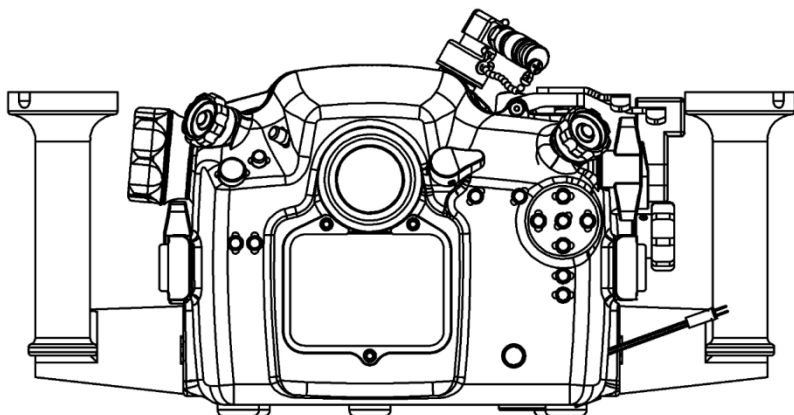
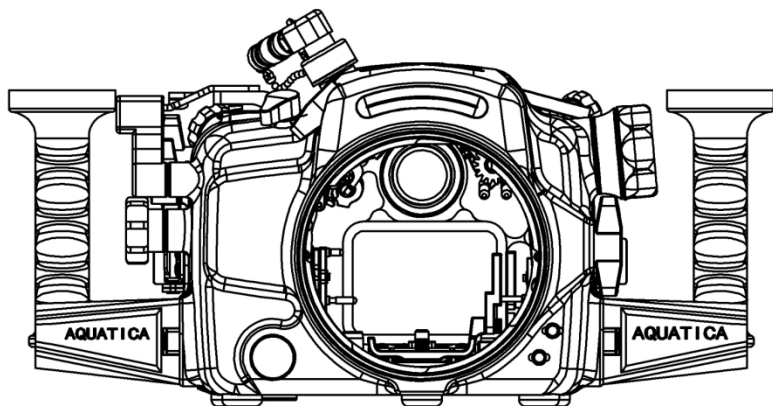





AQUATICA™

Digital



Aquatica Housing For Nikon Z6 & Z7 #20086



-  Thank you for purchasing your Aquatica AZ6/7 housing. Before you start to use your new housing, please read these instructions carefully. Keep this manual in a safe place for future reference.
-  This instruction manual assumes that the camera user is already familiar with the Nikon Z6 or Z7 camera. If not, please read your camera instruction manual before attempting to use the housing.
-  Please visit the Aquatica Digital website for further information.

AQUATICA PRODUCT NUMBERS

20086-NK-VC	Aquatica housing for Nikon Z6 and Z7 <i>Including dual Nikonos bulkheads + Surveyor kit</i>
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20086-OPT-VC	Aquatica housing for Nikon Z6 and Z7 <i>Including dual optical fiber ports + Surveyor kit</i>
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20086-KT-VC	Aquatica housing for Nikon Z6 and Z7 <i>Including dual Ikelite bulkheads + Surveyor kit</i>
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Note: Illustrations shown in this manual may display products different from the housing you purchased

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Safety precautions

Please carefully read and follow the following precautions and recommendations:

- ✿ Improper transportation, handling or use of this housing might cause a flood or a malfunction. Follow all recommendations stated in the next sections of this manual.
- ✿ Never remove, change a port or open the housing in a location where sand or similar foreign material might come in contact with an O-ring. Be wary of strong winds as they could potentially be carrying sand or other harmful particulate matter.
- ✿ Always perform a simple preventive seal test without the camera inside after doing maintenance on the housing.
- ✿ Non-authorized use of third party accessories, as well as modifications and/or alterations not specifically authorized by Aquatica may affect performance, cause poor functioning of the controls or impair the sealing integrity of the housing.
- ✿ Always handle the ports carefully. Protect them when not in use to avoid scratching the acrylic or glass surface of ports and windows.
- ✿ Always confirm that the ports remain properly attached before rinsing the housing. When rinsing without a wired strobe, confirm that the bulkhead strobes connectors are sealed with their plug.
- ✿ Never jump into the water with the housing. Have the system handed to you after you have made your entry or have it lowered to you on a rope.
- ✿ Never handle the housing by grabbing the port, or if using one, the Aqua View finder.

Make sure that boat staff are familiar with these procedures and advise them to manipulate the housing by using the grips provided with the housing.

Package contents

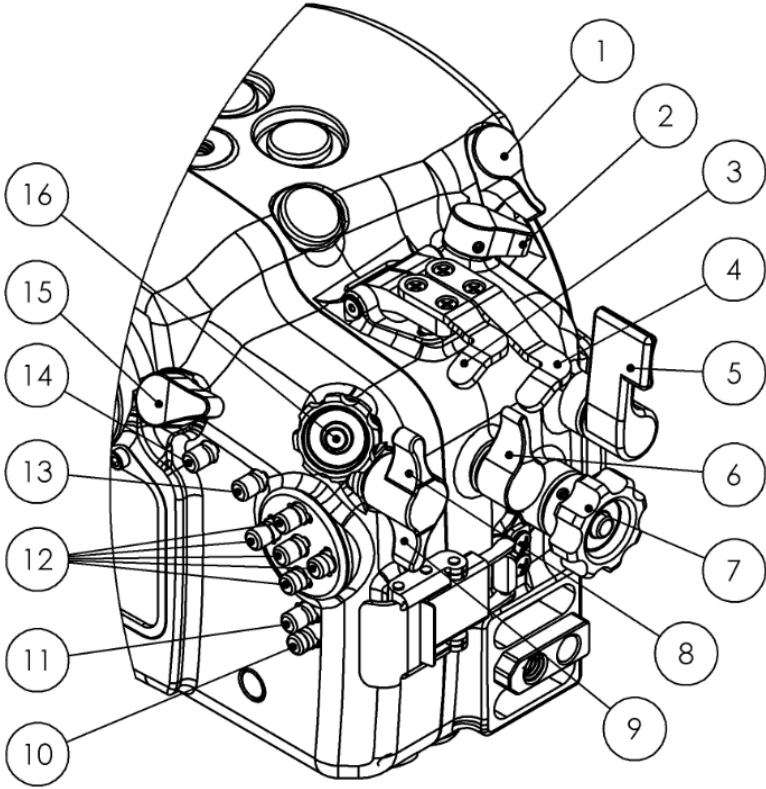
- ✦ AZ6/7 housing
- ✦ Camera saddle
- ✦ FTZ adapter saddle
- ✦ Handle grips (2) with screws (2)
- ✦ AZ6/7 instruction manual
- ✦ Lens chart (F-mount and Z-mount)
- ✦ Spare housing seal O-ring
- ✦ CR 2032 coin cell battery (for Surveyor)
- ✦ Aquatica O-ring lubricant container
- ✦ Set of Allen keys
- ✦ Optical flash trigger
(for 20085-OPT-VC housings)
 - ✦ CR 2045 coin cell batteries (2)
- ✦ Vacuum pump

Product specifications

Construction	Housing body	6061-T6 Aluminium
	Surface treatment	Anodized + powder coated
	Windows	Optical acrylic
	Grip handles	Black PVC
Physical	Dimensions WxHxD (w/o grips)	257mm x 158mm x 160m 10.1" x 6.2" x 6.3" (W x H x D)
	Width (w/ grips)	364mm ~ 14.3" (W)
	Weight (w/o camera)	2.88 kg ~ 6.35 lb
	Buoyancy	Slightly negative
	Depth rating	100 msw - 330 fsw
Features	Locking saddle	Safe locking of the saddle inside the housing using our proven locking system. Saddle is easily released by pressing the locking tab.
	Aqua View finder compatibility	Aqua View finder 45° Aqua View finder 180°
	Moisture/vacuum alarm	Supplied with the Surveyor moisture and vacuum sensor alarm.
	Flash capability ¹	Housing can be ordered with the following flash options: Optical triggering <i>Nikonos</i> -style bulkhead <i>Ikelite</i> -style bulkhead
	New HDMI bulkhead	Dedicated 25mm HDMI bulkhead allows external Prores RAW recording

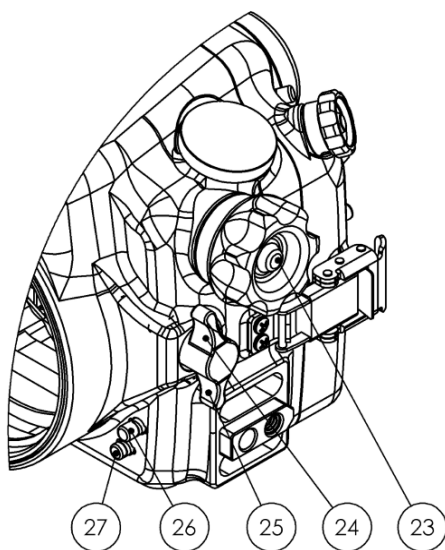
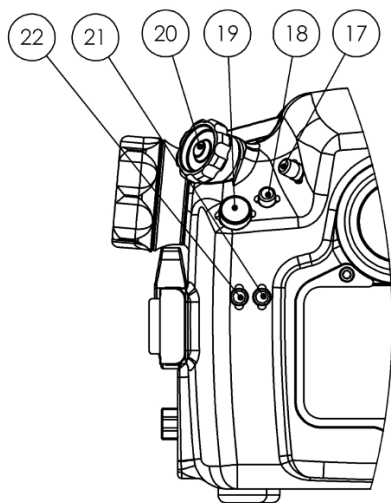
¹ Note that all of the AZ6/7 flash triggering options **are not** TTL compatible.

Housing functions

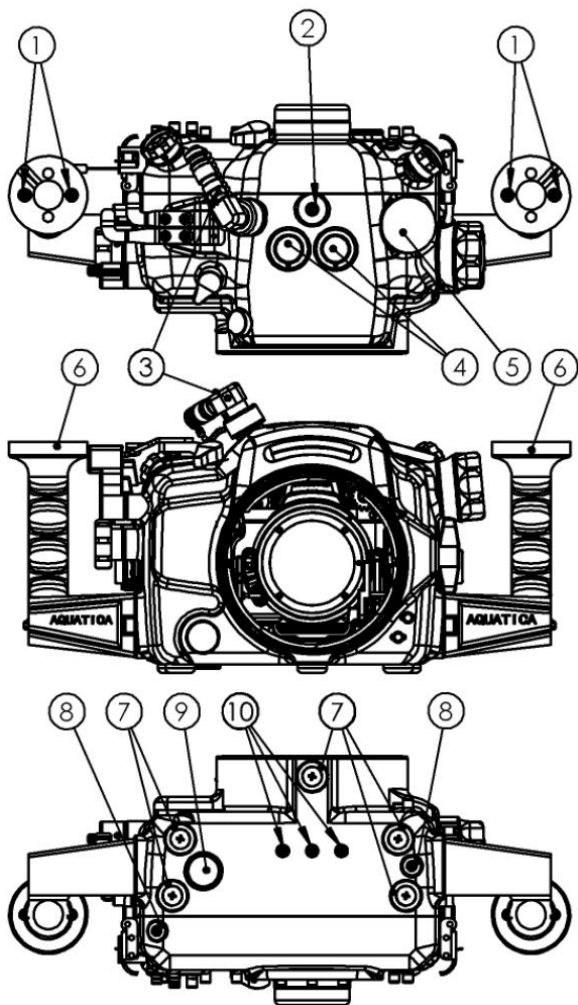


1	Port lock release
2	On-Off Lever
3	Record
4	ISO
5	Shutter Release
6	Exposure compensation
7	Sub-command dial
8	Back focus (AF)
9	Sub selector center press
10	Release mode / timer
11	Menu
12	Multi selector buttons
13	Photo mode "i"
14	Disp

15	Photo/movie selector
16	Main command dial
17	Monitor mode
18	Delete/Trash
19	Playback
20	Mode dial
21	Plus button
22	Minus button
23	Zoom/Focus gear dial
24	Fn2
25	Fn1
26	F-mount release
27	Z-mount release



Housing components



- | | |
|----|------------------------------------|
| 1 | Handle ball mount ² (1) |
| 2 | Top ball mount ² |
| 3 | Vacuum valve |
| 4 | Flash bulkheads ³ (2) |
| 5 | HDMI bulkhead |
| 6 | Handle (2) |
| 7 | Rubber pads (5) |
| 8 | Zinc anodes (2) |
| 9 | 16mm bulkhead |
| 10 | Tripod mount ² (3) |
| 11 | Closing latches (2) |

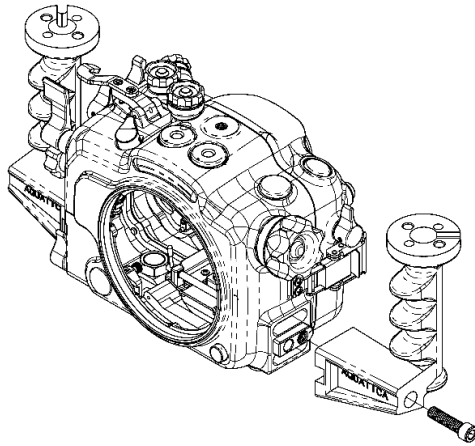
² 1/4-20 UNC thread

³ Optical, Nikonos, or Ikelite bulkheads

Housing preparation

Follow these steps to prepare your AZ7 housing:

STEP 1: Assemble the grips onto your housing using the provided screws and Allen key.



STEP 2: Suggested configuration

Strobes arms on the handle ball mounts (1)⁴

Focus lights or external monitors on Top ball mount (2)⁴

Scooter, underwater camera slider, tripod mount on (10)⁴

STEP 3: Mount your strobes on the arms and connect them to the housing. For details about optical flash triggering and wired bulkheads, refer to the [Flash triggering section page 24](#) Follow your strobe manufacturer manual and its recommendations.

STEP 4: Before use, remove the main O-ring seal from its groove on the front half of the housing and carefully verify that the O-ring and its groove are free from scratches or foreign matter. Lubricate the O-ring with a light coat of silicone grease.

⁴ Refer to Housing components section

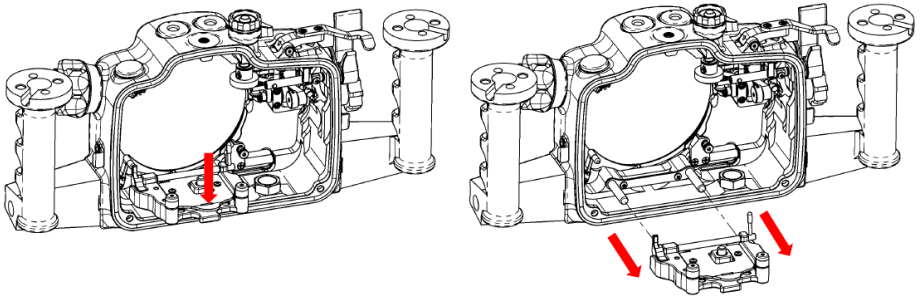
WARNING: For proper handling of O-rings, follow the detailed instructions outlined in the [Care and maintenance - O-rings_section](#) page [30](#).

STEP 5: Insert the provided CR 2032 coin cell battery in the Surveyor alarm (rear half of housing) as described in the [Surveyor board](#) section page [20](#).

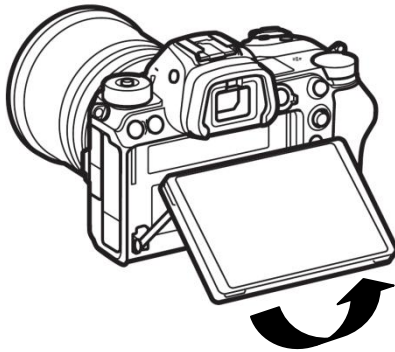
Camera installation

Follow these steps to prepare your Nikon Z6 or Nikon Z7 camera for use with your Aquatica housing.

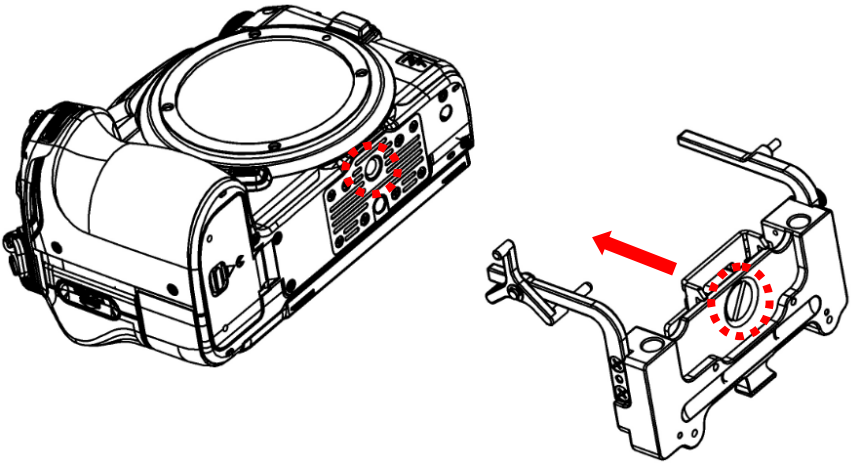
STEP 1: Remove the saddle from the housing by pressing the saddle locking tab and pulling the saddle out of the housing.



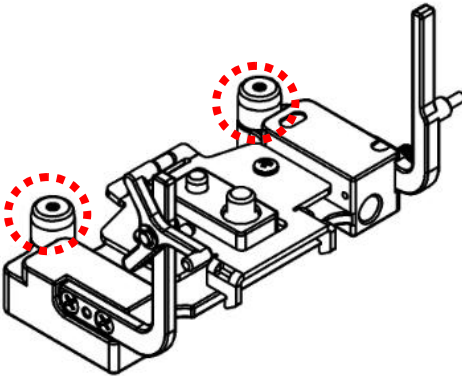
STEP 2: Tilt the camera monitor screen up.



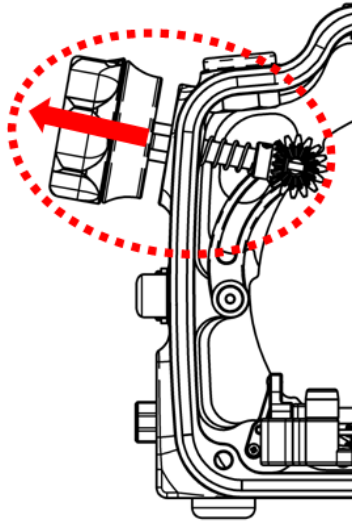
STEP 3: Install the camera on the saddle by aligning the positioning hole under the camera and screwing the bottom screw with either a flat screwdriver or a coin.



STEP 4: Tilt the camera screen down until it is resting on the saddle rear stoppers. To get a better view of the screen in the water keep the screen parallel to the camera body.



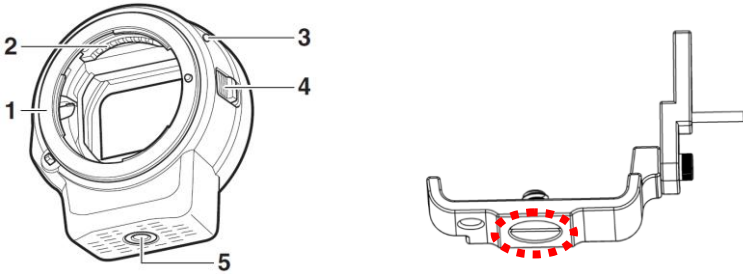
STEP 4: If you have a lens with a gear installed on the camera pull the zoom-focus knob and turn it to lock it out prior to installing the camera in the housing to avoid interference between the gears.



STEP 5: Install the camera inside the housing by aligning the saddle holes with the two guiding pins in the housing. Push it all the way in until you hear the locking mechanism click in the housing. Perform a check by pulling on the saddle to ensure it is firmly attached to the housing.

FTZ adapter installation

Install the FTZ adapter on its saddle by aligning the positioning hole under the camera and screwing the bottom screw with either a flat screwdriver or a coin.



You can install the FTZ adapter on the camera before or after putting it in the housing. To remove an F-mount lens from the housing without removing the camera or adapter from the housing use the FTZ release button.

Port mounting

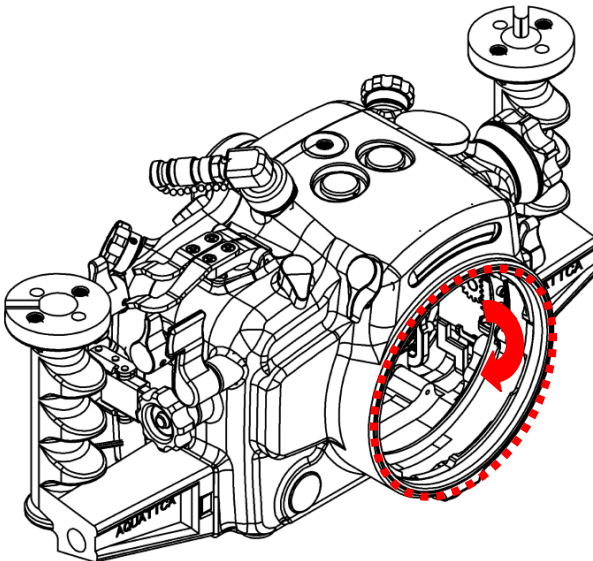
The AZ6/7 housing is equipped with a bayonet locking system that firmly attaches compatible ports and extension rings.

STEP 1: Before mounting the port, remove the O-ring seal from its groove and carefully verify that the O-ring and its groove are free from scratches or foreign matter. Lubricate the O-ring with a light coat of silicone grease. Also check that the O-ring mating surface on the housing is clean and free of any physical damage.

WARNING: For proper handling of O-rings, follow the detailed instructions outlined in the [Care and maintenance - O-rings_section page 30](#).

STEP 2: Place the housing on its back on a soft and steady surface.

STEP 3: Place the port or extension ring inside the housing bayonet. Align the bayonet using the four alignment notches in the housing.



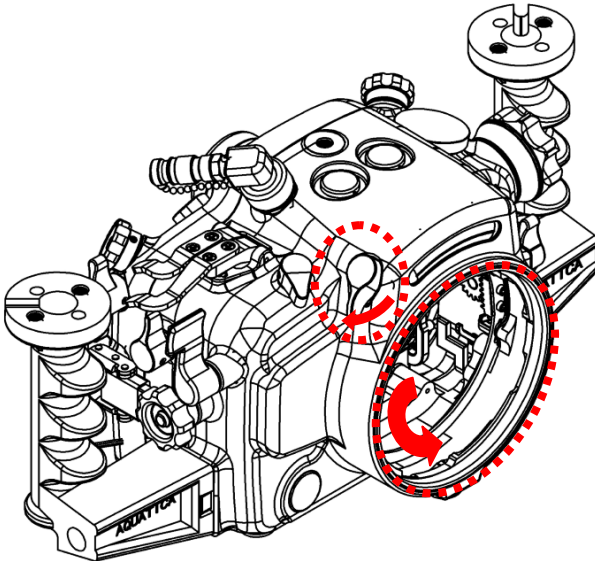
STEP 4: Push with even force on both sides of the port or extension ring until you feel it snap into place. Make sure the bayonet is completely inside the housing.

STEP 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 ring is properly seated before attempting to rotate it again.

STEP 6: Confirm that the port or extension ring is safely locked in the housing by gently trying to rotate it counter-clockwise. The bayonet lock should prevent any counter-clockwise rotation.

Port removal

STEP 1: While pressing the port release lever, rotate the port or extension ring counter-clockwise until it stops.



STEP 2: Carefully pull the port or extension ring out of the housing.

Housing closing

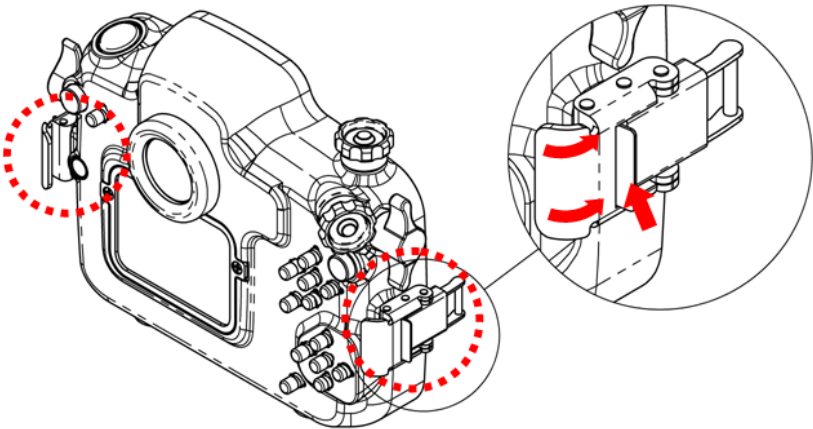
STEP 1: Before closing the housing, remove the O-ring seal from its groove and carefully verify that the O-ring and its groove are free from scratches or foreign matter. Lubricate the O-ring with a light coat of silicone grease. Also check that the O-ring mating surface on the housing is clean and free of any physical damage.

WARNING: For proper handling of O-rings, follow the detailed instructions outlined in the Care and maintenance - [O-rings_section page 30](#).

STEP 2: Perform either a Surveyor moisture alarm test or a vacuum check if you are using a pump. Refer to Surveyor board *and* Using the vacuum monitoring system sections (from page 20) for a complete procedure.

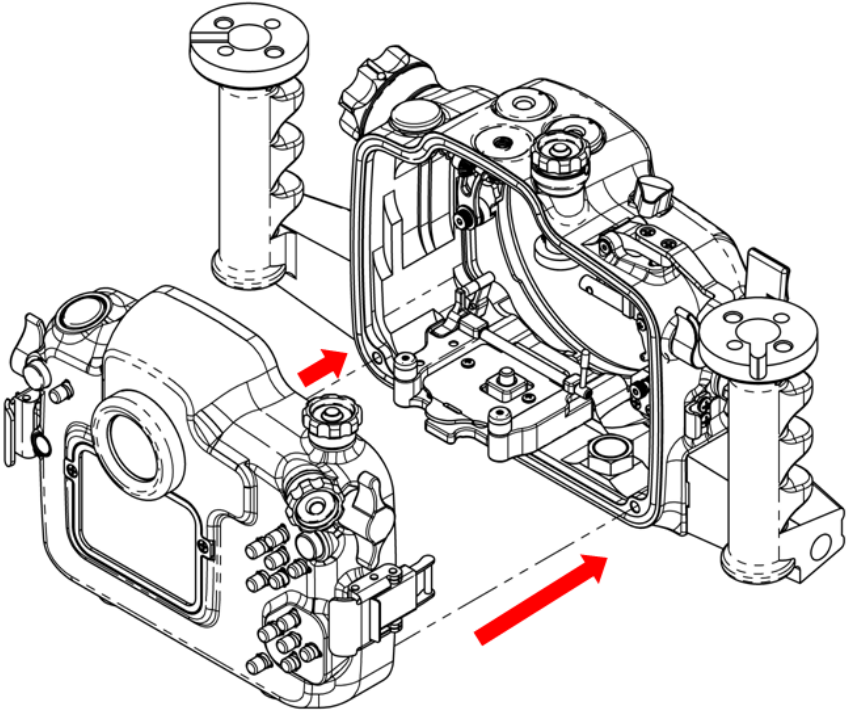
STEP 3: Be sure that the housing is free of any foreign object that could interfere during closing.

STEP 4: Be sure that both locking latches on the rear portion of the housing are unlocked. If unlocked, latches should be able to rotate freely, if they cannot rotate freely, unlock them by pressing the locking tab and pulling them out.



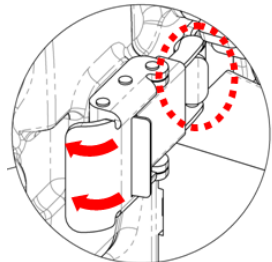
STEP 5: Pull the latches out so they don't interfere with the front portion hooks upon closing.

STEP 6: Align the rear portion of the housing with the front one using the two guiding pins.



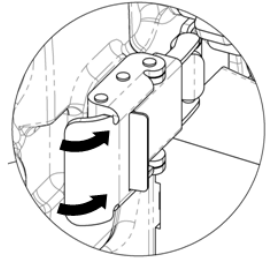
STEP 7: Close the two housings shells together.

STEP 8: Once both portions of the housing are pressed against each other, rotate latch towards the front until it catches the front hook, and then pull back until it locks into position. Repeat for second latch.



WARNING: In the event that you should feel any unusual resistance when attempting to close your housing, do not force closure. Reopen and inspect carefully for any potential obstruction before trying again.

STEP 10: Verify that both latches are locked by trying to pull them out **without pressing the locking tab**. If properly locked, you should not be able to open them by simply pulling them out.

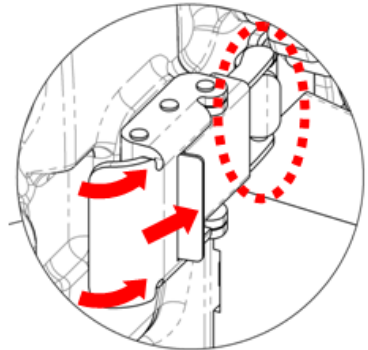


Housing opening

Note: *If your housing is under vacuum, you won't be able to open it directly with the following procedure. See note in Using the vacuum monitoring system section.*

STEP 1: Unlock both latches by pressing the locking tabs and pulling them out.

STEP 2: Rotate both latches to free them from the front hooks and pull out the rear portion.

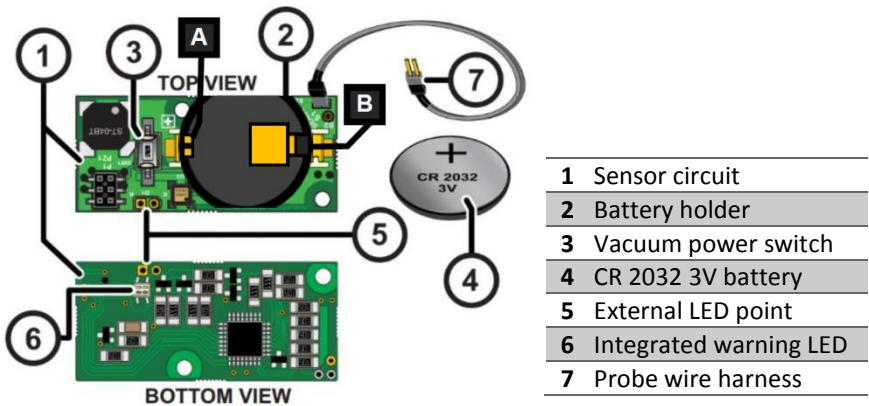


Surveyor board and Vacuum pump

Your AZ6/7 housing comes standard with the Surveyor board and a vacuum valve factory installed.

Surveyor board

The surveyor board has two independent sub-systems, a moisture detection system and a vacuum monitoring system.



To insert your CR 2032 battery:

STEP 1: With the (+) side facing up, slip the battery under the plastic tab (A) at an angle.

STEP 2: Push the part of the battery that is sticking out into the holder (on B side) until it locks in.

To remove your CR 2032 battery:



STEP 1: Push the plastic tab (B) away from the holder.

STEP 2: Grab the battery by the sides sticking out of the holder and pull it out.

Once a battery is installed, the moisture detection circuit of the Surveyor alarm will remain on standby and does not need to be activated.

If not being used for a prolonged period of time (months), it is recommended to remove the battery from the sensor circuit to avoid unnecessary drain.

Moisture detection LED code:










Standby mode	LED is off <i>System is on standby</i>	
Water detected	Red LED flashing with audible alarm <i>Water is making contact with probe</i>	

Note: If you are only using the moisture detection system without the vacuum, it is recommended to perform a quick test of the circuit before every dive. To do so, simply moisten the tip of your finger and establish contact between the board probes (#7). If it fails to activate the alarm, check that the battery is correctly inserted and replace it with a fresh one if required.

Using the vacuum monitoring system

The vacuum monitoring sensor of the Surveyor board offers the user an efficient tool to check the housing's sealing integrity before and during his dive.

Vacuum monitoring LED code:

Standby mode	LED is off <i>System is on standby</i>	
Ready to Vacuum	Green LED flashing <i>System is ready to be depressurized</i>	
40-100% Vacuum	Yellow LED flashing <i>Building vacuum inside housing</i>	
100% Vacuum	Green LED solid <i>Required level of vacuum is achieved</i>	
Over-depressurization ⁵	Green LED flashing <i>System is getting over depressurized</i>	
Vacuum standby	Green LED flashes once every 4 sec <i>Housing system is holding vacuum</i>	
Loosing vacuum ⁶ 40-60%	Yellow LED flashing <i>Housing is losing vacuum over time</i>	
Lost vacuum 0-40%	Red LED flashing w/ audible alarm ⁷ <i>Housing has lost vacuum</i>	
Water detected	Red LED flashing with audible alarm <i>Water is making contact with probe</i>	

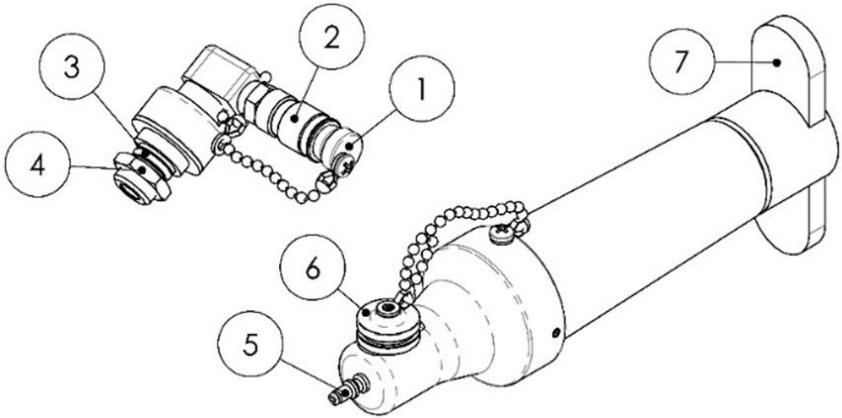
STEP 1: Prior to closing your housing, activate the Surveyor's vacuum monitoring mode by pressing the activation switch on the board. The Surveyor green LED should be flashing rapidly as shown in the table above "Ready to vacuum".

STEP 2: Close your housing using procedure outlined in the Housing closing section.

⁵ Everything is OK, just stop pumping vacuum

⁶ Indication of a slow leak

⁷ Alarm will stay on during 30 seconds before going back to standby mode



STEP 3: Remove the valve plug (#1) by sliding the quick-disconnect collar (#2).

STEP 4: Insert the pump stem (#5) in the pressure valve and release the quick disconnect collar (#2).

STEP 5: Make sure the pressure release plug (#6) is screwed all the way in (clockwise).

STEP 6: Build vacuum inside your housing by pumping the handle (#7). The amount of pumping required will vary according to the housing dimensions and the port configuration being used. However, the proper amount of vacuum should always be attainable within a reasonable delay. Refer to vacuum monitoring LED code table.

Note: Be careful not to over-depressurize the housing. This will trigger the alarm and require opening the housing and starting the procedure all over again.

STEP 7: Remove the pump by sliding the quick-disconnect collar (#2) and put back the plug (#1) in the pressure valve.

Note: If your housing fails to maintain a constant vacuum, proceed a thorough inspection of the user serviceable O-rings of the housing. If unsuccessful in determining the source of the leak, refrain from immersing the housing and return it to your authorized service center for inspection.

Bringing back housing to ambient pressure:

Once your housing is under vacuum, it is important to bring it back to ambient pressure before attempting to remove the port or to open the housing. To pressurize your housing, insert the pump back into the valve (STEP 4) and remove pressure release plug (#6). Once the hissing sound stops, you can remove the pump (STEP 7). The housing is now at ambient pressure.

Flash triggering

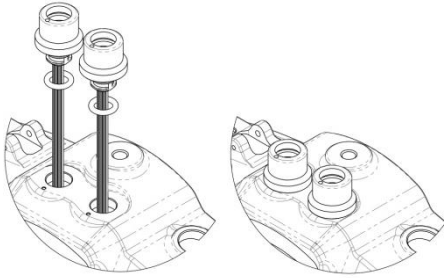
There are three flash options compatible with the AZ6/7 housing

- ✿ Optical triggering (#20086-OPT-VC)
- ✿ *Nikonos*-style bulkhead (#20086-NK-VC)
- ✿ *Ikelite*-style bulkhead (#20086-KT-VC)

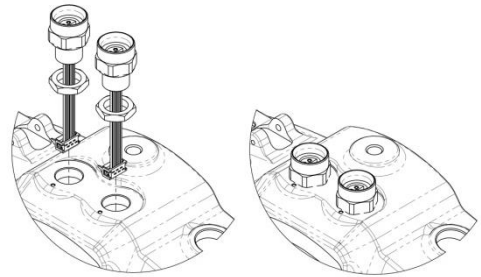
Note: Note that none of the offered flash triggering options are TTL compatible.

For *Nikonos* and *Ikelite* style bulkheads, simply insert the velcroed board inside your camera hot-shoe then connect your strobe's cables following the manufacturer's instructions.

Nikonos (20085-NK-VC)

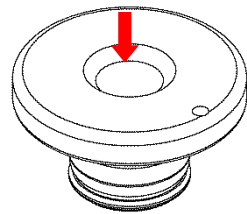
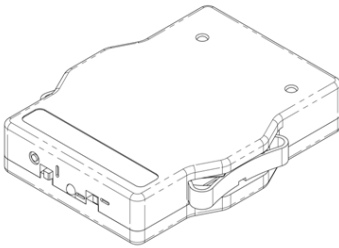


Ikelite (20085-KT-VC)



Optical (20085-OPT-VC)

If your housing is equipped with the optical flash option, you will need to use to the optical flash trigger.



STEP 1: Remove the battery trays from the flash trigger

STEP 2: Insert the provided CR 2045 coin cell batteries inside the 2 trays (positive side up)

STEP 3: Insert the battery trays inside the flash trigger

STEP 4: The flash trigger has a power switch (left) and intensity switch (right). Upon turning on the flash trigger the notification LED will flash once. If it flashes red the battery level is low, replace batteries with new ones.

STEP 5: Insert your flash trigger in your camera hot shoe using the bottom mount. Make sure it is pushed all the way in to align the LEDs with the bulkheads on the housing.

STEP 7: Push the optical cable bushing in their sockets in the optical bulkheads.

The flash trigger batteries should be able to fire strobes at least 15,000+ times. However, some CR 2045 cells have a very limited shelf life, so make sure to change them if your flash trigger has not been used for a few months.

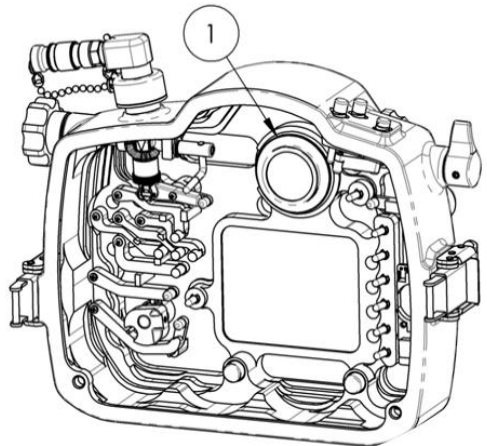
Note: If you are using *SEA & SEA YS-D2* strobes with your slim flash trigger, it is required to use the *SEA & SEA Fiber-Optic Cable II* (using 613 fibers). Smaller optical fiber cable will prevent the strobes from firing consistently

Aqua View Finder

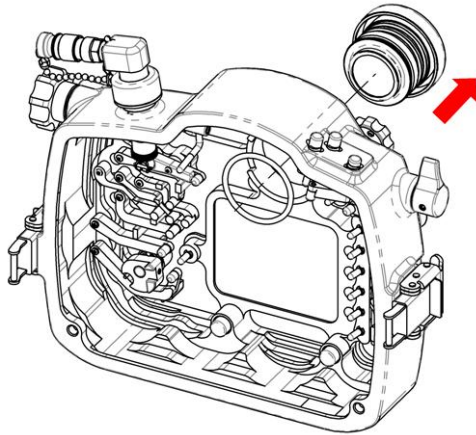
The AZ6/7 housing is compatible with both the 180° Aqua View finder (#20054) and the 45° Aqua View finder (#20059). To install your Aqua View finder, you will have to remove the standard eyepiece.

To remove your standard eyepiece:

STEP 1: Using an O-ring removal tool, remove the eyepiece retaining O-ring (#1). If you don't have a removal tool, the O-ring can also be pinched using only your fingers.



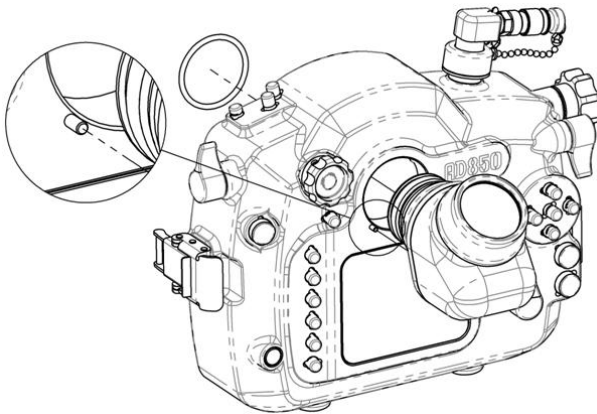
STEP 2: Carefully pull the eyepiece body out of the housing.



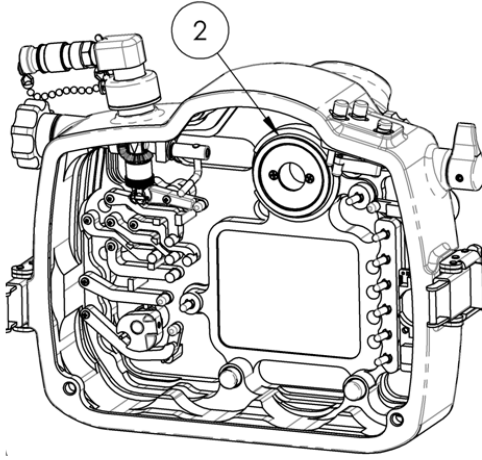
To install your Aqua View finder:

STEP 1: Carefully verify that the O-ring and its groove are free from scratches or foreign matter. Lubricate the O-ring with a light coat of silicone grease. Also check that the O-ring mating surface on the housing is clean and free of any physical damage.

STEP 2: Insert your Aqua View finder inside your housing. Be sure to align the Aqua View finder with the aligning pin on the housing.



STEP 3: Install your Aqua View finder retaining O-ring (#2).



Note: It is highly recommended to perform a simple seal test without the camera after performing the installation. View following section for details.

Care and maintenance

With basic care and a regular maintenance schedule, your Aquatica housing will provide years of enjoyment and satisfaction in producing spectacular underwater images. Please follow all undermentioned care and maintenance instructions.

Housing components

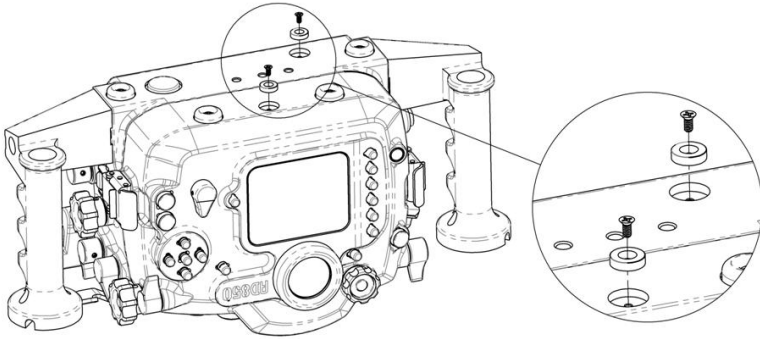
After every salt water dive, soak and/or rinse your housing system in fresh water. It should soak for a minimum of 30 minutes. Operate all the controls several times, while soaking, to dislodge any trapped salt water residues.

Periodically remove the hand grips for storage and transportation to avoid having the thread of the attachment bolts fuse on to the housing. Unscrew, clean and lubricate the bolts with a small amount of WD-40 or Zinc-based lubricant.

WARNING: Use WD-40 or any lubricant carefully, sparingly and only on metal to metal surfaces. WD-40 or other petroleum-based lubricants can damage the acrylic on the ports, the optical surfaces of a lens or O-rings.

Sacrificial anodes

Two anodes are attached to the bottom parts of the housing to prevent galvanic corrosion due to electrolysis. As time goes by, and depending on use, they will deteriorate and need replacement. Contact your dealer to order replacement anodes (#19220).



O-rings

When replacing the main seal O-ring, place the entire O-ring over the O-ring groove and start by pushing the O-ring in the corners. Work your way around the O-ring making sure it is snugly sitting in the groove. Avoid going solely in one direction as doing so will stretch the O-ring material and possibly prevent it from properly seating.

When working your housing or port O-rings, please follow these instructions:

- ✿ Never use a sharp instrument when removing an O-ring as this may damage the sealing surface of the groove or the O-ring itself. A dedicated O-ring tool, a dull pointed object or the edge of a credit card usually works well.
- ✿ Once removed, the O-ring should be inspected for damage. Carefully check that it is free of nicks or cuts and that it retains its original round profile. O-rings that appear to be damaged should be immediately replaced with new ones.

- ✿ Rinse the O-ring with fresh water and dry it with a clean lint free cloth.
- ✿ Clean the O-ring groove (the channel where the O-ring sits) with a cotton swab. Make sure to remove any lint the cotton swab may leave behind.
- ✿ Wipe the matching sealing surface part of the housing with a clean lint-free cloth.
- ✿ Lubricate the O-ring with a thin layer of Aquatica O-ring lubricant (# 19213) until it appears to be smooth and shiny. **Do not over lubricate.** Use just enough lubricant so the O-ring will pull smoothly through your fingers. Excessive amounts of grease will only attract and trap dirt onto the O-ring.
- ✿ Confirm that the Port and extension ring O-rings are properly and evenly seated in their O-ring groove.
- ✿ To reinstall the clean and lubricated main O-ring of the housing:
 - ✿ Place the entire O-ring over the groove and start by pushing the O-ring in at each corner.
 - ✿ Push the O-ring at each side to distribute it evenly across the surface before finally working in the rest of the O-ring.
 - ✿ Never start at one end and work your way around the O-ring. This creates uneven tension on the O-ring which may cause the O-ring to stretch.

Note: When changing ports or O-rings, a simple seal test without the camera inside should be performed. 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 you have a proper seat of the new port or O-ring. This test, **though time consuming and often considered unnecessary, may save your camera equipment from irreparable water damage.**

The internal O-rings of the housing are not user replaceable. While these O-rings are not as susceptible to damage as the main seal, rinsing the housing properly with fresh water to flush out salt crystals and sand residues will assure trouble free operation. Aquatica recommends yearly maintenance of the internal O-rings. Authorized service centers are offering this service with factory-approved procedures and replacement parts. You can check the closest service center to you on the Aquatica website.

WARNING: Only use the Aquatica O-ring lubricant (#19213). Petroleum-based lubricants, used by some manufacturers to lubricate their Silicone-made O-rings will cause the O-ring material to swell. This will cause difficult installation and will likely result in O-ring being damaged or pinched.

Storage and transportation

Store and transport the housing in a sturdy, shock proof container and avoid travelling with the camera mounted inside the housing. In the event of an impact, especially on the external push buttons, the impact could potentially be transferred to the camera controls and damage them.



When travelling by air or in situation where atmospheric pressure changes are foreseen, leave the housing opened, or alternatively, remove the port and the eye piece. Doing so allows equalization of the air pressure inside the housing with ambient pressure. Failure to follow this recommendation may cause an internal pressure build up which could potentially force ports or acrylic windows to pop out or potentially unseat their O-ring seal.

Warranty

PLEASE READ CAREFULLY

One year limited warranty

All Aquatica products are guaranteed against defects in material or workmanship for one (1) 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 responsibility 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 +1 (514) 737-9481 and ship **by registered mail (insured) only**, enclosing your proof of purchase to:

Aquatica Digital
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 _____