

DIGITAL VOICE RECORDER WS-331M WS-321M WS-311M INSTRUCTIONS

INSTRUCTIONS

Thank you for purchasing an Olympus Digital Voice Recorder. Please read these instructions for information about using the product correctly and safely. Keep the instructions handy for future reference.

To ensure successful recordings, we recommend that you test the record function and volume before use.



Introduction

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PUS	INDEX	
BECORDER	Table of Contents	P.4
31M	Safe and Proper Usage	P.6
	Getting Started	P.8
	When Using the Recorder as a Voice Recorder	P.19
	Using the Recorder on Your PC	P.44
	Using the Recorder as a Music Player	P.48
	Feature Common to the Voice Recorder and Music Player	P.72
	Other Practical Use Methods	P.94
ASE VOL	Other Information	P.95

Table of Contents

Introduction	2
INDEX	3
Table of Contents	4
Safe and Proper Usage	6
General Precautions	6

1 Getting Started

Main Features	. 8
Identification of Parts	10
Inserting Battery	12
Power Supply	13
VOICE Mode and MUSIC Mode	14
Setting Time/Date (Time & Date)	17

2 When Using the Recorder as a Voice Recorder

9
22
24
25
26

Recording from External Microphone	
or Other Devices2	8
Playing	0
Noise Cancel Function (Noise Cancel) 3	4
Set the Voice Filter (Voice Filter)	6
Continuous Playback (All Play) 3	8
Locking Files (Lock)4	0
Menu List (VOICE Mode) 4	2

3 Using the Recorder on Your PC

Saving Files in Your PC	44
Operating Environment	45
Connecting to Your PC	46

4 Using the Recorder as a Music Player

Using the Recorder as a Music Player 4	8
Using Windows Media Player 4	8
Importing Content for Listening on the	
Recorder 4	9
Window Names 5	0
Copying Music from CD5	1

Transferring Music File to the Recorder 5	52
Music Playback	55
Select Play Mode (Play Mode)	59
Random Playback (Random)6	51
Increasing the WOW Effect (WOW) 6	63
Selecting Equalizer (EQ)6	66
Moving the Tracks (Move)6	68
Menu List (MUSIC Mode)	70

5 Feature Common to the Voice Recorder and Music Player

Formatting the Recorder (Format)	91
Viewing System Information	
(System Info.)	93

6 Other Practical Use Methods

Using as External Memory	
of the Computer	94

7 Other Information

Alarm Message List	95
Troubleshooting	96
Accessories (Optional)	97
Specifications	98
Technical Assistance and Support 1	00

Safe and Proper Usage

Before using your new recorder, read this manual carefully to ensure that you know how to operate it safely and correctly. Keep this manual in an easily accessible location for future reference.

 The warning symbols indicate important safety related information. To protect yourself and others from personal injury or damage to property, it is essential that you always read the warnings and information provided.

General Precautions

- Do not leave the recorder in hot, humid locations such as inside a closed automobile under direct sunlight or on the beach in the summer.
- Do not store the recorder in places exposed to excessive moisture or dust.
- Do not use organic solvents such as alcohol and lacquer thinner to clean the unit.
- Do not place the recorder on top of or near electric appliances such as TVs or refrigerators.
- Avoid recording or playing back near cellular phones or other wireless equipment, as they may cause interference and noise. If you experience noise, move to another place, or move the recorder further away from such equipment.
- Avoid sand or dirt. These can cause irreparable damage.
- Avoid strong vibrations or shocks.
- Do not disassemble, repair or modify the unit yourself.

- Do not operate the unit while operating a vehicle (such as a bicycle, motorcycle, or go-cart).
- Keep the unit out of the reach of children.

<Warning regarding data loss>

Recorded content in memory may be destroyed or erased by operating mistakes, unit malfunction, or during repair work.

It is recommended to back up and save important content to other media such as a computer hard disk.

Any liability for passive damages or damage of any kind occurred due to data loss incurred by a defect of the product, repair performed by the third party other than Olympus or an Olympus authorized service station, or any other reasons is excluded from the Olympus's liability.

Batteries

▲Warning

- Batteries should never be exposed to flame, heated, short-circuited or disassembled.
- Do not attempt to recharge alkaline, lithium or any other non-rechargeable batteries.
- Never use any battery with a torn or cracked outer cover.
- Keep batteries out of the reach of children.
- If you notice anything unusual when using this product such as abnormal noise, heat, smoke, or a burning odor:
 - (1) remove the batteries immediately while being careful not to burn yourself, and;
 - (2) call your dealer or local Olympus representative for service.

Main Features

This product can be used to record meetings or notes, for use in conferences and other business settings, and for language studies. It can also be used as a digital music player. This recorder features a two-part design. The battery compartment separates from the main unit to expose a USB terminal, for direct connection to your PC.

1

Main Features of the Digital Voice Recorder

 The recorder stores highly compressed WMA (Windows Media Audio) format voice messages in integrated flash memory. (PSP P. 19)

It can also play back WMA and MP3 (MPEG-1/MPEG-2 Audio Layer-3) format files. (INST P. 30)

- It has a built-in Variable Control Voice Actuator (VCVA) function. (
 P. 22)
- The Low Cut Filter minimizes air conditioner noise and other similar noises while recording. (reg P. 26)
- A Noise Cancel function ([™] P. 34) and a Voice Filter function ([™] P. 36) cut noise and enable clear audio playback.
- You can choose one of three stereo or three monaural recording modes. (INP. 24)

Recording modes	WS-331M (2GB)	WS-321M (1GB)	WS-311M (512MB)	
ST XQ	35 hours 30 minutes	17 hours 40 minutes	8 hours 45 minutes	
ST HQ	71 hours 00 minutes	35 hours 25 minutes	17 hours 40 minutes	
ST SP	142 hours 05 minutes	70 hours 55 minutes	35 hours 25 minutes	
HQ	142 hours 05 minutes	70 hours 55 minutes	35 hours 25 minutes	
SP	279 hours 35 minutes	139 hours 40 minutes	69 hours 40 minutes	
LP	555 hours 45 minutes	277 hours 35 minutes	138 hours 30 minutes	



Available recording time may be shorter if many short recordings are made. (The displayed available recording time and recorded time are approximate indications.)



- It features various repeat functions.
 (INP P. 59, P. 78)
- Index mark and temp mark features allow you to quickly find desired locations. (FSP P. 76)
- The playback speed can be controlled as preferred. (INP P. 84)

Main Features of the Digital Music Player

- You can play back music files in WMA and MP3 format. (
 P. 55)
 - The WS-331M can hold about 500 songs; the WS-321M about 250, and the WS-311M about 125. (at 128 kbps, 4 minutes per song)
- It has built-in WOW XT. (I P. 63)
- You can change the playback equalizer settings. (INP. 66)



- Connecting this recorder directly to the USB port links up with your PC. The data can be transferred or saved without USB cable or driver software. (FOR P. 46)
 - This recorder is compatible with USB 2.0, enabling fast data transfer to a computer.
- This USB storage class support recorder can be utilized as external memory to read and save the data. (EPP P. 94)
 - By connecting the computer with the USB, pictures, text data, etc. can be saved, and utilized to carry data.

Identification of Parts



- 1 EAR (Earphone) jack
- 2 MIC (Microphone) jack
- **③** Built-in stereo microphone (R)
- 4 REC (Record) button
- **(5)** STOP button
- 6 PLAY button
- **7** Built-in speaker
- ⑧ USB terminal
- 9 VOL (+) button
- 10 **I** button
- 1 VOL (–) button
- 12 FOLDER/INDEX button

- **13 ERASE button**
- **14 OK/MENU button**
- 15 I ◄ button
- 16 Display (LCD panel)
- 17 Record/Play indicator light
- 18 Built-in stereo microphone (L)
- **19 USB access indicator light**
- 20 Strap hole
- 21 HOLD switch
- 22 Mode (VOICE/MUSIC) switch
- 23 RELEASE (Release) button
- 24 Battery cover

I

Display (LCD Panel)

VOICE mode display



MUSIC mode display



-9

- Folder indicator
- VCVA (Variable Control Voice Actuator) indicator
- 8 Record mode indicator
- Ocharacter information display
- Microphone sensitivity indicator
- 6 Erase lock indicator
- Low Cut Filter indicator
- O Playback effect indicator

- Battery indicator
- Current file number
- Total number of recorded files in the folder
- Memory remaining indicator (E/ F bar)
- Title and artist name indicator
- Play position bar indicator







Lightly press down on the arrow and slide the battery cover open.

Insert size-AAA alkaline battery, observing the correct polarity.

Close the battery cover completely by pressing to the direction (A), then sliding to the direction (B).

If the "hour" indicator flashes in the display, see "Setting Time/ Date (Time & Date)" (Fig P. 17).

Replacing the Battery

The battery indicator on the display changes as the battery loses power.



When **a** appears on the display, replace the battery as soon as possible.

When the battery is too weak, **•** "Battery Low" appears on the display and the recorder shuts down. When changing battery, AAA alkaline battery or Olympus Ni-MH battery is recommended.

Ni-MH Rechargeable Battery

Optional Ni-MH rechargeable batteries from Olympus can be used for the recorder. Use them with the BU-400 Olympus Ni-MH Rechargeable Battery Charger (Europe only) (res P. 97).

Notes

- · Manganese battery may not be used in this recorder.
- Be sure to stop the recorder before replacing the battery. Unloading the battery while the recorder is in use may corrupt the file. If you are recording into a file and the battery runs out, you will lose your currently recorded file because the file header will not be able to close. It is crucial to change the battery once you see only one hash mark in the battery indicator.
- If it takes longer than 15 minutes to replace the dead battery or if you take the battery in and out repeatedly at short intervals, you may have to reset the time when you have loaded a fresh battery.
- Remove the battery if you are not going to use the recorder for an extended period of time.
- When playing a voice/music file, the recorder may be reset due to the reduction of the voltage output of the battery depending on the volume level even if m is displayed in the battery indicator. In this case,
- 2 lower the volume of the recorder.

When the recorder is not being used, turn the power off to reduce battery consumption to a minimum. Even if the power is turned off, existing data, mode settings, and clock settings will be maintained.



Turning On the Power

Slide the **HOLD** switch in the direction opposite that indicated by the arrow.

The display will turn on and the power will be turned on. The resume function will bring the recorder back to the stop position in memory before power was turned off. 1



Turning Off the Power

Slide the **HOLD** switch in the direction indicated by the arrow while the recorder is not in operation.

The display shuts off and the power will be turned off.

The resume function remembers the stop position before the power is turned off.



- Standby Mode and Display Shut Off

If the recorder is stopped/not used for over 5 minutes after it is turned on, it goes into standby (power-save) mode, and the display shuts off. To exit standby mode and turn on the display, press any button. This device can be used as a voice recorder or as a music player. For recording and playing back voice recordings, set the mode switch to VOICE. For listening to music, set the mode switch to MUSIC.



VOICE Mode

Slide the mode switch to the **VOICE** position.

The recorder provides five folders, named **A** through **E**, for storing audio data. The files like recorded audio or language files transferred from a PC, are stored in these folders as individual files. Up to 200 files can be saved in each folder.

File names will be automatically created for files recorded by this recorder.

WS330001.WMA

— Extension

File number: A serial number automatically assigned by a Digital Voice Recorder.

_ User ID: The name that has been set on the Digital Voice Recorder.

List display

Α

Current folder and files recorded in this folder are displayed.

01/120

A/ 5M 24D AN

WS330002 WMA

WS330003.WMA WS330004.WMA Current folder

Scroll bar (appears when the whole contents cannot be displayed.)

File being selected (The file name will be highlighted, and the file name, and date and time the file was recorded, will scroll across the screen once.)





MUSIC Mode

Slide the mode switch to the **MUSIC** position.

This recorder can save the music files (WMA, MP3 files) transferred from the PC in the 2 music folders, the original "Root" folder and its subsidiary "Music" folder.

Also, this recorder can create the folders in up to 2 lavers within the "Music" folder. It is convenient to manage the multiple albums with the same artist name. Up to 200 files can be saved in each folder.



Notes

- Up to 128 folders including "Root" and "Music" folders can be operated on this recorder.
- · When using Windows Media Player 10, click [Start Sync] instead of setting the synchronization options. All the files will be transferred to the part (A) above (197 P. 52).

How to Select a File



Meaning of Icons in this Manual

Set the mode switch to VOICE before operating the recorder.



Set the mode switch to MUSIC before operating the recorder.



Convenient features that can be used with both the Voice Recorder and Music Player.

Setting Time/Date (Time & Date)

If you set the date and time beforehand, the information when the file is recorded is automatically stored for each file. Setting the date and time beforehand enables easier file management.

The hour indicator will flash automatically when you load a battery before using the recorder for the first time, or after the recorder hasn't been used for a long time. Proceed from step 1.









Select the item from "hour", "minute", "year" "month" and "day" with a flashing point.

- Press the + or button to set. Follow the same steps by pressing the ►►I or I<◄ button to select the next item,

and press the + or - button to set.





• You can choose between 12 and 24 hour display by pressing the FOLDER button while setting the hour and minute.

Example: 10:38 P.M. 10:38 PM \leftrightarrow 22:38 (Initial setting)

• You can choose the order of the year, month, day by pressing the FOLDER button while setting them.

Example: January 7, 2007

→ 1M 7D 2007Y → 7D 1M 2007Y → 2007Y 1M 7D → (Initial setting)



Press the **OK** button to complete the setup screen.

The clock will start from the set date and time. Press the OK button according to the time signal.

Press the **STOP** button to close the menu.

Note

• If you press the OK button during the setup operation, the recorder will save the items that were set to that point.

Changing the Time/Date

Press and hold the STOP button while this recorder is in stop mode to display the "Time & Date". If the "Time & Date" is not correct, set it using the procedure below.





The "Menu" screen opens (I P. 42).

- Press the + or button to choose "Sub Menu".
- Press the OK or ►►I button.



Press the + or - button to choose "Time & Date".

Press the **OK** or ►►I button.

The hour indicator flashes, indicating the start of the Time/Date setup process.

The following steps are the same as Step 1 through Step 4 of "Setting Time/Date (Time & Date)" (ESP P. 17).



Recording

Before starting recording, select a folder between Folder A to Folder E. These five folders can be selectively used to distinguish the kind of recording; for example, Folder A might be used to store private information, while Folder B might be dedicated to holding business information.

Newly recorded audio will be saved as the last file in the selected folder.

a Current folder

recording.





Press the FOLDER button to choose a folder in which to make a recording.

Every time the FOLDER button is pressed, folders will switch.

A 01/119 WS330001. WS330002.WMA WS330003.WMA WS330004.WMA

2



The record/play indicator light glows red. Turn the built-in stereo microphone in the direction to be recorded.

The display changes depending on the recording mode (
P. 24).

- b Current recording mode
- C Recording elapsed time
- d Memory remaining indicator (E/F bar) (the bar indicates remaining memory)
- Level meter (varies according to the sound) volume being recorded)

Every time the OK button is pressed while recording, "Recording elapsed time" and "Remaining recording time" cycles in the location indicated by \bigcirc .

Press the **STOP** button to stop recording.

TT**120**/120 b l and E 🔳 (C)-35 M 1 2 S

Display in the stereo recording mode



Display in the monaural recording mode

Notes

- To ensure recording from the beginning, start speaking after you see the red record/play indicator light on.
- A beep will sound when remaining recording time reaches 60 seconds, 30 seconds, and 10 seconds while recording.
- When remaining recording time is less than 60 seconds, the record/play indicator light starts flashing in red. When the recording time is decreasing to 30 or 10 seconds, the light flashes faster.
- "Memory Full" or "Folder Full" will be displayed when the memory or folder capacity is full. Delete any unnecessary files before recording any further (Fig P. 72).
- If the REC button is pressed while the mode switch is set to MUSIC, "Music Mode" will flash on the screen. Set the mode switch to VOICE before recording (*** P. 14).

2



Pause

- Press the **REC** button while recording.
 - "Rec Pause" will flash on the display.
- The recorder will time out after 1 hour when left in "Rec Pause".





Resume Recording

Press the **REC** button again.

Recording will resume at the point of interruption.



Listening While Audio is Recorded



If you start recording after inserting the earphone into the EAR jack on the recorder, you can hear the sound being recorded. The sound volume on the recording monitor can be adjusted by pressing the VOL (+) or VOL (-) button.

Connect the earphone to the EAR jack on the recorder.

After recording has started, you can hear the sound being recorded through the earphone. If the earphone is connected, no sound will come from the speaker.

Notes

- Recording level cannot be controlled using the volume button.
- When using the earphones, do NOT set the volume too high. Listening at very high volume may lead to hearing loss.
- Do not place earphones near a microphone as this may cause feedback.



When the microphone senses that sounds have reached a preset threshold volume level, the built-in Variable Control Voice Actuator (VCVA) starts recording automatically, and stops when the volume drops below the threshold level.

The VCVA feature extends recording time and conserves memory by stopping recording during silent periods, which helps the playback to be more efficient.



While the recorder is stopped, press the **MENU** button for 1 second or longer.

The "Menu" screen opens (1887 P. 42).

Menu Rec Menu Play Menu Beep & Display Sub Menu

- Press the OK or ►►I button. The "Rec Menu" screen opens.
- Press the + or button to choose "VCVA".



- Press the OK or ►►I button. The VCVA setup process begins.
- Press the + or button to choose between "On" and "Off".

On: Will start recording in VCVA mode. **Off**: Will resume recording in normal mode.

Press the **OK** button to complete the setup screen.

If the I button is pressed, the setting will be canceled and it will return to the "Rec Menu" screen.



Using the Variable Control Voice Actuator (VCVA)





Press the **STOP** button to close the menu.

If it is set to "On", **VEVA** will appear on the display.

 WCVA (Variable Control Voice Actuator) indicator

Press the **REC** button to start recording.

When the sound volume is lower than the preset threshold sound level, recording automatically stops after 1 sec approximately, and "Standby" flashes on the display. The record/play indicator light glows red when recording starts and flashes when recording pauses.

ⓐ <u>Vava</u> **120**/120 **00** M **00** s 1H27M53s



Press the ►►I or I◄◄ button adjust the pause sound level.

The VCVA level can be set to any of 15 different values. The higher the value, the more sensitive the recorder to sounds. At ^(b) the highest value, even the faintest sound ^(c) will activate recording.

The VCVA pause sound level can be adjusted according to the ambient (background) noise.

- (b) Level meter (varies according to the sound volume being recorded)
- © Start level (moves to the right/left according to the set level)



2

Notes

- The start/stop actuation level also varies depending on the selected microphone sensitivity mode (# P. 25).
- If the starting level is not adjusted within 2 seconds, the display will return to the previous.
- If the surrounding noise is loud, the starting sensitivity of the VCVA can be adjusted according to the recording situation.
- To ensure successful recordings, prior testing and adjustment of the start/stop actuation level is recommended.



The recording mode can be chosen from ST XQ (stereo extra high quality sound recording), ST HQ (stereo high quality sound recording), ST SP (stereo standard recording), HQ (high quality sound recording), SP (standard recording), and LP (long-term recording).

While the recorder is stopped,





The "Rec Menu" screen opens.





- Press the OK or ►►I button.
- The recording mode setup process begins.
- Press the + or button to select the recording mode.





Press the **OK** button to complete the setup screen.

If the I button is pressed, the setting will be canceled and it will return to the "Rec Menu" screen.

Press the **STOP** button to close the menu.

(a) Record mode indicator

Press and hold the STOP button while the recorder is stopped to check "Remaining Memory" and "Remaining Recording Time" in the selected recording mode.



Notes

- When a meeting and lecture is to be recorded clearly, set other than LP mode to record.
- When an external monaural microphone is used while the recorder is set to ST XQ, ST HQ, or ST SP mode, audio will be recorded to the L channel only.

2

Recording Modes (Rec Mode)



Microphone Sensitivity (Mic Sense)

Microphone sensitivity is adjustable to meet recording needs.







- While the recorder is stopped. press the **MENU** button for 1 second or longer.
- The "Menu" screen opens (
 P. 42).
- Press the **OK** or **D** button. The "Rec Menu" screen opens.
- Press the + or button to choose "Mic Sense".





- Press the **OK** or **▶** button.
- The microphone sensitivity setup process begins.
- Press the + or button to choose between "Conf" and "Dict".

Conf: High-sensitivity mode that records sounds in all directions.

Dict: Low-sensitivity mode suited for dictation.

Press the **OK** button to complete the setup screen.

If the I button is pressed, the setting will be canceled and it will return to the "Rec Menu" screen.

- Press the STOP button to close the a menu.
 - a Microphone sensitivity indicator





Note

· When the speaker's voice is to be recorded clearly, set to Dict (dictation) mode and move the built-in stereo microphone close to the speaker's mouth (5 to 10 cm / 2 to 4 inches) and record.



The recorder has a Low Cut Filter function to minimize low-frequency sounds and record voices more clearly. This function can reduce noise from air conditioners, projectors and other similar noises.



- While the recorder is stopped, press the **MENU** button for 1 second or longer. The "Menu" screen opens (FF P. 42).
- Press the OK or ►►I button. The "Rec Menu" screen opens.
- Press the + or button to choose "Low Cut Filter".





Press the OK or ►►I button.

The Low Cut Filter setup process begins.

Press the + or - button to choose between "On" and "Off".

On: Low Cut Filter will be turned on. Off: Low Cut Filter will be canceled.



Press the **OK** button to complete the setup screen.

If the I button is pressed, the setting will be canceled and it will return to the "Rec Menu" screen.

- Press the STOP button to close the menu.
- If it is set to "On", \mathbf{X} will appear on the display.
- a Low Cut Filter indicator



Recommended Settings by Recording Condition

	Recommended settings			
Recording condition	Recording Mode	Microphone Sensitivity	Low Cut Filter	
Conferences with large crowds and lectures in large rooms.	ST XQ	Conf		
Meetings and business negotiations with a small number of people.	ST XQ, ST HQ, ST SP	ST HQ, ST SP		
Dictation with a lot of background noise.	ST XQ, ST HQ, HQ	Dict		
Music playing, wild birds singing, and railway sounds.	ST XQ	Microphone Sensitivity*	Off	
Dictation in a quiet environment.	There is no particular recommendation. Choose a setting for recording.			

* Set the microphone sensitivity according to the volume being recorded.



Recording from External Microphone or Other Devices

To MIC (microphone) jack



Recording with External Microphone

Connect the external microphone to the microphone jack of the recorder.

When the external microphone is connected to the microphone jack of the recorder, the built-in microphone will not operate.

Applicable External Microphones (optional)

Stereo microphone: ME51S

The built-in large-diameter microphone enables sensitive stereo recording. Stereo recording is available only in ST XQ, ST HQ or ST SP modes.

Highly sensitive noise-cancellation monaural microphone: ME52

This microphone is used to record sound at a distance while minimizing surrounding noise.

• Noise-Cancellation monaural microphone: ME12 (Dictation microphone)

Used to get clear recordings of your own voice by reducing the effects of ambient noise.

• Tie clip microphone: ME15 (Monaural)

Small concealing microphone with a tie-clip.

Telephone pickup: TP7 (Monaural)

Earphone type microphone can be plugged into your ear while phoning. The voice or conversation over the phone can be clearly recorded.



Notes

- Use the connecting cord sold separately for dubbing (KA333) to connect the recorder with other devices.
- The detailed input levels cannot be adjusted with this recorder. When you connect the recorder to an external device, execute a test recording and adjust the output level of the external device.
- A microphone with plug-in power, which receives the power supply from this recorder, can be used.
- When the external stereo microphone is inserted while set in HQ, SP, and LP modes, it enables recording
 only with the L channel microphone.
- When an external monaural microphone is used while the recorder is set to ST XQ, ST HQ, or ST SP mode, audio will be recorded to the L channel only.









Press the **FOLDER** button to choose a folder.

Every time the FOLDER button is pressed, folders will switch.

Press the + or - button to choose the file that you want to play.

In the list display, use the + and – buttons to place the cursor on the desired file. Press the \rightarrow button in the list display to change the screen to the file display. In the file display, press the \rightarrow or \rightarrow

button to select a file. If you want to return from the file display to the list display, press the FOLDER button.





List display



File display



The record/play indicator light glows green.

- a Play position bar indicator
- **b** Current playback time
- © File length

You can change the playing speed by pressing the PLAY button while the recorder is playing back (FSF P. 84).

Press the + or - button to select the proper sound volume.

The display shows the volume level. You can choose between 0 and 30.

d Volume level meter





2 Playing



Press the **STOP** or **OK** button at any point you want to stop the playback.

Stop a file play back at any point. Press the PLAY or OK button to start playing back from where it was stopped.

Press and hold the STOP button while this recorder is in stop mode to display the remaining memory.



2



Forwarding

Press and hold the **>>**I button while the recorder is stopped in the file display.

If you release the button, it will stop. Press the PLAY or OK button to start playing back from where it was stopped.



(a) File length

Press and hold the ►► button while playing a file.

- ➡ When you release the ►►I button the recorder will resume normal playback.
- If there is an index mark or temp mark (IPP P. 76) in the middle of the file, the recorder will stop at that location.
- The recorder stops when it reaches the end of the file. Continue pressing the
 I button to proceed with the cue from the beginning of the next file.

Rewinding

Press and hold the I button while the recorder is stopped in the file display.

If you release the button, it will stop. Press the PLAY or OK button to start playing back from where it was stopped.



ⓐ File length

Press and hold the I

- When you release the I d button the recorder will resume normal playback.
- If there is an index mark or temp mark in the middle of the file, the recorder will stop at that location.
- The recorder stops when it reaches the beginning of the file. Continue pressing the I
- If the I button is kept pressed while the recorder is stopped at the start of the top file, the recorder will fast rewind starting from the end of the last file.

Locating the Beginning of the File

Press the **>>**I button during playback, slow playback, or fast playback.

The next file is cued and playback starts at the previously set speed.

Press the Idea button during playback, slow playback, or fast playback.

The file being played is cued and playback starts at the previously set speed.*

Press the I dutton 2 times during playback, slow playback or fast playback.

- The previous file is cued and playback starts at the previously set speed.*
- If there is an index mark or temp mark in the middle of the file, the recorder will stop at that location.
- * If the previous playback is set ($^{\mbox{\tiny EW}}$ P. 82), the recorder will playback in reverse skip for the set time.

Playing







Playback Through Earphone

An earphone can be connected to the EAR jack of the recorder for listening.

When the earphone is used, the recorder speaker will be switched-off.

Notes

- To avoid irritation to the ear, insert the earphone after turning down the volume level.
- When you listen with the earphone during playback, do not raise the volume too much. It may cause hearing impairment and decrease in hearing ability.





If recorded audio is difficult to understand because of noisy surroundings, adjust the Noise Cancel setting level. Noise will be reduced in the file when it's played back for better sound quality.



While the recorder is stopped or during playback, press the **MENU** button for 1 second or longer. The "Menu" screen opens (INP 42).

If the recorder is stopped, proceed to Step 2. If the recorder is playing, proceed to Step 4.

Press the + or - button to choose "Play Menu".







- Press the OK or ►►I button. The "Play Menu" screen opens.
- Press the **+** or **-** button to choose "Noise Cancel".



Press the OK or ►►I button.

The noise cancel setup process begins.

Press the + or - button to choose from "High", "Low" and "Off".

If the recorder goes to the menu screen during playback, move the cursor to change playback sound accordingly.





Press the **OK** button to complete the setup screen.

If the I button is pressed, the setting will be canceled and it will return to the "Play Menu" screen.

Press the **STOP** button to close the [®]-

If the recorder goes to the menu screen during playback, press the I

If it is set to anything other than "Off", M will appear on the display.

(a) Noise Cancel indicator



Notes

- If you set Noise Cancel to "Low" or "High", the setting remains valid until it's set to "Off".
- The Noise Cancel is not available when either the Voice Filter (197 P. 36) or Playback Speed (197 P. 84) is set.
- If the Noise Cancel is enabled, the Voice Filter and Playback Speed are not available.



The recorder has a Voice Filter Function to cut low and high frequency tones during normal, fast, or slow playback, and enable clear audio playback.



- While the recorder is stopped or during playback, press the MENU button for 1 second or longer. The "Menu" screen opens (I P. 42). If the recorder is stopped, proceed to Step 2. If the recorder is playing, proceed to Step 4.
- Press the + or button to choose "Play Menu".







The "Play Menu" screen opens.

Press the + or – button to choose "Voice Filter".





Press the OK or ►►I button.

The voice filter setup process begins.

Press the + or - button to choose between "On" and "Off".

On: Voice Filter will be turned on. **Off**: Voice Filter will be canceled.

If the recorder goes to the menu screen during playback, move the cursor to change playback sound accordingly.




Press the **OK** button to complete the setup screen.

If the I button is pressed, the setting will be canceled and it will return to the "Play Menu" screen.

Press the **STOP** button to close the **e**-menu.

If the recorder goes to the menu screen during playback, press the I

If it is set to "On", $[\!\![\mathbf{V}]\!]$ will appear on the display.

a Voice Filter indicator



Notes

- · Once the Voice Filter is set to "On", it will remain enabled until set to "Off".
- The Voice Filter and Noise Cancel (187 P. 34) features cannot be used at the same time.



This function allows you to listen to all your recordings of one folder in one go without any stop between the files.





Menu

Rec Menu

Play Menu Beep & Display Sub Menu

Play Menu

Noise Cancel Voice Filter

Play Speed All Play

38

2



Press the + or - button to choose between "On" and "Off".

On: Continuous playback.

Off: Returns to playback with stop between single files.



Press the **OK** button to complete the setup screen.

If the I button is pressed, the setting will be canceled and it will return to the "Play Menu" screen.

Press the **STOP** button to close the menu.

If the recorder goes to the menu screen during playback, press the I

Note

• After playback of last file in the folder, "End" appears on the screen and playback stops automatically.



Locking a file keeps important data from being accidentally erased. Locked files are not erased when you choose to erase all files from a folder (F P. 73).



Locking Files (Lock)



Press the + or - button to choose between "On" and "Off".

On: Locks the file and prevents it from being erased.

Off: Unlocks the file and allows it to be erased.

Press the **OK** button to complete the setup screen.

If the I a button is pressed, the setting will be canceled and it will return to the "Sub Menu" screen.

Press the **STOP** button to close the menu.

(a) Erase lock indicator







🔄 Menu List (VOICE Mode)

Below is a map of the menu structure seen when the menus are entered while the recorder is stopped. If the MENU button is pressed and held for more than one second during playback, "Back Space", "Noise Cancel", "Voice Filter", "Play Speed", and "All Play" settings can be set, without interrupting playback.

Menus highlighted with are common to both "VOICE" and "MUSIC" modes, and can be selected even when the mode switch is set to "MUSIC".



Menu List (VOICE Mode)

Menu		Setting	Ref. Page
Beep & Display	Beep	On, Off	P. 87
	Backlight	On, Off	P. 88
	Contrast	01-12	P. 89
	LED	On, Off	P. 90
Sub Menu	Lock	On, Off	P. 40
	Time & Date	In order of hour, minute, year, month, and day	P. 17
	Format	Start, Cancel	P. 91
	System Info.	Capacity, Model Name, Version	P. 93

Menu List (VOICE Mode)

2

- The recorder will stop if you leave it idle for 3 minutes during a menu setup operation, when a selected item is not applied.
- If the menus are entered during playback but 8 seconds elapse with no buttons being pressed, the screen will return to the playback display.

Saving Files in Your PC

By being connected to a PC, the recorder enables you to do the following:

- You can save (back-up) the files stored in the recorder on your PC. Also, you can transfer the files from your PC to the recorder.
- Using the Windows Media Player, the stored WMA or MP3 files on your PC can be transferred and played back on this recorder.
- Playback voice files on your PC.

The voice file recorded by this recorder can be played on your PC using the Windows Media Player or the simplified playback software, DSS Player - Lite, which can be downloaded for free from the website of the Olympus. Using the DSS Player - Lite enables you to search the index marks that are marked on the voice files. Free DSS Player-Lite can be downloaded from Olympus homepage.

http://www.olympusamerica.com/cpg_section/cpg_downloads.asp http://olympus-europa.com/consumer/2590_software.cfm

Precautions on Using the Recorder Connected to a PC

- When you are downloading a file from the recorder or uploading a file to the recorder, do not remove the USB connecter even if the screen is indicating you can. Data is still being transferred while the record/play indicator light and USB access indicator light are blinking in red. When removing the USB connecter, be sure to follow the description in rest. P. 47. If the USB connecter is removed before the drive is stopped, data may not be successfully transferred.
- On a PC, do not format the drive of the recorder. Initialization is not successfully achieved on a PC. For initialization, follow the instructions in the Sub Menu screen of the recorder (res P. 91).
- Never make an operation such as deleting, moving or changing the name of this recorder's 5 voice folders, music folders or management files in each folder using the file management tool such as "Explorer".

The order of files may be changed or files may become unrecognizable.

- Data can be written or uploaded to the recorder even though the attribute of the recorder drive is shown as read only by the operating system of the PC.
- As the noise may cause adverse effects on electronics devices nearby the recorder, unplug the external microphone and earphone when you connect the recorder to a PC.

Operating Environment

PC:

IBM PC/AT compatible PC

Operating System: Microsoft Windows 2000/XP/Vista

USB port:

One free port

Others:

Internet environment when accessing to the music information site.

Notes

- The support service will not cover if your PC has been updated from Windows 95/98/Me to Windows 2000/XP/Vista.
- Any failure on a self-modified PC will not be covered under the operational warranty.

Connecting to Your PC

Connecting to Your PC



With the recorder stopped, slide the **HOLD** switch to the HOLD position, and turn the recorder off.

The display will turn off.

- Detach the battery compartment pressing the **RELEASE** button of the rear side.
- Connect the recorder's USB terminal to a PC USB port or USB hub.

"Remote" is displayed on recorder if the USB is connected.

Launch My Computer, in the window, the recorder will appear as a removable disk.



Transfer the voice files to your computer.

The 5 voice folders of this recorder are displayed as "DSS_FLD**A**", "DSS_FLD**B**", "DSS_FLD**C**", "DSS_FLD**D**" and "DSS_FLD**E**", and the recorded voice files are saved in WMA format in these folders.

You can copy them to any folder on your computer.

While transmitting data, "Busy" is displayed, and the record/ play indicator light and USB access indicator light flashes red. If you double-click on the file, Windows Media Player will be launched and playback will start.

- If you are using Windows 2000, Windows Media Player must be installed on the PC.

Disconnecting from Your PC



compartment.

- NEVER disconnect the USB while the record/play indicator light and USB access indicator light are flashing in red. If you do so, the data may be destroyed.
- Refer to the user's manual for your PC regarding the USB port or USB hub on your PC.
- Be sure to push the USB connector all the way in. Otherwise, the recorder may not operate properly.
- Use the supplied USB extension cable depending on situations.
- Do not use USB extension cables other than the supplied cable. Using cables from other manufacturers could result in damage to the recorder. Do not use the supplied USB extension cable with devices from other manufacturers

Using the Recorder as a Music Player

The recorder supports music files in WMA and MP3 formats, which can be transferred from the PC to the corresponding music folder of the recorder.

Using Windows Media Player

By using Windows Media Player, music files from music CDs can be converted (ripped) (P. 51) and music files that you have bought from any music distribution sites can be easily transferred to the recorder (IST P. 52).



Copyright and Copyright Protection Feature (DRM)

By the Copyright Act, any voice/music files and music CDs downloaded from the Internet without the copyright holder's permission may not be reproduced, distributed, publicized/republicized on the Internet, or converted into WMA or MP3 files for the purpose of commercial business or sale.

A WMA file may be provided with DRM (Digital Right Management) for copyright protection. DRM limits the file to copy or distribute music files that are converted (ripped) from a music CD or downloaded from music distribution services. To transfer a WMA file with DRM to the recorder, you need to use appropriate methods such as Windows Media Player. Copying the music files with DRM purchased from online music distribution service to a portable device such as this recorder may be restricted.

Note

[•] This recorder is compatible with Microsoft Corporation DRM9, but not with DRM10.

Importing Content for Listening on the Recorder

You can transfer language content and music files imported from language CDs and the Internet using Windows Media Player for playing on the recorder. The recorder is compatible with WMA and MP3 language content.

Import Files Using Windows Media Player

Copy music files and language content from CDs to a computer.

Please see "Copying Music from CD" (I P. 51) for details.

Transfer files from the PC to the recorder

Transfer copied music files and language content from the PC to the recorder.

Please see "Transferring Music File to the Recorder" (
P. 52) for details.

Directly Record Files to the Recorder

Connect the recorder to another device to record directly to the recorder.

Please see "Recording the Sound of Other Devices with this Recorder" (ISP P. 29) for details.

Windows Media Player 11



Windows Media Player 10



- 1 Features taskbar
- 2 Seek slider
- ③ Shuffle button
- (4) Repeat button
- (5) Stop button
- 6 Previous button
- ⑦ Play button
- 8 Next button
- Mute button
- 10 Volume slider

- 1 Features taskbar
- 2 Quick Access Panel button
- 3 Seek slider
- ④ Rewind button
- ⑤ Play button
- 6 Stop button
- Previous button
- 8 Next button
- Mute button
- 10 Volume slider
- (1) Shuffle/Repeat button
- 12 Fast Forward button

Copying Music from CD

Insert CD into the CD-ROM drive and start Windows Media Player.

2 From the Features taskbar, click the [Rip] menu.

After clicking the [Rip] menu, click the [View Album Info] for Windows Media Player 10 as necessary.

If Internet connectivity is available, CD information is searched.

Put a check mark on the music file that you want to copy.

Click the [Start Rip].

For Windows Media Player 10 Click the [Rip Music]. Files copied to a PC are stored in WMA format. Music files copied are categorized by artist, album, genre, etc. and added to the play list.



3 2 4 The second secon

Windows Media Player 10

Transferring Music File to the Recorder

You can transfer the music files saved in your PC to this recorder. For how to copy the music files from the CD to your PC, see "Copying Music from CD" (ET P. 51).

Windows Media Player 11

- Connect the recorder to a PC and start Windows Media Player.
- **2** From the Features taskbar, click the [Sync].
- Click the [Sync] menu again to select [DVR] → [Advanced Options], [Set Up Sync], then set as follows. Click on the [Create folder hierarchy on device] to check.*1*2

The folder with artist name or album name is automatically created. This will make you find the file you want to listen to more easily.

- *1 If [Create folder hierarchy on device] is checked by default, click to uncheck the box once, and click it again to check.
- *2 After the synchronous transfer to the recorder, a file named "WMPInfo.xml" is created. If you delete this file, the *1 may need to be set again.





Select the desired category from the [Library] on the left, then select music files or albums to transfer to the recorder and drag and drop them in the [Sync List] on the right.

Click the [Start Sync]. The file is transferred to the recorder.

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Windows Media Player 10

- Connect the recorder to a PC and start Windows Media Player.
- **2** From the Features taskbar, click the [Sync].
- From the pull down menu on the left
- side window, select the play list to be transferred to the recorder and put the check marks on the music file that you want to transfer.

The order of music pieces can be changed by Drag & Drop of the music file in the play list displayed.

From the pull down menu on the right side window, select the drive corresponding to the recorder.

The recorder is recognized as a Removable Disk.

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Click 🛃 on the upper right corner

and set the synchronization options.

Click on the [Create folder hierarchy on device] to check.*1 *2

The folder with artist name or album name is automatically created. This will make you find the file you want to listen to more easily.

- *1 If [Create folder hierarchy on device] is checked by default, click to uncheck the box once, and click it again to check.
- *2 After the synchronous transfer to the recorder, a file named "WMPInfo.xml" is created. If you delete this file, the *1 may need to be set again.

Click the [Start Sync].

The file is transferred to the recorder. The music file transferred to the recorder is displayed in Item on Device.



- Copying the music files with DRM purchased online music distribution service to a portable device such as this recorder may be restricted.
- Refer to the online help of Windows Media Player for details.
- If the music files are transferred to the recorder until it reaches to the maximum memory, the message "Cannot make the system file. Connect to PC and delete unnecessary file" may appear on this recorder's display. In such a case, erase the files to make free space (hundreds of KB to dozens of MB depending on the music file sizes) for the management file. (The more capacity for the management file will be necessary as the number of the music files increases.)



This recorder supports WMA and MP3 formats. To playback the music files using the music player, you need to transfer (copy) the corresponding music files from the PC to this recorder's folders for music (IIIST P. 52).



55

4

Music Playback





Press the + or - button to select the proper sound volume.

The display shows the volume level. You can choose between 0 and 30.

(f) Volume level meter

Press the **STOP** or **OK** button at any point you want to stop the playback.

Stop a file play back at any point. Press the PLAY or OK button to start playing back from where it was stopped.

Press and hold the STOP button while this recorder is in stop mode to display the remaining memory.

The next track will automatically start once the track being played is finished.





- The proper bit rate for playback on the recorder is 5 kbps to 256 kbps for both the WMA and MP3 format.
- It is possible to play back MP3 files with different bit rates (converting the bit rate within one file); however, the displayed time may not be accurate.
- When using the earphones, do NOT set the volume too high. Listening at very high volume may lead to hearing loss.
- It is possible to listen to music without the earphones, using the internal speakers; however, the sound will be in mono, not stereo.
- Up to 40 characters per track can be used to list title and artist name.

Forwarding

Press and hold the $\blacktriangleright l$ button while the recorder is stopped in the file display.

If you release the button, it will stop. Press the PLAY or OK button to start playing back from where it was stopped.

Press and hold the $\blacktriangleright i$ button while playing a file.

- ➡ When you release the ►►I button the recorder will resume normal playback.
- If there is an index mark or temp mark ($^{\hbox{\tiny ESP}}$ P. 76) in the middle of the file, the recorder will stop at that location.
- The recorder stops when it reaches the end of the file. If you press and hold the ►►I button, it continues fast forwarding within the playback range selected in the "Play Mode"(For P. 59). While "Random" (For P. 61) is set to "On", it continues fast forwarding of files randomly.

Rewinding

Press and hold the I \triangleleft button while the recorder is stopped in the file display.

If you release the button, it will stop. Press the PLAY or OK button to start playing back from where it was stopped.

Press and hold the I

- ➡ When you release the I◄◄ button the recorder will resume normal playback.
- If there is an index mark or temp mark in the middle of the file, the recorder will stop at that location.
- Once it reaches back to the starting position of the file, it stops. If you press and hold the I◄◀ button, it continues rewinding within the playback range selected in the "Play Mode". While "Random" is set to "On", it continues the rewinding of files randomly.
- If the I button is kept pressed while the recorder is stopped at the start of the top file, the recorder will fast rewind starting from the end of the last file.













Skip a Music File While Playing It

Press the **>>**I button during playback, slow playback, or fast playback.

- The next file is cued and playback starts at the previously set speed.
- It cues within the playback range selected in "Play Mode". If "Random" is "On", it cues the next file randomly.

Press the I during playback, slow playback, or fast playback.

The file being played is cued and playback starts at the previously set speed.

Press the I dutton 2 times during playback, slow playback or fast playback.

- The previous file is cued and playback starts at the previously set speed.
- If "Random" is "On", the files will be cued randomly.

When the Playback or Fast Forward Reaches to the End of the Last File

When the playback reaches to the end of the last file, it returns to the starting position of the head file and stops. If "Random" (IPP . 61) is "On", it returns to the starting position of the file that is randomly played and stops. If you select "All" in "Play Mode" (IPP . 59), all the files in this recorder can be played continuously.

Select Play Mode (Play Mode)

There are six play modes. You can choose whether to play by file or folder, or all files stored in the recorder.





- In "File" mode, when the recorder comes to the end of the last file in the folder, "End" flashes for 2 seconds on the display and the recorder stops at the start of the last file.
- In "Folder" mode, when the recorder comes to the end of the last file in the folder, "End" flashes for 2 seconds on the display and the recorder stops at the start of the first file in the folder.
- In "All" mode, after playing the last file in the folder, the recorder will start playing from the first file in the
 next folder. When it comes to the end of the last file in the recorder, "End" flashes for 2 seconds on the
 display and the recorder stops at the start of the first file in the recorder.



You can set the random playback of the music files within the range set in "Play Mode" (1878 P. 59).







While the recorder is stopped or during playback, press the MENU button for 1 second or longer. The "Menu" screen opens (I P. 70). If the recorder is stopped, proceed to Step 2. If the recorder is playing, proceed to Step 3.

Press the OK or ►►I button.

The "Play Menu" screen opens.

Press the + or - button to choose "Random".



Press the OK or ►►I button.

The random setup process begins.

Press the **+** or **-** button to choose between "On" and "Off".

On: Plays the music files within the range set in "Play Mode" randomly. **Off**: Cancels the setting.

If the recorder goes to the menu screen during playback, move the cursor to change playback sound accordingly.

Press the **OK** button to complete the setup screen.

If the I button is pressed, the setting will be canceled and it will return to the "Play Menu" screen.





Press the **STOP** button to close the menu.

If the recorder goes to the menu screen during playback, press the I



If it is set to "On", **C** will appear on the display.

(a) Random playback indicator

- If "All" is selected in "Play Mode", all files in a folder are randomly played, then another folder will be randomly selected, and the files in the folder will be randomly played.
- If both "Repeat" and "Random" are set to "On", it repeats playback randomly.

Increasing the WOW Effect (WOW)

The recorder has WOW XT, an audio processing technology that increases sound clarity and bass quality. The level of the surround effect (SRS 3D) and the bass effect (TruBass) may be individually adjusted through three levels of processing or turned off.

Surround effect (SRS 3D): Increases the sound-expansion effect and sound clarity. Bass effect (TruBass): Enriches the low sounds.



While the recorder is stopped or during playback, press the MENU button for 1 second or longer.

The "Menu" screen opens (
P. 70). If the recorder is stopped, proceed to Step 2. If the recorder is playing, proceed to Step 3.

Press the **OK** or **▶** button.

The "Play Menu" screen opens.

Press the + or - button to choose "WOW".

Play Menu Play Mode Random WOW





Press the **OK** or ►►I button again.

"SRS 3D" will be displayed on the screen.

Press the **OK** or **D** button.

The surround effect setup process begins (SRS 3D).









Press the + or - button to select the surround level.

If the recorder goes to the menu screen during playback, move the cursor to change playback sound accordingly.

Press the **OK** button to save your setting.

Returns to the "SRS 3D" or "TruBass" selection display.

If the I button is pressed, the setting will be canceled.









Press the **OK** or ►►I button.

The bass effect setup process begins (TruBass).

Press the + or - button to select the bass effect level.

If the recorder goes to the menu screen during playback, move the cursor to change playback sound accordingly.





Notes

- If no operation is made for 3 minutes during the setting, it will return to the stop status.
- · Both the surround effect and bass effect are Off as the WOW default settings.
- (•) will be displayed on the screen if the surround effect or the bass effect is set.
- The WOW effect will be weakened if the bit rate for any music file is less than 32 kbps.
- Depending on the song, the WOW effect will be heightened, and may sound like noise. If this happens, adjust the WOW effect.
- The WOW Effect cannot be used when Playback Speed (INP P. 84) is set.

🔢 Selecting Equalizer (EQ)

If you change the equalizer setting, you can enjoy the music with your favorite sound quality.





The "Menu" screen opens (
P. 70). If the recorder is stopped, proceed to Step 2. If the recorder is playing, proceed to Step 3.

Press the **OK** or **>>**I button.

The "Play Menu" screen opens.

Press the + or - button to choose "EQ".



Press the **OK** or **▶** button.

The equalizer setup process begins.

Press the + or - button to select the desired equalizer characteristics.

Select "User" to save your own custom equalizer settings.

If "User" is selected, proceed to Step 6. Otherwise, proceed to Step 9.

If the recorder goes to the menu screen during playback, move the cursor to change playback sound accordingly.

Press the ►►I button.

Select the frequency band.













Press the ►►I or I◄◀ button to select the frequency band.

You can set frequency band for the 60 Hz, 250 Hz, 1 kHz, 4 kHz, and 12 kHz bands.

Press the + or - button to select the equalizer level.

You can select the equalizer level from -10dB to 10dB in 1dB increments. The higher the decibel value, the louder the sound. The default setting is 0dB.

To change the settings again, press the ► I or I ◄ button and repeat the procedure from step 7.

Press the **OK** button to complete the setup screen.

If the I button is pressed, the setting will be canceled and it will return to the "Play Menu" screen.

Press the **STOP** button to close the menu.

If the recorder goes to the menu screen during playback, press the I

An icon will appear on the display according to the setting.

a Selected equalizer indicator





EQ

USER



4

- The equalizer default setting is Flat.
- Your equalizer settings will be retained in memory even when you change the battery.



You can move a file in a folder to change the order of playback. First select the file for which you want to change the playback order.



69



Press the + or - button to select the location to move it to.

Press the **OK** button to complete the file moving.

If there are more files to move, repeat Steps 5 through 8.

If the OK button is pressed for one second or longer, file order rearrangement will close and the recorder will return to the "Sub Menu" screen.

Press the **STOP** button to close the menu.





Below is a map of the menu structure seen when the menus are entered while the recorder is stopped. If the MENU button is pressed and held for more than one second during playback, "Play Mode", "Random", "WOW", "EQ", "Back Space", and "Play Speed" settings can be set, without interrupting playback.

Menus highlighted with are common to both "VOICE" and "MUSIC" modes, and can be selected even when the mode switch is set to "VOICE".



Menu List (MUSIC Mode)

Menu Setting Re	ef. Page
Beep On, Off	P. 87
Beep & Backlight On, Off	P. 88
Display Contrast 01-12	P. 89
LED On, Off	P. 90
Move Programs the order in which to play files in the folder.	P. 68
Sub	P. 17
Menu Format Start, Cancel	P. 91
System Info. Capacity, Model Name, Version	P. 93

- The recorder will stop if you leave it idle for 3 minutes during a menu setup operation, when a selected item is not applied.
- If the menus are entered during playback but 8 seconds elapse with no buttons being pressed, the screen will return to the playback display.

* This chapter will use VOICE mode display screens to explain the operations.



Erasing One File at a Time

A selected file can be erased from a folder.



Select the file you want to delete.

In the stop status, display the file or place the cursor on the file in the list display.

Press the ERASE button. The "Cancel" indicator flashes.





Press the + button to choose "Erase".







5





"Erase Done" is displayed when the file is erased. File numbers will be reassigned automatically.
Erase All Files from a Folder

All files in a folder can be erased simultaneously.

The locked files (I P. 40) and the files set to read-only on the PC will not be erased.



Press the **FOLDER** button to select the folder in which you want to erase all files.

- Press the ERASE button twice. The "Cancel" indicator flashes.
- Press the + button to choose "All Erase".





- Press the **OK** button.
- The display changes to "All Erase!" and erasing will start.

"Erase Done" is displayed when the files are erased. The locked files and read-only files are reassigned the file numbers in ascending order, starting from "1".







Notes

- An erased file cannot be restored.
- The locked files and the files that are set to read-only will not be erased (187 P. 40).
- If an action is not selected within eight seconds on the "Cancel", "Erase", or "All Erase" screens, the recorder will return to stop status.
- It may take over 10 seconds to complete erasing. Never turn the power off or remove batteries during this time because data may be corrupted.





If you bring the HOLD switch to the HOLD position, the current conditions will be preserved, and all buttons and switches will be disabled. This feature is useful when the recorder has to be carried in a bag or pocket.

Set the Recorder to HOLD Mode

Slide the **HOLD** switch in the direction indicated by the arrow while the recorder is not in operation.

After "Hold" appears on the display, the recorder is set to HOLD mode.





Exit HOLD Mode

Slide the **HOLD** switch in the direction opposite that indicated by the arrow.

Notes

- If you press any button in HOLD mode, the clock display flashes for 2 seconds, but it will not operate the recorder.
- If HOLD is applied during playback (recording), operation is disabled with the playback (recording) state unchanged. (When playback ends, or recording ends due to insufficient memory, the recorder will stop once, then will automatically enter in hold status.)



If index marks and temp marks are placed, you can quickly find a location you want to listen to in fast forward and fast rewind and when cuing a file. Index marks cannot be placed on files created on machines other than Olympus IC recorders, but temp marks can be placed instead to temporarily remember desired locations.

Setting an Index Mark or a Temp Mark



Press the **INDEX** button during recording or playing.

A number appears on the display and an index mark or temp mark will be placed. Even after an index or temp mark is placed, recording or playback will continue so you can place index or temp marks in other locations in a similar manner.



Clearing an Index Mark or a Temp Mark

Follow the procedures below to erase index or temp marks.



Locate the index or temp mark you want to clear.

Press the ►►I or I d button to select an index or temp mark to erase.





Press the **ERASE** button while the index or temp number appears for approximately 2 seconds on the display.



The index or temp mark is erased.

Index or temp numbers after the erased index or temp number will automatically move up.

Temp marks are temporary markings, so if you move to another file, switch to the list screen, or connect the recorder to a computer, they will be automatically erased.

Notes

- Up to 16 index and temp marks can be set in a file. If you try to place more than 16 index or temp marks, the "Index Full" message will appear for index marks, and "Temp Full" for temp marks.
- Index or temp marks cannot be set or erased in a locked file (INP . 40).



How to Begin Segment Repeat Playback

This function enables repeated playback of part of the file being played.





Choose a file that contains a segment you want to play back repeatedly, and press the **PLAY** or **OK** button.

File playback begins.

Press the **REC** button at the point you want to start segment repeat playback.

" End?" will flash on the display.

Even while " End?" is flashing, changing the playback speed (ETP. 84), fast forward and rewind (ETP. 31, P. 32) can be executed the same as during normal playback, and it can be advanced quickly to the end position. When it reaches to the end of the file while " End?" is flashing, the point will become the end position, and repeat playback will start.

Press the **REC** button again at the position where you want to end segment repeat playback.

The " Play" message appears, and repeat playback will start. The recorder repeatedly plays back the segment until the segment repeat playback is canceled.



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(HQ)

▲ #

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77

120/120

10M36s

120/120

22M50

End?

45M06s

77

As in regular play mode, playback speed (I P. 84) can be changed during segment repeat playback as well. If an index mark and temp mark (I P. 76) are inserted or eliminated during segment repeat playback, segment repeat playback will be canceled and it will return to regular play mode.

Cancel the Segment Repeat Playback Function







Press the **REC** button.

The segment repeat playback is released and playback continues without repeating.

Press the **STOP** button.

The segment repeat playback is released and stop playback.

Press the ►► button.

Pressing the >> button will release segment repeat playback and fast forward and cue to the beginning of the next file.

Press the Idea button.

Pressing the I button will release segment repeat playback and rewind and reverse to the beginning of the current file.



Menu Setting Method

Each item of the menu list (IN P. 42, P. 70) can be set by the following method.







While the recorder is stopped or during playback, press the **MENU** button for 1 second or longer.

The "Menu" screen opens.

If the recorder is stopped, proceed to Step 2. If the recorder is playing, proceed to Step 4.

For information on the menu items which can be set during playback, see the menu list.



Press the + or - button to move Menu Ito the item to be set. Rec Menu Play Menu Beep & Display Sub Menu Press the **OK** or **▶** button. Play Menu Moves to the setting of the selected item. **Back Space** Noise Cancel Voice Filter Play Speed Press the + or - button to move Play Menu to the item to be set. Back Space Noise Cancel Voice Filter Play Speed Press the OK or ►►I button. **Noise Cancel** Moves to the setting of the selected item. High Lów . . .



Press the + or - button to change the setting.

If the recorder goes to the menu screen during playback, move the cursor to change playback sound accordingly.

Press the **OK** button to complete the setup screen.

The new setting will be displayed on the screen.

Pressing the I◄◀ button rather than the OK button will cancel the new setting and return the display to the previous menu screen.

Press the **STOP** button to close the menu.

If the menus were entered during playback, pressing the I







Auto Backspace Review (Back Space)

To ease the reviewing of a voice file you can set an auto backspace for several seconds, so you will listen to the last phrase repeatedly.



Auto Backspace Review (Back Space)



Press the **OK** button to complete the setup screen.

If the I button is pressed, the setting will be canceled and it will return to the "Play Menu" screen.

Press the **STOP** button to close the menu.

If the recorder goes to the menu screen during playback, press the I◀◀ button to close the menu screen.

Press the I d button while the file is being replayed.

Playback starts at the set point of seconds before.



Note

If the setting other than "Off" is selected at the previous playback, and even though the I def button is
pressed, it does not reverse skip to the cue or the index mark position. Reverse skip is executed for
only the set time (1 to 10 seconds).

Changing the Playback Speed (Play Speed)

The playback speed of the file can be changed between 0.5 and 1.5 times speed in increments of 0.125. Change the speed according to need such as listening to meeting content at a fast speed or reviewing spots that you couldn't catch in a language lesson at a slow speed. The tone will be automatically adjusted digitally without changing the voice so it sounds natural.

Change Playback Speed



Press the **PLAY** button during a playback.

Every time the PLAY button is pressed, the playback speed will switch.

Regular Play: Playback at normal speed. **S. Play (slow playback):** Playback speed slows down, and **S** will turn on (default at 0.75 times as fast).

F. Play (fast playback): Playback speed becomes faster, and **B** will turn on (default at 1.5 times as fast).

a Selected play speed indicator



Even if playback is stopped, the changed playback speed will be retained. The next playback will be at that speed.

Change Playback Speed Setting

You can change the playback speed setting for S. Play and F. Play.



While the recorder is stopped or during playback, press the **MENU** button for 1 second or longer. The "Menu" screen opens (FSP 42, P. 70).

Changing the Playback Speed (Play Speed)

Changing the Playback Speed (Play Speed)



- Press the + or button to choose "Play Menu".
- Press the OK or ►►I button.
- The "Play Menu" screen opens.
- Press the + or button to choose "Play Speed".





- Press the OK or ►►I button.
- The playback speed setup process begins.
- Press the + or button to choose
- between "S. Play" and "F. Play".





- Press the OK or ►►I button. Start setting each of "S. Play" and "F. Play".
- Press the + or button to set the playback speed.
 - **S. Play**: x0.5, x0.625, x0.75, x0.875 **F. Play**: x1.125, x1.25, x1.375, x1.5

If the recorder goes to the menu screen during playback, move the cursor to change playback sound accordingly.





Press the OK button to complete the setup screen. Returns to the "S.Play" or "F.Play" selection display.

Press the **STOP** button to close the menu.

If the recorder goes to the menu screen during playback, press the I

As in Regular Play mode, you can stop playback, cue a file, or insert an index mark (IFSP P. 76) in F. Play and S. Play modes as well.

Notes

- F. Play and S. Play are available even if either the Voice Filter (INP P. 36) or Equalizer (INP P. 66) is set.
- F. Play and S. Play are not available if either the Noise Cancel (127 P. 34) or WOW Effect (127 P. 63) is set.
- During fast playback/slow playback, it will be played back in monaural even though the file was recorded in ST XQ, ST HQ, ST SP mode.
- Playback speed will return to normal if the mode switch setting is changed.



The recorder beeps to alert you to button operations or warn you of errors. System sounds may be turned off.



While the recorder is stopped, press the **MENU** button for 1 second or longer.

The "Menu" screen opens (I P. 42, P. 70).

- Press the + or button to choose "Beep & Display".
- Press the OK or ►►I button. The "Beep & Display" screen opens.







Press the OK or ►►I button.

The system sound setup process begins.

Press the + or - button to choose between "On" and "Off". On: System sounds are enabled.

Off: System sounds are disabled.

Press the **OK** button to complete the setup screen.

If the I button is pressed, the setting will be canceled and it will return to the "Beep & Display" screen.

Press the **STOP** button to close the menu.







Backlight (Backlight)

The recorder display backlight is On by default. The display will remain lit for about 10 seconds when a button on the recorder is pressed.







- While the recorder is stopped, press the **MENU** button for 1 second or longer. The "Menu" screen opens (res P. 42, P.70).
- Press the + or button to choose "Beep & Display".
- Press the OK or ►►I button.
- The "Beep & Display" screen opens.
- Press the + or button to choose "Backlight".



- Press the OK or bel button. The backlight setup process begins.
- Press the + or button to choose between "On" and "Off". On: Backlight is enabled. Off: Backlight is disabled.



Press the **OK** button to complete the setup screen.

If the I a button is pressed, the setting will be canceled and it will return to the "Beep & Display" screen.

Press the **STOP** button to close the menu.



LCD Contrast Adjustment (Contrast)

Display contrast can be adjusted in 12 levels.







- While the recorder is stopped, press the **MENU** button for 1 second or longer. The "Menu" screen opens (ISP P. 42, P. 70).
- Press the + or button to choose "Beep & Display".
- Press the OK or ►►I button.
- The "Beep & Display" screen opens.
- Press the + or button to choose "Contrast".



- Press the OK or ►►I button. The contrast setup process begins.
- Press the + or button to set the contrast level.

You can adjust the LCD display contrast level from 1 to 12.

Press the **OK** button to complete the setup screen.

If the I button is pressed, the setting will be canceled and it will return to the "Beep & Display" screen.

Press the **STOP** button to close the menu.

Contrast Level OG



You can set it so the Record/Play indicator light does not turn on.

second or longer.

"Beep & Display".





-5 **5** Press the OK or ►►I button. The LED setup process begins.

"LED".

Press the + or - button to choose between "On" and "Off". On: LED light will be set. Off: LED light will be canceled.

While the recorder is stopped, press the **MENU** button for 1

The "Menu" screen opens (I P. 42, P. 70). Press the + or - button to choose

Press the + or - button to choose

Press the OK or ►►I button. The "Beep & Display" screen opens.





Press the **OK** button to complete the setup screen.

If the I a button is pressed, the setting will be canceled and it will return to the "Beep & Display" screen.

Press the **STOP** button to close the menu.







If you format the recorder, all files will be removed and all function settings will return to defaults except date and time settings. Transfer any important files to a computer before formatting the recorder.





Notes

- Never turn the power off or remove batteries during formatting because data may be corrupted. It may take over 10 seconds to complete erasing.
- Never format the recorder from a PC.
- After formatting, recorded voice file names may start from 0001.
- · Once the recorder is formatted, the music files with DRM may not be transferred to the recorder again.
- When the recorder is formatted, all the saved data, including locked files and read-only files, are erased.



Viewing System Information (System Info.)

You can check the recorder's information on the menu screen.





- While the recorder is stopped, press the MENU button for 1 second or longer. The "Menu" screen opens (
 P. 42, P. 70).
- Press the + or button to choose "Sub Menu".
- Press the **OK** or **▶** button.
- The "Sub Menu" screen opens.
- Press the + or button to choose "System Info.".



Capacity :2GB Model

Version 100

:WS331

- Press the **OK** or **▶** button. "Capacity/Model/Version" will appear.
- Press the STOP button to close the menu.

Other Practical Use Methods

Using as External Memory of the Computer

With the recorder connected to your PC, you can download data from the memory to your PC and upload data stored on your PC to the memory.

Example: Copying Data from PC to Recorder using Explorer

Start Windows.

Connecting the recorder to your PC.

For the connection procedure, refer to "Connecting to Your PC" (1 P. 46).

Open the Explorer window.

The product's name is displayed.

Copy the data.

While the data is being written or copied, the record/play indicator light and USB access indicator light on the recorder will flash in red.

Unplug the recorder from a computer.

For how to unplug the recorder, please see "Disconnecting from Your PC" (R P. 47).

Note

 NEVER disconnect the USB while the record/play indicator light and USB access indicator light are flashing in red. Otherwise data may be damaged.

Alarm Message List

Message	Meaning	Explanation	Action
Battery Low	Low battery power	Battery power is getting low.	Replace with new batteries (FF P. 12).
File Protected	Erase-locked	Tried to delete a locked file.	Unlock the file (INP. 40).
Index Full	Index full	The file is full of index marks (maximum of 16 marks).	Erase index marks that are no longer required (INF P. 76).
Temp Full	Tempmark full	The file is full of Tempmarks (maximum of 16 marks).	Erase Tempmarks that are no longer required (INF P. 76).
Folder Full	Folder full	The folder is full of files (maximum of 200 files).	Erase unnecessary files (🖙 P. 72).
Memory Error	Error in the internal memory	Error in the internal memory.	This is a malfunction, so go to the store where you purchased the recorder or an Olympus service station for repair.
License Mismatch	Illegally copied file	The music files copied illegally.	Delete the file (ISP P. 72).
Memory Full	Zero remaining memory	No remaining internal memory.	Erase unnecessary files (FF P. 72).
No File	No file	No files were found in the folder.	Select another folder.
Format Error	Formatting error	There was an error while formatting the recorder's memory.	Reformat the memory (B P. 91).
Can't Make The System File. Connect To PC And Delete Unnecessary File	The management file cannot be created.	The file for management cannot be created due to a shortage of capacity for remaining flash memory.	Connect the recorder to a computer and delete any unnecessary files.

Troubleshooting

Symptom	Probable cause	Action
Nothing appears	The battery is not loaded properly.	Verify polarity is correct.
on the display	The battery is dead.	Replace with new battery (INP. 12).
	The recorder is in HOLD mode.	Release the recorder from HOLD (163° P. 75).
Won't start	The recorder is in HOLD mode.	Release the recorder from HOLD (INP P. 75).
	The battery is dead.	Replace with new battery (IN P. 12).
Unable to	Low remaining internal flash memory.	Erase unnecessary files (INP P. 72).
record	The maximum number of files has been reached.	Check another folder.
	MUSIC mode is active.	Switch to VOICE mode (FR P. 14).
No playback tone heard	The earphone is connected.	Unplug the earphones to use the internal speaker.
	The VOL(+ or -) button is set to 0.	Adjust the VOL(+ or -) button (INP. 30).
Unable to erase	The file is locked.	Unlock the file (INP. 40).
	The file is read-only.	Cancel the read-only setting of the file on the PC.
Noise heard	The recorder was shaken during recording.	
during playback	The recorder was placed near a cell phone or fluorescent light while recording or during playback.	Move the recorder.
Recording level too low	The microphone sensitivity is too low.	Set the microphone sensitivity to "Conf" mode and try again (187 P. 25).
Unable to set index marks, tempmarks	The maximum number of marks has been reached.	Erase unnecessary marks (🖙 P. 76).
	The file is locked.	Unlock the file (I P. 40).
	The file is read-only.	Cancel the read-only setting of the file on the PC.
Cannot find the recorded voice	Wrong folder.	Switch to the right folder.

Accessories (Optional)

Stereo microphone: ME51S

The high fidelity of the recording, which only stereo can perform. Furthermore, it gives clear sound quality with less noise.

Highly sensitive noise-cancellation monaural microphone: ME52

This microphone is used to record sound at a distance while minimizing surrounding noise.

Noise-Cancellation monaural microphone: ME12

(Dictation microphone)

Used to get crisp recordings of your own voice by reducing the effects of ambient noise.

Tie clip microphone: ME15

(Monaural) Small concealing microphone with a tie-clip.

Telephone pickup: TP7

(Monaural)

Earphone type microphone can be plugged into your ear while phoning. The voice or conversation over the phone can be clearly recorded.

Ni-MH rechargeable battery and charger set: BC400 (Europe only)

BC400 comes with an Ni-MH rechargeable battery charger(BU-400) and 4 Ni-MH rechargeable batteries (BR401) as a pack. This charger can quick charge Olympus AA or AAA Ni-MH rechargeable batteries.

Ni-MH rechargeable battery: BR401

High-efficiency rechargeable long life batteries.

Connecting cord: KA333

Connecting cord which has stereo mini-plugs (ø3.5) with resistance at both ends. Use to connect from the earphone jack output of the recorder to the microphone input jack when recording.

Converting plug adapters (PA331/PA231) which convert to the monaural mini plug (Ø3.5) or monaural mini plug (Ø2.5) are also enclosed.

DSS Player software

If you transfer voice files recorded with the recorder to a PC, you can easily play back, organize, and edit the files. You can also manage Podcast contents (download from web site or transfer to the recorder). The DSS Player can be upgraded to a DSS Player Plus, which is equipped with a enhanced functionality (Option). (compatible with recognition software, joining and

(compatible with recognition software, joining and splitting of the files and configuring the menu settings of this recorder)

Specifications

For the Digital Voice Recorder

Recording format:

WMA (Windows Media Audio)

Input level:

-70 dBv

Sampling frequency:

ST XQ mode: 44.1 kHz ST HQ mode: 44.1 kHz ST SP mode: 44.1 kHz HQ mode: 44.1 kHz SP mode: 22 kHz LP mode: 8 kHz

Overall frequency response:

ST XQ mode: 50 Hz to 19 kHz ST HQ mode: 50 Hz to 15 kHz ST SP mode: 50 Hz to 9 kHz HQ mode: 50 Hz to 13 kHz SP mode: 100 Hz to 7 kHz LP mode: 100 Hz to 3 kHz

Recording time: (WS-331M)

ST XQ mode: 35 hours 30 minutes ST HQ mode: 71 hours 00 minutes ST SP mode: 142 hours 05 minutes HQ mode: 142 hours 05 minutes SP mode: 279 hours 35 minutes LP mode: 555 hours 45 minutes

(WS-321M)

ST XQ mode: 17 hours 40 minutes ST HQ mode: 35 hours 25 minutes ST SP mode: 70 hours 55 minutes HQ mode: 70 hours 55 minutes SP mode: 139 hours 40 minutes LP mode: 277 hours 35 minutes

(WS-311M)

ST XQ mode: 8 hours 45 minutes ST HQ mode: 17 hours 40 minutes ST SP mode: 35 hours 25 minutes HQ mode: 35 hours 25 minutes SP mode: 69 hours 40 minutes LP mode: 138 hours 30 minutes

Alkaline battery life:

(Recording)

ST XQ mode: Approx. 11.5 hours ST HQ mode: Approx. 13.5 hours ST SP mode: Approx. 14.5 hours HQ mode: Approx. 16 hours SP mode: Approx. 16.5 hours LP mode: Approx. 21 hours

(Playback/ All Mode) Speaker playback: Approx. 7 hours Earphone playback: Approx. 15 hours

Ni-MH rechargeable battery life: (Recording)

ST XQ mode: Approx. 9.5 hours ST HQ mode: Approx. 11.5 hours ST SP mode: Approx. 12 hours HQ mode: Approx. 12.5 hours SP mode: Approx. 12.5 hours LP mode: Approx. 15 hours

(Playback/ All Mode)

Speaker playback: Approx. 6 hours Earphone playback: Approx. 11.5 hours

For the Digital Music Player

Compatible data format: WMA, MP3 (MPEG-1/MPEG-2 Audio Layer-3)

Sampling frequency: 44.1 kHz

Frequency band: 20 Hz to 20 kHz

Playback time: WS-331M: about 500 songs WS-321M: about 250 songs WS-311M: about 125 songs (128kbps/4 minutes per song)

Maximum headphone output: 5mW + 5mW (at load of 22 Ω)

Alkaline battery life: WMA: Approx. 16 hours MP3: Approx. 19 hours

Ni-MH rechargeable battery life: WMA: Approx. 12.5 hours MP3: Approx. 14 hours

Common Specifications

Recording medium: Built-in NAND FLASH memory (WS-331M: 2GB/ WS-321M: 1GB/ WS-311M: 512MB)

Speaker: Built-in ø18 mm round dynamic speaker

MIC jack: ø3.5 mm, impedance $2k\Omega$

EAR jack: g3.5 mm, impedance 8Ω or more

Maximum working output (3 V DC): 70 mW or more (8 Ω speaker)

Input power requirement: Rated voltage: 1.5 V Batteries: AAA battery (LR03 or ZR03) or Ni-MH rechargeable battery

External dimensions: 94.8 x 38.6 x 11 mm (without protrusions)

Weight: 47 a (including alkaline battery)

- * Specifications and design are subject to change without notice.
- * Battery life is measured by Olympus. It varies greatly according to the type of batteries used and the conditions of use.

Technical Assistance and Support

The following are contact information for technical support for Olympus recorders and software only.

- ◆ Technical Hotline Number in the U.S. and Canada 1-888-553-4448
- User Support E-mail address in the U.S. and Canada distec@olympus.com
- Technical Hotline Number in Europe Toll free number 00800 67 10 83 00 available for Austria, Belgium, Denmark, Finland, France, Germany, Italy, Luxemburg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom

Charged numbers for the Rest of Europe +49 180 567 1083 +49 40 23773 4899

 User Support E-mail address in Europe dss.support@olympus-europa.com Declaration of Conformity Model Number: Trade Name: Responsible Party: Address: Telephone Number:

WS-331M/WS-321M/WS-311M DIGITAL VOICE RECORDER OLYMPUS IMAGING AMERICA INC. 3500 Corporate Parkway. P.O. Box 610, Center Valley, PA 18034-0610, U.S.A. 1-888-553-4448

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.



Tested To Comply With FCC Standards

FOR HOME OR OFFICE USE

Canadian RFI

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

Cet appareil numérique ne dépasse pas les limites de la Catégorie B pour les émissions de bruit radio émanant d'appareils numériques, tel que prévu dans les Règlements sur l'Interférence Radio du Département Canadien des Communications.

For customers in Europe



"CE" mark indicates that this product complies with the European requirements for safety, health, environment and customer protection.



This symbol [crossed-out wheeled bin WEEE Annex IV] indicates separate collection of waste electrical and electronic equipment in the EU countries. Please do not throw the equipment into the domestic refuse. Please use the return and collection systems available in your country for the disposal of this product. Apolicable Product: WS-331M/WS-321M/WS-311M



L'indication « CE » signifie que ce produit est conforme aux exigences concernant la sécurité, la santé, l'environnement et la protection du consommateur.



Le symbole [poubelle sur roue barrée d'une croix WEEE annexe IV] indique une collecte séparée des déchets d'équipements électriques et électroniques dans les pays de L'UE. Veuillez ne pas jeter l'équipement dans les ordures domestiques. A utiliser pour la mise en rebut de ces types d'équipements conformément aux systèmes de traitement et de collecte disponibles dans votre pays.

Produit applicable: WS-331M/WS-321M/WS-311M



La marca "CE" indica que este producto cumple con los requisitos europeos en materia de seguridad, salud, medio ambiente y protección al consumidor.

Este símbolo (un contenedor de basura tachado con una X en el Anexo IV de WEEE] indica que la recogida de basura de equipos eléctricos y electrónicos deberá tratarse por separado en los países de la Unión Europea. No tire este equipo a la basura doméstica. Para el desecho de este tipo de equipos utilice los sistemas de devolución al vendedor y de recogida que se encuentren disponibles.

Producto aplicable: WS-331M/WS-321M/WS-311M



Das "CE" Zeichen bestätigt die übereinstimmung mit den Europäischen Bestimmungen für Betriebssicherheit und Umweltschutz.

Dieses Symbol [durchgestrichene Mülltonne nach WEEE Anhang IV] weist auf die getrennte Rücknahme elektrischer und elektroischer Geräte in EU-Ländern hin. Bitte werfen Sie das Gerät nicht in den Hausmüll. Informieren Sie sich über das in Ihrem Land gültige Rücknahmesystem und nutzen dieses zur Entsorgung. Anwendbare Produkte: WS-331MWS-321MWS-311M



Знак "СЕ" обозначает, что этот продукт соответствует европейским требованиям по безопасности, охране здоровья, экологической безопасности и безопасности пользователя.



Этот символ [перечеркнутая мусорная урна WEEE на колесах, приложение IV] обозначает раздельный сбор электрических и электронных отходов в России. Пожалуйста, не выбрасывайте изделия в бытовой мусоропровод. Используйте системы возврата и сбора (если таковые имеются) для утилизации отходов вышеуказанных типов.

Применимое изделие: WS-331M/WS-321M/WS-311M



Il marchio "CE" indica che questo prodotto è conforme alle norme della comunità europea per quanto riguarda la sicurezza, la salute, l'ambiente e la protezione del consumatore.



Questo simbolo [contenitore di spazzatura barrato come illustrato nell'allegato IV della direttiva WEEE] indica una raccolta separata dei rifiuti di apparecchiature elettriche ed elettroniche nei paesi dell'Unione Europea. Si prega di non gettare questo dispositivo tra i rifiuti domestici. Si prega di utilizzare i sistemi di raccolta e di recupero disponibili per lo smaltimento di questo tipo di dispositivi.

Prodotto applicabile: WS-331M/WS-321M/WS-311M



OLYMPUS IMAGING CORP.

Shinjuku Monolith, 3-1 Nishi-Shinjuku 2-chome, Shinjuku-ku, Tokyo 163-0914, Japan. Tel. 03-3340-2111

OLYMPUS IMAGING AMERICA INC.

3500 Corporate Parkway, P.O.Box 610, Center Valley, PA 18034-0610, U.S.A. Tel. 1-888-553-4448

OLYMPUS IMAGING EUROPA GMBH

(Premises/Goods delivery) Wendenstrasse 14-18, 20097 Hamburg, Germany. Tel. 040-237730 (Letters) Postfach 10 49 08. 20034 Hamburg, Germany.

OLYMPUS UK LTD.

2-8 Honduras Street, London EC1Y 0TX, United Kingdom, Tel.020-7253-2772 http://www.olympus.com/