

**SONY**

3-856-519-51(1)

# ***Portable MiniDisc Player***

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Operating instructions



***MZ-E40***

Sony Corporation ©1996 Printed in Japan



## **WARNING**

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

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

### **Caution**

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

### **Information**

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

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

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

### **Owner's Record**

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

Model No. MZ-E40

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

"MD WALKMAN" is a trademark of Sony Corporation.

## **Welcome!**

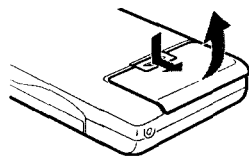
Welcome to the world of the MiniDisc! Here are some of the capabilities and features you'll discover with the new MiniDisc Player.

- Display on the player – You can see play modes and battery condition. And you can see the disc name and the track name if the MD is labeled.
- Monaural playback – You can play the MD that is recorded with monaural sound.

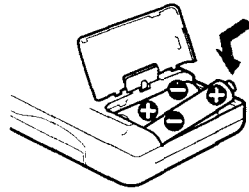
# Playing an MD right away!

Prepare two size AA(R6) alkaline batteries to play an MD. You can also use this player on house current or rechargeable batteries with optional accessories (see "Power sources"). The player automatically switches to play the stereo or monaural sound according to the recorded sound.

## 1 Install the batteries.



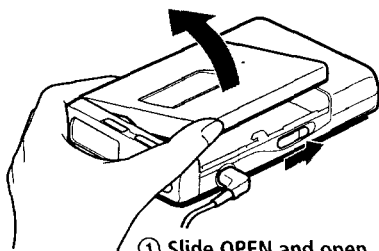
① Open the lid.



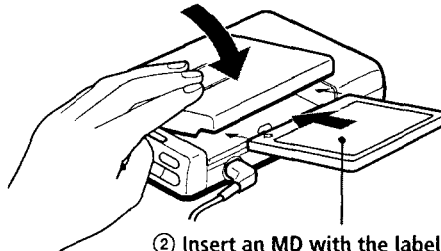
② Install two size AA (LR6) alkaline batteries (not supplied), and close the lid.

The battery life is approx. 4 hours (It may be shorter due to operating conditions and the temperature of the location.)

## 2 Insert an MD.



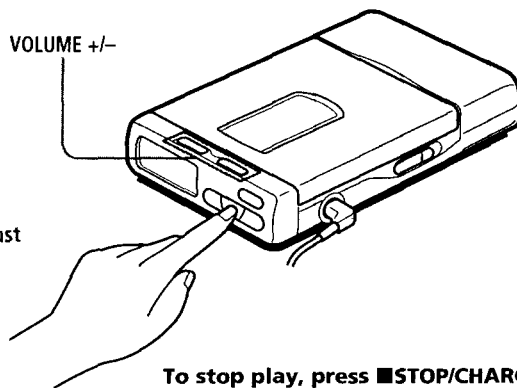
① Slide OPEN and open the lid.



② Insert an MD with the label side facing up, and press the lid down to close.

### 3 Play an MD.

- ① Press **▶**.  
The player starts to play the first track.
- ② Press **VOLUME +/-** to adjust the volume.  
You can check the volume in the display.



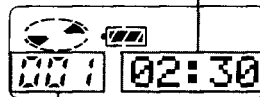
To	Press
Find the beginning of the current track	◀◀
Find the beginning of the next track	▶▶
Go backwards while playing <sup>1)</sup>	keep pressing ◀◀ side
Go forward while playing <sup>1)</sup>	keep pressing ▶▶ side
Remove the MD	■ STOP/CHARGE and open the lid. <sup>2)</sup>

#### If the play does not start

Make sure the player is not locked. See "To lock the controls."

#### Display window while playing back

Track name<sup>3)</sup> or elapsed time of the track being played



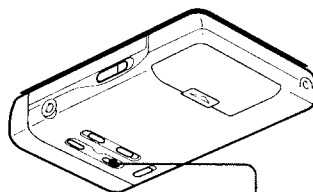
Track number

- 1) To go backward or forward quickly without listening, press **||** and keep pressing **◀◀** or **▶▶**.
- 2) Once you open the lid, the point to start play will change to the beginning of the first track.
- 3) Appears only with MDs that have been electronically labeled.

## ▶ Various ways of playback

### Playing tracks repeatedly

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



PLAY MODE

Press PLAY MODE while the player is

playing an MD. Each time you press PLAY MODE, the play mode indication changes as follows.

Play mode indication



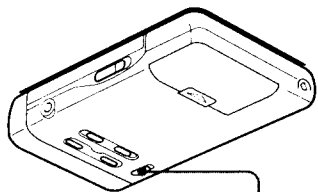
"(none)" (normal play)  
All the tracks are played once.

↑  
"all repeat"  
All the tracks are played repeatedly.

↑  
"1" (single repeat)  
A single track is played repeatedly.

↑  
"SHUF" (shuffle repeat)  
All the tracks are played repeatedly in random order.

**To lock the controls**  
To prevent the buttons from being accidentally operated when you carry the player, use this function.



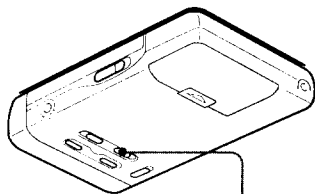
HOLD

Slide HOLD in the direction of the ▶ On the player, slide HOLD to lock the controls of the player.

### To emphasize bass (MEGA BASS feature)

The MEGA BASS feature intensifies low frequency sound for richer quality audio reproduction.

MEGA BASS



Slide MEGA BASS.

Choose 1 (slight effect) or 2 (strong effect). To cancel the effect, set MEGA BASS to 0.

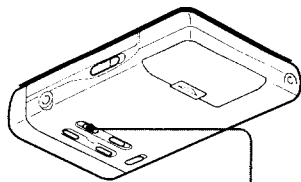
#### Note

If the sound is distorted when emphasizing bass, turn down the volume.

### To protect your hearing (AVLS)

The AVLS (Automatic Volume Limiter System) function keeps down the maximum volume to prevent excessive sound from harming your ears.

AVLS



Set AVLS to LIMIT.

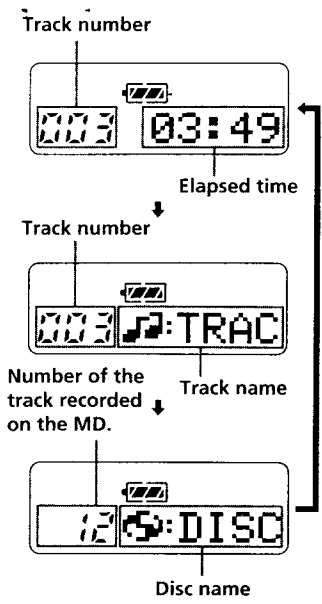
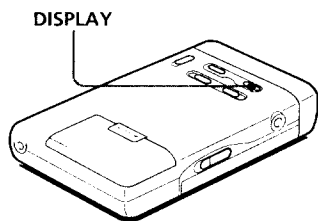
The volume is kept at a moderate level, even if you try to turn the volume above the limited level.

### Tips on playback

#### To know the track name and time

Press DISPLAY while the player is playing an MD.

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



**Note**

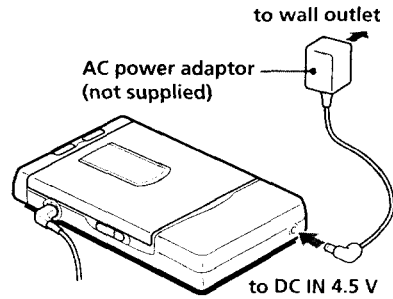
Disc and track names appear only with MDs that have been electronically labeled.

## ► Power sources

You can use the player on house current, dry batteries, a nickel metal hydride rechargeable battery.

### Using on house current

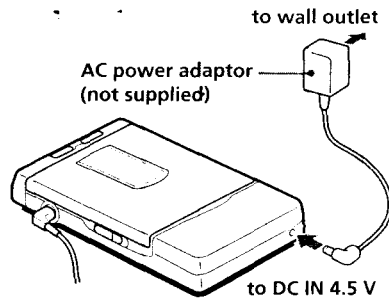
To use your player on house current, connect the AC power adaptor AC-E45HG (not supplied).



### Using on a nickel metal hydride rechargeable battery




Before using the rechargeable battery BP-DM20 (not supplied) for the first time, charge it with the AC power adaptor AC-E45HG (not supplied).

- 1 Connect the AC power adaptor.



### When to replace or charge the batteries

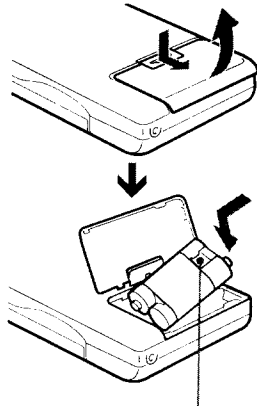
You can check the battery condition with the battery indication displayed while using the player.

-  Used batteries
- ↓
-  Weak batteries. Replace all the batteries
- ↓
-  The batteries have gone out. "LoBATT" flashes in the display, and the power goes off.

### Notes

- Charging time may vary depending on the battery condition.
- When you use the battery for the first time or after a long period of disuse, the battery life may be shorter. In this case, charge and discharge the battery several times. The battery life will be restored.
- If the rechargeable battery capacity becomes half the normal life, replace it with a new one.
- The battery life is approx. 3 hours (It may be shorter due to operating conditions and the temperature of the location.)

- 2** Insert the rechargeable battery, and close the lid.



The projection on the battery comes on the right.

- 3** Press ■STOP/CHARGE on the player. "Charge" flashes and the battery indication appears in the display and charging starts. When charging is completed, "Charge" and the battery indication go out. A completely discharged battery takes about 3 hours to charge fully. To stop charging before the battery is fully charged, press ■STOP/CHARGE.
- 4** Disconnect the AC power adaptor. As long as the player is connected to the AC power, the power will be supplied from the AC source instead of the battery.



## ► Additional information

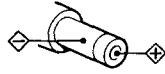
### Precautions

#### On safety

- Do not put any foreign objects in the DC IN 4.5 V jack.

#### On power sources

- Use the house current, two size AA (R6) batteries, nickel metal hydride rechargeable battery, or car battery.
- For use in your house: Use the AC power adaptor AC-E45HG. Do not use any other AC power adaptor since it may cause the player to malfunction.



Polarity of the plug

- The player is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the player itself has been turned off.
- If you are not going to use this player for a long time, be sure to disconnect the power supply (AC power adaptor, dry batteries, rechargeable batteries, or car battery cord). To remove the AC power adaptor from the wall outlet, grasp the adaptor plug itself; never pull the cord.
- For use in the car: Use the CPA-9 car connecting pack (not supplied).

#### On heat build-up

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

#### On installation

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

#### On the headphones

##### Road safety

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

##### Preventing hearing damage

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

##### Caring for others

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

#### Note on mechanical noise

The player gives out mechanical noise while operating, which is caused by the power-saving system of the player and it is not a trouble.

#### For the customers in the USA

##### DISPOSAL OF NICKEL METAL HYDRIDE BATTERY.

##### NICKEL METAL HYDRIDE BATTERY. DISPOSE OF PROPERLY.

You can return your unwanted nickel metal hydride batteries to your nearest Sony Service Center.

**Note:** In some areas the disposal of nickel metal hydride batteries in household or business trash may be prohibited.

For the Sony Service Center nearest you call 1-800-222-SONY (United States only)

**Caution:** Do not handle damaged or leaking nickel metal hydride battery.

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

## Troubleshooting

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

### The player does not work or works poorly.

- Power sources may not be securely connected.
  - ➔ Disconnect the power source once and connect it again.
- Moisture has condensed inside the player.
  - ➔ Take the MD out and leave the player in a warm place for several hours until the moisture evaporates.
- The rechargeable battery or dry batteries are weak (LoBATT flashes).
  - ➔ Replace the dry batteries or recharge the battery.
- The dry batteries have been installed incorrectly.
  - ➔ Install the batteries correctly.
- You pressed a button while the disc indication was rotating quickly.
  - ➔ Wait until the indication rotates slowly.
- The AC adaptor was unplugged during playing or a power outage occurred.
- While operating, the player received a mechanical shock, too much static, abnormal power voltage caused by lightning, etc.
  - ➔ Restart the operation as follows.
    - 1 Disconnect all the power sources.
    - 2 Leave the player for about 30 seconds.
    - 3 Connect the power source.

### No sound comes through the headphones.

- The headphones plug is not firmly connected.
  - ➔ Connect the headphones plug firmly to PHONES jack.
- Volume is too low.
  - ➔ Adjust the volume by pressing VOLUME +/- .
- AVLS is on.
  - ➔ Slide AVLS to NORM.

### An MD is not played from the first track.

- Disc playing stopped before it came to the last track.
  - ➔ Press **⏮** repeatedly or open and close the lid once to go back to the beginning of the disc, and restart playing after checking the track number in the display.

### Playback sound skips.

- The player is placed where it receives continuous vibration.
  - ➔ Put the player on stable place.  
A very short track may cause sound to skip.

### Sound has a lot of static.

- Strong magnetism from a television or such device is interfering with operation.
  - ➔ Move away from the source of strong magnetism.

### Charging the rechargeable battery does not start.

- The rechargeable battery has been inserted incorrectly or the AC power adaptor has been connected incorrectly.
  - ➔ Insert the battery correctly or connect the AC power adaptor correctly.

### On the MiniDisc cartridge

- Do not break open the shutter.
- Do not place the cartridge where it will be subject to light, temperature, moisture or dust.

### On cleaning

- Clean the player casing with a soft cloth slightly moistened with water or a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzene as it may mar the finish of the casing.
- Wipe the disc cartridge with a dry cloth to remove dirt.
- Dust on the lens may prevent the unit from operating properly. Be sure to close the disc compartment lid after inserting and ejecting an MD.

### Notes on the batteries

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

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

# Specifications

## System

### Audio playing system

MiniDisc digital audio system

### Laser diode properties

Material: GaAlAs

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

Emission duration: continuous

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

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

### Revolutions

400 rpm to 900 rpm (CLV)

### Error correction

Advanced Cross Interleave Reed Solomon Code (ACIRC)

### Sampling frequency

44.1 kHz

### Coding

Adaptive TRansform Acoustic Coding (ATRAC)

### Modulation system

EFM (Eight to Fourteen Modulation)

### Number of channels

2 stereo channels

1 monaural channel

### Frequency response

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

### Wow and Flutter

Below measurable limit

### Outputs

Headphones: stereo mini-jack, maximum output level 15 mW + 15 mW, load impedance 16 ohm

## General

### Power requirements

Sony AC Power Adaptor AC-E45HG (not supplied) connected at the DC IN 4.5 V jack: 120 V AC, 60 Hz

Two size AA (LR6) batteries (not supplied)

Nickel metal hydride rechargeable battery BP-DM20 (not supplied)

### Battery operation time

Approx. 4 hours with two size AA(R6) batteries

Approx. 3 hours with BP-DM20 Nickel Metal

Hydride Rechargeable battery

### Dimensions

Approx. 129.9  $\times$  24.5  $\times$  79.4 mm (w/h/d) ( $5 \frac{1}{8} \times 1 \times 3 \frac{1}{4}$  in.)

### Mass

Approx. 170 g (6.0 oz) the player only

Approx. 300 g (10.6 oz)

incl. a premastered MD, headphones, and two

Sony alkaline LR6 (5C) batteries

### Supplied accessories

Headphones (1)

Carrying case (1)

### Optional accessories

AC-E45HG AC power adaptor

BP-DM20 Nickel Metal Hydride Rechargeable battery

DCC-E245 Car battery cord

CPA-9 Car Connecting Pack

MDR-D33, MDR-D55, MDR-D77 Stereo

Headphones

SRS-A41 Sony Active Speakers

CK-MD4 MiniDisc Carrying Case

CK-MD10 MiniDisc Filing Box

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

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Design and specifications are subject to change without notice.