the computer and the Net MD.



#### Notes

Generally, you cannot erase or divide/combine checked-out audio files. If you want to edit such files, check them back in first. Checked-out files can be edited on some MD devices; however, erasing a track will decrease the number of times the file can be checked out, and dividing or combining tracks will render the file impossible to check back into the computer (page 96).


### Using other functions!

#### Using the SonicStage online help

This manual explains only the basic operations of the SonicStage software. However, the software has a host of other functions that allow you to carry out various operations, such as importing audio files from the Internet, classifying and managing audio files, and playing in various play modes. For information and details on the various menus and operations, go to the online help.

To display online help



Click  (help) while the SonicStage software is running.



You can display the online help by selecting the following:  
[Start]–[Programs]\*–[SonicStage]–[SonicStage Help]

\* [All Programs] in the case of Windows XP.



---

## Settings and Precautions

---

### Settings according to OS

The settings and precautions will differ according to the operating system being used. Check the items that apply to your system.



For Windows XP users

#### Restrictions when running the SonicStage software under Windows XP

- To install this software, you must log on with a user name with “Computer Administrator”\* as an attribute.
- You must log on with the user name “Administrators” or “Power Users” to use the SonicStage software.
- Both edition of Windows XP (Home/Professional) can be used.
- The NTFS format of Windows XP Home Edition or Windows XP Professional (factory installed) can be used only with the standard (factory) settings.

\* To check whether the user name has the attribute of “Computer Administrator”  
Go to [Start]- [Control Panel]-[User Account], and then check the user name displayed on the window.

#### When using SonicStage under Windows XP

If you use the “System Restore” function in Windows “System Tools”, audio data managed by SonicStage may become corrupted and rendered unplayable.

Before executing the system restoration procedure, you should first back up all audio files and restore them after doing the system restoration procedure.

For details about backup procedures, refer to online help.

#### Note

Restoring backup data requires access to the Internet. If an audio file becomes unplayable after restoring the system, an error dialog box may appear. If this occurs, do as instructed by the message.



For Windows Millennium Edition users

### **When using SonicStage under Windows Millennium Edition**

If you use the “System Restore” function in Windows “System Tools”, audio data managed by SonicStage may become corrupted and rendered unplayable.

Before executing the system restoration procedure, you should first back up all audio files and restore them after doing the system restoration procedure.

For details about backup procedures, refer to online help.

#### **Note**

Restoring backup data requires access to the Internet. If an audio file becomes unplayable after restoring the system, an error dialog box may appear. If this occurs, do as instructed by the message.



For Windows 2000 users

### **Restrictions when running the SonicStage software under Windows 2000**

- You must log on as “Administrator” to install the SonicStage software.
- You must log on with the user name “Administrators” or “Power Users” to use the SonicStage software.
- Of the Windows 2000 versions, SonicStage is supported only by Windows 2000 Professional.
- The NTFS format of Windows 2000 Professional (factory installed) can be used only with the standard (factory) settings.



For Windows 98 Second Edition users

### **Importing MP3 files to the computer or playing WAV files on the computer**

Microsoft Media Player version 7.0 or higher is required for importing MP3 files or playing WAV files. Users of earlier versions can download the most recent version from the Microsoft website (<http://www.microsoft.com/>).

---

## For users with OpenMG Jukebox, SonicStage, or SonicStage Premium installed on their computer

### Note

Confirm whether any tracks have been checked out from your computer.

If tracks have been checked out from OpenMG Jukebox, an earlier version of SonicStage, or SonicStage Premium, it may not be possible to check those tracks back in with SonicStage Ver.1.5. It is recommended to check in the tracks before installing SonicStage Ver.1.5.

### Check the following contents before installing SonicStage Ver.1.5.

The installation items and procedure will vary depending on the software installed on your computer.

#### Users with OpenMG Jukebox installed

Installed Version	What to do
Ver.1.0~2.1	Install SonicStage 1.5. OpenMG Jukebox Ver.1.0-2.1 is automatically uninstalled and replaced. <sup>1)</sup>
Ver.2.2	OpenMG Jukebox Ver.2.2 and SonicStage Ver.1.5 can co-exist in the computer. If you install SonicStage Ver.1.5, then OpenMG Jukebox Ver.2.2 will be automatically upgraded to the latest version.

- <sup>1)</sup> Audio files recorded with OpenMG Jukebox Ver.1.0-2.1 are automatically converted to SonicStage Ver.1.5 files. For safety sake, it is recommended that you back up your audio data with the back-up tool before doing the upgrade to SonicStage Ver.1.5.

#### Users with an earlier version of SonicStage installed

Installed Version	What to do
Ver.1.0~1.5	Install SonicStage Ver.1.5. The earlier version is automatically uninstalled and replaced. <sup>1)</sup>

- <sup>1)</sup> Audio files recorded with SonicStage Ver.1.0-1.5 are automatically converted to SonicStage Ver.1.5 files. For safety sake, it is recommended that you back up your audio data with the back-up tool before doing the upgrade to SonicStage Ver.1.5.

#### Users with a SonicStage Premium installed

Installed Version	What to do
SonicStage Premium	Install SonicStage Ver.1.5. SonicStage Ver.1.5 and SonicStage Premium can co-exist in the computer.

### ***Precautions on the co-existence of SonicStage Ver. 1.5 with OpenMG Jukebox Ver.2.2 or SonicStage Premium***

- Make sure the OpenMG Jukebox Ver.2.2 icon is not displayed in the task tray. If it is, the Net MD may not be recognized by your computer.
- Audio data recorded on the computer are stored in a common file and used by both applications. Therefore, if you delete an audio file (e.g., one album) in one application, it will be deleted in the other software as well.

### ***Precaution on using a computer on which OpenMG Jukebox Ver.1.0-2.1 or SonicStage Ver.1.0-1.2 is installed***

Make sure not to replace SonicStage Ver.1.5 with OpenMG Jukebox Ver.1.0-2.1 or SonicStage Ver.1.0-1.2., as all audio data in the Music Drive may be lost. If you begin the installation of OpenMG Jukebox Ver.1.0-2.1 or SonicStage Ver.1.0-1.2 by mistake, stop the installation immediately.

---

## **Note on hard disk drive space**

120 MB or more free space on the hard disk drive is required. If your computer does not have enough space, the software will not be properly installed. The required free space differs according to the version of your Windows OS, or the amount of audio files that you handle.

---

## **Notes on system suspend/hibernation mode**

- If the computer changes to system suspend/hibernation mode during the recording of a CD or the checking in/out of a data file, the audio data may be lost or the computer may not wake up properly. The computer suspend/hibernation function should therefore be turned off.
- If you change the media while the computer is in system suspend/hibernation mode, audio data may be lost after the computer wakes up.
- If the computer changes to system suspend/hibernation mode, the computer may not recognize the Net MD when it wakes up. If this happens, disconnect the USB cable and reconnect it again.

---

## **Backing up the audio data**

Before doing any procedure that may affect the operating system itself (such as a system recovery), you should back up all of your audio data with the [SonicStage backup tool] from the [Start] - [Programs] - [SonicStage].

---

## Uninstalling the SonicStage software

To uninstall the SonicStage software, follow the procedures below.

---

### For Windows XP users

Log on with a user name with “Computer Administrator” as an attribute.  
Refer to the operating instructions of your computer for details on logging on as an administrator.

- 
- 1 Click [Start]–[Control Panel].  
The “Control Panel” window appears.
  - 2 Double-click [Add/Remove Programs].  
The “Add/Remove Programs” dialog box appears.
  - 3 Click [Change or Remove Programs].
  - 4 Click [SonicStage 1.5.XX] in the “Currently Installed Programs” list, and then click [Change and Remove].
  - 5 Click [OpenMG Secure Module 3.1]\* in the “Currently Installed Programs” list, and then click [Change and Remove].  
Do as instructed by the message and restart the computer. When the computer restarts, the uninstallation will be completed.
- 

\* If SonicStage Ver.1.5 is co-existing with OpenMG Jukebox Ver.2.2 or SonicStage Premium on your computer, and you uninstall one or the other, make sure [OpenMG Secure Module 3.1] is not uninstalled since it is commonly used with both software applications.

---

### For Windows Millennium Edition/Windows 98 Second Edition users

- 
- 1 Click [Start]–[Settings]–[Control Panel].  
The “Control Panel” window appears.
-

---

## 2 Double-click [Add/Remove Programs].

The Add/Remove Programs Properties window appears.

---

## 3 Click [SonicStage 1.5.XX] in the list of programs for automatic removal, and then click [Add/Remove].

## 4 Click [OpenMG Secure Module 3.1]\* in the list of programs for automatic removal, and then click [Add/Remove].

Do as instructed by the message and restart the computer. When the computer restarts, the uninstallation will be completed.

---

---

### For Windows 2000 users

Log on as “Administrator”, and then follow the instructions below.

Refer to the operating instructions of your computer for details on logging on as an administrator.

---

## 1 Click [Start]–[Settings]–[Control Panel].

The “Control Panel” window appears.

---

## 2 Double-click [Add/Remove Programs].

The “Add/Remove Programs” dialog box appears.

---

## 3 Click [Change or Remove Programs].

## 4 Click [SonicStage 1.5.XX] in the “Currently Installed Programs” list, and then click [Change/Remove].

## 5 Click [OpenMG Secure Module 3.1]\* in the “Currently Installed Programs” list, and then click [Change/Remove].

Do as instructed by the message and restart the computer. When the computer restarts, the uninstallation will be completed.

---

\* If SonicStage Ver.1.5 is co-existing with OpenMG Jukebox Ver.2.2 or SonicStage Premium on your computer, and you uninstall one or the other, make sure [OpenMG Secure Module 3.1] is not uninstalled since it is commonly used with both software applications.

---

## Troubleshooting

Please do the following steps if you encounter a problem while using the SonicStage software. In case a message appears, it is recommended that you write it down.

### **Step 1: Check the symptoms in this “Troubleshooting” section.**

A variety of information can also be found in the operating procedures and “Settings and Precautions” (page 86) as well.

### **Step 2: Check the symptoms in the SonicStage 1.5 online help (page 84).**

Check “Troubleshooting” under “Additional information” in the online help. Useful information may also be found in other sections in the online help.

### **Step 3: If the trouble cannot be solved after checking the above references.**

Check the following table and then consult your nearest Sony dealer.

<b>Computer</b> <ul style="list-style-type: none"> <li>• Manufacturer:</li> <li>• Model:</li> <li>• Type: Desktop type / Laptop type</li> </ul>
<b>Name of operating system:</b>
<b>RAM capacity:</b>
<b>Hard disk drive (containing SonicStage and audio data)</b> <ul style="list-style-type: none"> <li>• Capacity of the drive:</li> <li>• Free space:</li> </ul>
<b>Installed folder containing SonicStage (if other than the default folder)<sup>1)</sup></b> <ul style="list-style-type: none"> <li>• Location of the installed folder:</li> </ul>
<b>Version of the software (SonicStage Ver.1.5)<sup>2)</sup>:</b>
<b>Error Message (if one appeared):</b>
<b>If an externally connected CD-ROM drive is used</b> <ul style="list-style-type: none"> <li>• Manufacturer:</li> <li>• Model:</li> <li>• Type: CD-ROM / CD-R/RW / DVD-ROM / Other (                      )</li> <li>• Type of connection to the computer: PC card / USB / IEEE1394 / Other (                      )</li> </ul>
<b>If another device with USB connection is used</b> <ul style="list-style-type: none"> <li>• Name of the device (or devices):</li> </ul>

<sup>1)</sup> If you do not specify the destination, the software is installed at C:\Program Files\Sony\SonicStage.

<sup>2)</sup> To check the SonicStage software version, go to [Menu] - [About SonicStage] in the SonicStage window, or see the version information on the supplied CD-ROM.

---

## If your computer does not recognize the Net MD

- **Is the Net MD connected correctly to your computer?**

- If the Net MD is not firmly connected to the computer, the Net MD will not be recognized by your computer.
- Reconnect the dedicated USB cable. If the computer still does not recognize the Net MD, disconnect the Net MD, restart the computer, and connect the dedicated USB cable again.

- **Is an MD inserted in the Net MD?**

Check if an MD is inserted in the Net MD.

- **If your computer does not recognize your Net MD even when the Net MD is connected and a disc is inserted, the Net MD driver may not be correctly installed.**

Go to the [USB Controller] in the Windows Device Manager window to verify that your Net MD is correctly recognized.

A [!] mark in the Device Manager window indicates that your Net MD is not correctly recognized. Reinstall the Net MD driver.

1 Click [Start]–[Settings]–[Control Panel].<sup>1)</sup>

2 Double click [System] in the control panel.<sup>2)</sup>

3 Click the [Hardware]<sup>3)</sup> tab, and then click [Device Manager].

The Device Manager window appears.

<sup>1)</sup> In Windows XP, select [Start]–[Control Panel].

<sup>2)</sup> In Windows XP, double click [System] if the control panel is in the “classic” format, or click [Performance and Maintenance] and then [System] if the control panel is in the “category” format.

<sup>3)</sup> Depending on your system, the [Hardware] tab may not be provided. In this case, click the [Device Manager] tab to display the Device Manager window.

---

## If the installation was not successful

- **Be sure to close all Windows applications before you start the installation.**

If you start the installation while other programs are running, a malfunction may occur. This is especially true for programs that require large amounts of system resources, such as virus-check software.

- **Be sure not to connect the Net MD to your computer before you start the installation.**

If the dedicated USB cable is connected to your computer before the installation, the installation cannot be done correctly. Connect the dedicated USB cable after the installation completed.

- **Make sure your computer has enough hard disk drive space.**

120MB of free space or more on the hard disk drive is required. If your computer does not have enough space, the installation may not be possible.

- **If the installation seems to be stopped**

It may take 30 minutes or more for the installation to complete, depending on your computer or CD-ROM drive.

During the installation, watch out for the occurrence of any of the following problems.

Problem	Cause/Remedy
The installation appears to have stopped before it has completed.	Check for the appearance of an error message beneath the installation window. → Press the [Tab] key while holding down the [Alt] key. If an error message has appeared, press the [Enter] key. The installation will resume. If there is no message, the installation is still in progress. Wait a little while longer.
The progress bar on the display is not moving. The access lamp has not lit for a few minutes.	The installation is progressing normally. Please wait.

- **If the installation is still unsuccessful after all that you have done.**

— The installation can be done by copying all files to the hard disk as follows:

- 1 Create a new folder on the hard disc.
- 2 Insert the supplied CD-ROM (SonicStage Ver.1.5) into the CD-ROM drive.
- 3 When the installation window appears, click [Exit] to cancel the installation.
- 4 Right-click the start menu and start up Explorer.
- 5 Select [SS15E] on the CD-ROM drive, and then click [Edit] -[Select All].
- 6 Click [Edit]-[Copy to Folder] (or [Edit]-[Copy]) to copy all files to the folder that you created in step 1.
- 7 Remove the CD-ROM from the CD-ROM drive, open the folder that was copied to the hard disk and double-click [setup.exe].
- 8 When the installation window appears, follow the displayed instructions to install [SonicStage 1.5].

— The installation may be done by installing the software from [Start]-[Run].

---

## Information and explanations

---

### Net MD FAQ

This section introduces frequently asked questions and answers on the Net MD.



#### On the Net MD

##### What is a “Net MD”?

Net MD is a specification that allows audio data in a computer to be transferred to a MiniDisc through a USB cable.

Till now, MiniDiscs could be used to record only analog sources (through a microphone or analog input) or PCM sources such as CDs. Recording audio files on a computer was impossible. However, thanks to SonicStage and other music management software based on such copyright protection technology as “OpenMG”<sup>1)</sup> and “MagicGate”<sup>2)</sup>, conversion of audio files to the ATRAC or ATRAC3<sup>3)</sup> format used on MDs became possible, enabling the recording of computer files to MDs.

1) Copyright protection technology for managing audio data recorded on computers, etc.

2) Technology for verifying the copyright-protection status of audio data in check-out/check-in operations between a computer and a Net MD device.

3) File type for recording to an MD.

##### How does the SonicStage software make using MDs more convenient?

- It allows you to record audio data from your computer to your MD.
- Editing operations are easily done using on-screen operations.
  - Labeling: Allows use of keyboard for easy labeling of contents.
  - Moving tracks or groups: Allows tracks or groups to be moved simply by dragging and dropping. Track movements are easy to see.
  - Group settings: Groups are easy to create or release.

These operations can be used to edit tracks on a disc in the Net MD. If you want to edit the contents of an MD, connect the Net MD to your computer, and edit the tracks in the SonicStage Device/Media window.

##### Can tracks recorded on the Net MD be checked in to a computer?

No, they cannot.

Audio data that was originally checked out from a computer can only be checked back into the same computer. Tracks that are recorded on the Net MD using a microphone or through an analog or digital connection cannot be transferred to the computer or copied.

Computer  $\Rightarrow$  MiniDisc : OK.

MiniDisc  $\Rightarrow$  Computer : OK only for tracks originally checked out from the computer.



## On Editing

### **Can checked-out tracks be edited on the Net MD?**

- Things you can do on the Net MD:
  - Label contents.
  - Assign or release groups
  - Move tracks or groups.
- Things you cannot do on the Net MD:
  - Add track marks (divide)/erase track marks (combine).
  - Delete tracks, groups, or the entire disc contents.

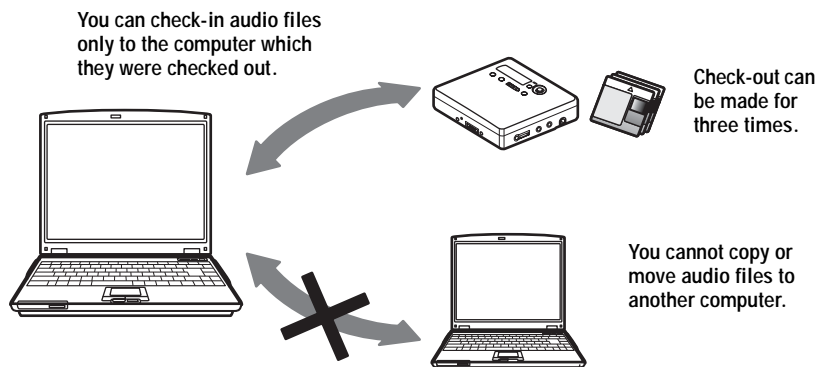
---

## On copyright protection

The OpenMG technology\* allows you to enjoy digital music, while maintaining the copyrights of its holders. OpenMG Jukebox encrypts audio files in OpenMG format and stores them on the hard disk of your computer to prevent unauthorized distribution.

\* The copyright protection technology of this software conforms to SDMI (Secure Digital Music Initiative) specifications.

This software places some restrictions on recording and playback to protect copyrights. You can check in audio files only to the same computer from which they were checked out. They cannot be copied or checked in to other computers. For details, see “Features by copyright protection by OpenMG” (page 99).



## Restrictions on audio content

High-quality digital audio content is widely available through music distribution services on the Internet. To protect the copyrights of its holders from unauthorized distribution, some audio content is distributed with certain restrictions on recording and playback. For example, the playback period or playback count for the data may be limited. In such cases, checking out of the audio contents may not be possible.

Depending on the contents, some audio data that could be checked out are subject to editing restrictions on the Net MD; e.g., audio contents cannot be erased or track marks cannot be added or erased.

It is not possible to check in tracks other than those that were checked out from your computer (for example, tracks recorded using a microphone or through analog or digital connection).

## Features by copyright protection by OpenMG

The SonicStage software features OpenMG, a copyright protection technology developed by Sony to protect music copyrights. OpenMG uses high-level cryptographic technology to protect music contents with computers.

Users should be aware of the restrictions described below.

- Music recorded on the hard disk using the SonicStage software cannot be played when copied to other computers.
- Installation of the same SonicStage software to other computers is not permitted.
- Usage Rules  
If Usage Rules are included in the music by way of the copyright holder or the distributor, operation will be restricted to use permitted by the Usage Rule. For music, such as compact discs, that does not contain a Usage Rule, the Default Usage Rule of SDMI will apply. This Default Usage Rule states that one file can be checked out up to three times only.
- On music contents that are not compatible with the SonicStage software  
Under the supervision of SDMI, this software prohibits recording of music with a copy prohibition signal.
- Upgrading SonicStage software  
This software was developed in accordance with the current arrangement between Sony and SDMI. If this arrangement is modified in the future, some of the software functions may become unavailable. Sony may offer an upgrade kit in this case at additional user expense.

---

## Glossary

### ATRAC3

ATRAC3, which stands for Adaptive Transform Acoustic Coding<sup>3</sup>, is audio compression technology that satisfies the demand for high sound quality and high compression rates. The ATRAC3 compression rate is approximately 10 times higher than that of the Audio CD, resulting in an increased data capacity for the media.

### “Check-In /Check-Out”

Check-out is to transfer music files from a personal computer to an external device/media (such as a Network Walkman). Returning checked-out music files to the same computer is to check in. (You cannot move checked-out music files to another computer.)

You can check out a music file, check it back in, and then check it out again an infinite number of times. The SDMI rules provide that up to four copies of a music file can be checked out at one time. OpenMG employs a method whereby three copies of a song can be checked out simultaneously, while the fourth copy is maintained as a master on your PC.

### Electronic Music Distribution (EMD) service

EMD is a website that distributes music files which are available for purchase.

### MP3

MP3, which stands for MPEG-1 Audio Layer<sup>3</sup>, is a standard for audio file compression determined by the Motion Picture Experts Group, an ISO (International Organization for Standardization) working group. It enables compression of audio files to about 1/10 of the data size of a standard compact disc. Since the MP3 encoding algorithm is disclosed, there are various encoders/decoders that are compliant with this standard, including freeware that is available for no charge. The MP3 standard is therefore widely used in the computer field.

### Music Drive

Music Drive is a music database for managing audio data on a computer. In Music Drive, audio files can be managed along with such information as artist names, track names, and CD jacket images, or can be combined and categorized in different playlists.

### OpenMG

Copyright protection technology for the import and management of musical content from distribution services or CDs. By using software that are compliant with OpenMG, audio contents can be encrypted before storage on a hard disk drive to allow playback of those audio files on that computer. OpenMG also prevents the unauthorized distribution of the contents via the Internet or other networks.

### Playlist

A playlist is like a container that can be used to hold and categorize files stored in Music Drive. For example, by making a “jazz” playlist and then putting your favorite jazz tracks into the playlist, you can play all of the tracks repeatedly or check them all out at the same time.

## Recording mode (Bit rate)

This is a measure of data volume per second. The rate is expressed in bps (bits per second). In SonicStage, the bit rate can be selected for recording an audio CD or converting MP3 and WAV format audio files into ATRAC3 format from among three rates: 132 kbps, 105 kbps or 66 kbps. In the case of 105 kbps, 105,000 bits of information is processed per second. If the bit rate is large, that means a large amount of information is used to play the music. Thus, 105 kbps data produces better sound quality than 66 kbps data, and 132 kbps data provides better sound quality than 105 kbps data. However, audio files in formats such as MP3 have different encoding methods, and so the sound quality is not determined by the bit rate alone.

## SDMI

SDMI, which stands for Secure Digital Music Initiative, is a forum that consists of over 130 companies in the fields of recorded audio content, computers, and consumer electronics. It is dedicated to the development of integrated copyright protection technology that can be used worldwide.

SDMI is working to create a framework for preventing the improper usage of audio files and to promote legal music distribution services. The copyright protection technology OpenMG is based on the SDMI standard.

## Windows Media Audio

This is an audio compression technology that includes the management system called “Windows Media Rights Manager”.

## Windows Media Technology

This is a technology that includes a contents management system called Windows Media Rights Manager which encrypts contents and distributes music contents along with their conditions for usage, distribution, etc. Audio files supporting Windows Media Technologies (WMT) downloaded via EMD\* can be imported into and managed by OpenMG Jukebox.

\* EMD may not be available in certain areas of the world.

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WMT 101







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2. **PARTS:** In addition, Sony will supply, at no charge, new or rebuilt replacements in exchange for defective parts for a period of one (1) year. After 90 days from the date of purchase, labor for removal and installation is available from Sony authorized service facilities or a Sony Service Center at your expense.

To obtain warranty service, you must take the Product, or deliver the Product freight prepaid, in either its original packaging or packaging affording an equal degree of protection, to any authorized Sony service facility.

This warranty does not cover customer instruction, installation, set up adjustments or signal reception problems.

This warranty does not cover cosmetic damage or damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or modification of, or to any part of the Product, including the antenna. This warranty does not cover damage due to improper operation or maintenance, connection to improper voltage supply, or attempted repair by anyone other than a facility authorized by Sony to service the Product. This warranty does not cover Products sold AS IS or WITH ALL FAULTS, or consumables (such as fuses or batteries). This warranty is valid only in the United States.

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