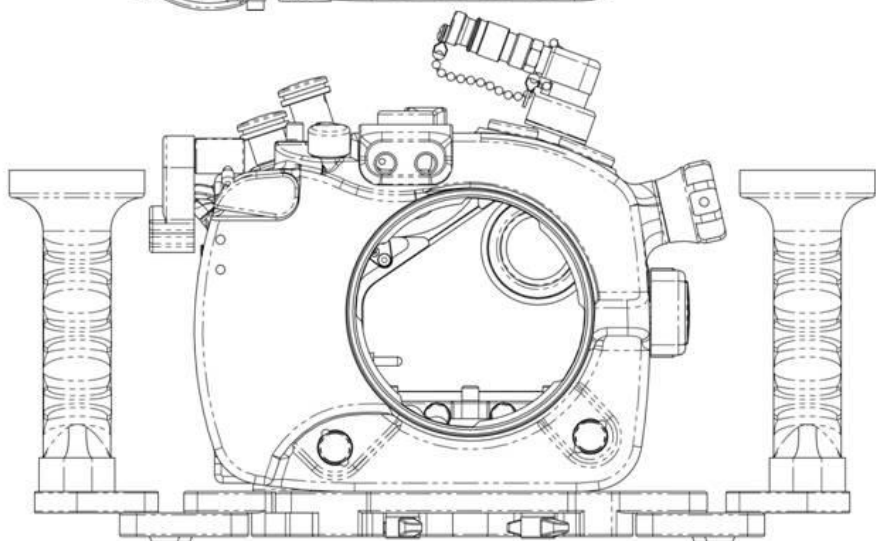
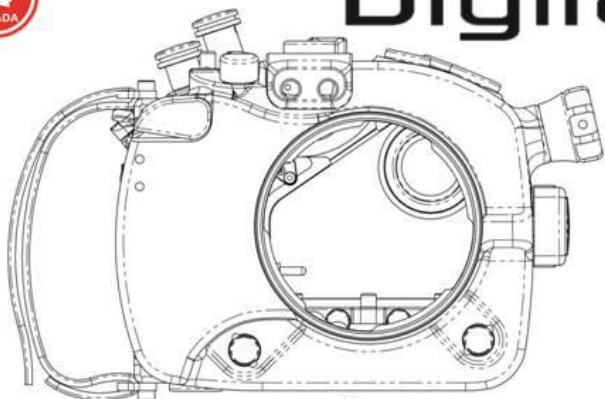


AQUATICA™






Digital



A6500

INSTRUCTION MANUAL

Product #37000

-  Thank you for purchasing your Aquatica A6500 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 Sony A6500 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

37000-NK	Aquatica A6500 housing for Sony a6500 camera with Nikonos bulkhead
37000-IKE	Aquatica A6500 housing for Sony a6500 camera with Ikelite bulkhead
37000-OPT	Aquatica A6500 housing for Sony a6500 camera with dual optical connectors
37000-NK-VC	Aquatica A6500 housing for Sony a6500 camera with Nikonos bulkhead + Surveyor kit
37000-IKE-VC	Aquatica A6500 housing for Sony a6500 camera with Ikelite bulkhead + Surveyor kit
37000-OPT-VC	Aquatica A6500 housing for Sony a6500 camera with dual optical connectors + Surveyor kit

NOTE: *Shown housing illustrations may differ from your actual housing depending on the ordered version.*

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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.

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)	202mm x 156mm x 100mm 7.94" x 6.13" x 3.94"
	Width (w/ grips)	325mm - 12.79"
	Buoyancy	Slightly negative
	Depth rating	100 msw - 330 fsw
	Self position-finding controls	Housing levers are finding their right position regardless of camera levers position for the following controls: <ul style="list-style-type: none">  On/off lever  Fn lever
	Magnetic saddle	Safe locking of the saddle inside the housing using powerful Neodymium magnets.
	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	Compatible with the following depending on flash option: <ul style="list-style-type: none">  Optical triggering  Nikonos-style bulkhead  Ikelite-style bulkhead 	

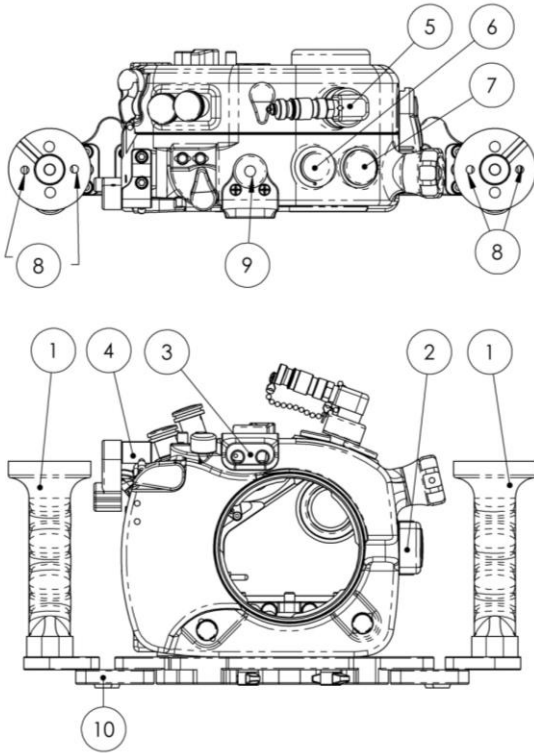
¹ Note that all of the A6500 flash triggering options **are not** TTL compatible.

Package contents

- ✿ A6500 housing
- ✿ Handle grips (2) with adjustable grip tray
- ✿ Hand strap
- ✿ ½” adapter sleeve (see Footnote 2 at page 7)
- ✿ A6500 instruction manual
- ✿ Lens chart
- ✿ Spare housing seal O-ring
- ✿ Aquatica O-ring lubricant container
- ✿ Set of Allen keys
- ✿ Vacuum pump
(for 37000-NK-VC, 37000-OPT-VC and 37000-IKE-VC kits)

Housing schematics

Housing components

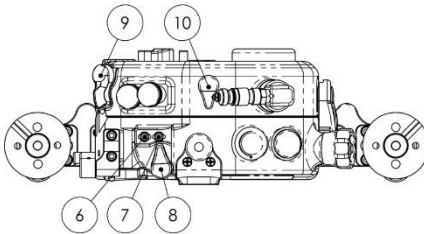


Standard	
1	Handle grips (2)
2	Closing latch
3	Optical flash
4	External shutter
6	½" accessory port
7	Versatile port ²
8	Ball mounts
9	Top ball mount
10	Adjustable grip tray

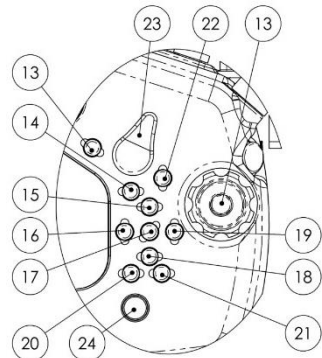
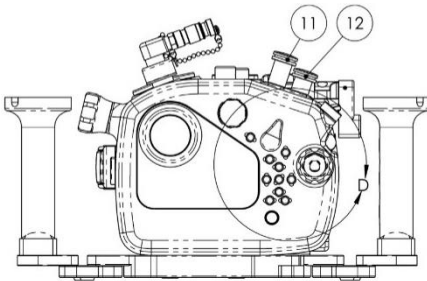
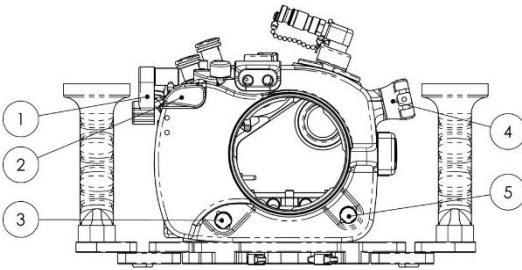
Optional	
5	Vacuum port

² Your A6500 housing comes equipped with the 16mm adapter. You can remove the installed 16 mm adapter sleeve and install the provided ½" adapter sleeve if you wish to use this port with ½" accessories.

Housing functions



1	Shutter lever (grips)
2	Shutter lever (hand strap)
3	Lens release
4	Focus - Zoom
5	Port release
6	C1 button
7	C2 button
8	On/Off lever
9	AF/MF AEL lever
10	Flash Lever
11	Mode dial
12	Control dial
13	Menu button
14	Fn button
15	Up selection button
16	Left selection button
17	Select/Ok button
18	Down selection button
19	Right selection button
20	Playback button
21	C3 button
22	AF/MF AEL button
23	AF/MF/AEL switch lever



Housing preparation

Follow these steps to prepare your A6500 housing for use:


- STEP 1:** Assemble your handle grips and tray onto your housing using the provided screws (2) and Allen keys.
- STEP 2:** If you are adding any shoes, brackets or ball mounts onto your housing, mount them using the intended ¼-20 UNC threaded holes. You can use the threaded holes on the handle grips or the top ball mount.
- STEP 3:** Mount your strobes and their arms onto the housing. For details about optical flash triggering and wired bulkheads, refer to the *Accessories, Flash triggering* section (page 18). Follow your strobe manufacturer manual and its recommendations.
- STEP 4:** Before use, remove the main O-ring seal from its groove on the rear 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.

WARNING: For proper handling of O-rings, follow the detailed instructions outlined in the *Care and maintenance, O-rings* section (page 20).

- STEP 5:** Insert the provided CR 2032 coin cell battery in the Surveyor alarm. Read *Accessories, Surveyor sensor* (page 15) for more details on sensor operation.

Camera preparation and installation

Follow these steps to prepare your Sony a6500 camera for use with your housing. It is also advisable before inserting the camera into the housing, in order to save valuable time underwater, to set your camera shooting preferences beforehand.

- STEP 1:** Remove the camera rubber eye cup and the two lanyard clips.
- STEP 2:** Turn off the Electronic View Finder Auto Switch on your camera. This will prevent your camera from automatically switching from the screen to the viewfinder when the housing is closed.
- MENU** →  2 (Camera settings 2) → [Finder/Monitor] → [...]
- STEP 4:** Remove the magnetic saddle from the housing by pulling the saddle out of the housing.
- STEP 5:** Pull out the screen to make room for the aligning pins behind it
- STEP 6:** Install the camera on the saddle by aligning the threaded hole under the camera and screwing the bottom screw with either a flat screwdriver or a coin.
- STEP 7:** Push the screen back on the aligning pins.
- STEP 8:** Slide the saddle and camera inside the housing using the two guiding pins. Push it all the way through until you hear the saddle magnets snap on the housing ones. Perform a check by pulling on the saddle to ensure it is firmly attached to the housing. **View following note.**

NOTE: *In the described case, the camera is inserted without its lens attached. If you are inserting your camera with a lens attached, make sure to first pull out the zoom-focus knob to avoid interference between the gear ring and the housing. To lock the knob out during insertion, rotate it in either way while pulled until it sits on the locking pins.*

Port mounting

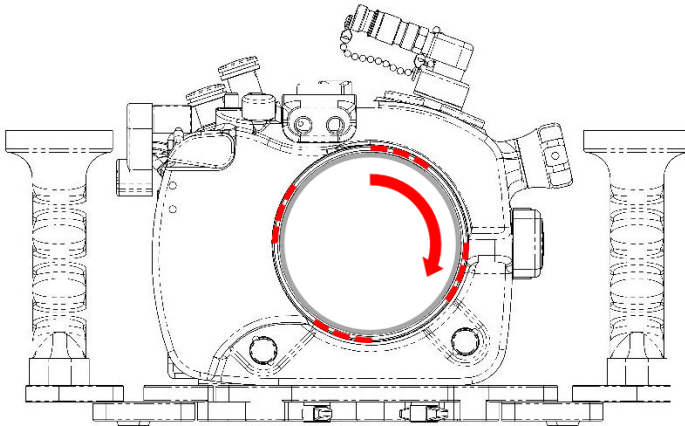
The A6500 housing is equipped with a bayonet locking system that firmly attaches compatible ports and extensions.

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 20).

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.

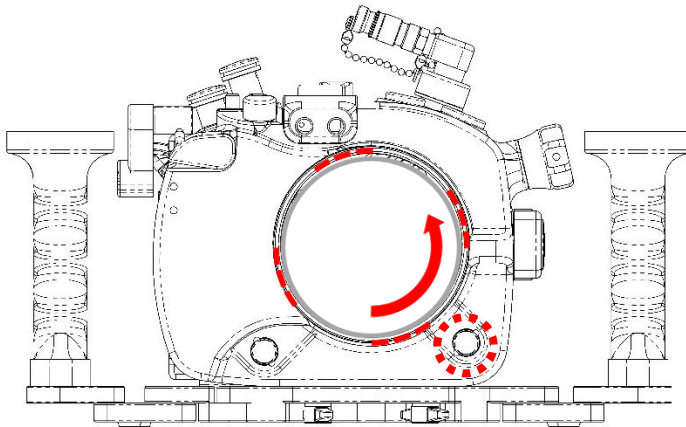


STEP 6: Confirm that the port or extension ring is safely locked in the housing by gently trying to rotate it counter-clockwise. The bayonet lock should prevent any counter-clockwise rotation.

WARNING: Never attempt to manually focus the camera if it is set to autofocus mode with a mounted focus gear engaged. This will strain the focus mechanism motor and might damage your lens.

Port removal

STEP 1: While pressing the port release button, 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 20).

STEP 2: Perform either a Surveyor moisture alarm test or a vacuum check if you are using a pump. Refer to *Accessories, Surveyor sensor* and *Vacuum pump* sections (from page 15) for a complete procedure.

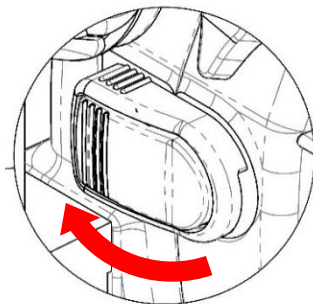
STEP 3: Make sure that the housing is free of any foreign object that could interfere during closing.

STEP 4: Rotate closing latch counter-clockwise until its round side is pointed at the front of the housing. If it is locked in position, press on the latch tab (marked “PUSH”) while rotating it to release it.

STEP 5: Close the two housings shells together.

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 6: Once housing is closed, rotate latch clockwise until it clicks in the locked position.



NOTE: The latch is shown in its final locked position.



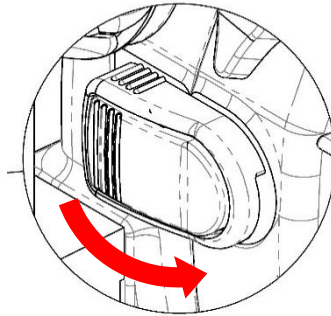
STEP 7: Make sure the latch is properly closed by trying to rotate it counter-clockwise without pressing the releasing tab.

NOTE: All the control mechanisms in your A6500 housing are self-finding. This means you don't have to worry about matching the lever positions on your camera and your housing. However, note that if the control levers on your housing are not matching those of your camera upon closing, you may need to cycle them one time. This will allow the housing to "grab" the camera levers if they were not in a matched position upon closing. The two controls that needs to be cycled are the On/off and the AF/MF/AEL lever.

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 Accessories, Vacuum pump section.

STEP 1: While pressing the release tab, rotate the locking latch counter-clockwise.



NOTE: The latch is shown in its initial locked position.

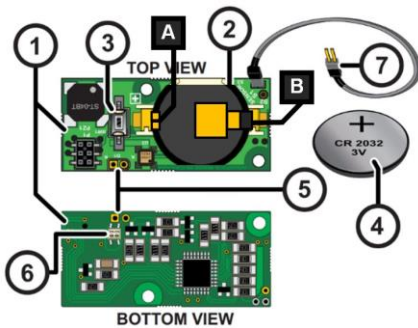
STEP 2: Open the housing by rotating the rear shell.

Accessories

Surveyor sensor

Your A6500 housing comes standard with the Surveyor moisture alarm. This sensor device has two distinct purposes, a moisture detection circuitry and an ambient pressure sensor circuitry.

NOTE: *Once a battery is installed, the moisture detector function 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, it is recommended to remove the battery from the sensor circuit to avoid unnecessary drain.*



1	Sensor circuit
2	Battery holder
3	Vacuum power switch
4	CR 2032 3V battery
5	External LED point
6	Integrated warning LED
7	Probe wire harness

To insert your CR 2032 battery:



- STEP 1:** With the (+) side facing up, slip the battery under the plastic tab (B).
- STEP 2:** Push the part of the battery that is sticking out into the holder (on A side).

To remove your CR 2032 battery:

- STEP 1:** Push the plastic tab (B) away from the holder.
- STEP 2:** Grab the battery by each side sticking out of the holder and pull it out.

WARNING: If you are only using the moisture alarm function 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). This should trigger the water alarm. If it fails to activate, check that the battery is correctly inserted and replace it with a fresh one if required.










Moisture alarm mode 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>	

If you want to benefit from the full capabilities of your Surveyor sensor, you can order the optional vacuum pump system (#19228). The vacuum function of the Surveyor offers the user an efficient monitoring tool to check its housing sealing integrity before and during his dive.

The next table shows the vacuum sensor mode LED code. See *Accessories, Vacuum pump* section (page 17) for the required procedure to obtain a vacuum using the pump.

Vacuum sensor mode LED code:

Standby mode	LED is off <i>System is on standby</i>	
Vacuum ready	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 ³	Green LED flashing <i>System is getting over depressurized</i>	
Vacuum standby	Green LED flashing every 4 sec <i>Housing system is holding vacuum</i>	
Loosing vacuum ⁴ 40-60%	Yellow LED flashing <i>Housing is losing vacuum over time</i>	
Lost vacuum 0-40%	Red LED flashing w/ audible alarm ⁵ <i>Housing has lost vacuum</i>	
Water detected	Red LED flashing with audible alarm <i>Water is making contact with probe</i>	

³ Everything is OK, just stop pumping vacuum.

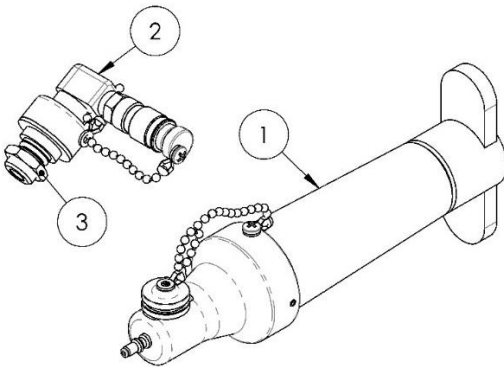
⁴ Indication of a slow leak behavior.

⁵ Alarm will stay on during 30 seconds before going back to standby mode.



Vacuum pump

A vacuum pump will allow you to fully benefit from the capabilities of your Surveyor sensor. Your pump kit #19228 includes the following parts:



1	Vacuum pump
2	Pressure valve
3	Retaining nut
*	Aquatica lubricant

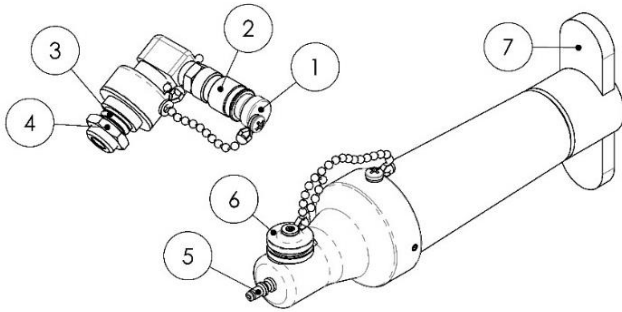
If your pump was not factory installed or bought separately, you will need to install the pressure valve bulkhead on your housing. Install your vacuum pump system in the rear 1/2" bulkhead port, compatible with pump kit #19228

To install your valve:

- STEP 1:** Remove the existing plug by unscrewing the hexagonal nut inside.
- STEP 2:** Lubricate the valve bulkhead O-ring using provided Aquatica O-ring lubricant (see *Care and maintenance, O-rings section* for more information).
- STEP 3:** Carefully insert the valve bulkhead into the selected port, slightly rotating the valve while pushing will facilitate the insertion.
- STEP 4:** Tighten the retaining nut using a 5/8" wrench.

To use your vacuum monitoring system:

- STEP 1:** Prior to closing your housing, put your Surveyor sensor in vacuum mode by pressing the activation switch on the board. The Surveyor green LED should be flashing rapidly upon activation.
- STEP 2:** Close your housing using procedure outlined in the *Housing closing section*.



- 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 LED code table in *Accessories, Surveyor sensor* section.

WARNING: Be careful not to over-depressurize the housing. This will trigger the alarm and require the sensor to be reset.

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

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.

NOTE: *Once your housing is under vacuum, it is important to pressurize it back to ambient pressure before attempting to remove your port or open the housing. To pressurize it back, 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 back at ambient pressure.*

Flash triggering

There are three flash options compatible with the A6500 housing:

- ✦ Optical triggering (#37000-OPT and #3700-OPT-VC)
- ✦ Nikonos-style bulkhead (#37000-NK and #3700-NK-VC)
- ✦ Ikelite-style bulkhead (#37000-IKE and #3700-IKE-VC)

NOTE: Note that none of the offered flash triggering options on the A6500 housing are TTL compatible.

For Nikonos and Ikelite style bulkheads, simply insert the velcroed board inside your camera hot-shoe. Both options come already wired with the required flash circuit board.

Aqua View finder

The A6500 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 .

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.

WARNING: For proper handling of O-rings, follow the detailed instructions outlined in the *Care and maintenance, O-rings* section (page 20).

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

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

WARNING: 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 housing to prevent galvanic corrosion due to electrolysis. Depending on use, the anodes 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.

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- ✦ 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.

WARNING: 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.**

WARNING: Only use our 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.

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.

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 housings 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 _____