SeaLife® micro 2.0™

Instruction Manual:

Micro 2.0 Underwater Camera 32GB *(Item SL510)*

Micro 2.0 Underwater Camera 64GB *(Item SL512)*

Table of Contents

Visit sealife-cameras.com/manuals for Español, Deutsch, Français, Italiano and Nederlands and other languages

I. Package Contents

Micro 2.0 Underwater Camera (32GB WiFi SL510 or 64GB WiFi SL512)

Wrist strap (SL50102)

Lens Cap (SL50113)

Wall charger with US plug (SL50105)

USB adapter (SL50103)

Int'l plug adapters for UK, EU, AU (SL50106)

USB cable (SL51004)

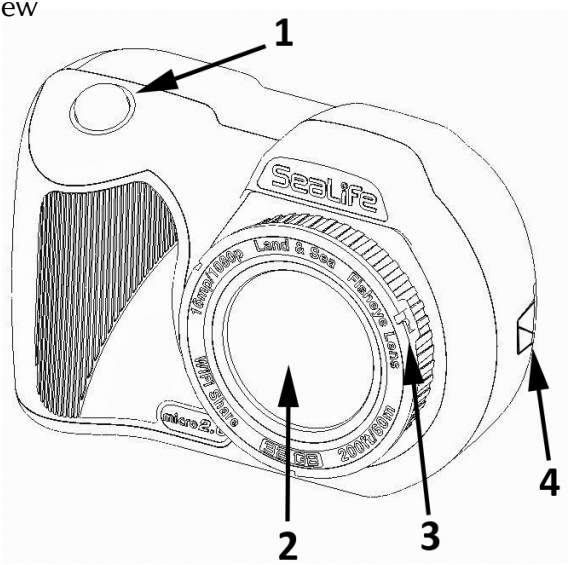
Camera pouch (SL50107)

Not shown:

Instruction manual – English (SL51008) **SeaLife Warranty statement**

II. Getting to Know Your Camera

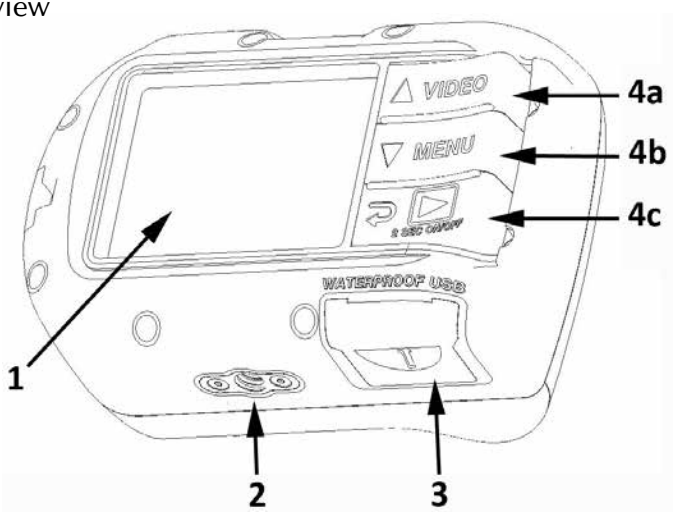
Front view



1. **Shutter button**
2. **Optical glass lens port**
3. **Lens adapter ring** (For attaching close-up lens accessory – sold separately)
4. **Wrist strap connection**

II. Getting to Know Your Camera (cont'd)

Rear view



1. 2.4" TFT color display

2. 1/4-20 tripod accessory mount

3. Waterproof USB contacts

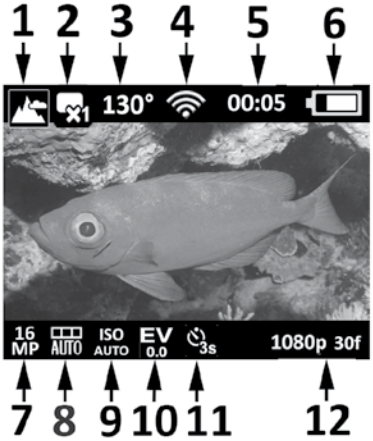
(Serial# located under USB cover)

4. "Piano Key" controls:

a. Video (up)
b. Menu (down)
c. Playback / Power (back 1 step)

II. Getting to Know Your Camera (cont'd)

LCD Display:
Capture Mode



1. Scene modes

a. Land
b. Dive
c. Snorkel
d. Ext Light

2. Capture mode

a. Single
b. Continuous
c. Time Lapse
d. AEB
e. Burst

3. 130° Field of View (FOV)

4. WiFi On

5. Timers

a. ● 0:00:01 Video record time (H:MM:SS)
b. 00:05 Time Lapse countdown time (MM:SS)

6. Battery condition

a. Full power
b. High power
c. Medium power
d. Low power
e. Near empty

II. Getting to Know Your Camera (cont'd)

LCD Display: Capture Mode

7. Image size resolution

a. 16MP / 4608 x 3456 / 4:3

b. 14MP / 4608 x 3072 / 3:2

c. 12MP / 4608 x 2592 / 16:9

d. 9MP / 3456 x 2592 / 4:3

e. 7MP / 3456 x 1944 / 16:9

f. 4MP / 2304 x 1728 / 4:3

g. 3MP / 2304 x 1296 / 16:9

h. 2MP / 1920 x 1080 / 16:9

8. White Balance

a. Auto

b. Underwater Deep

c. Underwater Shallow

d. Underwater Green

e. Daylight

f. Cloudy

9. ISO value

a. Auto

b. 100

c. 200

d. 400

e. 800

10. Exposure Value (From -2.0 to +2.0 in 0.3 increments)

11. Self-timer or Time Lapse time interval

a. Self-timer (3s or 10s)

b. Time Lapse interval (2s, 5s, 10s, 30s, 1m, 5m or 30m)

12. Video resolution size (with frames per second)

a. 1296p at 30fps

b. 1080p at 60fps

c. 1080p at 30fps

d. 720p at 120fps

e. 720p at 60fps

f. 720p at 30fps

g. 480p at 240fps

h. 480p at 120fps

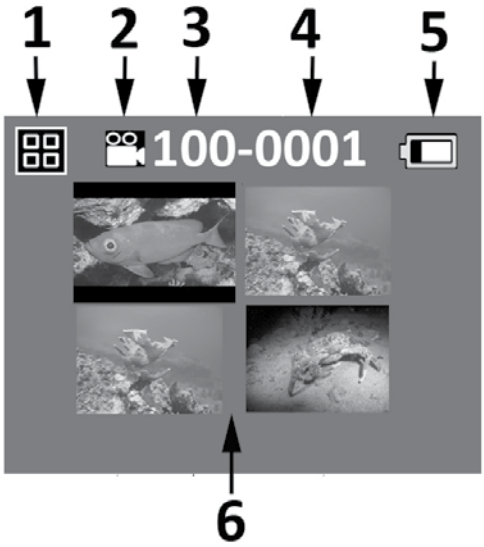
i. 480p at 60fps

j. 480p at 30fps

Note: When shooting video time lapse, the frame rate is replaced by the time interval.

II. Getting to Know Your Camera (cont'd)

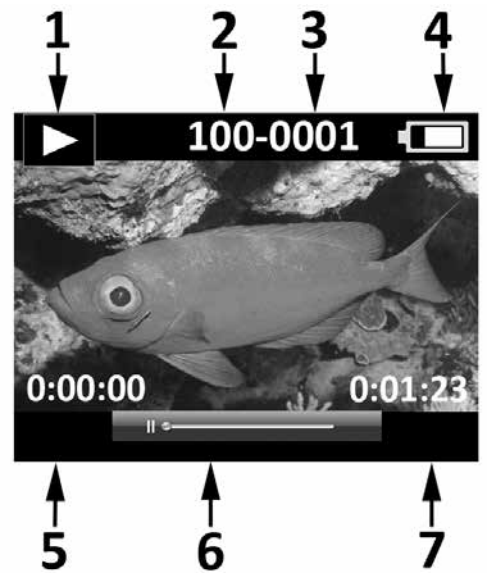
LCD Display:
Playback Mode
(Thumbnail view)



1. **Playback icon - Thumbnail view**
2. **File type:** a. Still image b. Video clip
3. **Folder # (100 to 999)**
4. **File # (0001 to 9999)**
5. **Battery condition**
6. **Thumbnail images (Maximum 4 per page)**

II. Getting to Know Your Camera (cont'd)

LCD Display:
Playback Mode
(Single view)

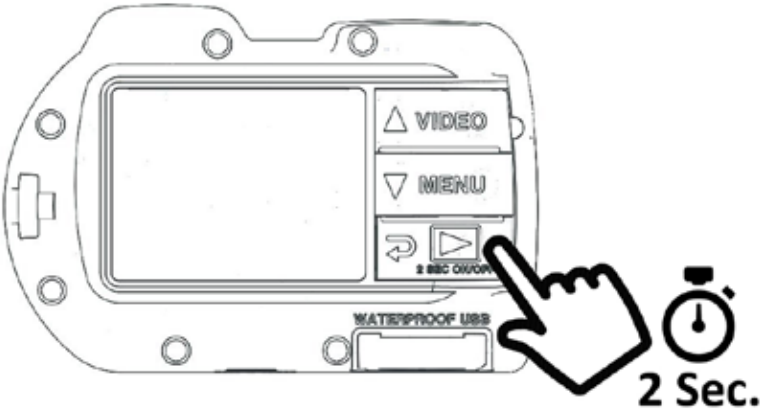


1. **Playback icon - Single image view**
2. **Folder # (100 to 999)**
3. **File # (0001 to 9999)**
4. **Battery condition**
5. **Elapse time H:MM:SS (video files only)**
6. **Video status bar (video files only)**
7. **Total recorded time H:MM:SS (video files only)**

III. Basic Camera Operation

Power On:

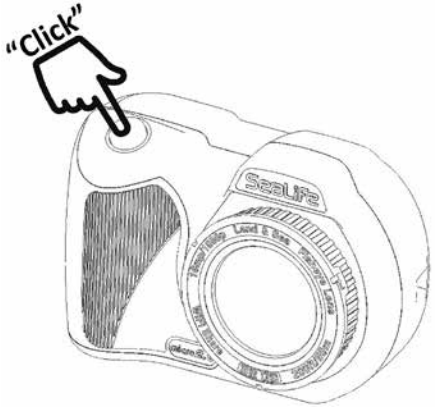
Push and hold bottom button for 2 seconds to power camera ON or OFF.



III. Basic Camera Operation (cont'd)

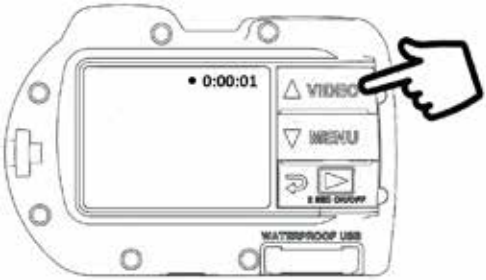
Take a Picture:

Aim, hold camera steady and push shutter button.



Take a Video:

Aim, hold camera steady and push video button to start or stop video recording.



Note:

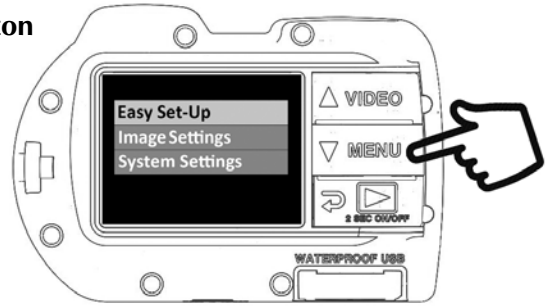
- When video recording is in progress, you will see a red dot with elapse record timer on the top right of the LCD display.
- You can take a 2MP picture while recording video by pushing the shutter button. This feature is not available when recording at 1296p resolution or 120fps or 240fps video.

III. Basic Camera Operation (cont'd)

Easy Setup:

This on-screen guide will help you set the camera correctly.

1. Push MENU button



2. Push shutter button to select "Easy Setup."

3. Follow the on-screen guide using the Up (△ VIDEO) or Down (▽ MENU) buttons to select desired option and Shutter button to confirm setting.

III. Basic Camera Operation (cont'd)

Playback Pictures and Videos:

1. Push Playback button to display thumbnail images.

2. Use the Up (△ VIDEO) or Down (▽ MENU) buttons to scroll through thumbnails.

3. Push Shutter button to select and display single images/videos.

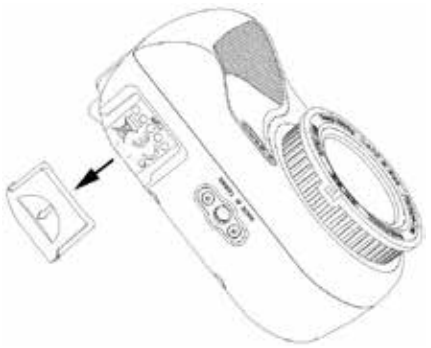
Note:

- Push Shutter button to start or pause playback of video files.
- Use Up (△ VIDEO) button to increase playback speed or Down (▽ MENU) button to decrease playback speed.
- You can delete an image file by pushing and holding shutter button while in thumbnail view.

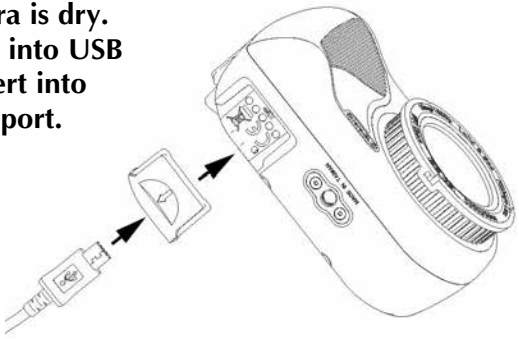
III. Basic Camera Operation (cont'd)

Charge Battery:

1. Remove USB cover.

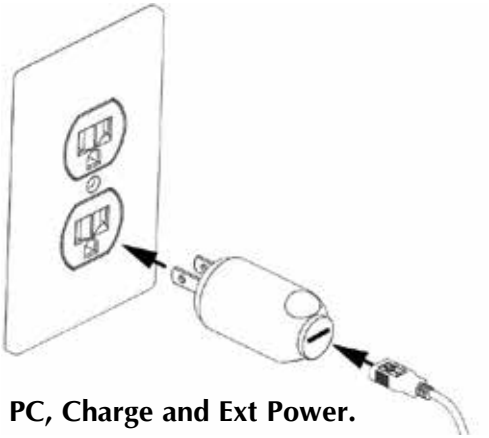


2. Make sure camera is dry. Insert USB cable into USB adapter, and insert into waterproof USB port.

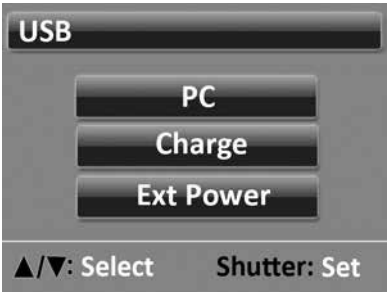


Important: Camera MUST be completely dry before inserting USB adapter. USB adapter is not waterproof.

3. **Connect other end of the USB cable into the wall charger, and insert wall charger into outlet.**

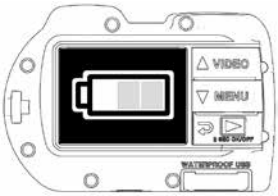


4. **The camera will display PC, Charge and Ext Power.**



5. **Use the Up (△ VIDEO) or Down (▽ MENU) buttons to select Charge and push Shutter button to confirm selection.**

6. When the camera is charging, the large battery icon in center of display will blink from one to three bars repeatedly. The icon will show three solid bars when the battery is fully charged.



7. After 1 minute of charging, the display will go to sleep in order to save power and charge faster. Push any button to turn on display and see battery charging status.

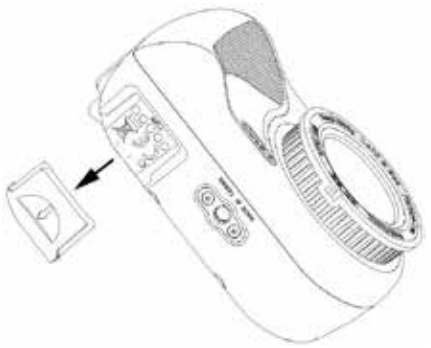
Note:

- After 1 minute, the camera will go into power save mode and display will turn off while camera continues charging.
- Push the SHUTTER button to show battery charging status. Flashing icon means battery is still charging. Solid icon means battery is finished charging.
- The camera may also be charged when connected to a computer USB port; however, charging takes twice as long as charging with wall charger.
- The wall charger may be fitted with one of the 3 international plug types.
- Pushing the MENU button while the camera is charging will stop charging and show USB option screen.
- See troubleshooting tips on page 47 if camera doesn't connect to charger.

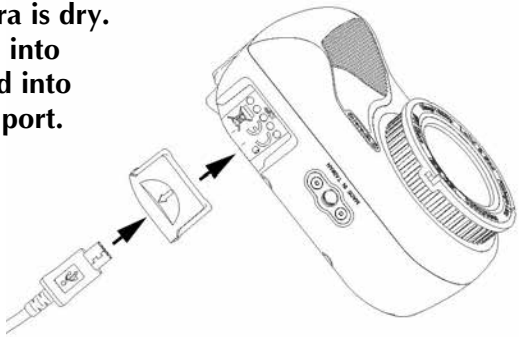
III. Basic Camera Operation (cont'd)

Upload pictures to PC:

1. Remove USB cover.

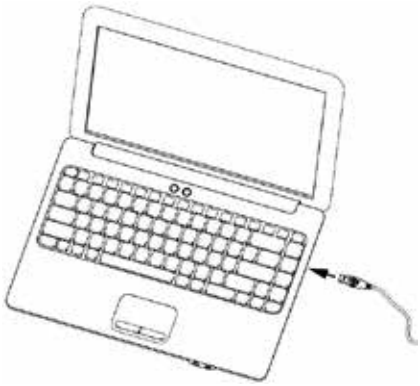


2. Make sure camera is dry. Insert USB cable into USB adapter, and into waterproof USB port.

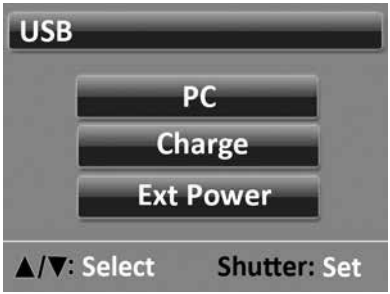


Important: Camera MUST be completely dry before inserting USB adapter. USB adapter is not waterproof.

3. Connect other end of the USB cable into computer.



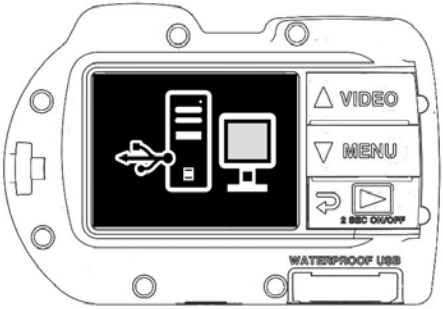
4. The camera will display PC, Charge or Ext Power.



5. Use the Up (△ VIDEO) or Down (▽ MENU) buttons to select PC. Push Shutter button to confirm selection.

III. Basic Camera Operation (cont'd)

6. Display will show PC connection icon for about 1 minute.



For Windows

Click on Windows Start icon and select "My Computer."

Double click on "Removable Disk" icon.

The DCIM folder contains all pictures and videos.

Eject USB device to disconnect camera from computer.

For MAC

Double click on "untitled" or "unlabeled" disk drive icon or your desktop.

The DCIM folder contains all pictures and videos.

Eject USB device to disconnect camera from computer.

Note:

- After 1 minute, the camera will go into power save mode and display will turn off while camera is still connected to PC.
- Push the SHUTTER button to show PC connection icon. Pushing the MENU button will interrupt PC connection and show USB option screen.
- The battery will keep its charge (not charge or discharge) when connected to a computer USB port.

III. Basic Camera Operation (cont'd)

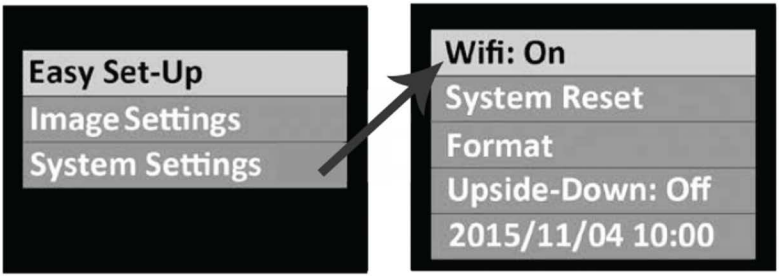
Note:

- Selecting Ext Power will allow you to operate while using external power provided by PC connection, wall charger and any 5V power bank.
- You may also make USB wired connection directly to a smart phone or tablet provided you have a USB adapter specific to the make / model of your smart device. When connecting the camera directly to an iPad or iPhone, a USB Power Y-Cable is required to provide additional power to support a USB connection, which is available at most electronic stores
- See troubleshooting tips on page 47 if camera does not connect to PC.

IV. WiFi Connection to Smartphone/Tablet

1. **Download and install the free "SeaLife Micro Cam" app* to your Android or iOS device.**

2. **In the camera's "System Settings" menu, turn WiFi setting to "WiFi: On."**



Note:

- After turning WiFi ON, please allow 15 to 20 seconds for the WiFi to start up.

IV. WiFi Connection to Smartphone/Tablet

(cont'd)

3. **On your smartphone (or tablet), select "Settings" icon then select "WiFi."**
4. **On the list of available WiFi hotspots, click "SeaLife Micro 2.0" and enter password 1234567890**

Android

Apple

5. **Open "SeaLife Micro Cam" app. Camera will automatically connect to your smartphone.**
6. **When the camera is connected, the smartphone will show a live preview of what the camera sees.**
7. **To disconnect WiFi, turn off camera power or select "WiFi: Off" from camera's Systems Menu.**

Note:

The camera name (SSID) and password can be changed in the SeaLife Micro Cam App settings menu. Connect the camera to your smartphone/tablet and open the SeaLife Micro Cam App. Select the settings icon on the top right of the preview screen and scroll down to "Camera Name(SSID)/ Password". Follow the on screen instructions.

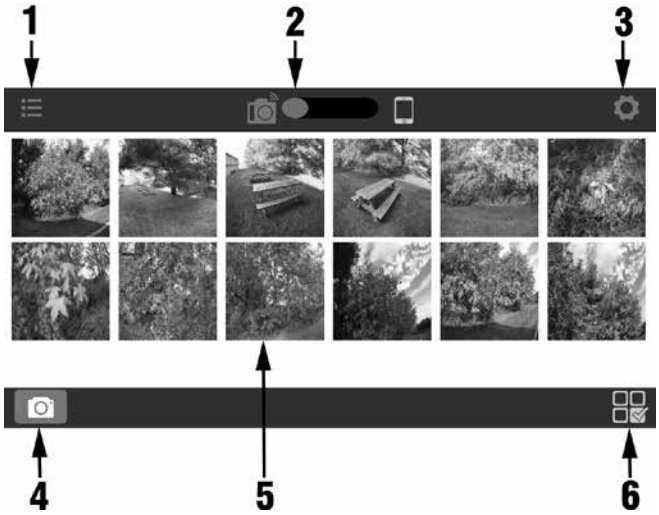
V. Using the SeaLife Micro Cam App

Home Screen:

1. Refresh WiFi connection
2. Camera settings menu
3. Picture / Video mode
4. Take picture or start/stop video
5. Playback

V. Using the SeaLife Micro Cam App (cont'd)

Playback Screen:

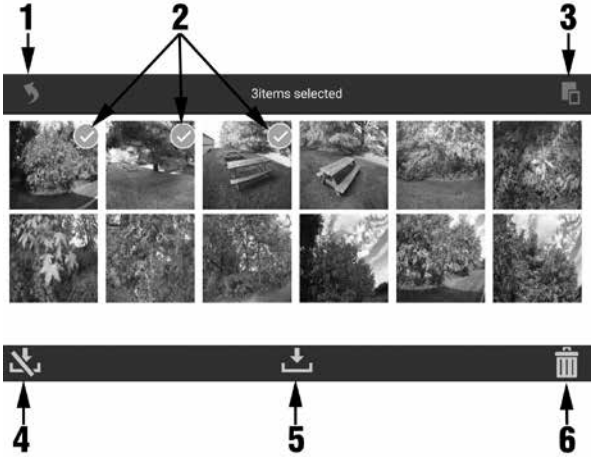


1. List view
2. Image saved on camera (left) or downloaded to smartphone (right)
3. Playback settings
4. Home screen
5. Thumbnail images (touch to enlarge image)
6. Select images for downloading or deleting

V. Using the SeaLife Micro Cam App (cont'd)

Select Screen:

1. **Return to thumbnail**
2. **Selected items (w/ orange check mark)**
3. **Select all**
4. **Cancel download**
5. **Download**
6. **Delete**

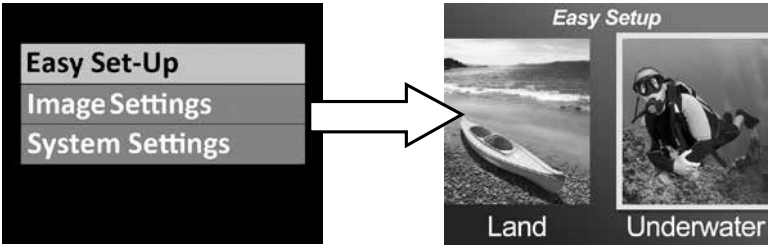


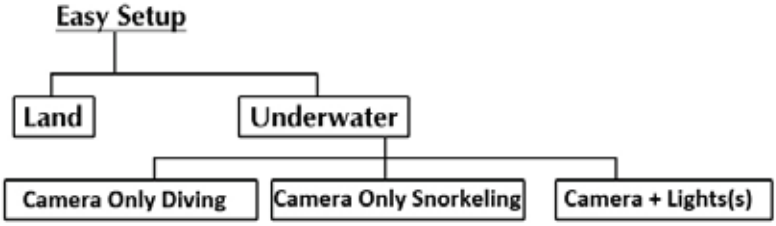
Note:

Images/videos downloaded from the camera to your smartphone/tablet will automatically be saved to the device's photo/video gallery.

VI. Menu Navigation

Easy Setup:
A step-by-step guide that helps you set the camera correctly. Simply follow the on-screen guide and enter if you are using the camera on land or underwater, and if you are using one or two lights.





VI. Menu Navigation (cont'd)

Image Settings:

Self Timer

Useful for capturing self portraits or videos. Delays image capture or video record start time by 3 sec. or 10 sec. after pushing shutter button.

Capture Mode

There are 5 different methods for capturing still images:

Single: Captures one image at a time.

Continuous: Keeps shooting images while shutter button is pushed at a rate of 1 to 2 frames per second depending on image size.

Time Lapse: Records still images at pre-set time intervals of 2 sec, 5, sec, 10 sec, 30 sec, 1 min, 5 min and 30 min. Useful for shooting a sequence of pictures without holding the camera or disturbing the subject. Later you can select the best image or combine all the images into a time lapse video using video editing software.

AEB: Auto Exposure Bracketing. Captures 3 images at different exposures: Standard exposure, slightly over-exposed and slightly under-exposed. Later you can select the best exposure.

Burst: Shoots 5 pictures within 1 second.

VI. Menu Navigation (cont'd)

Scene Mode

Select between 4 different pre-programmed camera settings to automatically give you the best possible image and video under specific shooting conditions.

Land: For above water. Camera sets to 16MP resolution, auto white balance and auto exposure.

Dive: For underwater at depths greater than 25ft/8m. Camera sets to 16MP resolution, Underwater Deep white balance and auto exposure program that favors faster shutter speeds to minimize motion blur effect.

Snorkel: For underwater at depths less than 25ft/8m. Camera sets to 16MP resolution, Underwater Shallow white balance and auto exposure program that favors faster shutter speeds to minimize motion blur effect.

Light mode: For underwater at any depth with one or two photo-video-dive lights. Camera sets to 16MP resolution and auto exposure program that favors faster shutter speeds to minimize motion blur effect. Uses Underwater Shallow white balance to add some color correction. For more natural colors, change white balance to Daylight.

VI. Menu Navigation (cont'd)

White Balance (WB)

Select between 6 different white balance settings to give you the best possible image and video under specific ambient lighting conditions.

Auto:	Automatically selects best white balance for land (not for underwater).
Underwater Shallow:	Ideal for shooting underwater images and videos at depths less than 25ft/8m.
Underwater Deep:	Ideal for shooting underwater images and videos at depths greater than 25ft/8m.
Underwater Green:	Ideal for shooting underwater images and videos in green (algae) water.
Daylight:	Ideal for shooting in sunny conditions.
Cloudy:	Ideal for shooting in cloudy conditions.

Exposure Value (EV)

This setting adjusts the camera's auto exposure program and is useful to force the camera to capture slightly over-exposed or under-exposed pictures and videos. Increasing the value results in a brighter image exposure. Decreasing the value results in a darker image exposure.

Field of View (FOV)

This adjusts the camera's field of view (or viewing angle). This setting is not available for high frame rate video recordings greater than 60fps. Changing the field of view setting maintains the original picture resolution.

Wide 130°	Useful for shooting bigger subject close up so you can fit everything into the image frame.
Medium 100°	Useful for shooting medium sized subjects close up so you can fit everything into the image frame.
Narrow 80°	Useful for shooting smaller-sized subjects close up and fill the image frame.

Picture Resolution

Select among 8 different resolutions and aspect ratios depending on how you want to compose the picture.

4:3 and 3:2 are the most common picture aspect ratios. 3:2 aspect ratio was used by original 35mm film cameras and most DSLR's, and is useful for composing landscapes or slightly wider scenes. 4:3 aspect ratio is used by micro four-thirds and compact digital cameras, and is utilizing the full frame size of the image sensor. 16:9 is a wide-screen format commonly used to view pictures on an HD TV, smartphone or other wide screen devices.

16MP (4:3):	4608 x 3456. Highest full frame resolution.
14MP (3:2):	4608 x 3072. Highest 3:2 aspect ratio resolution.
12MP (16:9):	4608 x 2592. Highest wide-screen resolution.
9MP (4:3):	3456 x 2592. Medium resolution with 4:3 aspect ratio.
7MP (Wide 4:3):	3456 x 1944. Medium resolution with 16:9 aspect ratio.
4mp (4:3):	2304 x 1728. Lowest resolution with 4:3 aspect ratio.
3mp (16:9):	2304 x 1296. Resolution equivalent to 3M 1296p video frame size. Ideal for high resolution time lapse photography that is later produced into HD quality video.
2MP (Wide 16:9):	1920 x 1080. Resolution equivalent to full 1080p frame size. Ideal for time lapse photography that is later produced into HD quality video.

Video Resolution

Select among 10 different video recording resolutions and frame speeds depending on what you are recording and what you intend to do with the video clip. Recording at 60fps (frames per second) is useful for fast action subjects. Recording at higher frame speeds of 120 or 240fps will playback in slow motion at 30fps and useful for super fast action subjects.

1296p – 30fps (frames per second)
1080p – 60fps
1080p – 30fps
720p – 120fps
720p – 60fps
720p – 30fps
480p – 240fps
480p – 120fps
480p – 60fps
480p – 30fps

ISO (Pictures only)

ISO adjusts how sensitive the image sensor is to light. Select between Auto, 100, 200, 400 and 800. The higher the ISO value, the more sensitive the camera will be to light and is ideal for low light shooting conditions. A higher ISO value also results in a grainier, less sharp picture. The lower the ISO value, the less sensitive the camera will be to light and is ideal for brighter light shooting conditions. A lower ISO value also results in sharper, less grainy image quality. Selecting AUTO ISO automatically selects the optimal setting.

Quality

This adjusts how much the still image or video is compressed. Select between 3 options:

Super Fine: Lowest degree of compression, resulting in best quality and largest file size.

Fine: Moderate degree of compression, resulting in good quality and smaller file size.

Standard: Highest degree of compression, resulting in fair quality and lowest file size.

Sharpness

Choose among 3 sharpness levels – hard, standard and soft. A "harder" picture has sharper edges and lines, showing more detail but may appear more pixelated. Softer images have smoother lines.

Metering

This sets the metering method for calculating the exposure.

Center: Averages the light metered from the entire frame, but gives greater weight to the subject matter at the center. This is the recommended setting for most pictures.

Spot: A very small portion of the center of the screen is measured to calculate the correct exposure. Results in

good exposure of brighter objects located in the center of the image frame, especially when using an external photo-video light.

Average: The entire area of the screen is measured, and the exposure is calculated.

Photo Time Lapse

Records still images at pre-set time intervals of 2 sec, 5 sec, 10 sec, 30 sec, 1 min, 5 min and 30 min. Useful for shooting a sequence of pictures without holding the camera or disturbing the subject. Later, you can select the best image or combine all the images into a time lapse video using video editing software. This menu setting will only appear when Capture Mode is set to Time Lapse.

Video Time Lapse

Records video at very slow frame rate of 1, 2, 5 or 10 seconds and plays back at standard 30 frames per second. Useful for recording very slow moving subjects, like sunset, starfish walking, plant growing, etc. A 30 minute time lapse video recorded at 1 second frame rate will play back in 1 minute. Push video button to start / stop time lapse video. Turn Video Time Lapse OFF to disable this feature.

Color

Shoot pictures and video in different colors for unique visual effects.

Standard – Normal color

Sepia – A reddish brown monochrome tint gives the picture or video a warm, antique feeling.

Negative – Colors are reversed. white is black, yellow is blue, etc.

Black/White – No colors. Monochrome black, gray and white.

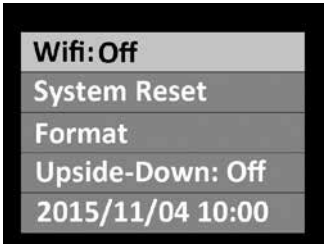
Vivid – Enhances the colors for more vibrant pictures and videos.

70 Film – Replicates the colors used back in the 1970's TV shows.

Popart - Intense colors.

VI. Menu Navigation (cont'd)

System Settings:



WiFi

Turn WiFi ON to enable the wireless transmitter needed to connect the camera to your iOS or Android smartphone or tablet. Please allow about 15 seconds for the device to boot-up. A green WiFi indicator will appear on the top of the display when WiFi is turned on. See page 20 for information on connecting camera to smartphones or tablets.

Note:

- Keep WiFi turned off when not in use, as this will deplete battery power more rapidly. WiFi will also turn off automatically if camera is powered off.

System Reset

System Reset will restore all camera settings to original factory default. Camera will reboot after System Reset.

Upside-Down

Allows the camera to be positioned upside down, while pictures and video is saved right-side-up.

VI. Menu Navigation (cont'd)

Date / Time

Set camera date and time. Format is YYYY/MM/DD HH:MM.

Auto Off

Camera will automatically turn off after 3 minutes of not pushing any buttons. The Auto Off function can be disabled by selecting "Auto off: Off" or extended to 5 minutes by selecting "Auto off: 5 min."

Shortcut

Creates shortcut to one menu setting when pushing menu button for 2 seconds. Select between Off, Video resolution, Photo size, Capture mode, Scene mode, White Balance, Exposure Value, Field of view, Color and ISO.

Format

This will delete all files in the internal memory. It is useful to format memory if internal memory is corrupted by other files saved on the camera. It is recommended to format the memory occasionally to refresh the memory's folder structure.

Firmware Version

Displays what firmware (software) version is installed on the camera. SeaLife may occasionally release firmware updates if any operation and performance enhancements are discovered. Please check SeaLife website for updates: www.sealife-cameras.com/firmware

VI. Menu Navigation (cont'd)

Sound

The camera includes a speaker located inside the waterproof enclosure, which may be turned ON or OFF. The speaker volume has been preset to the loudest possible level, but may be difficult to hear because of the waterproof design.

Microphone

The camera includes a microphone located inside the waterproof enclosure, which may be turned ON or OFF. When the microphone is turned ON, the volume has been preset to the highest possible setting; however, the audio volume when recording video on land is minimal because of the waterproof design. The microphone is more effective underwater and will record the diver breathing or any sounds emitted by sealife. Another option is to use YouTube or video editing software to add music or narrations to your video.

Quickview

This sets whether or not to show the captured image on the LCD display after it has been captured. You can select OFF, 2 seconds or 5 seconds.

Language

Select among English, German, French, Spanish, Italian, Dutch, Russian and Turkish.

VI. Menu Navigation (cont'd)

Light Frequency

To avoid flicker effect when taking pictures indoors under fluorescent lighting, select 60Hz for USA and other countries using 110-120V electrical system. Select 50Hz for countries using 220-240V electrical system.

Date Stamp

Turning Date Stamp ON will imprint the data and time on the bottom right corner of each picture. Not available for videos.

Memory Available

Shows how much internal memory is available for storage. The camera uses some internal memory for operating system files, so 28.9GB and 58.2GB of memory is available for 32GB and 64GB models, respectively.

SSID

This is the username used for making wireless connection to a smartphone or tablet. The default name is "SeaLife Micro 2.0" and it can be changed in the SeaLife Micro Cam app.

VII. Great Underwater Pictures Made Easy

Taking underwater images is much different than taking land photos or video. Here are the most important tips to taking great pictures underwater:

Crystal clear water

Crystal clear water is essential for good underwater pictures. Tiny particles floating in the water cause low visibility and poor picture quality. Avoid stirring up the sandy bottom with your fins. These floating particles cause small spots to appear in your picture, known as "backscatter." Try to limit your shooting distance to 1/10 of the water visibility. For example, if the visibility is 60 feet (18m), you should keep your shooting distance to within 6 feet (1.8m).

Get close to your subject

The ideal shooting distance is 1ft to 4ft (0.3 to 1.2 meters). This distance will result in greater detail. Remember the camera's minimum focus range is 12" (30cm). For shooting closer shooting distances of 6" to 24" (15cm to 60cm), consider purchasing the optional 10X close-up lens (item # SL570).

Move calmly and control your buoyancy before taking a picture

It's hard to take good pictures when you are moving. Position yourself at the best shooting angle and neutralize your buoyancy. Be calm and patient: Sometimes you have to wait so the fish that were frightened away come back. Don't chase the fish, let the fish come to you. Always be in control of your buoyancy before taking pictures and observe all safe diving rules.

VII. Great Underwater Pictures Made Easy (cont'd)

Shoot many pictures of the same subject - if you don't like it, delete it later

One of the great advantages of digital cameras is that you can review and delete pictures later, so shoot several pictures of the same subject. One of the best ways to learn underwater photography is by comparing your good pictures and bad pictures.

Use a Sea Dragon Underwater Photo/Video/Dive Light to enhance color and brightness

Water filters out light and red/yellow colors resulting in darker, blue images. The Dive and Snorkel modes will correct for lost colors, but are only effective to a depth of about 60ft/18m, depending on available sunlight and water visibility. The most effective way to compensate for lost colors is by using a Sea Dragon Photo/Video/Dive light. The light easily mounts to the bottom of the camera. The Flex-Connect system of trays, grips, flexible arms and adapters can click together and apart in seconds without tools, for compact travel. Two lights can be mounted to the camera for wide angle illumination.

Pan very slowly or not at all

When recording video, keep the camera aimed steady at the subject. Avoid making any sudden or jerky movements. If you pan the camera, move it very, very slowly or you will get seasick watching it later. A better way is to slowly move the camera off of the subject, stop recording, change the angle or distance, then start the recording again.

VII. Great Underwater Pictures Made Easy (cont'd)

Limit video clips to 10 seconds or less

It's better to record many short clips than a few long videos. Shorter clips are much easier to share and edit. Remember, a 30 second clip is about 35MB – 10 times more than one 13 megapixel still image. Shorter video clips can be stitched together using video editting software like MicroSoft Movie Maker, Apple iMovie and Youtube. You can also add music and titles to produce a dramatic movie of your diving adventure.

Correcting fisheye lens barrel distortion

The built-in fisheye lens allows you to get close to the subject and still fit everything into the picture. The Micro 2.0 camera features built in barrel distortion correction. Some pictures taken of straight objects, like a tree or horizon, may still appear slightly bent.

There are many photo editing programs available that can correct this barrel distortion effect. Here is a BEFORE and AFTER example corrected with software called ShiftN, which is a free download.

VII. Great Underwater Pictures Made Easy (cont'd)

Visit the SeaLife website for updated tips and advice

Any updates to the manual or additional tips and advice can be found on the SeaLife website at www.sealife-cameras.com.

Ask your local SeaLife dive dealer about underwater camera courses

Most SeaLife dive dealers offer underwater camera courses which include hands-on training as well as many helpful tips and techniques to underwater videos and photography.

VIII. Optional Accessories

Sea Dragon Underwater Photo/Video/Dive Lights

The bright, powerful line of Sea Dragon underwater lights not only produces sharp, colorful pictures and videos, but also makes for a great dive light. Reefs and coral come alive with true colors you've never seen before. The compact and powerful line of Sea Dragon lights are easy to connect to your Micro camera using the Flex-Connect system of trays, grips and arms. Check out sealife-cameras.com for the latest line of Sea Dragon underwater lights.

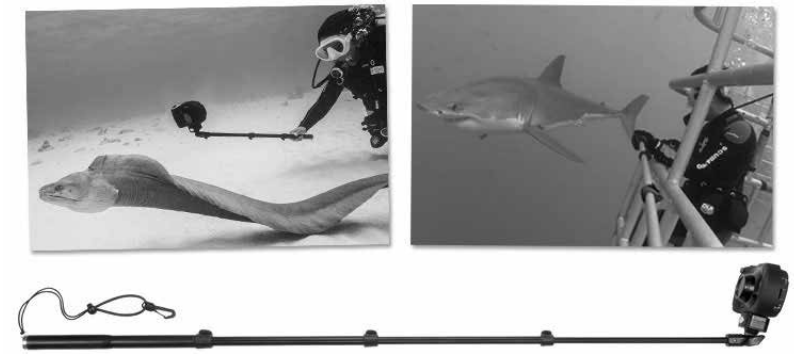
Left: Micro 2.0 attached to Sea Dragon 2500 UW photo-video-dive light w/ Flex Connect Grip and Micro Tray. Center: Sea Dragon lights quickly and easily click together with a push of a button. Right: Micro 2.0 attached to two Sea Dragon 2000 UW lights w/ Flex Connect Grips and Dual Tray.

VIII. Optional Accessories (cont'd)

AquaPod (SL913)

The SeaLife AquaPod allows for close up underwater photos and videos while maintaining a comfortable distance between you and your subject. It's ideal for exciting shark images and video, as well as easily frightened ocean species.

Rotate the Micro camera on the AquaPod for self-portrait images. Easy to use and hold steady, both above and below the water, the AquaPod extends from 18 inches (46cm) to 53 inches (135cm).

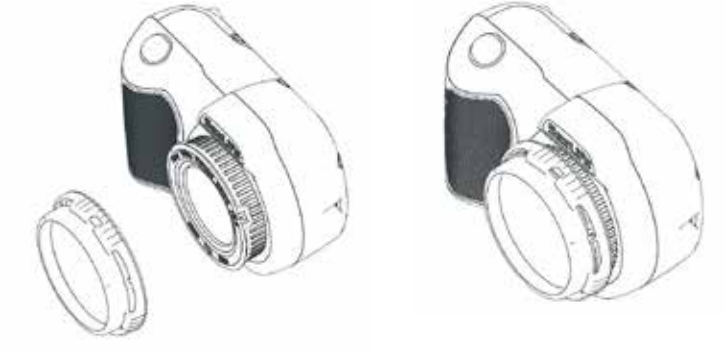


To shoot still images, simply set the camera to "Time Lapse" mode, allowing it to automatically shoot at set time intervals. For videos, just push the video button on the camera and start shooting. For best results, make smooth and gentle movements so the lens stays focused on your subject.

VIII. Optional Accessories (cont'd)

10X Close-up Lens (SL570)

For shooting sharp close-ups from 6″ to 24″ (15cm to 60cm) the optical glass lens easily attaches to the lens port and locks in place with a right twist. It's removable underwater and includes a safety lanyard that connects to the camera.



IX. Care and Maintenance

- Immediately after using camera underwater, soak camera in a fresh water tub for about 20 minutes. Remove USB cover and rinse USB contacts.
- While holding camera underwater, push each button a few times to rinse out trapped saltwater.
- Dry housing with clean soft towel after removing from fresh water tub. Never let water dry on the lens or LCD window, which can cause water drop stains.
- Do not let camera sit in direct sunlight for prolonged periods of time. Keep camera in a shaded area or under a dry towel.
- Make sure camera is perfectly dry before storage. Store camera in a clean dry area.
- Do not disassemble this product; there are no user-serviceable parts inside and will void warranty.
- Keep camera away from extreme temperatures or prolonged exposure to direct sunlight. Storage temperature range is -20°F to 140°F (-29°C to 60°C).
- For long-term storage, charge battery to about 50% or more. Storing camera with 0% charge may shorten battery lifespan or permanently damage battery.
- Opening and tampering with the camera will void your warranty.
- Battery may only be replaced by Authorized SeaLife Service Center. Risk of explosion if battery is replaced by incorrect type. Dispose of used batteries according to your local laws.

X. Troubleshooting

Camera locks up

- In the event the camera locks-up, push and hold the power button for about 8 seconds to force-off and reboot the camera.
- Check SeaLife website for firmware updates: **www.sealife-cameras.com/firmware**

Camera not connecting to computer or wall charger

- Thoroughly clean the gold pin contacts on the camera and USB adapter with cotton swab moistened with isopropyl alcohol. Do not use pencil eraser or other abrasives to clean the contacts as that will remove the gold plating.
- Check and remove and debris that may be obstructing the USB adapter from being fully inserted into the camera's waterproof USB port.
- Reboot computer and try again.
- Try using another USB cable. It's a micro-B type USB cable, which is commonly used with smart phones and other USB devices.
- The USB adapter is not waterproof and needs to be replaced if it got wet.
- Try connecting the camera to a PC or wall charger and pulling back slightly on the adapter. This may be a temporary solution to get a USB connection until the adapter can be replaced.

X. Troubleshooting (cont'd)

Pictures/videos not sharp or out of focus

- The camera uses a fixed focus lens that is sharp from 12″ (30cm) to infinity. Make sure to maintain at least 12″ (30cm) distance between the camera and the subject. For close-up shooting distances of 6″ to 24″ consider purchasing the SeaLife 10X Close-Up lens.
- There are other factors that may contribute to pictures or videos not being sharp. Most common is shooting in low light conditions, which can cause a grainy image or motion blur. Consider purchasing a Sea Dragon external photo-video light ideal for capturing sharp, colorful pictures and videos underwater or in low light conditions.

Downloading SeaLife Micro Cam app for iPad

- Search App Store for "SeaLife Micro Cam" and select "iPhone Only" from the dropdown menu on the top left of your iPad. The SeaLife Micro Cam app is originally designed for iPhones but works equally well with iPad.

More information

- Check SeaLife website for the latest tips and technical updates: **www.sealife-cameras.com/micro-hd-tips-and-technical-updates**
- For technical support, please contact the USA SeaLife Service Center at **service@sealife-cameras.com** or the SeaLife distributor in your country. A list of distributors is on the SeaLife website: **www.sealife-cameras.com/authorized-dealer-locator**

X. Spare Parts and Service

We stand behind our product with a pledge to provide superior service to our customers. If your camera needs service or if you need a replacement part, we promise fast, friendly and professional service so you can have your equipment in good working order before your next dive trip.

Parts

To order spare parts, please contact your local SeaLife dealer. Visit the Dealer Locator at www.sealife-cameras.com to find a dealer near you. US residents can also order spare parts online at www.SealifePartsDirect.com

Service

If your SeaLife product is damaged and requires repair service, please follow these important instructions:

1. Visit the Product Updates page located in the Technical Support menu of the sealife-cameras.com website.
2. Check that you have the most recent firmware loaded on your camera. Firmware updates are also available in the Technical Support menu of the sealife-cameras.com website.
3. Contact the dealer from whom you purchased the product. The Dealer Locator page contains a complete list of local dealers that may be able to assist you with trouble shooting your problem.

If none of these options help, please follow the return instructions available on the seaLife-cameras.com website.

XI. FCC Statement

15.105(b)

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.

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 of the device.

15.21

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

XI. FCC Statement (cont'd)

Canada, Industry Canada (IC) Notices

This Class B digital apparatus complies with Canadian ICES-003 and RSS-210.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Radio Frequency (RF) Exposure Information

The radiated output power of the Dell Wireless Device is below the Industry Canada (IC) radio frequency exposure limits. The Dell Wireless Device should be used in such a manner such that the potential for human contact during normal operation is minimized.

This device has been evaluated for and shown compliant with the IC Specific Absorption Rate ("SAR") limits when installed in specific host products operated in portable exposure conditions (antennas are less than 20 centimeters of a person's body).

This device has been certified for use in Canada. Status of the listing in the Industry Canada's REL (Radio Equipment List) can be found at the following web address: http://www.ic.gc.ca/app/sitt/reltel/srch/nwRdSrch.do?lang=eng

Additional Canadian information on RF exposure also can be found at the following web address: http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08792.html

XI. FCC Statement (cont'd)

Canada, avis d'Industry Canada (IC)

Cet appareil numérique de classe B est conforme aux normes canadiennes ICES-003 et RSS-210.

Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne doit pas causer d'interférence et (2) cet appareil doit accepter toute interférence, notamment les interférences qui peuvent affecter son fonctionnement.

Informations concernant l'exposition aux fréquences radio (RF)

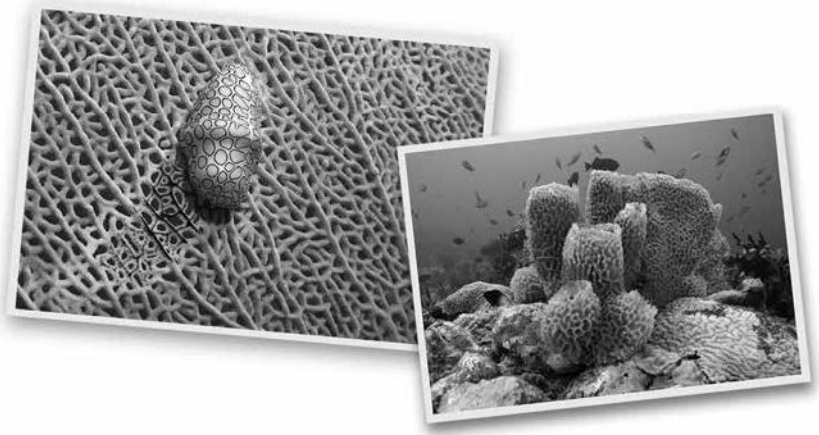
La puissance de sortie émise par l'appareil de sans fil Dell est inférieure à la limite d'exposition aux fréquences radio d'Industry Canada (IC). Utilisez l'appareil de sans fil Dell de façon à minimiser les contacts humains lors du fonctionnement normal.

Ce périphérique a été évalué et démontré conforme aux limites SAR (Specific Absorption Rate – Taux d'absorption spécifique) d'IC lorsqu'il est installé dans des produits hôtes particuliers qui fonctionnent dans des conditions d'exposition à des appareils portables (les antennes se situent à moins de 20 centimètres du corps d'une personne).

Ce périphérique est homologué pour l'utilisation au Canada. Pour consulter l'entrée correspondant à l'appareil dans la liste d'équipement radio (REL - Radio Equipment List) d'Industry Canada rendez-vous sur: http://www.ic.gc.ca/app/sitt/reltel/srch/nwRdSrch.do?lang=eng

Pour des informations supplémentaires concernant l'exposition aux RF au Canada rendez-vous sur: http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08792.html

SeaLife® micro 2.0™



SL51008 | December 2015

Share your photos and videos with us on the web!

sealife-cameras.com

Visit sealife-cameras.com/manuals for Español, Deutsch, Français, Italiano and Nederlands