SONY

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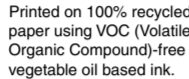# IC Recorder

Operating Instructions

Owner's Record
The model number is located at the rear and the serial number is located inside the battery compartment. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. _____   Serial No. _____

IC RECORDER
ICD-U50/U60/U70

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

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http://www.sony.net/

For the customers in the U.S.A.

INFORMATION
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one 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 Customer Information Services Center 1-800-222-7669 or http://www.sony.com/

Declaration of Conformity

Trade Name:	SONY
Model:	ICD-U50/U60/U70
Responsible Party:	Sony Electronics Inc.
Address:	16530 Via Esprillo, San Diego, CA 92127 U.S.A.
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.
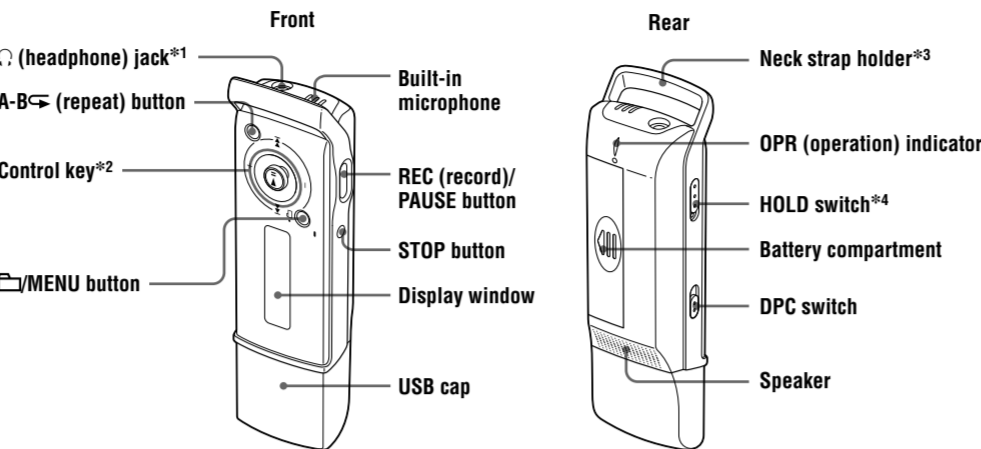
Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

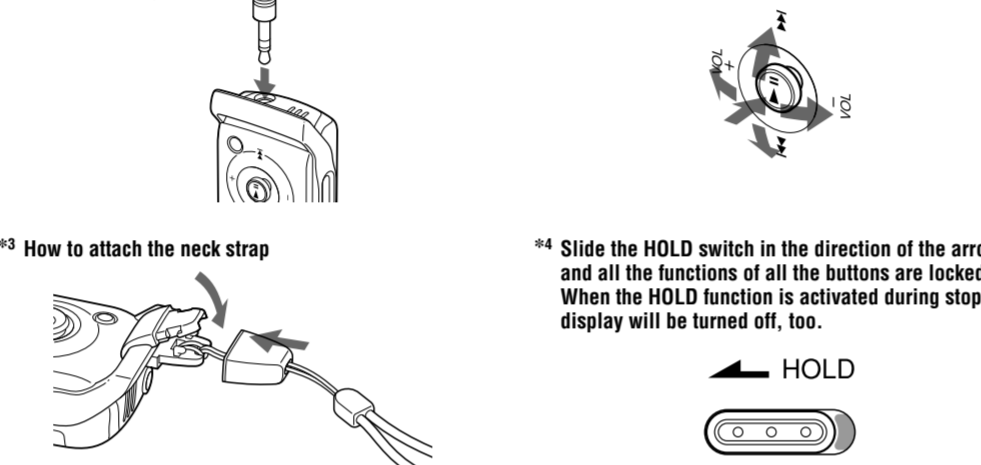Applicable accessories: Headphone

■ Troubleshooting

Before taking the unit for repair, check the following sections. Should any problem persist after you have made these checks, consult your nearest Sony dealer.

The unit does not operate.
• The battery has been inserted with incorrect polarity.
• The battery is weak.
• The buttons are locked with the HOLD switch. (If you press any button, "HOLD" will flash 3 times.)

No sound comes from the speaker.
• The ear receiver or headphones are plugged in.
• The volume is turned down completely.

"MEMORY FULL" or "MESSAGE FULL" flashes and you cannot start recording.
• The memory is full. Erase some of the messages.
• 99 messages have been recorded in the selected folder. Select another folder or erase some of the messages.

Noise is heard.
• An object, such as your finger, etc., accidentally rubbed or scratched the unit during recording so that noise was recorded.
• The unit was placed near an AC power source, a fluorescent lamp or a mobile phone during recording or playback.
• Ear receiver/headphones plug is dirty. Clean the plug.

Recording level is low.
• Set the microphone sensitivity to "MIC SENS:H (high)" using the menu.

Recording is interrupted.
• The advanced VOR function is activated. Set "VOR:OFF" in the menu.

"--:--" is displayed.
• You have not set the clock.

"--Y--M--D" or "--:--" is displayed on the REC DATE or REC TIME display.
• The date and time of recording will not be displayed if you recorded the message when the clock was not set.

The battery life is short.
• The batery life mentioned in "Installing the Battery" is based on playback through stereo headphone(s) with the medium volume level using Sony LR03(SG) alkaline battery. The battery life may shorten depending on the operation of the unit.

You cannot record messages up to the maximum recording time.
• If you record messages in a mixture of HQ, SP and LP modes, the recordable time varies from the maximum HQ mode recording time to the maximum LP mode recording time.
• No more recording can be made when 99 messages each have been recorded in a folder.
• Due to the limitation of the IC recording system, this unit records in the minimum recording unit. If the length of each message cannot be divided by the minimum recording unit, the remaining recording time may decrease by more than the total length of the messages.

The unit does not operate correctly.
• Take out the battery and insert it again.

Please note that recorded messages may be erased during service or repair work.

Index to Parts and Controls

■ Main Unit

Front
- ⌒ (headphone) jack*1
- A-B⇄ (repeat) button
- Control key*2
- ⌂/MENU button
- Built-in microphone
- REC (record)/PAUSE button
- STOP button
- Display window
- USB cap

Rear
- Neck strap holder*3
- OPR (operation) indicator
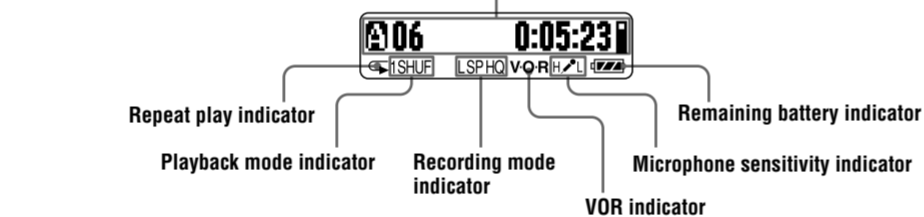- HOLD switch*4
- Battery compartment
- DPC switch
- Speaker

This unit does not have a power on/off switch.

*1 Connect stereo headphone(s) or stereo ear receiver to the ⌒ (headphone) jack. If noise is heard, wipe the headphone/ear receiver plug.

*2 How to use the control key
Use the key to change the menu settings as well as for playback. In the menu mode press the key right or left to select a menu item and press the key (►II) to confirm the setting.

*3 How to attach the neck strap

*4 Slide the HOLD switch in the direction of the arrow, and all the functions of all the buttons are locked. When the HOLD function is activated during stop, the display will be turned off, too.

◄—— HOLD

■ Display Window

Folder indicator (A, B, C, D, E, ♫)/Message number/REC (recording) indicator/Recording time indication/Remaining memory indicator/Total number of messages in a folder/Menu indication/Counter/Remaining time indication/Recording date indication/Current time indication

- Repeat play indicator
- Playback mode indicator
- Recording mode indicator
- Remaining battery indicator
- Microphone sensitivity indicator
- VOR indicator

When recording or playback stops, the display changes from counter to current time, and then disappears in 30 seconds.
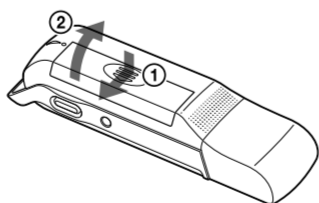
■ Supplied Accessories

Stereo headphone (1)
LR03 (size AAA) alkaline battery (1)
CD-ROM (1)
Neck strap (1)
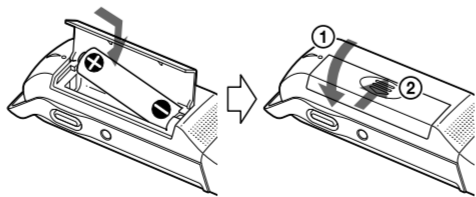Operating instructions (1)
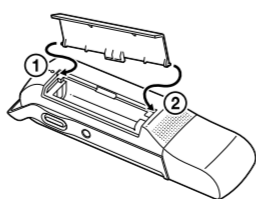

Getting Started

■ Installing the Battery

1 Slide and lift the battery compartment lid.

2 Insert one LR03 (size AAA) alkaline battery with the correct polarity, and close the lid.

If the battery compartment lid is accidentally detached, attach it as illustrated.

Battery life*1

When using a Sony LR03 (SG) (size AAA) alkaline battery

Recording mode	Recording	Playback*2
HQ*3	Approx. 11 hr.	Approx. 13 hr.
SP*4	Approx. 16 hr. 30 min.	Approx. 19 hr.
LP*5	Approx. 16 hr. 30 min.	Approx. 19 hr.
MP3	—	Approx. 8 hr. 30 min.

(hr.: hours / min.: minutes)
*1 The battery life may shorten depending on the operation of the IC recorder.
*2 When playing back through the stereo headphone with the medium volume level
*3 HQ: High quality recording mode
*4 SP: Standard play recording mode
*5 LP: Long play recording mode

! Note
Do not use a manganese battery with this IC recorder.

Battery remaining indicator
The battery indicator on the display shows the battery condition.
When ⊏⊐ flashes, replace the battery with a new one.
When ⊏⊐ flashes and "CHANGE BATTERY" flashes 3 times, the battery is exhausted and the IC recorder will stop operating.

! Notes
• When you replace the battery with a new one, the clock returns to the setting display, or an incorrect date and time appear when you insert the new battery. In this case, set the date and time again. The recorded messages, however, will remain.
• The IC recorder is accessing data while "ACCESS" appears on the display or the OPR indicator flashes in orange. While the IC recorder is accessing data, do not remove the battery. Doing so may damage the data.

■ Setting the Clock

You must set the clock to record the date and time.

1 **Press and hold ⌂/MENU for more than 1 second.**
The unit enters the menu mode.

REC MODE:HQ

2 **Press the control key toward ►►I to display "DATE & TIME>" and press ►II.**
The clock setting display appears.

DATE & TIME>

3 **Press the control key toward ►►I to select the digits of the year and press ►II.**

06Y 1M 1D

4 **Set the month, day, hour and minute in sequence, then press ►II.**
When the minute digits are selected, the clock will be set and the display will return to "DATE & TIME>."

5 **Press STOP to exit from the menu mode.**
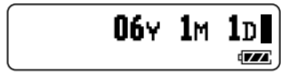
Recording

■ Recording Messages

You can record up to 99 messages in each of the five folders (A, B, C, D and E), a total of 495 messages.

Folders for messages   **Folder for MP3 files**

A B C D E   ♫*

* ♫ is a folder for MP3 files.
If you select ♫ and record messages, the folder will be automatically switched to A, B, C, D or E, whichever has sufficient space for those messages.
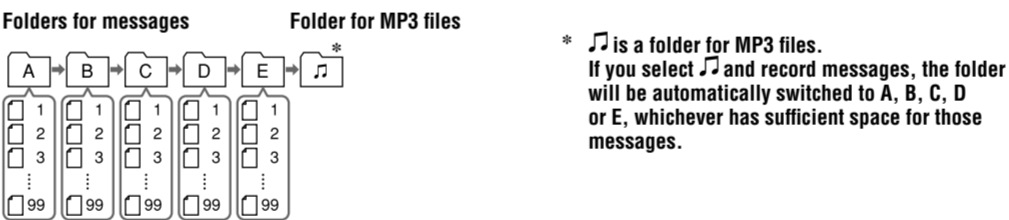
1 **Press ⌂/MENU to select a folder.**

2 **Press REC/PAUSE in the stop mode to start recording.**
The message will be automatically added after the end of the last recorded message.

e.g. | Message 1 | Message 2 | New message | Empty space |

3 **Speak into the built-in microphone.**

4 **Press STOP to stop the recording.**
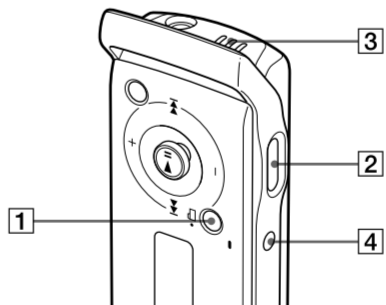
! Notes
• While the OPR indicator is flashing or is lit in orange, do not remove the battery. Doing so may damage the data.
• Noise may be recorded if an object, such as your finger, etc., accidentally rubs or scratches the IC recorder during recording.
• Before making a recording, be sure to check the remaining battery indicator.

To pause recording
Press REC/PAUSE. "PAUSE" flashes. To release pause and resume recording, press REC/PAUSE again.

Monitoring the recording
Connect the headphone supplied or an optional stereo ear receiver to the ⌒ (headphone) jack and monitor the recording. You can adjust the volume with the control key by pressing it toward VOL + or VOL –, but the recording level is fixed.

Selecting the recording mode
Select "HQ", "SP", or "LP" in the "REC MODE:HQ" menu (see "Menu Settings" on the reverse side). To record in better sound quality, select "HQ".

Selecting the microphone sensitivity
Select the microphone sensitivity in the "MIC SENS:H" menu (see "Menu Settings" on the reverse side).

Maximum recording time

The maximum recording time* of all the folders is as follows. You can check the remaining recording time by selecting "REMAIN" in the "DISPLAY>" menu (see "Menu Settings" on the reverse side).
* When deleting Player Plug-in for Windows Media Player and Windows® 2000 Professional, Windows® 98 Second Edition Driver.

	ICD-U50	ICD-U60	ICD-U70
HQ*1	28 hr. 40 min.	57 hr. 30 min.	115 hr. 10 min.
SP*2	76 hr. 30 min.	153 hr. 25 min.	307 hr. 15 min.
LP*3	125 hr. 15 min.	251 hr. 5 min.	502 hr. 45 min.

(hr.: hours / min.: minutes)
*1 HQ: High quality recording mode
*2 SP: Standard play recording mode
*3 LP: Long play recording mode

Remaining memory indicator
During recording, the remaining memory amount indicated decreases.
When nothing is recorded, " ▮ " is displayed.
When the remaining recording time reaches 5 minutes, the remaining memory indicator " ⃞ " flashes.
When the memory is full, recording automatically stops, an alarm sounds, and "MEMORY FULL" will flash, and the remaining memory indicator " ⃞ " will flash. To continue recording, first erase some of the messages.

■ Starting Recording Automatically in Response to the Sound (VOR Function)

Set the VOR (voice operated recording) function to "ON" in the "VOR:OFF" menu (see "Menu Settings" on the reverse side).

Playback/Erasing

■ Playing Back Messages

When playing back a message you have just finished recording, start from Step 2.

1 **Press ⌂/MENU to select the folder you want.**

2 **Press the control key toward I◄◄ or ►►I to select the message number you want to play, and press ►II to start playback.**

3 **Adjust the volume by pressing the control key toward VOL + or VOL –.**

4 **Press STOP to stop playback.**
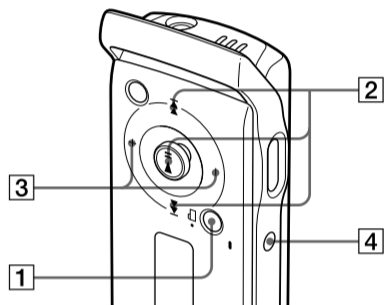
To	Do this
pause playback	Press ►II. To resume playback from that point, press ►II again.
go back to the beginning of the current message	Press toward I◄◄ once.
go back to previous messages	Press toward I◄◄ repeatedly. (During the stop mode, keep the key pressed to go back through the messages continuously.)
skip to the next message	Press toward ►►I once.
skip to succeeding messages	Press toward ►►I repeatedly. (During the stop mode, keep the key pressed to skip the messages continuously.)
search forward/backward*	Keep pressing toward ►►I (forward/cue) or I◄◄ (backward/review) during playback and release the key at the point you wish to resume playback.

* If you keep the control key toward ►►I or I◄◄ pressed, the IC recorder starts to search at higher speed. During cue/review, the counter will be displayed, regardless of the display mode setting. If you keep the control key toward ►►I to the end of the recorded messages, "MESSAGE END" flashes and the IC recorder stops at the beginning of the last message in the folder.

Adjusting the playback speed (DPC: Digital Pitch Control function)
Set the DPC switch to ON.
Set the playback speed in the "DPC: 0%" menu (see "Menu Settings" on the reverse side).

To resume normal playback
Set the DPC switch to OFF.

! Notes
• When the DPC switch is set to ON, the playback sound changes.
• When the DPC switch is set to ON, an MP3 file may be played back at a lower speed than the one you set in the "DPC 0%" menu.

Selecting the playback mode
Change the playback mode in the "VOICE PL MODE>" menu (see "Menu Settings" on the reverse side).

Playing back a specified section repeatedly (A-B Repeat)

1 During playback, press A-B↩ (repeat) briefly to set the starting point (A).

2 While "A-B B?" is flashing, press A-B↩ briefly again to set the finishing point (B).
"A-B REPEAT" appears and the specified section is played back repeatedly.

To stop A-B Repeat playback
Press STOP. The A-B Repeat setting will be cancelled.
To pause A-B Repeat playback, press ►II.

!Notes
• You cannot set A-B Repeat for a section that overlaps two or more messages.
• If you do not set the finishing point (B), the finishing point is automatically set at the end of the message.

■ Erasing

!Note
Once a recording has been erased, you cannot retrieve it.

Erasing messages one by one

1 Select the message you want to erase.

2 Select "ERASE A MSG>" in the menu and press ►II.
"ERASING…." appears on the display and the message is erased.

To cancel erasing
Press STOP before step **2**.

Erasing all messages in a folder

1 Select the folder with the messages you want to erase.

2 Select "ERASE ALL MSG>" in the menu and press ►II.
"ERASING…." appears on the display and all the messages in the folder are erased.

To cancel erasing
Press STOP before step **2**.

!Note
It may take a few minutes to erase the messages, if there are many massages to be erased in a folder.

Using Your IC Recorder with a Personal Computer

System requirements

• IBM PC/AT*[1] or compatible
  – CPU: 266MHz Pentium*[2] II processor or higher
  – RAM: 64 MB or more
  – Hard disk space: 5 MB or more, depending on the size and number of sound files you intend to store
  – USB port
  – Sound board: Sound Blaster 16 compatible
  – Display: High color (16 bits) or more, and 800 × 480 dots or more
• OS: Microsoft® Windows® XP Media Center Edition 2005, Windows® XP Media Center Edition 2004, Windows® XP Media Center Edition, Windows® XP Professional, Windows® XP Home Edition, Windows® 2000 Professional, Windows® Millennium Edition*[3], Windows® 98 Second Edition*[3],*[4] (standard installation)
• Windows Media Player: Ver. 6.4 or higher (your computer must meet the system requirements (operating environment) necessary for using the Windows Media Player)
*[1] IBM, PC/AT are registered trademarks of International Business Machines Corporation.
*[2] Pentium is is registered trademark of Intel Corporation.
*[3] Excluding the People's Republic of China model.
*[4] Microsoft® and Windows® are registerd trademarks of Microsoft Corporation.

■ Connecting the IC Recorder to the Computer

1 Install the driver software into your computer from the supplied CD-ROM (for the use with the Windows 2000 Professional or Windows 98 Second Edition).
Remove the USB cap from the IC recorder and connect the recorder to the USB connector of your computer. Install the driver software from the supplied CD-ROM. For details, refer to "On the supplied CD-ROM" attached.

2 Install the plug-in for playback using a computer into your computer from the supplied CD-ROM.
For details, refer to "On the supplied CD-ROM" attached.

Computer
IC recorder **to USB connector**

☿Tips
• The driver software for the use with the Windows 2000 Professional or Windows 98 Second Edition, and the plug-in software for playback using a computer are also installed in the IC recorder.
• You can also use this IC recorder as a USB mass storage device.

!Note
The IC recorder is communicating with the computer whenever the OPR indicator flashes or is lit in orange. While the IC recorder is communicating with the computer, do not remove the IC recorder from the computer.

■ Playing Back MP3 Files Using the IC Recorder

1 Drag and drop the MP3 files from the computer to the ♫ (MUSIC) folder of the IC recorder.
The number of directory levels allowed for the folder is 2 and the maximum number of folders is 300. The total number of files allowed in the ♫ (MUSIC) folder is 999.

2 Press ⌷/MENU to select "♫."

3 Press the control key toward I◄◄ or ►►I to select a file to play and press ►II.
The selected file starts to play.

4 Press STOP to stop playback.

Maximum recording time of MP3 files*
ICD-U50

Bit rate	Maximum recording time of files
256 kbps	Approx. 2 hr. 10 min.
128 kbps	Approx. 4 hr. 20 min.
48 kbps	Approx. 11 hr. 35 min.

ICD-U60

Bit rate	Maximum recording time of files
256 kbps	Approx. 4 hr. 20 min.
128 kbps	Approx. 8 hr. 40 min.
48 kbps	Approx. 23 hr. 10 min.

ICD-U70

Bit rate	Maximum recording time of files
256 kbps	Approx. 8 hr. 40 min.
128 kbps	Approx. 17 hr. 25 min.
48 kbps	Approx. 46 hr. 30 min.

(hr.: hours/min.: minutes)

* • When deleting Player Plug-in for Windows Media Player and Windows® 2000 Professional, Windows® 98 Second Edition Driver.
  • The maximum recording time varies if files other than the MP3 files are stored in the IC recorder.

!Notes
• If you copy MP3 files to the A, B, C, D, or E folder, the IC recorder cannot recognize the files and the files cannot be played back.
• If the DPC switch is set to ON, the playback sound changes and playback becomes monaural.
• When playing back MP3 files, the playback may not re-start from the point you stopped.

Selecting a playback mode
Select the playback mode in the "MUSIC PL MODE>" menu (see "Menu Settings").

■ Playing Back Messages Using the Computer

1 Drag and drop the messages (files) you want to copy from the folder of the IC recorder to the computer.

2 Double-click the file on the computer to start playback.

Copying messages from the Computer to the IC recorder

1 Drag and drop messages (files) you want to copy from the computer to the A, B, C, D, or E folder of the IC recorder.

!Note
If you copy messages (files) to the ♫ (MUSIC) folder, the IC recorder cannot recognize the messages (files) and the messages (files) cannot be played back.

Menu Settings

■ Making Settings for the Menu

1 Press and hold ⌷/MENU for more than 1 second to enter the menu mode.

2 Press the control key right or left to select the item and then press ►II.

3 Press STOP to exit the menu mode.

Menu settings

Menu item	Settings (*: Initial setting)
REC MODE:HQ	Set the recording mode. HQ*: You can record with high-quality sound. SP: You can record with standard quality sound. LP: You can record for a longer time.
MIC SENS:H	Set the microphone sensitivity. H* (high): To record at meetings or in a quiet and/or spacious place. L (low): To record dictation or in a noisy place.
DISPLAY>	Change the display mode. (Items shown in the playback/stop/recording mode) COUNTER*: Elapsed playback time of one message/ Elapsed playback time of one message /Recording time REMAIN: Remaining time of one message/Remaining recording time/ Remaining recording time REC DATE: Recorded date/ Recorded date/Current date REC TIME: Recorded time/ Recorded time/Current time
VOR:OFF	Set the VOR function. ON: The VOR function is activated. Recording starts when the IC recorder detects sound and stops when no sound is heard ("VOR PAUSE" flashes on the display), eliminating recording during soundless periods. OFF*: The VOR function does not work. **!Note** The VOR function is affected by the sound around you. Set the microphone sensitivity in the menu according to the recording conditions. If recording is not satisfactory after you have changed the microphone sensitivity, or for important recordings, set the VOR function to "OFF."

Menu item	Settings (*: Initial setting)
DPC:0%	When you set the DPC switch to ON, you can adjust the speed of the playback between twice the normal speed (+100%) and half the normal speed (–50%). Set the speed by 10% for + setting ("FAST PLAY" appears) and by 5% for – setting ("SLOW PLAY" appears).
VOICE PL MODE>	Set the playback mode for the message folders. 1 FILE PLAY*: When the playback of one message is finished, the IC recorder stops at the beginning of the next message. 1 FILE REPEAT: One message is played back repeatedly. CONTINUED PLAY: All messages in one folder are played back continuously. **!Note** When you select the ♫ folder, "VOICE PL MODE>" is not displayed.
MUSIC PL MODE>	Set the playback mode for MP3 files. 1 FILE PLAY: When the playback of one file is finished, the IC recorder stops at the beginning of the next file. 1 FILE REPEAT: One file is played back repeatedly. CONTINUED PLAY*: All files in one folder are played back continuously. ALL REPEAT: All files in the ♫ folder are played back repeatedly. SHUFFLE: All files in the ♫ folder are played back in random order repeatedly. **!Note** When you select the A, B, C, D or E folder, "MUSIC PL MODE>" is not displayed.
FORMAT>	Initialize the flash memory. **!Note** To initialize the flash memory, use the IC recorder, not the computer.
DATE & TIME>	Set the clock. (06Y1M1D*)
BEEP:ON	Set for a beep to be heard or not. ON*: A beep will sound to indicate that an operation has been accepted. OFF: No beep sound will be heard.
LED:ON	Turn the OPR indicator on or off during operation. ON*: During recording or playback, the OPR indicator lights or flashes. OFF: The OPR indicator does not light, even during operation. **!Note** When the IC recorder is connected to the USB connector of your computer, the OPR indicator always flashes regardless of the menu setting.
BACK LIGHT:ON	Turn the backlight in the display window on or off. ON*: The backlight in the display window lights up. OFF: The backlight in the display window does not light, even during operation.
ERASE ALL MSG>	All files in the folder will be erased.
ERASE A MSG>	One message will be erased.

Connecting Other Equipment to the IC Recorder

■ Recording Sound on the IC Recorder with Other Equipment

Connect the ⌂ (headphone) jack of the IC recorder to the microphone or line input connector of the other equipment.

To ⌂ (headphone) jack | **Audio connecting cable** | **To microphone or line input connector**

Tape recorder, etc.

Optional audio connecting cable (not supplied)
When connecting to the microphone input connector, use a connecting cable with a resistor as follows.

To the IC recorder	To the other equipment
Stereo mini-plug (with a resistor)	Mini-plug (monaural) (with a resistor)
Stereo mini-plug (with a resistor)	Stereo mini-plug (with a resistor)

When connecting to the line input connector, use a cable without a resistor as follows.

To the IC recorder	To the other equipment
Stereo mini-plug (without a resistor)	Mini-plug (monaural) (without a resistor)
Stereo mini-plug (without a resistor)	Stereo mini-plug (without a resistor)

!Note
Optional audio connecting cables are not sold in Europe.

■ Precautions

On power
• Operate the unit only on 1.5 V DC. Use one LR03 (size AAA) alkaline battery.

On safety
• Do not operate the unit while driving, cycling or operating any motorized vehicle.

On handling
• Do not leave the unit in a location near heat sources, or in a place subject to direct sunlight, excessive dust or mechanical shock.
• Should any solid object or liquid fall into the unit, remove the battery and have the unit checked by qualified personnel before operating it any further.

On noise
• Noise may be heard when the unit is placed near an AC power source, a fluorescent lamp or a mobile phone during recording or playback.
• Noise may be recorded when an object, such as your finger, etc., rubs or scratches the unit during recording.

On maintenance
• To clean the exterior, use a soft cloth slightly moistened in water. Do not use alcohol, benzine or thinner.

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

Backup recommendations
To avoid potential risk of data loss caused by accidental operation or malfunction of the IC recorder, we recommend that you save a backup copy of your recorded messages on a computer, etc.

■ Specifications

Recording media
Built-in flash memory 256 MB (ICD-U50)
512 MB (ICD-U60), 1GB (ICD-U70), Monaural recording
Actual usable capacity may be smaller.

Recording time
ICD-U50 HQ: 28 hours 40 minutes
SP: 76 hours 30 minutes
LP: 125 hours 15 minutes
ICD-U60 HQ: 57 hours 30 minutes
SP: 153 hours 25 minutes
LP: 251 hours 5 minutes
ICD-U70 HQ: 115 hours 10 minutes
SP: 307 hours 15 minutes
LP: 502 hours 45 minutes

Frequency range
HQ: 160 - 6,800 Hz
SP: 100 - 3,400 Hz
LP: 100 - 3,400 Hz
MP3: 20 - 20,000 Hz

Bit rates for MP3 files (kbps)
MPEG Ver. 1 Layer 3:
32, 40, 48, 56, 64, 80, 96, 112, 128, 160, 192, 224, 256, 320
MPEG Ver. 2 Layer 3:
32, 40, 48, 56, 64, 80, 96, 112, 128, 144, 160

Sampling frequencies for MP3 files (kHz)
MPEG Ver. 1 Layer 3:
32.0, 44.1, 48.0
MPEG Ver. 2 Layer 3:
16.0, 22.05, 24.0

Speaker
approx. 10 mm ($^{13}/_{32}$ in.) dia.

Power output
35 mW (when using a built-in speaker)

Output
Headphone jack (stereo minijack) for 8 - 300 ohms headphone(s)/ear receiver

Input/Output
USB connector

Power requirements
One LR03 (size AAA) alkaline battery: 1.5 V DC

Dimensions (w/h/d)
(not incl. projecting parts and controls)
30.0 × 99.7 × 20.0 mm ($1^{3}/_{16}$ × 4 × $^{13}/_{16}$ in.)

Mass (incl. battery)
64 g (2.3 oz)

Optional accessories
Active speaker SRS-T88, SRS-T80

Your dealer may not handle some of the above listed optional accessories. Please ask the dealer for detailed information.

MPEG Layer-3 audio coding technology and patents licensed from Fraunhofer IIS and Thomson.

While basic compatibility between ICD-U50/U60/U70 and the Windows® 98 Second Edition and Windows® Millennium Edition operating systems has been verified, compatibility with these operating systems is not guaranteed now or in the future. Because Microsoft Corporation has ended support for these operating systems, support will not be provided to resolve issues between ICD-U50/U60/U70 and these operating systems. No upgrades to ICD-U50/U60/U70 will be produced to improve support for Windows® 98 Second Edition and Windows® Millennium Edition.

Design and specifications are subject to change without notice.

☿Playback order of MP3 files using the IC recorder
The MP3 files in the ♫ folder copied from the computer to the IC recorder are played back in the order shown, from the highest directory to the lowest (from ① to ⑥), when the "MUSIC PL MODE>" menu is set to "ALL REPEAT."

♫ folder displayed on the computer