

# SHARP



## 1-BIT PORTABLE MINIDISC RECORDER

MODEL

# IM-DR580H

OPERATION MANUAL

If you require any advice or assistance regarding your Sharp product, please visit our web-site [www.sharp.co.uk/customersupport](http://www.sharp.co.uk/customersupport). Customers without Internet access may telephone 08705 274277 during office hours (or (01) 676 0648 if telephoning from Ireland).

Thank you for purchasing this SHARP product. For the best performance, read this manual carefully. It will guide you in operating your SHARP product.

**MDLP****NetMD**TINSE0568AWZZ  
03K R HK ①

## Special Notes

### NOTES FOR USERS IN THE U.K. AND IRELAND

#### SERVICE INFORMATION

In the unlikely event of your equipment requiring repair, please use the supplied postage paid label to send your unit to the Sharp repair centre or contact the dealer or supplier from whom it was purchased. Where this is not possible, please visit our web-site [www.sharp.co.uk/customersupport](http://www.sharp.co.uk/customersupport).

Customers without internet access may telephone 08705 274277 during office hours (or (01) 676 0648 if telephoning from Ireland).

Please note; all calls will be charged at local rate.

Certain replacement parts and accessories may be obtained from our main parts distributor.

WILLOW VALE ELECTRONICS LTD.  
0121 766 5414

In the unlikely event of this equipment requiring repair during the guarantee period, you will need to provide proof of the date of purchase to the repairing company. Please keep your invoice or receipt, which is supplied at the time of purchase.

#### ■ Warnings

- The supplied AC adaptor contains no user serviceable parts. Never remove covers unless qualified to do so. It contains dangerous voltages, always remove the mains plug from the main outlet socket before any service operation or when not in use for a long period.
- The AC adaptor supplied with the IM-DR580H must not be used with other equipment.
- To prevent fire or shock hazard, do not expose this appliance to dripping or splashing liquids. No objects filled with liquids, such as vases, shall be placed on the apparatus.
- Never use an AC adaptor other than the one specified. Otherwise, problems or serious hazards may be created.

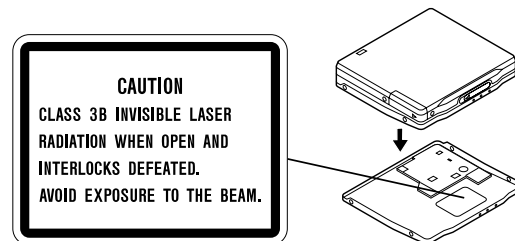
#### ■ Caution

- When recording important selections, make a preliminary test to ensure that the desired material is properly recorded.
- SHARP is not liable for damage or loss of your recording arising from malfunction of this unit.

- At full volume, prolonged listening to a personal stereo may damage the user's hearing. This model complies with the law if used with the correct earphones (model number RPHOH0021AWZZ, RPHOH0022AWZZ). If the earphones are damaged in any way, please order using the model number given above.
- This product is classified as a CLASS 1 LASER PRODUCT.
- Use the Portable MiniDisc Recorder only in accordance with the instructions given in this manual and do not attempt to interfere with the interlock switch or make any other adjustment as this may result in exposure to hazardous radiation.

#### Laser Diode Properties

- Material: GaAlAs
  - Wavelength: 785 nm
  - Pulse time:
- Read mode: 0.8 mW Continuous  
Write mode: max 12 mW 0.5S  
min cycle 1.5S  
Repetition



#### ■ Notes

- Recording and playback of any material may require consent, which SHARP is unable to give. Please refer particularly to the provisions of the Copyright Act 1956, the Dramatic and Musical Performers Protection Act 1958, the Performers Protection Acts 1963 and 1972 and to any subsequent statutory enactments and orders.
- This equipment complies with the requirements of Directives 89/336/EEC and 73/23/EEC as amended by 93/68/EEC.
- US and foreign patents licensed from Dolby Laboratories.
- The letters in brackets contained in the model number indicate the colour of the product only. Operation and specifications are unaffected.

## Features

### ■ A Net MD portable recorder

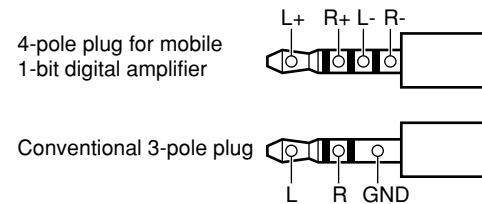
Audio data saved on the hard disk of a PC can be transferred to a Net MD-compatible recorder using the provided software "BeatJam".

### ■ A Portable MD player with "Mobile 1-bit digital amplifier"

The 1-bit digital signal is sent to a constant voltage circuit directly from a high-order  $\Delta\Sigma$  modulation circuit. The amplifier transmits and amplifies the signal, and allows extremely natural and clear sound with little deterioration.

### ■ "4-pole plug earphone" optimizes "Mobile 1-bit digital amplifier"

Sharp has adopted "4-pole plug" earphone that completely separate right and left sound. Enjoy the high quality sound of the "Mobile 1-bit digital amplifier".



### ■ Multi-link station

Connect the multi-link station to a PC, speakers with built-in amplifiers or other external equipment, and place the main unit on the multi-link station. Now you can enjoy playing, recording and editing music as well as Net MD features.


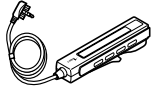

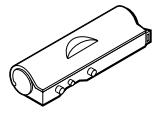
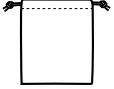
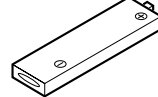
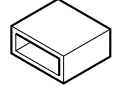

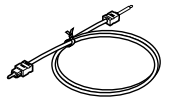
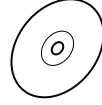

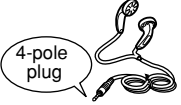
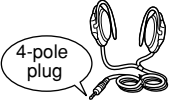
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## Accessories

Important Introduction  
-Accessories-

 <b>AC Adaptor (RADPA8066AWZZ) x 1</b>	 <b>Remote control x 1</b>	 <b>Multi-link station x 1</b>	 <b>Battery case x 1</b>
 <b>Carrying bag x 1</b>	 <b>Rechargeable nickel-metal hydride battery (AD-NT55BT) x 1</b>	 <b>Battery carrying case x 1</b>	 <b>Connection cable (for analogue recording) x 1</b>
 <b>Connection cable (for digital recording) x 1</b>	 <b>CD-ROM x 1</b>	 <b>USB connection cable x 1</b>	 <b>Earphones (inner ear type) x 1</b>
			 <b>Earphones (ear-fit type) x 1</b>

**Notes:**

- You can hear the sound only from one earphone if you use the supplied earphones with other equipment.
- Parts and equipment mentioned in this operation manual other than those detailed above are not included.
- The AC adaptor may be different from the one in the drawing.

**Warning:**

The AC adaptor supplied with the IM-DR580H must not be used with other equipment.

## Precautions

IM-DR580H

### ■ Important

- Do not wear your earphones when you are crossing streets or near traffic.
- Do not use your earphones whilst driving a motor vehicle, it may create a traffic hazard and may be illegal. Remember to obey all of the safety rules in your area.



- Do not play the unit at a high volume. Hearing experts advise against extended listening at high volume levels.
- If you experience ringing in your ears, reduce the volume or discontinue use.
- No naked flame sources, such as lighted candles, should be placed on the apparatus.
- Attention should be drawn to the environmental aspects of battery disposal.
- The apparatus is designed for use in moderate climate.
- This portable MD should only be used within the range of 0°C - 40°C.

### To avoid accidental electric shock or other possible problems, observe the precautions listed below.

- Do not disassemble or modify the unit.
- Do not drop or subject the unit to shock.
- Do not use the unit near open flames.
- Do not spill liquid on the unit.
- Do not use an external power supply, other than the 3 V DC supplied with this unit, as it may damage the unit.
- SHARP is not responsible for damage due to improper use. Refer all servicing to a SHARP authorised service centre.

### ■ Storing the unit

#### Avoid using or leaving the unit in the following places.

- Places exposed to direct sunlight for many hours (especially in cars with the doors and windows closed) or near heaters. (The cabinet may deform, change colour or the unit may malfunction.)
- Places exposed to excessive dust.
- Places exposed to water.
- Places where temperatures are excessively high or low.
- Places (bathrooms) where the humidity is extremely high.
- Places with strong magnetic fields such as near TVs or loudspeakers.
- Places exposed to vibration.
- Places where sand can easily enter the inside of the unit (beaches etc.).
- If the unit is used near radio tuners or TVs, noise and/or picture interference may result. If you experience these problems, move the unit away from such devices.

It is not recommended to put the portable MD into a rear pocket, as this may damage the product when sitting.



Using this unit near mobile phones may cause noise pickup. If it occurs, move it away from them.

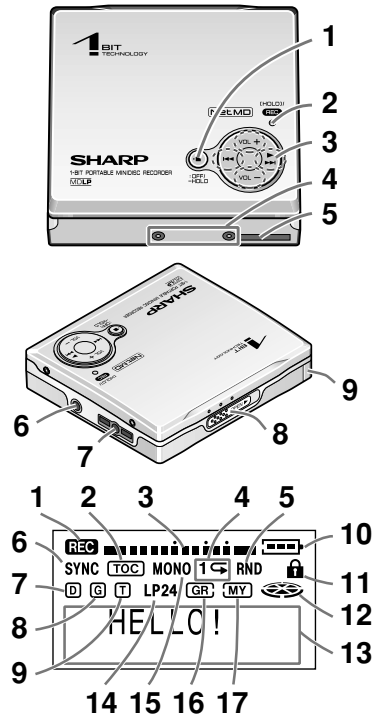


Important Introduction  
-Precautions-

1

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## Names of Controls and Indicators



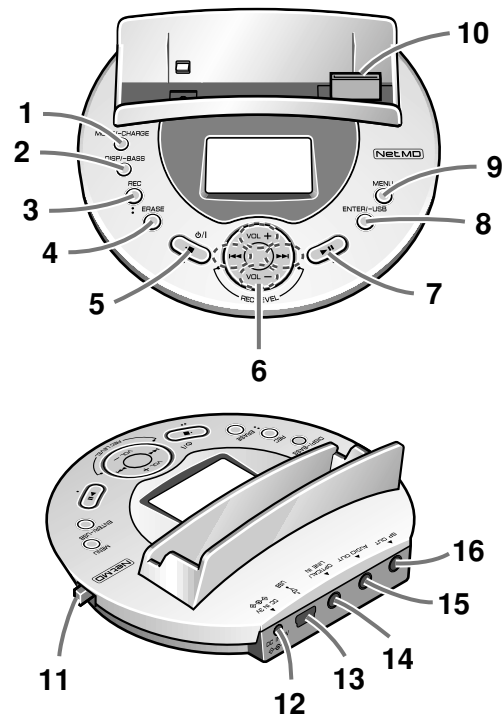
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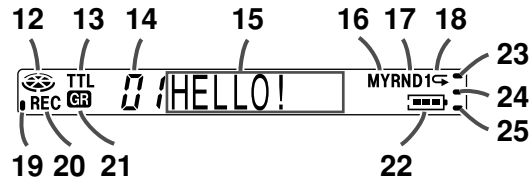
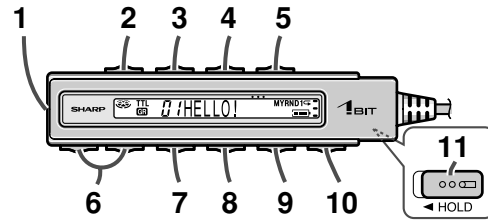
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Important Introduction  
-Names of Controls and Indicators-

## Names of Controls and Indicators (continued)

Important Introduction  
-Names of Controls and Indicators-



### ■ Remote control unit

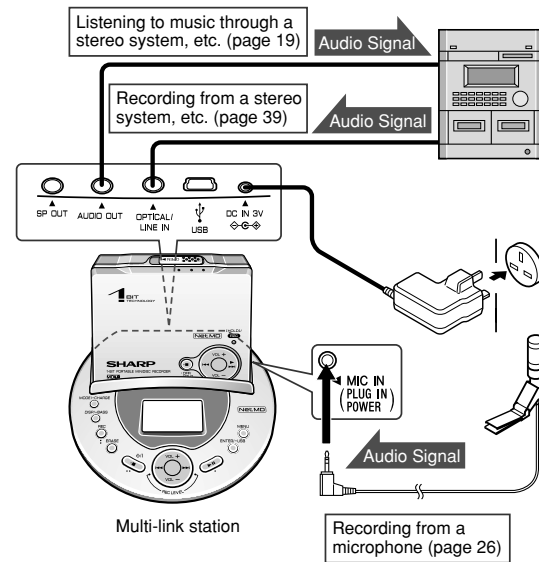
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## Connecting to Other Equipment

IM-DR580H

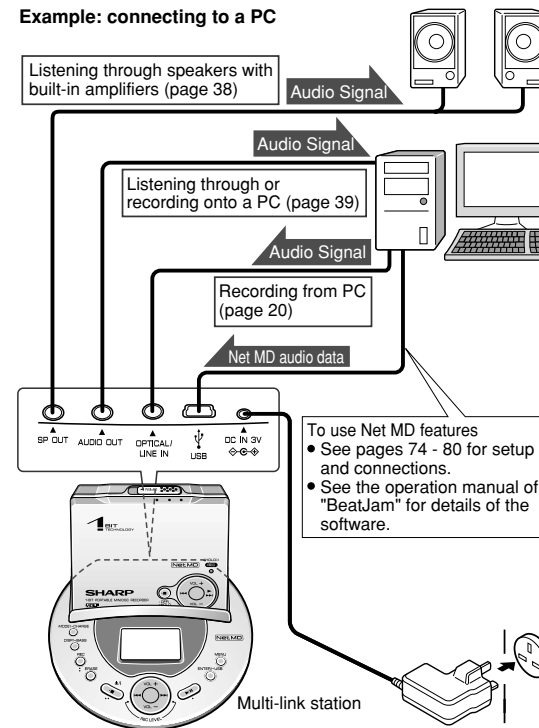
Enjoy the multi-link station features with other equipment. See the corresponding pages for connections and operations.

### Example: connecting to a stereo system and microphone



**Note:**  
SP OUT and AUDIO OUT sockets on the multi-link station accept 3-pole earphones, not the supplied 4-pole earphones.

### Example: connecting to a PC



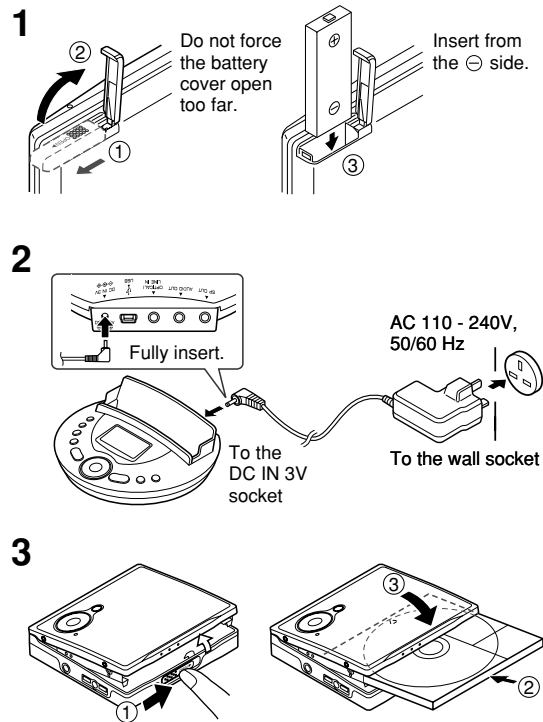
Preparation  
-Connecting to Other Equipment-

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## Using with the Multi-link Station

Preparation  
-Using with the Multi-link Station-



You can charge the battery, record, play or edit music and use Net MD features with the multi-link station.

### 1 Insert the rechargeable battery.

A rechargeable battery other than the AD-N55BT cannot be charged.

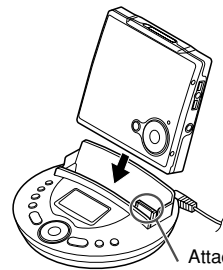
### 2 Plug the AC adaptor into the wall socket, and then insert the plug on the other end into the DC IN 3V socket.

### 3 Insert a MiniDisc.

- 1 Slide the OPEN lever to release the compartment door.
- 2 Insert the disc fully as indicated by the arrow, with the label up.
- 3 Close the compartment door.

Playback starts automatically with a playback only MiniDisc or a MiniDisc which is protected against accidental erasure (Auto play function, see page 70).

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Press down the unit with its front side facing toward you.

Attach to the main unit connection terminal.

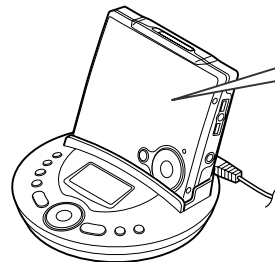
#### 4 Place the main unit on the multi-link station.

- Press down the main unit to set it securely.

#### Caution:

When the unit is not in use for extended periods, remove the AC adaptor from the wall socket.

#### Now the multi-link station is ready.



Operate with the multi-link station when the main unit is placed on it. The remote control and main unit buttons cannot be used.

#### Charging → See page 14.

Charge the battery.

#### Recording → See pages 19, 26.

Record from a stereo system or microphone.

#### Playback → See page 38.

Listen to MDs through speakers with built-in amplifiers.

#### Editing → See page 58.

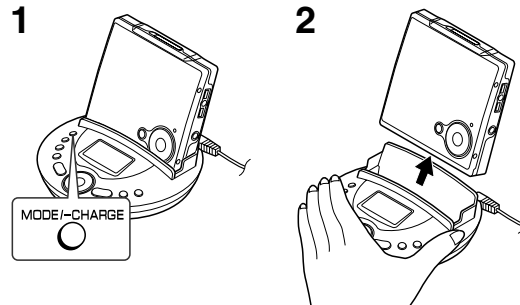
Edit tracks on MDs.

#### Net MD → See page 74.

Connect to a PC to use Net MD features.

## Using with the Rechargeable Battery

When the rechargeable battery is used for the first time or when you want to use it after a long period of disuse, be sure to charge it fully.



### 1 Place the main unit on the multi-link station.

- The battery indicator will scroll, and the battery will begin charging.



Scrolling

- If placing the main unit with the power on or after operations with the multi-link station, turn it off and hold down the CHARGE button for 3 seconds or more.

### 2 After charging, remove the main unit from the multi-link station.

- Hold the multi-link station and pull the main unit straight out.

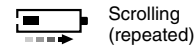
### Battery indicator:

The battery indicator shows the progress of charging.

Charging starts



Appear



Scrolling  
(repeated)



Charging complete  
(in approx. 3.5 hours)



Goes out

- **When the indicator is off, charging is complete.**

- Charging does not start if the main unit is not set on the multi-link station properly or there is any dirt or foreign substance on the terminal.

- It may take approx. 30 seconds for the indicator to scroll depending on the remaining amount of battery.

- **The battery is charged up to 90% if it is completely discharged.**

- The unit can be left in the charging state after it is completed.

- Charging may take less time depending on the remaining amount of battery.

### Top-up charging:

"Memory effect" is a loss of battery capacity in nickel metal hydride batteries caused by a voltage drop. This product allows top-up charging with no "memory effect" even if the battery is not fully discharged.

**Notes:**

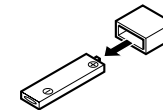
- This product should only be used within the range of 0°C - 40°C. The battery should be charged within the range of 5°C - 35°C (charging is impossible below 0°C or over 40°C).
- After the rechargeable battery is charged or used, the main unit or multi-link station will get slightly warm. This is normal.
- When the battery is charged for the first time or is charged after not being used for a long period, the operating time may be shorter than normal. The battery life will recover with normal use i.e. charging and discharging.
- Charging stops when you press the REC, ►|| or ■ button on the multi-link station.
- **When the portable MD is turned on or operating, the battery will not be charged.**
- For information about battery life, see the battery item in the "Specifications" on page 87.
- A rechargeable nickel-metal hydride battery is the only kind that can be used. Even if the battery is not used, you should charge it at least once every three months because of the special quality of this battery.

**Battery replacement:**

- The rechargeable battery can be charged approximately 300 times.
- When the operating time is reduced to about half the normal amount of time, even after a full charge is performed, replace the battery with a new one (AD-N55BT).

**Caution:**

- Use the specified battery AD-N55BT only. Do not charge a battery (nickel-cadmium, alkaline, etc.) other than that specified.
- Do not remove the outer cover of the rechargeable battery. It may cause heat generation, fire, or explosion.
- Do not dip the battery in water, do not dispose of it in a fire, and do not take it apart.
- If the rechargeable battery terminal is dirty, charging may not start. In such a case, wipe off the dirt with a dry cloth.
- Do not disassemble the battery.
- Do not short-circuit the terminals as they will become very hot and will damage the battery.
- Do not drop or subject the battery to shock.
- Do not insert objects (metal etc.) into the battery compartment of this product or into the rechargeable battery.
- Carry the battery in the supplied case. Apply the case on the ⊕ end.
- If the rechargeable battery is used in a cold environment, the operating time will be reduced.
- Do not carry the battery in your pocket or a bag together with metal objects (keys, coins, jewelry, etc.). The battery may short out and generate significant amounts of heat.

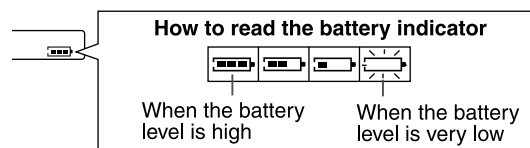


Preparation  
-Using with the Rechargeable Battery-

## Using with the Rechargeable Battery (continued)

### ■ Checking the remaining amount of battery level

The remaining amount of battery level is shown by the battery indicator ( ) during operation.  
<On the remote control>



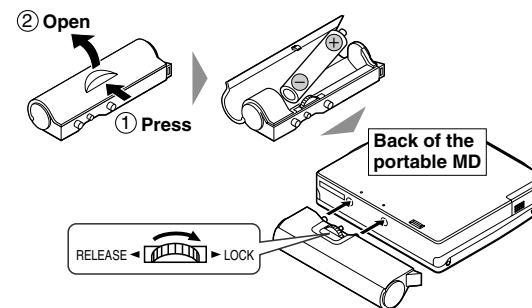
- When the battery is completely discharged, the battery indicator will flash. Recharge the battery or replace the alkaline battery with a new one.
- When the battery has run out completely, "LoBATT" will appear. Then, the power will be disconnected automatically.

#### Notes:

- If you use the battery which you stopped charging halfway, " " may appear. It does not mean that the battery is completely charged.
- The battery indicator will not correctly display the remaining capacity for approximately 20 seconds after the power has been turned on.
- When the AC adaptor is used, the battery indicator will not be shown.
- The number of bars shown in the battery indicator may increase or decrease, depending on the operation being performed. This is normal.

## Using with the Alkaline Battery

Use one commercially available alkaline battery (LR6, "AA" size).  
The rechargeable battery can be used at the same time.



- 1 Open the case cover.**
- 2 Insert an alkaline battery into the battery case.**  
Set the battery properly according to  $\oplus$  and  $\ominus$  inside the case.
- 3 Attach the battery case to the portable MD.**



**Caution:**

Do not use a rechargeable battery (nickel-cadmium battery etc.) in the battery case.

**Notes:**

- Use the rechargeable battery at the same time to ensure stable operations even if the battery case falls apart due to shock or vibration.
- Do not replace the battery or the rechargeable battery during operation.
- If the unit is not used for a long period of time, remove the battery. (Even if the power is turned off, the battery will be drained slowly but continuously.)

## Notes on Inserting/Removing a MiniDisc

IM-DR580H

- To avoid breakage, do not force the compartment open, and do not insert a MiniDisc forcibly or under the holder.
- If a MiniDisc does not go in smoothly or the door does not close properly, take out the disc and try again.



- Do not open the compartment when the power is on. Be sure to turn it off before removing a MiniDisc.  
The compartment door is locked while recording or editing is in progress. Do not slide the OPEN lever to avoid breakage.
- Do not open the compartment when the main unit is on the multi-link station.

Preparation  
-Using with the Alkaline Battery/Notes on Inserting/Removing a MiniDisc-

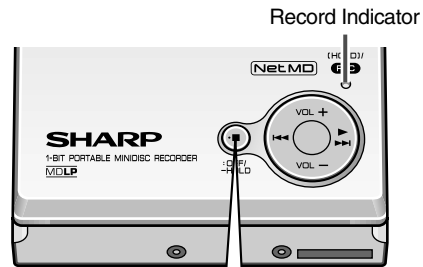
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## Hold Function

The present operation condition can be kept even if other buttons are accidentally pressed in a place such as a crowded train. (The main unit and remote control function separately.)

### Main unit



Hold down the ■ (HOLD) button for 2 seconds or more.  
The mode switches each time the button is pressed.

**Hold on:** The record indicator flashes three times.

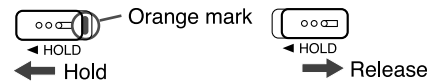
**Hold off:** The record indicator flashes once.

- If the battery is inserted, you can set this function even when the power is turned off.
- If a button is pressed with the hold function active, the record indicator flashes twice.

### Remote control unit



Move the HOLD switch to the safety position (direction indicated by the arrow).



#### To cancel the hold mode

Move the HOLD switch away from the safety position (the opposite direction of the arrow).

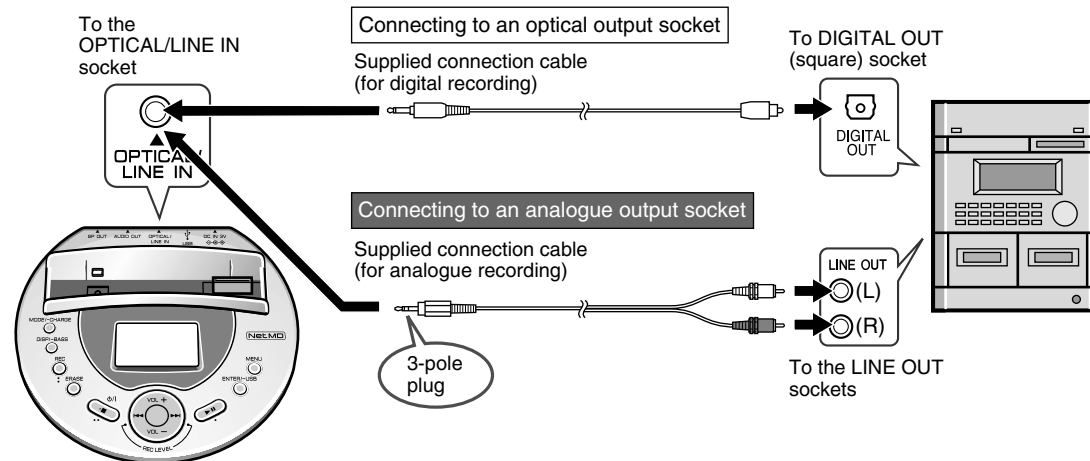
If the hold function is active whilst the power is turned off, the power cannot be turned on by mistake and the battery will not be drained.

## Connecting to a Stereo System, PC, etc.

IM-DR580H

Connect other equipment to the multi-link station for recording. The connection differs according to the equipment. Recording requires a digital or analogue connection cable.

### ■ Recording from a stereo system



#### Notes:

- When recording from a stereo system, do not connect anything to the MIC IN socket on the main unit.
- This product has a built-in sampling rate converter that automatically converts the sampling frequency of various digital equipment including the digital radios and DAT deck (32 kHz and 48 kHz respectively) to 44.1 kHz for recording.

- For digital connections, use equipment with an appropriate digital audio interface.
- Plug in cables securely.

Recording  
-Connecting to a Stereo System, PC, etc.-

3

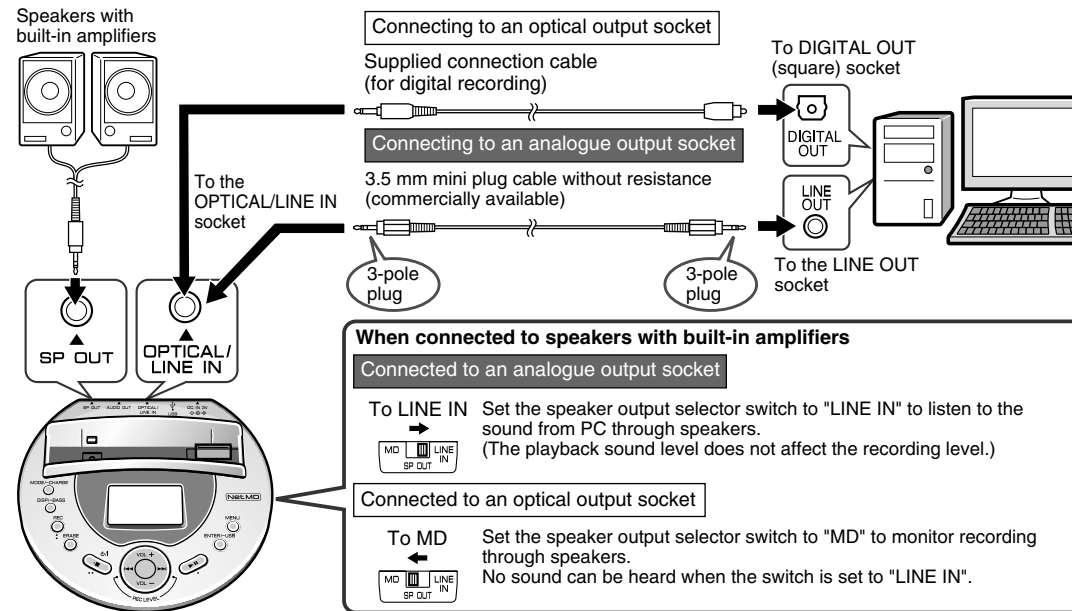
19

IM-DR580H(E) TINSE0568AWZZ

03/10/15 IM-DR580H(E)2.fm

## Connecting to a Stereo System, PC, etc. (continued)

### ■ Recording from PC



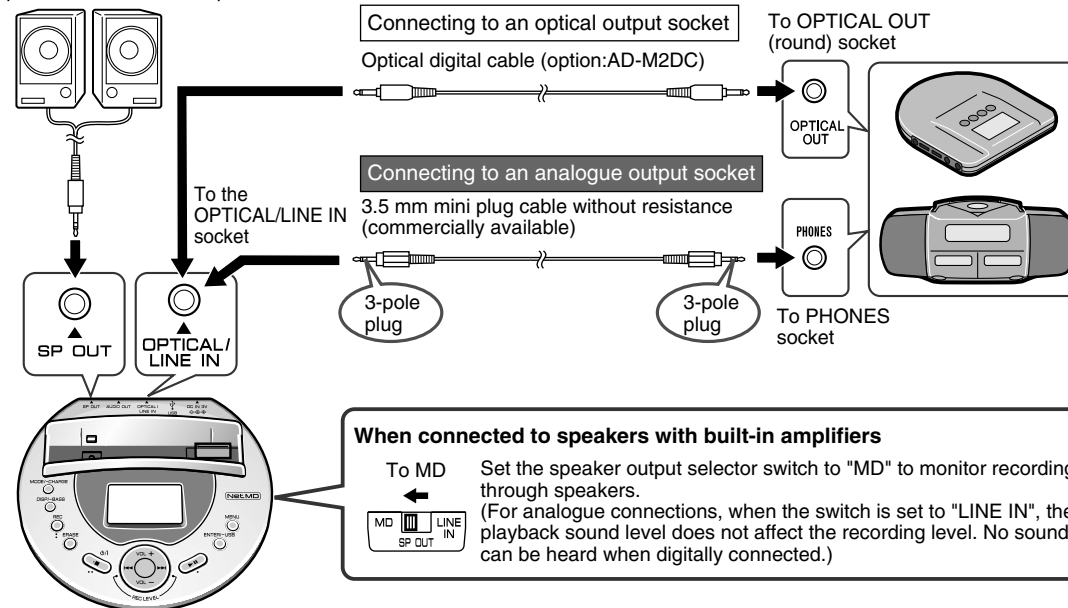
#### Note:

When PC and the multi-link station are connected through input and output sockets, howling or sound deterioration may occur. To avoid this, set the "LINE MONI" to "OFF" for analogue connections (see page 70). For digital connections, disconnect PC from the AUDIO OUT socket on the multi-link station and set "OPT MONI" to "ON" (see page 70).

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### ■ Recording from a portable CD player, etc.

Speakers with built-in amplifiers



#### Note:

Set "LINE MONI" (for analogue connections) or "OPT MONI" (for digital connections) to "ON" (see page 70). You can listen to the sound being recorded through earphones or speakers.

Recording  
-Connecting to a Stereo System, PC, etc.-

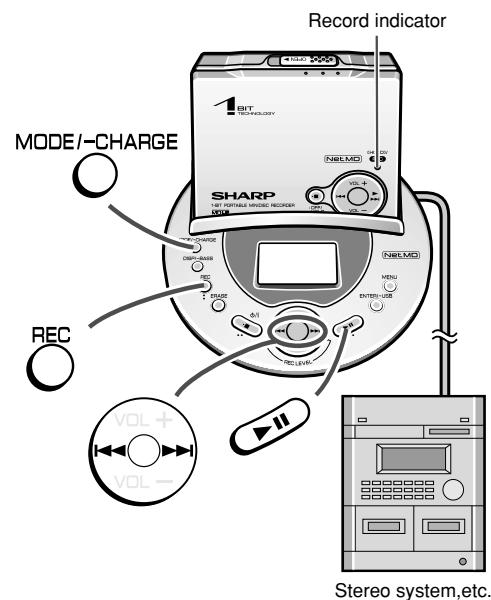
3

21

## Recording from a Stereo System, etc.

### Before Recording:

- When recording important selections, make a preliminary test to ensure that the desired material is properly recorded.
- SHARP is not liable for damage or loss of your recording arising from malfunction of this unit.



### Manual recording

**1** Connect external equipment to the OPTICAL/LINE IN socket on the multi-link station (pages 19 - 21).

**2** Insert a recordable MiniDisc (page 12).

**3** Place the main unit on the multi-link station.

**4** Press the REC button.

Recording is paused.

LINEin(15)  
-01- 0:00

- Even when the power is off, you can start recording by pressing the REC button.
- The record indicator flashes.

**5** Press the MODE/-CHARGE button repeatedly to select the recording mode (page 33).

Display	Recording mode
None	Stereo recording
LP2	2 times long recording
LP4	4 times long recording
MONO	Monaural recording

**6** Start playback on the external equipment and adjust the recording level by pressing the ◀◀ or ▶▶ button (page 23).

### 7 Press the PAUSE button on the stereo system to enter the playback pause mode.

Here you can search for the track to record.

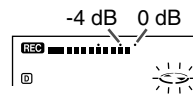
### 8 Press the ►|| button.

- The record indicator lights up.

### 9 Begin playback on the external equipment, the output will be recorded.

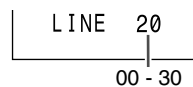
#### ■ Recording level adjustment

Adjust the recording level so that the maximum sound volume from the source makes the reading swing somewhere between -4 dB and 0 dB.



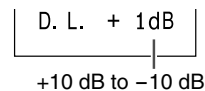
#### Analogue recording (connecting with analogue cable)

The recording level can be adjusted between LINE 00 and 30.



#### Digital recording (connecting with digital cable)

You can adjust the level in 1 dB increments between +10 dB and -10 dB.



- Do not increase the recording level excessively. The sound may be distorted.
- Once you adjust the digital recording level, the setting is retained even after the recording stops. (For cancellation instructions, see page 70.)
- The sound from the earphones does not change even if the digital recording level is adjusted.

#### To interrupt recording

Press the ►|| button.

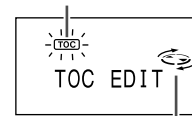
- To resume recording, press the ►|| button again.
- The track number will be increased by one each time the recording is interrupted.

#### To stop recording

Press the ■ button.

- When you record or edit, "TOC" appears. This indicates the TOC information is changed, but not recorded yet. When recording is stopped, TOC is written on the MD.

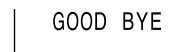
Flashing (recording information)



Rotating

#### To turn off the power

Press the ■ button whilst in the stop mode.



- The power automatically turns off approx. 2 minutes after recording.
- The power does not turn off whilst recording is paused.

## Recording from a Stereo System, etc. (continued)

### Notes:

- When recording, it is recommended to use the AC adaptor and also install the battery. Should the power failure occur, the power source will be automatically switched to the battery.
- Changing the volume level whilst recording does not affect the recording.
- You cannot adjust the bass level whilst recording.
- **When recording through the earphone socket, the recording level depends on the sound volume on the connected equipment.**
- If powered by batteries, some portable CD/MD players may not send signals from the optical socket. Use the AC power for digital recording. Also, deactivate sound skip prevention if installed.

### ■ Playback sound-actuated recording

Recording automatically starts or pauses by detecting sound from the stereo system (synchronised recording).

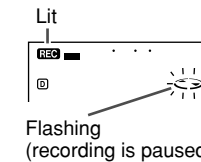
**1 Connect external equipment to the OPTICAL/LINE IN socket on the multi-link station (pages 19 - 21).**

**2 Insert a recordable MiniDisc (page 12).**

**3 Place the main unit on the multi-link station.**

**4 Press the REC button.**

Recording is paused.


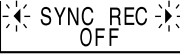
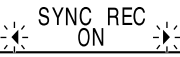
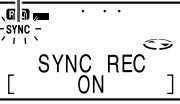
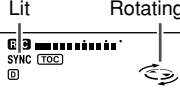


**5 Press the MODE/-CHARGE button repeatedly to select the recording mode (page 33).**

**6 Start playback on the external equipment and adjust the recording level by pressing the ◀◀ or ▶▶ button (page 23).**

After the adjustment, leave the connected equipment in the stop mode.



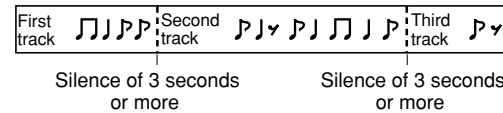
<p><b>7 Press the MENU button.</b></p> <p>The unit enters the menu select mode.</p>	
<p><b>8 Select "SYNC REC" by pressing the &lt;&lt; or &gt;&gt; button and press the ENTER/-USB button.</b></p>	
<p><b>9 Select "ON" by pressing the &lt;&lt; or &gt;&gt; button and press the ENTER/-USB button.</b></p> <p>● "SYNC" will flash.</p> <p>ON: Synchro recording is active.</p> <p>OFF: Synchro recording is deactivated.</p>	 Flashing 
<p><b>10 Begin playback on the external equipment.</b></p> <p>Recording will begin automatically.</p>	Lit      Rotating 

**To stop recording**  
 Press the ■ button.  
 Synchro recording is deactivated.

**To use the last setting for synchro recording**  
 Press the REC button to pause recording and press the REC button for 2 seconds or more.  
 Synchro recording starts.

**Recording pause and track numbering**

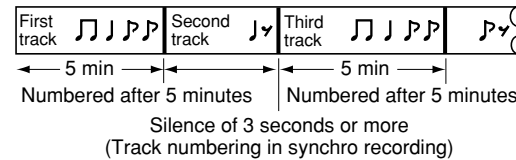
- When the stereo system is stopped, the unit will enter the synchro recording pause mode. When playback is resumed, the recording will be resumed.
- If a silence lasts for 3 seconds or more, recording will be paused (pause function does not work for approximately 10 seconds after the recording starts). When the unit receives sound again, recording automatically starts.
- A new track number is created when the recording resumes.



**When track number setting is active**

Tracks are numbered after a silence of more than 3 seconds and at set intervals (see page 34).

(Example: the interval is 5 minutes)

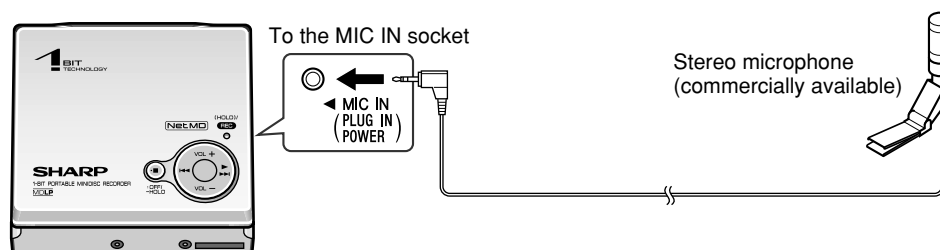


**Note:**  
 Recording may not pause or resume at an appropriate timing depending on the playback signal. In this case, perform recording manually (see pages 22 - 23).

Recording from a Stereo System, etc.-

## Recording from a Microphone

Connect a microphone to the main unit for recording.



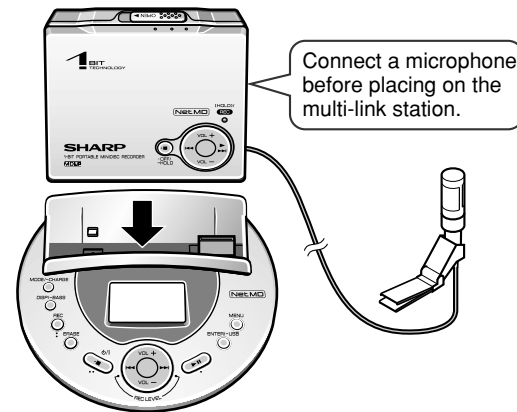
### Notes:

- When recording from a microphone with the main unit on the multi-link station, do not connect anything to the OPTICAL/LINE IN socket. Noise may be picked up.
  - When the recording level is high, MD mechanical operation sound may be recorded. To avoid this, keep the sound collector of the microphone away from the main unit. MD mechanical operation sound may be recorded more easily if the microphone is a direct connection type.
  - Keep the plug clean. Dirt may cause noise pickup.
  - Insert the plug firmly. If you don't, the recording will not be made properly.
  - Use a microphone with a 3.5 mm diameter stereo mini plug.
- **To use a microphone, be sure it is a plug-in-power type microphone.**
    - When a plug-in-power type microphone is plugged in, the portable MD will provide power for the microphone's operation.
    - If a different type of microphone is plugged in, it may not operate properly or it may cause the unit to malfunction.

Use the multi-link station or the remote control for microphone recording.

#### ■ Indoor recording

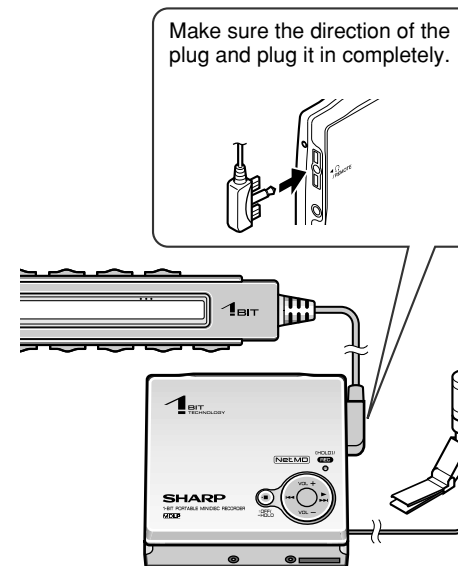
If the AC adaptor can be used, keep the main unit on the multi-link station for recording.



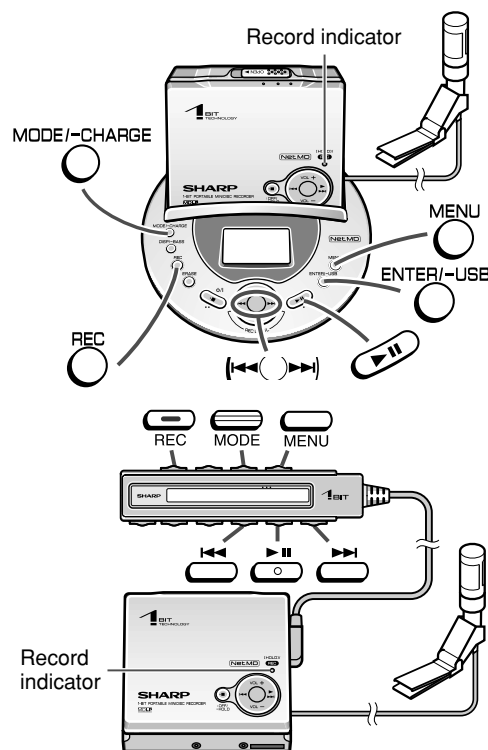
**Note:**  
Recording cannot be remotely controlled when the main unit is placed on the multi-link station (no display is shown in the indicator).

#### ■ Outdoor recording

It is not recommended to use the AC adaptor with the multi-link station outdoors. When outside or where it is inconvenient to use the multi-link station with the AC adaptor, use the remote control for recording.



## Recording from a Microphone (continued)



### ■ Manual recording

[Operate with the multi-link station or the remote control]

( ) indicates remote control operations.

- 1** Connect a plug-in microphone to the MIC IN socket on the main unit (page 26).
- 2** Insert a recordable MiniDisc (page 12).
- 3** To operate with the multi-link station, place the main unit on the multi-link station. (To use the remote control, connect it to the main unit.)
- 4** Press the REC button.
  - The record indicator flashes.
  - The REC button functions even if the main unit is turned off.
- 5** Press the MODE/-CHARGE (MODE) button repeatedly to select the recording mode (page 33).
- 6** Press the MENU button.  
The menu selection mode is activated.
- 7** Select "MIC LEVEL" ("MICLevel") by pressing the ◀◀ or ▶▶ button, and then press the ENTER/-USB (▶▶) button.

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**8** Select "ALC-H", "ALC-L" or "MANUAL" by pressing the ◀◀ or ▶▶ button, and the press the ENTER/-USB (▶▶) button.

**9** Press the ▶▶ button to start recording.

The record indicator lights up.

#### To interrupt recording

Press the ▶▶ button whilst recording.

To resume recording, press the ▶▶ button.

The track number will be increased by one each time you interrupt recording.

#### To stop recording

Press the ■ button.

TOC information is recorded.

### ■ Adjusting the microphone recording level

#### Auto adjustment:

- In step 8 above, select "ALC-H" or "ALC-L". The recording level is adjusted according to the sound from the microphone. Normally set to "ALC-H".
- If the sound from the microphone is too loud and the recording level exceeds 0 dB frequently, select "ALC-L" to lower the level.
- Select "ALC-H" or "ALC-L" so that the maximum recording level is between -4 dB and 0 dB.

#### Manual adjustment:

In step 8, select "MANUAL" to adjust the recording level manually. This is useful at meetings or in conversations.

Select "MANUAL" and press the ◀◀ or ▶▶ button.

- Adjust the maximum level between -4 dB and 0 dB.
- Adjustable between "MIC L 00 (M-L00)" and "MIC H 30 (M-H30)".



#### Notes:

- Sound is interrupted when switching between "MIC L 20 (M-L20)" and "MIC H 21 (M-H21)". This is not a malfunction.
- Do not increase the recording level excessively.
- The adjusted level is retained after recording is stopped.

Recording  
-Recording from a Microphone-

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## Recording from a Microphone (continued)

### ■ Sound-actuated recording (Mic Synchronised recording)

[Operate with the multi-link station or the remote control]

( ) indicates remote control operations.

- 1** Connect a plug-in microphone to the MIC IN socket on the main unit (page 26).
- 2** Insert a recordable MiniDisc (page 12).
- 3** To operate with the multi-link station, place the main unit on the multi-link station. (To use the remote control, connect it to the main unit.)
- 4** Press the REC button.
  - The record indicator flashes.
  - The REC button functions even if the main unit is turned off.
- 5** Press the MODE/-CHARGE (MODE) button repeatedly to select the recording mode (page 33).
- 6** Press the MENU button.
 

The menu selection mode is activated.
- 7** Select "MIC LEVEL" ("MICLevel") by pressing the ◀ or ▶ button, and then press the ENTER/-USB (▶) button.

- 8** Select "ALC-H", "ALC-L" or "MANUAL" by pressing the ◀ or ▶ button, and then press the ENTER/-USB (▶) button (page 29).
 

⌘ MIC LEVEL ⌘
ALC-H
- 9** Press the MENU button.
 

The unit enters the menu select mode.

⌘ MIC LEVEL ⌘
ALC-H
- 10** Select "SYNC REC" by pressing the ◀ or ▶ button and press the ENTER/-USB (▶) button.
 

⌘ SYNC REC ⌘
OFF
- 11** Select the recording start level by pressing the ◀ or ▶ button and press the ENTER/-USB (▶) button.
 

SYNC REC
⌘ MIC SYNC H ⌘

  - "SYNC" will flash.

**MIC SYNC H (High):**  
Recording starts when the unit detects -24 dB or more (the unit can start recording from quiet sounds).

**MIC SYNC L (Low):**  
Recording starts when the unit detects -12 dB or more.

**OFF:**  
Synchro recording is deactivated. ("OFF" cannot be selected with the remote control.)
- 12** When a sound, such as person speaking, is picked up by the microphone, recording will begin automatically.
  - "SYNC" lights up.

### To stop recording

Press the ■ button.  
Synchro recording is deactivated.

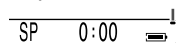
### To use the last setting for synchro recording

Press the REC button to pause recording and press the REC button for 2 seconds or more.  
Synchro recording starts.

### Synchro recording indicator on the remote control:

You can check the recording status.

Synchro recording indicator



Lit: Recording in progress

Flashing: Paused

### Notes:

- Recording may not pause or resume at an appropriate timing depending on the playback signal from the microphone. In this case, perform recording manually (see pages 28 - 29).
- If the unit starts recording from low unwanted noises too often, set the microphone input to "MIC SYNC L".

### Recording pause and track numbering

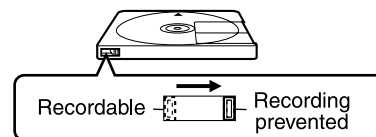
The unit automatically pauses when the microphone does not pick up any sound for 3 seconds or more. (Pause function does not work for approximately 10 seconds after a recording starts.) When the microphone picks up sound again, recording starts automatically.

## Notes for Recording

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### ■ To prevent recorded MiniDiscs from being erased accidentally

Slide the accidental erase prevention tab, located on the side of the MiniDisc, in the direction indicated by the arrow.  
The MiniDisc will then be protected against accidental erasure.

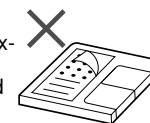


To add a recording to such a MiniDisc, slide the accidental erase prevention tab back to its original position.

### ■ Helpful tip when attaching a label

When attaching a label to a MiniDisc cartridge, be sure to note the following. If the label is not attached properly, the MiniDisc may jam inside the unit and you may not be able to remove it.

- If the label peels off or partially lifts away, replace it with a new one.
- Do not put a new label on top of an existing one.
- Attach the label only in the specified location.



## Notes for Recording (continued)

### ■ About sampling rate converter

This portable MD incorporates a sampling rate converter so that it can record from digital radios or DAT tape recorders.

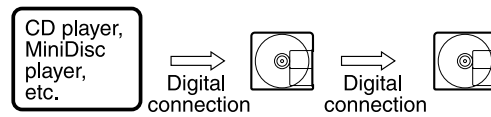
### ■ Note for digital recording

You cannot copy a MiniDisc that you recorded from digital inputs to another MiniDisc or DAT. It is prevented by the SCMS (Serial Copy Management System). Recording from analogue inputs is not affected.

Digital signals

Digitally recorded  
MiniDisc

Cannot record



## Advanced Recording

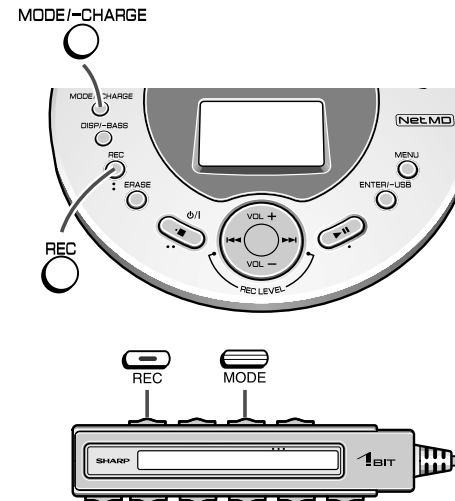
### ■ Switching recording mode

#### 2 times and 4 times long recording

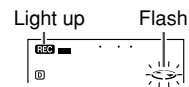
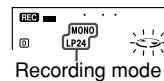
Double or quadruple time of stereo recording is possible.

#### Monaural recording

In monaural, you can record twice as long as stereo recording.





**1 Press the REC button.****2 Press the MODE/-CHARGE (MODE) button repeatedly to select the desired recording mode.**

Each press of the button changes the mode.

**For an 80 minute MiniDisc.**

Indication	Recording mode	Recording time
None	Stereo	MAX. 80 min.
LP2	2 times long (MDLP stereo)	MAX. 160 min.
LP4	4 times long (MDLP stereo)	MAX. 320 min.
SP/MONO	Monaural	MAX. 160 min.

**Display on the remote control**

Indication	Recording mode
REC	Stereo
REC	2 times long (MDLP stereo)
REC	4 times long (MDLP stereo)
REC	Monaural

**Notes:**

- Tracks recorded in 2 times long recording and 4 times long recording modes cannot be played with the unit that does not support these modes. On such a unit, no sound is heard. (The operation may vary depending on the unit.)
- Tracks can be recorded in stereo recording mode, 2 times long recording mode, and 4 times long recording mode on one MiniDisc.
- In monaural recording, the sound on the right and left channels is mixed even if the input source is in stereo. Although you can hear the stereo sound from the earphones, the recorded sound is monaural.
- The recording mode remains unchanged until a new mode is selected.

**Caution for 4 times long recording (LP4)**

Special compression methods are used to achieve 4 times long recording. This may cause some noise to be recorded occasionally. When the highest quality is required, stereo or LP2 recording is recommended.

**■ About ATRAC**

The ATRAC (Adaptive Transform Acoustic Coding) system compresses the sound data into 1/5 by cutting out the inaudible sound. Since the sound is selected based on psychoacoustics masking, the sound quality is not impaired. This unit is equipped with the ATRAC3 compressing system that can reduce the sound data to 1/10 or 1/20 of its original size. By employing this system, 2 times and 4 times long recordings are enabled in stereo mode.

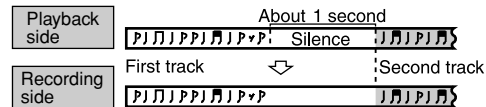
## Advanced Recording (continued)

### ■ Creating track numbers automatically

1. In analogue recording, tracks will be numbered as follows:

#### Recording from a stereo system:

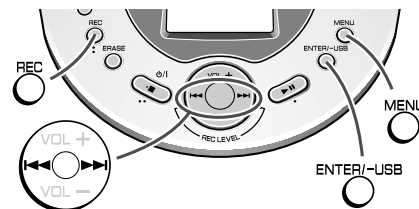
By default, track numbers are created automatically after 1 second or more of silence ("MARK LEVEL-AUTO" is selected).



#### Recording from a microphone:

By default, tracks are recorded as a sequence without numbers ("MARK OFF" is selected).

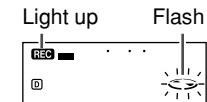
Sequential recording



### To change the numbering setting:

<When recording from a stereo system>

1 Press the REC button.



2 Press the MENU button.

The unit enters the menu select mode.



3 Select "MARK" by pressing the ◀◀ or ▶▶ button and press the ENTER/-USB (▶▶) button.



4 Select the desired interval by pressing the ◀◀ or ▶▶ button and press the ENTER/-USB (▶▶) button.



- |                   |   |
|-------------------|---|
| <b>LEVEL-AUTO</b> | Track numbers will be created automatically by detecting 1 second or more of silence. |
| <b>TIME 10min</b> | A new track number is created every 10 minutes.                                       |
| <b>TIME 5min</b>  | A new track number is created every 5 minutes.  |
| <b>TIME 3min</b>  | A new track number is created every 3 minutes.  |
| <b>OFF</b>        | No track numbers are created automatically.   |

## &lt;When recording from a microphone&gt;

**1 Press the REC button.**

**2 Press the MENU button.**  
The unit enters the menu select mode.



**3 Select "MARK" by pressing the ◀◀ or ▶▶ button and press the ENTER/-USB (▶II) button.**



**4 Select the desired interval by pressing the ◀◀ or ▶▶ button and press the ENTER/-USB (▶II) button.**



<b>OFF</b>	No track numbers are created automatically.
<b>TIME 10min</b>	A new track number is created every 10 minutes.
<b>TIME 5min</b>	A new track number is created every 5 minutes.
<b>TIME 3min</b>	A new track number is created every 3 minutes.

**Notes:**

- The interval between marks may vary slightly compared with the actual recording time.
- Whilst recording, a change in the numbering setting is applied immediately.

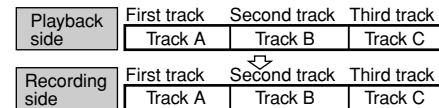
**Auto mark indicator on the remote control:**

You can check the setting for auto track numbering.

Auto mark indicator	ON: Set
SP 0:00	OFF: Disabled

**2. In digital recording, tracks will be numbered as follows:**

When recording from a CD or a MiniDisc using the digital connection, track numbers will be created at the same points as on the CD or MiniDisc (synchro marker function).

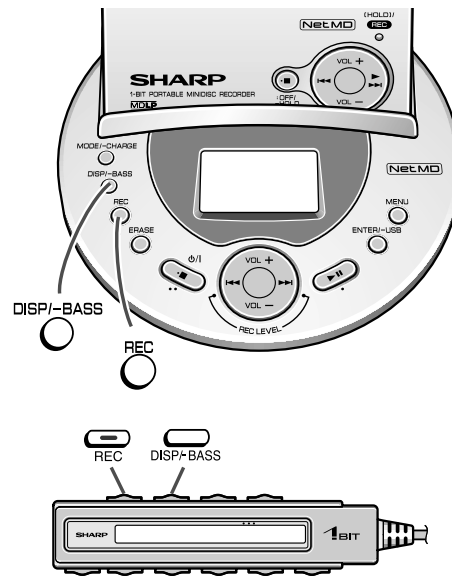
**Notes:**

- Track numbers may not be created in proper places, depending on the source to be recorded from, such as signals with noise.
- When recording, if a programmed playback is performed by the source or playback is performed by selecting tracks manually, the MiniDisc track numbers may not be the same as on the source.
- In digital recording, track numbers may not be created depending on the connected stereo system.

## Advanced Recording (continued)

### ■ Creating track numbers manually

You can number tracks at the desired positions whilst recording from a stereo system or microphone. This is useful when the silence between tracks is too short for auto track numbering.



Whilst recording, press the REC button at the point where you want to create track numbers.

- The track number will be increased by one.

### Numbering restriction

If you attempt to number tracks continuously within a certain time, "SORRY" (the multi-link station) or "Sorry" (the remote control) will appear and the operation will be interrupted. Wait a while and try again.

In that case, wait until the next operation can be resumed.

In stereo recording	Within 40 seconds
In 2 times long recording	Within 80 seconds
In 4 times long recording	Within 160 seconds
In monaural recording	Within 80 seconds

IM-DR580H

### ■ Checking the remaining recording time

#### [Operate with the multi-link station]

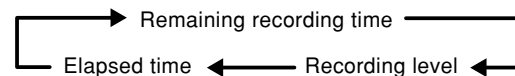
Whilst recording or recording is paused, press the DISP/-BASS button.

- Press the button again to return to the previous display.

#### [Operate with the remote control]

Whilst recording or recording is paused, press the DISP/-BASS button.

- Each time the button is pressed, the display will change as follows.



#### Notes:

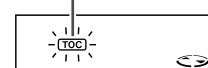
- Remaining recording time varies depending on the set recording mode.
- Remaining recording time can be checked even in the stop mode (page 50).

### ■ About TOC

TOC, an abbreviation of Table of Contents, contains a listing of where tracks start on the disc as well as the numbers and other information. This system allows a quick search for the beginning of tracks and blank spaces for recording. Whilst recording or editing, the TOC indicator remains lit.

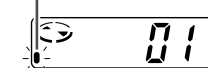
<Multi-link station>

TOC indicator



<Remote control>

TOC indicator



To avoid data loss whilst recording or editing (TOC indicator lights or flashes), do not:

- Subject the main unit to shock or vibration.
- Unplug the AC adaptor.
- Remove the battery.

**Information is recorded in the TOC when recording is complete or the main unit is turned off.**

#### Notes:

**If a power failure occurs during recording (with the TOC not overwritten), the recorded data will be lost. To avoid this, use the rechargeable battery at the same time that replaces the AC adaptor automatically.**

- Whilst the TOC indicator lights or flashes, a MiniDisc cannot be removed. Turn off the main unit and try again.
- You can record all the information in the TOC at once after editing several times.

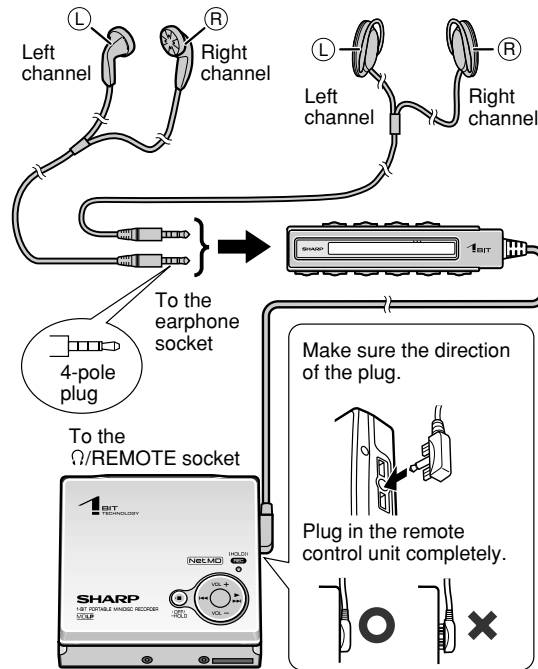
Recording  
-Advanced Recording-

3

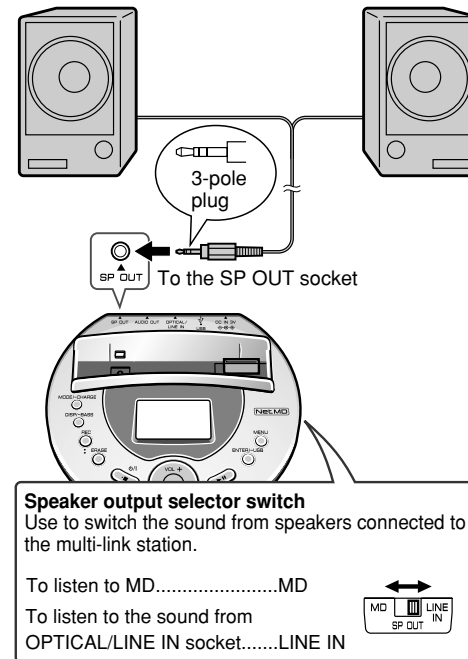
37

## Connecting Earphones or Speakers

### ■ Listening through earphones



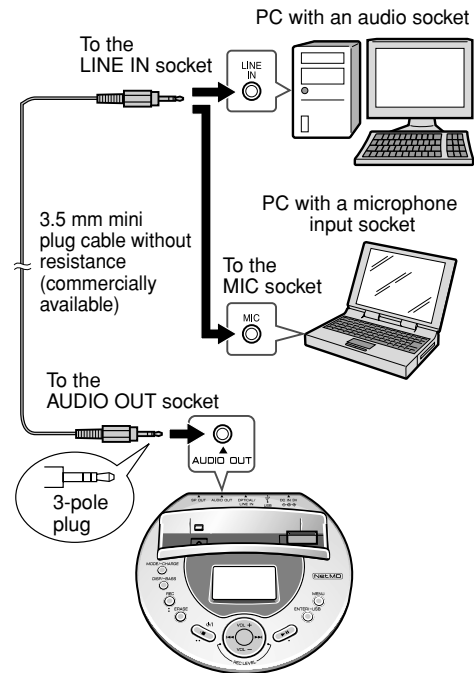
### ■ Listening through speakers with built-in amplifiers



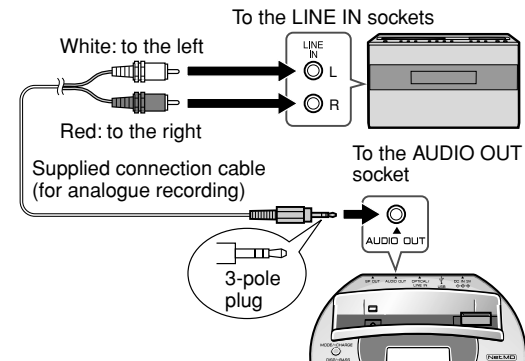
## Connecting to PC or Stereo System

IM-DR580H

### ■ Playback/recording on PC



### ■ Playback/recording on stereo system



#### Notes on recording on PC or stereo system

- When recording with a stereo system, eliminate the confirmation sound (page 70). Otherwise, it will also be recorded.
- Recording will be made in the analogue mode.
- Character information will not be recorded.
- Playback sound level may decrease depending on the equipment.
- Recording software should be installed in the PC.
- See the operation manual supplied with the software for playback, recording or adjusting the level.
- If the monaural microphone input on the PC is used, recorded sound will be monaural.

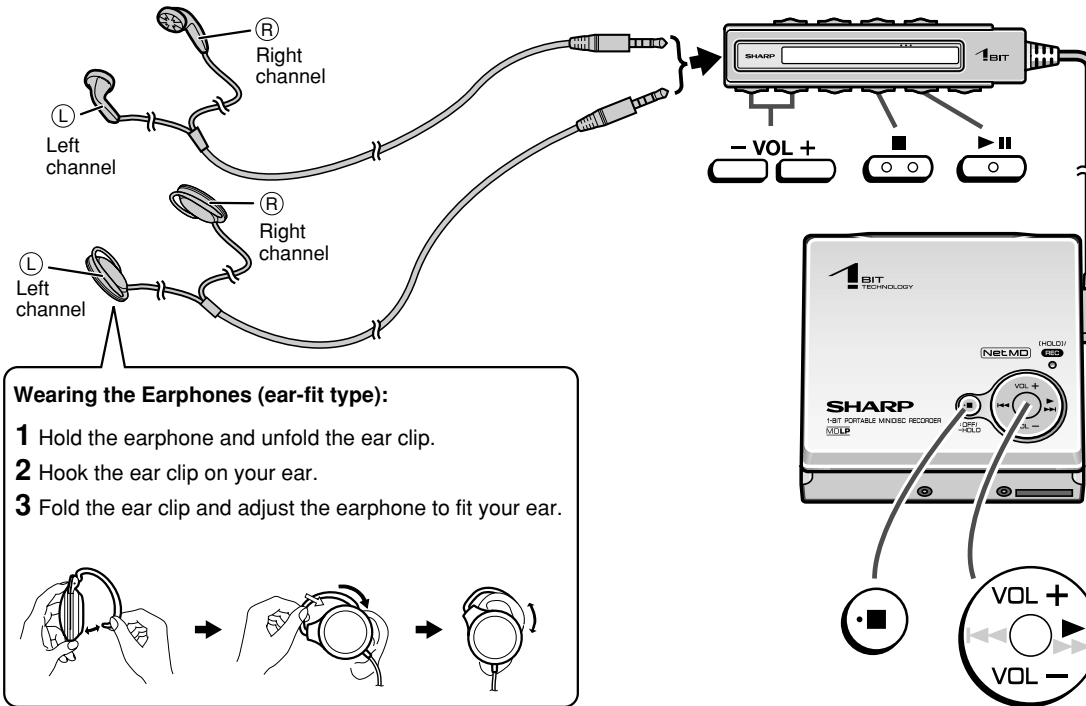
Playback  
-Connecting to PC or Stereo System-

4

39

## Basic Playback

### ■ Listening through earphones



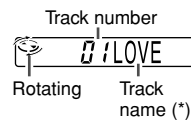


**1 Plug the remote control and earphones into the unit (page 38).**

**2 Insert a MiniDisc (page 12).**

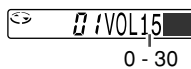
**3 Cancel the hold function if it is active (page 18).**

**4 Start playback by pressing the ►|| button on the remote control.**



- After the last track is played, the main unit stops automatically.
- This can be operated by pressing the ► button on the main unit.

**5 Press the VOL + or VOL - button to adjust the volume.**



- You can also use the VOL+ or VOL- button on the main unit.

#### To interrupt playback

During playback, press the ►|| button on the remote control.

- Press the ►|| button again to resume playback.
- About 5 minutes after playback is paused, the unit will enter the stop mode and, 30 seconds later, turn off.

#### To stop playback

During playback, press the ■ button on the main unit or remote control.

If the unit is not operated for at least 2 minutes whilst in the stop mode, the power will shut off automatically.

#### To turn off the power

Whilst in the stop mode, press the ■ button on the main unit or remote control.

- If you press the ■ button on the main unit more than 2 seconds, the hold function is activated.

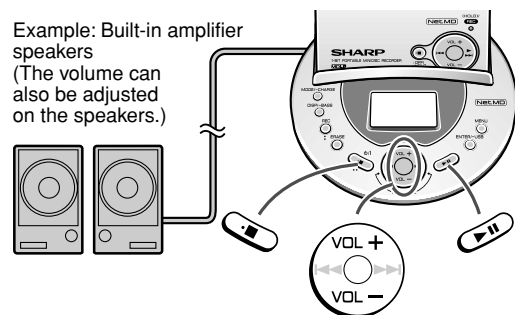
#### Notes:

- Playback starts automatically with a playback only MiniDisc or a MiniDisc which is protected against accidental erasure (Auto play function).
  - **Whilst the main unit is placed on the multi-link station, operations are impossible with the main unit or remote control.**
  - The sound escaping from your earphones may annoy people around you. In particularly crowded places (such as on trains or buses), reduce the volume.
- (\*) If track names are not recorded on the MiniDisc, "NO NAME" will be displayed.

## Basic Playback (continued)

### ■ Listening through built-in amplifier speakers or a stereo system

Example: Built-in amplifier speakers  
 (The volume can also be adjusted on the speakers.)



**1** Connect the multi-link station with other equipment (pages 38 - 39).

**2** Insert a MiniDisc (page 12).

**3** Place the main unit on the multi-link station.

**4** Start playback by pressing the ►|| button on the multi-link station.

Track name (\*) | LOVE | Rotating  
 | 01 | | 0:05 |  
 Track number | Playing time

- When the last track has finished playing the unit will automatically stop.

**5** Press the VOL + or VOL - button on the multi-link station to adjust the volume.

Vol | 15 | Rotating  
 | 01 | | 0:10 |  
 0 - 30

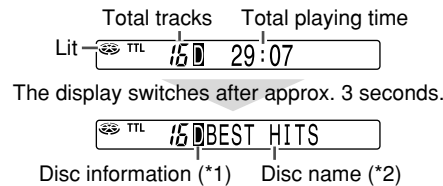
#### Notes:

- If a power failure occurs and the rechargeable battery is not installed, unplug the AC adaptor. Otherwise playback may start automatically when the power is restored.
- The main unit plays tracks according to the mode they are recorded (see page 33).

(\*) If track names are not recorded on the MiniDisc, "NO NAME" will be displayed.

### Display in the stop mode:

<On the remote control>



<On the multi-link station>

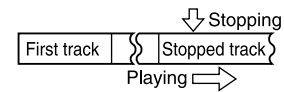


(\*1) Disc information indicator appears with total tracks, disc name and total playing time. Disc name display is "1" (single-byte) or "1" (double-byte) on the remote control.

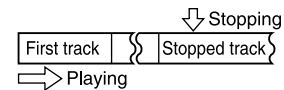
(\*2) "NO NAME" appears if there is no disc name. For group-recorded MDs, the group name is displayed (see page 57).

### ■ Resume function

When you stop and then restart playback without removing the disc, playback will resume from the point at which the disc was stopped.



Once you remove the MiniDisc, playback starts from the first track.



### ■ To adjust the bass

[Operate with the remote control or the multi-link station]

- 1 Hold down the DISP/-BASS button for 2 seconds or more.
- 2 Within 3 seconds, press the DISP/-BASS button repeatedly to select the bass strength.

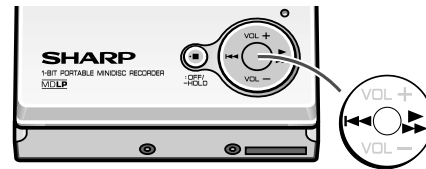
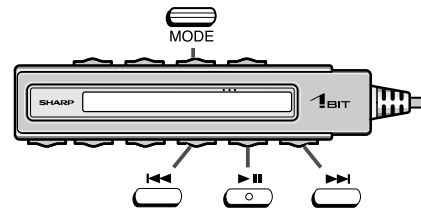
**BASS 1:** Emphasised slightly.  
**BASS 2:** Emphasised more.  
**BASS 3:** Emphasised fully.  
**BASS OFF:** Cancelled.

#### Note:

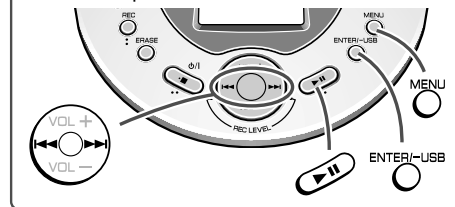
If you set the volume to 23 or more, the bass boost will be adjusted automatically.

## Advanced Playback

### ■ Track search



You can place the main unit on the multi-link station to operate with the multi-link station.



[Operate with the remote control, main unit or multi-link station]

#### To locate the beginning of a track:

During playback or whilst in the stop mode, press the ◀◀ or ▶▶ button.

- To skip a number of tracks at one time, press the ◀◀ or ▶▶ button repeatedly until the desired track number is shown.

#### To fast forward or fast reverse audibly:

During playback, hold down the ◀◀ or ▶▶ button.

- Normal playback will resume when the ◀◀ or ▶▶ button is released.
- When the end of the last track is reached during fast forward, the unit will enter the pause mode. When the beginning of the first track is reached during fast reverse, the unit will enter the playback mode.

#### To start playback with a desired track:

**1** Whilst in the stop mode, press the ◀◀ or ▶▶ button.

**2** Press the ▶|| button.

- The selected track will be played back.
- When operating the main unit, press the ▶ button. If you press the ▶▶ button on the main unit in step 1, the selected track starts playback automatically.

### ■ To adjust playback speed

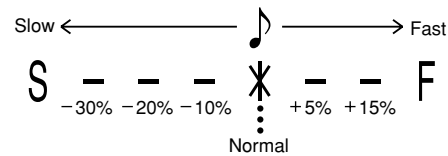
You can increase or decrease the playback speed.

[Operate with the remote control]

**1** During playback, hold down the **MODE** button for 2 seconds or more.

**2** Within 10 seconds, select the speed by pressing the **◀◀** or **▶▶** button.

Move "s" to adjust the speed.



**3** Press the **MODE** button to complete the setting.

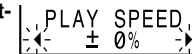
- To return to normal speed, move "s" to the normal position.

[Operate with the multi-link station]

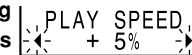
**1** During playback, press the **MENU** button.

The unit enters the menu select mode.

**2** Press the **ENTER/-USB** button.



**3** Select the speed by pressing the **◀◀** or **▶▶** button and press the **ENTER/-USB** button.



- To return to normal speed, select "± 0%".

-30%	Slowest
-20%	Slower
-10%	Slow
± 0%	Normal
+ 5%	Faster
+15%	Fastest

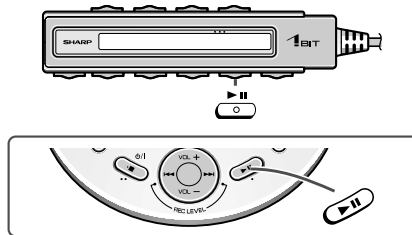
#### Notes:

- When you operate whilst in the stop mode, start playback after setting is completed.
- "s" will blink if you switch display to clock whilst playback speed is not set to normal.
- The playback speed is set to normal when you record or change discs.



**Notes:**

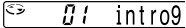
- If the playback mode is selected whilst stopped, press the ►|| button to start playback.
- When "TOC" is displayed, random play or repeat play is impossible.
- In random play the unit will select and play tracks automatically. (You cannot select the order of the tracks.) After all of the tracks have been played once in random order, the unit will stop automatically.
- During random, random repeat, or single track repeat play, you can forward or reverse the MiniDisc only within the track being played.
- During random play, the unit cannot find the beginning of any track which has been played.
- Repeat play lasts until you stop the unit.
- When you stop and resume random play, the rest of tracks are played starting from the last played track. If you turn the power off and resume random play, all the tracks are played in random order starting from the interrupted track.

**■ Intro play**

You can listen to the beginning of each track for 9 seconds in the recorded order.

[Operate with the remote control or the multi-link station]

**1 In the stop mode, select "normal playback" or "all tracks repeat playback" for the playback mode (see page 46).**

**2 Hold down the ►|| button for 2 seconds or more.** 

The unit plays back the first 9 seconds of the track and advances to the next.

**3 Press the ►|| button when you reach the track you wish to listen.**

Normal playback will resume.

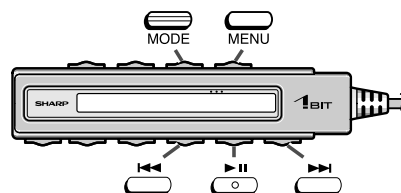
**Notes:**

- Intro play is available only when normal playback or all track repeat playback is selected.
- After intro playback of all tracks, normal playback starts.
- To skip to the desired track in intro play, press the ◀◀ or ▶▶ button.

## Advanced Playback (continued)

### ■ My Entry Playback (favourite track playback)

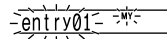
You can register up to 10 tracks per MiniDisc as favourite tracks which remain in memory even after removing the MiniDisc (up to 9 discs).



#### To register favourite tracks: [Operate with the remote control]

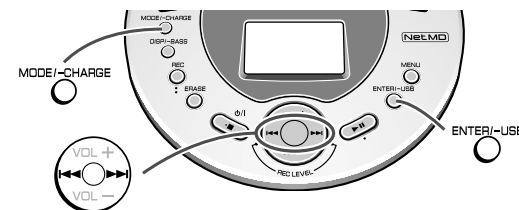
Whilst playing a track to be registered, hold down the ►|| button for 2 seconds or more.

Repeat this to register more tracks (up to 10 tracks).



#### Notes:

- A playback-only MD can also be registered.
- More than 10 tracks cannot be registered. "MY full" appears then.
- If more than 9 MDs are registered, the least frequently used MD will be cancelled. (If the frequency of use is the same, the oldest will be cancelled.)
- Favourite registration on the MD will be cancelled if recording or editing is performed on it.
- Tracks cannot be registered as favourites during favourite track playback or intro play.



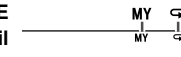
To play a registered favourite track:  
[Operate with the remote control or the multi-link station]

( ) indicates operations on the multi-link station.

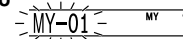
**1** Whilst playing, press the **MODE** (MODE/-CHARGE) button until **"MY"** or **"MY◀"** is displayed.

MY : Favourite track playback

MY◀ : Favourite track repeat playback



**2** Press the ◀◀ or ▶▶ button to choose the registered track.



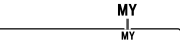
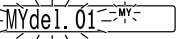
If a registered track is selected without entering the favourite track playback mode, "MY" will flash 3 times.

#### Note:

When an MD is inserted, "MY-entry" will appear on the remote control and "MY-entryDISC" on the multi-link station. If the MD is playback-only or erase-protected, the unit will enter the favourite track playback mode automatically.



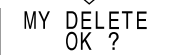


**To cancel each of the registered favourite tracks:  
[Operate with the remote control]**

1. Press the MODE button until "MY" is displayed.
 
2. Select the track you wish to cancel by pressing the ◀◀ or ▶▶ button.
3. Whilst the selected track is playing, hold down the ▶▶ button for 2 seconds or more.
 

The selected track will be cancelled.

**To cancel all favourite tracks:  
[Operate with the multi-link station or the remote control]**

- ( ) indicates operations on the remote control.
1. Insert a MiniDisc with "favourite tracks".
  2. Whilst in the stop mode, press the MENU button. The unit enters the menu select mode.
  3. Select "SETUP" by pressing the ◀◀ or ▶▶ button and press the ENTER/-USB (▶▶) button.
 
  4. Select "MY DELETE" by pressing the ◀◀ or ▶▶ button and press the ENTER/-USB (▶▶) button.
 
  

  5. Press the ENTER/-USB (▶▶) button. Favourite track registration will be cancelled.

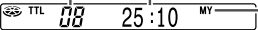
**Notes:**

- If the favourite track playback mode is selected whilst playing a normal track, the unit will enter the mode after the playback.
- Whilst in the favourite track playback mode, moving to the beginning of track, fast forward and fast rewind can be performed only on favourite tracks.

**Display in the stop mode**

<On the remote control>

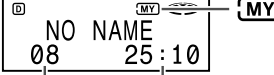
Total favourite tracks      Total playing time



The display switches after approx. 3 seconds.



<On the multi-link station>



Total favourite tracks      Total playing time

## Advanced Playback (continued)

### ■ Checking Displays

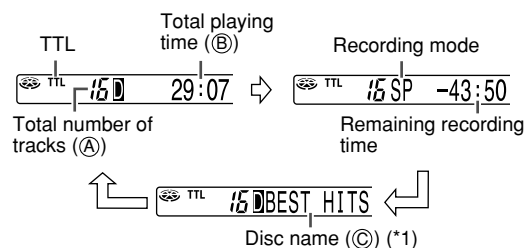
To check the total playing time and remaining recording time:

**[Operate with the remote control or the multi-link station]**

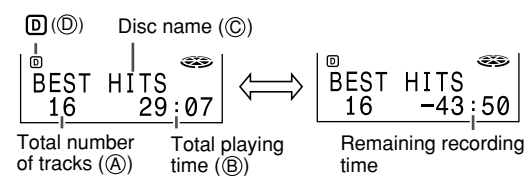
Whilst in the stop mode, press the DISP/-BASS button.

Each time the button is pressed, the display will change as follows.

**[On the remote control]**



**[On the multi-link station]**



To check the playing time and track name of each track:

**[Operate with the remote control]**

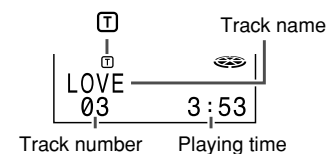
1. Whilst in the stop mode, press the ◀◀ or ▶▶ button to select a track.
2. Press the DISP/-BASS button. Each time the button is pressed, the display will change as follows.



- To check all tracks, press the ■ button.
- "TTL" lights up.

**[Operate with the multi-link station]**

Whilst in the stop mode, press the ◀◀ or ▶▶ button to select a track.



- To check all tracks, press the ■ button.
- "Ⓜ" or "Ⓟ" lights up.

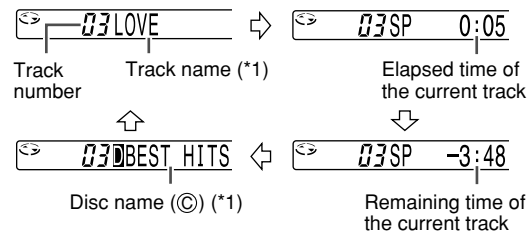
**To check the elapsed time and remaining time of the current track:**

**[Operate with the remote control or the multi-link station]**

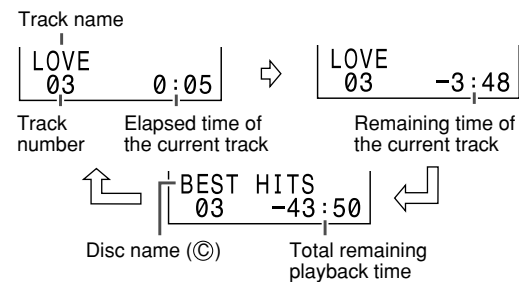
During playback or whilst in the pause mode, press the DISP/BASS button.

Each time the button is pressed, the display will change as follows.

**[On the remote control]**



**[On the multi-link station]**



The meaning of A to D varies according to the play mode (normal, group or favourite track).

	Normal playback mode	Group playback mode	Favourite track playback mode
A	Total number of tracks	Total number of tracks in the group	Total number of favourite tracks registered (*2)
B	Total playing time	Total playing time of the group	Total playing time of favourite tracks (*2)
C	Disc name	Group name (*2)	Disc name
D	Lights up	"@" Lights up (multi-link station) (*2)	"@" Lights up (multi-link station)

When group playback and favourite track playback are set simultaneously, (\*2) will appear.

(\*1) If kanji and alphabets are used for a disc, group or track name, set the auto character function to "OFF" to show both. When it is "ON", alphabets do not appear.

**Notes:**

- If the disc name or the track name was not originally recorded on the MiniDisc, "NO NAME" will be displayed.
- Remaining recording time varies depending on the set recording mode.
- Elapsed playback time and remaining playback time may be different from the actual time.
- Remaining recording time will not be displayed with a playback only MiniDisc.

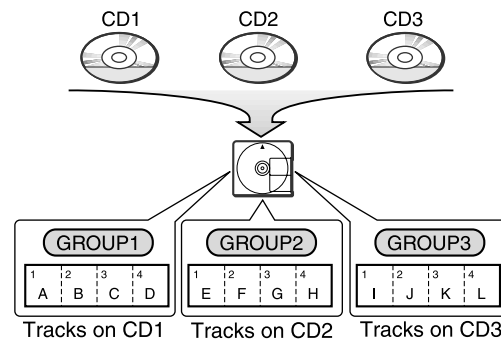
## Group Recording and Group Playback

### ■ Group recording

Since this MD portable recorder adopts the 4 times long recording mode, you can record many tracks on one MD (supporting MDLP).

#### When using group recording and group playback

You can record tracks by the group of artists or albums, etc. That MD can be played by selecting the group.



When the group mode is selected for recording, tracks are played by the group, starting with the first track of the group.

Group1				Group2				Group3			
1	2	3	4	1	2	3	4	1	2	3	4
A	B	C	D	E	F	G	H	I	J	K	L

When the group mode is cancelled, tracks will be numbered sequentially from the beginning.

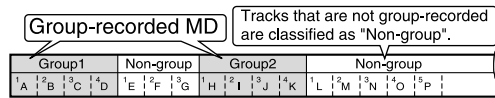
Disc name											
1	2	3	4	5	6	7	8	9	10	11	12
A	B	C	D	E	F	G	H	I	J	K	L

**■ Group Playback**

Using a group-recorded MD, you can play back tracks by the desired group (albums, artists, etc.).

**■ Playback of group-recorded MD**

Example of group recording:



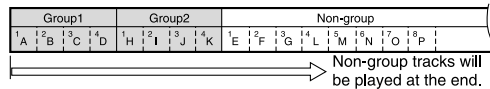
Depending on the selection of the group mode, playback of a group-recorded MD changes as follows.

**When the group mode is selected**

("GR" lights up)

Tracks are played by the group, starting with the first track of the group.

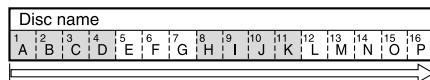
You can select a group to play back.



**When the group mode is cancelled**

("GR" goes out)

Tracks are numbered in the order they are recorded.

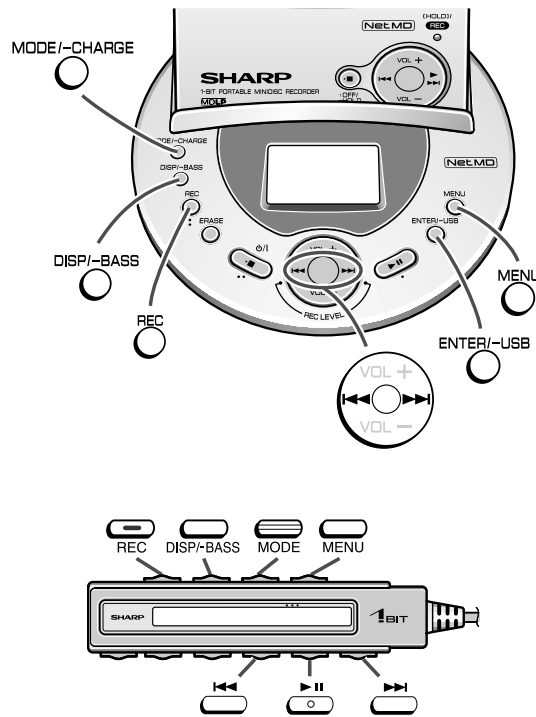


The following table describes random play, repeat play and favourite track playback in the group mode (when "GR" lights).

<b>RND (Random playback)</b>	Tracks are played back at random within a group and playback stops automatically after all tracks are ended.
<b>RND (Random repeat playback)</b>	Tracks are played back at random within a group, and groups are played repeatedly in order.
<b>(All tracks repeat playback)</b>	All tracks are played back repeatedly in order.
<b>1 (1 group repeat playback/1 track repeat playback)</b>	The selected group is played back repeatedly.
<b>MY* (Favourite track playback)</b>	All tracks registered as "favourite tracks" are played back.
<b>MY* (Favourite track repeat playback)</b>	All favourite tracks are played back repeatedly.

(\*) Displayed only when a registered MiniDisc is inserted.

## Recording by Group

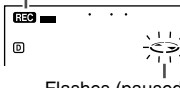
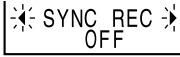



### Preparation:

- 1 Connect a microphone or equipment for recording (pages 19 - 21 and 26).
- 2 Insert a MiniDisc and place the main unit on the multi-link station (pages 12 - 13).  
To operate with the remote control, connect it to the main unit (page 27).

[Operate with the multi-link station or the remote control]

( ) indicates operations on the remote control.

<p><b>1 Press the REC button.</b></p>	<p>Lights</p>  <p>Flashes (paused)</p>
<p><b>2 Press the MODE/-CHARGE (MODE) button repeatedly to select the recording mode (page 33).</b></p>	
<p><b>3 Press the MENU button.</b></p> <p>The unit enters the menu select mode.</p>	
<p><b>4 Select "GrSELECT" by pressing the &lt;&lt;&lt; or &gt;&gt;&gt; button and press the ENTER/-USB (&gt;&gt;&gt;) button.</b></p>	

**5** Press the ◀◀ or ▶▶ button repeatedly to select a group to add tracks to.

**NEW GROUP (NEW-Gr):**

To create a new group.

**GR01, GR02, GR03...:**

To add tracks to an existing group. (If the group name has been recorded, the name will be displayed instead of "GR01".)

**Non GROUP (Non-Gr):**

To record tracks as non-group.

- On the remote control, only "NEW-Gr" or "Non-Gr" can be selected.
- Setting for group recording will not be changed until a new setting is entered. To cancel settings for all groups, select "Non GROUP (Non-Gr)".

**6** Press the ENTER/-USB (▶II) button.

**7** Start recording.

Tracks are recorded in the group selected in step 5. To change the group, stop recording and start over from step 1.

**Recording from a stereo system, etc.**

Manual recording (See steps 6 - 9 on pages 22 - 23.)

Synchro recording (See steps 6 - 10 on pages 24 - 25.)

**Recording from a Microphone**

Manual recording (See steps 6 - 9 on pages 28 - 29.)

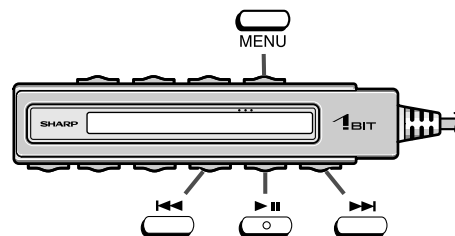
Synchro recording (See steps 6 - 12 on page 30.)

**Notes:**

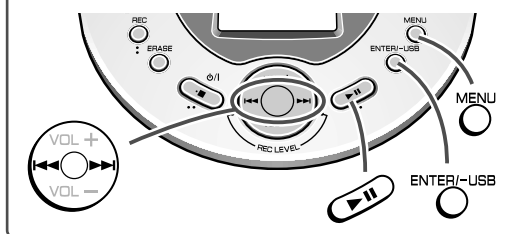
- When a group-recorded MD is used for recording or editing on other equipment, malfunction may occur.
- After group recording, tracks not in the group (non-grouped tracks) are moved behind the group and track numbers change.
- If a group-recorded MD is played back with the equipment that does not support the group function, the disc name will not be displayed correctly and the group name will not be displayed at all. (Example: 0;BEST//1-10; ··)
- You can create up to 99 groups. "GROUP FULL" appears when you attempt to create more. Even if the number of groups is 98 or less, "TOC FULL" may appear indicating no more groups can be created.
- If "? Gr Form" appears, you need to start over. Refer to "Error Messages" (see page 85).

## Listening to Group-recorded MD

Using a group-recorded MD, you can play back tracks by the desired group (albums, artists, etc.).



You can place the main unit on the multi-link station to operate with the multi-link station.

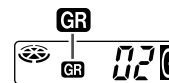


**[Operate with the remote control or the multi-link station]**

( ) indicates operations on the multi-link station.

### 1 Insert a group-recorded MiniDisc.

- The group mode is activated automatically.
- "GR" lights up.



### 2 Press the ► button.

To operate with the main unit, press the ► button.

### To search a desired group

- 1 During playback or whilst in the stop mode, press the MENU button.
- 2 Select "GrSELECT" by pressing the ◀ or ▶ button and press the ► (ENTER-/USB) button.
- 3 Press the ► (ENTER-/USB) button.
- 4 Within 5 seconds, select the group by pressing the ◀ or ▶ button.

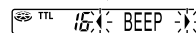
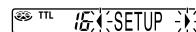


### To cancel the group mode

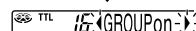
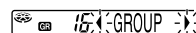
1 Whilst in the stop mode, press the MENU button.



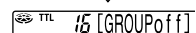
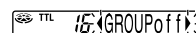
2 Select "SETUP" by pressing the ◀ or ▶ button and press the ▶ (ENTER/-USB) button.



3 Select "GROUP" by pressing the ◀ or ▶ button and press the ▶ (ENTER/-USB) button.



4 Select "GROUPoff" by pressing the ◀ or ▶ button and press the ▶ (ENTER/-USB) button.



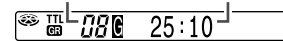
### Note:

Whilst in the favourite track playback mode or favourite track repeat playback mode, group playback cannot be performed. Favourite track playback or favourite track repeat playback is prioritised.

### Display in the stop mode

<On the remote control>

Total tracks in group      Total playing time



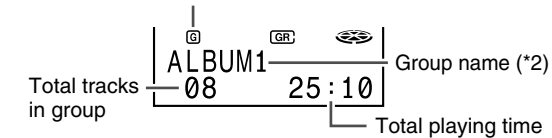
The display switches after approx. 3 seconds.



Group information (\*1)      Group name (\*2)

<On the multi-link station>

Group information (\*1)

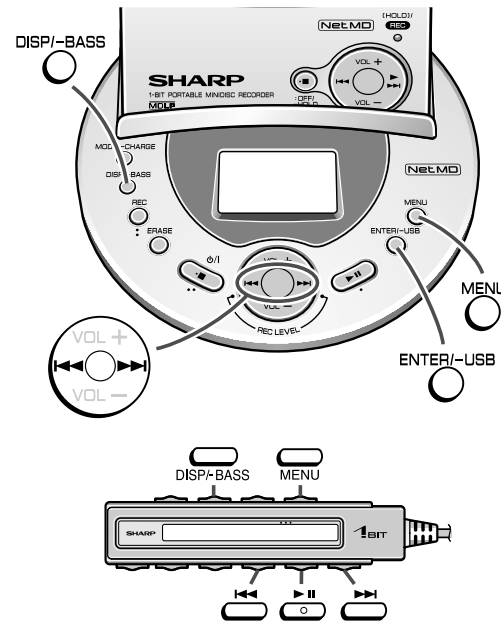


(\*1) Group information indicator appears with total tracks in group, group name and total playing time. Group name display is "G" (single-byte) or "GR" (double-byte) on the remote control.

(\*2) When there is no group name, "Gr\*\*\*" (the remote control) or "GR\*\*\*" (the multi-link station) appears (\*\* indicates a group number). For non-grouped tracks, "Non-Gr" (the remote control) or "Non GROUP" (the multi-link station) appears.

## Titling a MiniDisc

- Load a MiniDisc to be named. A playback only or recording prevented MiniDisc cannot be edited.
- The group-recorded MD may not be edited properly with other equipment.



**[Operate with the multi-link station or the remote control]**

( ) indicates remote control operations.

### ■ Creating a disc name

**1** Insert a recorded MiniDisc and cancel the group mode (page 57).

**2** Press the MENU button.

The unit enters the menu select mode.

**3** Select "NAME" by pressing the ◀◀ or ▶▶ button and press the ENTER/-USB (▶||) button.

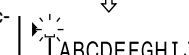


**4** When "DISC NAME" appears, press the ENTER/-USB (▶||) button.



- The unit will enter the character input mode.

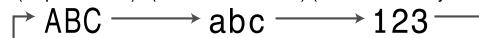
- On the remote control, "D-NAME" appears.



Cursor

**5** Press the DISP/-BASS button to select the type of characters.

(Capital letters) (Lower-case letters) (Numbers and symbols)



- 6** Select a character by pressing the **◀** or **▶** button and press the **ENTER/USB (▶II)** button. Repeat steps 5 - 6 to enter other characters.



- 7** After entering all characters, hold down the **ENTER/USB (▶II)** button for 2 seconds or more. The disc name will be created.



#### ■ Characters (symbols)

Capital letters																	
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
S	T	U	V	W	X	Y	Z	.	/								
Lower-case letters																	
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r
s	t	u	v	w	x	y	z	.	/								
Numbers and symbols																	
1	2	3	4	5	6	7	8	9	0	!	"	#	\$	%	&	'	(
)	*	+	-	.	/	:	:	<	=	>	?	@	_	~			

□ : indicates a space.

#### ■ To enter a space

Press the VOL. + button to move the cursor to the right.

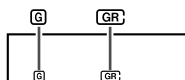
#### Notes:

- One disc name and up to 99 group names and 255 track names can be created per disc. (A maximum of 40 characters for each disc, group and track name, and a total of about 1,700 characters can be entered per disc.)
- You cannot use "/" in a name successively.
- The MD that has been group recorded with this unit should not be named using other equipment. The disc may not be played properly.
- If the number of characters entered as a disc, group or track name exceeds 40, "NAME FULL" will be displayed.
- When a disc, group, or track name that contains 40 characters is changed, "NAME CUT" will be displayed. In this case, delete all the characters and re-enter the names.
- If you enter "LP:" at the beginning of a name, "LP:" may not be displayed.

## Titling a MiniDisc (continued)

### ■ Creating a group name

- 1** Insert a group-recorded MiniDisc.

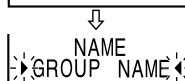


- 2** Whilst in the stop mode, choose the group to be named (page 56).

- 3** When "GR" lights up, press the MENU button.  
The unit enters the menu select mode.



- 4** Select "NAME" by pressing the ◀ or ▶ button and press the ENTER/-USB (▶) button.



- 5** When "GROUP NAME (GrNAME)" appears, press the ENTER/-USB (▶) button.  
The unit will enter the character input mode.



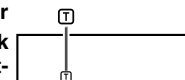
- 6** Enter a group name (pages 58 - 59, steps 5 - 6).

- 7** After entering all characters, hold down the ENTER/-USB (▶) button for 2 seconds or more.  
The group name will be created.



### ■ Creating a track name

- 1** Whilst in the stop mode or pause mode, select the track by pressing the ◀ or ▶ button.



- 2** Press the MENU button.  
The unit enters the menu select mode.

- 3** Select "NAME" by pressing the ◀ or ▶ button and press the ENTER/-USB (▶) button.



- 4** Select "TRACK NAME (TrNAME)" by pressing the ◀ or ▶ button and press the ENTER/-USB (▶) button.  
The unit will enter the character input mode.



- 5** Enter a track name (pages 58 - 59, steps 5 - 6).

- 6** After entering all characters, hold down the ENTER/-USB (▶) button for 2 seconds or more.  
The track name will be created.



### ■ To erase a character

#### 1 Set the unit to character input mode.

Disc name : page 58, steps 1 - 4  
Group name : page 60, steps 1 - 5  
Track name : page 60, steps 1 - 4

#### 2 Press the VOL. - or VOL. + button to select the character you want to erase.

#### 3 Press the MODE/-CHARGE (MODE) button.

#### 4 Hold down the ENTER-/USB (▶||) button for 2 seconds or more.

### ■ To add characters

#### 1 Set the unit to character input mode.

Disc name : page 58, steps 1 - 4  
Group name : page 60, steps 1 - 5  
Track name : page 60, steps 1 - 4

#### 2 Press the VOL. - or VOL. + button to select the character before which you wish to add another character.

#### 3 Select a character you wish to add (pages 58 - 59, steps 5 - 6).

#### 4 Hold down the MENU button for 2 seconds or more.

#### To change a character:

Erase the character you want to change, and then add a new one.

### ■ Stamping titles from another MiniDisc

#### Before stamping

When there are 2 MiniDiscs on which the same tracks are recorded, you can transfer the character information (disc, group, and track names) of the master MiniDisc to another MiniDisc (for stamping) simultaneously.

#### 1 What is a master MiniDisc?

A recordable MiniDisc that contains tracks and character information. (You cannot transfer the information from a playback-only MiniDisc.)

#### 2 What is a MiniDisc for stamping?

A MiniDisc that contains the same tracks in the same order as the master MiniDisc. (Make sure that the total number of tracks of the master MiniDisc and the one for stamping are the same.)

#### Notes:

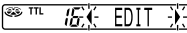

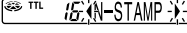

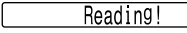


- When information of the non-grouped MD is stamped on the group-recorded MD, the disc and track names will be stamped properly. However, the group information will be erased.
- When information of the group-recorded MD is stamped on the non-grouped MD, tracks will be grouped automatically.

## Titling a MiniDisc (continued)

### Master MiniDisc operation

#### [Operate with the remote control]

For stamping, leave the main unit off the multi-link station as you need to eject and load MiniDiscs. Use the remote control for the operation.

- 1 Insert a master MiniDisc.**  
Do not mistake the master MiniDisc for the target one.
- 2 Whilst in the stop mode, press the MENU button.**  
The unit enters the menu select mode.
- 3 Select "EDIT" by pressing the  $\leftarrow$  or  $\rightarrow$  button and press the  $\blacktriangleright$  button.**  

  
↓  

  
↓  

  
↓  

- 5 Press the  $\blacktriangleright$  button.**  

  
↓  

- 6 When the unit displays "CHANGE MD", remove the master MiniDisc.**  
Remove it without turning off the power. Or, the operation will be cancelled.  


### Operation of the MiniDisc for stamping

- 7 Load a MiniDisc for stamping.**





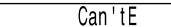
- 8 Press the  $\blacktriangleright$  button.**

The unit will finish recording the character information and enter the stop mode.



#### Note:

If the total number of tracks on the master MiniDisc does not match that on the MiniDisc for stamping, "Can't E" appears and the unit turns off.



If this happens, adjust the total number of tracks on the newly recorded MiniDisc using the edit operation.

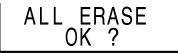
## Editing Tracks

IM-DR580H


### ■ To erase all of the tracks at once

You can erase all tracks at once.

[Operate with the multi-link station]

- 1 Whilst in the stop mode, hold down the ERASE button for 2 seconds or more. 

To cancel the operation, press the ■ button.

- 2 Press the ENTER/-USB button. 

All of the tracks will be erased.

#### Caution:

Once a track has been erased, it cannot be recovered. Check the track number before erasing it.

#### Notes:

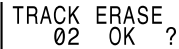
- When you attempt to erase all tracks on a MiniDisc which contains tracks checked out through the Net MD feature, "Protect??" appears. Press the ENTER/-USB button to proceed. The copyright is erased at the same time.
- To erase all tracks from the menu, select "ALL ERASE" (on the multi-link station) or "A-ERASE" on the remote control.

### ■ To erase one track at a time

You can erase one track at a time.

[Operate with the multi-link station]

- 1 Whilst in the stop mode, select the track to erase by pressing the ◀◀ or ▶▶ button. To cancel the operation, press the ■ button.

- 2 Press the ERASE button. 

- 3 Press the ENTER/-USB button. 

The track will be erased.

#### Caution:

Once a track has been erased, it cannot be recovered. Check the track number before erasing it.

#### Notes:

- You cannot erase tracks checked out through the Net MD feature ("Ⓜ" appears on the multi-link station).
- To erase tracks with the remote control, select "Tr. ERASE" from the menu.
- When all the tracks in a group have been erased, the group and the group name will also be erased.
- A track in the pause mode can also be erased.



## Editing Tracks (continued)

### ■ To combine tracks

Two adjacent tracks can be combined.

[Operate with the multi-link station or the remote control]

( ) indicates remote control operations.

**1** Whilst in the stop mode, select the letter of the two tracks to be combined by pressing the ◀◀ or ▶▶ button.

**2** Press the MENU button.

The unit enters the menu select mode.

**3** Select "EDIT" by pressing the ◀◀ or ▶▶ button and press the ENTER/-USB (▶||) button.

```

┌ EDIT ─┐
└──┬──┘

```

**4** Select "COMBINE" by pressing the ◀◀ or ▶▶ button and press the ENTER/-USB (▶||) button.

```

┌ EDIT ─┐
└──┬──┘
    │
    ▼
┌ COMBINE ─┐
└──┬──┘
    │
    ▼
┌ COMBINE ─┐
└──┬──┘
    │
    ▼
┌ 03 + 04 ? ─┐
└──┬──┘

```

**5** Press the ENTER/-USB (▶||) button.

The two tracks will be combined, and the unit will stop at the beginning of the combined track.

```

┌ COMPLETE ─┐
└──┬──┘

```

### To combine two non-adjacent tracks:

- First, put the two tracks next to each other in the order you want using the MOVE function. Then combine them using the COMBINE function.
- For group-recorded tracks, only those in the same group can be combined. To combine tracks in different groups, move one track using the GROUP CHANGE function before combining them.

### When one or both tracks to be combined have a name:

The first track name will be used. However, when the first track does not have a name, the second track name will be used.

### In the following cases, tracks may not be combined.

- Tracks recorded by different inputs cannot be combined.
- Examples:
- Digital recorded track and analogue recorded track.
  - Different recording modes (stereo recording, 2 times long recording, 4 times long recording, monaural recording).
  - Some short tracks (stereo recording: 12 seconds, monaural recording or 2 times long recording: 24 seconds, 4 times long recording: 48 seconds) may not be combined.

### Notes:

- You cannot combine tracks checked out through the Net MD feature ("a" appears on the multi-link station) with other types.
- A track in the pause mode can also be combined.



### ■ To divide a track

You can divide a track into 2 tracks.

[Operate with the multi-link station or the remote control]  
( ) indicates remote control operations.

**1** During playback, press the **▶||** button at the point where you wish to divide the track. Playback will be paused.

**2** Press the MENU button.

The unit enters the menu select mode.

**3** Select "EDIT" by pressing the **◀◀** or **▶▶** button and press the ENTER/-USB (**▶||**) button.

**4** Select "DIVIDE" by pressing the **◀◀** or **▶▶** button and press the ENTER/-USB (**▶||**) button.

**5** Press the ENTER/-USB (**▶||**) button.

The track will be divided into two tracks, and the unit will pause at the beginning of the second of the two new tracks.

#### When a track has a name before dividing:

The two new tracks will have the same name. However, in the "TOC FULL" condition, the second track may not be named.

#### Total number of tracks that can be divided:

Each disc can hold up to 255 tracks. However, even if the number of assigned tracks has not reached 255, it might not be possible to make any further divisions of tracks.

#### Note:

You cannot divide tracks checked out through the Net MD feature ("a" appears on the multi-link station).

### ■ To move a track

You can move a track to the desired position.

[Operate with the multi-link station or the remote control]  
( ) indicates remote control operations.

**1** Whilst in the stop mode or pause mode, select the track to move by pressing the **◀◀** or **▶▶** button.

**2** Press the MENU button.

The unit enters the menu select mode.

**3** Select "EDIT" by pressing the **◀◀** or **▶▶** button and press the ENTER/-USB (**▶||**) button.

**4** Select "MOVE" by pressing the **◀◀** or **▶▶** button and press the ENTER/-USB (**▶||**) button.

**5** Select the new position for the track by pressing the **◀◀** or **▶▶** button.

**6** Press the ENTER/-USB (**▶||**) button.

The track will be moved, and the unit will be stopped or paused at the beginning of the track.

#### Moving a track to another group

Group-recorded tracks can be moved within the group. To move them to a different group, use the GROUP CHANGE function.

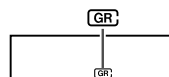
## Editing Groups

### ■ Moving a track to another group

On a group-recorded MD, you can move a track to a different group. (Group change)

[Operate with the multi-link station]

- 1 Insert a group-recorded MiniDisc.

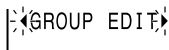


- 2 Whilst in the stop mode or pause mode, select the track to move by pressing the ◀◀ or ▶▶ button.

- 3 Press the MENU button.

The unit enters the menu select mode.

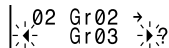
- 4 Select "GROUP EDIT" by pressing the ◀◀ or ▶▶ button and press the ENTER/-USB button.



- 5 Select "CHANGE" by pressing the ◀◀ or ▶▶ button and press the ENTER/-USB button.



- 6 Select the destination group by pressing the ◀◀ or ▶▶ button.



- 7 Press the ENTER/-USB button.

The track will be moved, and the unit will be stopped or paused at the beginning of the track.



#### Notes:

- When all the tracks in a group are moved to different groups, the group and the group name will be erased.
- Non-group tracks can also be moved to a group using the GROUP CHANGE function.

### ■ Creating a group before recording

You can create a group in advance and record tracks in it. (Group reserve)

[Operate with the multi-link station]

- 1 Insert a MiniDisc.

- 2 Whilst in the stop mode, press the MENU button.

The unit enters the menu select mode.

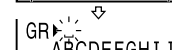
- 3 Select "GROUP EDIT" by pressing the ◀◀ or ▶▶ button and press the ENTER/-USB button.



- 4 Select "RESERVE" by pressing the ◀◀ or ▶▶ button and press the ENTER/-USB button.



The unit will enter the character input mode.

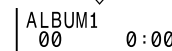


- 5 Enter a group name (pages 58 - 59, steps 5 - 6).

Otherwise, you will not be able to create a group.

- 6 Hold down the ENTER/-USB button for 2 seconds or more.

The created group name will be displayed.



#### To record in the created group:

Refer to "Recording by group" (page 54).

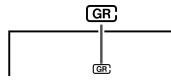
#### Note:

Even if you create a group using the GROUP RESERVE function, it will not be played if no track is recorded in it. (Group name will not be displayed either.) To check the contents of the group, refer to "To search a desired group" (page 56).

### ■ Moving a group to the top

On a group-recorded MD, group-recorded tracks can be moved to the beginning of the MiniDisc. (Group top move)  
[Operate with the multi-link station]

- 1 Insert a group-recorded MiniDisc.

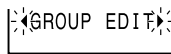


- 2 Whilst in the stop mode, select the group to be moved (page 56).

- 3 When "GR" lights up, press the MENU button.  
The unit enters the menu select mode.



- 4 Select "GROUP EDIT" by pressing the ◀ or ▶ button and press the ENTER/-USB button.



- 5 Select "TOP MOVE" by pressing the ◀ or ▶ button and press the ENTER/-USB button.



- 6 Press the ENTER/-USB button.  
The group will be moved to the top of the MD.



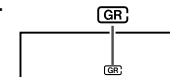
#### Notes:

- If the group name has been recorded, the group name will not be changed even if the GROUP TOP MOVE function is performed.
- The GROUP TOP MOVE function cannot be performed with non-group tracks or groups without tracks.

### ■ Moving non-group tracks to after group-recorded tracks

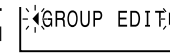
If non-group tracks are found in the middle of a group-recorded MD, they can be moved to after group-recorded tracks. (Group arrange)  
[Operate with the multi-link station]

- 1 Insert a group-recorded MiniDisc.



- 2 Whilst in the stop mode, press the MENU button.  
The unit enters the menu select mode.

- 3 Select "GROUP EDIT" by pressing the ◀ or ▶ button and press the ENTER/-USB button.



- 4 Select "ARRANGE" by pressing the ◀ or ▶ button and press the ENTER/-USB button.



- 5 Press the ENTER/-USB button.  
Non-group tracks are moved to after group-recorded tracks.



#### Caution:

All non-group tracks are moved to after group-recorded tracks by "GROUP ARRANGE".  
The track order of moved tracks will not be maintained.  
Perform this after consideration.

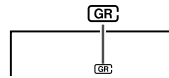
## Editing Groups (continued)

### ■ Erasing a group

On a group-recorded MD, you can erase all tracks in a group at once. (Group erase)

[Operate with the multi-link station]

- 1** Insert a group-recorded Mini-Disc.

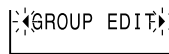


- 2** Whilst in the stop mode, select the group to be erased (page 56).

- 3** When "GR" lights up, press the MENU button.  
The unit enters the menu select mode.



- 4** Select "GROUP EDIT" by pressing the ◀ or ▶ button and press the ENTER/-USB button.



- 5** Select "Gr&TrERASE" by pressing the ◀ or ▶ button and press the ENTER/-USB button.



- 6** Press the ENTER/-USB button.  
The selected group will be erased.



#### Caution:

Once a group has been erased, it cannot be recovered. Check carefully before you erase it.

#### Notes:

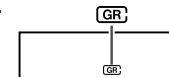
- The GROUP ERASE function erases the group and group name.
- You cannot erase a group containing tracks checked out through the Net MD feature ("a" appears on the multi-link station).

### ■ Erasing group information

You can erase the entire group information of a group-recorded MD. By erasing the group information of a MD, it will be a non-group MD. (Group cancel)

[Operate with the multi-link station]

- 1** Insert a group-recorded Mini-Disc.

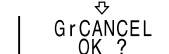


- 2** Whilst in the stop mode, press the MENU button.  
The unit enters the menu select mode.

- 3** Select "GROUP EDIT" by pressing the ◀ or ▶ button and press the ENTER/-USB button.



- 4** Select "CANCEL" by pressing the ◀ or ▶ button and press the ENTER/-USB button.



- 5** Press the ENTER/-USB button.  
The group information will be erased.



#### Caution:

The GROUP CANCEL function erases all the group information. Check carefully before you erase it.

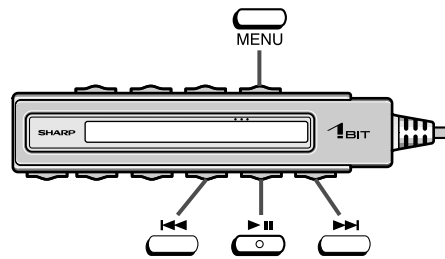
## Setting the Alarm

IM-DR580H

You will hear the alarm sound through earphones at a specified time. Select from 1 to 99 minutes.


### [Operate with the remote control]

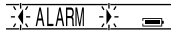
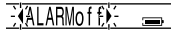
The alarm is cancelled when the main unit is placed on the multi-link station.

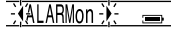



- 1** During playback or whilst in the stop mode, press the **MENU** button.

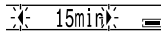
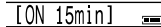
The unit enters the menu select mode.


- 2** Select "ALARM" by pressing the **left arrow** or **right arrow** button and press the **play/pause** button.



- 3** Select "ALARMon" by pressing the **left arrow** or **right arrow** button and press the **play/pause** button.

- 4** Select the time by pressing **left arrow** or **right arrow** button and press the **play/pause** button.

You can set the time from 1 to 99 minutes.

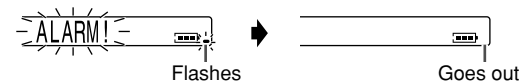
### When the alarm is set:

Alarm indicator lights up.



### When the set time comes:

The alarm beeps repeatedly for one minute from the earphones.



### To stop the beep sound

Press any button on the remote control or the main unit.

### To change the alarm time

Repeat the operation from step 1.

### To cancel the alarm setting

Select "ALARMOFF" in step 3.

### Notes:

- Press the **stop** button after setting the alarm. The remaining time will be displayed for about 1 second.
- Turn the power off after setting the alarm. The remaining time will appear and the alarm beeps at the time you set.
- When the battery runs out, the alarm beeps and the setting is cancelled.
- If recording is performed, the alarm setting will be cancelled.

## Changing Default Settings

[Operate with the multi-link station]

**1** Insert a MiniDisc.

**2** Whilst in the stop mode, press the **MENU** button.  
The unit enters the menu select mode.

⏏ EDIT ⏏

**3** Select "SETUP" by pressing the **◀** or **▶** button and press the **ENTER/-USB** button.

⏏ SETUP ⏏



⏏ SETUP BEEP ⏏

**4** Select the menu by pressing the **◀** or **▶** button and press the **ENTER/-USB** button.

⏏ SETUP AUTO PLAY ⏏



⏏ AUTO PLAY ON ⏏

**5** Select the item by pressing the **◀** or **▶** button and press the **ENTER/-USB** button.

⏏ AUTO PLAY OFF ⏏



[ AUTO PLAY OFF ]

Menu	Item	
BEEP	ON*	Beep on
Beep sound	OFF	Beep off
AUTO PLAY	ON*	Set
Auto play	OFF	Cancelled
POWER SAVE	AUTO*	Set
Auto power save	OFF	Cancelled
DIGI LEVEL	AUTO SAVE*	Setting retained
Digital recording level	NOT SAVE	Cancelled
GROUP	ON*	Set
Group play-back mode	OFF	Cancelled
LINE MONI	ON*	Set
Line monitor	OFF	Cancelled
OPT MONI	ON*	Set
Optical monitor	OFF	Cancelled

(\*) indicates default setting.

- The remote control can also be used to set beep sound, auto play, auto power save and group play-back mode (page 71).

**[Operate with the remote control]****1** Insert a MiniDisc.**2** Whilst in the stop mode, press the MENU button.

The unit enters the menu select mode.

**3** Select "SETUP" by pressing the ◀◀ or ▶▶ button and press the ▶|| button.**4** Select the menu by pressing the ◀◀ or ▶▶ button and press the ▶|| button.**5** Select the item by pressing the ◀◀ or ▶▶ button and press the ▶|| button.

Menu	Item	
BEEP	ON*	Beep on
Beep sound	OFF	Beep off
autoPLAY	ON*	Set
Auto play	OFF	Cancelled
autoPS	AUTO*	Set
Auto power save	OFF	Cancelled
LIGHT	NORMAL*	See the next page.
Backlight on the remote control	ALL TIME AUTO OFF	
autoCHAR	ON*	Set
Auto character	OFF	Cancelled
GROUP	ON*	Set
Group playback mode	OFF	Cancelled

(\*) indicates default setting.

- The multi-link station can also be used to set beep sound, auto play, auto power save and group playback mode (page 70).

## Changing Default Settings (continued)

### ■ Beep sound

You can eliminate the confirmation sound that beeps when you press a button.

### ■ Auto play

You can make the unit not play automatically when you insert a playback-only MiniDisc or an accidental erasure protected MiniDisc.

### ■ Auto power save

When the unit is used in a place exposed to much vibration, sound skipping can be decreased by cancelling the auto power save function. (Battery will drain faster.)

### What is auto power save function?

During playback, maximum 40 seconds (in stereo) of musical information is stored. Auto power save function automatically adjusts the storage time between 5 and 40 seconds to reduce the power consumption. If this function is cancelled, the storage time cannot be adjusted.

- When the multi-link station is powered by the AC adaptor, the storage time will be 40 seconds regardless of the settings.
- The storage time varies depending on the recording mode.

### ■ Digital recording level

#### "AUTO SAVE"

The digital recording level you set will be kept even after cancelling recording.

#### "NOT SAVE"

Every time you cancel recording, the level will return to "D.L. 0 dB".

### ■ Group playback mode

Tracks are played in the recorded order regardless of the group.

### ■ Line monitor/Optical monitor

You can switch the monitor sound on and off. When PC and the multi-link station are connected through input and output sockets, select "OFF" to avoid howling or sound deterioration.

#### Note:

Howling or sound deterioration may not occur on some PCs.

### ■ Backlight on the remote control

#### "NORMAL"

<b>Display</b>	Always displayed
<b>Backlight</b>	Lit for approx. 10 seconds during operation

#### "ALL TIME"

<b>Display</b>	Always displayed
<b>Backlight</b>	Always lit.

#### "AUTO OFF"

<b>Display</b>	Displayed for approx. 10 seconds during operation
<b>Backlight</b>	Lit for approx. 10 seconds during operation

"REC" indicator on the main unit: Off

### ■ Auto character

If kanji and alphabets are used for a disc, group or track name, set the auto character function to "OFF" to show both. When it is "ON", alphabets do not appear.



## Selecting Menu

IM-DR580H

You can set or check each function by selecting from the menu.

**[Operate with the multi-link station or the remote control]**

( ) indicates remote control operations.

### How to select Menu

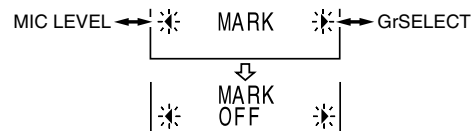
Example: To set 10 minutes for auto mark (on the multi-link station) with a microphone connected.

#### 1 Press the MENU button.

Press the MENU button to enter the menu select mode. Item name is displayed in the first line and menu settings in the second line.

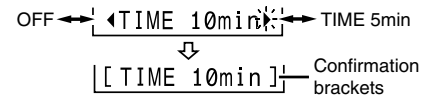


#### 2 Select the item by pressing the ◀ or ▶ button and press the ENTER-/USB (▶) button. An item is selected.



#### 3 Select a setting option by pressing ◀ or ▶ button and press the ENTER-/USB (▶) button.

An option is set and "[ ]" mark will be indicated at both ends.



#### Notes for selecting menus:

- "◀" mark indicates the item selected and available directions.

◀	▶	Items on the left and right.
▶	◀	No item on the left and right.
◀		Items on the left.
	▶	Items on the right.

- Complete the operation within 30 seconds whilst selecting the menus.
- If you press the MENU button during the operation, the previous display appears. When "MENU CANCEL?" appears on the multi-link station, select "YES" (stop) or "NO" (continue) and press the MENU button.
- To cancel the operation, press the ■ button.
- Make sure to apply each change in menu settings. Otherwise they will be cancelled.

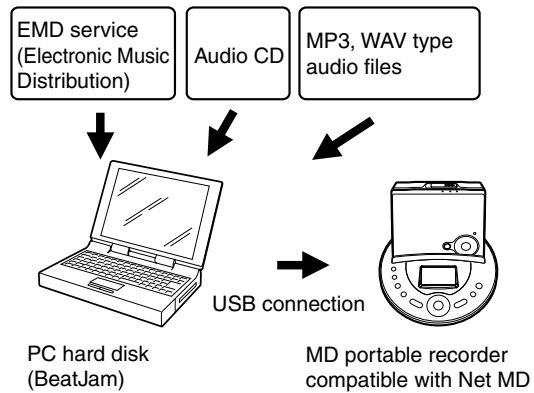
## About Net MD

### ■ What is a Net MD portable recorder?

The USB is adopted to ensure high compatibility of PCs and MDs.

Audio data saved on the hard disk of a PC can be transferred to a Net MD-compatible recorder using the provided software "BeatJam".

Not only the basic operations but also the title editing of audio data on an MD can be performed via the PC.



Digital audio data can be imported into the hard disk of a PC in the following methods:

- Converting the music downloaded via the music distribution service on the Internet into ATRAC3 of the OpenMG system.
- Recording an audio CD via the CD-ROM drive of a PC on the hard disk. (Compressing data with the ATRAC3 sound compressing system)
- Converting the existing MP3, WAV audio files into ATRAC3 of the OpenMG system.

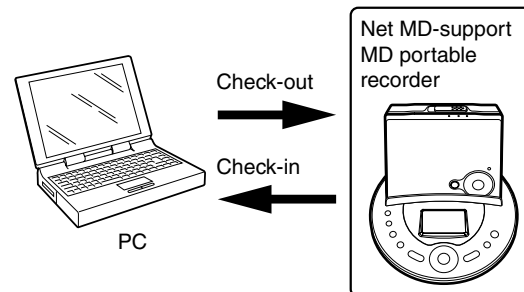
The saved audio data can be played on the existing MD player, as its recording method is not changed when being recorded on an MD. (To play audio data saved in the MDLP mode, the MDLP-support MD player is required.)

All the audio data managed by "BeatJam" is encrypted by the OpenMG system and recorded on the hard disk of the PC, which prevents its unauthorised use or distribution.

■ **Transferring audio data from a PC to MD portable recorder IM-DR580H (check-in/check-out)**

By using the provided software "BeatJam", you can transfer audio data from the hard disk of the PC to IM-DR580H, the Net MD-support MD portable recorder.

"Check-out" is to transfer audio data from a PC to a Net MD-support MD portable recorder, and "check-in" is to return it from the recorder to the same PC.



■ **Restrictions on check-in and check-out**

- One piece of audio data can be checked out up to 3 times (except for some pieces).  
You cannot check out a track more than 3 times. However, if the track is returned to the PC once by using the check-in function, you can check out the same track again.
- You can check in the checked-out audio data to the same PC only. You cannot check it in to other PCs.

■ **Restrictions on audio data**

Along with the popularization of the music distribution service via the Internet, high-quality digital music can be obtained easily, whereas some pieces are distributed with restrictions on the number of check-out or the recording/playback method to prevent infringement of copyrights caused by unauthorised distributions. This unit mounts the copyright protection technology to realise playback or recording in compliance with the will of the copyright owners. For details in possibilities and the frequency of audio data check-out to a Net MD-support device, contact respective music distribution service companies.

## System Requirements

See the table below for the system requirements, especially free space and memory.

OS	Windows® XP Home Edition*1/ Professional*1	Windows® Mil- lennium Edition	Windows® 98 Second Edition	Windows® 2000 Professional*1
CPU	Pentium® II 300 MHz or higher (MMX® Pentium® 233 MHz mini- mum)	MMX® Pentium® 233 MHz or higher (MMX® Pentium® 200 MHz mini- mum)		MMX® Pentium® 233 MHz or higher (MMX® Pentium® 200 MHz minimum)
Memory	128 MB or more (64 MB minimum)	64 MB or more		64 MB or more
Others	<ul style="list-style-type: none"> <li>● Display...1024 x 768 resolution, High Color or upper</li> <li>● Sound source...Sound card</li> </ul>			

\*1 To use this software, login as system administrator (computer administrator).

### Hard disk space

#### 120 MB or more

- Additional space is required to store music data.
- The required space depends on the format or reserved space.

### Notes:

- USB ports are required to connect with external devices or media. The operation via USB hub is not guaranteed.
- Depending on the driver or CD-ROM drive, audio CDs may not be recorded.
- Operations are not guaranteed when using BeatJam
  - on dual-boot computers.
  - with other music software simultaneously.
  - with different version simultaneously.
- You cannot use BeatJam with programs that create virtual CD-ROM drives.
- You cannot use BeatJam when more than one OpenMG compatible audio device is connected.

- "BeatJam" is a copy protected material of Justsystem Corporation. Copyrights and other rights related to "BeatJam" belong to Justsystem Corporation.
- "BeatJam" is a registered trademark of Justsystem Corporation.
- "ATRAC3" and its logo, "OpenMG" and **OpenMG**, "Net MD" and **NETMD**, OpenMG Jukebox and SonicStage are trademarks of Sony Corporation.
- Pentium and MMX are registered trademarks of Intel Corporation in the United States.
- Microsoft, Windows, and DirectX are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.
- Screen shots are used according to the guide lines of Microsoft Corporation.
- "ATRAC3" and its logo indicate audio compression technology of Sony Corporation. The compatibility is not guaranteed.
- Other company names and product names are trademarks or registered trademarks of their respective owners or Justsystem Corporation.

## Software Installation

IM-DR580H

### ■ Installation of BeatJam

Plugin and USB driver required for transferring music files are also installed along with BeatJam.  
(Example: Windows® XP English version)

#### 1 Insert BeatJam CD-ROM into the CD-ROM drive.

Setup application appears.



#### 2 Click "BeatJam Setup".

Setup starts.

Follow the instructions on the screen.

**Installation does not start even if CD-ROM is inserted**  
If the setup application does not appear, perform the following.

1. Click Windows "Start" button and select "My Computer".  
Double click "My Computer" on the desktop if you use Windows® Me, 98SE or 2000.
2. Right click on "OMGBJ" indicating CD-ROM drive and select "Open" from the menu.
3. Double click AUTOPLAY.EXE from the list.

#### Caution:

##### Windows® XP/2000

User with Administrator\* rights needs to log on. Confirm with the network or computer Administrator if you are in a workgroup.

\* User name in Administrator or Administrators group under Windows® 2000.

##### For Windows® XP and Me user

When you use the "System Restore" system tool in Windows® XP or Windows®Me, all the music files that you recorded or imported may become unplayable. Please back up all your music files using the Backup Tool before executing "System Restore".

##### If a previous version of OpenMG Jukebox\* or SonicStage\* is currently installed on your computer

OpenMG Jukebox or SonicStage should be upgraded. The screen appears to prompt you to upgrade the software. Click "Continue" to proceed.

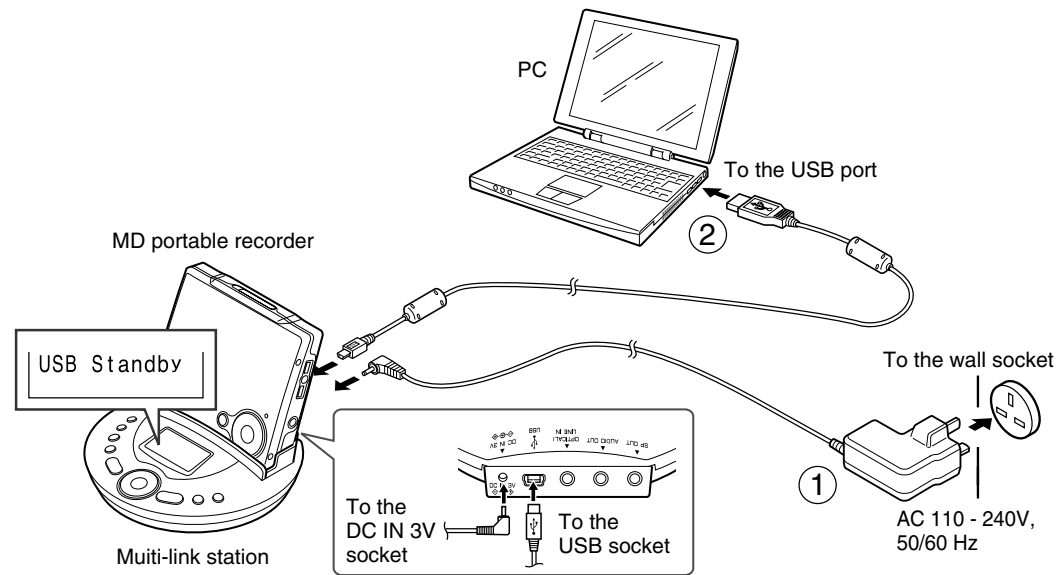
\* OpenMG Jukebox and SonicStage are softwares of Sony Corporation.

##### Hard disk contains old BeatJam database

You can select to re-use or delete the database during setup.

## Connecting to a PC

Connect your PC and the multi-link station with the supplied USB connection cable.  
(Insert a MiniDisc and place the main unit on the multi-link station.)



### Note:

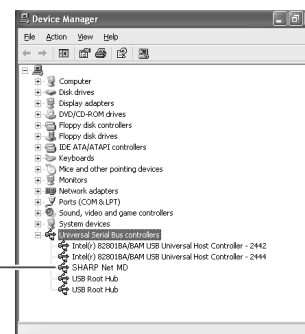
Connect the main unit to the PC with the USB connection cable, and place on the multi-link station. "USB Standby" appears (when the PC is turned on). Operations are possible except those of Net MD features.

**Caution:**

- The operation is not guaranteed if 2 or more USB devices are connected to your PC.
- Insert the USB connection cable directly into the USB port on the PC. We do not guarantee the operation with it connected via a USB hub, etc.
- When connecting the MD portable recorder, disconnect all the other USB devices from the PC. The sound may skip if they are connected.
- If the power supply to the PC or the MD portable recorder stops during the operation of this system, TOC information may not be written on the MD. If it occurs, restart the operation from the beginning.
- We do not guarantee the operation with the self built computers or modified motherboards.
- If cables such as an extension cable or two-way cable is connected instead of a connection cable, the line quality will be degraded and the software may not operate properly.

**■ Checking the USB driver**

Whilst the MD portable recorder is connected to the computer, after clicking "Control Panel" → "System", select the "Hardware" tab and click "Device Manager" to check the following device name.

**● Universal Serial Bus controllers**

Net MD

**Windows® 2000:**

Open "System" in "Control Panel", select the "Hardware" tab and click "Device Manager".

**Windows® 98 Second Edition:**

Open "System" in "Control Panel", and click the "Device Manager".

## Transferring Data

### ■ Checking out

Check-out is to transfer tracks to OpenMG compatible players. You can check out recorded tracks with BeatJam up to 3 times.

<b>1</b>	<b>Connect the multi-link station to the PC.</b>
<b>2</b>	<b>Insert a MiniDisc in the main unit and place on the multi-link station.</b> <span style="border: 1px solid black; padding: 2px;">USB Standby</span>
<b>3</b>	<b>Press the ENTER/-USB button for 2 seconds or more.</b> "...USB..." appears on the multi-link station and operations with the unit are disabled.
<b>4</b>	<b>Transfer music files to the unit (check-out).</b> For details, refer to the manual of BeatJam.

#### Transfer speed:

Approximate time required to transfer a 4 minute song is 1 minute (SP), 10 seconds (LP2) and 5 seconds (LP4). (With the AC adaptor and fully charged battery used.)

- Additional time is required to record the TOC information on a MiniDisc.
- **Transfer may take longer depending on the PC.**

#### Follow the instructions below to take out the MD after check-out:

1. Press the ENTER/-USB button on the multi-link station for 2 seconds or more.
2. When the "...USB..." disappears, remove the main unit.
3. Remove the MD.

### ■ Checking in

Check-in means to return the tracks from external devices to the PC. You can check-in tracks only to the source PC.

<b>1</b>	<b>Connect the multi-link station to the PC.</b>
<b>2</b>	<b>Insert a MiniDisc in the main unit and place on the multi-link station.</b> <span style="border: 1px solid black; padding: 2px;">USB Standby</span>
<b>3</b>	<b>Press the ENTER/-USB button for 2 seconds or more.</b> "...USB..." appears on the multi-link station and operations with the unit are disabled.
<b>4</b>	<b>Return a music file to your PC (check-in).</b> For details, refer to the manual of BeatJam.

#### TOC writing on an MD:

TOC writing will start when check-in or check-out is complete. Whilst writing, the TOC indicator on the multi-link station flashes. (Refer to page 37.)

#### Caution:

- During check-in or check-out, do not press the ENTER/-USB button for 2 seconds or more, disconnect the USB connection cable or turn off the PC. Audio data may be lost.
- If a checked-out track is deleted in another computer, it cannot be checked in any more.



## MiniDisc System Limitations

IM-DR580H

The unit may have the following symptoms whilst recording or editing. The unit is not out of order.

SYMPTOM	LIMITATIONS
<b>"DISC FULL" or "TOC FULL" appears even though the MiniDisc still has recording time left.</b>	More than the limited number of tracks (255) cannot be recorded regardless of the recording time. If the MiniDisc is recorded or edited repeatedly or it has scratches (recording skips scratched parts), you may not be able to record the maximum number of tracks described above. If the total number of character information (disc, group, and track names) exceeds 1,700, the MD cannot be edited.
<b>The remaining recording time does not increase even though you erased tracks.</b>	Short tracks (stereo recording: 12 seconds, monaural recording or 2 times long recording: 24 seconds, 4 times long recording: 48 seconds) may not be counted as tracks when displaying the remaining recording time.
<b>The total of the recorded time and the remaining time does not match the maximum recordable time.</b>	One cluster (approximately 2 seconds) is the minimum unit for recording. For example, a 3-second track uses 2 clusters (approximately 4 seconds). Therefore, the actual recordable time may be shorter than the displayed time.  (The number of seconds indicates that in the stereo recording mode (SP). It varies depending on the recording mode.)
<b>Combine function does not work.</b>	A MiniDisc on which recording and editing are repeated may not allow the combine function.
<b>A track number is created in the middle of a track.</b>	A track number may be created if there are scratches or dust on the MiniDisc.
<b>Sound skips in fast reverse/forward.</b>	If one track is divided and recorded in separate places on a repeatedly recorded or edited MiniDisc, sound may skip.
<b>Even if "LP:" is entered at the top of the name, "LP:" is not displayed.</b>	If "LP:" is entered at the top of the 2 times/4 times long recorded track (LP2/LP4), "LP:" will not be displayed. Enter symbols other than ":" after "LP".

## Troubleshooting

Many potential "problems" can be resolved by the owner without calling a service technician. If something seems to be wrong with this product, check the following before calling your authorised SHARP dealer or service centre.

### The unit does not turn on.

- Is the AC adaptor disconnected?
- Is the battery exhausted?
- Is the unit in the hold mode?
- Has condensation formed inside the unit?
- Is the unit being influenced by mechanical shock or by static electricity?

### No sound is heard from the earphones.

- Is the volume set too low?
- Are the earphones plugged in?
- Are you trying to play a MiniDisc with data on it instead of a MiniDisc containing music?

### When the operation buttons are pressed, the unit does not respond.

- Is the unit in the hold mode?
- Is the battery exhausted?
- Is the remote control unit plug or the earphones plug inserted firmly?

### Some sounds are skipped.

- Is the battery exhausted?
- Is the unit being subjected to excessive vibration?

### The MiniDisc cannot be ejected. (The compartment does not open.)

- Has the track number or character information been written on the disc yet?
- Is the unit in the recording or editing mode?
- Is the AC adaptor unplugged or did a power failure occur whilst recording or editing?

### Recording and editing are impossible.

- Is the MiniDisc protected against accidental erasure?
- Has the recording level been properly adjusted?
- Is the unit connected properly to the other equipment?
- Is the AC adaptor unplugged or did a power failure occur whilst recording or editing?
- Is the unit in the hold mode?
- Is the sampling frequency appropriate for recording?
- Is an optical signal being output from the stereo system? Read the operation manual for the stereo system.

### The battery cannot be charged.

- Is the rechargeable battery in the unit?
- Is the terminal dirty?

### Group functions cannot be used with the group-recorded MD.

- TOC information may have been changed with other equipment.

### The operation is unstable whilst the PC and the unit are connected.

- Are you using the USB cable that was purchased separately?

### The display does not show anything or malfunctions.

- Is the PC out of order?
- Are you using another application with this programme simultaneously?

**Editing is not possible.**

- Are the PC and the MD portable recorder connected improperly?
- Is the MD recorder in the hold mode?
- Is a commercial playback-only MD inserted?

**■ If trouble occurs**

When this product is subjected to strong external interference (mechanical shock, excessive static electricity, abnormal supply voltage due to lightning, etc.) or if it is operated incorrectly, it may malfunction.

Should a failure occur, the lid may not open by sliding the OPEN lever.

**If such a problem occurs, do the following:**

1. Unplug the AC adaptor from the wall socket.
2. Remove the battery.
3. Leave the unit completely unpowered for approximately 30 seconds.
4. Plug the AC adaptor back into the wall socket.
5. After about 30 seconds, press the ►|| button as a test.

**■ Moisture condensation**

When the unit has condensation inside, the disc signals cannot be read, and the unit may not function properly.

In the following cases, condensation may form inside the unit.

- Shortly after turning on a heater.
- When the unit is placed in a room where there is excessive steam or moisture.
- When the unit is moved from a cool place to a warm place.

**To remove condensation:**

Remove the MiniDisc and leave the unit for approximately 1 hour. The condensation should evaporate and the unit will work properly.

## Maintenance

IM-DR580H

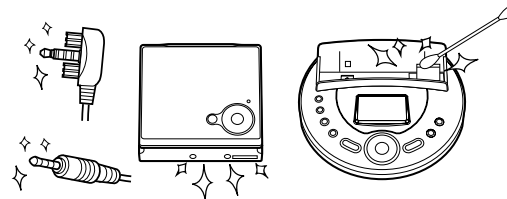
**■ Cleaning**

**When the unit becomes dirty**

Clean it with a soft cloth. When the unit is excessively dirty, use a soft cloth dampened in water (external surfaces only).

**Clean the plugs and the connecting sockets.**

- If the plugs or sockets are dirty, noise may be heard. Cleaning will prevent noise.
- Clean them periodically with a dry cotton swab (do not use water or alcohol).



**Caution:**

- Do not use chemicals for cleaning (petrol, paint thinner, etc.). It may damage the cabinet finish.
- Do not apply oil to the inside of the unit. It may cause malfunctions.

## Error Messages

ERROR MES- SAGES	MEANING
<b>BATT EMPTY (LoBATT)</b>	<ul style="list-style-type: none"> <li>The battery has run down.</li> </ul>
<b>BLANK MD (BLANK)</b>	<ul style="list-style-type: none"> <li>Nothing is recorded. (Replace the disc with a recorded disc.)</li> </ul>
<b>BUSY</b>	<ul style="list-style-type: none"> <li>A track is being moved.</li> </ul>
<b>Can't COPY</b>	<ul style="list-style-type: none"> <li>You tried to record from a copy prohibited MiniDisc. (Record using the analogue cable.)</li> <li>You tried to record signals other than music (such as data).</li> </ul>
<b>Can't EDIT (Can't E)</b>	<ul style="list-style-type: none"> <li>A track cannot be edited. (Change the stop position of the track and then edit it.)</li> </ul>
<b>(Can't E)</b>	<ul style="list-style-type: none"> <li>Stamp function does not work. (Check the number of tracks.)</li> </ul>
<b>Can't LOCK (Can't L)</b>	<ul style="list-style-type: none"> <li>You tried to record or edit whilst the compartment could not be locked. (Reload the MiniDisc.)</li> </ul>
<b>Can't PLAY</b>	<ul style="list-style-type: none"> <li>You tried to play back a track that cannot be played with this equipment.</li> </ul>

ERROR MES- SAGES	MEANING
<b>Can't READ (*) (Can't S)</b>	<ul style="list-style-type: none"> <li>The disc data cannot be read because the disc is damaged. (Reload the Minidisc or replace it with another one.)</li> </ul>
<b>Can't REC (Can't R)</b>	<ul style="list-style-type: none"> <li>Recording cannot be performed correctly due to vibration or shock.</li> </ul>
<b>Can'tWRITE</b>	<ul style="list-style-type: none"> <li>Cannot save the TOC information correctly to a MiniDisc.</li> </ul>
<b>DEFECT!</b>	<ul style="list-style-type: none"> <li>The disc is scratched. (If the recorded sound is not right, retry recording or replace the disc with a recordable one.)</li> </ul>
<b>DISC FULL (D-FULL)</b>	<ul style="list-style-type: none"> <li>The disc is out of recording space.</li> </ul>
<b>DISCONNECT (NO MIC)</b>	<ul style="list-style-type: none"> <li>A recording source or a microphone is not connected.</li> </ul>
<b>Er-MD (**)</b>	<ul style="list-style-type: none"> <li>The microprocessor has reported a system fault and the unit is out of order. (To have it repaired, go to the distributor where you purchased the unit.)</li> </ul>
<b>GROUP FULL</b>	<ul style="list-style-type: none"> <li>The total number of groups exceeds 99. (Erase unnecessary groups.)</li> </ul>

ERROR MESSAGES	MEANING
<b>LOCKED</b>	<ul style="list-style-type: none"> <li>You removed a MiniDisc whilst recording or editing. (Turn off the power before removing the MiniDisc.)</li> </ul>
<b>NAME FULL (N-FULL)</b>	<ul style="list-style-type: none"> <li>The number of a disc, group, or track name exceeds 40. (Shorten the name.)</li> </ul>
<b>NO DISC (NoDISC)</b>	<ul style="list-style-type: none"> <li>A disc has not been loaded.</li> </ul>
<b>NO SIGNAL (noSIG.)</b>	<ul style="list-style-type: none"> <li>Poor connection of the digital cable.</li> <li>No output signal comes out from the connected unit. (Use the AC power for the connected unit.)</li> <li>The input signal has improper sampling frequency.</li> </ul>
<b>NO TRACK (NoTRACK)</b>	<ul style="list-style-type: none"> <li>There is no track to be played.</li> </ul>
<b>PLAY MD (PLAYmd)</b>	<ul style="list-style-type: none"> <li>You tried to record on a playback-only disc.</li> </ul>
<b>POWER?</b>	<ul style="list-style-type: none"> <li>AC adaptor other than specified.</li> <li>Abnormal voltage detected.</li> </ul>
<b>PROTECTED</b>	<ul style="list-style-type: none"> <li>The write protection tab of a MiniDisc is set to the protected position.</li> </ul>
<b>SORRY (Sorry)</b>	<ul style="list-style-type: none"> <li>Since a track number is currently being located or updated, the unit cannot accept your command. (Wait a while and try the operation again.)</li> </ul>

ERROR MESSAGES	MEANING
<b>TEMP OVER (TEMP!)</b>	<ul style="list-style-type: none"> <li>The temperature is too high. (Turn off the power, and wait a while.)</li> </ul>
<b>TOC FORM (**)</b>	<ul style="list-style-type: none"> <li>There is an error in the recorded signal. (Erase all of the tracks, and then record again.)</li> </ul>
<b>TOC FULL (T-FULL)</b>	<ul style="list-style-type: none"> <li>There is no space left for recording character information (track names, disc names, etc.).</li> </ul>
<b>Tr. Protect (Tr. PROTECT)</b>	<ul style="list-style-type: none"> <li>The track has been protected from being erased. (Edit the track with the device on which it was recorded.)</li> </ul>
<b>? DISC</b>	<ul style="list-style-type: none"> <li>A disc which contains data other than music was played. (A disc which contains non-music data cannot be played.)</li> </ul>
<b>? Gr Form</b>	<ul style="list-style-type: none"> <li>The group recording or the GROUP RESERVE function cannot be performed. (Erase the disc name and retry the same operation.)</li> </ul>

- A number or symbol appears in (\*) position.
- Messages shown in the brackets are shown on the remote control.

## Specifications

As a part of our policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviations from these values in individual units.

<b>Power source:</b>	DC 1.2 V: Rechargeable Nickel-Metal Hydride Battery (AD-N55BT) x 1 DC 1.5 V: Commercially available, "AA" size (LR6), alkaline battery x 1 DC 3 V: AC adaptor (AC 110 - 240 V, 50/60 Hz), with the multi-link station
<b>Power consumption:</b>	60 mA (AC adaptor)
<b>Output power:</b>	RMS: 16 mW (8 mW + 8 mW)
<b>Charging time:</b>	Approx. 3.5 hours (90 %) Approx. 5.5 hours (fully charged)(When using the AC adaptor included with the unit)
<b>Dimensions:</b>	Width: 80.1 mm Height: 16.6 mm Depth: 72.6 mm
<b>Weight:</b>	120 g with rechargeable battery/95 g without rechargeable battery
<b>USB socket:</b>	Multi-link station; exclusive USB socket
<b>Input socket:</b>	Main unit; Microphone (powered by the main unit) Multi-link station; Line/optical digital
<b>Output socket:</b>	Main unit; Earphones (impedance: 32 ohms)/remote control Multi-link station; audio output, speaker output Portable MiniDisc recorder
<b>Type:</b>	Portable MiniDisc recorder
<b>Signal readout:</b>	Non-contact, 3-beam semiconductor laser pickup
<b>Audio channels:</b>	Stereo 2 channels/monaural 1 channel
<b>Frequency response:</b>	20 - 20,000 Hz ( $\pm 3$ dB)
<b>Rotation speed:</b>	Approx. 400 - 1,800 rpm CLV (Playback), approx. 400 - 2,700 rpm CLV (Recording)
<b>Error correction:</b>	ACIRC (Advanced Cross Interleave Reed-Solomon Code)
<b>Coding:</b>	ATRAC/ATRAC3 (Adaptive TRansform Acoustic Coding), 24-bit computed type
<b>Recording method:</b>	Magnetic modulation overwrite method
<b>Sampling frequency:</b>	44.1 kHz (32 kHz and 48 kHz signals are converted to 44.1 kHz, and then recorded.)
<b>Wow and flutter:</b>	Unmeasurable (less than $\pm 0.001$ % W. peak)

**Battery life:**

	Stereo		2 times long		4 times long	
When using the rechargeable battery (fully charged) included with the unit	Continuous recording: Approx. 8 hours	Continuous play: Approx. 27 hours	Continuous recording: Approx. 12 hours	Continuous play: Approx. 36 hours	Continuous recording: Approx. 15 hours	Continuous play: Approx. 42 hours
When using a commercially available, high capacity, "AA" size (LR6), alkaline battery	Continuous recording: Approx. 8 hours	Continuous play: Approx. 48 hours	Continuous recording: Approx. 15 hours	Continuous play: Approx. 67 hours	Continuous recording: Approx. 20.5 hours	Continuous play: Approx. 75 hours
When using one, commercially available, high capacity, "AA" size (LR6), alkaline battery with the rechargeable battery (fully charged)	Continuous recording: Approx. 20 hours	Continuous play: Approx. 80 hours	Continuous recording: Approx. 30.5 hours	Continuous play: Approx. 103 hours	Continuous recording: Approx. 40 hours	Continuous play: Approx. 122 hours

- The above values are the standard values when the unit is used at an ambient temperature of 25°C.
- The continuous recording time is for microphone input when the volume level is set to "VOL 0" and the backlight is set to "LIGHT OFF".
- The continuous play time shows the value when the volume level is set to "VOL 15" and the backlight is set to "LIGHT OFF".
- The operating time when using an alkaline battery may be different, depending on the type and manufacturer of the battery, and on the operating temperature.
- "Fully charged" means that the battery is charged for approx. 3.5 hours, and charged for another 2 hours after the battery indicator disappears.

**Input sensitivity:**

	Reference input level	Input impedance
MIC H	0.25 mV	10 k ohms
MIC L	2.5 mV	10 k ohms
LINE	100 mV	20 k ohms

**Output level:**

	Specified output	Maximum output level	Load impedance
Ear-phones	-	8 mW + 8 mW	32 ohms
Audio output	125 mV (-12 dB)	-	10 k ohms
Speaker output	125 mV (-12 dB) *1	-	10 k ohms

\*1 When the speaker output selector switch of the multi-link station is set to MD.

### TERMS OF GUARANTEE

Subject to the terms listed below, Sharp Electronics (U.K.) Ltd. (hereinafter called "the Company") guarantee to provide for the repair of, or at its option replace this Sharp Equipment, or any component thereof, (other than batteries), which is faulty or below standard, as a result of inferior workmanship or materials.

The conditions of this guarantee are:

1. The guarantee shall only apply to defects which occur within one year from the date of purchase, provided that this equipment is sent to the repair address within this period.
2. This guarantee covers equipment intended for private domestic use only. This guarantee does not apply to equipment used in the course of a business, trade or profession.
3. The guarantee does not cover MiniDiscs or batteries.
4. This guarantee does not cover any faults or defects caused by accident, misuse, fair wear and tear, neglect, tampering with the equipment, or any attempt at adjustment or repair other than by a Service Facility appointed by Sharp.
5. In the unlikely event of a defect occurring, the product must be returned to the Company's repair centre with proof of purchase. A postage paid label and a fault report form are supplied with the product for this purpose. It is your responsibility to ensure that the packaging is adequate, and to obtain proof of posting. Further details of the repair service, which is available after the guarantee period on a chargeable basis, and additional report forms and labels can be obtained by telephoning 0870 738 0000.
6. No person has any authority to vary the terms or conditions of this guarantee.
7. This guarantee is offered as an additional benefit to the consumer's statutory rights and does not affect these rights in any way.

# SHARP

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**SHARP CORPORATION**

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