

Portable Memory Stick Audio Player

Network Walkman

Operating Instructions



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 WALKMAN is a trademark of Sony Corporation.



MEMORY STICK DUO

MAGICGATE

NW-MS70D/MS90D/MS77DR

WARNING

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

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

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

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

Note on installation

If you use the unit at a place subject to static or electrical noise, the track's transferring information may be corrupted. This would prevent successful transferring authorization on your computer.

For the customers in the United States

Owner's Record

The model number is located in the front and the serial number is located inside the "Memory Stick" slot cover of the player (see page 10). Record the serial number in the space provided below.

Refer to them whenever you call your Sony dealer regarding this product.

Model No. _____

Serial No. _____

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 using one or more of the following measures:

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

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

If you have any questions about this product:

Visit: www.sony.com/walkmansupport

Contact: Sony Customer Information Services Center at (866)-456-7669

Write: Sony Customer Information Services Center
12451 Gateway Blvd..
Fort Myers, FL33913

Declaration of Conformity

Trade Name: SONY
Model No.: NW-MS70D
NW-MS90D
NW-MS77DR
Responsible Party: Sony Electronics Inc.
Address: 16450 W. Bernardo Dr, San
Diego, CA 92127 USA
Telephone Number: 858-942-2230

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

For the customers in the Netherlands

Voor de Klanten in Nederland



Gooi de batterij niet weg maar lever
deze in als klein chemisch
afval(KCA).

Notice for users

On the supplied software

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

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Documentation ©2004 Sony Corporation

This manual explains how to operate Network Walkman. For details on how to use the supplied software (SonicStage), refer to the SonicStage Operating Instructions.

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In this manual, TM and ® marks are not specified.

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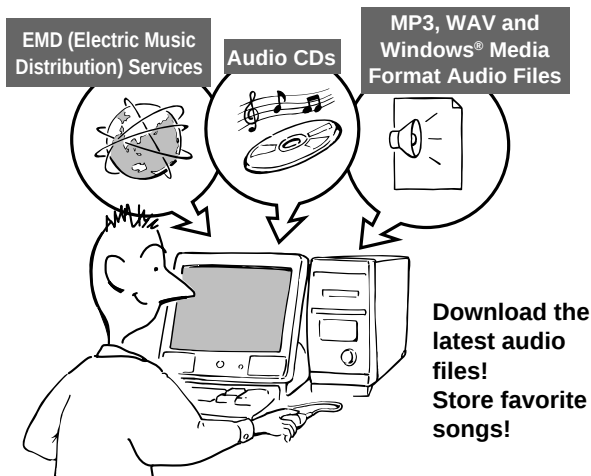
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Overview

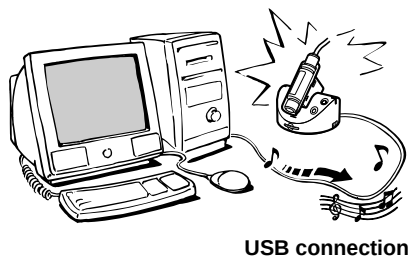
What you can do with your Network Walkman

First, you need to install the SonicStage Software into your computer. You can easily transfer digital audio files from your computer to the built-in flash memory or MagicGate-compatible “Memory Stick Duo” (not supplied), and carry it anywhere to enjoy.

1 Store digital audio files on your computer.



2 Transfer files to your Network Walkman.



3 Enjoy music with your Network Walkman.



Other features

- Compact size, light weight, skip-proof operation, scratch resistant, high portability.
- Approximately 44 hours*¹ of continuous playback with a rechargeable nickel hydride battery.
- Hybrid drive: you can store digital audio files in the built-in flash memory or MagicGate-compatible “Memory Stick Duo” (not supplied).
- NW-MS70D/MS77DR: The 256MB built-in flash memory enables more than 11 hours*² of recording time.
- NW-MS90D: The 512MB built-in flash memory enables more than 23 hours*² of recording time.
- The supplied SonicStage software enables you to transfer songs recorded using the recording cradle to your computer (NW-MS77DR), and to record songs from audio CDs to the hard disc of your computer, using the ATRAC3plus format (high sound quality, high compression).
- High-speed data transfer using the dedicated USB cable and USB cradle.
- Backlight LCD screen: song titles and artist names can be displayed.
- Group function: you can select songs to be played by album.
- Storage function: you can store a variety of data as well as audio files.
- NW-MS77DR: you can record songs*³ from audio CD, etc., using the recording cradle without the need to go through the computer.

*¹ Differs according to the data format. In this case, the figure for the battery duration is when continuously playing ATRAC3 format audio files.

*² Differs according to the bit rate when recording. In this case, the figure for the recordable time is when recording at 48kbps ATRAC3plus format.

*³ Recordable at 64/48kbps ATRAC3plus format.

NOTES:

- The recorded music is limited to private use only. Use of the music beyond this limit requires permission of the copyright holders.
- Sony is not responsible for incomplete recording/downloading or damaged data due to problems of the Network Walkman or computer.

On “MagicGate Memory Stick”

What is a “Memory Stick”?

“Memory Stick” is a compact, portable and versatile Integrated Circuit recording medium with a data capacity that exceeds a floppy disk. “Memory Stick” is specially designed for exchanging and sharing digital data among “Memory Stick” compatible products. Because it is removable, the “Memory Stick” can also be used for external data storage.

Sizes of “Memory Stick”

There are two sizes of “Memory Stick”: regular size “Memory Stick” and compact size “Memory Stick Duo”. With a duo adaptor, you can use “Memory Stick Duo” on a device supporting regular size “Memory Stick”. For your Network Walkman, use a “Memory Stick Duo” (compact size “Memory Stick”).

Types of “Memory Stick”

There are five types of “Memory Stick”: MagicGate-compatible “Memory Stick Duo” is the only media supported by your Network Walkman.*

- ① “Memory Stick PRO”: “Memory Stick PRO” can be used on “Memory Stick PRO” compatible devices. It has the “MagicGate” copyright protection technology.
- ② “Memory Stick-R”: Data stored in “Memory Stick-R” cannot be overwritten. It can be used on “Memory Stick-R” compatible devices. You cannot store data with “MagicGate” copyright protection technology.
- ③ “Memory Stick”: You can store any data except for data requiring the “MagicGate” copyright protection technology.
- ④ “MagicGate Memory Stick”: “MagicGate Memory Stick” is equipped with “MagicGate” copyright protection technology.
- ⑤ “Memory Stick ROM”: “Memory Stick ROM” is a read-only “Memory Stick” in which data has been prerecorded. Data stored in “Memory Stick ROM” cannot be overwritten or deleted.

* You can also use a “Memory Stick” for reading/writing data that is not protected by a copyright protection technology.

What is “MagicGate”?

“MagicGate” is a copyright protection technology for “MagicGate Memory Stick” and compliant products, such as Network Walkman. Authentication ensures that the protected content is transferred only between compliant devices and “MagicGate Memory Stick”, and that protected content is recorded and transferred in an encrypted format to prevent unauthorized copying or playback.

Using “Memory Stick” (not supplied) on your Network Walkman

Prepare MagicGate-compatible “Memory Stick Duo”.

“Memory Stick” is not supplied with your Network Walkman. Although there are several types of “Memory Stick”, MagicGate-compatible “Memory Stick Duo” is the only media that supports your Network Walkman.

When you purchase “Memory Stick”, make sure that you select MagicGate-compatible “Memory Stick Duo” with a **MAGIC GATE** logo and **MEMORY STICK DUO** logo.

Note

The memory capacity of MagicGate-compatible “Memory Stick Duo” supported by your Network Walkman is up to 128MB.

Notes on using “Memory Stick Duo”

- Do not remove “Memory Stick Duo” during reading or writing data.
- Data may be damaged in the following cases.
 - The Network Walkman is removed from the USB cradle or the dedicated USB cable is unplugged while reading or writing data.
 - The “Memory Stick” is used in a location subject to static electricity or electric noise.
- Creating backup copies of important data is recommended.

Notes on formatting (initializing)

“Memory Stick Duo” is shipped with a FAT format as the standard format.

To format “Memory Stick”, use devices conformable with the “Memory Stick”.

If “Memory Stick” is formatted using Windows Explorer, “FORMAT ERROR” (page 53) will be displayed and audio files cannot be played on the Network Walkman. On Windows XP, you can format “Memory Stick” properly. When you format “Memory Stick”, always perform either one of the following:

- Follow the instructions of “Formatting memory” on page 44.
- Format using the supplied SonicStage software.
 - For details on how to format using the SonicStage software, refer to “SonicStage Online Help.”

Displaying on Windows Explorer

When you connect Network Walkman to your computer with the supplied USB cable, you can display the data stored on “Memory Stick” or built-in flash memory as an external drive (for example, as the D drive) using Windows Explorer.

- Data transferred with the SonicStage software, and audio data recorded directly from the digital/analog audio device (only for NW-MS77DR) will be stored in a “HIFI” folder. Do not edit data stored in the “HIFI” folder using Windows Explorer. Data copied or edited using Windows Explorer cannot be played on your Network Walkman.
- You can display data that has been stored on other “Memory Stick” compatible devices (JPEG, MPEG format, etc.).

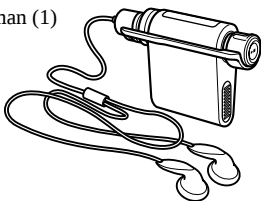
For information on how to handle data except in the “HIFI” folder, refer to the instruction manual that comes with the equipment with which the recording has been done.

Step 1: Checking the package contents

Please check the accessories in the package.

NW-MS70D/MS77DR
NW-MS90D (US model)

- Network Walkman (1)
- Headphones (1)



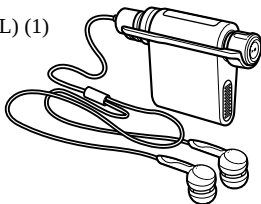
NW-MS90D (Non-US model)

- Network Walkman (1)
- Headphones (1)
- Earbuds (Size S, L) (1)

Earbuds(Size S)

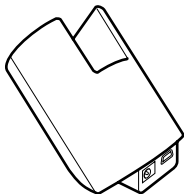


Earbuds(Size L)



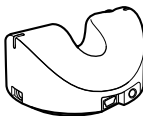
NW-MS70D/MS90D

- USB cradle (1)

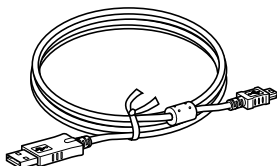


NW-MS77DR

- Recording USB cradle (1)



- Dedicated USB cable (1)



- AC power adaptor (for the supplied USB cradle) (1)
- Carrying pouch (1)
- Neck strap (1)
- Extension headphone cord (1)
- Optical digital cable (1)
(Only for NW-MS77DR)
- CD-ROM (1)
- Operating instructions (1)
- SonicStage Operating Instructions (1)

For the customer of NW-MS90D (Non-US model)

WARNING

The supplied headphones are a close-up design to create Powerful Bass Sound. **Do not use headphones while driving.**

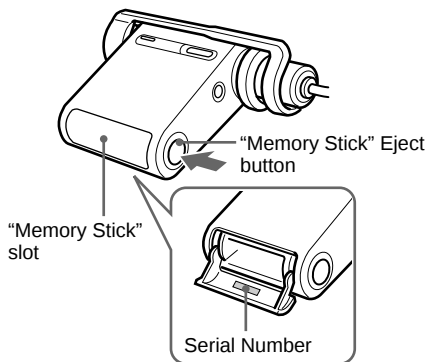
- Do not use headphones while driving, cycling, or operating any motorized vehicle.
- It can also be potentially dangerous to play your headphones at high volume while walking, especially at pedestrian crossings. You should exercise extreme caution or discontinue use in potentially hazardous situations.

When you wear the headphone, you may hear noise, such as the cord rubbing against your clothes. This is not malfunction.

About the Serial Number

The serial number provided for your device is required for the customer registration. The number is on a label on the inside of the “Memory Stick” slot cover.

Press the “Memory Stick” Eject button to open the cover and check the serial number.



Step 2: Charging the battery

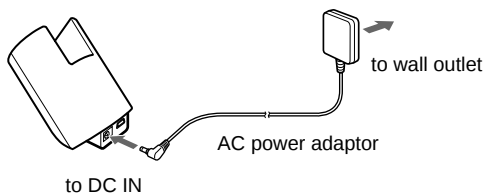
Charge the built-in battery before using your Network Walkman.

Connect the AC power adaptor as illustrated below. The control buttons on your Network Walkman are all disabled while it is attached to the USB cradle or the recording USB cradle.

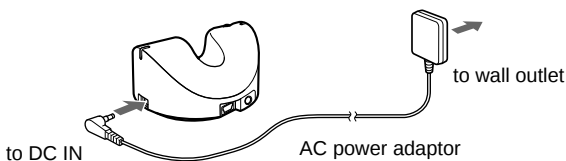
1 Connect the AC power adaptor.

Connect the DC plug of the AC power adaptor to the DC IN jack of the USB cradle or the recording USB cradle. Connect the AC plug to a wall outlet.

NW-MS70D/MS90D



NW-MS77DR

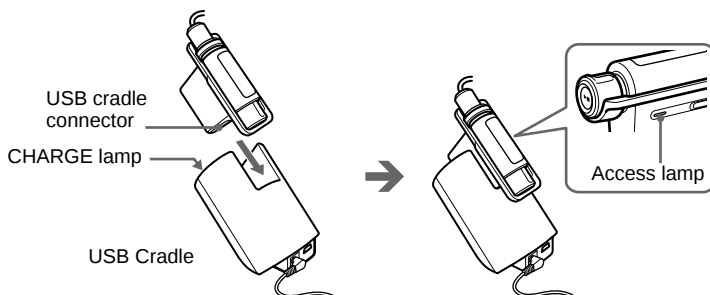


2 Attach your Network Walkman to the supplied USB cradle or the recording USB cradle.

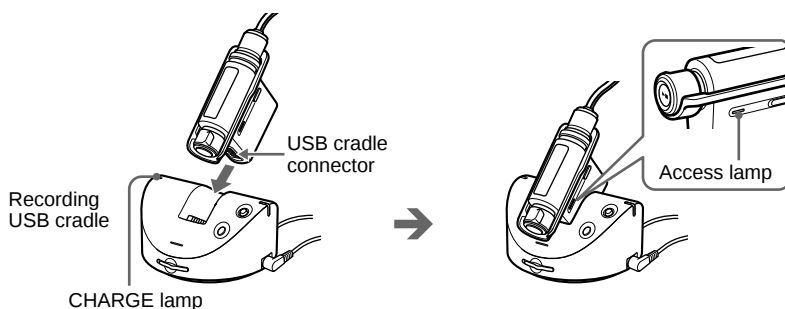
Note

Be sure to attach your Network Walkman in the direction of the arrow as illustrated below.

NW-MS70D/MS90D



NW-MS77DR



The CHARGE lamp on the USB cradle or the recording USB cradle lights up and charging starts. It takes approximately 90 minutes*. When charging is complete, the CHARGE lamp goes out.

We recommend you to charge the battery for 30 minutes or more continuously. Your Network Walkman requires 15 minutes to check the battery condition to protect it before a quick recharge starts.

* The figure represents the charging time for an empty battery charged in an ambient temperature of between 5°C to 35°C (67°F to 95°F). The charging time will be shortened depending on the battery power remaining. If the battery is charged in a low-temperature environment, the charging time will be longer.

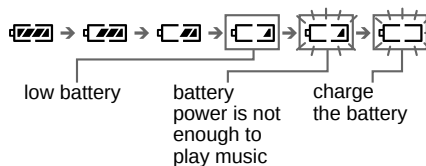
Battery duration (for continuous use)

ATRAC3 format: Approximately 44 hours

ATRAC3plus format: Approximately 36 hours

On the remaining battery indication

The battery icon in the display (page 14) changes as shown below.



Notes

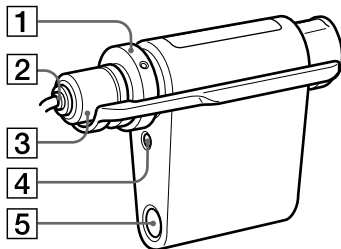
- Charge the battery in an ambient temperature of between 5°C to 35°C (67°F to 95°F).
- It cannot playback during charge.

Locating controls

For details about each part, refer to the pages in parentheses.

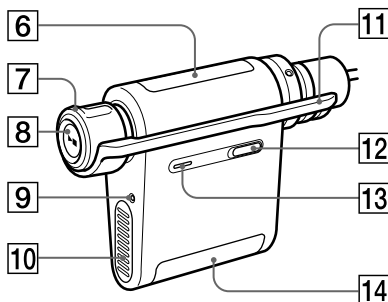
Network Walkman

Front side



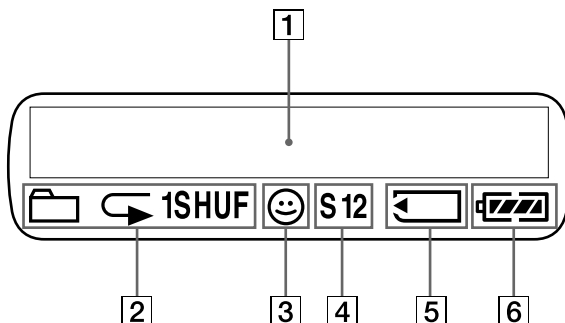
- 1** VOL (+/-) control (Page 23, 35)
- 2** Headphone plug (Page 25)
- 3** Plug cover (Page 25 to 26)
- 4** SOUND/AVLS button (Page 30, 35)
- 5** “Memory Stick” Eject button (Page 15, 19, 24)

Rear side



- 6** Display (Page 14, 27, 53 to 55)
For details on the display and icons, refer to page 14.
- 7** Shuttle switch (Page 24, 27 to 44)
- 8** Play/Stop button (Page 23 to 24, 27 to 44)
- 9** RESET button (Page 48)
- 10** USB cradle connector (Page 12, 17, 21)
- 11** HOLD (Locking controls) switch (Page 32)
- 12** MENU button (Page 27 to 44, 59)
You can switch to the Time display by pressing the MENU button for a while.
- 13** Access lamp (Page 17)
- 14** “Memory Stick” slot (Page 15, 19, 24)

Display



- 1** Text/graphic information display (page 27)
Displays track number, track name, current date and time (page 28 to 34), ERROR MESSAGE (page 18, 53 to 55) and menu. Press the MENU button to switch the display mode. For details, refer to “Changing the display mode” on page 28. And for details on the display mode during recording, refer to “Recording onto your Network Walkman” on page 19 to 21.
- 2** Playback mode indication (page 27)
The current playback mode is displayed.
- 3** AVLS indication (page 35)
The indication appears while the AVLS function is activated.
- 4** Digital sound preset indication (page 30 to 31)
The current sound setting is displayed.
- 5** “Memory Stick” indication (page 15, 19)
The icon is displayed when “Memory Stick” (not supplied) is inserted into the slot.
- 6** Remaining battery indication (page 12)
The remaining battery power is displayed.

Transferring audio files from the computer to your Network Walkman

Note

Before connecting your Network Walkman to the computer for the first time, be sure to install the SonicStage software from the supplied CD-ROM in your computer. Even if the SonicStage software is already installed, you need to install SonicStage software with this package before connecting your Network Walkman to the computer (update programs may be available.)

1 Install the SonicStage software in your computer using the supplied CD-ROM.

Follow step 1 only for the first time when you connect your Network Walkman to the computer.
For details, refer to the manual "SonicStage Operating Instructions."

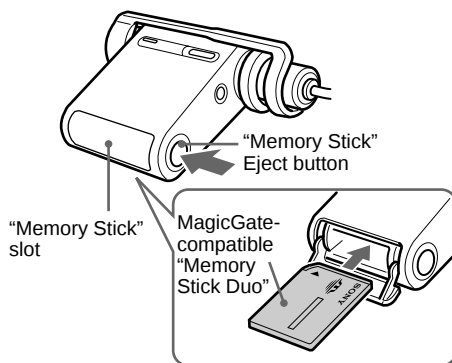
2 Import audio files into the SonicStage software.

For details, refer to the manual "SonicStage Operating Instructions."

3 Prepare the device to which you transfer data.

Insert MagicGate-compatible "Memory Stick Duo" (not supplied) into the slot of your Network Walkman.*
While a "Memory Stick" is inserted,  is indicated in the display of your Network Walkman.

* Your Network Walkman comes equipped with 256MB (NW-MS70D/MS77DR)/512MB (NW-MS90D) built-in flash memory. You can use your Network Walkman without external memory. When you do not use "Memory Stick", skip step 3 and follow step 4.

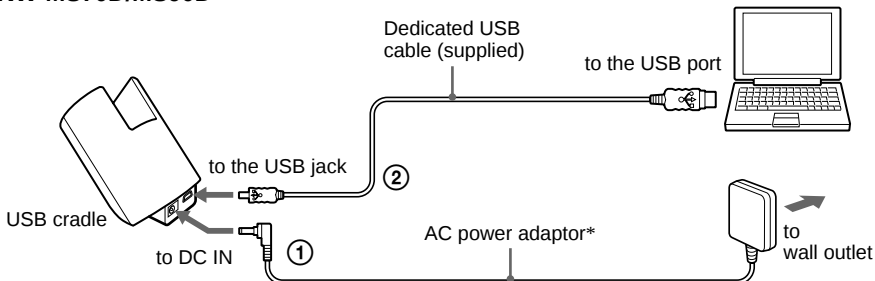
**Notes**

- When connecting your Network Walkman to the computer, make sure that the erasure prevention switch (page 46) of "Memory Stick Duo" is not set to "LOCK."
- Insert "Memory Stick Duo" into the slot until it clicks into the place.
- To remove "Memory Stick Duo", refer to page 24.
- Do not label "Memory Stick Duo" to prevent sticking it in the slot.

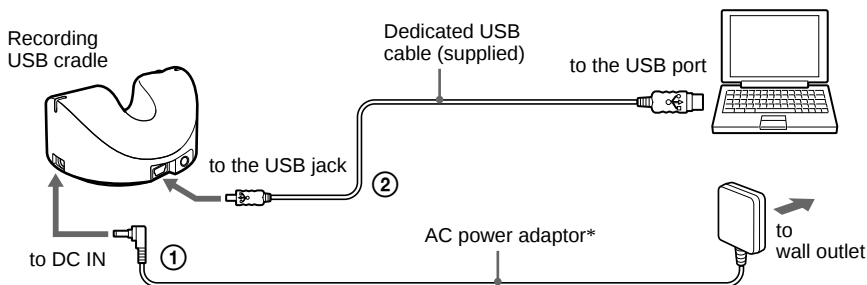
4 Connect your Network Walkman to the computer.

- ① Connect the AC power adaptor*.
Connect the supplied AC power adaptor to the DC IN jack on the USB cradle or the recording USB cradle, and then to a wall outlet.
- ② Connect the USB cradle or the recording USB cradle to the computer.
Connect the small connector of the dedicated USB cable into the USB jack on the USB cradle or the recording USB cradle, and the large connector to a USB port on your computer.

NW-MS70D/MS90D

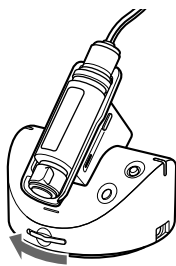


NW-MS77DR



* You can charge the battery without connecting the AC power adaptor. Connect your Network Walkman and the computer (②). From the menu, select "USB CHG: ON" (page 43) to enable charging the battery with a computer. However, frequent use of USB charge may increase the consumption of the computer's built-in battery.

- ③ Set the record select switch. (Only for NW-MS77DR)
Set the record select switch to "USB/KEY PROTECT."



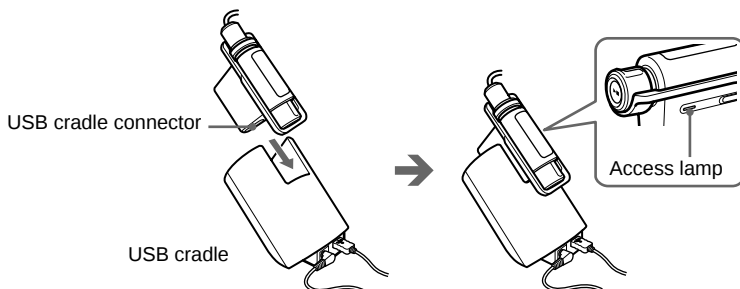
Record select switch

- ④ Attach your Network Walkman to the USB cradle or the recording USB cradle.
 “CONNECT” is indicated in the Network Walkman display, and the access lamp blinks while accessing the computer.

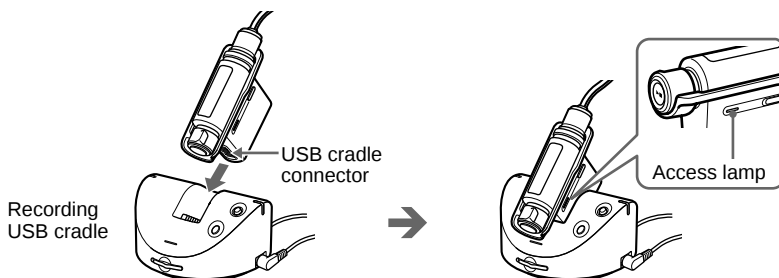
Note

Be sure to attach your Network Walkman in the arrow direction as illustrated.

NW-MS70D/MS90D



NW-MS77DR



Notes

- The access lamp blinks while your Network Walkman accesses the computer.
- Do not disconnect the USB cable or remove your Network Walkman from the USB cradle or the recording USB cradle when the access lamp is blinking. The data being transferred may be destroyed.
- Use of your Network Walkman with a USB hub or a USB extension cable is not guaranteed. Always connect your Network Walkman to the computer directly using the dedicated USB cable.
- Some USB devices connected to the computer may interfere with the proper operation of your Network Walkman.
- The control buttons on your Network Walkman are all disabled while it is connected to a computer. If you attach your Network Walkman to the USB cradle or the recording USB cradle connected to the computer during playback, playback stops and “CONNECT” appears in the Network Walkman display.
- You can display the data stored in the built-in flash memory using Windows Explorer when your Network Walkman is connected to the computer. However, in case “Memory Stick” is inserted into the slot, the data stored in “Memory Stick” will be displayed.

5 Transfer audio files to your Network Walkman.

For information on transferring audio files to the built-in flash memory or MagicGate-compatible “Memory Stick Duo” (not supplied), refer to the separate manual “SonicStage Operating Instructions.”

Tip

For information on transferring audio files back to the computer, refer to the manual “SonicStage Operating Instructions” or online Help for the SonicStage software.

Note on playing songs with a limited playing period (Timeout contents)

Some songs distributed via the Internet (EMD service) have a limited playing period.

If you try to play an expired song, “EXPIRED” blinks and the next song will be played after a moment.

In addition, an expired song cannot be played using the SonicStage software or transferred to your Network Walkman. Delete any songs as needed.

Note on playing songs with a limited playing count

Your Network Walkman does not support contents with a limited playing count.

When you try to play a song with a limited playing count, “EXPIRED” will be displayed and the song will not be played.

Recording onto your Network Walkman

— Only for NW-MS77DR

You can record songs onto your Network Walkman from a digital audio device (e.g. CD player) using an optical digital cable (supplied), or an analog audio device (e.g. cassette tape player) using a connecting cord (not supplied), not via computer.

Note

Recording from a digital audio device using an optical digital cable is possible only with a sound source (CD, MD, etc.) of 44.1 kHz sampling frequency. When recording a sound source of another sampling frequency, use analog recording, connecting the recording cable to the LINE OUT jack, etc.

1 Prepare the device to which you record songs.

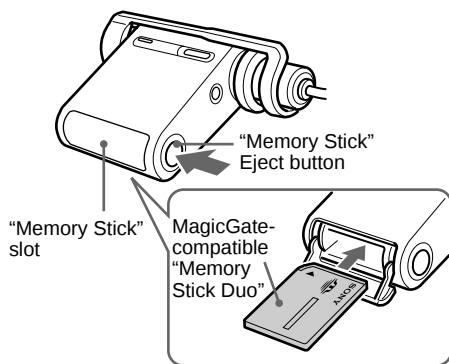
When recording to the built-in flash memory

Remove MagicGate-compatible “Memory Stick Duo” (not supplied) from the Network Walkman. (If inserted, songs will be recorded to the “Memory Stick Duo”.) For removing the “Memory Stick Duo”, refer to page 24.

When recording to a “Memory Stick”

Insert MagicGate-compatible “Memory Stick Duo” (not supplied) into the Network Walkman.

 is indicated in the display when a “Memory Stick” is inserted.



Notes

- When using a “Memory Stick”, release the erasure prevention switch (page 46) on the “Memory Stick” if it set to “LOCK.”
- Be sure to insert the “Memory Stick” fully until it clicks.
- Do not label “Memory Stick Duo” to prevent sticking it in the slot.

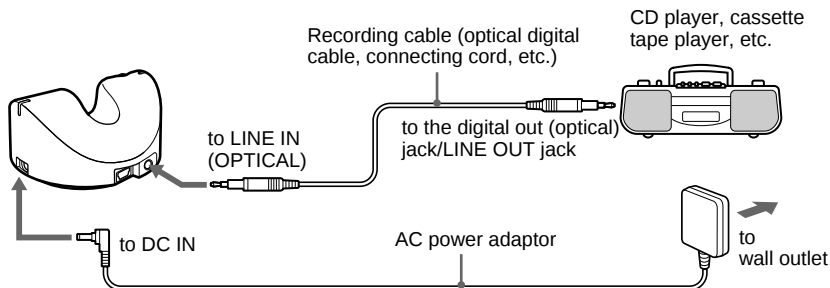
2 Connect the Network Walkman to a digital/analog audio device.

① Connect the AC power adaptor.

Connect the supplied AC power adaptor to the DC IN jack on the recording USB cradle, and then to a wall outlet.

② Connect the recording USB cradle and the digital/analog audio device.

Connect the recording cable to the LINE IN (OPTICAL) jack on the recording USB cradle, and then to the digital out (optical) jack* on the digital audio device.



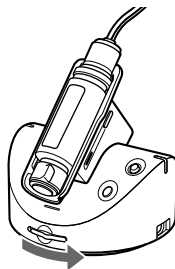
* When connecting to an analog audio device, connect to the LINE OUT jack, etc.

Note

You cannot charge the battery while recording. Be sure to charge before recording.

③ Set the record select switch.

Set the record select switch to "LINE IN."

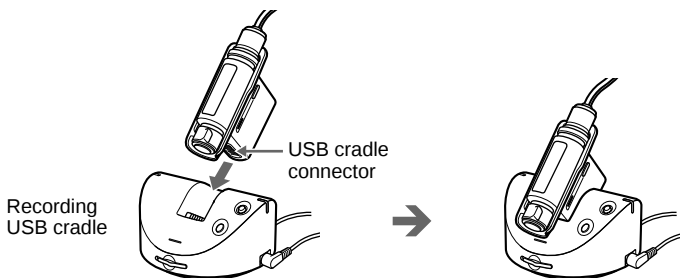


Record select switch

- ④ Attach the Network Walkman to the recording USB cradle.

Note

Be sure to attach your Network Walkman in the direction of the arrow as illustrated below.



3 Start recording.

When synchro-recording is cancelled

- ① Pause the playback of the CD, etc., that you want to record.
- ② Press the REC/PAUSE button on the recording USB cradle.

The recording LED on the recording USB cradle lights up, and recording starts. The REC icon is displayed on the left side of the display, followed by the track name*, displayed to the right. The remaining recordable time will then be displayed (Remaining counter).

- ③ Start playback of the CD, etc.

When synchro-recording is activated

- ① Press the REC/PAUSE button on the recording USB cradle.

The recording LED on the recording USB cradle flashes, and recording enters standby mode. The REC icon, the icon which indicates synchro-recording, and the recording bit rate and remaining recordable time flash.

- ② Start playback of the CD, etc.

After playback starts, the recording LED on the recording USB cradle lights up, and recording starts. In the display, after the track name* is displayed, the remaining recordable time will be displayed (Remaining counter).

* The track name is displayed as "GxxxTxxx" (the group number and the track name).

To cancel recording

Press the STOP button on the recording cradle.

To pause recording

Press the REC/PAUSE button on the recording USB cradle. The recording LED flashes while paused. Press the REC/PAUSE button again to continue recording.

💡 Tip

To activate/cancel synchro-recording, refer to "Changing the setting of synchro-recording" on page 38.

Notes

- Synchro-recording is available only when recording from a digital audio device using an optical digital cable.
- If you pause recording, the remaining part of the current track from that point will be recorded as a new track, and the track number will be renewed.

Listening to music with your Network Walkman

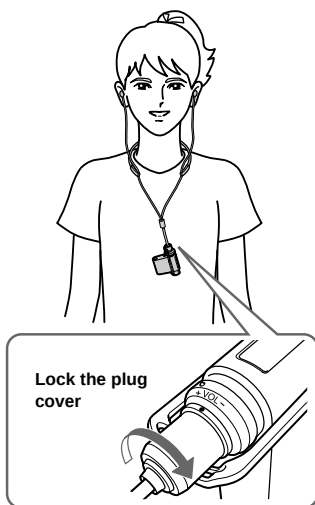
Charge the battery (page 11) and transfer/record (only for NW-MS77DR) audio files to the built-in flash memory or MagicGate-compatible "Memory Stick Duo" (not supplied) (page 15 to 21) prior to listening to music.

Note

Be sure to remove your Network Walkman from the USB cradle or the recording USB cradle when operating your Network Walkman.

1 Put on the headphones.

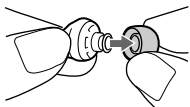
Make sure that the plug cover is locked to your Network Walkman first. You can carry your Network Walkman with the supplied headphones and neck strap. When you use your Network Walkman while putting it in a pocket or bag, use the supplied extension cord. (Page 25 to 26)



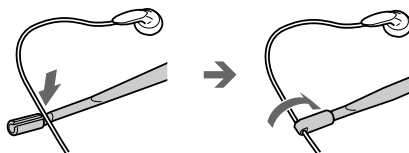
** NW-MS90D only (Non-US model) **

How to install the earbuds correctly

If the earbuds do not fit your ears correctly, low bass sound may not be heard. To enjoy better sound quality, adjust the earbuds position to sit on your ears comfortably or push them into the inside of your ears so that they fit your ears snugly. At purchase, M size earbuds are installed. If the earbuds do not fit your ears, try one of the other supplied sizes, S or L.

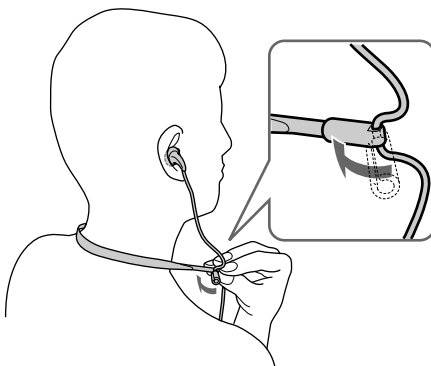


- ① Fold one end of the supplied neck strap as illustrated to clinch the headphone cord.



Make sure that the supplied neck strap's ends are secured to the headphone cord so it does not come loose.

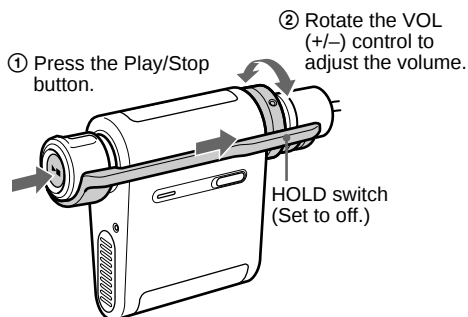
- ② Place the neck strap around your neck as illustrated and fold the other end of the neck strap to clinch the headphone cord.



Note

When you adjust the length of headphone cord, hold the end of the neck strap.

2 Start playback.



Tip

If your Network Walkman is not operated for 10 seconds while in stop mode, the display automatically turns off. When scrolling track titles, etc., the display turns off after scrolling is finished.

When the normal playback mode is selected, playback stops automatically after the last song is played*.

* When a "Memory Stick" (not supplied) is inserted into the slot, songs stored in the "Memory Stick" will be played after the last song in the built-in flash memory is played.

If playback does not start

Make sure that the HOLD switch is set to off (page 32).

To stop playback

Press the Play/Stop button.

To adjust the volume

The volume can be set in the PRESET and MANUAL mode (page 35 to 36).

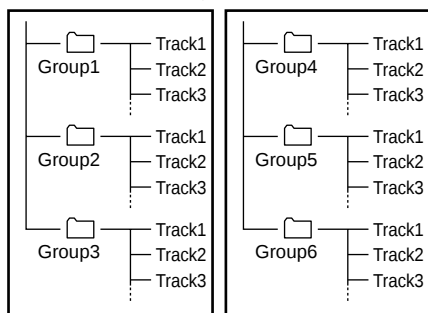
What is the Group function?

The Group function enables you to select favorite music conveniently on your Network Walkman. You can transfer or play songs by album or artist using the Group function.

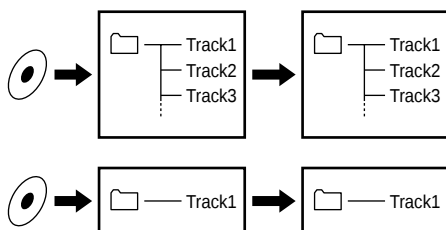
Note that the group information may be erased or damaged if a song that is transferred to "Memory Stick" using the Group function is edited with a device that does not support the function.

Built-in flash memory

"Memory Stick"



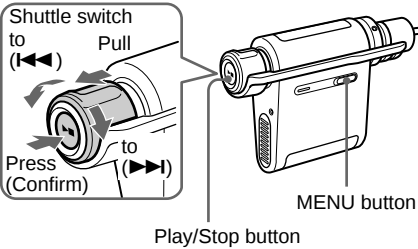
- Playback starts in order of the songs in the built-in flash memory, and then data in the "Memory Stick".
- The track number is the order of songs in each group.
- You can switch between Track Name mode and Group mode by pulling the Shuttle switch.
- In the Group mode, group names are displayed instead of track names. In addition, any shift operations, such as Skip or Repeat, are performed by group.



Transferring by group

The audio files transferred to the SonicStage software are always grouped when transferred to the built-in flash memory or a "Memory Stick".

On other operations



 Tip

You can switch to the Group mode by pulling the Shuttle switch.

To	Shuttle switch operation
Skip to the beginning of the next track * ¹	Rotate the Shuttle switch clockwise (>>>I)
Skip to the beginning of the current track * ¹	Rotate the Shuttle switch counterclockwise (I<<<)
Skip to the beginning of the next group * ²	Pull and rotate the Shuttle switch clockwise (>>>I)
Skip to the beginning of the previous group * ²	Pull and rotate the Shuttle switch counterclockwise (I<<<)
Fast-forward * ³	Rotate the Shuttle switch clockwise (>>>I) and hold it.
Fast-rewind * ³	Rotate the Shuttle switch counterclockwise (I<<<) and hold it.

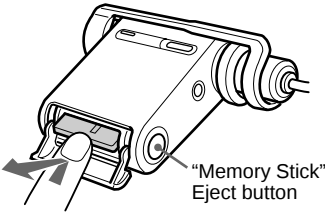
*¹ Rotating and holding of the Shuttle switch during stop mode allows you to skip to the beginning of the next (current and previous) track continuously.

*² Pulling, rotating and holding of the Shuttle switch during stop mode allows you to skip to the beginning of the next (current and previous) group continuously.

*³ Fast-forward and fast-rewind speed become faster if the operation is continued for five seconds.

To remove “Memory Stick” (not supplied)

Press the “Memory Stick” Eject button and open the “Memory Stick” slot. Push the “Memory Stick” slightly and release it.

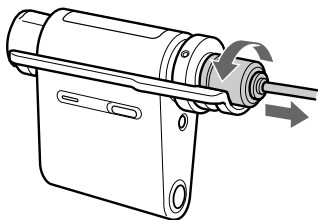


Give a slight push once.

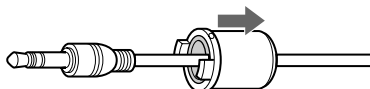
Removing the headphones from your Network Walkman

This procedure is required when you use the supplied extension headphone cord.

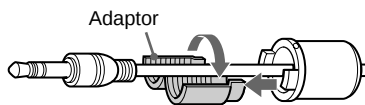
- ① Rotate the plug cover counterclockwise to disconnect it from your Network Walkman.



- ② Pull the plug cover from the plug in the direction of the arrow.

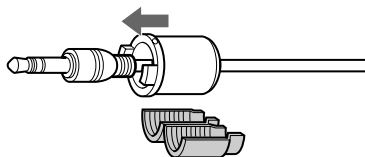


- ③ Remove the adaptor.



If the adaptor does not come out, push it out with a ballpoint pen, etc.

- ④ Remove the plug cover.



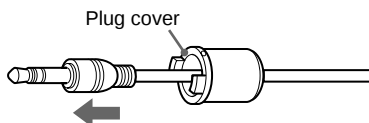
Notes

- The plug cover is to be used with the supplied headphones and extension cord.
- Keep the plug cover and adaptor in a safe place when not in use to avoid losing them.

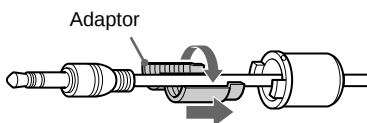
Attaching the plug cover to the supplied extension headphone cord

The extension headphone cord is convenient when your Network Walkman is in your pocket or carrying bag.

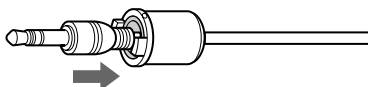
- ① Slip the headphone plug of the extension cord into the plug cover.



- ② Attach the adaptor to the headphone cord, and slide the adaptor into the plug cover completely.

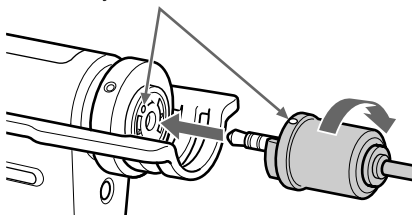


- ③ Slide the headphone plug into the plug cover completely.



- ④ Connect the headphone plug together with the plug cover to the headphone jack.

Connect the headphone plug to the headphone jack of your Network Walkman with the (○) marks aligned with one another, and rotate the plug cover clockwise until it clicks into place. If the headphone plug is not fully connected to the headphone jack, the plug cover may come loose.



- ⑤ Connect the extension cord to the headphone.

Note

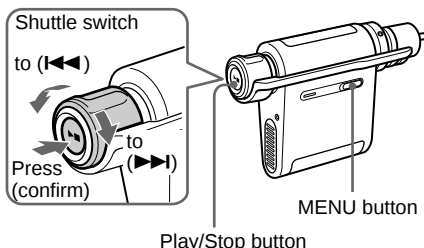
Do not pull the headphone cord when you connect/disconnect the headphones to/from your Network Walkman or attach/remove the plug cover to/from the headphone cord. It may cause the wire to break.

Playback mode

You can play an audio file in five ways: all repeat, single repeat, shuffle repeat, group repeat, and group shuffle repeat.

Playback mode	Screen Icon*	LCD display
Normal play	none	NORMAL
All tracks repeatedly		All Repeat
Current track repeatedly		1 Repeat
All tracks repeatedly in random order		Shuf Rep
Current group repeatedly		GP Rep
All groups repeatedly in random order		GP Shuf Rep

* The screen icon will be displayed after step 3.

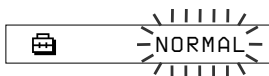


Play/Stop button

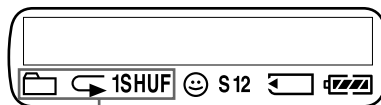
- 1 Press the MENU button.
The menu screen is displayed.



- 2 Rotate the Shuttle switch to select "PLAYMODE >" and press the Play/Stop button to confirm.



- 3 Rotate the Shuttle switch to select a desired play mode and press the Play/Stop button to confirm.
The icon of the selected play mode is displayed.



Play mode icon.

- 4 Press the MENU button.
The display returns to the normal screen.

To cancel the Menu mode

Select [RETURN] in the menu screen or press the MENU button.

To return to the normal play mode

Select "NORMAL" in step 3.

Notes

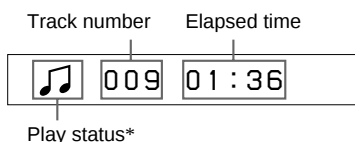
- The display automatically returns to the normal playback screen if you do not operate any button for 60 seconds.
- When there is no audio files in the built-in flash memory or "Memory Stick", you cannot set any playback mode.
- When a "Memory Stick" is ejected or an audio file is transferred from/to SonicStage, the selected desired mode will be cancelled.

Changing the display mode

You can view information such as track numbers or titles in the display while music is played or stopped. Change the display mode by operating the Shuttle switch in the Menu mode.

- **Lap Time: Elapsed time display mode**

The following will be displayed after a music title and artist name are displayed.



* The media icon (audio files storage medium) displays for three seconds when music playback starts.

Built-in flash memory:

“Memory Stick”:

Play: Displays and alternately.

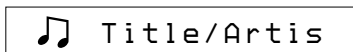
Stop: Displays a media icon.

Search track: Displays or .

Fast-forward/Fast-rewind: Displays or .

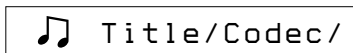
- **Title: Title display mode**

The track title and the artist name are displayed. When the music title includes more than 12 characters, it will be automatically scrolled.

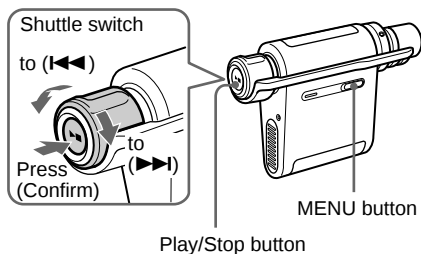


- **Track info: Track information display mode**

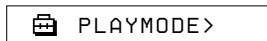
The track title, CODEC, and bit rate are displayed. When the information includes more than 12 characters, it will be automatically scrolled.



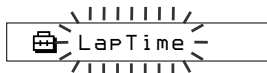
While searching, fast-forwarding, or fast-rewinding a track, the current playing position is displayed.



- 1 Press the MENU button.
The menu screen is displayed.



- 2 Rotate the Shuttle switch to select “DISPLAY >” and press the Play/Stop button to confirm.
The selected display mode blinks.



- 3 Rotate the Shuttle switch to select a desired display mode and press the Play/Stop button to confirm.
The display switches to the selected display mode.



- 4 Press the MENU button.
The display returns to the normal screen.

To cancel the menu mode

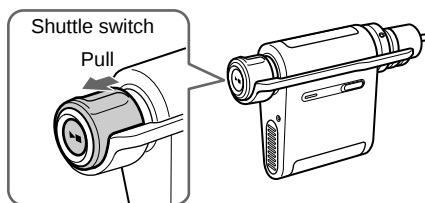
Select [RETURN] in the menu screen or press the MENU button.

Note

The display automatically returns to the normal playback screen if you do not press any buttons for 60 seconds.

Selecting the group display mode

For any menu mode, you can select the group display by pulling the Shuttle switch.

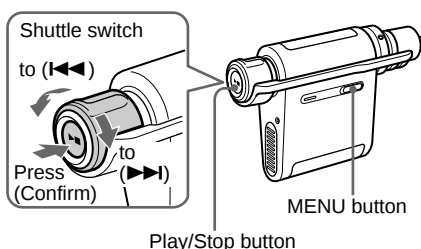


Displaying the remaining recordable time

— Only for NW-MS77DR

You can view the remaining recordable time in the built-in flash memory or a “Memory Stick Duo” (not supplied). (The remaining recordable time is displayed only when the music is stopped; you cannot view during playback.)

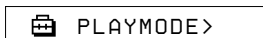
When a “Memory Stick” is inserted in your Network Walkman, you can view the remaining recordable time in the “Memory Stick”, and when not, you can view that of the built-in flash memory.



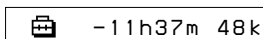
💡 Tip

The remaining recordable time differs depending on the recording bit rate (48 kbps/64 kbps). For details on the recording bit rate, refer to “Selecting the bit rate” on page 39.

- 1 Press the MENU button.
The menu screen is displayed.



- 2 Rotate the Shuttle switch to select “REC REMAIN >” and press the Play/Stop button to confirm.
The remaining recordable time is displayed.



- 3

After viewing the remaining recordable time, press the Play/Stop button.
- 4

Press the MENU button.
The display returns to the normal screen.

To cancel the menu mode

Select [RETURN] in the menu screen or press the MENU button.

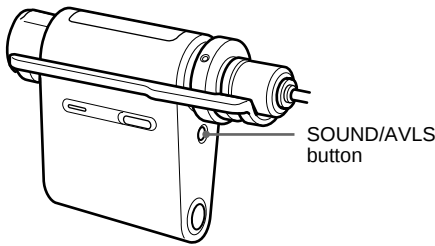
Adjusting treble and bass (Digital sound preset)

You can adjust the treble and bass. You can preset two settings, which can be selected during playback.

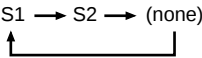
Selecting the Sound quality

Default settings

Sound quality	SOUND 1 (S1)	SOUND 2 (S2)	SOUND OFF (NORMAL SOUND)
Bass	+1	+3	±0
Treble	±0	±0	±0



Press the SOUND/AVLS button repeatedly to select “S1” or “S2.”



To return to the normal Sound quality

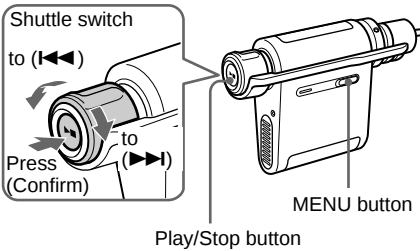
Select “SOUND OFF.”

Adjusting the sound quality

You can adjust the sound quality of bass and treble parts.

Sound quality	Emphasis level
Bass	-4 to +3
Treble	-4 to +3

You can preset desired sound quality settings as “SOUND 1” and “SOUND 2.” While playing music, you can assign a preset sound quality to music.



- Press the MENU button
The display returns to the normal screen.

To adjust the “SOUND 2” setting

Select “SOUND :2 >” in ❶ of step 3.

To cancel the menu mode

Select [RETURN] in the menu screen or press the MENU button.

- Press the MENU button.
The menu screen is displayed.



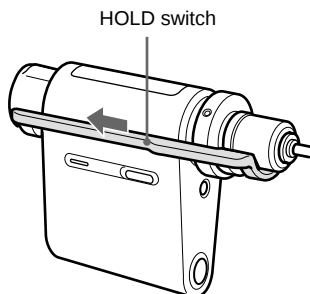
- Rotate the Shuttle switch to select “SOUND >” and press the Play/Stop button to confirm.



- Set up the tone quality of “SOUND 1.”
 - Rotate the Shuttle switch to select “SOUND :1 >” and press the Play/Stop button to confirm.
 - After “SOUND 1:B >” appears, press the Play/Stop button once.
 - Rotate the Shuttle switch to adjust the emphasis level of bass sounds and press the Play/Stop button to confirm.
 - After “SOUND 1:T >” appears, press the Play/Stop button once.
 - Rotate the Shuttle switch to adjust the emphasis level of treble sounds and press the Play/Stop button to confirm.

Locking the controls (HOLD)

You can protect your Network Walkman against accidental operation by using the HOLD function when carrying it.



Slide the HOLD switch in the direction of the arrow.

All operation buttons are disabled.

If you press buttons while the HOLD switch is on, "HOLD" blinks in the display.

To release the HOLD function

Slide the HOLD switch in the opposite direction of the arrow.

Storing data other than audio files

You can transfer data from the hard disk of your computer to the built-in flash memory or "Memory Stick" using Windows Explorer.

Either the built-in flash memory or "Memory Stick" is displayed in Windows Explorer as an external drive (for example: as the D drive).

When "Memory Stick" is inserted into the slot of your Network Walkman, only the data stored in "Memory Stick" will be displayed. If you want to display the data stored in the built-in flash memory, remove "Memory Stick" from the slot of your Network Walkman.

Note

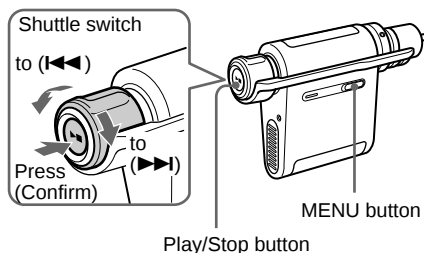
You cannot operate the SonicStage software while operating the data storage function of your Network Walkman to use files stored in the built-in flash memory or "Memory Stick". The error message "Cannot access the Device/media." will be displayed when you try to operate both of them simultaneously.

Adjusting the time setting of your Network Walkman to a computer's built-in clock

If the function is set to "ON," the time setting of your Network Walkman is automatically adjusted to the computer's built-in clock when your Network Walkman is connected to it (the SonicStage software must be started). "ON" is selected by default.

You cannot play a song with a limited playing period without the time setting of your Network Walkman. Be sure to adjust the time setting.

To set the date and time on your Network Walkman, refer to "Adjusting the current time setting (DATE-TIME)" on page 34.



Changing the setting to "OFF"

The time setting of your Network Walkman does not change even when your Network Walkman is connected to a computer.

- 1 Press the MENU button.
The menu screen is displayed.



- 2 Rotate the Shuttle switch to select "PC CLK:" and press the Play/Stop button to confirm.



- 3 Rotate the Shuttle switch to select "OFF" and press the Play/Stop button to confirm.
- 4 Press the MENU button.
The display returns to the normal screen.

To change the setting to "ON"

Select "ON" in step 3.

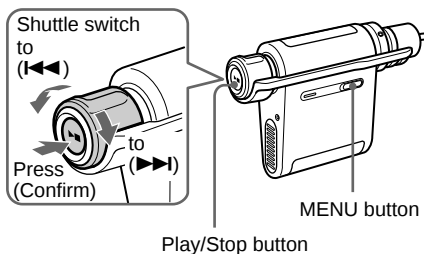
To cancel the menu mode

Select [RETURN] in the menu screen or press the MENU button.

Adjusting the current time setting (DATE-TIME)

You can set and display the current time.

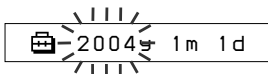
You can also adjust the time setting of your Network Walkman to a computer's built-in clock by connecting your Network Walkman to the computer. (Page 33)



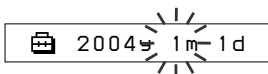
- 1 Press the MENU button.
The menu screen is displayed.



- 2 Rotate the Shuttle switch to select "DATE-TIME" and press the Play/Stop button to confirm.
The "year" digit blinks.

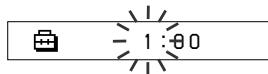


- 3 Rotate the Shuttle switch to adjust the "year" setting and press the Play/Stop button to confirm.
The "month" digit blinks.



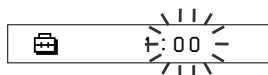
- 4 As you did in step 3, adjust the settings for "month" and "date."

After rotating the Shuttle switch to adjust the "date" setting, press the Play/Stop button to confirm, the display switches to the time setting screen.



- 5 Rotate the Shuttle switch to adjust the "hour" setting and press the Play/Stop button to confirm.

The "minute" digit blinks.



- 6 As you did in step 5, adjust the settings for "minute."

After rotating the Shuttle switch to adjust the "minute" setting, press the Play/Stop button to confirm.

- 7 Press the MENU button.
The display returns to the normal screen.

To cancel the menu mode

Select [RETURN] in the menu screen or press the MENU button.

To display the current time

Press the MENU button and hold it.

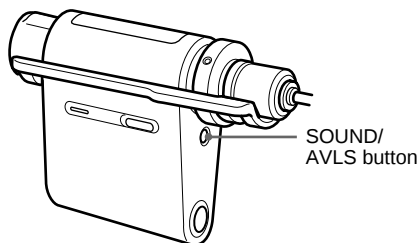
You can display the current time while pressing the button.

Notes

- If the unit is not used for a long time, your settings of the date and time may be reset.
- If the current time is not set, the display for the date and time will be "-- --."
- If PC CLK is set to "ON" (page 33), the time setting of your Network Walkman is automatically adjusted to a computer's built-in clock when your Network Walkman is connected to the computer.
- Depending on the shipping area, the time display format of the unit is set to a 12-hour display or a 24-hour display.
You cannot switch between a 12-hour display and a 24-hour display in the unit.
A 24-hour display is shown in this manual.

Limiting the volume (AVLS)

You can set AVLS (Automatic Volume Limiter System) to limit the maximum volume to prevent auditory disturbance or distraction. With AVLS, you can listen to music at a comfortable volume level.



Press and hold the SOUND/AVLS button for half a second.

The ☺ (AVLS) indication is displayed. The volume is kept at a moderate level.

To cancel AVLS

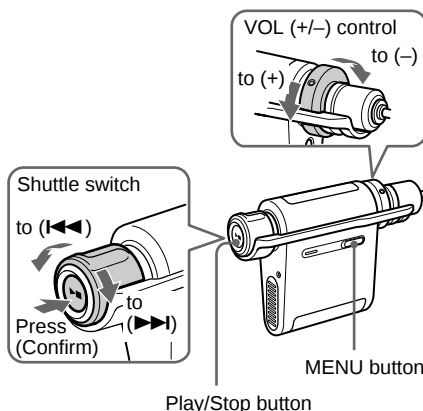
Press and hold the SOUND/AVLS button until the ☺ indication goes out.

Setting the volume using the preset volume function

There are two modes to adjust the volume level.

Manual mode: Rotate the VOL (+/-) control to adjust the volume level in the range of 0 to 31.

Preset mode: Rotate the VOL (+/-) control to set the volume level to any of three preset levels: LO, MID, or HI.



Setting a volume level of the preset mode

- 1 Press the MENU button.
The menu screen is displayed.

 PLAYMODE>

- 2 Rotate the Shuttle switch to select "VOL: MAN."

 VOL : MAN

Setting the volume using the
preset volume function (continued)

3 Press the Play/Stop button to confirm.
“MAN” blinks.

4 Rotate the Shuttle switch to select
“SET >.”



5 Press the Play/Stop button to confirm.
“VOL LO xx”* blinks.
* “xx” stands for numeric values of the
volume level.



6 Set volume levels of three preset levels:
LO, MID, or HI.

- ① Rotate the VOL (+/-) control to set the
volume level of the LO preset.
- ② Rotate the Shuttle switch to select “VOL
MID xx,” and then rotate the VOL (+/-)
control to set the volume level of the
MID preset.
- ③ Rotate the Shuttle switch to select “VOL
HI xx,” and then rotate the VOL (+/-)
control to set the volume level of the HI
preset.

7 Press the Play/Stop button to confirm.

8 Press the MENU button.
The display returns to the normal screen.
With these settings, you can adjust the
volume level to any of three preset levels:
LO, MID, or HI.

To cancel the menu mode

Select [RETURN] in the menu screen or press the MENU
button.

Note

If AVLS (page 35) is set, the actual volume may be lower
than the settings.

Switching to the manual
mode

1 Press the MENU button.
The menu screen is displayed.

2 Rotate the Shuttle switch to select
“VOL: SET.”



3 Press the Play/Stop button to confirm.
“SET >” blinks.

4 Rotate the Shuttle switch to select
“MAN.”

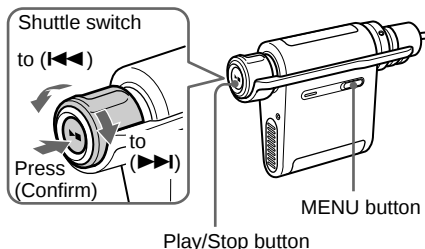


5 Press the Play/Stop button to confirm.

6 Press the MENU button.
The display returns to the normal screen.
With this setting, you can adjust the volume
level by rotating the volume control.

Turning off the beep sound (BEEP)

You can turn off the beep sounds of your Network Walkman.



- 1 Press the MENU button.
The menu screen is displayed.



- 2 Rotate the Shuttle switch to select "BEEP:" and press the Play/Stop button to confirm.
"ON" blinks.



- 3 Rotate the Shuttle switch to select "OFF" and press the Play/Stop button to confirm.



- 4 Press the MENU button.
The display returns to the normal screen.

To change the setting to "ON"

Select "ON" in step 3.

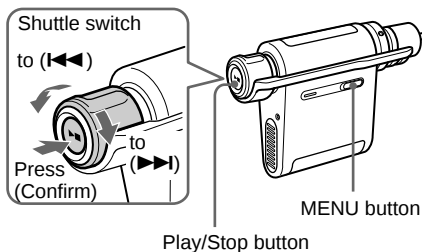
To cancel the menu mode

Select [RETURN] in the menu screen, or press the MENU button.

Changing the backlight setting

You can select ON or OFF.

Menu	Backlight mode
OFF	Always off
ON	Turns on for three seconds after each operation (or until scrolling is complete)



To set "ON"

- 1 Press the MENU button.
The menu screen is displayed.



- 2 Rotate the Shuttle switch to select "LIGHT:" and press the Play/Stop button to confirm.
"OFF" blinks.



- 3 Rotate the Shuttle switch to select "ON" and press the Play/Stop button to confirm.



- 4 Press the MENU button
The display returns to the normal screen.

To change the setting to "OFF"

Select "LIGHT: OFF" in step 3.

To cancel the menu mode

Select [RETURN] in the menu screen or press the MENU button.

Changing the setting of synchro-recording

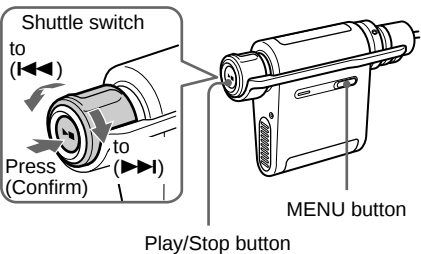
— Only for NW-MS77DR

You can select the setting for synchro-recording. If you set synchro-recording to “ON,” recording will start automatically when a sound (signal) from the recording source (CD player, etc.) is detected (only when recording from the digital audio device using the optical digital cable). If a silent portion of the recording source is detected, recording will pause automatically. When sound is detected again, recording restarts.

You can select ON or OFF

Menu	Setting contents
ON	Activates synchro-recording
OFF	Cancels synchro-recording

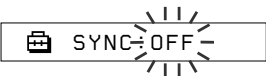
The default setting is OFF.



- 1 Press the MENU button.
The menu screen is displayed.



- 2 Rotate the Shuttle switch to select “SYNC:” and press the Play/Stop button to confirm.
“OFF” flashes.



- 3 Rotate the Shuttle switch to select “ON” and press the Play/Stop button to confirm.



- 4 Press the MENU button.
The display returns to the normal screen.

To set to OFF

Select “OFF” in step 3.

To cancel the menu mode

Select [RETURN] in the menu screen or press the MENU button.

💡 Tip

If there is a silent portion in the recording source for a few seconds, recording pauses automatically. When the sound is detected again, recording restarts. If there is a silent portion for more than 5 minutes, recording stops automatically.

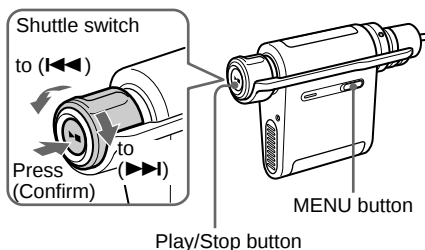
Notes

- Synchro-recording cannot be used when recording from an analog audio device.
- During synchro-recording, you cannot pause or continue recording manually.
- Do not change the synchro-recording setting while recording. Recording may not complete correctly.
- Even if there is a silent portion in the recording source, recording may not pause automatically if noise is present in the recording source.
- If there is a silent portion for a few seconds in a song during synchro-recording, a new track is created from the point where the sound is detected again.

Selecting the bit rate

— Only for NW-MS77DR

You can select the recording bit rate (48 kbps or 64 kbps) using the ATRAC3plus format. The higher the bit rate, the better the sound quality. However, audio data increases in size.



- 1 Press the MENU button.
The menu screen is displayed.



PLAYMODE >

- 2 Rotate the Shuttle switch to select "BITRATE:" and press the Play/Stop button to confirm.
"OFF" flashes.



BITRATE: 48k

- 3 Rotate the Shuttle switch to select the desired bit rate and press the Play/Stop button to confirm.



BITRATE: 64k

- 4 Press the MENU button.
The display returns to the normal screen.

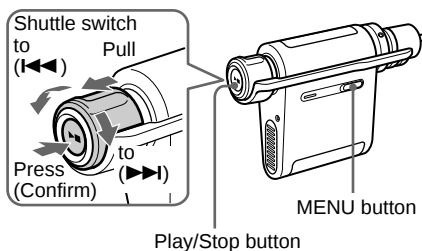
To cancel the menu mode

Select [RETURN] in the menu screen or press the MENU button.

Editing the track name and group name (EDIT NAME)

— Only for NW-MS77DR

You can edit the recorded track/group name. You can edit the track/group name only when the music is stopped, but not during playback. You cannot edit the artist name.



- 1 Press the MENU button.
The menu screen is displayed.



PLAYMODE >

- 2 Rotate the Shuttle switch to select "EDIT NAME >" and press the Play/Stop button to confirm.



G001T001

- 3 Select the desired track or group which you want to edit.

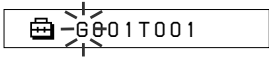
When editing the track name

Rotate the Shuttle switch to select the desired track name, and press the Play/Stop button to confirm.

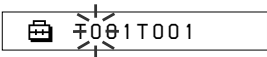
When editing the group name

Pull out the Shuttle switch to display the group name, and then rotate it to select the desired group name, and press the Play/Stop button to confirm.

When the track/group name is selected, the first character/number/symbol flashes, and you can start editing.



- 4 Edit the track/group title.
- ① If you selected a group in step 3, push in the Shuttle switch.
- ② Rotate the Shuttle switch to select the desired character/number/symbol, and push the Play/Stop button.
- The selected character/number/symbol is confirmed and the next character flashes.



Tip

You can change the character/number/symbol type by rotating and holding the Shuttle switch. Release the Shuttle switch at the desired type. Rotate to select your desired character/number/symbol.

- ③ After editing the title by repeating the step ②, press and hold the Play/Stop button for a few seconds to confirm.
- The edited title is stored.



- 5 Press the MENU button.
- The display returns to the normal screen.

Other editing operations are as follows:

To	Operation
Move the cursor	Pull and rotate the Shuttle switch
Insert a blank space before the cursor	Select the last symbol
Erase a character above the cursor	Press the SOUND/AVLS button

To cancel the menu mode

Select [RETURN] in the menu screen or press the MENU button.

To cancel editing

Press the MENU button.

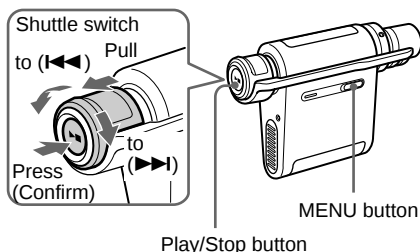
Notes

- You can edit only the track/group names contained in audio data recorded using the recording USB cradle. If you select audio data transferred with the SonicStage software in your computer, "CANNOT EDIT" appears, and you cannot edit. Even if you record audio data using the recording USB cradle, you cannot edit the group/track names on your Network Walkman if they have already been edited using SonicStage software.
- The character type which you can input are alphabetical letters (A-Z, a-z), numbers (0-9) and symbols (" () , _ ' - blank space).
- The maximum number of characters that you can input is 20.

Erasing audio file (ERASE)

You can erase a song stored in the built-in flash memory or “Memory Stick Duo” (not supplied) by track or group (album). Prior to erasing a song, verify the song to be erased.

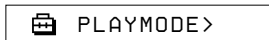
If songs are erased, the SonicStage software recognizes them as songs to be transferred back to the computer when your Network Walkman is connected to the computer that you used for transferring. Therefore, the remaining transfer count increases automatically.



Tip

You can switch to the Group mode by pulling and rotating the Shuttle switch.

- 1 Press the MENU button.
The menu screen is displayed.



- 2 Rotate the Shuttle switch to select “ERASE” and press the Play/Stop button to confirm.



You cannot erase audio file while playing music.

- 3 Rotate the Shuttle switch to select the title you want to erase and press the Play/Stop button to confirm.



If you do not operate it for 10 seconds, the erasing operation will be cancelled automatically.

- 4 Rotate the Shuttle switch to select “Y.”



- 5 Press the Play/Stop button.
“Really?” is displayed.

- 6 Press the Play/Stop button.
After “ERASING” is displayed, the song will be erased. When the song is erased, “COMPLETE” is displayed and the display returns to the indication in step 2.

- 7 Press the MENU button
The display returns to the normal screen.

To cancel the menu mode

Select [RETURN] in the menu screen or press the MENU button.

To cancel erasing a song

Select “N” in step 4.

To erase a song by group

Pull and rotate the Shuttle switch to select the group you want to erase in step 3.

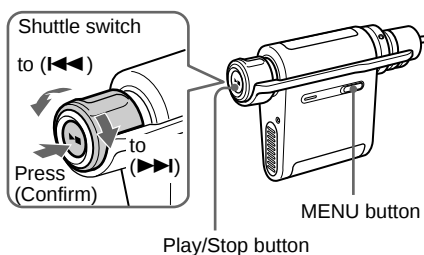
Notes

- You cannot erase a song while playing music. (“ERASE” will not be displayed in the menu screen.)
- You cannot erase audio files stored in a “Memory Stick” when the erasure prevention switch of the “Memory Stick” is set to “LOCK.” (“MS LOCKED” will be displayed.)
- Do not remove “Memory Stick Duo” while “ERASING” is displayed.

Regrouping songs (REGROUP)

The song group function may be disabled* when a song has been deleted from or added to the built-in flash memory or “Memory Stick Duo” by operating the computer in which the SonicStage software is not installed (page 15). In such a case, you may enable the group function by regrouping audio file. When you need to edit audio file, make sure that you connect your Network Walkman to the computer and use the SonicStage software.

* The order of songs will not be changed even if the song group function is disabled.



- 1 Press the MENU button.
The menu screen is displayed.

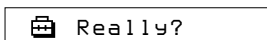


- 2 Rotate the Shuttle switch to select “REGROUP” and press the Play/Stop button to confirm.



You cannot regroup audio file while playing music.

- 3 Rotate the Shuttle switch to select “Y” and press the Play/Stop button to confirm.
“Really?” is displayed.



- 4 Press the Play/Stop button.
Regrouping starts and “REGROUPING” blinks. When regrouping audio file is complete, “COMPLETE” is displayed and the display returns to the indication in step 2.

- 5 Press the MENU button.
The display returns to the normal screen.

To cancel the menu mode

Select [RETURN] in the menu screen or press the MENU button.

Notes

- You cannot regroup songs while playing music. (“REGROUP” will not be displayed in the menu screen.)
- Do not remove the “Memory Stick” while “REGROUP” is displayed.

Tip

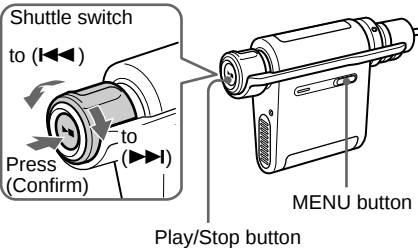
In some cases, you may not be able to restore the former grouping. When you need to edit audio file, connect your Network Walkman to the computer and use the SonicStage software.

Charging the battery with a USB connection (USB CHARGE)

The setting enables you to charge your Network Walkman by connecting your Network Walkman to the computer using the dedicated USB cable. You can charge the battery without connecting the AC power adaptor.

Tip

The USB CHARGE function is useful when you want to charge your Network Walkman away from your home. Normally, charge the battery with the AC power adaptor.



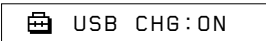
- 1 Press the MENU button.
The menu screen is displayed.



- 2 Rotate the Shuttle switch to select "USB CHG:." and press the Play/Stop button to confirm.
"OFF" blinks.



- 3 Rotate the Shuttle switch to select "ON" and press the Play/Stop button to confirm.



- 4 Press the MENU button.
The display returns to the normal screen.

- 5 Connect your Network Walkman to the computer using the dedicated USB cable.

Refer to "Transferring audio files from the computer to your Network Walkman: step 4" on page 16.
Charging starts.

To change the setting to "OFF"

Select "OFF" in step 3.

To cancel the menu mode

Select [RETURN] in the menu screen or press the MENU button.

Note

Some computers do not supply sufficient power through USB ports. When the power supply is insufficient, an error message will be displayed on the computer screen and the recognition of your Network Walkman is disabled. In such a case, disconnect your Network Walkman from the computer and set the USB CHARGE function to OFF.

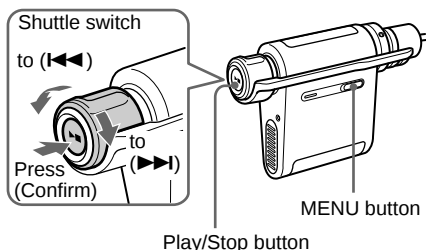
Tip

Normally, charge the battery with the AC power adaptor.

Formatting memory (FORMAT)

You can use your Network Walkman to format the built-in flash memory or “Memory Stick Duo” (not supplied).

If memory is formatted, all data previously stored in the memory will be erased. Be sure to verify the data stored in the memory prior to formatting. (If a “Memory Stick” is formatted, data recorded using other devices will be also erased.) A commercially available “Memory Stick” is already formatted at the factory. You do not need to format it prior to using.



Note

You cannot use a “Memory Stick” that has been formatted using any device other than your Network Walkman or supplied SonicStage software. For details, refer to information on page 9.

- 1 Press the MENU button.
The menu screen is displayed.



- 2 Rotate the Shuttle switch to select “FORMAT” and press the Play/Stop button to confirm.



You cannot format memory while playing music.

When “Memory Stick” is inserted into the slot

- ① Rotate the Shuttle switch to select “IN” (Built-in flash memory) or “MS” (“Memory Stick”).



- ② Press the Play/Stop button to confirm.

- 3 Rotate the Shuttle switch to select “Y” and press the Play/Stop button to confirm.
“Really?” is displayed.

- 4 Press the Play/Stop button.
“FORMATTING” blinks and formatting starts.
When formatting is complete, “COMPLETE” is displayed and the display returns to the indication in step 2.

- 5 Press the MENU button.
The display returns to the normal screen.

To cancel the menu mode

Select [RETURN] in the menu screen or press the MENU button.

To cancel formatting

Select “N” in step 3.

Notes

- You cannot format memory while playing music. (“FORMAT” will not be displayed in the menu screen.)
- You cannot format memory when the erasure prevention switch of “Memory Stick” is set to “LOCK.” (“MS LOCKED” will be displayed.)
- Do not remove “Memory Stick Duo” while “FORMATTING” is displayed.

Tip

If audio files are erased by formatting, the SonicStage software recognizes them as audio files to be transferred back to the computer when your Network Walkman is connected to the computer that you used for transferring. Therefore, the remaining transfer count increases automatically.

Precautions

On safety

- Do not put any foreign objects in the DC IN jack of the USB cradle.
- Be sure not to short-circuit the terminals of the USB cradle with other metallic objects.

On power sources

- Use only the AC power adaptor and the USB cradle or the recording USB cradle supplied with your Network Walkman. Do not use any other AC power adaptor since this may cause the Network Walkman to malfunction.



- Your Network Walkman is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the Network Walkman itself has been turned off.
- If you are not going to use your Network Walkman for a long time, be sure to disconnect the power supply. To remove the AC power adaptor from the wall outlet, grasp the adaptor plug itself; never pull the cord.

On installation

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

On heat build-up

Heat may build up in your Network Walkman or USB cradle while charging if it is used for an extended period of time.

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 Network Walkman at a 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 the headphones at a 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 to the people around you.

Warning

If there is lightning when you are using your Network Walkman, take off the headphones immediately.

On cleaning

- Clean your Network Walkman casing with a soft cloth slightly moistened with water or a mild detergent solution.
- Clean the headphone plug periodically.

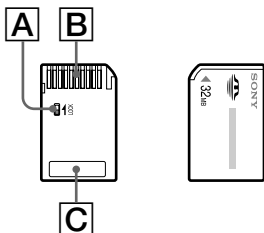
Notes

- 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.
- Be careful not to let water into the USB cradle or the recording USB cradle from the clearance at the connection part.

If you have any questions or problems concerning your Network Walkman, consult your nearest Sony dealer.

Precautions (continued)

On handling the “Memory Stick Duo”



- Do not label “Memory Stick Duo” to prevent sticking it in the slot.
- You cannot record, edit, or delete data stored in a “Memory Stick” when the erasure prevention switch is set to “LOCK.” (A)
- Use a tapered tool when you set the erasure prevention switch.
- Do not remove “Memory Stick” while reading or writing data.
- Do not perform the following to prevent damage to data.
 - Remove “Memory Stick” or turn off your Network Walkman while reading or writing data.
 - Operate your Network Walkman in the location under the influence of static charge or electrical noise.
- Making a backup of important data is recommended.
- Do not apply too much pressure to “Memory Stick” when you write down in the memo area. (C)
- Keep a “Memory Stick” in its supplied case when you carry or store it.
- Do not touch the “Memory Stick” connector with your finger or metallic objects. (B)
- Do not bend, drop, or subject a “Memory Stick” to strong shock.
- Do not disassemble or modify a “Memory Stick”.
- Do not allow a “Memory Stick” to get wet.
- Do not use or store your Network Walkman in a location that is subjected to:
 - Extremely high temperature such as in a sun-heated car
 - Direct sunlight
 - High humidity or places with corrosive substances

When disposing the Network Walkman

This Network Walkman has a built-in nickel metal hydride battery. When you dispose of the Network Walkman, be sure to dispose of it properly.

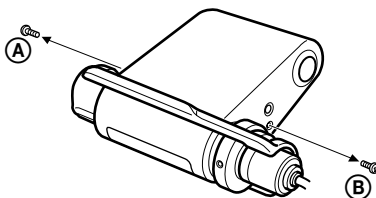
Certain countries may regulate disposal of the battery used to power this product.
Consult with your local authority.

Note

Never disassemble your Network Walkman except when disposing of it.

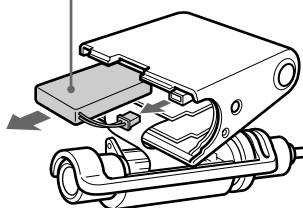
To remove the Nickel Metal Hydride battery

- ① Remove the screws (A) and (B) at the sides using a Phillips screwdriver.



- ② Remove the cover.

Nickel Metal Hydride battery



- ③ Disconnect the connector and then remove the battery.
- ④ Insulate the connector terminal by wrapping with a tape.

**For the customers in the U.S.A. and
Canada**

RECYCLING NICKEL METAL HYDRIDE BATTERIES

Nickel Metal Hydride batteries are recyclable.
You can help preserve our environment by
returning your used rechargeable batteries to the
collection and recycling location.

For more information regarding recycling of
rechargeable batteries, call toll free
1-800-822-8837, or visit <http://www.rbrc.org/>.

Caution: Do not handle damaged or leaking
Nickel Metal Hydride batteries.



Troubleshooting

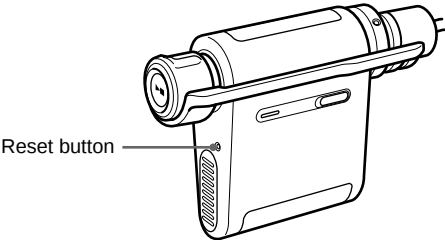
If you experience any of the following difficulties while using your Network Walkman, use this troubleshooting guide to help you to remedy the problem prior to consult a Sony dealer. Should any problem persist, consult your nearest Sony dealer. For trouble concerning operations while connected to your computer, refer to the online help of the supplied software in addition.

To reset the player

If your Network Walkman does not operate normally or if there is no sound, even after checking the troubleshooting guide below, press the reset button for more than one second with a pointed tool.

Tip

Any audio files stored in the memory will not be erased by pressing the reset button.



What happened?

On operating

Symptom	Cause/Remedy
There is no sound. Noise is generated.	• The volume level is set to zero. → Turn the volume up (page 23). • The headphone plug is not connected properly. → Connect the headphone plug properly (page 26). • The headphone plug is dirty. → Clean the headphone plug with a soft dry cloth. • Songs with a limited playing period is played. → Songs with an expired playing period cannot be played. • No audio files are stored in the memory. → If “NO DATA” is displayed, transfer audio file from the computer.
Buttons do not work.	• The HOLD switch is set to on. → Set the HOLD switch to off (page 32). • Your Network Walkman contains moisture condensation. → Keep your Network Walkman aside for a few hours. • The remaining battery power is insufficient. → Charge the battery (page 11). • Your Network Walkman is placed on the USB cradle or the recording USB cradle. → Button operations are disabled while your Network Walkman is placed on the USB cradle or the recording USB cradle. Remove your Network Walkman from the USB cradle or the recording USB cradle.
The volume is not loud enough.	The AVLS is enabled. → Disable the AVLS (page 35).
There is no sound from the right channel of the headphones.	The headphone plug is not fully connected. → Connect the headphone plug fully (Page 26).
Playback has stopped suddenly.	The remaining battery power is insufficient. → Charge the battery (page 11).

On the display window

Symptom	Cause/Remedy
The backlight is not turned on.	LIGHT is set to "OFF." → In the menu mode, set "LIGHT" to "ON" (page 37).
"□" is displayed for a title.	Characters that cannot be displayed on your Network Walkman are involved. → Use the supplied SonicStage software to rename the title with appropriate characters.

On charging the battery

Symptom	Cause/Remedy
Battery life is short.	- The operating temperature is below 5°C (67°F). → Battery life becomes shorter due to the battery characteristics. This is not malfunction. - You did not use your Network Walkman for a prolonged period. → Efficiency of the battery will be improved by repetition of charging and discharging. - The battery is required to be replaced. → Consult your near Sony dealer. - Battery charging time is not enough. → Your Network Walkman requires 15 minutes to check the battery condition to protect it before a quick recharge starts. Keep charging the battery until it is complete (the CHARGE lamp goes out).
The Charge lamp does not light.	The unit does not operate normally. → Press the reset button to reset the unit (page 48).
The Charge lamp blinks.	You are trying to charge the battery at high or low temperature. → Charge the battery in ambient temperature of between 5°C to 35°C (67°F to 95°F). The battery will not be charged at high or low temperature to prevent its deterioration.

On the connection with the computer or supplied software

Symptom	Cause/Remedy
The software cannot be installed.	An operating system not compatible with the software is used. → For details, refer to the separate manual "SonicStage Operating Instructions."
"CONNECT" is not displayed when connecting to the computer with the dedicated USB cable.	- Wait for the authentication of the SonicStage software. - Another application is running on the computer. → Wait for a while and reconnect the USB cable. If the problem persists, disconnect the USB cable, restart the computer, and then reconnect the USB cable. - The dedicated USB cable is disconnected. → Connect the dedicated USB cable. - A USB hub is used. → Connecting via a USB hub is not guaranteed. Connect the dedicated USB cable directly to the computer.

Troubleshooting (continued)

Symptom	Cause/Remedy
Your Network Walkman is not recognized by the computer when it is connected to the computer.	- Your Network Walkman is not placed on the USB cradle or the recording USB cradle properly. → Place your Network Walkman on the USB cradle or the recording USB cradle properly. - The dedicate USB cable is disconnected. → Connect the dedicated USB cable. - The driver file for your Network Walkman has not been installed. → Install the driver file for your Network Walkman (page 15). The driver file for your Network Walkman will be installed automatically if you install the SonicStage software using the supplied CD-ROM.
Song cannot be transferred.	- The dedicated USB cable is not connected properly. → Connect the USB cable properly. - The song has already been transferred three times. (SonicStage ver. 2.0 and above is not subject to this limitation.) → Transfer the song back to the computer and then transfer it to your Network Walkman again. - The free space of the memory (built-in flash memory or “Memory Stick”) to where you want to transfer audio files is insufficient. → Transfer any unnecessary songs back to the computer and increase the free space. - You have already transferred 400 songs or 400 groups to the built-in flash memory. → The maximum number of songs or groups that you can transfer to the built-in flash memory is 400. - You have already transferred 400 songs or 400 groups to the “Memory Stick”. → The maximum number of songs or groups that you can transfer to a “Memory Stick” is 400. - Audio files with a limited playing period or playing count may not be transferred due to restrictions set by copyright holders. For details on the settings of each audio file, contact the distributor. - The “Memory Stick” to where you want to transfer audio files does not support MagicGate. → Use MagicGate-compatible “Memory Stick Duo”.
The number of audio files that can be transferred is not much. (Available recording time is short.)	- The free space of the memory (built-in flash memory or “Memory Stick”) to where you want to transfer audio files is not enough for the size of audio files you tried to. → Transfer any unnecessary audio files back to the computer and increase the free space. - Data other than audio files are stored in the media (built-in flash memory or “Memory Stick”) to where you want to transfer audio files to. → Move data other than audio files to the computer and increase the free space.
Audio files cannot be transferred back to the computer.	- Any computer other than the computer used for transferring to your Network Walkman is selected for transferring back to the computer target. → Audio files cannot be transferred back to the computer to any computer other than the computer used for transferring to your Network Walkman. - The audio file has been deleted from the computer used for transferring to your Network Walkman. → The audio file cannot be transferred back to the computer if the file is deleted from the computer used for transferring to your Network Walkman. Also delete this audio file from your Network Walkman.

Symptom	Cause/Remedy
Audio files are transferred back to the computer without operations occasionally when the Network Walkman is connected to the computer.	If an audio file is deleted from your Network Walkman using SonicStage installed on any computer other than the computer used for transferring, the file will be transferred back to the computer automatically when your Network Walkman is connected to the computer that you used for transferring. Therefore, the remaining transfer count increases automatically.
After connecting the Network Walkman to the computer, "Memory Stick" is displayed but files cannot be found.	• The "Memory Stick" is not inserted. → Insert the "Memory Stick". • There is a problem with the "Memory Stick". → Insert the "Memory Stick" and check the display of the Network Walkman while disconnecting the dedicated USB cable. If an error message is displayed, follow the message (page 53 to 54). • The computer once enters the suspend mode then recovers. → You may not transfer the data properly after the computer recovers from the suspend mode. Disconnect the dedicated USB cable and connect the cable again.
The operation of the Network Walkman becomes unstable while it is connected to the computer.	USB hub or USB extension cable is used. → Connecting via a USB hub or USB extension is not guaranteed. Connect the dedicated USB cable directly to the computer.
"Failed to authenticate Device/Media" is displayed on the computer screen while connecting the Network Walkman to the computer.	Your Network Walkman is not connected to the computer properly. → Quit the SonicStage software and verify the connection of the dedicated USB cable. Restart the SonicStage software.

On recording (Only for NW-MS77DR)

Symptom	Cause/Remedy
The buttons on the recording USB cradle do not work.	• The recording USB cradle is not turned on. → Connect the supplied AC power adaptor properly. • The record select switch is set to "USB/KEY PROTECT." → Set the switch to "LINE IN." • The recording cable is not connected to the LINE IN jack properly. → Connect the optical digital cable or the connecting cord (analog cable) to the LINE IN jack properly.
An error occurs while recording.	• Music is not transferred. → Check whether the recording source (digital/analog audio device) is playing correctly. Be sure to press the STOP button on the recording USB cradle to cancel the error message before restarting recording. • The unit is in a place subject to vibration. → If the unit becomes subject to vibration, an error may occur while recording. Locate the unit in a stable place and press the STOP button on the recording cradle to cancel the error message before restarting recording.

Other

Symptom	Cause/Remedy
There is no beep sound when your Network Walkman is operated.	BEEP is set to "OFF." → In the menu mode, set "BEEP" to "ON" (page 37).
"Memory Stick" cannot be inserted into the slot.	- The "Memory Stick" is being inserted in the wrong direction. → Be sure to insert "Memory Stick" in the right direction on your Network Walkman (page 15, 19). - You labelled the "Memory Stick". → Do not label the "Memory Stick".
The current time is reset.	You did not operate your Network Walkman for a long period without charging it. → This is not malfunction.
Your Network Walkman, the USB cradle or the recording USB cradle gets warm.	The battery is being charged or just charged. → Your Network Walkman, the USB cradle or the recording USB cradle may get warm when the battery is being charged or just charged because of quick charge.
"Memory Stick" used on other devices cannot be used.	"Memory Stick" has been formatted on the other device such as a computer. → Transfer necessary data to other memory such as a computer's hard disk and reformat "Memory Stick" on your Network Walkman (page 44).
Groups in "Memory Stick" cannot be found.	The data stored in the "Memory Stick" or the built-in flash memory were edited using a device that does not support the Group function. → Regrouping before connecting to the computer may restore the groups (page 42).
Audio files stored in "Memory Stick" cannot be played using other device supporting "Memory Stick".	You are trying to play ATRAC3plus format files using a device that does not support the ATRAC3plus format. → ATRAC3plus format files can be played only on devices supporting the ATRAC3plus format.

Error messages

Follow the instructions below if an error message appears in the display.

Message	Meaning	Remedy
ACCESS	Accessing “Memory Stick”.	Wait for access to be complete. Do not remove the “Memory Stick” while accessing.
AVLS	The volume level exceeds the rated value while the AVLS is enabled.	Turn the volume down or disable the AVLS.
CANNOT PLAY	• Your Network Walkman cannot play certain files because of incompatible formats. • Transferring has been interrupted forcefully.	If the file cannot be played, you can erase it from the “Memory Stick”. For details, refer to “To delete abnormal data from a “Memory Stick” or built-in flash memory” (page 55).
CANNOT REC	After attaching your Network Walkman to the recording USB cradle, you have set the record select switch to “LINE IN.”	This is not an error. Wait to confirm that you can start recording.
	Recording failed.	After checking the connection of the recording cable, restart recording.
	There is audio data which cannot be recorded by this unit.	The audio data you are trying to record is not compatible with this unit.
CONNECT	Your Network Walkman is connected to the computer.	This is not an error. You can operate your Network Walkman using the SonicStage software, but you cannot operate the controls on your Network Walkman.
ERROR	A malfunction is detected.	Consult your nearest Sony dealer.
EXPIRED	• The song with a playback restriction has expired. • The current time has not been set to play the song with a playback restriction. • The song is protected by the playback restriction that is not compatible with your Network Walkman.	• If the current time has not been set yet, set the current time in the menu mode (page 34). • If song cannot be played, you can erase it from the “Memory Stick”. For details, refer to “To delete abnormal data from a “Memory Stick” or built-in flash memory” (page 55). • Your Network Walkman does not support contents with a limited playing count. For details, refer to “Note on playing songs with a limited playing count” (page 18).
FILE ERROR	• The file cannot be read. • The file is not normal.	Erase “FILE ERROR” track. For details, refer to “To delete abnormal data from a “Memory Stick” or built-in flash memory” (page 55).
FORMAT ERROR	(During playback) The inserted “Memory Stick” contains a file format that is not compatible with your Network Walkman.	Format a “Memory Stick” following the procedures on page 44. (Format the “Memory Stick” on your Network Walkman. If you format it on another device, you cannot play the song on your Network Walkman although transferring are available.)
	(During recording) The track you are trying to record contains a file format that is not compatible with your Network Walkman.	You cannot record the track because it is not compatible with your Network Walkman.

Troubleshooting (continued)

Message	Meaning	Remedy
GROUP FULL	The maximum number of groups in the built-in flash memory or the “Memory Stick” has been exceeded.	After transferring the necessary groups to your computer, erase the groups. For details on how to transfer groups to your computer, refer to online Help for the SonicStage software.
HOLD	All operation buttons are disabled since the HOLD switch is set to on.	Set the HOLD switch to off to operate the buttons.
LOW BATT	The battery is low.	Charge the battery.
MEMORY FULL	The memory is full or there are 400 groups.	Delete songs or groups. A group without song is also regarded as one group. To delete groups without song, use the SonicStage software.
MG ERROR	An unauthorized distribution file is detected for copyright protection.	Transfer normal audio files back to the computer and then format “Memory Stick” on your Network Walkman. (For details, refer to “To delete abnormal data from a “Memory Stick” or built-in flash memory” (page 55).)
MS LOCKED	The erasure prevention switch of “Memory Stick” is set to “LOCK.”	Set the erasure prevention switch to off when you format a “Memory Stick”, transfer audio data connecting your Network Walkman to the computer, or connect your Network Walkman to the digital/analog audio device for recording (NW-MS77DR).
NO AUDIO	There is no audio files in the built-in flash memory or “Memory Stick”.	If there is no audio files in the “Memory Stick”, use the SonicStage software to transfer audio files.
	Other than MagicGate-compatible “Memory Stick Duo” is inserted.	Insert the MagicGate-compatible “Memory Stick Duo” (not supplied). For details, refer to “On “MagicGate Memory Stick” ” on page 8.
NO DATA	There are no data in “Memory Stick”.	Use the SonicStage software to transfer audio files.
READ ONLY	Read-only “Memory Stick” is inserted.	Insert the MagicGate-compatible “Memory Stick Duo” (not supplied). For details, refer to “On “MagicGate Memory Stick” ” on page 8.
STICK ERROR	- You cannot access “Memory Stick”. - There is a problem with “Memory Stick” or your Network Walkman.	Remove and reinsert “Memory Stick”. If the problem persists, bring your Network Walkman and “Memory Stick” to your nearest Sony dealer.
TYPE ERROR	The inserted “Memory Stick” is not compatible with your Network Walkman.	Insert MagicGate-compatible “Memory Stick Duo” (not supplied) to the slot as needed.

To delete abnormal data from a “Memory Stick” or built-in flash memory

If “CANNOT PLAY,” “EXPIRED,” “FILE ERROR,” “STICK ERROR,” or “MG ERROR” is displayed, there is a problem with all or part of the data stored in the “Memory Stick” or the built-in flash memory.

Follow the procedures below to erase data you cannot play.

- 1 Connect your Network Walkman to the computer, and start the SonicStage software.
- 2 If you have already specified the data with problems (such as expired songs), erase the data using the SonicStage software.
- 3 If the problem persists, click the  button on the SonicStage software to transfer all data without problems while your Network Walkman is connected to the computer.
- 4 Disconnect your Network Walkman from the computer and then format “Memory Stick” or the built-in flash memory using the FORMAT menu (page 44).

Note

If a “Memory Stick” is formatted, data recorded using other devices will be also erased. Be sure to verify the data stored in the “Memory Stick” prior to formatting, when “Memory Stick” contains data recorded using other devices.

For details, refer to the online Help for the SonicStage software.

Specifications

Maximum recording time (Approx.)

NW-MS70D/MS77DR; When using the built-in flash memory only:	
ATRAC3	ATRAC3plus
4 hr. 10 min. (132 kbps)	2 hr. (256 kbps)
5 hr. 20 min. (105 kbps)	8 hr. 40 min. (64 kbps)
8 hr. 30 min. (66 kbps)	11 hr. 40 min. (48 kbps)

NW-MS90D; When using the built-in flash memory only:	
ATRAC3	ATRAC3plus
8 hr. 20 min. (132 kbps)	4 hr. (256kbps)
10 hr. 40 min. (105 kbps)	17 hr. 20 min. (64 kbps)
17 hr. (66 kbps)	23 hr. 20 min. (48 kbps)

When using “Memory Stick” (64MB):	
ATRAC3	ATRAC3plus
60 min. (132 kbps)	30 min. (256kbps)
80 min. (105 kbps)	130 min. (64 kbps)
120 min. (66 kbps)	170 min. (48 kbps)

When using “Memory Stick” (128MB):	
ATRAC3	ATRAC3plus
120 min. (132 kbps)	60 min. (256kbps)
160 min. (105 kbps)	260 min. (64 kbps)
240 min. (66 kbps)	350 min. (48 kbps)

Sampling frequency

44.1 kHz

Audio compression technology

Adaptive Transform Acoustic Coding3 (ATRAC3)
Adaptive Transform Acoustic Coding3plus (ATRAC3plus)

Frequency response

20 to 20,000 Hz (single signal measurement during playback)

Output

Headphone: Stereo mini-jack

Signal-to-noise ratio (S/N)

79 dB or more (excluding ATRAC3 66 kbps)

Dynamic range

85 dB or more (excluding ATRAC3 66 kbps)

Operating temperature

5°C to 35°C (67°F to 95°F)

Power source

- DC IN 1.2 V (from built-in rechargeable battery)
- DC IN 4.5 V (from AC power adaptor)
- USB power (from a computer through supplied USB cable)

Battery life (continuous playback)

ATRAC3 format: Approximately 44 hours
ATRAC3plus format: Approximately 36 hours

Dimension

36.4 × 48.5 × 18 mm (1 ⁷/₁₆ × 1 ¹⁵/₁₆ × ²³/₃₂ inches)
(w/h/d, projecting parts not included)

Mass

Approx. 54 g (1.9 oz) (“Memory Stick Duo” not included)

Supplied accessories

- USB cradle (NW-MS70D/MS90D) (1)
- Recording USB cradle (NW-MS77DR) (1)
- Headphones (1)
- Dedicated USB cable (1)
- AC power adaptor (for the supplied USB cradle) (1)
- Carrying pouch (1)
- Extension headphone cord (1)
- Optical Digital cable (NW-MS77DR) (1)
- Neck strap (1)
- Earbuds (Size S, L) (NW-MS90D Non-US model) (1)
- CD-ROM (1)
- Operating Instructions (1)
- SonicStage Operating Instructions (1)

Optional accessories

- MagicGate-compatible “Memory Stick Duo”
 - MSH-M128A (128 MB)
 - MSH-M64A (64 MB)

Design and specifications are subject to change without notice.

Glossary

MagicGate

Copyright protection technology that consists of authentication and encryption technology. Authentication ensures that protected content is transferred only between compliant devices and media, and that protected content is recorded and transferred in an encrypted format to prevent unauthorized copying or playback.

Note

MAGIC GATE is terminology denoting the copyright protection system developed by Sony. It does not guarantee conversion among other media.

“MagicGate Memory Stick”

A compact IC recording media “Memory Stick” equipped with “MagicGate” copyright protection technology. You can record or play data, such as music, that requires copyright protection only by using a “MagicGate Memory Stick” with “MagicGate” compatible equipment (e.g., Network Walkman).

“MagicGate Memory Stick” can be used to record any other kind of digital data with any other “Memory Stick” compatible equipment.

“MagicGate Memory Stick” is distinguished by the “MG” and “MAGIC GATE” logos.

“Memory Stick”

“Memory Stick” is a portable and compact Integrated Circuit recording medium. There are two types of “Memory Stick”: “MagicGate Memory Stick” equipped with “MagicGate” copyright protection technology, and the standard “Memory Stick”, which is not equipped with the copyright protection technology. You can record image files, audio files, and sound files using “Memory Stick” compatible audio visual devices, or record data from the computer. Data with different formats can be stored in the same “Memory Stick”. (Refer to the instruction manuals that come with the devices to check which format the equipment is able to read.)

For example, you can store image files in the space available on “MagicGate Memory Stick” using the respective equipment even if there are already audio files in “MagicGate Memory Stick”.

“Memory Stick Duo”

There are two sizes of “Memory Stick”: standard size and compact size “Memory Stick Duo”. You can use “Memory Stick Duo” for equipment supporting standard size “Memory Stick” by using a Memory Stick Duo adaptor.

OpenMG

Copyright protection technology that securely manages music content from the EMD/Audio CD on a personal computer. Application software that is installed on the computer encrypts the digital music content when recording on the hard drive. This allows you to enjoy music content on the computer, but prevents unauthorized transmission of this content across a network (or elsewhere). This PC copyright protection complies with “MagicGate”, and allows you to transfer digital music content from a PC’s hard drive to a compliant device.

SonicStage

Copyright protection technology that securely manages music content from the EMD/Audio CD on a personal computer. Application software that is installed on the computer encrypts the digital music content when recording on the hard drive. This allows you to enjoy music content on the computer, but prevents unauthorized transmission of this content across a network (or elsewhere). This PC copyright protection complies with “MagicGate”, and allows you to transfer digital music content from a computer’s hard disk to a compliant device.

ATRAC3

ATRAC3, which stands for Adaptive Transform Acoustic Coding3, is audio compression technology that satisfies the demand for high sound quality and high compression rates.

The ATRAC3 compression rate is approximately 10 times higher than that of the Audio CD, resulting in an increased data capacity for the media.

ATRAC3plus

ATRAC3plus, which stands for Adaptive Transform Acoustic Coding3plus, is audio compression technology that compresses data higher than ATRAC3. The ATRAC3plus is new audio compression technology that enables equal or higher quality sound comparing to ATRAC3.

Bit rate

Indicates the data amount per second. The rate is reflected in bps (bit per second).

64 kbps means 64,000 bits of information per second. If the bit rate is large, that means a large amount of information is used to play music. Comparing music of the same format (e.g., ATRAC3plus), 64 kbps data offers better sound quality than 48 kbps data. However, audio files in formats such as MP3 have different encoding methods, and thus sound quality cannot be determined by simply comparing the bit rate.

Menu list

Press the MENU button to display the menu mode and use the Shuttle switch (rotate: select/press: confirm) to change the settings of your Network Walkman.

For details about each menu, refer to the pages in parentheses. The menu with a ">" mark will be followed by a detailed-setting screen when you press the Shuttle switch to confirm.

Display (Menu mode)	Purposes
PLAY MODE > (Playback mode)	You can select your favorite playback mode. (page 27)
DISPLAY > (Display mode)	You can select your favorite display mode. (page 28)
VOL: (Preset volume)	You can preset your desired volume level. (page 35)
SOUND > (Digital sounds preset)	You can preset your desired sound quality. (page 30)
BEEP: (Operation sounds setting)	You can set to "ON" or "OFF." (page 37)
LIGHT: (LCD backlight setting)	"OFF": Always off "ON": Turns on for three seconds after each operation (page 37)
TITLE: (Switching the title display between English mode and Japanese mode)	English and Japanese modes available for the title display. The English mode is selected by default. You do not normally need to change this setting. This setting is not available for NW-MS77DR.
DATE-TIME (Current time setting)	You can set and display the current time. (page 34)
PC CLK: (Adjusting the time setting to a computer built-in clock)	You can adjust the time setting of your Network Walkman to a computer built-in clock. (page 33)
USB CHG: (USB CHARGE setting)	You can charge the battery with a USB connection. (page 43)

Display (Menu mode)	Purposes
ERASE > (Erasing audio files)	You can erase audio files stored in the built-in flash memory or MagicGate-compatible "Memory Stick Duo" (not supplied) inserted into the Network Walkman. Track Erase/Group Erase are available. (page 41)
FORMAT > (Formatting memory)	You can format the built-in flash memory or MagicGate-compatible "Memory Stick Duo" (not supplied) inserted into the Network Walkman. (page 44)
REGROUP > (Regrouping data)	You can restore the group function. (page 42)
BITRATE: (Selecting bit rate)	You can select the desired bit rate. (page 39) (Only for NW-MS77DR.)
REC REMAIN > (Displaying remaining recordable time)	You can display the remaining recordable time. (page 29) (Only for NW-MS77DR.)
SYNC: (Setting synchro-recording)	"ON": Activates synchro-recording. "OFF": Cancels synchro-recording. (page 38) (Only for NW-MS77DR.)
EDIT NAME > (Editing track/group name)	You can edit the recorded track/group name. (page 39) (Only for NW-MS77DR.)
[RETURN]	You can switch to the normal mode by selecting [RETURN] and pressing the Play/Stop button.

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Printed on 100% recycled paper using VOC
(Volatile Organic Compound)-free vegetable
oil based ink.

<http://www.sony.net/>

Printed in Japan
