

*Portable IC Audio Player*

# ***Network Walkman***

---

Operating Instructions



***NW-S4***

## Owner's Record

The model number is located on the battery compartment lid and serial number is located inside of the battery compartment (see page 5). Record the serial number in the space provided below. Refer to them whenever you call your Sony dealer regarding this product.

Model No. NW-S4

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, you may call:

Sony Direct Response Center 1-(800)-222-7669

or write to:

Sony Direct Response Center 12451 Gateway Blvd. Fort Myers, FL 33913

## Declaration of Conformity

Trade Name: SONY  
Model No.: NW-S4  
Responsible Party: Sony Electronics Inc.  
Address: 680 Kinderkamack Road,  
Oradell, NJ 07649 USA  
Telephone No.: 201-930-6972

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

**SONY®** NW-S4



Tested To Comply  
With FCC Standards

FOR HOME OR OFFICE USE

## 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.

Program ©2001 Sony Corporation

Documentation ©2001 Sony Corporation

Network Walkman is trademark of Sony Corporation.

OpenMG and its logo are trademarks of Sony Corporation.

WALKMAN is a registered trademark of Sony Corporation.

Microsoft, Windows, Windows NT, Windows Media, Windows Millennium Edition and their logos are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.

US and foreign patents licensed from Dolby Laboratories.

All other trademarks and registered trademarks are trademarks or registered trademarks of their respective holders.



---

# Table of Contents

Overview .....	4
What you can do with your Network Walkman .....	4

---

## Getting Started

Unpacking .....	5
Parts and controls .....	6
Inserting the battery .....	7
Installing the armband .....	8

---

## Basic Operations

Transferring songs from the computer to Network Walkman (Check-out) .....	9
Listening to music with Network Walkman .....	10
Using the display information .....	11

---

## Advanced Operations

Playing songs repeatedly (MODE) .....	12
Emphasizing the bass sound (MEGA BASS) .....	13
Protecting your hearing (AVLS) .....	14
Locking the controls (HOLD) .....	14
Playing back time-limited music (timeout contents) .....	15
Using Network Walkman in combination with Windows Media™ Player 7 .....	16

---

## Other Information

Precautions .....	18
Specifications .....	19
Troubleshooting .....	20
Glossary .....	22
Index .....	Back cover

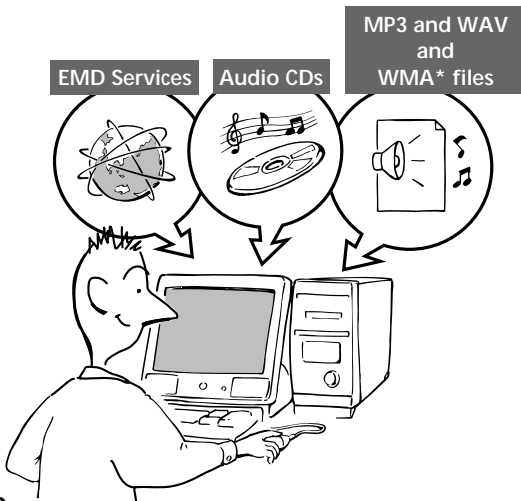
This manual explains how to operate Network Walkman. For details on how to use the supplied software (OpenMG Jukebox), refer to the OpenMG Jukebox Operating Instructions.

# Overview

## What you can do with your Network Walkman

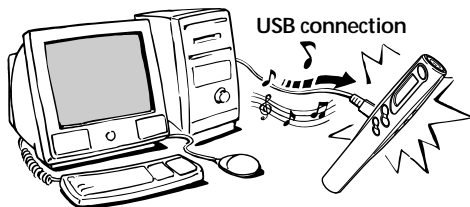
Network Walkman is a portable IC audio player. You can easily transfer digital audio files from your computer to the product's built-in flash memory and carry it anywhere to enjoy.

- 1 Store digital audio files on your computer.**



- 2 Transfer the files to Network Walkman.**

\* To transfer a file in WMA format to your Network Walkman, you need the Microsoft® Windows Media™ Player 7. (It is not included in Network Walkman. See page 16 for details.)



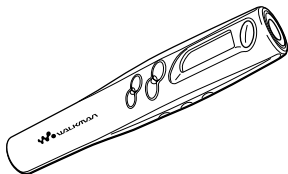
- 3 Listen to your Network Walkman.**



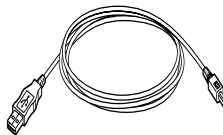
# Unpacking

Your Network Walkman comes with the following items.

- Network Walkman (1)



- USB cable (1)



- Size AA (LR6) alkaline battery (1)

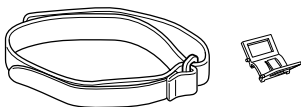


- CD-ROM (OpenMG Jukebox installation disc) (1)
- NW-S4 Operating Instructions (1)
- OpenMG Jukebox Operating Instructions (1)

- Headphones (1)

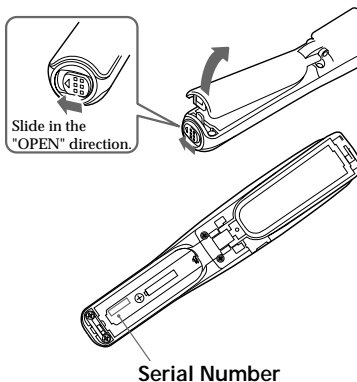


- Armband (1)



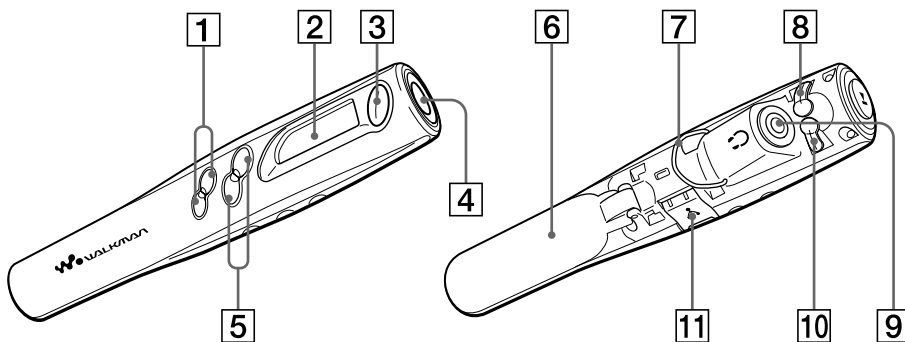
## About the Serial Number

The serial number provided for your device is required for the customer registration. The number is located inside the battery compartment.



# Parts and controls

Refer to the page numbers indicated in parentheses for details.



**1** VOL (volume) +/- (page 10)

**2** Display (page 11)

**3** SHIFT button (pages 12, 13)

**4** ►/■ (play/stop) button  
(page 10)

**5** ◀◀/▶▶ (MEGA BASS/MODE)  
buttons (pages 11, 12, 13)

**6** Battery compartment  
(page 7)

**7** Strap holder

**8** HOLD switch (page 14)


**9** Headphones jack (page 10)

**10** AVLS switch (page 14)

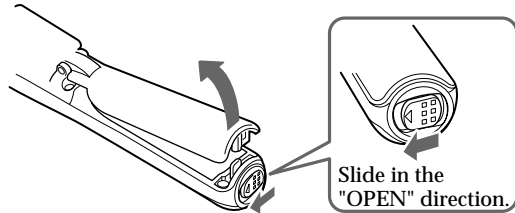
**11** USB connector (page 9)

# Inserting the battery

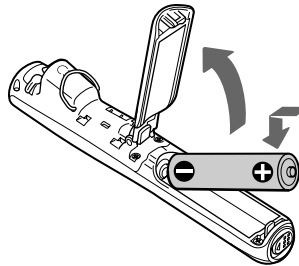
## Notes

- If you do not use the battery correctly, it may become damaged from leakage and corrosion.  
For best results:
  - Make sure the polarity is correct.
  - Do not charge a dry cell battery.
  - Remove the battery, if you do not intend to use the player for an extended period of time.
  - If you have battery leakage, replace the battery with a new one after cleaning the battery compartment.
- The  mark indicates that the battery has run out. Network Walkman will not function after it beeps and the display turns off. Please change the battery.
- Be sure to use the specified battery.

- 1 Open the battery compartment lid.



- 2 Insert the size AA (LR6) alkaline battery (supplied) matching the + and - ends on the battery to those inside the battery compartment.




- 3 Close the lid holding it down until locked.

### **Battery duration**

About 16 hours\*.

\* The battery life may be shorter due to operating conditions, the temperature of the location and battery type.

### **When to replace the battery**

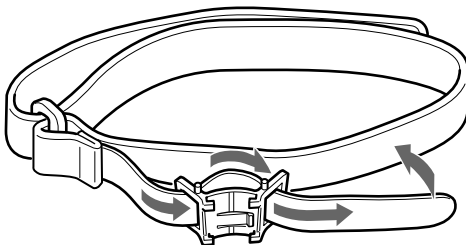
Replace the battery when the battery indicator on the display (page 11) reads empty (.

# Installing the armband

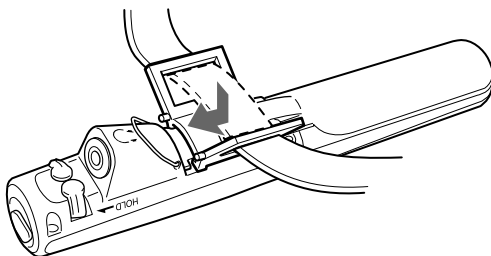
## Note

Do not wear the unit for a long time with the armband fastened tightly.

- 1 Install the armband attachment to the armband. Slide the armband to the deepest position and fix it using the fastener.

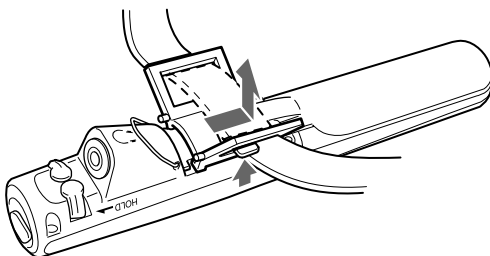


- 2 Lift the attachment toward the headphones jack and install it to the unit.



## Removing

While pulling the tab upward, slide the attachment toward the battery compartment.





## Transferring songs from the computer to Network Walkman (Check-out)

### Notes

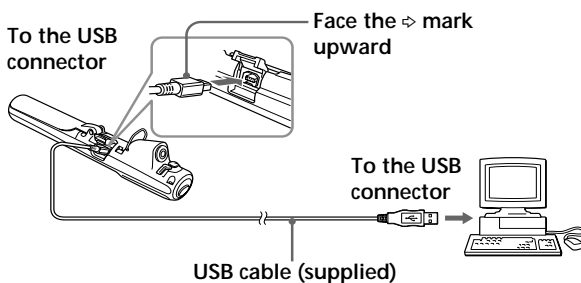
- Be sure to install OpenMG Jukebox before connecting Network Walkman.
- When you connect Network Walkman to the computer for the first time, the window for installing the driver appears. Follow the instructions in the window.
- Click OK when the dialog box that says the driver is not digitally signed appears in Windows 2000.
- Network Walkman is inactive while connected to the computer.
- Use of this player with a USB hub or a USB extension cable is not guaranteed.
- Network Walkman may not work if certain USB devices are connected at the same time.
- Some computers may not work correctly after recovering from the suspended mode. Disconnect the USB cable and reconnect it.
- When you close the lid of USB connector, push it securely until it is locked.

In order to check out digital audio files from your computer, first you must install the supplied OpenMG Jukebox software and then import digital audio files to OpenMG Jukebox.

For details, refer to the OpenMG Jukebox operating Instructions.

### 1 Connect Network Walkman to your computer.

You can see "PC" on the display when you connect Network Walkman to your powered PC. This means that the power to Network Walkman is supplied from the PC.



### 2 Transfer the music file to Network Walkman (Check-out).

For details on how to operate, refer to the Open MG Jukebox Operating Instructions.

### Tip

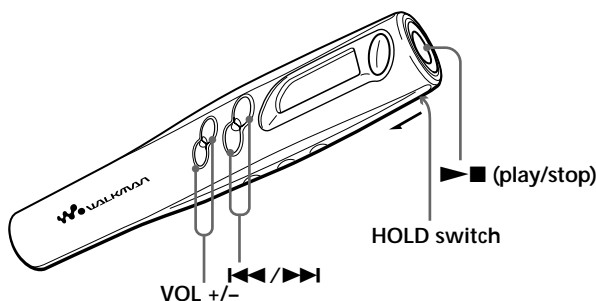
To transfer the song back to the computer (check-in), refer to the OpenMG Jukebox software instruction manual or the online help.

# Listening to music with Network Walkman

Please insert the battery before use (see page 7).

## Note

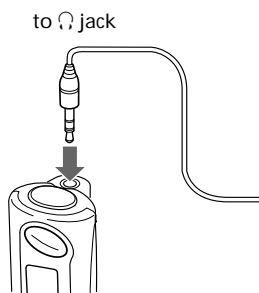
When using Network Walkman, be sure to disconnect it from the computer. The player is deactivated while it is connected to your computer.



## Tip

The player does not have a power switch. The player automatically turns off several seconds after it stops playing. When you press ►■ (play/stop) button again, Network Walkman is powered on automatically and starts playing from the last song you stopped playing. (Pressing ►■ starts playback from the first song if you connect and disconnect the player to the computer once.)

## 1 Connect the headphones (supplied).



## 2 Press ►■ (play/stop).

Playback begins.

Adjust the volume with the VOL +/- buttons.

## If playback does not start

The HOLD switch may be switched up. Please release it down (page 14).

## To stop playback

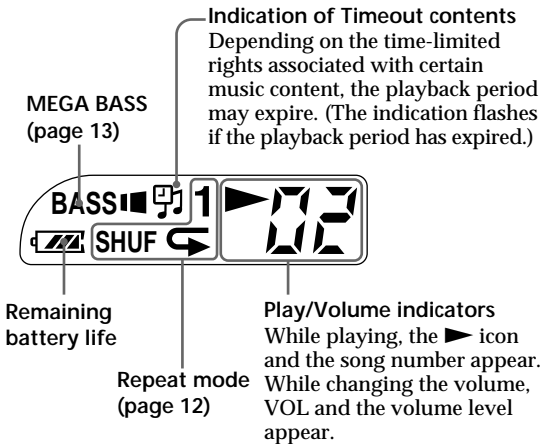
Press ►■ (play/stop).

To	Take the following action
Go to the beginning of the next track	Press ►► once
Go to the beginning of the succeeding tracks	Press ►► repeatedly
Go to the beginning of the present track	Press ◀◀ once
Go to previous tracks and/or the beginning of the before tracks	Press ◀◀ repeatedly
Go forward	During playback, Press ►► and hold
Go backward	During playback, Press ◀◀ and hold

**Note**  
The display turns off and the power will go off several seconds after playback stops.

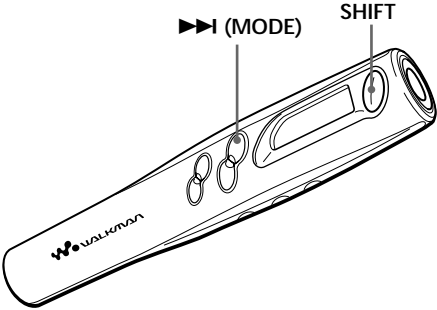
### Using the display information

You can check play status, battery life, and other information on Network Walkman display.

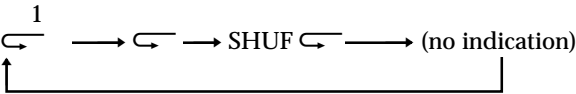


# Playing songs repeatedly (MODE)

There are three ways to play songs; "All Repeat", "1 Repeat" and "Shuffle Repeat".



To play songs repeatedly, while holding down the SHIFT button, press **MODE** repeatedly. Each time you press the **MODE** button, the repeat mode indicator changes as follows:



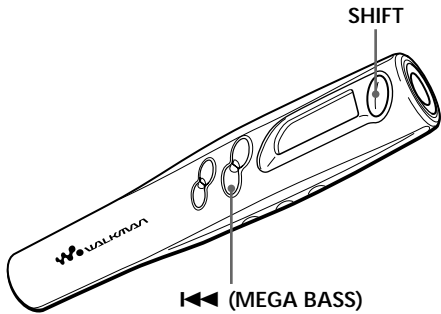
Repeat mode indicator	The player repeats
1 ↪	the current song (1 Repeat)
↪	all songs continuously (All Repeat)
SHUF ↪	all songs in random order (Shuffle Repeat)
No indicator	Repeat mode off

**To cancel Repeat Play**  
While holding down the SHIFT button, press **MODE** repeatedly until the repeat indicator disappears.

# Emphasizing the bass sound (MEGA BASS)

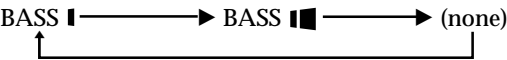
**Note**  
If the sound becomes distorted when emphasizing the bass, turn down the volume.



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



While holding down the SHIFT button, press **MEGA BASS** repeatedly.

Each time you press the **MEGA BASS** button, the repeat mode indicator changes as follows:



Display indication	Sound quality
BASS 	MEGA BASS (moderate effect)
BASS 	MEGA BASS (strong effect)
none	normal play

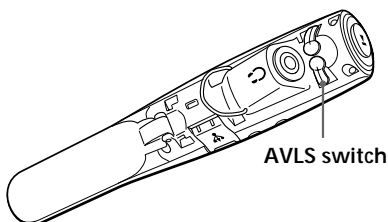
## To cancel the MEGA BASS effect

While holding down the SHIFT button, press **MEGA BASS** repeatedly until the repeat indicator disappears.

---

## Protecting your hearing (AVLS)

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



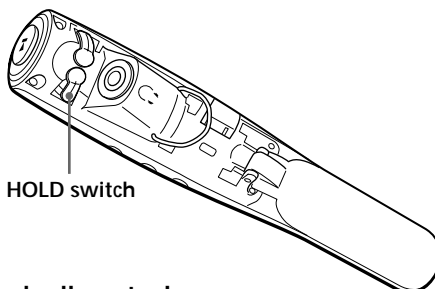
**To limit the maximum volume level**  
Slide the AVLS switch to LIMIT.

**To cancel AVLS**  
Slide the AVLS switch to NORM.

---

## Locking the controls (HOLD)

The HOLD switch locks all controls to prevent accidental operation.



**To lock all controls**  
Slide the HOLD switch to ➡.  
Controls will be locked.

**To release the HOLD function**  
Slide the HOLD switch in the opposite direction of the arrow.

---

# Playing back time-limited music (timeout contents)

Some music data distributed via the Internet (EMD service) have playback time restriction.

When you playback a song with playback time restriction, the timeout icon (page 11) goes on.

If you try to playback a song whose playback period is already expired, the timeout icon flashes and playback of the next song begins.

We recommended you to check-in or delete the expired song in the player to the computer using the OpenMG Jukebox software.

OpenMG Jukebox will not playback the expired song and the expired song will not be available for check-out to Network Walkman. Delete these songs as needed.

## Note

If you delete the expired song in the Network Walkman player while connected to the computer that you checked-out the song from, the original data of that song on the computer is also deleted.

---

# Using Network Walkman in combination with Windows Media™ Player 7

If you install Microsoft Windows Media™ Player 7, you can transfer a WMA file to your Network Walkman and play it back. Refer to the online help for Windows Media Player 7 for detailed operations.

## Playing back WMA files with Network Walkman

### Installing Windows Media Player 7 and the dedicated plug-ins

- Refer to <http://www.openmg.com/> for the details on how to obtain Windows Media Player 7.
- To use Windows Media Player 7 in combination with your Network Walkman, you need to install the dedicated plug-in software. This software has been already installed when the NW-S4 driver was installed using the enclosed OpenMG Jukebox CD-ROM.

### Transferring (copying) a WMA file to your Network Walkman

Network Walkman can only playback those WMA files that are listed in the "Available File Formats" in the "Options" dialog box on Windows Media Player 7 and are of 64 to 160 kbps.

### Notes

- If you check "Enable Personal Rights Management" on the "CD Audio" tab in the "Options" dialog box when recording a CD using Windows Media Player 7, the music cannot be transferred to Network Walkman. To enable the music transfer, remove the check mark when recording the CD.
- It may be impossible to transfer the music contents with copyright management information such as those purchased via EMD.



## Notes

- Songs checked-out using the OpenMG Jukebox (ATRAC3 and MP3) can also be listened on the Portable Device screen of Windows Media Player 7, but they can not be played back nor checked-in to Windows Media Player 7.
- The transferred (copied) WMA files to Network Walkman from Windows Media Player 7 are shown on the OpenMG Jukebox with a (⌂) mark and you can not playback nor check-in them to the OpenMG Jukebox.

- 1 Start Windows Media Player 7 and click on the "Portable Device" tab.

The "Portable Device" screen appears.



- 2 Connect your Network Walkman to the computer (See page 9).

The computer recognizes your Network Walkman and the songs downloaded in Network Walkman are shown on the "Music On Device" window of Windows Media Player 7. If the computer can not recognize your Network Walkman, press the F5 key.

- 3 Transfer (copy) the songs to your Network Walkman.

Select a WMA file you want to transfer (copy) to your Network Walkman and click on the "Copy Music" button on Windows Media Player 7 window.

This starts copying the selected song and its title is added to the "Music On Device" window.

Refer to the online help of Windows Media Player 7 for details on copying music to a portable device.

# Precautions

### Safety

Do not drop or vigorously shake the player. It may damage the unit.

### Installation

Do not place the player in a location where it is:

- On an unstable surface
- Very humid or no ventilation
- Subject to excessive dust
- Subject to direct sunlight or extreme heat
- In a car with its windows closed
- In a magnetized location (near a magnet, speaker, or TV).

### Operation

If Network Walkman player is brought directly from a cold to a warm location, or if it is placed in a very damp environment, moisture may condense on the parts inside Network Walkman player. Should this occur, Network Walkman player may not work properly.

Remove the battery and let Network Walkman player sit for approximately two or three hours or until the moisture evaporates.

### Headphones

- **Road Safety**  
Do not use headphones while driving, cycling, or operating any motorized vehicle. It may create a traffic hazard and is illegal in many areas. It can also be potentially dangerous to play your player at high volume while walking, especially at pedestrian crossings. You should exercise extreme caution or discontinue use in potentially hazardous situations.
- **Preventing hearing damage**  
avoid using headphones at high volume. Hearing experts advise against continuous, loud and extended play. If you experience ringing in your ears, reduce the volume or discontinue use.

- **Caring for others**

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

### Cleaning

Clean the casing with a soft cloth lightly moistened with water or a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzene as it may damage the finish of the casing.

### Do not immerse in water

This product is not meant to be immersed in water or to be exposed to continuous contact with water.

- Before opening or shutting the USB connector lid or battery compartment lid, be sure to wipe off any water, dust, or sand from the outside of the player.
- If the player is splashed with salt water, wipe clean with a damp cloth, then dry with a soft dry cloth. Do not wash under running water; do not use soap or detergent; and do not dry with an electric hair dryer.
- The supplied headphones are not meant to be immersed in water or come in continuous contact with water. If they get wet, dry them with a soft cloth. Never use an electric dryer while wearing the headphones.

---

# Specifications

## Audio specifications

Frequency response

20 – 20,000 Hz

Signal-to-noise ratio (S/N)

85 dB

## Memory capacity

64 MB (including the system software:

61.1 MB available for music)

## Available file format

ATRAC3

MP3

Bit rate\*: 32–256 kbps

Sampling rate: 32/44.1/48 kHz

\* Variable bit rate files are not supported. Bit rate higher than 128 kbps is not guaranteed when you select the sampling rate 32 or 48 kHz.

WMA\*\*

Bit rate: 64–160 kbps

\*\*The files applied with the Microsoft Windows Media Right Manage are not supported.

## Output

Headphones jack

Stereo mini jack

## Connector (special mini jack)

USB 1.0 compliant

## General

Power requirements

Size AA (LR6) alkaline battery × 1

USB bus power

Battery life

Approx. 16 hours (varies depending on bit rate, volume, etc.)

Power consumption

Approx. 145 mW

Dimensions (approx.)

Approx. 5.3 × 1 × 1.1 inches (132.1 × 24.7 × 29.0 mm) (w/h/d)

Mass

Approx. 2.1 oz (60g) (including battery)

Operating temperature

41°F to 95°F (5°C to 35°C) (not condensed)

Environment temperature

–4°F to 140°F (–20°C to 60°C) (not condensed)

## Supplied accessories

See page 5.

---

# Troubleshooting

If you experience any of the following difficulties while using Network Walkman, use this troubleshooting guide to help you remedy the problem. Should any problem persist, consult your nearest Sony dealer. For trouble concerning operations while connecting with your computer, please refer to the supplied software's online help "Troubleshooting" contents, too.

## On the player

### No sound, or noise is heard.

- Check that the headphones are connected securely.
- Plugs are dirty. Clean the plugs with a dry soft cloth periodically.
- Adjust the volume with the VOL +/- buttons.

### The controls on the player do not work.

- If the player is connected to the computer, disconnect it.
- Make sure that the HOLD function is deactivated (page 14).
- Condensation may have developed inside the player. Allow it to sit for about 2 or 3 hours.
- If the battery is weak, replace it with a new one.
- Check that the battery is inserted correctly.

### The volume does not increase.

- Make sure that the HOLD function is deactivated (page 14).
- Make sure that the AVLS function is deactivated (page 14).

### The sound is distorted.

- Cancel the MEGA BASS (page 13).
- Import audio files with a higher bps value.

### The player does not function.

- If Network Walkman player is connected to the computer, disconnect it.
- Make sure that the HOLD function is deactivated (page 14).
- If the battery is weak, replace it with a new one.
- Check out songs to Network Walkman player if 00 appears on the display.

### The selected music data can not be played back.


- The time-limit of the song may be expired.  
Some music data distributed via the Internet (EMD service) have playback time restriction (page 15). When you playback a song with the playback time restriction, the timeout icon goes on.  
If you try to playback a song whose playback period is already expired, the timeout icon flashes and playback of the next song begins.

### The commercially-available USB cable cannot be connected.

- Use the supplied USB cable.

## On the software

### Cannot check out songs

- The USB cable is not fully plugged in. Disconnect the USB cable and reconnect it.
- The available memory space in Network Walkman player may be insufficient.
- The song has already been checked out the maximum permitted number of times. If the remaining number of times the song is allowed to be checked out is zero, you cannot check out that song (in which case, the song is marked .

- If the song has a limited playing period or playing count, you may not be able to check it out to Network Walkman, depending on the restrictions set by the copyright holders. For details on the settings of each song, contact the service, or see the OpenMG Web site.
- You may be trying to check out 100 or more songs to Network Walkman. The maximum number of songs that can be checked out to Network Walkman is 99.

**Your computer does not authenticate Network Walkman.**

- There is a communication error between your computer and Network Walkman. Disconnect the USB cable, reconnect it, and then restart OpenMG Jukebox.
- You are using a USB hub. Network Walkman may not work when connected to certain USB hubs. Connect the USB cable to your computer's USB port.

---

# Glossary

## ATRAC3

ATRAC3, which stands for Adaptive Transform Acoustic Coding<sup>3</sup>, is audio compression technology that satisfies the demand for high sound quality and high compression rates.

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

## Bit rate

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

In OpenMG Jukebox, the bit rate for recording an audio CD or converting MP3 and WAV format audio files into ATRAC3 format can be chosen from 132 kbps/105kbps/66kbps. 105 kbps means 105000 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, a 105 kbps data offers better sound quality than 66 kbps data, and 132 kbps data offers better sound quality than 105 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.

## Check-in/Check-out

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

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

## MP3

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

---

## **SDMI**

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

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

## **Windows Media Audio**

One of the audio file formats which can be played back on the Microsoft Windows Media Player. Installing the dedicated plug-in software supplied with Network Walkman to your PC allows transferring WMA files from the Windows Media Player 7 to your Network Walkman and playing them back with it.

## **Windows Media Technology**

A technology including a contents management system called Windows Media Rights Manager, which can encrypt contents and distribute them with their conditions for usage, distribution, etc. Audio files supporting Windows Media Technologies (WMT) downloaded via EMD can be imported into and managed by OpenMG Jukebox.

---

# Index

- A**
- Armband ..... 8
  - ATRAC3 ..... 22
  - AVLS ..... 14
- B**
- Battery ..... 7
  - Bit rate ..... 22
- C**
- Check-in ..... 22
  - Check-out ..... 9, 22
  - Connecting ..... 9
- D**
- Display information ..... 11
- E**
- EMD ..... 4, 15, 16
- G**
- Go backward ..... 11
  - Go forward ..... 11
- H**
- Headphones ..... 10
  - HOLD ..... 14
- M**
- MP3 ..... 22
  - MEGA BASS ..... 13
- O**
- OpenMG Jukebox ..... 9, 15, 16, 17, 21, 23
- P**
- Parts and controls ..... 6
  - Playback ..... 10
  - Precautions ..... 18
- R**
- Repeat mode ..... 12
- S**
- SDMI ..... 23
  - Serial number ..... 5
  - Specifications ..... 19
- T**
- Time-out contents ..... 15
  - Transferring the songs ..... 9
  - Troubleshooting ..... 20
- U**
- Unpacking ..... 5
  - USB ..... 9
- V**
- Volume ..... 10, 14
- W**
- WAV ..... 4
  - Windows Media™ Player 7 ..... 4, 16, 17
  - Window Media Technologies (WMT)  
..... 23
  - WMA ..... 4, 16, 23

<http://www.world.sony.com/>