



## **Ecko Fiber Strobe**

Product Number 40101



### **Product Use & Video Tutorials**

<http://ikelite.com/watch-ecko>

## About this Product

Thank you for your purchase of Ikelite equipment. Please read this instruction manual completely before attempting to operate or dive with this product.

## Included in the Box

- Ecko Fiber strobe
- Dome Diffuser (installed)
- 1" Ball Mount
- 2 year manufacturer warranty

## Specifications

- 50 watt-seconds
- 0 to 2.5 second recycle time
- 117° angle of coverage without dome diffuser
- 140° angle of coverage with dome diffuser
- 5700K color temperature
- 6 manual power stops in 1/2-stop increments
- 100 meters (330 feet) depth rating
- Weight in air 391 grams
- Dimensions 83 mm diameter x 105 mm length

## **Important Notices**

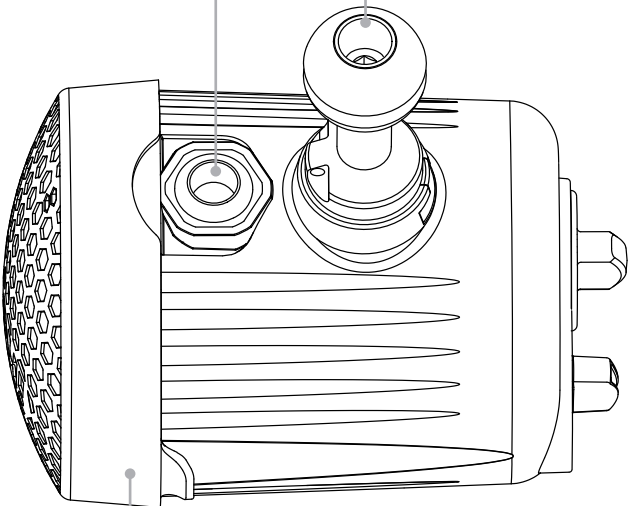
- » **DO NOT** remove or lubricate the battery door o-ring.
- » **To prevent salt build-up, submerge the strobe in clean freshwater after use. Operate the power knob several times while underwater to flush out any residue.**
- » **DO NOT** use Loc-Tite, cleaning agents, spray lubricants, Rain-X, or other solvents on strobe. Use of an incompatible chemical compound can damage the plastic and o-rings, and may result in leaking.
- » **DO NOT** disassemble. The strobe is factory sealed. Disassembly will void the limited warranty.
- » **DO NOT** continuously fire the strobe more than 15 times above water in rapid succession. If this does happen, allow the strobe to cool down for at least 10 minutes.
- » **DO NOT** use lithium or lithium-ion batteries.

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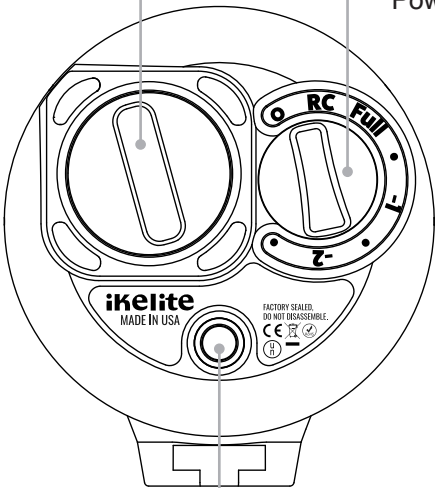
# Getting to Know Your Strobe

Fiber Optic Port      Ball Mount



Dome Diffuser

Battery Door      Power/Exposure Dial



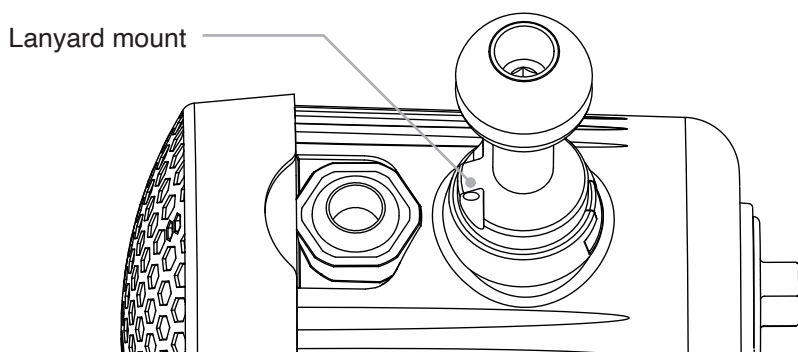
Strobe Ready Light

## Attaching the Ball Mount

The ball mount features a small hole for the attachment of a lanyard. Use the lanyard clip on the ball mount to secure your dome diffuser to the strobe body.

Orient the lanyard mount towards the front of the strobes and line up the recesses in the flat side of the ball mount with the projections on the strobe body mount.

Use included hex key to tighten the ball mount firmly onto the strobe body.

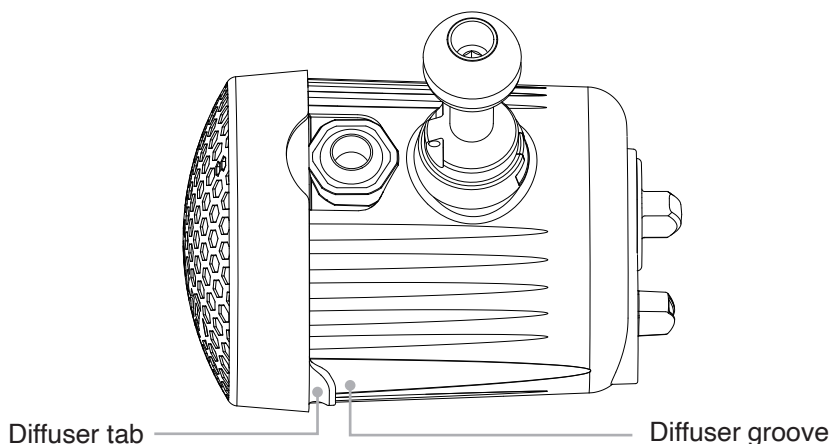


## Installing the Dome Diffuser

The included dome diffuser can be secured to the front of the strobe when softer lighting or a coverage angle of up to 140° is desired. The diffuser reduces the Ecco light intensity by one f-stop.

» **Always attach the dome diffuser to the strobe ball mount using the included lanyard to prevent accidental loss.**

Line the tabs on the side up with the grooves on the left and right sides of the strobe and gently press the diffuser into place.



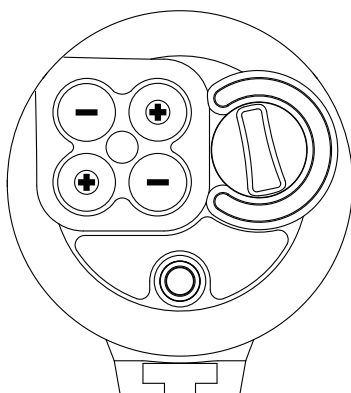
Gently lift up on one of the tabs on either side of the diffuser and pull to remove.

## Attaching a Fiber Optic Cable

1. Check the end of the fiber optic cable to ensure that it is clean and smooth.
  2. Ensure that the fiber optic cable o-ring is in place. This o-ring does not provide waterproofing, however it does keep the fiber optic cable in place.
  3. Attach one end of the fiber optic cable to the fiber optic port on the side of the strobe. The connector is a press-fit into the fiber optic port.
  4. Attach the other end of the fiber optic cable to the housing.
- » **The o-ring on the fiber optic cable does not require lubrication.**
- » **A fiber optic cable may be attached and removed when wet or underwater.**

## Installing Batteries

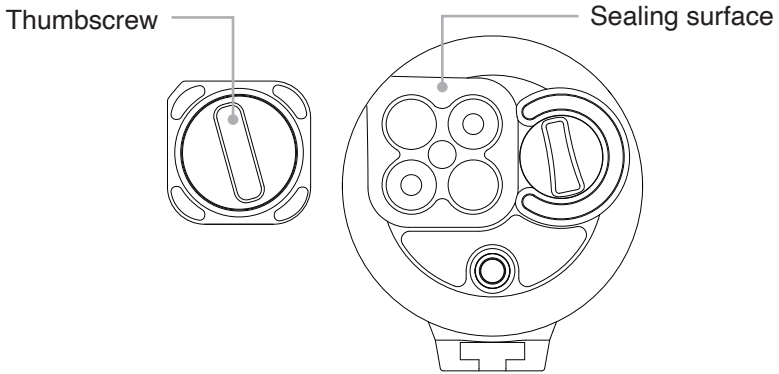
1. Rotate the strobe switch to the OFF position.
2. To access the battery compartment, rotate the thumbscrew counter-clockwise several times.
3. Tilt the strobe with the battery compartment door down to prevent water droplets from falling inside of the strobe when opening. Gently remove the door.
4. Install four AA-cell alkaline, NiMH, or NiCad batteries. Do not use lithium batteries. Refer to the labels inside of the battery compartment for reference.



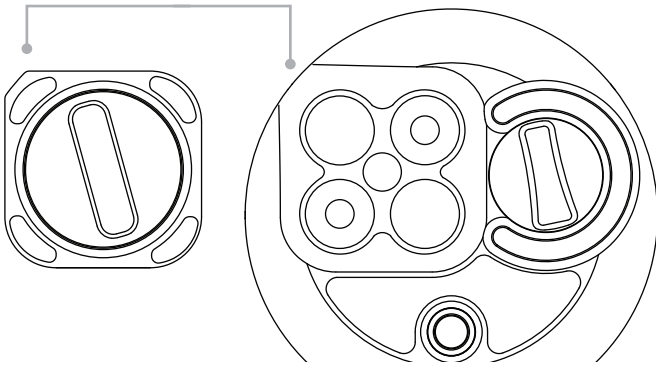
5. Make sure the o-ring is in the groove of the battery door. DO NOT remove or lubricate the o-ring.



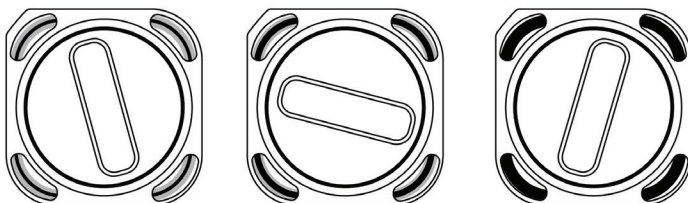
- 6.** Check that the visible portion of the o-ring o-ring and sealing surface on the strobe body are clean.



- 7.** Align the flatted corner of the battery door with the outside edge of the strobe body. Make sure the door fits into the recess around the battery compartment.



8. The o-ring seal will be visible through the battery door as the door is attached. At first, a very thin black line is visible through the four viewing windows in the corners of the battery door. Rotate the thumbscrew clockwise until the line just starts to thicken.



9. Once the line starts to thicken, rotate 1/4 turn clockwise. The line will be solid black. DO NOT rotate more than 1/2 turn past point where the seal begins to form. Over-tightening can compromise the seal of the battery compartment.

» **DO NOT use lithium batteries. We recommend high quality rechargeable batteries like Eneloop® PRO.**

» **DO NOT over-tighten the thumbscrew.**

## Opening the Battery Compartment

Tilt the rear portion of the strobe down while removing the battery door to reduce the possibility of water droplets falling into the battery compartment after a dive.

A small amount of moisture may be left around the edges of the battery compartment sealing surface. Thoroughly dry the sealing surface of the battery compartment before re-assembling.

» **DO NOT remove the thumbscrew or o-ring from the battery door.**

» **The battery compartment is sealed separately from the main electronics. Do not disassemble the strobe. Disassembly will void the warranty.**

- » **Always carry spare batteries; weak batteries cause many camera and strobe problems. It's time to replace the batteries when the ready light remains dark for 15 seconds or longer after a flash.**

## Strobe Ready Light

The Ecko features a ready light at the rear of the strobe that glows red when the strobe has recycled and is ready to fire its flash again.

- » **AA batteries will provide slow recycle times as they reduce in power. If recycle times are too long, replace fresh batteries.**

## TTL Compatibility

This strobe supports fiber optic TTL triggering with compatible cameras and Ikelite TTL transmitters. Manual fiber optic triggering is supported with all fiber optic other systems.

Compatibility information is updated as new camera models and new TTL transmitters are released. Refer to the Ecko Fiber product page on the Ikelite website for up-to-date compatibility information:

<https://www.ikelite.com/products/ecko-fiber-underwater-strobe>

## Camera Settings for Canon TT5 Transmitter

Refer to your camera and housing instruction manuals for recommendations on flash settings for external strobes. In general:

- **External Speedlight control** must be set to 'Flash firing - Enable.'
- **Auto Lighting Optimizer** must be set to 'Disable.'
- **Shutter mode** is set to 'Mechanical' on EOS R-series cameras.

## Camera Settings for OM System / Olympus / Panasonic

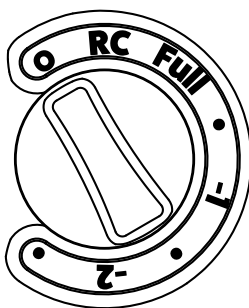
Refer to camera's instruction manuals for more information on the RC/Wireless flash settings. In general:

- **Flash mode** must be set to 'RC' (OM / Olympus) or 'Wireless' (Panasonic).
- **Shooting mode** must allow flash. Not all shooting modes allow the use of RC/Wireless flash.

## Power/Exposure Dial

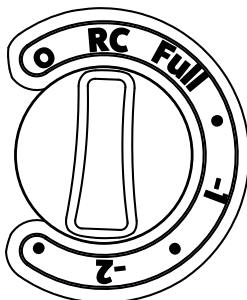
### OFF position

Always turn the strobe to OFF before connecting or disconnecting a sync cord or opening the battery compartment.



## RC / TTL / Auto Exposure Position

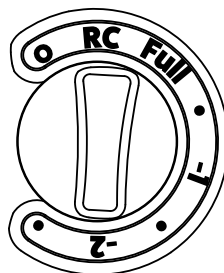
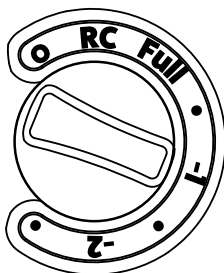
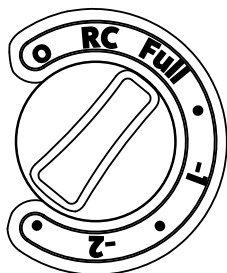
RC (Remote Control) TTL flash receives a signal from the compatible camera or TTL Transmitters telling the strobe when and how much to fire. When taking pictures with the mode switch in this position, the camera automatically adjusts the strobe power output to properly expose the subject of your image on each shot.



- » This position should only be used when the strobe is attached to a compatible TTL system.

## Manual Exposure Positions

- » The Ecko features six manual exposure settings in half f/stop increments: Full, -0.5, -1.0, -1.5, -2.0, and -2.5. Rotate the dial counter-clockwise to increase strobe flash power. Rotate the dial clockwise to reduce strobe flash power.



## Automatic Pre-Flash Learning Mode

The Ecko has automatic preflash recognition which occurs in each of these scenarios:

- Turning the strobe on
- Switching from RC to Full (manual exposure settings)
- Switching from Full (manual exposure settings) to RC

In each of these scenarios, the first flash will be a “learning” flash which will automatically adjust the strobe to your camera’s preflash sequence. This photo may not be useable as the flash timing may be out-of-sequence. Subsequent photos will fire in sequence.

- » **It is important to take a single shot to properly calibrate the strobe in its learning mode.**
- » **DO NOT use burst, continuous drive, bracketing, or any multi-frame flash mode when you first turn the strobe on or when you first switch between TTL and manual settings. Use of these modes during the learning sequence will result in dark or underexposed photos.**

## Using TTL Strobe Exposure

With TTL strobe exposure, the camera evaluates the scene and automatically adjusts the strobe’s power for correct exposure.

Camera exposure modes that support TTL flash operation:

- Manual (M)
- Shutter Priority (Tv)
- Aperture Priority (Av)
- Program (P)
- AUTO

Refer to your camera's instruction manual for details on your model's specific operation.

- » **TTL strobe exposure is only supported with compatible cameras and TTL transmitter accessories.**
- » **High ISO speeds will typically result in reduced flash output. For better colors with flash exposure, choose lower ISO speeds such as ISO 100, 200, etc.**
- » **Underwater strobes in general are effective at a distance of no more than about 6 feet (2m) from your subject. Effective distance will be less in low visibility settings.**
- » **Make sure that your stobe(s) are pointed at your subject for accurate exposure.**

## Flash Exposure Compensation

Use **Flash Exposure Compensation (FEC)** in the camera's external flash settings menu to adjust your strobe output automatically while remaining in RC TTL flash mode.

Flash Exposure Compensation will affect both strobes simultaneously when shooting a dual strobe set-up.

## Switching from TTL to Manual Flash

This strobe has an Automatic Pre-Flash Learning Mode, eliminating the need to change from TTL to manual flash exposure in the camera's menu settings.

When switching from RC (TTL) to manual on the strobe, the first flash will be a "learning" flash which will automatically adjust the strobe to your camera's pre-flash sequence. This photo may not be useable as the flash timing may be out-of-sync. Subsequent photos will fire in synchronization.

Once synchronized, simply use the Exposure Switch on the back of the strobe to select the appropriate manual flash power.

## **Maintenance**

### **Post-Dive**

1. Always re-check o-ring seal after removing the battery door from the strobe. Most importantly, make sure the o-ring is in place prior to re-attaching the battery door. Do not lubricate and do not remove the battery door o-ring.
2. Make sure the battery door is on and tightened down. Do not overtighten.
3. Rinse your strobe in fresh water. Dry thoroughly.
4. Never leave your system in a fresh water rinse tank. Collisions with other peoples' gear can cause scratches or damage to your equipment.
5. Stow your system in a shaded place where it is protected from impact or overheating. If no shade is available, we recommend covering the system with a towel or cloth.

### **Post-Travel and Storage**

1. Rinse the exterior of the strobe with fresh water after use, especially after exposure to salt water. While rinsing, turn the power switch to free built-up salt or debris.
2. Dry the strobe thoroughly with a clean, lint-free cloth.
3. Check the battery door o-ring and sealing surfaces for any dirt or debris. Do not lubricate the o-ring.
4. Remove the batteries prior to storage.
5. Loosen the thumbscrew on the battery compartment door if storing the strobe for long periods of time.



6. Store in a cool, dry place.

## Troubleshooting

### Photos are over-exposed (too light)

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

### Photos are under-exposed (too dark)

- Adjust strobe exposure setting.
- Adjust camera aperture (larger), shutter speed (slower), or ISO (higher). Note that increasing the ISO with the strobe set to TTL will result in the camera under-powering the strobe.
- Move strobe(s) closer to your subject and check aiming.

### Strobe will not fire

- Turn on strobe.
- Check the ready light. Turn the strobe's mode switch to OFF and then back to any of the 'on' positions. Make sure that the switch has actually clicked into position.
- Check that the batteries are inserted according to the "+" and "-" markings. It is possible to buy bad "new" batteries, so check the voltage output with a meter if possible. If using rechargeable batteries, make sure the charger is operating properly and that the batteries are fully charged.
- Check the camera settings.

- Check cable connections.

### **Strobe will not fire**

- Make sure the strobe is turned on.
- If on, power cycle the strobe (turn off and back on).
- Make sure the fiber optic cable is plugged in.
- Make sure that the fiber optic cable on the housing end has direct line of sight to the signal flash or light.
- Make sure the signal flash is firing.
- Try a different fiber optic cable.
- Restore camera to factory default settings and then re-configure according to the housing instructions.

### **Ready light does not come on**

- Charge or replace batteries.
- Make sure batteries are installed in the correct directions.
- Make sure the strobe is turned on.

### **Backscatter or “snow” in images**

- Position strobes or lights farther away from your lens and at a slight angle.
- Avoid using strobes in extremely turbid conditions.

### **Water in battery compartment**

1. Air out and thoroughly dry the battery compartment with air from a blow dryer or scuba tank.
2. Wash out the battery compartment and battery door with alcohol.
3. Air out and thoroughly dry the battery compartment with air from a blow dryer or scuba tank.

4. Replace all batteries. Never re-use batteries that have been wet. The water could create an internal short circuit in the strobe at some later date, potentially causing an explosion.
5. The connections on the battery door can short out or degrade over time after exposure to salt water. It is recommended to replace the complete battery door, or replace the circuit board using the Ecko Service Kit in the unlikely event of accidental water intrusion.
6. Reassemble with fresh batteries.

## **Limited Warranty**

This Ikelite product is warranted against any manufacturing defects for a period of two (2) years from the original date of purchase. Defective products should be returned to Ikelite postage paid. Ikelite will, at its sole discretion, repair or replace such products, and will return to customer postage paid. All other claims of any nature are not covered. Except as mentioned above, no other warranty expressed or implied applies to this Ikelite product.

## **Service and Repairs**

Ikelite is most interested in performing any service to ensure that all products perform as intended. Evidence of purchase date must be provided to obtain warranty service. No prior authorization is required. You may return directly to us or through your 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 postage paid to:

Ikelite Underwater Systems  
Attn: Service Department  
50 West 33rd Street  
Indianapolis, IN 46208 USA

For the separate international customs documentation form that you complete to accompany the shipment, please state or designate that the enclosed products were originally manufactured in the USA and are being returned to the manufacturer for repair service. Value of the equipment listed for customs purposes should be zero.

## **Contact Us**

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

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