AQUATICA™

Digital

A1 Dcx

Made in CANADA

AQUATICA Pro Digital

OPERATING MANUAL
For Aquatica A1Dcx Housing

FOREWORD

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

The AQUATICA Pro Digital Housing is the result of a long and continuing relationship with the most demanding underwater photographers in the world. Each housings is handcrafted, quality checked and pressure tested to a 300 feet 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 Pro Digital Housing was designed for optimum technical and optical performance and to provide easy and efficient underwater access to essentials functions and controls of the Canon 1Dc and 1Dx cameras.

This manual assumes that the User is already familiar with the Canon 1Dc and 1Dx cameras. If not, please read the Canon instruction manual before attempting to use the housing.

With basic care and maintenance, your AQUATICA housing will give you a lifetime of enjoyment and satisfaction in producing underwater images.

Please read this manual carefully before using your housing for the first time and note that: wherever cited the right hand is your right when using the housing.

SAFETY PRECAUTIONS:

Improper transportation handling or use of this housing might cause a flood or malfunction.

Please 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 as impact forces especially on the external push buttons will be transferred to the camera.

- When travelling by air, either remove the port or open the housing.

- Never change a port or open the housing in a location where sand or similar foreign material might come in contact with an O-ring.

- Use of accessories or modifications and alterations unauthorized by the manufacturer may result in flooding or poor functioning of the controls.

- Be careful when opening the housing as the pressure buildup inside the housing will exaggerate the force of the latch spring. Keep fingers away from the path of the latches.

- Whenever changing ports or O-rings, perform a simple seal test with out the camera inside.

- Avoid scratching the acrylic or glass ports and windows.

- Make sure that all ports remain properly attached before rinsing the housing, especially when rinsing without a strobe make sure the bulkhead connector is sealed with its plug.

- Never attempt to operate the camera in autofocus mode with the lens mounted focus gear engaged with the housing gear.

- The main O-ring seal should be maintained and cleaned on a regular basis. Read and follow the *Care and Maintenance* section on this manual.

- Ensure that the spring loaded secondary lock is properly engaged on the latches to prevent their accidental opening.

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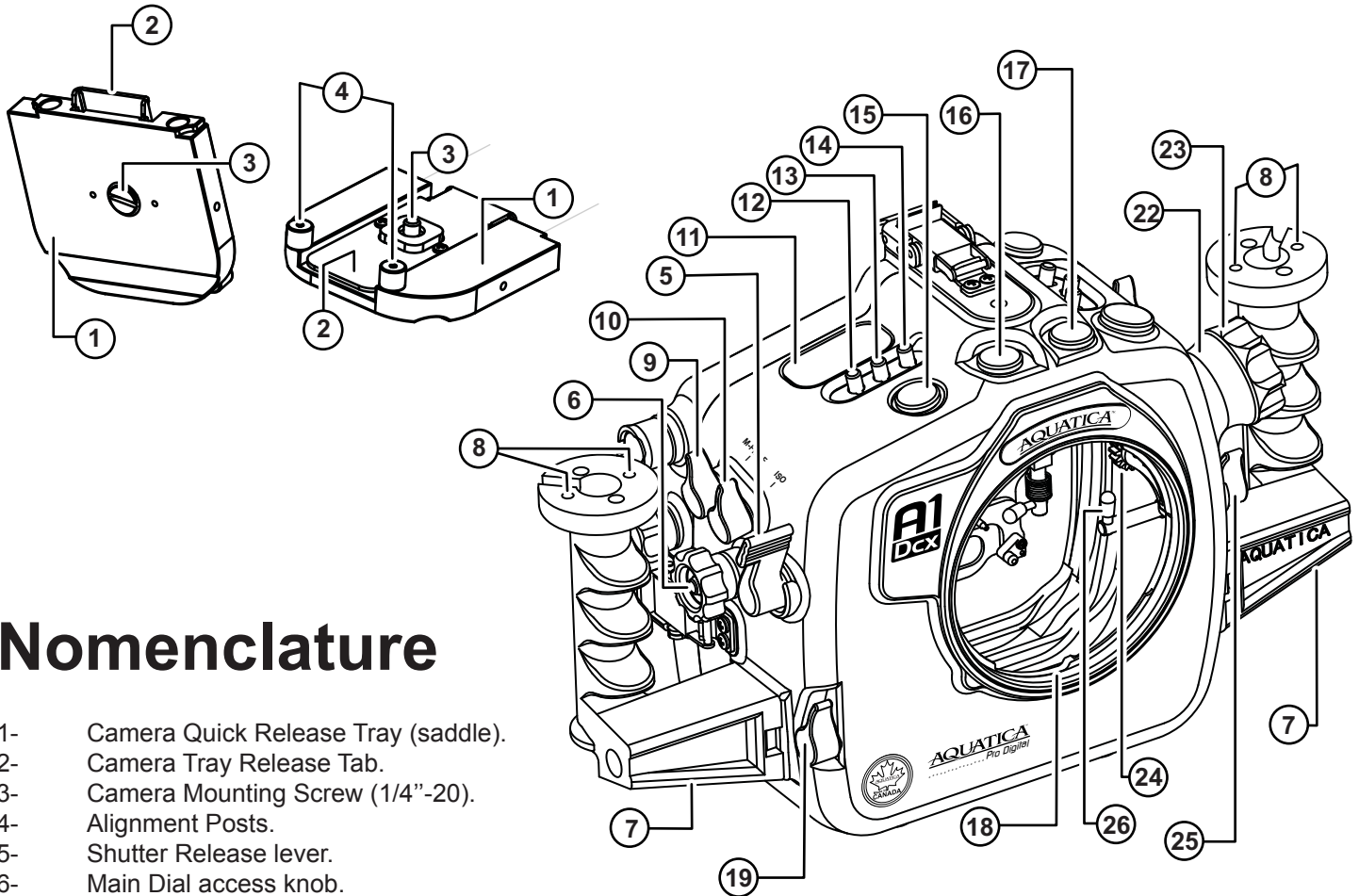
Nomenclature

1-   Camera Quick Release Tray (saddle).
2-   Camera Tray Release Tab.
3-   Camera Mounting Screw (1/4''-20).
4-   Alignment Posts.
5-   Shutter Release lever.
6-   Main Dial access knob.
7-   Grips (left and right hands).
8-   Grip's Accessories mounting holes (1/4"-20).
9-   M-Fn & AF Area selection mode lever.
10-   ISO Access lever.
11-   Top LCD panel window.
12-   Exposure Compensation button.
13-   White Balance button.
14-   LCD Panel Illumination button.
15-   Accessory Bulkhead Plug (1/2" Diameter).
16-   Strobe Connector Bulkhead (main).
17-   Strobe Connector Bulkhead (secondary).
18-   Bayonet Flange.
19-   Port Release mechanism lever.
20-   Top Accessory mounting hole (1/4"-20).
21-   Accessory Bulkhead Plug (1/2" Diameter).
22-   Focus/Zoom Control Release Disc.
23-   Focus/Zoom Control knob.
24-   Focus/Zoom Control pinion gear.
25-   Lens Release knob.
26-   Lens Release knob lever.
27-   Accessory bulkhead (16mm) plug.
28-   Shooting Mode Button.
29-   AF- Drive Button.
30-   Metering Mode & Flash Exposure compensation Button.
31-   Removable Viewfinder Eyepiece.
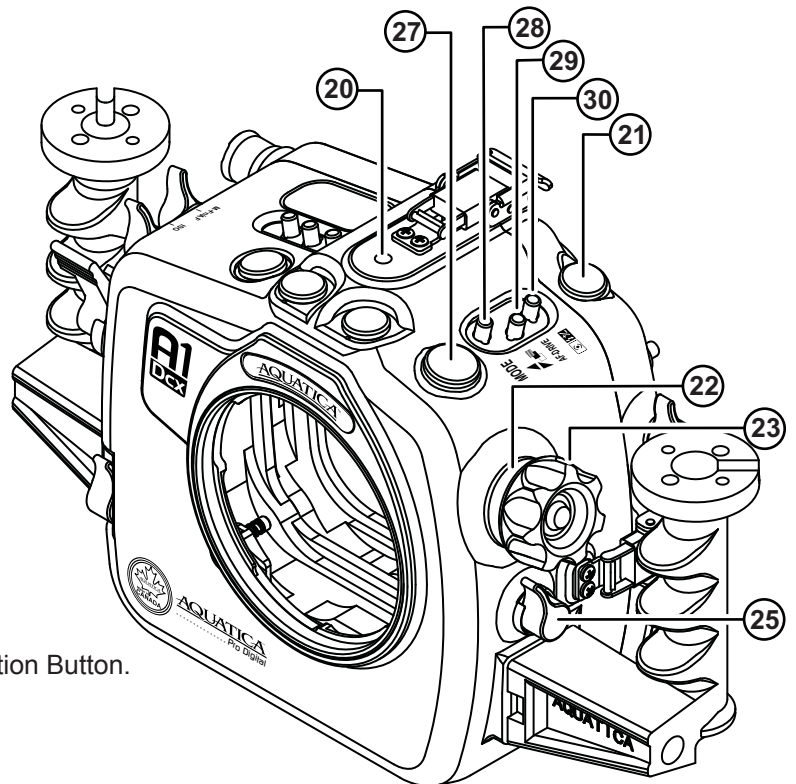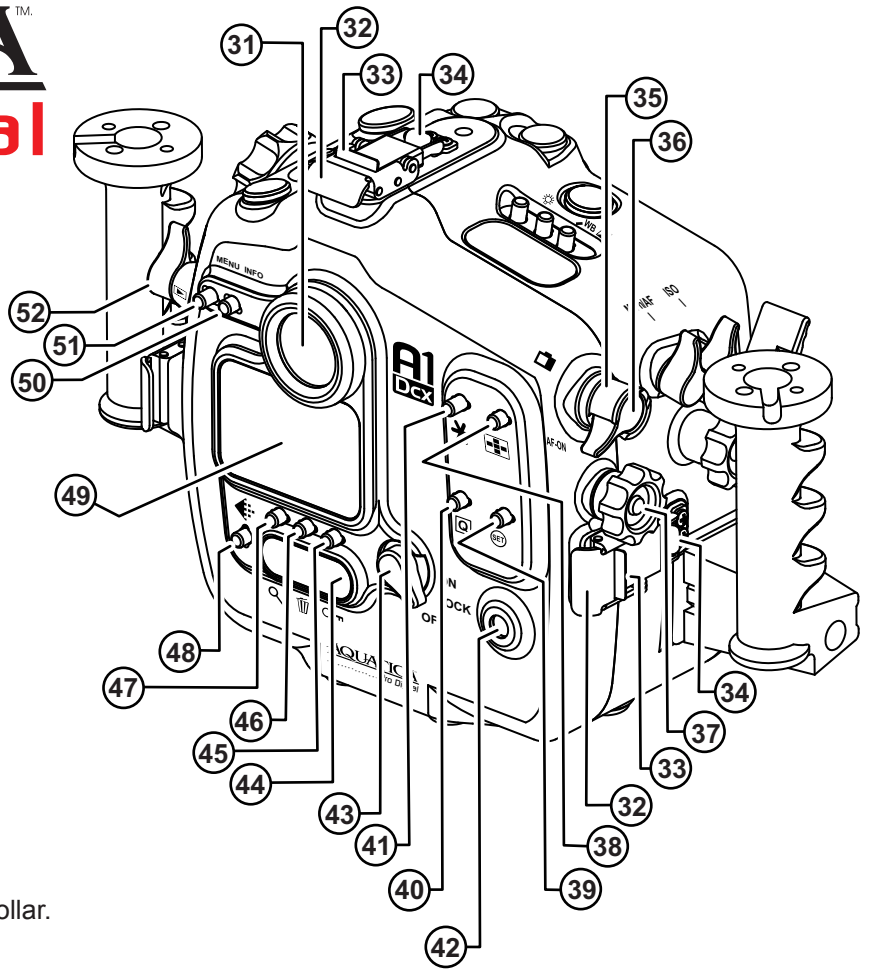
Nomenclature

31- Removable Viewfinder Eyepiece.
32- Locking Latches (one per side)
33- Safety locking tab (one per latches)
34- Latches strikes (one per side)
35- Live View & AF-ON Selection Rotating Collar.
36- Live View & AF-ON access lever.
37- Quick Control Dial access knob.
38- AF Point Selection button.
39- Set button.
40- Quick Control Button.
41- ✱& AE-Lock button.
42- Moisture & Vacuum sensor LED window.
43- Power & Multifunction Lock switch lever.
44- Rear LCD panel port window.
45- Protect feature button.
46- Erase button.
47- Index Magnify & Reduce button.
48- Card Image Size selection Button.
49- Rear LCD Monitor port window.
50- Info Button.
51- Menu Button.
52- Playback Lever.
53- Rubber Anti Skid Pad (6x).
54- Sacrificial Anodes (x2).
55- Accessories mounting holes (x3)
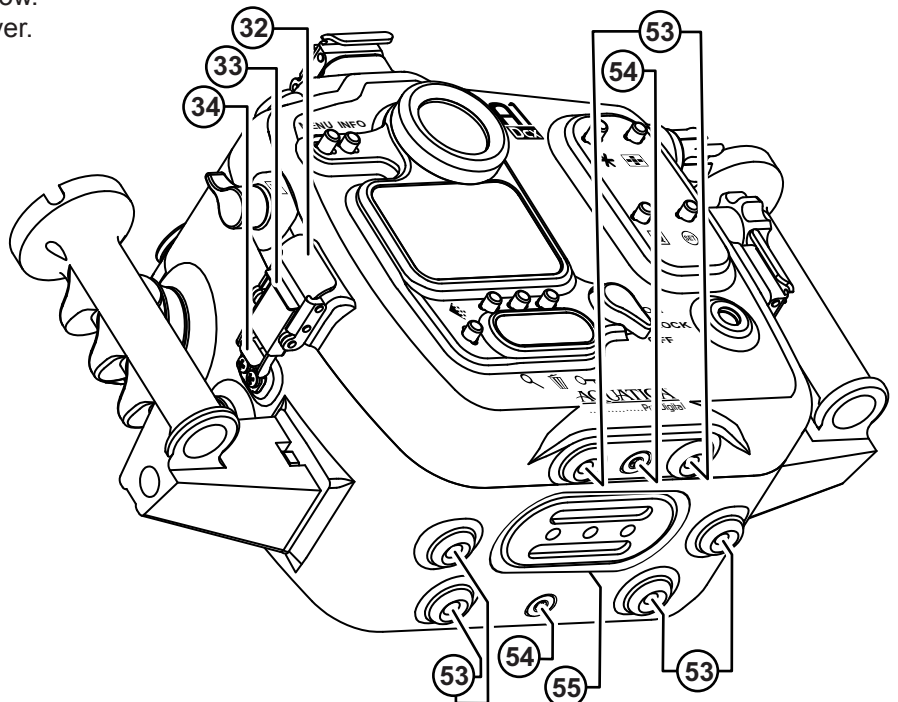
CONTROLS AND COMPONENTS IN DETAILS

1. CAMERA QUICK RELEASE TRAY: This tray slide into the housing to secures the camera into place.

2. CAMERA TRAY RELEASE TAB: Pressing on this tab will free the quick release tray from the housing

3. CAMERA MOUNTING SCREW: Used to fasten the camera to the Quick Release Tray

4. CAMERA ALIGNMENT POSTS: Two posts are provided to securely keep the camera in alignment.

5. SHUTTER RELEASE LEVER: This extended lever provides efficient access to the shutter release, always pull the shutter release lever gently back, part way activates the camera meter and auto focus. Pulling the lever back all the way triggers the camera. Note that depending on the AF mode used, the camera lens may need to focus properly before letting the camera trigger. Applying undue pressure on the lever will not make the camera trigger faster and may only results on damage to the camera shutter release.

6. MAIN DIALS ACCESS 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 control the shutter speed settings (see camera manual).

7. HAND GRIPS (X2): Left and right grip allowing the mounting of strobe arms and accessories.

8. GRIP'S ACCESSORIES MOUNTING HOLES: Two1/4-20 TPI holes on each grip are ready to accept TLC Base Brackets or TLC Base Ball for strobe arms or accessories.

9. M-Fn & AF AREA BUTTON: press to select either the focus point or M-Fn.

10. ISO LEVER: Pull to engage the ISO value selector button rotate either the Main Dial Knob (# 6) or the Quick Control Dial Knob (# 37).

11. TOP LCD PANEL WINDOW: Allows a clear view of the camera top LCD panel.

12. EXPOSURE COMPENSATION BUTTON: Press to engage the exposure compensation button, rotate the Quick Control Dial Knob (#37) to sect the desired value.

13. WHITE BALANCE BUTTON: Press to engage the exposure compensation button, rotate the Quick Control Dial Knob (#37) to select the desired value.

14. LCD PANEL ILLUMINATION BUTTON: Press to illuminate the top and rear LCD Panel

15. ACCESSORY BULKHEAD PLUG: This bulkhead connection allows connecting various accessories to the housing; it has a ½ inch diameter dimension.

16. RIGHT BULKHEAD CONNECTOR: Due to user preferences, this bulkhead connector function may vary from housings to housing. (see section on strobe connectors)

17. LEFT BULKHEAD CONNECTOR: Due to the user preferences, this bulkhead connector function may vary from housings to housing. (see section on strobe connectors)

18. BAYONNET MOUNTING FLANGE: allows the mounting of different ports and extension rings on the housing.

19. PORT RELEASE LEVER: pull to release the locking mechanism when removing a port or extension.

20. MOUNTING HOLE FOR ACCESSORY: a 1/4"-20 TPI hole is supplied to accept a TLC accessory or TLC base ball for mounting a strobe arm or a modeling light.

21. ACCESSORY BULKHEAD PLUG: This bulkhead connection allows connecting various accessories to the housing; it has a ½ inch diameter dimension.

22. FOCUS/ZOOM RELEASE DISC: A release disk is provided to disengage the knob should you want to us a non AF-S lens in autofocus or when you wish to remove the camera from the housing with lens attached.

23. FOCUS/ZOOM KNOB: Turning allows manual focus of a single focus lens or rotation of the zoom mechanism of a lens.

24. FOCUS/ZOOM PINION GEAR: Engages and operates the focus or zoom gear attached to the lens.

25. LENS RELEASE KNOB: activates the lens release button on the camera allowing easy removal of the lens.

26. LENS RELEASE KNOB LEVER: Applies pressure on the camera lens lock button

27. ACCESSORY BULKHEAD PLUG: This bulkhead connection allows connecting various accessories to the housing; it has a 16mm diameter dimension.

28. SHOOTING MODE BUTTON: Press this button and rotate either the Main Dial Knob (# 6) or the Quick Control Dial Knob (# 37) to select the shooting mode.

29) AF-DRIVE BUTTON: Press this button and rotate the Main Dial Knob (# 6) to select the AF Mode or the Quick Control Dial Knob (# 37) to select the Drive mode.

30. METERING MODE & FLASH EXPOSURE COMPENSATION: Press this button and rotate the Main Dial Knob (# 6) to select the Metering Mode or the Quick Control Dial Knob (# 37) to select the Flash Exposure Compensation

31. REMOVABLE VIEWFINDER: A full view of the illuminated camera viewfinder displays all the necessary information. This viewfinder be can be removed and replaced with an optional enhanced Aqua View Finder (straight or angled) for a larger displayed image.

32- LOCKING LATCHES: This housing has three (3) heavy duty latches with safety locks to protect against accidental opening.

33- SAFETY LOCKING TAB: These safety tabs are there to prevent accidental opening of the latch, to open a latch, push the safety tab and lift the latch.

34- LATCHES STRIKES: These hooks up to the safety latches.

35. LIVE VIEW AND AF-ON SELECTION ROTATING COLLAR: This collar rotates for selecting either the Live View or the AF-ON button, simply pull lever out, rotate to the desired position and press back the lever into place.

36. LIVE VIEW & AF-ON ACCESS LEVER: This lever can be pulled outward or inward to access either the Live View or the AF-ON feature, theses are important controls for video shooting and care should be taken to fully understand their working and subtleties.

37. QUICK CONTROL DIAL ACCESS KNOB: It rotates clockwise and counters 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, this control will adjust the aperture settings (see camera manual for in depth use).

38. AF POINT SELECTOR BUTTON: Push to select the AF pattern desired, you can rotate the Main Dial Knob (# 6) or the Quick Control Dial Knob (# 37) to select various options

39. SET BUTTON: Press to approve selection of menu or chosen mode features you have selected.

40. QUICK CONTROL BUTTON: Press to activate the preselected feature on the display. Rotate the Main Dial Knob (# 6) or the Quick Control Dial Knob (# 37) to change the value of the pre selected feature. Also when combined with the menu, pressing this button will allow skipping through the menu's sections.

41. ✳ & AE LOCK BUTTON: Press to lock the Auto Exposure.

42. MOISTURE AND VACUUM SENSOR LED WINDOW: This window allows viewing the status LED of the moisture and vacuum sensor, (see separate instruction sheet regarding the operation of this Moisture and Vacuum Sensor).

43. POWER & MULTIFUNCTION LOCK SWITCH LEVER: This lever activates the power switch of the camera, the intermediate position locks the Quick Control Dial Knob (37) access.

44. REAR WINDOW LCD: This port window allows viewing of the recorded images and is used in the Live View as well as the Video mode for framing. It allows the users to see the menus as well.

45. PROTECT BUTTON: Press to protect an image from accidental deletion.

46. ERASE BUTTON: Press to delete images.

47. INDEX, MAGNIFY & REDUCE BUTTON: Press this button and rotate the Main Dial Knob (# 6) or the Quick Control Dial Knob (# 37) to select the various feature of this button.

48. CARD IMAGE SIZE SELECTION BUTTON: Press this button and rotate the Main Dial Knob (# 6) or the Quick Control Dial Knob (# 37) to select the various feature of this button.

49. REAR LCD PORT WINDOW: Allows viewing of the rear LCD panel of the camera.

50. INFO BUTTON: This button will activate the rear LCD and display all pertinent shooting information.

51. MENU BUTTON: Press to activate menu display, scroll by rotating the Main Dial Knob (# 6) or the Quick Control Dial Knob (# 37). To select the feature you want, press the SET button (# 39)

52. PLAYBACK LEVER: Pull to activate the monitor and review images, scroll by rotating the Main Dial Knob (# 6) or the Quick Control Dial Knob (# 37).

53. RUBBER ANTI SKID PADS: Four rubber pads are provided to protect the housing and preventing it from sliding on wet decks.

54. SACRIFICIAL ANODES: (2X) zinc anodes are installed to protect your housing against salt water corrosion; theses are made to deteriorate easier than the other strategic part of your housing, hence the name sacrificial anodes. These anodes need to be replaced by the user as needed.

55. MOUNTING HOLES: Three 1/4" X 20 holes are provided for mounting strobes trays or accessories.

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PREPARATION OF THE HOUSING

1. Attaching the grips to the housing:
The housing is supplied with two Grips (# 7) these attaches on the sides of the housing with the supplied cap screws and hexagonal wrench. It is recommended to occasionally remove the grips and lubricate the screws threads (see Care and Maintenance: of the housing).

Two 1/4-20" threaded holes (# 8) are located on top of each grips, on these, you can mount the necessary shoes or brackets for your strobe system. The Technical Lighting Control system of strobe arm, from Aquatica is highly recommended, as it was designed to work and integrated with your housing from the onset.

On the bottom the housing are three (3) 1/4"-20 threaded holes (# 55), these can be used for mounting a tripod or accessory lighting tray. Located on the top is another 1/4"-20 hole (# 20) for mounting a video light, focusing light or other accessories

Mount the strobe(s) arms to the housing and connect the sync cord to the housing's strobe bulkhead as per your strobe(s) manufacturer recommendation. Please also read the section titled "Care and Maintenance: of the O-rings" concerning your strobe lubricant. It is strongly recommended to remove electrical sync cord frequently in order to prevent corrosion and salt built up.

2. Opening the housing:
This Aquatica housing has three latches (# 32) equipped with a safety mechanism, the efficient way to open the housing is to release the top latch first, to do so, just push the safety tab (# 33) and lift the latch up, then proceed with the two lateral ones, it is recommended to release those two lateral latches simultaneously keeping in mind, when releasing them, that they are spring loaded.

2. Lubricate the Main O-ring Seal:
Carefully inspect the Main O-ring seal in its groove located on the rear portion of the housing and check the sealing surface on the front half of the housing to confirm that it is free from scratches or foreign material. Lubricate the O-ring with a light coat of Aquatica O-ring Lubricant (Never use Lubricant intended for silicone type O-ring, be safe, use only original Aquatica supplied lubricant).

The Main O-ring sits in an inverted "V" groove, to release it, start at the entry point located in the lower left side of the housing, a dedicated O-ring pick or tool is recommended for this task, avoid using sharp object as they may damage the sealing surface or the O-ring material.

When replacing the main O-ring back into place, press the entire O-ring over the O-ring groove and start by pushing the O-ring in the corners. Slowly work your way around by pressing the O-ring in alternate area each time, making sure the O-ring is sitting properly in its groove in the end.

For further handling and maintenance of O-rings recommendations be sure to read the section titled "Care and Maintenance: of the O-rings."
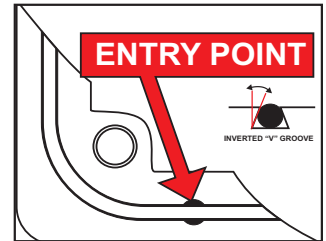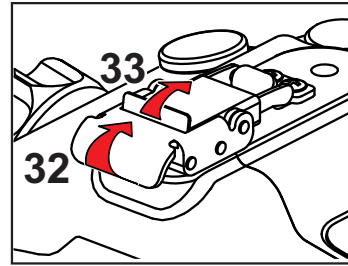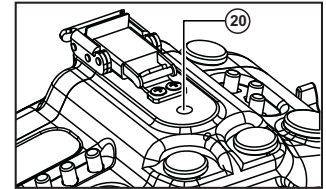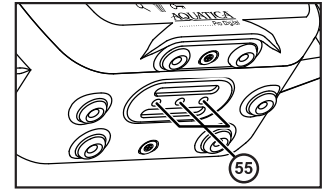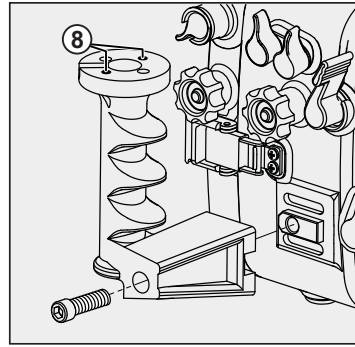
CAMERA PREPARATION AND INSTALLATION

1. Important Note: Prior to installing the camera in the housing, remove the rubber eyecup from the camera, the camera strap, and any clips and/or any object that might obstruct installation or get in the way. In order to save valuable underwater time, it is recommended at this stage to prepare the camera shooting mode, preferences and custom features at this point
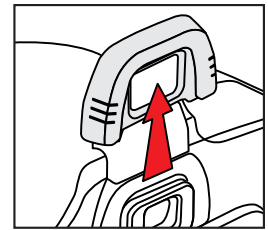
2. Remove the camera quick release tray (# 1) from the housing by pressing down on the release tab of the tray (# 2), carefully place the camera on the tray ensuring that the camera is properly secured by tightening the camera mounting screw (# 3) and is resting against the alignment post (# 4).
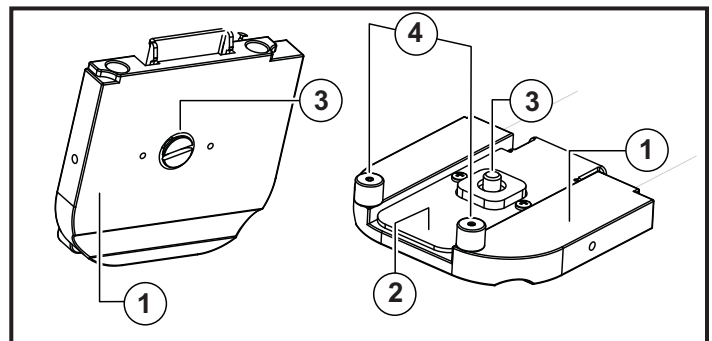
3. The power switch must be in the same position on both the housing (# 43) and on the camera body.
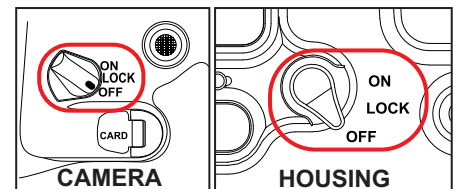
CAMERA PREPARATION AND INSTALLATION (continued)

4. If a lens with a gear is already mounted on the camera, Pull out the lens release lever (# 25) and lift and rotate the Focus/Zoom Release Disc (# 22) to rest on the dowel resting pins underneath to allow the pinion Focus/Zoom Pinion gear (# 24) and internal Lens Release Lever (#26) proper clearance.

5. Slide the quick release tray back into place as per drawing at right.

6. If the housing is to be used with strobes, then slide the housing's hot shoe connector onto the camera, as seen in photo at right. Be careful to tuck the wiring harness safely out of the way.

7. If using a third party monitor, confirm that it is properly connected and operating, secure all wiring and cables that could potentially get caught in between the rear and front of the housing, this is a critical and essential thing to check.

Before closing the housing always verifies that:

- The main O-ring on the front half of the housing is clean, lubricated and properly seated for a positive seal.

- The sealing surface on the rear half of the housing is clean and free from any scratches or physical damage.

- All cords or wires are tucked in so that they do not interfere with the closing of the housing.

- The POWER ON/OFF lever and switch are in the same position on both the camera and the housing (# 43).

Closing the housing:

- Join the front and rear halves of the housing using the two dowel pins at the bottom of the housing as a reference.

- Hold the housing with both hands and look around the sealing surface to ensure that the O-ring remained properly seated and that no cords or wires are caught between the edges.

- This housing has three latches (# 32) first lift the top latch and let it rest in position for now, then lift the lateral latches and hook them up on their respective strike hooks (# 34), close the two side latches simultaneously. Then proceed to the same with the top one, confirm that the safety tab is engaged by trying to open the latch with pushing on the safety tabs.

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

- Activate all controls of the camera, confirming that the camera is aligned as it should all the controls are operating smoothly.

PREPARATION OF THE LENS

Aquatica has a wide selection of Focus and Zoom gears that accommodate the most popular lenses used in underwater photography. Correctly mounting and securing these gears on a lens is mandatory for a smooth operation. Always follow the installation directions included with each gears carefully. This housing is designed for using EF type's lenses exclusively.

A comprehensive lens chart listing the lenses supported and their required gears is supplied along with this manual. For the latest updated version of this lens chart, you can refer to the Canon Type 4 Lens Chart: http://www.aquatica.ca/en/products_zoom.html

Notes: If the camera is set in manual focus a focus gear must be mounted on the lens. If you are using a zoom lens with a zoom ring the camera must be on auto focus, unless you are using one of the dedicated port or extension ring with an integrated focusing knob, also noteworthy is the fact that some wide angle lens may require a close up lens (Diopter) when used behind a specific dome port, the purpose of the close up lens is to correct the minimum focusing distance of the lens so that it will be able to focus on the virtual image created by the dome port. Refer to the Canon Type 4 lens chart to confirm if one is needed, and what suggested close up/diopter strength is required.

CLEANING THE PORTS:

Dirt, grease or fingerprints on the port, especially on the inside, can adversely affect the quality of the image. Acrylic ports should be cleaned with plastic cleaner and the glass ports should be cleaned with lens cleaner. For more details please refer to the section titled "Care and Maintenance: of the Ports."

Lubricate the port and/or port extension O-ring seal:

Before installing a port or port extension on the housing, remove the rear O-ring and lightly coat it with Aquatica O-ring Lubricant. For more details please refer to the section titled "Care and Maintenance: of the O-rings."
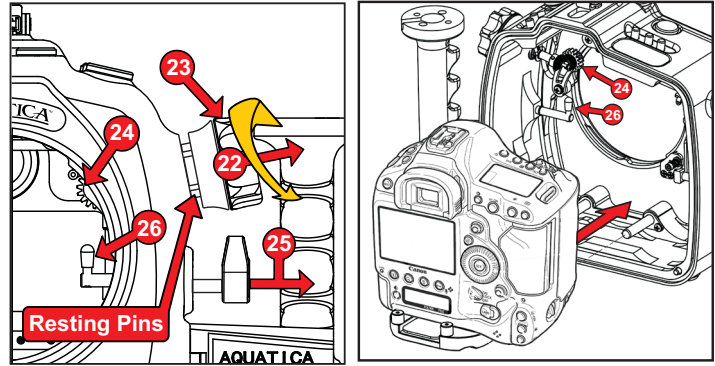
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GEAR INSTALLATION:

Your Focus or Zoom gear packaging contain the instruction for properly mounting the gear onto the lens, please follow these attentively. Once a gear is installed, always rotate it several times to make sure it moves smoothly and the gear does not slip.

Zoom lenses: if using a zoom lens, the gear should be mounted on the zoom lens control. The housing focus control then becomes the zoom control. Focusing of lens is achieved by using the camera's autofocus system or by a dedicated knob on the port or port extension.

LENS INSTALLATION

With the camera already inside the housing:

If there is a port or extension, it will first need to be removed from the housing, if required, install the gear on the lens. Before mounting the lens on the camera, make sure, by looking at the front of the housing, that the lens release lever (# 26) is properly located and activates the camera lens release button when the external lens release lever (# 25) of the housing is pulled in. Lift the Focus/Zoom release disc (# 22) up and rotate it so it rest on the up position. Find the reference point on the camera body and lens and mount the lens to the camera, make sure it is locked into place. Rotate the release disc back into position and turn the Focus/Zoom control knob (# 23) to insure that the gears are properly meshed and turning smoothly.

With the lens already attached to the camera:

Open the rear of the housing, make sure that the lens external lens release lever (# 25) of the housing is pulled out. Lift the Focus/Zoom release disc (# 22) up and rotate it so it rest on the up position. Slide the quick release tray in with the camera and lens mounted, make sure the tray is locked in. Rotate the release disc back into position and turn the Focus/Zoom control knob (# 23) to insure that the gears are properly meshed and turning smoothly.

WARNING: With standard EF (non USM) type lenses, you should always set the Focus Control of the lens to the "M" Manual position before testing the proper meshing of a focusing gear. Never attempt to operate it with the camera in autofocus mode and with a mounted focus gear engaged, this might cause serious damage to your lens focusing mechanism. This procedure is not required with USM type lenses.

PREPARATION OF THE PORTS

Your shooting requirement (macro or wide angle photography) will dictate whether you will be installing either a flat Macro Port (product # 18426, 18428 or 18429), or a Dome Port (Product # 18405, 18407, 18409). Refer to the Canon Type 4 lens chart for assistance in selecting the right port and accessories for your needs.

The lens chart may suggest the use of an extension ring, these falls into two categories:

- Macro Port Extension Rings: These extension rings are inserted between the Macro Port and the housing to provide the necessary space for longer lenses. Their uses are solely for adapting the port physically to a lens and they do not alter the optical property of a lens when used in this manner.

- Dome Port Extension Rings: When using a wide angle or zoom lens, an extension ring may be necessary. These port extension rings are inserted between the dome port and the housing and are meant to align the optical center of the dome port with the entrance pupil of the lens being used. This is done in order to attain the maximum optical quality when a wide angle lens is used behind a dome port.

Some dome ports have a built in shade while other have optional removable one so that they can accommodate full circular type fisheye lenses, if not using one of these lenses, and in order to reduce glare, maximize contrast and offer physical protection to the dome, the use of a dome shade is highly recommended. See the Canon Type 4 lens chart for the suggested dome shade.

A comprehensive list of the lenses supported and their required extensions and/or accessories are supplied along with this manual. For the latest updated version of this lens chart, you should refer to the Canon Type 4 Lens Chart available from our website: http://www.aquatica.ca/en/products_zoom.html
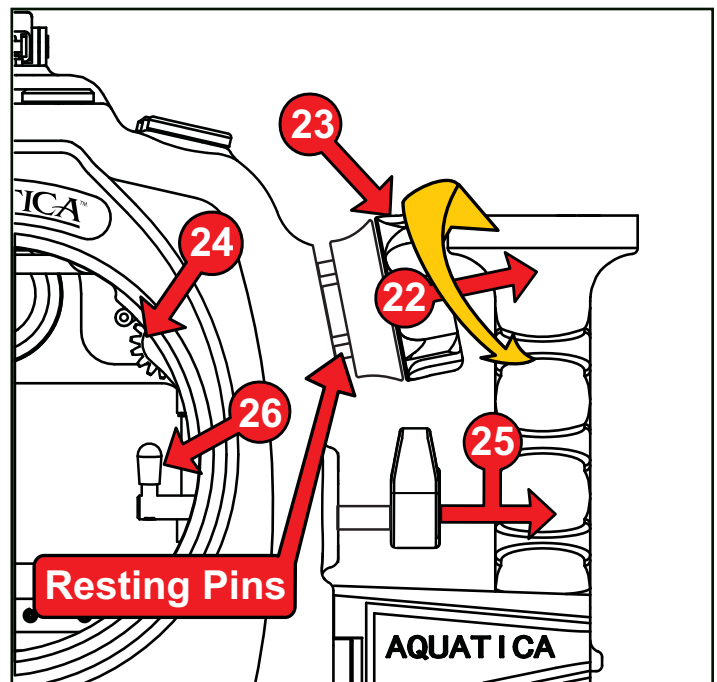
## MOUNTING A PORT OR EXTENSION RING ON THE HOUSING

Safely mounting a Port or extension on the housing requires that the O-ring be clean, lubricated, be properly seated in its groove and that the opposing sealing surface be clean and free of any physical damage.

This AQUATICA Pro Digital Housing features a locking bayonet mount (# 18) to mount a port or extension ring on the housing:

1. Place the housing on its back on a soft and steady surface.

2. Place the port or extension ring inside the bayonet of the housing. Align one of the four alignment notches with the opening of the housing.

3. Place 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 is completely inside the housing.

5. Rotate the port clockwise until it stops. Do not force it. If there is too much resistance take the port off, check the O-ring and see that the port or extension are properly seated before attempting to rotate again.

6. Try to rotate counter clockwise to confirm that the port or extension is safely locked on the housing.

7. When using large dome port such as the 6", 8" and 9.25" with an extension, uses of the optional extension ring to port locking collar (# 18469) is recommended, this will add another layer of safety by preventing the larger dome port from rotating during manipulation or transportation to the dive site.

To remove a port or extension from the bayonet, press the port release lever (# 19) and rotate the port or extension counter clockwise, carefully pull the port or extension off the bayonet.

Note: It is recommended that you familiarize yourself with this procedure by trying it without the camera in or the back cover attached to the housing; this to better visualize the internal functioning of the bayonet and port.
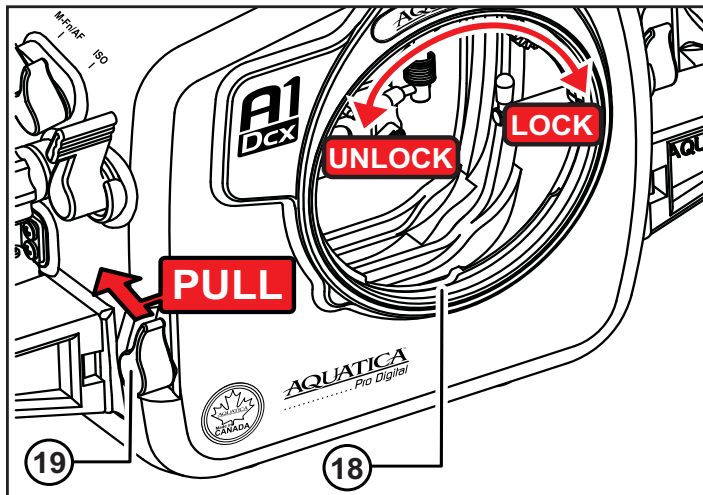
CHANGING A LENS (REMOVING A LENS)

The lens mounted gears may restrict the view and ease of access to the lens release button of camera. This AQUATICA Pro Digital Housing features a Lens Release Lever (key # 25) that is designed to trigger the lens release button of camera and allow for an easy removal of the lens.

To remove a lens from the front, simply remove the port and/or extension ring, rotate Lens Release Lever (key # 25) to press the camera lens release, hold and turn the lens clockwise.

Alternatively, a lens can be changed simply by pulling the whole camera and lens assembly from the housing. Start by pulling on the Focus/Zoom release disc (# 22) underneath the Focus/Zoom knob (# 23), and turning it so that it stay in the up position, this will disengage the pinion gear (# 24) from the focus or zoom gear attached to the lens, pull out the housing external release lever (# 25) remove the hot shoe and any other cables or wire from the camera and you can then pull the camera right out of the housing with the lens and gear attached.

✳ & AE-LOCK LEVER

The lever in the rear right portion of the housing (#36) can be used to access the AE-LOCK or the ✳ button, just pull outward or inward to access the desired function, then rotate the collar (#35), theses two buttons can be assigned a variety of custom function to conform to your personal style of shooting, we suggest that you refer to the Canon instruction manual to pull the maximum out of these highly creative features.

Rotate Collar and pull lever to access AF-ON

Rotate Collar and push lever in to access ✳
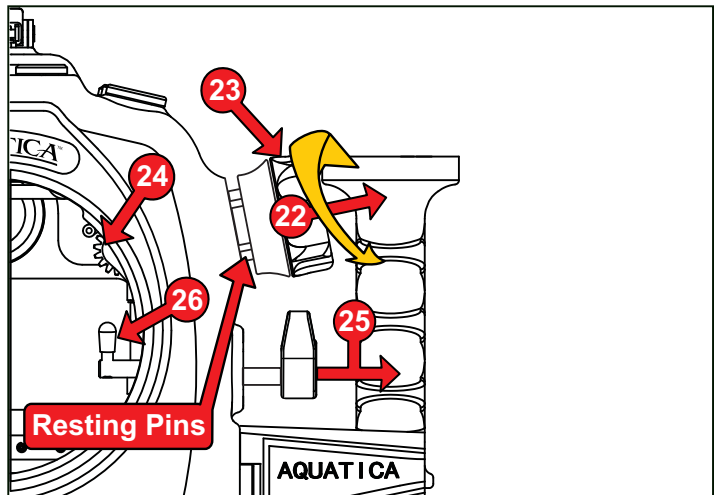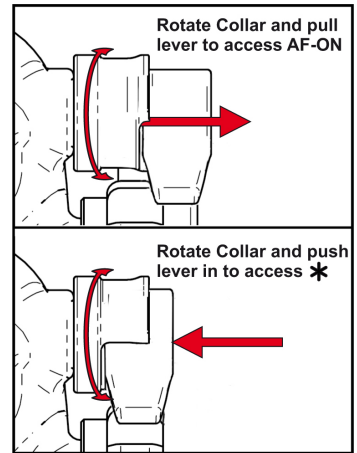
AQUATICA
Digital

MOUNTING AND ATTACHING FLASHES

You can mount the necessary shoes, brackets or Base Ball for your lighting on the threaded holes located on the top of the hand grips ((# 8). The use of Aquatica Technical Lighting Control Strobe Arm System is highly recommended, this lighting arm system having been developed to integrate with your Aquatica housing from the onset.

There are three threaded holes (# 55) on the bottom of the housing that can be used for mounting additional lighting bracket or tray. Located on top of the housing is one threaded hole (# 20) ready to accept an additional accessory, focusing light or extra strobe arm.
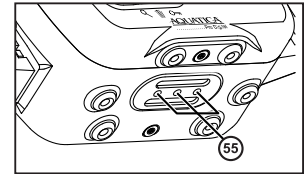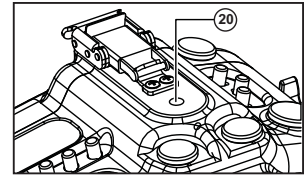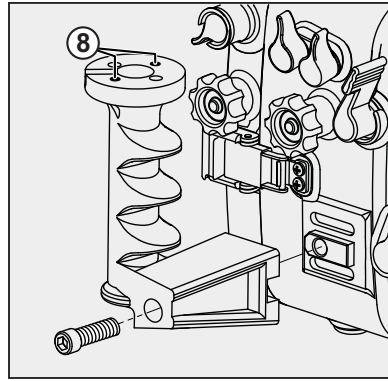
IMPORTANT NOTE FOR STROBE SYNC CORD O-RINGS: You should only use to the recommended O-ring lubricant from your strobes manufacturer on your sync cords O-ring and never on your Aquatica housing O-rings. Some lubricant may not be compatible with the material used in our or other manufacturer O-ring materials, swelling and damage to the O-ring could results from doing so.

Some sync cord on the market have been known to contain poor quality and highly conductive material in the construction of the bulkhead plug, removing the sync cord frequently, cleaning the threads and lubricating them is the first step in preventing the sync cord from locking up in the thread due to the sync cord corrosion built up.

Strobe setup:

Your Aquatica 1Dcx Pro Digital housing (# 20075-NK) is supplied with two Nikonos type connectors which are in turn connected to a switch board circuit. The A1Dcx housing can also be supplied with a single Ikelite bulkhead connection, only manual strobe exposure is available with this connection (# 20075-KM).

The strobes sync cords O-ring should be lubricated with the recommended O-Ring lubricant from your strobe manufacturer, Also advisable is to put a light coat of the lubricant on the threads of this connector, doing so reduces the risk of corrosion.

NOTE: Your Canon Digital camera design does not allow underwater strobes or flashes to be connected directly to the camera and be used in eTTL unless they are original Canon flashes in third party housing with the required connector and cords.

On the standard version (# 20075-NK) located on the top of your housing, you will find two Nikonos type bulkhead connectors (#16 & # 17), the main has 6 active contact pins and the secondary has two active pins, both connectors are wired through a switch board that gives the user the option of alternating between TTL and Manual flash exposure. (By default you housing is delivered with the switch board set to full manual), if eTTL exposure is desired then it can be made in either of the two following methods:

1) By using a single flash from Canon (or other brand eTTL compatible brand) in a designated underwater housing connected with a 6 pins TTL Nikonos Type sync cord on the right hand main connector (# 16) on your Aquatica housing.

2) By using an external eTTL converter connected to the main Nikonos type 6 pins connector on the right hand side (# 16) on your Aquatica housing. On this converter, one or two underwater strobes with compatible TTL cords can then connected, (confirm compatibility of the strobes and converter with their respective manufacturers).

Set up instruction for eTTL operation

Using the tip of a pen push the switches 1, 2, 3 & 4 to the ON (up) position, this will activate the connections on your main 6 pins bulkhead connector allowing eTTL communication between the camera and the housed flash or eTTL converter.

Set up instruction for manual operation

All switches must be in the OFF (lower) position, in this case all eTTL connections are disabled and only the ground and sync are left active, this will allow two underwater strobes or housed flashes to be connected directly via the main and secondary bulkhead.
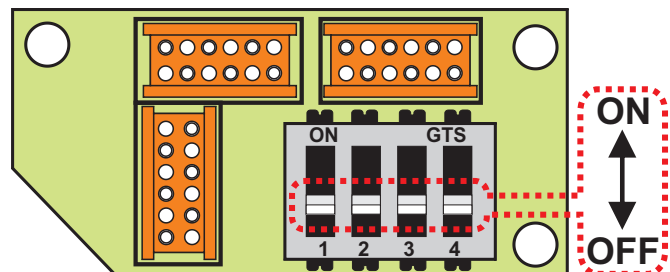
FIELD MAINTENANCE

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 the unit to a depth of 30 to 50 feet of water 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. 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 to you on a rope. Make certain that ropes of other equipment stay clear of the system.

When photographing, be sure to respect the environment. Avoid damaging marine life or manipulating sea creatures to obtain a pleasing photo. The housing is slightly negatively buoyant so that you can lay it down on the bottom, but avoid laying it on living coral or other delicate marine life.

Changing the memory cards

Before opening the housing to change memory card, you should always thoroughly dry the housing wiping it with a dry towel. If possible it is suggested that the housing be blown dried by directing a low pressure air nozzle around the main o-ring before opening.

Rest the housing on its front with the lens facing down, be careful to protect the port surface, release the two side latches simultaneously. Lift the rear part of the housing and place it in a secure location. This minimizes the possibility of any residual water falling into the housing and on to the camera when the housing is opened or damage to the sealing surface.

Pull the lens release lever (# 11) so the actuator (#12) clears the lens gear. Pull and rotate the retracting disc (#8) and Focus/Zoom knob (# 9) and rest it in the upper position, this will disengage the pinion gear (# 10)of the housing from the lens gear, you are now free to pull the camera tray out without requiring the removal of the port or lens.
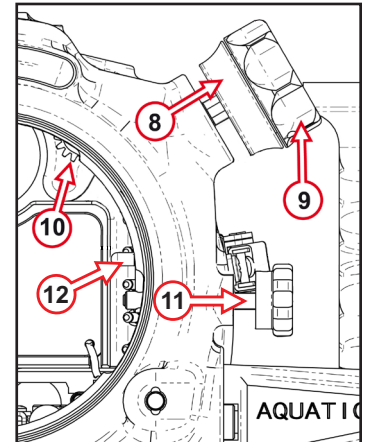
TRANSPORTING THE _AQUATICA Pro Digital_ housing

Store the _AQUATICA Pro 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. If you must do so, remove the lens as external pressure can damage the camera.

CARE AND MAINTENANCE

Of the housing:

After each and every salt water dive, your housing system should be soaked or rinsed in fresh water. The housing system should soak in fresh water for at least 30 minutes. During this soaking period operate all the controls several times to flush out any residual salt water.

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 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 the hand grips. Clean and lubricate the bolts with a small amount of WD-40.

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 the scratches will not seriously impair image quality. Internal scratches(air side) must be avoided as they do not fill in with water and will affect the quality of the image.

Clean the dome using only products recommended for cleaning acrylic and a soft lint free cloth. 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 from a dive tank is not recommended, the force of the air stream may easily dislodge a port or O-ring, It is advisable that ports and extension O-rings should be removed and serviced after every dive.

AQUATICA
Digital

Of the Latches:

The two latches of the AQUATICA Digital are equipped with safety locking tabs, their locking action prevent accidental opening of the latches. To open push the safety locking tab (A) and then lift the two latches (B) simultaneously as per illustration. When closing and prior to the immersing the housing always ensure that the locking tab mechanism is engaged. Watch for the build-up of corrosion or salt residue around the latches. This will appear as a white material. Lubricate the latches with a small amount of WD-40 to remove the corrosion or salt residue build-up.

Of the O-Rings:

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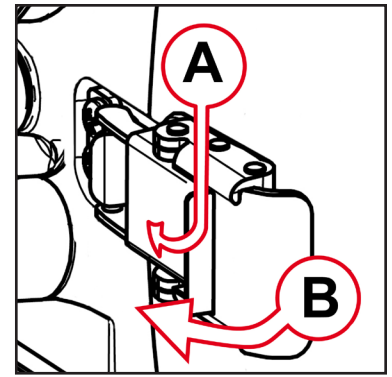
Of the sacrificial anode:

Two anodes (# 50) are attached to the bottom part of the housing. These prevent corrosion caused by electrolysis, as time goes they will deteriorates and eventually will require replacing, contact your dealer for replacement (parts # 19220).

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

1.   Remove 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.

Note: The main O-ring is inserted in an inverted V groove to prevent it from popping out accidentally, to remove, use a dull pointed object and insert in the side of the small opening on the lower left hand side corner of the front of the housing. Do not use sharp objects or excessive force; this could result in damage to the sealing surface.

2.   Once the O-ring is removed, it should be examined for damage. Check to make sure that the O-ring 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 O-rings.

3.   Rinse the O-ring with fresh water and dry it with a clean lint free cloth.

4.   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 damage.

5.   Wipe the part of the housing that the O-ring seals against with a clean lint-free cloth.

6.   Re-grease the O-ring with a thin layer of O-ring grease 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.

7.   Make sure that the O-ring is properly (evenly) installed in the O-ring groove.

8.   To reinstall the clean and lubricated O-ring, place the entire O-ring over the groove and start by pushing the O-ring in at each corner then, push the O-ring at each side and finally, work in the rest of the O-ring. Never start at one end and work your way around the O-ring. This places uneven tension on the O-ring which may cause the O-ring to stretch resulting in excess O-ring, which will have no place to go.
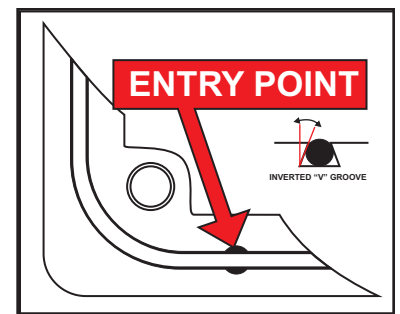
Warning: Use only recommended Aquatica O-ring lubricant (# 19213) on the Aquatica Housing (and use the recommended O-ring lubricant of your strobe manufacturer on their components O-rings), Petroleum based lubricant used by some manufacturers for their Silicone based O-rings can and will swell the material of our O-rings, this will render the O-ring very difficult to install and more likely will end up being damaged or pinched resulting in dire consequences

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. It is recommended by Aquatica to have the housing serviced on a yearly basis. Aquatica has authorized service facility in both continental USA and Europe for this annual maintenance. Before sending any items, always contact us or the service center closest to you (these are listed on our website www.aquatica.ca).

The internal moisture alarm for your AQUATICA Digital housing (Product # 20023) is powered by an easily available CR 2032 battery. Please read the instruction sheet provided for your moisture alarm prior for installation and operation.

When installing the moisture alarm battery, to avoid crushing the positive battery contact as shown in image below, first insert it as per (A) then just press it in to place (B)

To avoid unnecessary power drainage, it is recommended that the battery be removed from the moisture alarm when storing or not using the housing for extended period of time

Aquatica A1Dcx
For Canon 1Dc & 1Dx cameras

AQUATICA™
Digital

Replacement Viewfinder
19218 INCLUDED

Vacuum Pump and Pressure valve kit
AQUATICA Digital
19228

18851

Maintenance O-ring Kit

Aqua View 45° Finder
20059

BULKHEAD SELECTION*
20075-NK & 20075-KM

A1 Dcx

AQUATICA

Rebuilt O-Ring Kit **18852**

Made in CANADA

Aqua View Finder
20054

Sacrificial Anodes
(4 anodes and screws)
19220

Protective Hard Case
19216

Moisture/ Vacuum Sensor Alarm
19229 INCUDED

Hydrophone
19221

Deep Rated spring kit
19217

19305

Canon Type 4 Lens Chart

* Bulkhead connections

20075-NK Double Nikonos connectors
20075-KM One Ikelite 2 pins connector

(to know more about connectors refer to our website at www.aquatica.ca)

18464 & 18465

Focus gear included with these extensions

| 18456 | 18463 | 18453 | 18462 | 18457 | 18458 | 18454 |

PORT EXTENSION RINGS

18469
Extension to Port locking collar

18410
4" Mini Dome 100

18429
AF Macro Port
Low Profile

INCLUDED
18508
Neoprene Cover

18407
9.25" Mega Dome

18405
8" Dome Port

18409
6" Dome Port

INCLUDED
18508
Neoprene Cover

18426
AF/MF Macro Port

INCLUDED
18505
Neoprene Cover

INCLUDED
18506
Neoprene Cover

INCLUDED
18500
8" Neoprene Dome Cover

AQUATICA

INCLUDED
18502
6" Neoprene Dome Cover

AQUATICA

18484
6" Dome Shade

Canon Type 2 Lens Chart

18428
AF Macro Port

INCLUDED
18505
Neoprene Cover

18480
8" Dome Shade

18504
6" Neoprene cover for dome shade

18503
8" Neoprene cover for dome shade

19351 Close up lens holder

19352
+5
Close Up lens

19350
Close Up Kit
Includes: holder,
+5 & +10 close up lenses

19353
+10
Close Up lens

www.aquatica.ca

AQUATICA™ Digital

AQUATICA™ Digital

AQUATICA™
Digital

Technical Lighting Control

AMPHIBICO

FOCUS / TARGET LIGHT SET UP

17517
17509
17854
17508
17518
17857
17853

17516
17515
17514
17519

Macro Master Arm

17513
17512
17511

17510
17506

For Sea & Sea strobes

17651
1/4"x 20 threads

17858

TLC holder for
Ikelite TTL converter
and Double cable

17692
Ikelite DS 125, DS 50, DS 51

Ikelite DS 200
17688

17690
Nikonos SB-105

17655
8mm threads

17691
Sea & Sea

17800

17888
Inon

17851
1/4"x 20 threads

17889
17682
17681

17677
17673
17667

17887
Inon Strobes
17758
UK Aqua Sun
17757
8mm knob
17754
Nikonos SB-105
17753
Ikelite DS200
17752
Ikelite Knob

17681

17671

17800
17681

17677
17673
17667

For Ikelite TTL
Slave sensor

17856

Arm clamp
to 1" ball
17802

17659
1/4"x 20 threaded hole

17655
8mm threads

17800

17553

www.aquatica.ca

No pins, no O-rings just tough, reliable performance from TLC

Revised Nov 11, 2011

Buoancy Compensating Float # 17890

Buoancy Compensating Float # 17892
with arm clamp

Provided with 17752
Knob head adapter

17507

17555

For Ikelite Grip

17520

17501

Provided with 17892
Ball Head Adapter

17651
1/4"x 20 threads

17554
Four point mounting base

17750

17657

17552
9mm threads

17550
1/4"x 20 threads

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AQUATICA™

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 most pride and satisfaction in offering you the best underwater camera housings 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. Camera housed in AQUATICA housings are not covered under this warranty and ANY WATER DAMAGE SUSTAINED DUE TO INSTALLATION ERROR OR ANY OTHER REASON IS NOT THE RESPONSABILLITY OF AQUATICA. Therefore the appropriate insurance should be maintained by the user.

Warranty does not apply to replaceable seals or damages to impacts or 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 notify AQUATICA at 514-737-9481
and ship BY REGISTERED MAIL (INSURED) **ONLY**, enclosing your proof of purchase to:

AQUATICA
3025 De Baene
Montreal (Quebec)
H4S 1K8

Mark clearly on your package "Canadian goods returned for repair"

Do not ship by any other means.
Unauthorized packages will be refused.

YOUR SERIAL NUMBER_____

NOTES:_____

info@aquatica.ca   www.aquatica.ca

Technical Lighting Control

AQUATICA
Digital

AMPHIBICO