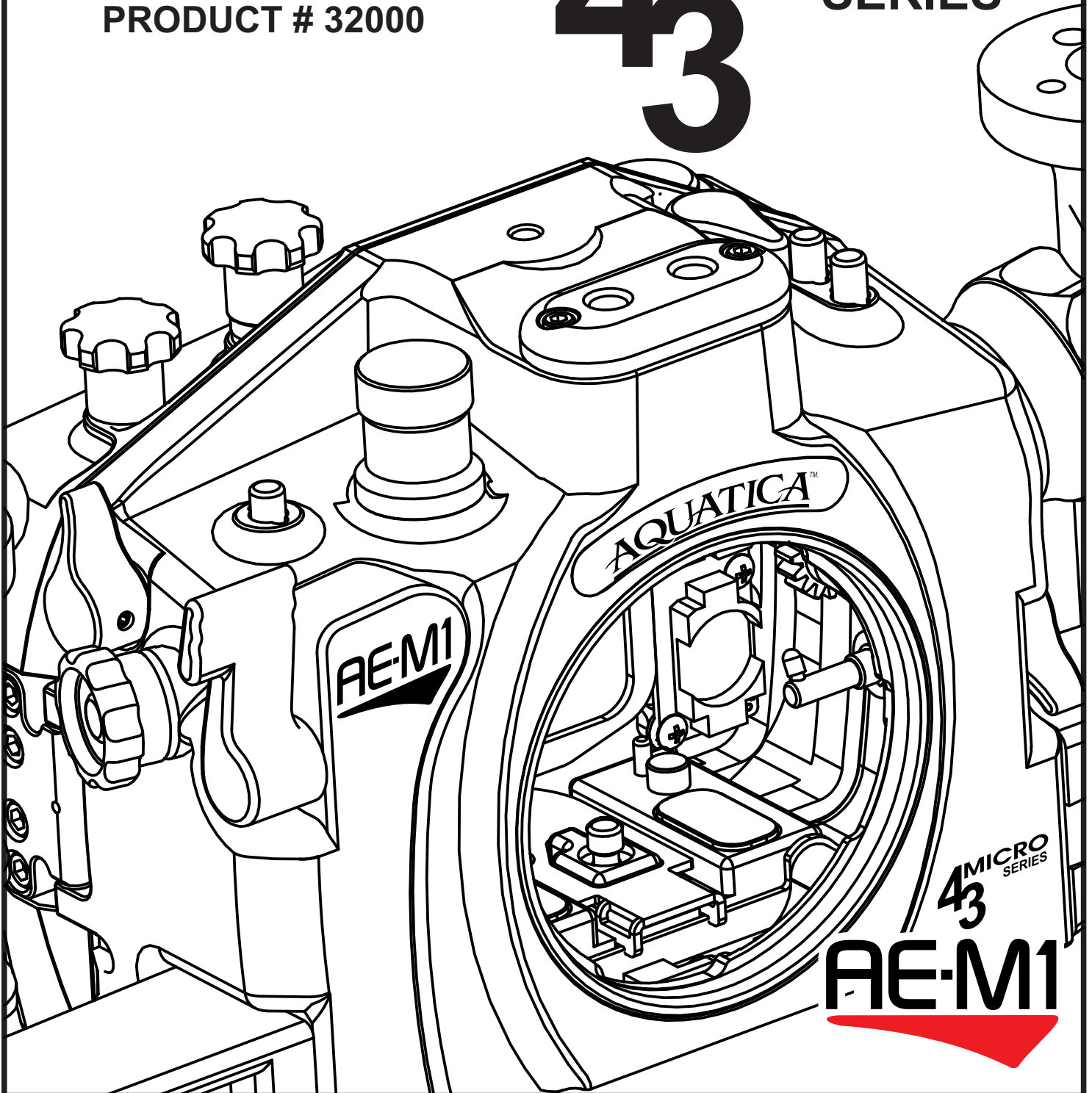


AQUATICA™

INSTRUCTION MANUAL
FOR AE-M1 HOUSING
PRODUCT # 32000

4 **MICRO**
3 **SERIES**



4 **MICRO**
3 **SERIES**
AE-M1

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FOREWORD

Thank you for having selected the AQUATICA Digital Camera Housing System for your underwater photography.

The AQUATICA Digital Housing is the result of a long and continuing relationship with the most demanding underwater photographers in the world. Each housing is handcrafted, quality checked and pressure tested to a 300 feet/90m equivalent by a small group of specially trained individuals, each of whom takes the utmost pride and satisfaction in offering the best underwater camera housing in the world.

The AQUATICA Digital Housing was designed for optimum technical and optical performance and to provide easy and efficient underwater access to essential functions and controls of the Olympus OM-D E-M1 camera.

This manual assumes that the user is already familiar with the Olympus OM-D E-M1 camera. If not, please read the instruction manual of your camera before attempting to use the housing.

Due to its rugged construction, your AQUATICA housing will give you a lifetime of enjoyment and satisfaction in producing underwater images with simple basic care and maintenance.

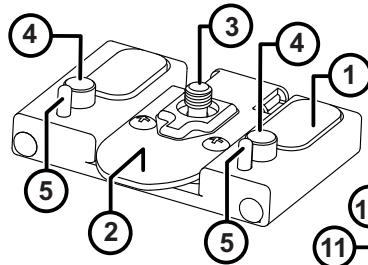
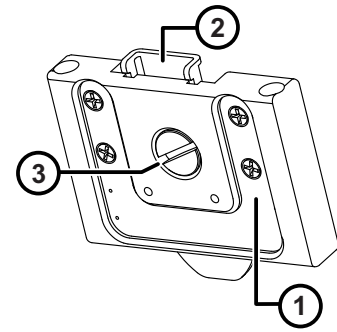
Please read this manual carefully before using your housing for the first time and note that whenever cited the right hand refers to your right when using the housing.

ELEMENTARY SAFETY PRECAUTIONS:

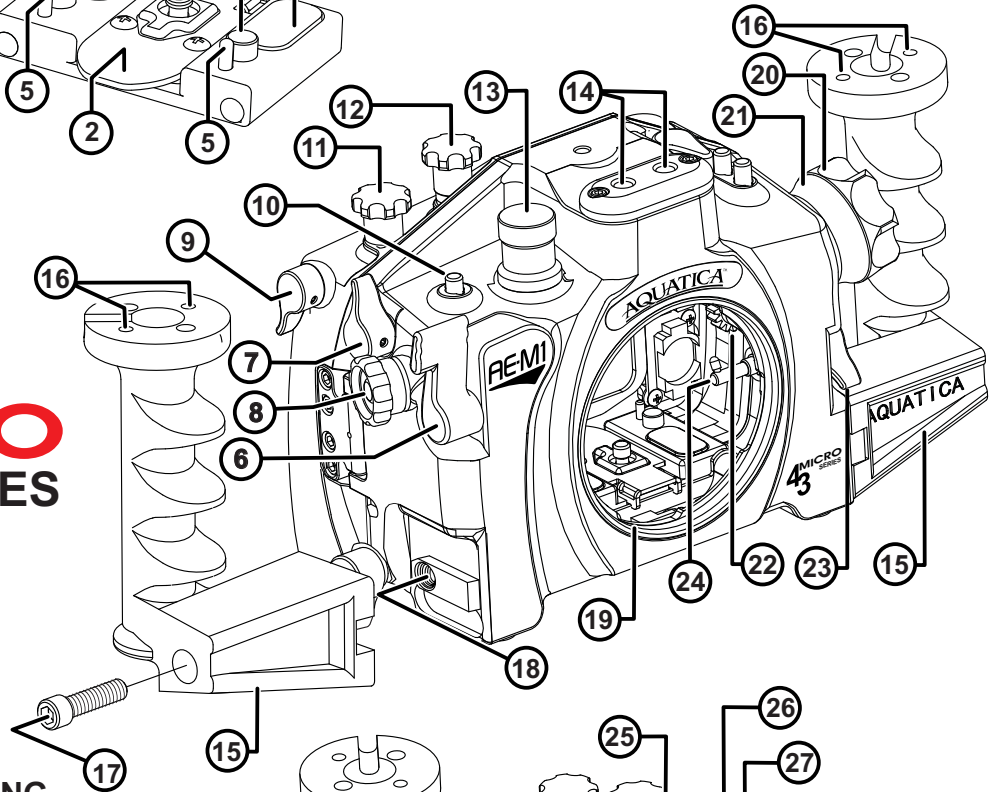
Improper transportation handling or use of this housing might cause a flood or malfunction. In order to avoid these issues, we recommend that you read and follow the following precautions:

- Store and transport the housing in a sturdy, shock proof container and avoid travelling with the camera mounted inside the housing. The force of any impact, especially on the external push buttons will be transferred to the camera and potentially damage this one.
- When travelling by air, or travelling in situation where atmospheric pressure change are foreseen, either remove the port or open the housing to prevent pressure build up inside the housing; this change of internal pressure can force port windows to pop out and/or potentially unseat an O-ring seal.
- Never remove or change a port or open the housing in a location where sand or similar foreign material might come into contact with an O-ring. Be wary of strong wind as it can potentially be carrying sand.
- Use of any accessories, as well as any modifications and/or alterations not authorized by AQUATICA may affect performance and result in flooding or poor functioning of the controls. Be wary of attaching third party accessories made of different metal as this can cause an electrolytic reaction and create corrosion damage to the housing.
- Whenever changing ports or O-rings, perform a simple seal test without the camera inside.
- Handle ports carefully to avoid scratching the acrylic or glass surfaces.
- Always confirm that the ports remain properly attached before rinsing or entering the water with the housing.
- The main O-ring seals should be maintained and cleaned on a regular basis. Read and follow the Care and Maintenance section in this manual. Page 11

Nomenclature

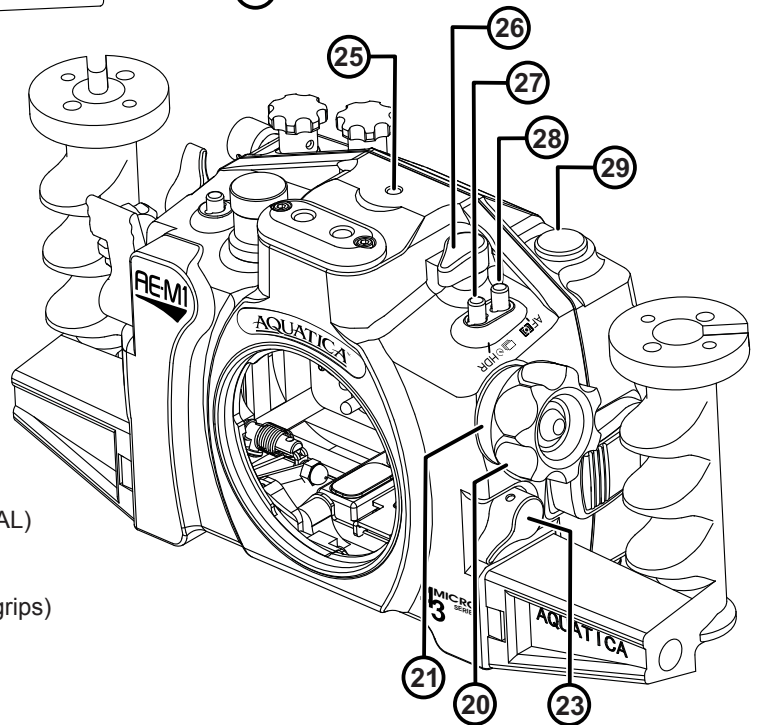


43 MICRO SERIES

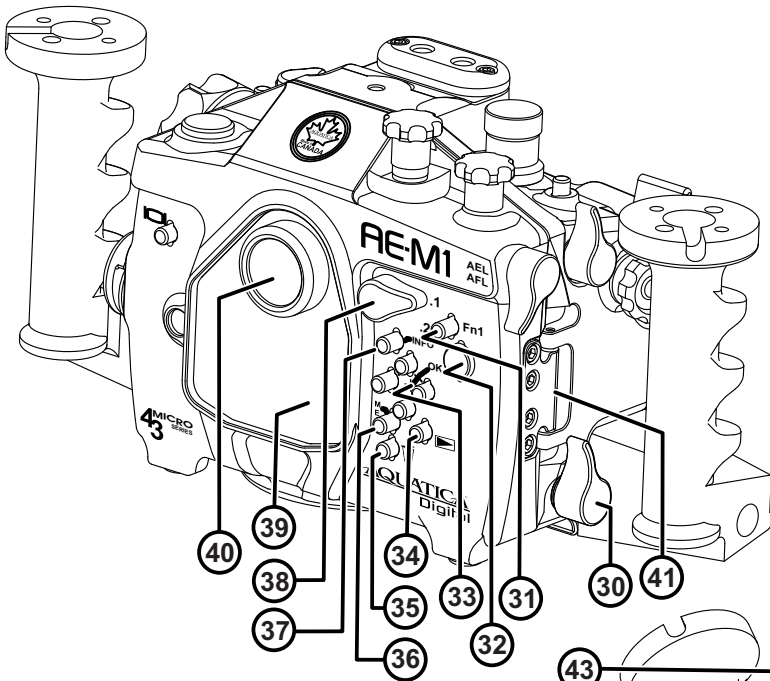


FRONT VIEW OF HOUSING

1. Camera quick release tray
2. Quick release tab
3. Camera mounting screw (1/4"-20")
4. Camera alignment posts
5. LCD display resting pins
6. Shutter release
7. Movie record lever
8. Front dial control knob
9. AEL/AFL lever
10. Fn2 button
11. Rear dial control knob
12. Mode dial control knob
13. Accessory nikonos bulkhead connection (OPTIONAL)
14. Optical strobes connecting ports
15. Grips (left & right)
16. Grip accessories 1/4"-20 mounting holes (two per grips)
17. Grip 5/16"-20 fasteners (one per sides)
18. Grip 5/16"-20 Mounting Holes (one per sides)
19. Bayonet flange
20. Focus/zoom pinion gear release disc
21. Focus/zoom control knob
22. Focus/zoom pinion gear
23. Lens release lever
24. Lens release lever actuator
25. Top accessory mounting Hole (1/4"-20)
26. ON/OFF lever
27. Sequential shooting/self timer/HDR (*1) & bracket setting (*2) button
28. AF/metering mode (*1) & flash setting (*2) button
29. Accessory bulkhead connection plug

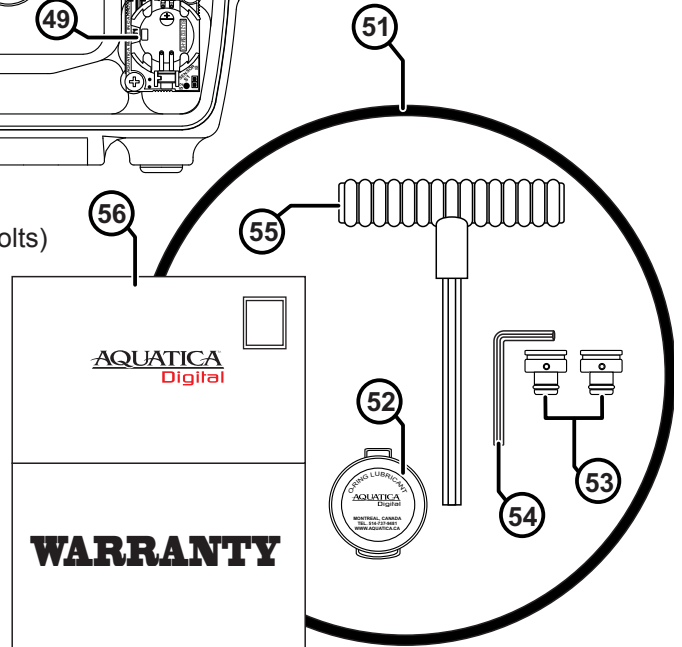
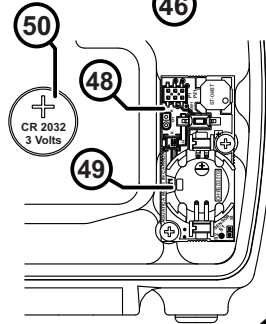
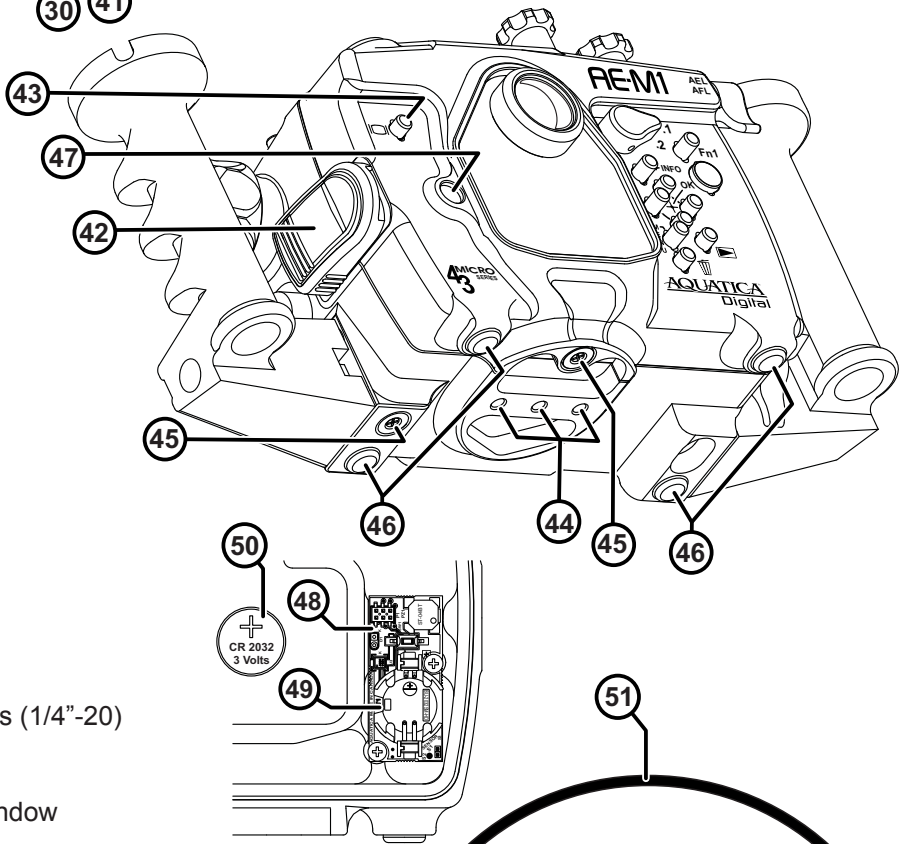


AE-M1



REAR VIEW OF HOUSING

- 30. Port/extension release button
- 31. Fn1 button
- 32. OK button
- 33. Arrow pad buttons
- 34. Playback button
- 35. Erase button
- 36. Menu button
- 37. Info button
- 38. Lever
- 39. Rear LCP port window
- 40. Removable eye piece
- 41. Back door hinge
- 42. Latch
- 43. LV button
- 44. Tripod/accessories mounting holes (1/4"-20)
- 45. Sacrificial anodes (2x)
- 46. Rubber anti skid pads (4x)
- 47. Moisture/pressure sensor LED window
- 48. Moisture/pressure sensor alarm
- 49. Moisture/pressure sensor alarm battery compartment
- 50. Moisture/pressure sensor alarm battery (CR 2032, 3 Volts)
- 51. Spare main O-ring
- 52. O-ring Lubricant Container
- 53. Optical Fiber Adapters
- 54. Small Hexagonal Wrench
- 55. Large Hexagonal Wrench
- 56. Warranty Card



Controls and Content in details:

1. Camera quick release tray: Allows quick removal of the camera from the housing for battery or card replacement. Page 8
2. Quick release tab: Press to release the camera tray from the housing. Page 8
3. Camera Mounting Screw (1/4"-20): Used for attaching the camera to the housing camera tray. Page 8
4. Camera Alignment Posts: These posts keep the camera properly aligned inside the housing. Page 8
5. LCD Display Resting Pins: Used for resting the rear LCD display of the camera at the proper angle. Page 8
6. Shutter Release: Pulling the shutter release lever back partway activates the camera meter and autofocus. Pulling all the way will trigger the camera.
7. Movie Record Lever: Pull to start recording in Video mode, pull again to stop.
8. Front Dial Control Knob: Rotates clockwise and counter clockwise. Use alone or in combination with other controls to select or set various camera functions or modes. In "Manual" exposure mode, this operate the aperture values (see camera manual).
9. AEL/AFL lever: Press to lock auto exposure and/or auto focus, this function can be adapted to different custom functions.
10. Fn2 button: This button can be assigned one of a number of functions. (Refer to camera manual for in depth use)
11. Rear dial control knob: This knob rotates clockwise and counter clockwise. It can be used alone or in combination with other controls to select or set various camera functions or modes. In "Manual" exposure mode, it controls the shutter speed settings. (Refer to camera manual for in depth use)
12. Mode dial control knob: Rotate to select the proper shooting mode. Care should be taken to understand the various combinations available.
13. Accessory Nikonos Bulkhead Connection: Shown with the optional Nikonos strobe connection. This access hole can also be used for other type of accessories. Page 11
14. Optical Strobe Connecting Ports: These connection ports are adaptable to the two most common types of optical fibers found on the market. Page 10
15. Grips (left & right). These grips have mounting points on top for accessories such as lighting and strobes.
16. Grip Accessory Mounting Holes (1/4"-20): Two threaded holes per grip are provided for attaching strobes or video support arms.
17. Grip 5/16"-20 fasteners (one per side): use these with the supplied Hexagonal T-Bar wrench (# 55) to attach the grips.
18. Grip 5/16"-20 mounting holes (one per side): These are the attachment points for the housing grips.
20. Focus/zoom pinion gear release disc: This release disc disengages the pinion gear from the lens. It allows the camera with a gear equipped lens, to be removed easily from the housing. Page 8 & 10
21. Focus/zoom control knob: Used to rotate the gear attached to the zoom ring on the lens. Page 8
22. Focus/zoom pinion gear: Engages the gear attached to the zoom ring. It is retractable when the release disc is lifted (# 20). Page 8 & 10
23. Lens release lever: Press to engage the camera lens release button located on the camera for removal of the lens from the front bayonet opening. Page 8 & 10
24. Lens release lever actuator: This links the external lens release lever (# 23) to the camera lens release lever.
25. Top accessory mounting hole (1/4"-20): Used for attaching accessories such as a focusing light.
26. ON/OFF lever: Flip to turn power ON or OFF. Page 8
27. Sequential shooting/self Timer/HDR (*1) & Bracket setting (*2) button: Press to select the desired mode using the front or rear dial knob (# 8 & # 11).
28. AF/metering mode (*1) & Flash setting (*2) Button: Press to select the desired mode using the front or rear dial knob (# 8 & # 11).
29. Accessory bulkhead connection plug: This access hole can be used for attaching accessories such as our vacuum testing system.
30. Port/extension release lever: Push to disengage the port locking mechanism. Page 9
31. Fn1 button: This button can be assigned a number of functions (Refer to camera manual for in depth use).
32. OK button: Press to confirm menus or selections.
33. Arrow pad buttons: Press to navigate throughout the camera menus and options, confirm selection by pressing the OK button (# 32).
34. Playback button: Press to review images taken with the camera.
35. Erase button: Press to delete images taken with the camera.

Controls and Content in details (continued):

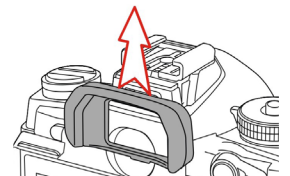
- 36. Menu button: Press to activate menu display. Scroll through the menu using the front (# 8) and/or rear controls (# 11) knobs or by using the Arrow pad buttons (# 33). Press OK button (# 32) to confirm selection.
- 37. Info button: Press to alternate between the various information displays.
- 38. Lever: Toggling this lever lets you alternate between the (.1) and (.2) settings of the camera,
- 39. Rear LCP port window: Offers a clear unobstructed view of the camera rear LCD.
- 40. Removable eye piece: This eye piece provide a full view of the camera viewfinder, displaying all of its information. This eye piece assembly can be removed and replaced with our optional Aqua View 180° and 45° enhanced finders.
- 41. Hinge: Rear door hinge.
- 42. Latch: This double action safety latch is used to securely lock the rear door of the housing, push in and rotate downward to open the rear cover of the housing. Page 8 & 10
- 43. LV button: Push to toggle between viewing through the camera eye piece or the rear LCD. Page 5
- 44. Tripod/accessories mounting holes (1/4"-20): Used for attaching an underwater tripod, accessory tray and/or other accessories.
- 45. Sacrificial anodes (2X): Two zinc anodes protect your Aquatica housing against salt water corrosion. Page 11
- 46. Rubber anti skid pads (4x): Four rubber pads are provided to protect the housing and preventing it from sliding on wet decks.
- 47. Moisture/pressure sensor LED window: provides visual access to the Moisture and Pressure sensor status LED. Page 12
- 48. Moisture/pressure sensor alarm: This alarm works both as a water detection device and an ambient pressure sensor. Page 12
- 49. Moisture/pressure sensor alarm battery compartment: This battery compartment holds the battery for the Moisture/Pressure Sensor. Carefully read instructions regarding installation of the battery. Page12
- 50. Moisture/pressure sensor alarm battery (CR 2032, 3 Volts): This battery powers the Moisture/Pressure Sensor. Carefully read instructions regarding its installation. Page 12
- 51. Spare main O-ring: A spare main O-ring is supplied with the housing. Page 11
- 52. O-ring lubricant container: Used for lubricating the Housing O-ring. Page 11 & 12

- 53. Optical fiber adapters (2x): Used for adapting straight tip optical fiber cord to the housing optical ports. Page 10
- 54. Small hexagonal wrench: Use for securing the adapter (# 53) to a straight tip optical fiber. Page10
- 55. Large hexagonal wrench: Use for attaching the grips (# 15) with the provided fasteners (# 17).
- 56. Warranty Card: Please fill and return this warranty card to Aquatica as instructed. Page 13

PREPARATION OF THE CAMERA:

Some preliminary steps are be required to optimize the Olympus OM-D E-M1 camera for underwater photography:

- 1) Remove the rubber protective guard from the viewfinder on your camera, the camera strap, and any object or accessories that might obstruct installation or get in the way of closing of the housing.

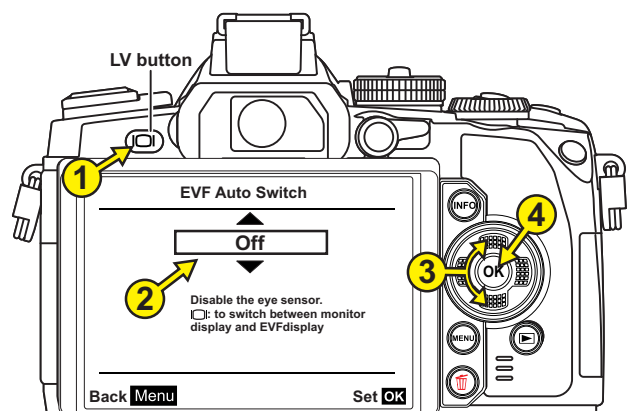


- 2) Disable the EVF auto switch of the camera on the EM-1:

The Olympus OM-D E-M1 camera has a proximity sensor that activate the electronic view finder when looking through it, this feature will need to be disabled. Viewing through the electronic View finder or through the rear LCD screen will then be selected by pressing the LV button on the housing (Key # 21), to do this:

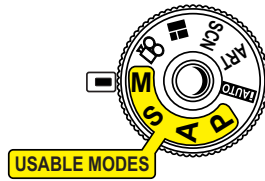
- A) Press and hold the LV button (1) for a few seconds, the menu page for EVF Auto Switch (2) will appear.
- B) Select OFF by scrolling with the Arrow Pad (3).
- C) Press OK to confirm selection (4).

You can now select the viewing method by pressing the LV button on the housing (Key # 21)



Preparing the OM-D EM-1 camera & FL-LM2 flash

If using the Olympus FL-LM2 flash in the Aquatica housing, the Olympus OM-D EM-1 will need to be programmed to trigger this flash when it is in the lowered (folded down) position. Please note that this can only be done while using the P, S, A, M and ART modes.



Start by selecting the desired exposure mode (P, S, A, M or ART) on the MODE dial. On the back of the camera, press the Menu button (1) and scroll using the Arrow Pad (2) until the Custom Menu Icon (3). Press the OK button (4) and scroll to the Button/Dial/Lever section (5) in the Shooting Menu 1. Press the OK button (4) again to open this menu page.

From the B. Button/Dial/Lever page, select Button Function (6) and press the OK button (7).

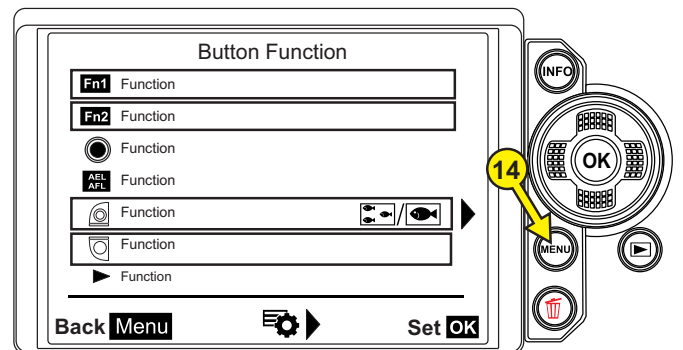
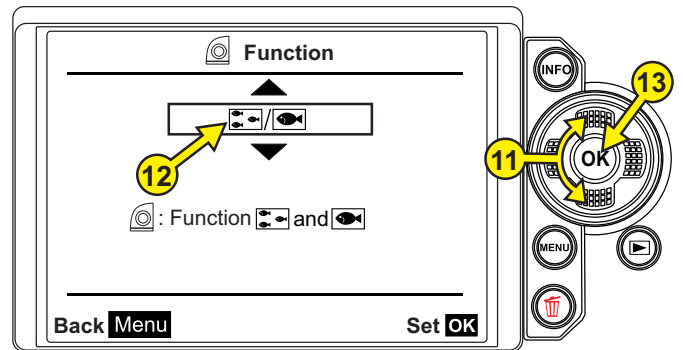
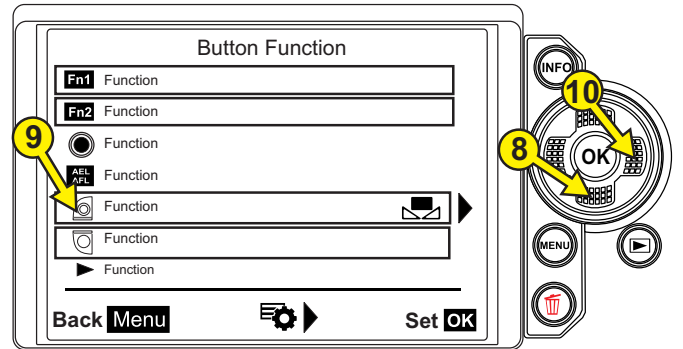
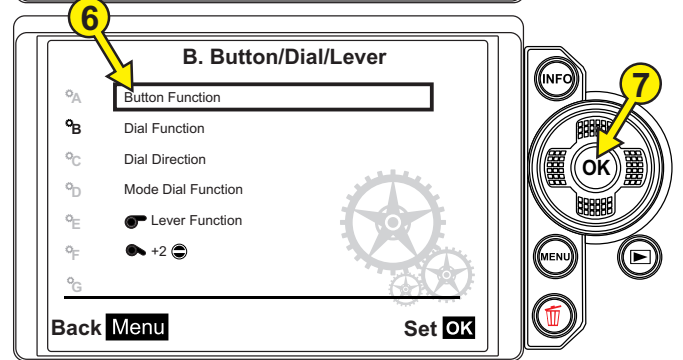
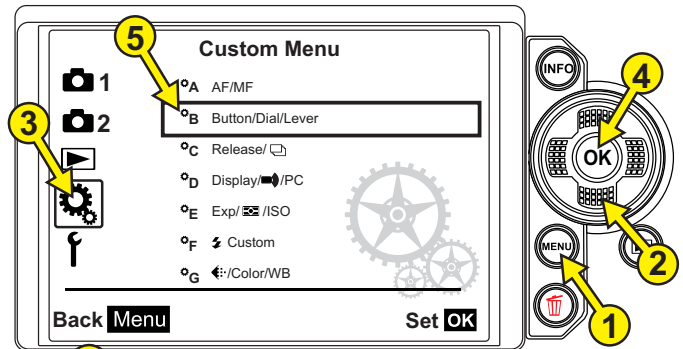
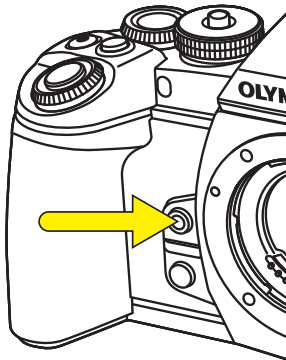
Scroll down with the Arrow Pad (8) to the button function to which you want to assign the underwater mode, Aquatica recommends the upper (9) of the two buttons located in the front right side of the camera (* see note at the bottom of this page). Once selected, press the Arrow Pad (10) to move to the right, this will open the Function page.

The Function page shows all the features that can be assigned to this button. You simply need to scroll the Arrow Pad (11) up or down to select the Underwater Mode icon (12). Confirm its selection by pressing the OK button (13).

To exit the menu and return to shooting with the camera, press the Menu button (14) until you are back to the normal display, or simply press lightly on the camera shutter release.

*Note on Fn button selection:

Technically any Fn buttons in the Button Function list could be assigned for underwater mode function. We recommend this one, since any button, once assigned to this mode will have no other practical use. Therefore, we feel it is preferable to select the one that is not accessed externally. The suggested button in question, which is normally assigned to the important One Touch White Balance can be reassigned to a more accessible and convenient button such as the Fn1 or Fn2 button.



Setting up the Live (Super Control Panel) function:

To program the camera to have access to the important **Super Control Panel** simply by pressing the OK button of the Housing (Key # 32), follow the steps listed below

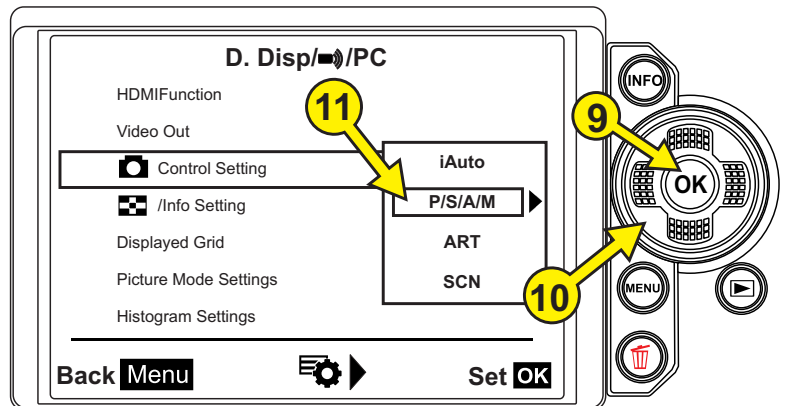
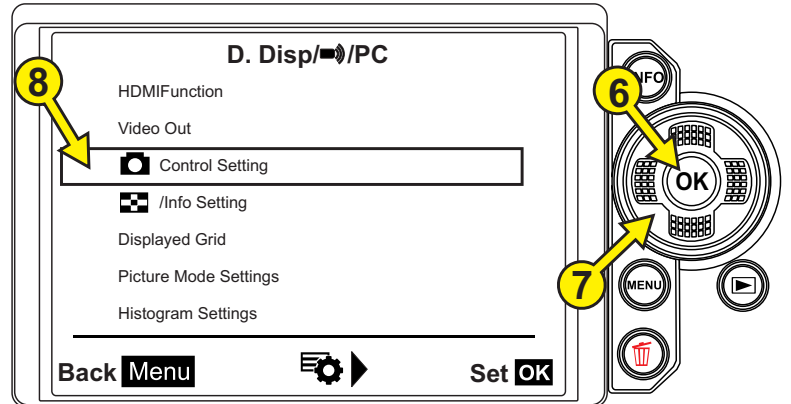
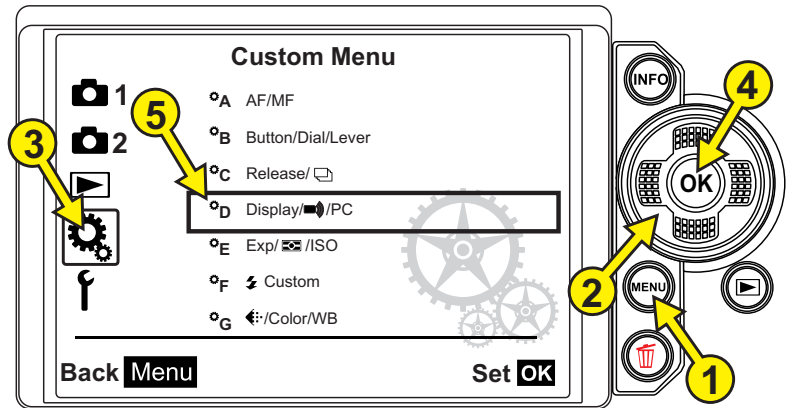
- Press the menu button (1).
- Scroll using the Arrow Pad (2) until you reach the "Custom Menu" (3).
- Press OK (4) for next screen.
- Scroll to "D" Disp / PC selection (5).
- Press OK (6) for Next Screen.
- Scroll down (7) to Control Setting (8).
- Press OK (9) for Next Screen.
- Scroll (10) to P/S/A/M (11) Line.
- Press OK (12) to access the next screen (13).
- Select by toggling up and down with the Arrow Pad (14).

Live Control (Off)

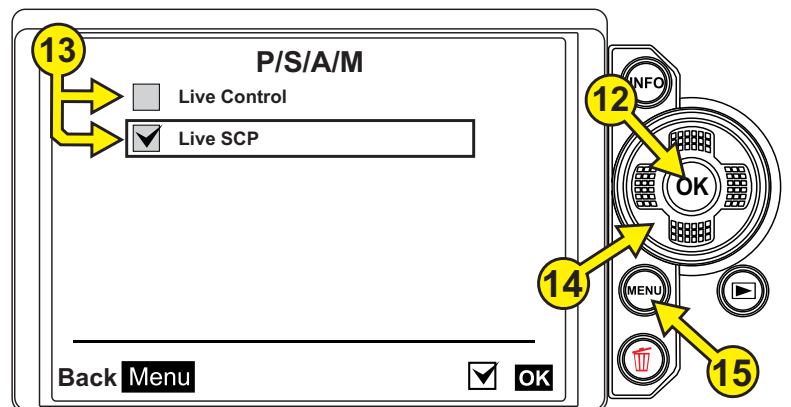
Live SCP (On)

- Press the OK button to confirm each selection status (check mark means ON).
- Press the MENU button (15) to exit or slightly depress the shutter release to go back to the shooting mode.

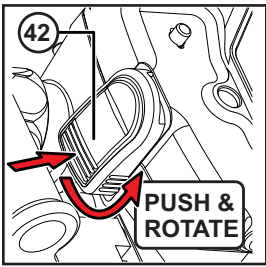
To access to the **Super Control Panel**, once the camera is installed in the housing, simply press the OK button, and it will display on the rear LCD panel.



Step 3

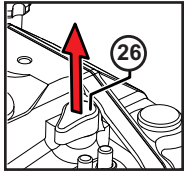
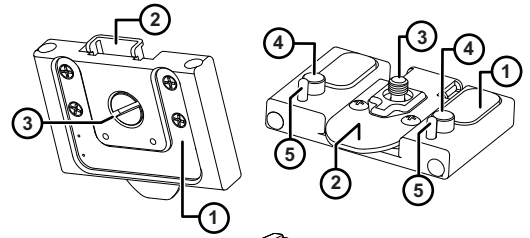


CAMERA PREPARATION FOR INSTALLATION IN THE HOUSING

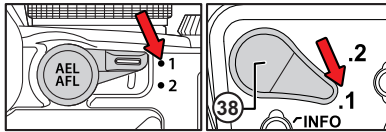


Start by opening the rear door of the housing by pressing on the latch cover (A) and rotating the latch body downward (B), to remove the quick release tray (# 1) from the housing, press down on the tab (Key # 2) and pull out the camera tray.

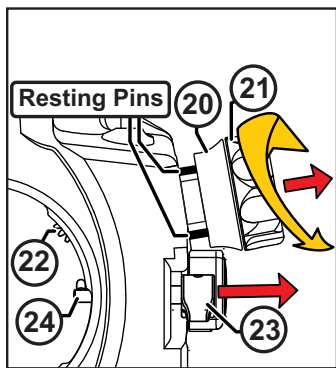
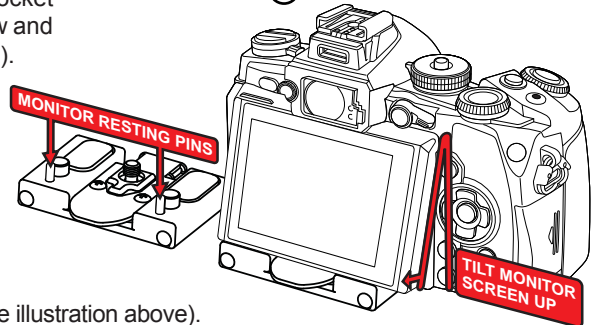
Lift the LCD display upward, rest the camera on the alignment posts (# 4) and align the camera tripod socket with the mounting screw (Key # 3). Tighten the screw and lower the LCD Display back on the resting pins (# 5).



Lift the ON/OFF lever (# 26) up.



Position the Lever (# 38) of the housing in the same position as on the camera (see illustration above).

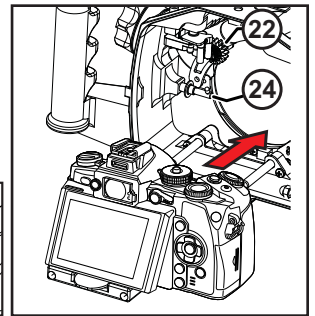
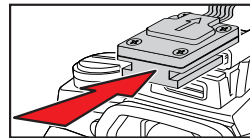


If setting up with the lens and a gear attached to the lens. Pull out the lens lock lever (# 23) on the front of the housing. Lift and rotate the Focus/Zoom Pinion Gear Release disc (# 21) so that it rests on the upper position.

Slide the quick release tray (# 1) back into place and confirm that it is locked in place.

Lower the ON/OFF lever (# 26) back into place and visually check that it is aligned and working properly by switching the camera ON & OFF.

If using an electrical type strobe connection, make sure that the hot shoe is properly installed on the camera (see illustration at right)



CLOSING OF THE HOUSING

Once the camera is securely installed in the front half of the housing, you should confirm the following:

- That the main O-ring on the housing is clean lubricated (see the Care and maintenance of O-rings section Page 11) and properly seated for a positive seal. Inspect the sealing surface and confirm that it is clean and free from any scratches or physical damage.
- That the lever (# 38) of the housing is in the same position as the camera and that the ON/OFF lever (# 26) is also positioned and working properly.
- If using a hot shoe, that the wiring harness is safely tucked away as to not be pinched by the door or obstructing the camera operation in any ways.
- Rotate the latch body (# 42) into the right position, close the rear door of the housing and engage the latch by rotating it to a stop, the safety cover will engage to prevent accidental rotation. To test that this safety feature is engaged, try to rotate the latch without pressing on the safety tab, it should not rotate.
- Visually check that the O-ring remained properly and no obstruction is present

CAUTION: if you feel any unusual resistance as you attempt to close the latch, do not force the closure. Check for any obstruction and try again.

SELECTING THE CORRECT PORT:

The 4/3 Micro Series Type 1 lens chart, included with your housing, was designed to assist you in selecting the right port and gear for your intended lenses. Two types of ports are available for underwater photography, the Dome port and the flat port (AKA Macro port):

A dome ports maintains the original field of view of a given lens, they are normally the ones recommended for wide angle photography. Optical quality of super wide angle lens will, typically, benefit from a large radius dome port, while fisheye lenses can be used with much smaller dome port.

A flat ports, also commonly referred to as a macro port, will on the other hand, narrow the field of view of a lens. This is due to the refraction caused by the flat lens of the port, it translate into additional magnification which will benefit the purpose of the Macro lens. These flat ports are also used with moderate zoom lenses, providing the user with a more compact solution with added magnification in the close up range of the lens.

PORT EXTENSION RINGS:

With certain lens combinations, an extension ring will need to be inserted between the port and the housing. These extension rings serve two purposes:

FLAT PORT EXTENSION RINGS:

While the two dedicated macro ports currently available, for the Olympus M.Zuiko ED 60mm F/2.8 and the Leica DG Macro-Elmarit 45mm f/2.8, do not requires and extension if used with their intended lens. Using longer lenses, converters or additional internal accessories, might necessitate the use of an extension ring, The extension then provide the extra space necessary for accommodating the longer physical dimensions.

DOMEST PORT EXTENSION RINGS:

When using a wide angle or zoom lenses behind a dome port. The extension ring, if required, will be inserted between the dome port and the housing and is intended for matching, as closely as possible, the optical center of the dome port and lens entrance pupil.

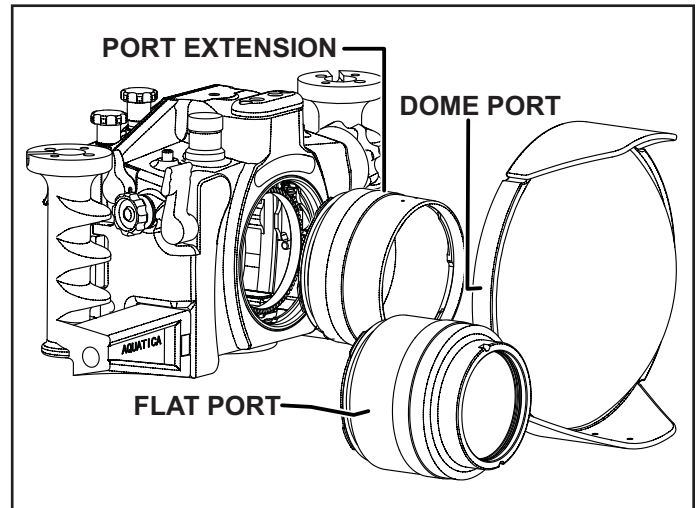
Note: Due to the constantly evolving selection of lenses, it is recommended that you visit our website on occasion and download the latest updated version of the 4/3 Micro Series Type 1 lens chart at: http://www.aquatica.ca/en/products_zoom.html

CLEANING A PORT:

Dirt, grease or fingerprints on the port, especially on the internal surface, can adversely affect the quality of the image. Acrylic ports should be cleaned with plastic or acrylic safe cleaner and the glass ports should be cleaned with proper optical lens cleaner. For more details please read section titled "Care and Maintenance: of the Ports. Page 11"

LUBRICATING THE PORT O-RING:

Before using the port, remove the O-ring on the rear of the port and lightly coat it with Aquatica O-ring Lubricant. For more details please read the section titled "Care and Maintenance: of the O-rings. Page 11"



MOUNTING PORT AND EXTENSION RINGS

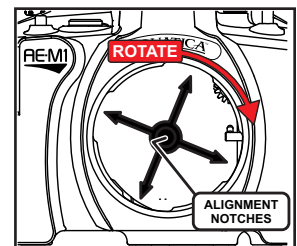
Before mounting the a port or extension on the housing, always ensures that the port O-ring is clean, lubricated and properly seated in its groove. Inspect the sealing surface on the housing to confirm that it is clean and free of physical damage.

This AQUATICA Housing System features a bayonet mount (#19) with a locking mechanism (# 30). To mount the port or extension ring simply:

1. Place the housing on its back on a clean and steady surface.
2. Place the port or extension ring inside the main port of the housing. Align one of the four alignment notches with the opening of the housing (see illustration).

3. Position your hands on opposite sides of the port or extension ring.

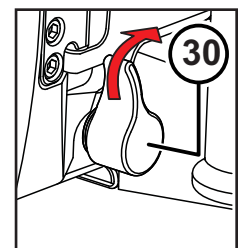
4. Push with even force on both sides of the port or extension ring until you feel it snap into place. Make sure the bayonet of the port or extension is completely inside the housing.



5. Turn the port or extension clockwise until it stops. Do not force, if there is too much resistance, remove the port, check the O-ring and retry.

6. Check to ensure for the proper seating and sealing of the port or extension and that it is safely locked on the housing.

7. To remove, simply pull the port release lever (# 30) and rotate the port or extension, counter clockwise



Note : It is recommended that you familiarize yourself with this mounting procedure by trying it without the camera, this will allow you an inside view of the bayonet mount and ports or extension rings in the housing.

PREPARATION OF THE LENS

There are a number of gears and lens options available for the Olympus OM-D EM-1 and its Aquatica AE-M1 housing. Using the right gear and correctly mounting it on the lens is primordial for a smooth housing operation. Included with each gear is the installation directions, please follow them carefully. Since the aperture control on the Olympus OM-D E-M1 is achieved using the Front Dial, the use of suitable types of lenses is mandatory.

Notes: Confirm that the lens used is properly set for using it in the housing, manual and focus distance limiter switch should all be set in the appropriate position (see directions included with the gear).

GEAR INSTALLATION:

Follow the gear instruction notice. Rotate the lens mounted gear ring several times to make sure it moves smoothly

USING THE HOUSING

Whenever changing ports or O-rings, it is highly advisable to perform a simple seal test without the camera inside. Strapping a weight to the housing and lowering it to a minimum depth of 30ft /10m for at least 10 minutes will assure you that the seating of the new port or o-ring is proper. This test, though time consuming and often considered unnecessary, may save your camera equipment from irreparable water damage. Once this test is performed the housing is now ready for the dive.

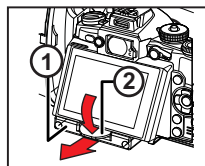
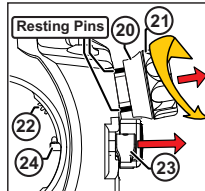
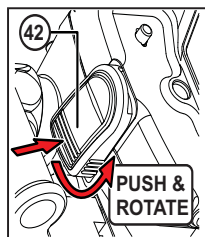
CAUTION: Never jump into the water with the housing. It is best to have the system handed to you after you have made your entry, or have it lowered gently to you on a line. Make certain that lanyards of other equipment stay clear of the system when rinsing.

The housing is slightly negatively buoyant so that you can lay it down on the bottom, but avoid laying it on live coral or other delicate marine life.

CHANGING THE MEMORY CARD AND BATTERY

The housing should be thoroughly dried before opening it to replace the memory card or battery. Wipe the housing off with a dry towel. If possible it is suggested that the housing be blown dried by directing low pressured air around the main o-ring before opening.

Rest the housing on its front with the port facing down, be careful to protect the port surface, pull the lens release lever out (# 23) and lift and rotate the zoom control disc (# 21) unto its resting pins, release the closing latch (# 42), open the rear door and pull out the quick release tray (# 1) with the camera and lens, be watchful of any residual water that could be dripping in the housing or on the camera. Before closing back the housing, inspect the O-ring thoroughly to confirm it is clean.



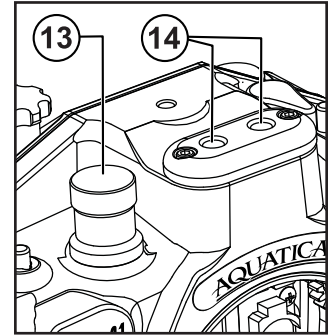
TRANSPORTING THE AQUATICA DIGITAL HOUSING

Store the AQUATICA Digital housing in a sturdy, shock proof container. When travelling by air, remove or loosen the port. This allows for equalization of the air pressure inside the housing to the external air pressure. Failure to do so may cause serious damage to the acrylic ports. Avoid travelling with the camera mounted in the housing.

USING UNDERWATER STROBES

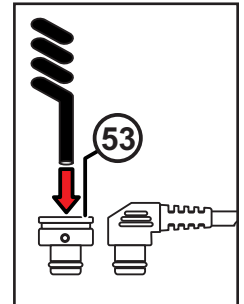
OPTICAL CONNECTORS

The Aquatica AE-M1 housing has two optical ports connections integrated in its design, these are ready to accept the most popular type of optical fiber commonly currently found on the market. The use of electrically triggered strobes is also possible; this is done with the addition of an optional strobe connector with hot shoe (Nikonos or Ikelite type).

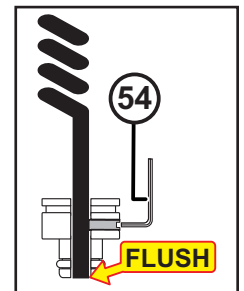


OPTICAL FIBER:

The housing is supplied with two adapters (# 53) for converting the typical straight optical fiber cord (typically used by INON and other strobe manufacturers), just insert the straight optical fiber cord, provided with your strobe, into the adapter supplied, push so that the tip is flush with the base and tighten the set screw lightly with the provided hexagonal wrench (# 54), do not over tighten, as it may damage the internal fiber and impair the signal transmission to the strobe.



For angled type cords, as commonly used on Sea & Sea and Olympus underwater strobes, simply plug the cord end in the optical port base of the housing.



When using Optical triggering, the built-in flash of the camera need to be programmed to fire in the down position, see PREPARING THE CAMERA on page 6 for the setup instruction.

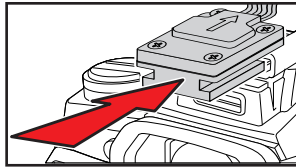
It is advisable to turn the camera and external strobe(s) off when travelling to your dive site in order to avoid useless drain of the camera and strobes batteries.

Note: Results from field testing suggest that mixing brand of strobes in S-TTL mode can produce unreliable results.

ELECTRICAL STROBE CONNECTION:

For strobes that do not offer optical triggering capability, an electrical strobe connector can be installed in the bulkhead hole (# 13) on the right hand side of the housing, a choice of the standard Nikonos or Ikelite type is available. Please note that only manual flash exposure will be possible with electrically connected underwater strobes.

The strobe are triggered through a hot shoe connection, make sure that this one is well inserted and that that the hot shoe ribbon cable will not interfere with the closing of the housing or its controls operation.



It is possible to adjust the exposure, when using manual strobe, by using either the aperture control of the camera and/or the variable power setting of the strobes.

Always refer to the strobe manufacturer instruction regarding their recommended lubricant on the strobes O-rings. Please see "Care and maintenance of the O-rings" on page 11 & 12 for some important information regarding O-rings lubricant.

Note: In order to give the camera internal flash and/or underwater strobe(s) sufficient time to recycle their charge completely, it is recommended that the camera sequential shooting mode (# 27) be set to Single-frame shooting. Rapid firing of the camera can result in underexposed images due to insufficient power being delivered by the strobes (or camera internal flash)

CARE AND MAINTENANCE

Of the housing:

After each and every salt water dive, your housing system should be soaked or rinsed in fresh water for at least 30 minutes. During this soaking period reach into the water and operate all the controls several times, on the return of a dive trip, given your housing a prolonged soaking in fresh water will prevent left over salt from settling in. Be sure to inspect the housing's main o-ring and clean it after every use. Refer to Maintenance: Of the O-rings.

To ensure that the accessory hand grips won't fuse on to the housing due to the exposure to salt water, it is also a good practice to occasionally remove them. Clean and lubricate the bolts with a small amount of WD-40 or add a touch of grease.

WARNING: Use WD-40 carefully, sparingly and only on metal to metal surfaces. WD-40 can damage the acrylic on the ports, the optical surfaces on lens as well as the O-rings.

Of the Ports:

Care should be taken with the Dome Port and Macro Port to avoid scratches on the lens surface. The acrylic port is softer than glass so minor exterior scratches are often unavoidable. However, since the indices of refraction for acrylic and water are almost equal to each other, the scratches, if they are minors, are unlikely to show up and will not seriously impair image quality. Internal scratches (air side) on the other hand must absolutely be avoided as they do not fill in with water and will affect the quality of the image.

Clean the Acrylic dome using only products recommended for cleaning acrylic and a soft lint free cloth and glass dome with approved lens cleaning products. Dust on the interior surfaces of

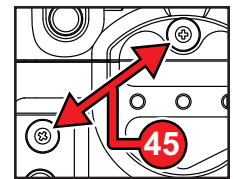
the port can be removed with a soft camel hair brush or a blower brush. Caution must be taken when using aerosol devices as not to spray the lens material with the liquid propellant as this may seriously affect the optical properties of the port. Use of pressurize air directly from a dive tank is not recommended, the high pressure force of the air stream may easily dislodge the port lens or its O-ring, It is advisable that ports should be removed, inspected and serviced after every dive.

Of the O-Rings:

The O-rings that need to be maintained on a regular basis are the main housing port and O-rings on the lens port the main O-ring should be cleaned and inspected on a regular basis and the port O-ring should be cleaned every time a port or extension is changed or removed.

Of the sacrificial anodes:

The anode attached to the bottom parts of the housing is there to prevent corrosion due to electrolysis, as time goes, it will deteriorates and need replacement, contact your dealer for a replacement set (parts # 19220).



TO SERVICE O-RINGS ON THE HOUSING MAIN O-RING, PORTS AND EXTENSION RINGS

1. Removing the O-ring: It is important never to use a sharp instrument when removing an O-ring as this may damage the O-ring groove or the O-ring itself. A dull pointed object or the edge of a credit card usually works well.
2. Once the O-ring is removed, it should be examined for damage. Check that it is free of nicks and cuts and that it retains its original round profile. O-rings that appear to be damaged should be discarded immediately and replaced with new ones. Rinse the O-ring with fresh water and dry it with a clean lint free cloth.
3. Clean the O-ring groove (where the O-ring sits) with a cotton swab. Be sure to remove any lint the cotton swab may leave behind. Inspect the groove for any signs of damage. Wipe the sealing surface part of the housing that the O-ring seals against with a clean lint-free cloth.
4. Re-grease the O-ring with a thin layer of Aquatica O-ring lubricant until it appears to be smooth and shiny. Do not over grease it. Use just enough grease so the O-ring will pull smoothly through your fingers. Excessive amounts of grease will only serve to attract dirt to the o-ring. Make sure that the O-ring is properly and evenly seated in the O-ring groove.
5. To reinstall the clean and lubricated main O-ring, place the entire O-ring over the groove and push the O-ring gently in, avoid excessive tension on the O-ring, as this may cause the O-ring to stretch.

Internal O-rings on the housing controls are not user accessible, while these O-rings are not as susceptible to damage as they are not exposed, rinsing properly with fresh water to flush out salt crystals and sand residues will be the proper way to assure trouble free operation.

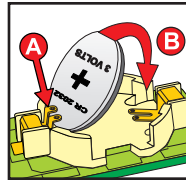
IMPORTANT NOTICE

WARNING: Use only petroleum free O-ring lubricant such as our # 19213 Aquatica O-ring Lubricant. Petroleum based lubricant used by other manufacturers for their silicone based O-rings can and will swell the material of our O-rings. This will make the O-ring more difficult to install and can result in the O-ring being damaged or pinched, adversely affecting the housing performance.

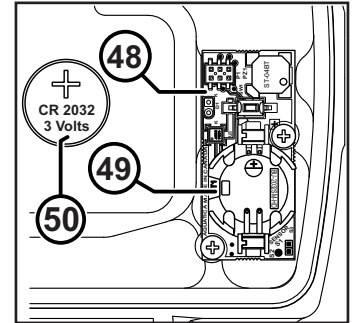
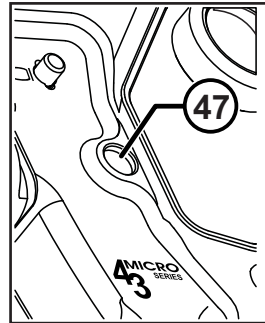
It is recommended by the manufacturer to have the housing in for yearly maintenance. Aquatica has authorized service center in both the continental USA and Europe, prior to sending the housing check for the closest service center to you on our website www.aquatica.ca.

MOISTURE ALARM

Your Aquatica housing is with a Surveyor moisture and vacuum sensor alarm (# 48). This device has two distinct purposes, a moisture detection circuitry and an ambient pressure sensor circuitry; both are integrated on the same circuit board.

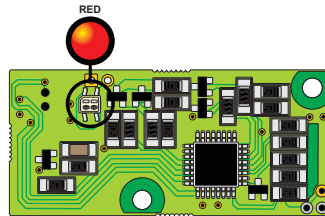


A standard CR2032 battery cell (# 50) is provided as the power source, to insert the battery, first slide it in the battery compartment, making sure that it is under the two contacts (A) first, and then push down (B) until it snap into place.



MOISTURE DETECTION FUNCTION:

The moisture detector function of the Surveyor alarm is always on standby and need not be activated, in the event of any contact with water, an audible signal coupled with a blinking bright red flashing LED, will be activated and visible through the LED viewing port (# 47).



Proceed to remove the housing from the water, always keeping in mind your personal safety.

To test the moisture alarm circuitry, simply moisten the tip of a finger and establish contact with the probes end, this should trigger the alarm signal, if it fails to activate, check the contacts position and the battery condition, replace with a fresh one if necessary.

VACUUM SENSOR FUNCTION:

Your Aquatica housing is equipped with Surveyor moisture and vacuum sensor alarm, to take advantage of the vacuum feature, a pressure valves and pump is required, this is sold as kit (# 19228) and include the operating manual.



VACUUM PUMP & PRESSURE VALVE
19228

AQUATICATM

Digital

WARRANTY

PLEASE READ CAREFULLY

One year Limited Warranty.

Thank you for purchasing an AQUATICA manufactured product! Your AQUATICA housing is handcrafted by a small group of specially trained individuals - each of whom takes the utmost pride and satisfaction in offering you the best underwater camera housing in the world. All AQUATICA products are guaranteed against defects in material or workmanship for (1) one full year from the date of purchase for consumer use. These same products when used commercially will carry a 90-day warranty. No statutory warranty applies. Cameras housed in AQUATICA housings are not covered under this warranty and ANY WATER DAMAGE SUSTAINED DUE TO INSTALLATION ERROR OR ANY OTHER REASONS IS NOT THE RESPONSABILITY OF AQUATICA. Therefore the appropriate insurance should be maintained by the user.

Warranty does not apply to replaceable seals or damages due to impacts or contact with abrasive surfaces. Warranty applies only to products purchased from authorized AQUATICA dealers and does not extend beyond the original retail purchaser. Unauthorized modifications or repairs will automatically void this warranty. This applies to removal of serial numbers and AQUATICA identification labels.

To obtain service during or after the warranty period **you must first notify** AQUATICA at 514-737-9481 or info@aquatica.ca for the shipping procedure and directions to your nearest authorized AQUATICA service center.

Always mark clearly on your package and shipping/export documents "**Canadian goods returned for repair**"

Do not ship to our manufacture unless authorized by Aquatica. Unauthorized packages will be refused.

YOUR SERIAL NUMBER _____

AQUATICA
3025 De Baene, Montreal, (Quebec), Canada H4S 1K8
info@aquatica.ca tel.: 514-737-9481