



200DL Underwater Housing for Panasonic Lumix DC-S5

Product # 71309

Product Registration

Please register your product within 15 days of purchase. Our product registration database is the quickest way for us to contact you in the event of a product update.

To register, send a photo of the above registration label to ikelite@ikelite.com along with your name, address, and phone number.

Introduction

Thank you for your purchase of Ikelite products.

Our primary focus is to provide quality, professional grade products for use in and underwater. Our products are designed, manufactured, and distributed from our sole facilities in and around Annapolis, USA where we started in 1962.

We are available if you have any questions or want photo advice. Send us an email 24 hours a day to ike@ikelite.com. We strive to reply within 1 business day.

An electronic version of this instruction manual is available for download via the product page on our website:

<https://www.ikelite.com>

In the Box

- Housing
- Main O-ring # 0132.61 (installed)
- Port O-ring # 0132.45 (installed)
- Zoom Gear Retainer # 0072.42 (installed)
- Body Cap # 0200.92 (installed)
- Waterproof Bulbhead Cap # 9104.7 (installed)
- Base with Left-Hand Quick Release Handle (installed)
- Hardware Set for Base with Handle # 9523.23 (installed)
- Tool for Zoom Gear Retainer # 0945.06
- .050" Hex Key # 0945.11
- 1/16" Hex Key # 0945.16
- Silicone Lubricant 1cc tube

Important Notices

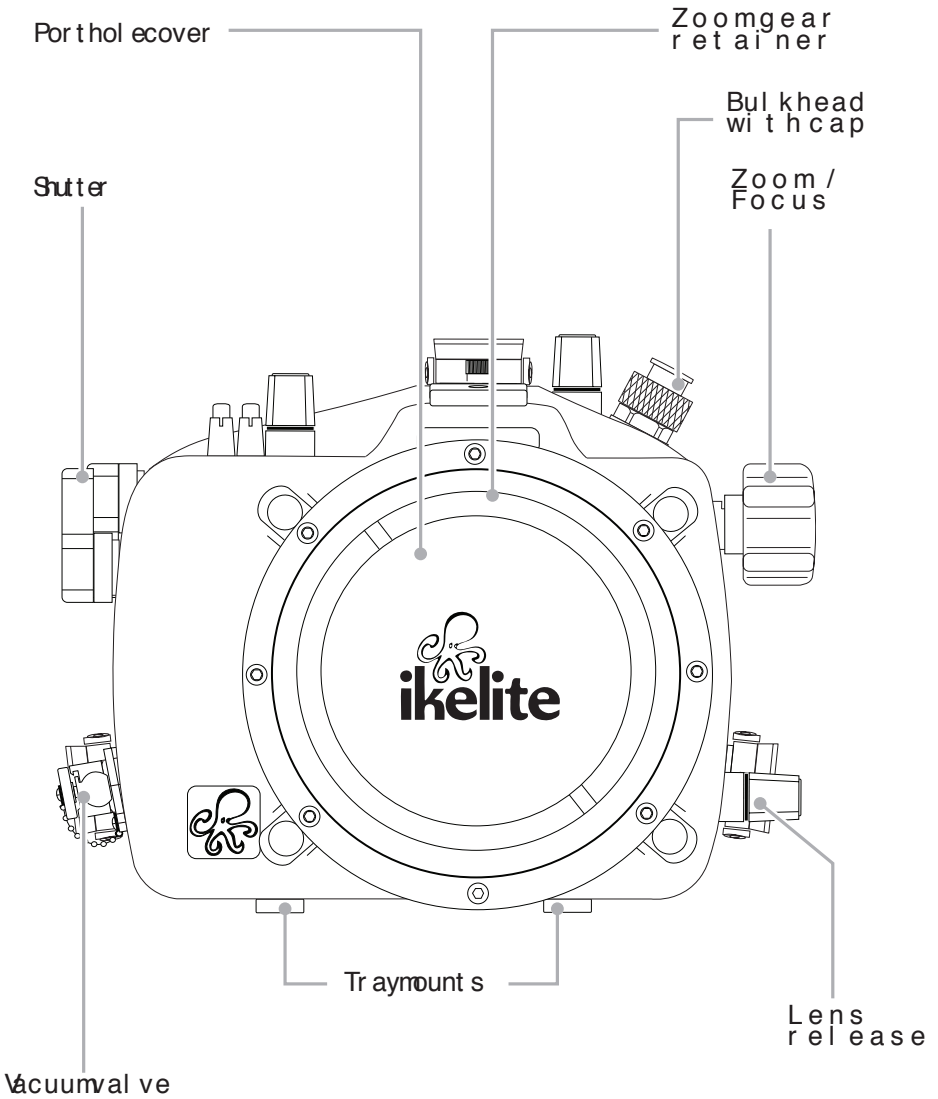
- » **This housing requires a compatible DL lens port for waterproof operation (sold separately). The housing is not waterproof without a DL lens port attached.**
- » **A bulkhead cap or sync cord must be attached to the housing bulkhead for waterproof operation. Never submerge the housing in water without either a sync cord or bulkhead cap attached.**
- » **Do not pull the shutter trigger without a camera installed. You may accidentally detach or damage the control spring.**
- » **Never leave a housing in a rinse tank, even if it is the only system in the tank. Accidental damage may occur when the user walks away from a housing while it is in the rinse tank.**
- » **Do not use alcohol, cleaning agents, spray lubricants, Rain-X, or other solvents on the housing or lens port. Use of an incompatible chemical compound can damage the plastic and o-rings, and may result in leaking.**
- » **If you will be using the system in strong surf it is recommended to draw a vacuum on the housing using the optional vacuum pump (sold separately).**

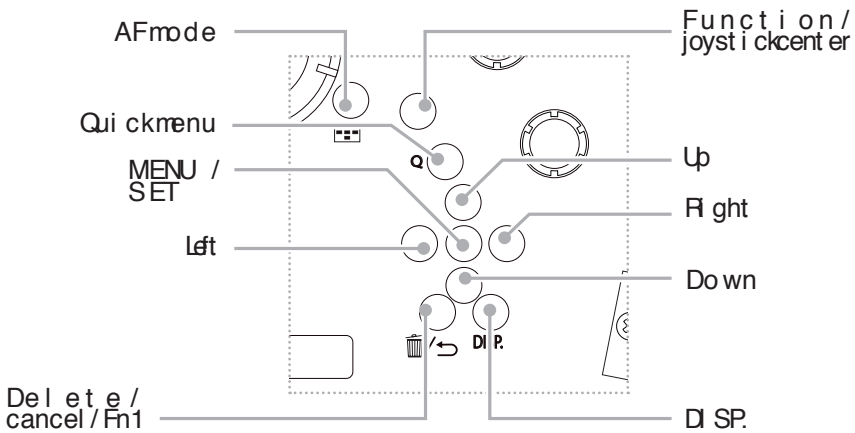
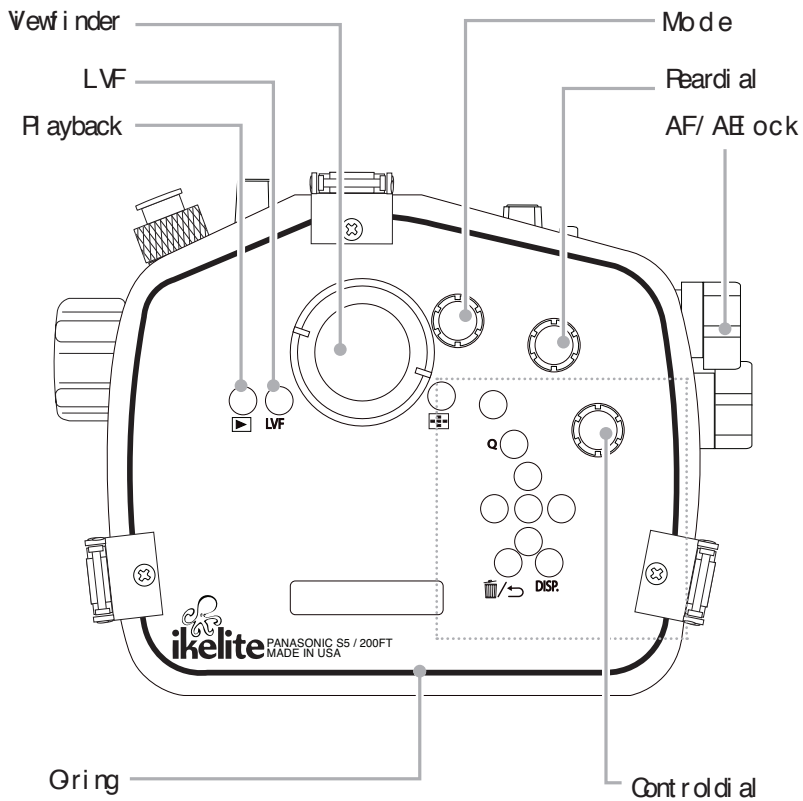
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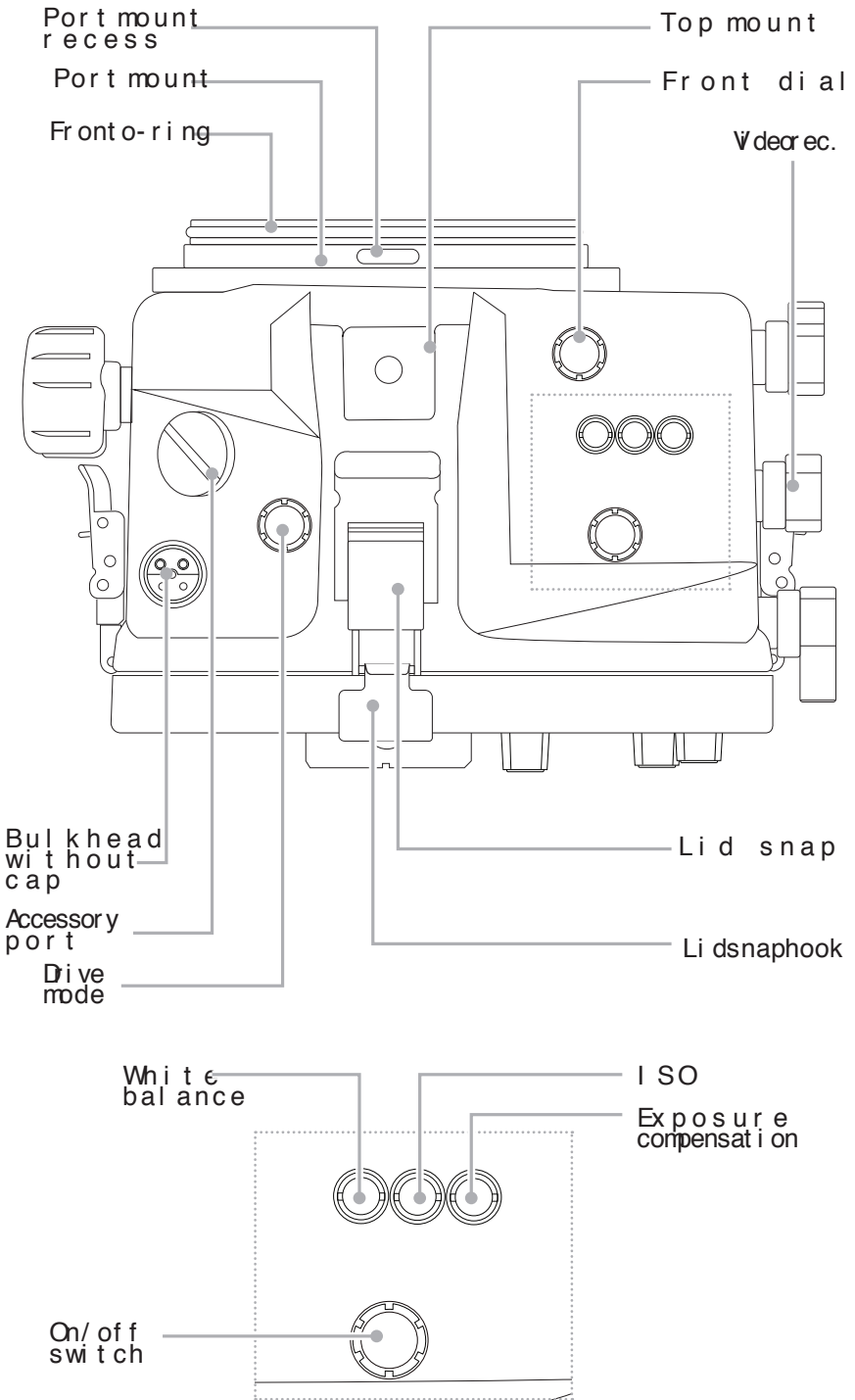
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Getting to Know Your Housing

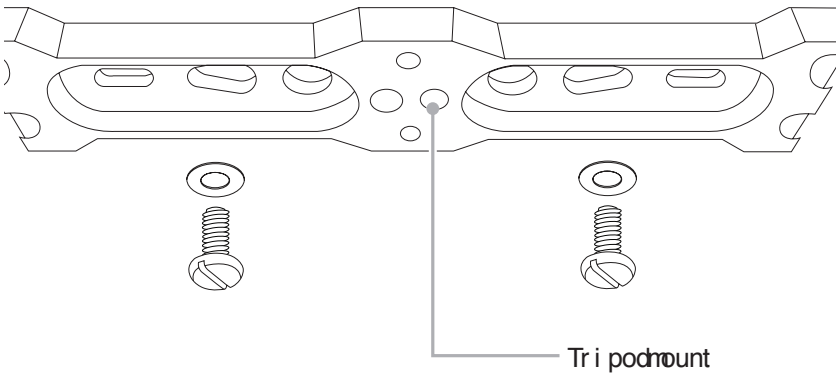






Base with Quick Release Handle

The handle and base will be attached to the top of your house with the two 1/4" nylon washers and 1/4-20 x 3/8" screws.



It is recommended to remove your base with the quick release handle and then thoroughly inspect the tray, housing, and hardware periodically.

A central 1/4-20 threaded hole allows for attachment of the base to a standard tripod.

The base features additional mounting locations for attachment to a variety of other housings (hardware not included).

Accessory Port

This housing features a special accessory port which may be used for the attachment of optional accessories. This port accepts fittings designed for a 1/2" thread or 1/2-20 threaded hole. Visit www.kelite.com for an updated list of compatible products.

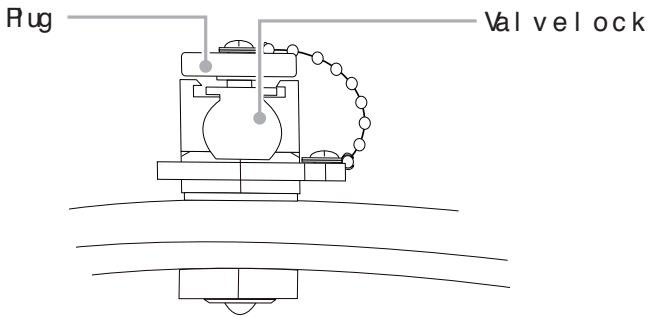
» **Do not remove or loosen the accessory port plug unless you are installing a compatible accessory.**

Top Accessory Mount

The housing features a 1/4-20 threaded top mount. Balance and flexible type mount save available for attachment of a GoPro camera, a focus light, or other lightweight accessories.

Vacuum Valve

Your housing features a vacuum valve for easy connection to a vacuum pump, so you can separate the



- » **DO NOT remove vacuum valve plug unless you are plugging in a vacuum pump.**
- » **DO NOT submerge the housing without the plug installed. The housing will not be waterproof without the plug installed.**

Trigger Extensions

The shutter and AF-ON lever may be extended to be closer to your hands when using the optional Right-Hand QuickRelease Handle #4077.02. This requires the Trigger Extension #4077.95 (one per control).

Trigger extensions and right-hand quick release handle are sold separately.

Setting Up Your Camera

Pre-Installation Checklist

1. Insert a fully charged camera battery.
2. Insert a properly formatted memory card.
3. Remove lens cap and any attached lens cap or neck strap.

Camera Settings

- Set **Eye Sensor Menu > LVF/Monitor Switch** to “MON.”
- Set **AF Assist Light** to “OFF.”
- Set **Flash Mode** to “Forced Flash On” without red-eye reduction when using an external strobe.
- Set **Flash Synchrono** to “1st curtain synchrono” (default) when using an external strobe. “2nd curtain synchrono” may be used with compatible TTL converters. When an external flash is used, the fastest shutter speed that can be selected is 1/250.
- Set **HDR** to “OFF” when using an external strobe.
- Flash cannot be used when an image effect in **Filter Effect** is selected.

Camera Settings Display

Some camera information can be toggled on and off using the **DISP** button.

For a larger display of camera settings, use the **Q** button on the **Quick Menu**. Use the front and rear directional sticks to change settings.

Exposure Settings

Refer to the **Cheat Sheets** in the Photo School section of our website for recommendations on exposure settings for various types of shooting situations: <https://www.kelite.com/blog/cheat-sheet-s>

Back Button Focus

Back button focus allows you to adjust when the camera takes a picture. This is useful in many shooting scenarios.

Use the camera's custom settings menu to set **Focus/Release Shutter** to **AF/AELock** or **AF-ON** which initiates autofocus. Then set **Focus / Release Shutter > Shutter AF** to "OFF."

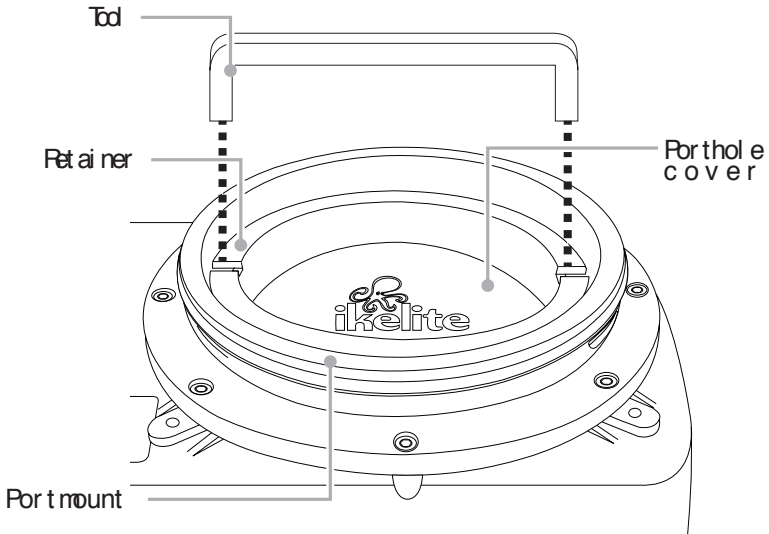
The AF/AELock button is convenient if accessed by a thumb lever on the side of the camera. Instead of half-pressing the shutter to autofocus and lock focus, press the AF/AELock button.

For super macro photography, you can use this technique instead of manual focus gear. Press AF/AELock to lock focus at the minimum focus distance of your lens. Then move the lens forward until the subject is in focus.

Setting Up Your Housing

Removing the Port Hole Cover

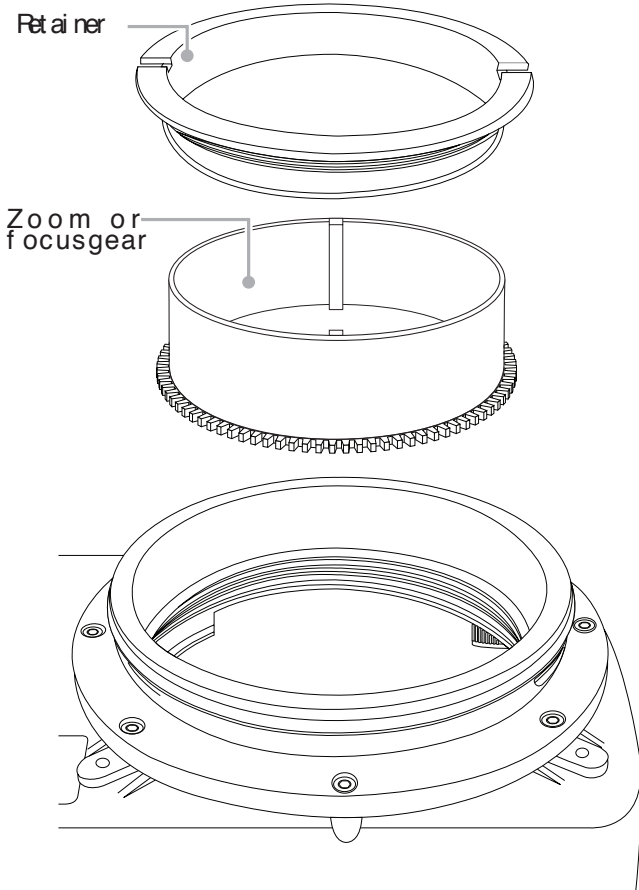
1. Align the zoom gear retainer tool with the hexagonal zoom gear retainer.



2. Rotate the removal tool counter-clockwise until the retainers are free from the lens port mount.
3. Remove the port hole cover from the housing.

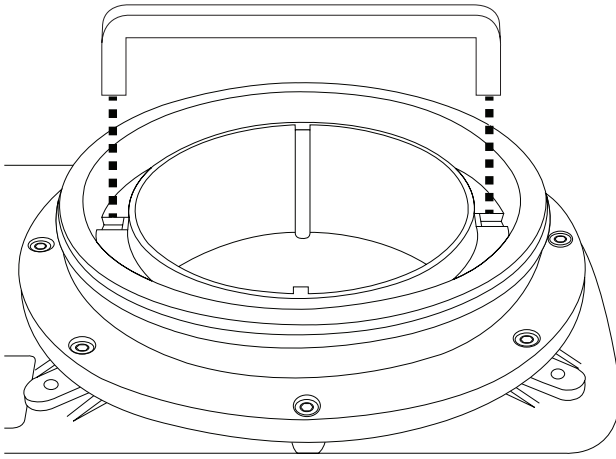
Installing a Zoom or Focus Gear

1. Place the zoom or focus gear (sold separately) into the lens port mount opening of the gear housing.



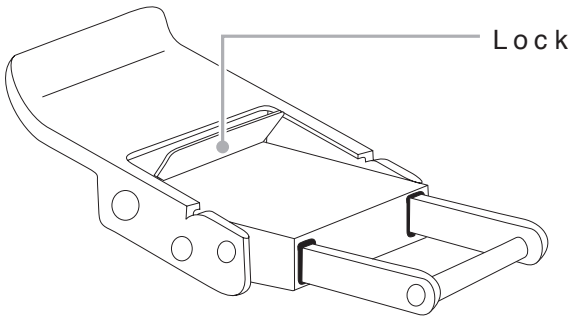
2. Place the gear retainer into the opening around the gear.

3. Tighten the handle and do not over-tighten.



Opening the Housing

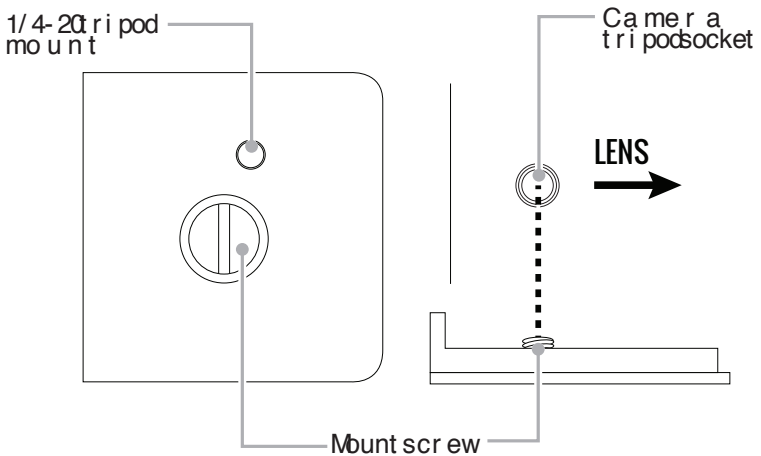
1. Push the handle down and pull it away from the housing.



2. Lift the handle and do not over-tighten or compress the O-ring or gasket. Keep it straight while lifting it away.
3. Repeat with remaining lid snaps.
4. Remove the housing back.

Installing the Camera

1. Remove any lens cap or cover from the camera.
2. Check to see whether the camera lens will fit through the opening of the housing. If not, the lens will need to be removed from the camera body and re-attached to the camera body installed in the housing.
3. Remove the camera mount plate from the housing.
4. Loosen the mount screw with the camera tripod socket. Use flat screwdriver to tighten the mount plate of the camera.

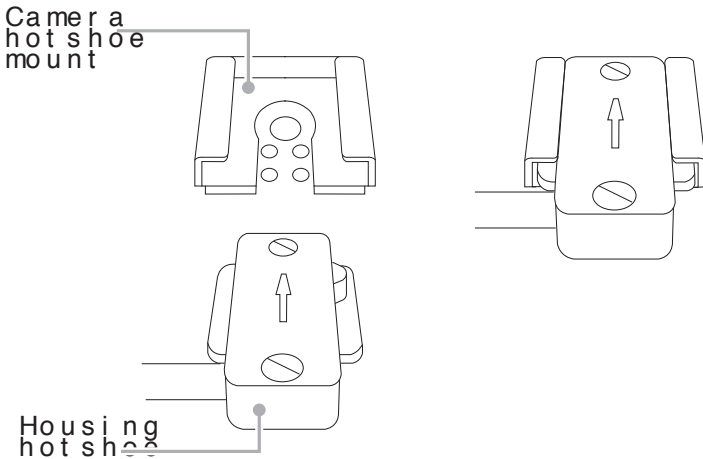


5. Pull out the housing control knob and move it out of the way.
6. Insert the mount plate into the housing. Push the camera all the way forward until it stops.
7. Push the housing control knob and check to see if the camera is

» **The camera may be attached to a tripod using the 1/4-20 threaded mounting hole on the bottom of the mount plate.**

Attaching the Hotshoe

1. Ori ent t hehot shoewi t ht hear r ovont oppoi nt i ng t owar dst hef r ont of t he camera .



2. Sl i det hehousi nghot shoewi nt ocamer ahot shoemount unt i l i t stops .
» **The hotshoe must be all the way forward in the camera mount for proper flash operation.**

Closing the Housing

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2. Pl ace t he back onto t he housi ng front .
3. M akesur enocont rol sorwi r esar ei nt erf eri ngwi t ht heo- ri ngort he back of t he housi ng.
4. Pl aceeachl i dsnapi nt ot hecor r espondi nghookont hehousi ng back .

5. Push the latches onto the housing until they are fully attached to the housing and the lock is engaged. Close the latches at the same time.
6. Check the O-ring seal. The O-ring should be uniformly solid and visible through the back of the housing.
7. Check control functions.
8. Attach the lens to the camera body. If using zoom gear with the clamp, refer to the zoom gear instructions for information on interfacing the clamp with the zoom gear.

Attaching a Lens Port

Refer to the appropriate lens port chart for information on compatible lens ports for your camera and your lens, zoom and macro lenses.

Choose a macro port for wide-angle and zoom lenses. Larger diameter lenses are better for splitting shots (half-in, half-out of the water) and provide sharper images.

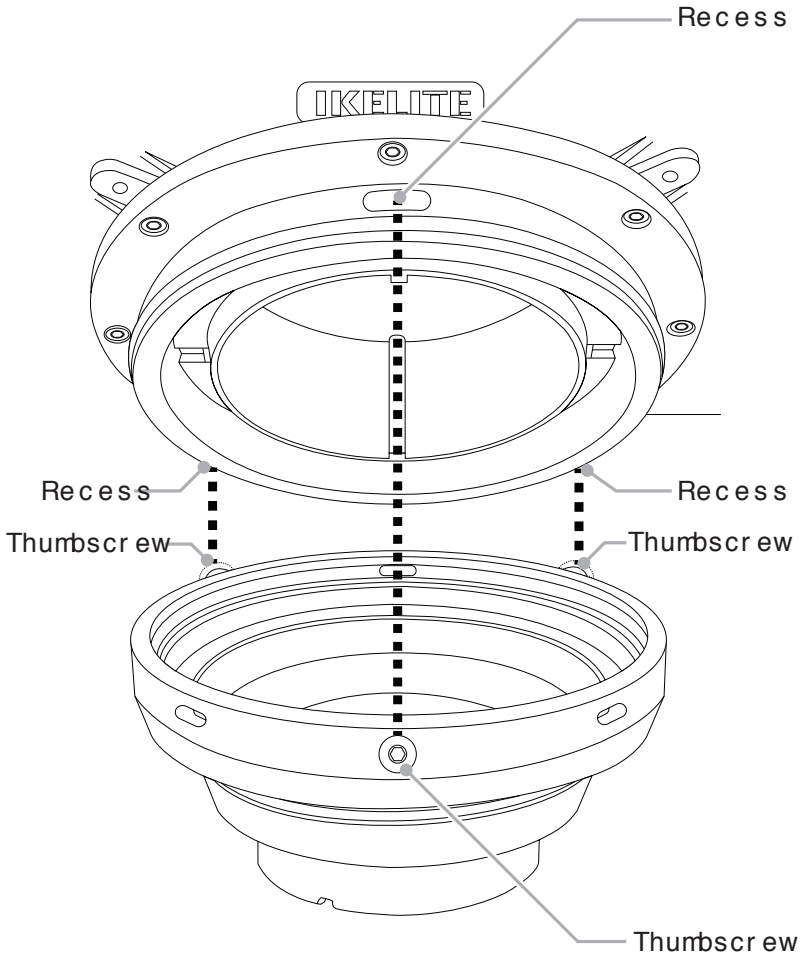
Choose a flat port for macro lenses. Flat ports magnify the subject underwater. Flat ports are not recommended for wide-angle or zoom lenses due to the limited field of view and risk of vignetting (dark shadows around the edges of the image).

» **This housing requires a compatible DL lens port for waterproof operation (sold separately). The housing is not waterproof without a DL lens port attached.**

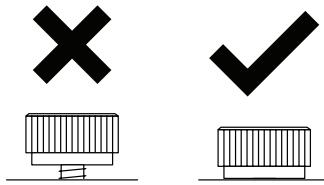
Installing the Lens and Port

1. Attach the lens to the camera. If using zoom/focus gear set the required clamp, makesure the clamp is seated in the gear tabs. Test the function before attaching the port.
2. Check the port seal is on the surface and free of debris.

3. Apply a very thin, even layer of lubricant to the exposed portion of the front o-ring and the lens port seal ring surface. Avoid dry spots or uneven build-up of lubricant.
4. Align the port thumb screws with the recesses in the housing port mount.



5. Press the port firmly onto the housing until the base of the port is flush with the housing's port mount. If there is resistance, remove the port and re-check that the hub screws are loosened and the o-ring is properly lubricated.
6. Tighten all the hub screws while holding the port firmly onto the housing. The hub screws should be evenly tightened to the head of the port or external body. If the screws are difficult to turn and/or the port is not seated properly, it is an indication that the port is not properly aligned.



- » **Proper alignment is critical to waterproof operation. Check that your lens port is oriented correctly and fully seated before entering the water.**
- » **Zoom/focus gear parts and installation vary depending on the lens you are using. Refer to the instructions included with the zoom or focus gear for detailed installation information.**

Setting Up An External Strobe

We recommend attaching an external strobe to the camera and clarity raw devariet photographtions, including daylight photography.

This should be done directly electrical connection of the camera as external flashhot shoe via manual flashhot shoe. An external strobe may be triggered via electrical sync cord.

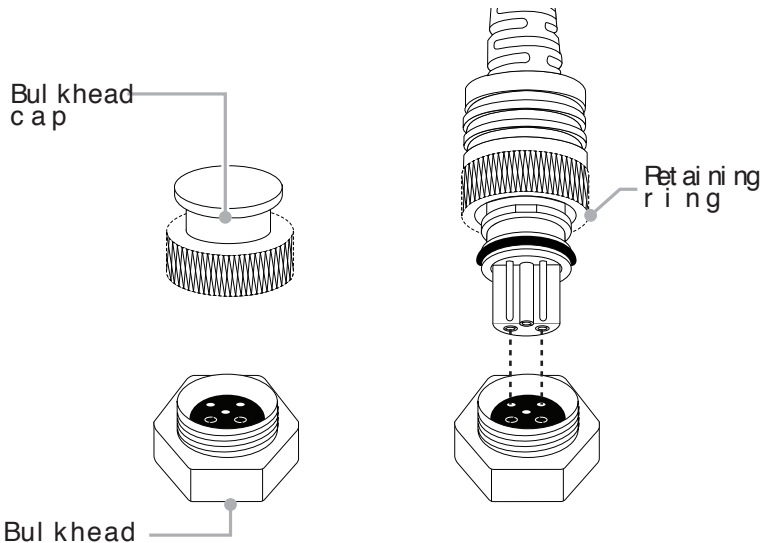
About Sync Cords

Connecting strobe electrical sync cords provides a first order recycling timer comparison of fiber optic connection, and prolongs camera battery life.

- » **To connect two strobes to the camera, you must use a dual sync cord.**
- » **A second slave strobe may be triggered optically off of a primary strobe connected by sync cord.**

Attaching a Sync Cord or TTL Converter

1. Remove connector protectors and bulb head caps from each connection.
2. Apply a very thin, even layer of lubricant on all threads, sealing surfaces, and the exposed portion of the hexagonal ring. Do not allow lubricant to get into the lens and except a few drops of the hexagonal bulb heads.



3. Align plug and insert into the housing bulkhead. Each time you insert the plug, make sure the plug is seated properly before tightening the retaining ring.
 4. Hand-tighten the retaining ring.
 5. Attach the end of the sync cord to the bulkhead on your strobe.
 6. Turn on the strobe(s).
 7. Turn on the camera. Take a test photo to ensure that your strobe(s) are functioning properly.
- » **A bulkhead cap or sync cord must be attached to the housing for waterproof operation. Never submerge the housing without either a sync cord or waterproof bulkhead cap attached.**

Getting in the Water

Final Check

1. Re-check the O-ring seal. The seal should be even, so it will be visible throughout the housing.
2. Turn on the camera and check all control functions.
3. Make sure that the camera can obtain focus and take a photo. If using a diopter, your camera will only be able to obtain focus on subject at a distance of approximately 12" (0.3m) or less.
4. Check camera battery level and available storage space on your memory card.
5. ~~W~~estrongly recommend you use a vacuum to clean the housing. Check for leaks using a soap solution and a vacuum pump (sold separately).

6. Submer get hehousi ngi naf r eshwat er t ankdedi cat edt o under wat erphot ogr aphyequi prønt . V sual l yconf i r m hat t her ear e nosi gnsof wat eri nt r usi on. Chesi gnof wat eri nt r usi oni sast eady st r eamof bubbl escomi ngf r omoneof t hehousi ng'sseal s .

Entering the Water

1. Bef oreent er i ngt hewat er , t ur nt hecamer aonandoper at each of t hehousi ngcont r ol st oget af eel f or usi ngt hecamer ai nt he housi ng .
 2. We r ecommendent er i ngt hewat er wi t hout your housi ngt oensur e youar econf ort abl eandyour l i f e- savi ngequi prønt i si nwor ki ng or der . Onceyouar est abl e, have someone pass your camer a housi ng t o you .
 3. Submer get hehousi ngat t hesur f aceof t hewat er andvi sual l y conf i r m hat t her ear enosi gnsof wat eri nt r usi on. Lookf or wat er dr opl et sorf oggi ngi nsi deof t hehousi ng, or ast eadyst r eamof bubbl escomi ngf r omoneof t he housi ng seal s .
 4. Use your handt ogent l yf l ushawayanysmal l bubbl est hat maybe ont hef aceof t hel ensport . Bubbl eswi l l pr oducesof t f ocusspot s i n your phot o or vi deo .
- » **If water appears to be entering the housing, point the lens port downward and return the housing to the surface immediately. Please observe all necessary safety precautions. NEVER ascend faster than accepted safety limits.**

Shooting Underwater

- Get ascl oseaspossi bl et oyour subject . Fort hebest resul ts, onl y phot ogr aphy subject st hat ar el esst han6'(1. 8m) away .
- Be careful not to stir up sand or silt .
- Phot ogr aphy subject sst r ai ght onor at asl i ght upwar dangl e .

- If you are in a shallow exposure, it is better to have the light slightly underexposed rather than overexposed. An overexposed image is missing color information which cannot be adjusted in post-processing. As light is underexposed, it has color information that can be adjusted.
- » **It is important to respect all living creatures underwater, including people, marine life, and coral. Get as close as you can to your subjects when taking a photograph, but never touch or disturb the marine life.**

Learning about Underwater Photography

Visit the PhotoSchool section of kelite.com for a wide range of information on shooting underwater including:

- **Product Tutorials and Videos**
- **Cheat Sheets** with exposure settings and recommendations for a variety of situations
- **Advanced Techniques** with in-depth technical and different shooting techniques
- **Frequently Asked Questions**
- **Photo Galleries** showing examples of real results underwater
- **Feature Articles** and more!

Maintaining Your Housing

Post-Dive

1. Rinse the housing in fresh water. Potassium permanganate is used to control sand particles but is not essential. It is used to clean the housing after use. If you have a saltwater housing, it is important to flush out any salt or debris to ensure the housing is ready for the next dive.

2. ~~NEVER~~ Leave your housing in a fresh water reservoir, even if it is the only system in the tank. Collisions with other persons gear can cause scratches or damage to your equipment. Accidental damage occurs most often in the rinse tank.
3. Rinse off any residual residue from the reservoir with clean, running fresh water.
4. Store the housing in a shaded place where it is protected from impact and overheat. If no shade is available, cover the housing with a light colored towel or cloth.
5. Check the memory capacity and battery life of your camera and strobe(s). Recharge as necessary.
6. Always re-check the ring seal after opening the housing for removing the lens port.
7. Detach the control knob and cap and lubricate the threads, o-ring(s) and sealingsurfaces every 2-3 days during continuous use.

Lens Port

Treat the surface of the lens port like a camera lens. After use, rinse and gently dry the outside of the lens port to avoid water spotting. Use only a microfiber lens cleaning cloth to avoid scratches. To clean, use mild soap solution.

- » **Do not rinse the inside of the lens port.**
- » **Do not use alcohol, cleaning agents, spray lubricants, Rain-X, or other solvents on the housing or lens port. Use of an incompatible chemical compound can damage the plastic and o-rings, and may result in leaking.**

Storage

1. Clean the housing and control storage thoroughly prior to storage.

2. Remove the ear and front o-rings. Place the nasal re-sealable plastic bag inside of the housing.
 3. Leave the lid snap open or release pressure on the lid springs.
 4. Disassemble and thoroughly inspect the base with the quick release handle(s) and hardware prior to storage.
 5. Store the housing in a cool, dry place away from direct sunlight and chemicals.
 6. Before using the housing, check the tightness of the set screw in each control knob. Check each control gland to make sure they are snug. There is a slight chance that they could vibrate loose during travel.
- » **Do not leave the camera and housing in direct sunlight for prolonged periods. Heat may damage the camera.**
 - » **Do not transport with the camera inside of the housing.**
 - » **Do not store the housing in a humid environment. Prolonged exposure to high humidity may damage electronic components.**

Servicing Recommendations

It is recommended that the housing be sent to a qualified technician for servicing every year or out of service maintenance. Servicing may be required more often depending on the use.

Lubricating Controls

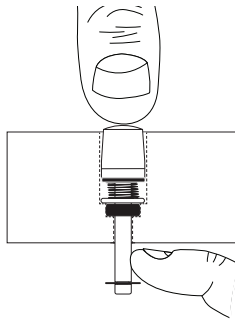
The housing's control may need to be lubricated if they become difficult to use or if the rings have dried out during long periods of storage.

- » **Use only Ikelite lubricant. Other types of lubricant may cause swelling of o-rings or cracking of plastic components.**

- » **Lubricant is not a sealant; it is used to reduce friction. Excessive lubricant can collect sand, hair or debris which may interfere with proper sealing.**
- » **Never use spray lubricants as the propellant ingredient can cause the plastic housing to crack or o-rings to swell.**

Lubricating Push Buttons

1. Press and hold the push button all the way in.
2. Place a small amount of lubricant at the base of the push button shaft inside the housing.

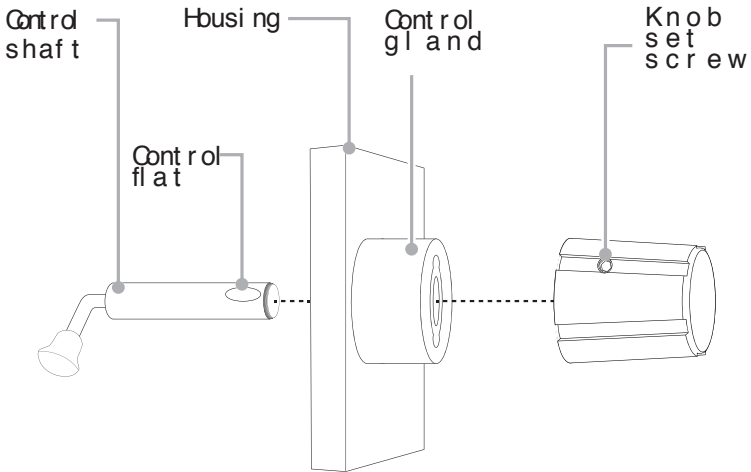


3. Press and release the push button several times to work the lubricant into the o-ring.
 4. If a push button control becomes difficult to push or sticks when depressed, soak the housing in warm soapy fresh water. After a few minutes, operate the push button. If this does not correct the problem, return the housing to the manufacturer.
- » **To prevent build-up of salt, sand, or debris, the push buttons should be flushed with fresh, clean water after every use. Depress each push button while the housing is submerged in fresh water.**
 - » **If it is necessary to remove a housing push button, NEVER re-use the e-clip. Push button o-ring kits include replacement e-clips.**

- » **Push buttons look similar but vary in length. Remove and re-install one push button at a time.**

Lubricating Control Shafts

1. Loosen the knob set screw using a hex key.
2. Remove the control shaft from the inside of the housing.
3. Clean and lightly lubricate the shaft, including the large end of the shaft.
4. If there is a spring associated with the control, make sure it is in its proper position.



5. Re-install the shaft from the inside of the housing. Put at the shaft gently for smooth installation at the end of the gland. Push the control shaft all the way through until the flat of the shaft is visible on the outside of the housing.
6. Align the knob set screw with the control flat.
7. Tighten the set screw firmly against the flat of the control shaft using a hex key.

8. Check that the set screw is oriented properly by holding the control shaft in place until the set screw is tight. If the set screw is not tight, loosen the set screw and retighten and recheck.

- » **We do not recommend removing the control gland from the housing.**
- » **Always take the housing underwater to depth without a camera after removing and re-installing controls.**
- » **Remove and re-install one control at a time.**
- » **DO NOT pull the shutter trigger without a camera installed. You may accidentally detach or damage the control spring.**

Troubleshooting

Water enters the housing

- Check and re-install the rear and front o-rings.
- Replace the o-rings if the rear or front o-rings show signs of cracks or tears.
- Take the housing underwater to depth without a camera installed to ensure that the leaking has been corrected.

Photos are over-exposed (too light)

- Adjust aperture (smaller), shutter speed (faster), or ISO (lower) setting.
- Move light(s) farther away from your subject.
- Adjust exposure compensation in the camera.
- Adjust lighting power.

Photos are under-exposed (too dark)

- Adjust aperture (larger), shutter speed (slower), or ISO (higher) setting.
- Move light(s) closer to your subject and make sure they are pointing in the right direction.
- Adjust exposure compensation in the camera.
- Adjust lighting power.

Strobe(s) will not fire

- Turn on strobe.
- Check the strobe(s) battery life.
- Reset or reattach the camera if it is out of default settings. There are some camera settings that will prevent an external flash from firing.
- Check camera settings recommended or use with the external strobe in the beginning of this manual.
- Check that the sync cord is properly attached.
- Check that the hot shoe connects or is properly plugged in properly.
- Check that the hot shoe is not pushed all the way forward on the camera.

Button(s) are sticking

- Soak the housing in lukewarm freshwater. Depress each button several times while the housing is submerged. Rinse the housing with running freshwater.
- Lubricate the controls.

Button(s) or control(s) not operating

- Tighten the camera amounting plate with the screwdriver.

- Ensure that not too high speed is used when entering the housing.
- Check that the camera amount is not pushed all the way forward.

Camera is not functioning normally underwater

- Check each housing control while underwater to ensure that they are properly engaged. An indicator light is engaged control may indicate malfunctioning of the camera.
- If using a dome port, the lens must be at least 0.3m (0.3m). If the lens is more than 0.3m (0.3m), add a diopter to the front of the lens.
- Check that no control is being accidentally pressed.
- Check that the shutter is not half depressed. If the shutter is spring has been damaged by activation in water, it may not return properly. Adjust or replace the shutter spring.

Backscatter or “snow” in images

- Reposition the light source(s) to direct light up the subject and not the water in-between the camera and subject.
- Avoid using strobes next to the diver visibility conditions.

Spare Parts

Rear o-ring # 0132.61

Front o-ring # 0132.45

DL port thumbscrews (set of 3) # 9249.7

Port hole cover # 0200.92

Zoom gear retainer # 75900

Trigger lever extension # 4077.95

Hardware set for base with handle # 9523.23

Waterproof bulkhead cap # 9104.7

Silicone lubricant # 5020

Push button o-ring kit # 6201.03

Tool for zoom gear retainer # 0945.06

.050" hex key # 0945.11

1/16" hex key # 0945.16

Limited Warranty

This limited warranty is given against any manufacturer's defect of or operation of the (2) year from the date of purchase. Defective products should be returned to the dealer for a full refund, at the discretion of the dealer, repair or replacement of the product, and will be returned to the customer postpaid. All other claims of any nature are not covered. Except as mentioned above, no other warranty is expressed or implied applies to this Ikelite product.

Service and Repairs

Ikelite is most interested in performance of its products as intended.

No prior authorization is required. You may write directly to our thorough dealer. Please include a brief description of the problem, any relevant email correspondence, and/or description of the service request. Always include name, shipping address, email address, and phone number inside of the package. Send postpaid to:

Ikelite Underwater Systems
Attention: Service Department
50 W 33rd St
Indianapolis, IN 46208 USA
(317) 923-4523
ikelite@ikelite.com

For detailed instructions or to register your product for service including important information on international customer documentation, please refer to our website at:

<https://www.ikelite.com/pages/service-repairs>

Contact Us

If you have any questions about your product or need advice on getting the images you want, please get in touch with us and we'll do everything we can to help you capture your unique perspective.

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