



## **DS160 Strobe**

Product Numbers 4060US • 4060EU • 4060AU • 4060UK

## **DS161 Strobe**

Product Numbers 4061US • 4061EU • 4061AU • 4061UK

## **Product Registration**

Please register your product at [www.ikelite.com](http://www.ikelite.com) within 15 days of purchase. Our product registration database is the best way for us to get a hold of you in the event of a product update or recall.

## 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. Please visit [ikelite.com](http://ikelite.com) to register your product to receive information on any updates, notices, or recalls pertaining to your equipment.

## Included in the Box

- DS160 Strobe Front # 4060.2 or DS161 Strobe Front # 4061.2
- Rechargeable NiMH Battery Pack # 4066.5
- Battery Pack Cover # 0591.4
- Smart Charger for NiMH Battery Pack # 0083.92 US / 0083.93 European / 0083.94 United Kingdom / 0083.95 Australian
- Diffuser # 0591.3
- 1" Ball Mount # 4081.4
- Waterproof Bulkhead Cap # 9104.5
- Silicone Lubricant # 0184.1

## **Important Notices**

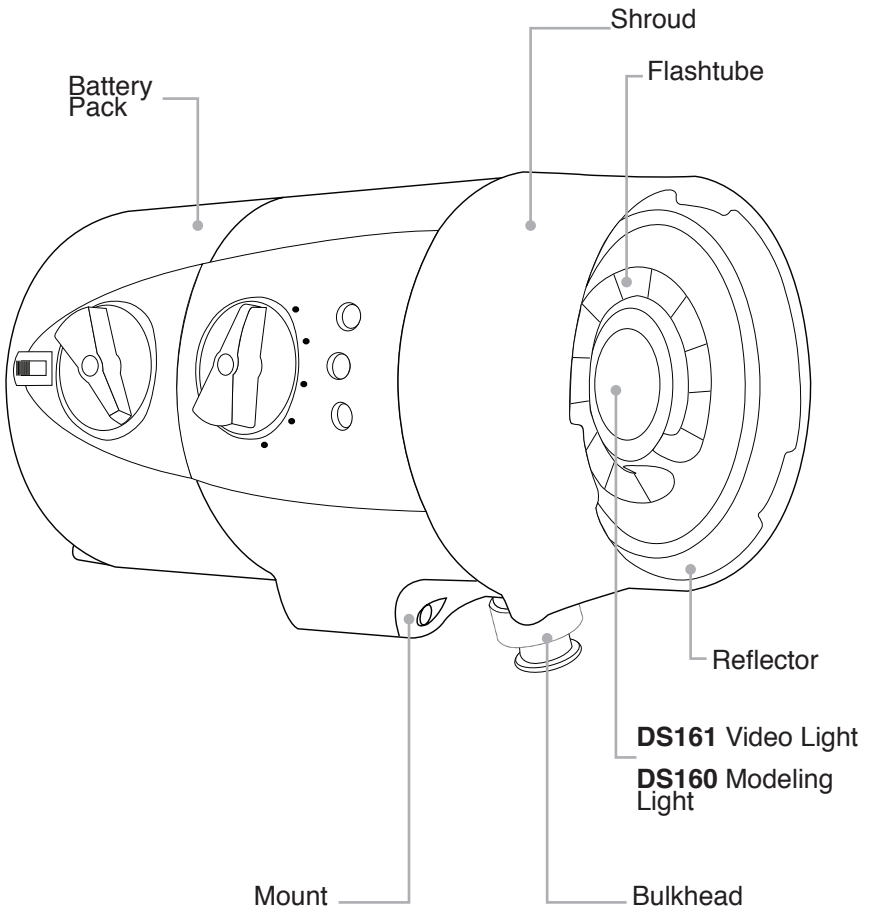
- » **The battery pack is NOT waterproof when removed from the strobe front.**
- » **NEVER use, ship, or travel with a water damaged battery pack. Use of a water damaged battery pack is a safety risk and can cause damage to the strobe electronics.**
- » **Store strobe front and battery pack in a cool, dry location when not in use.**

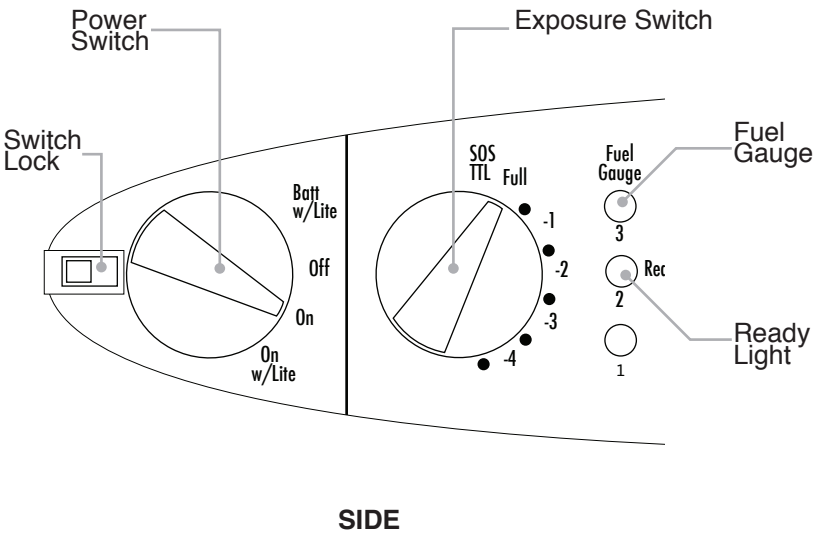
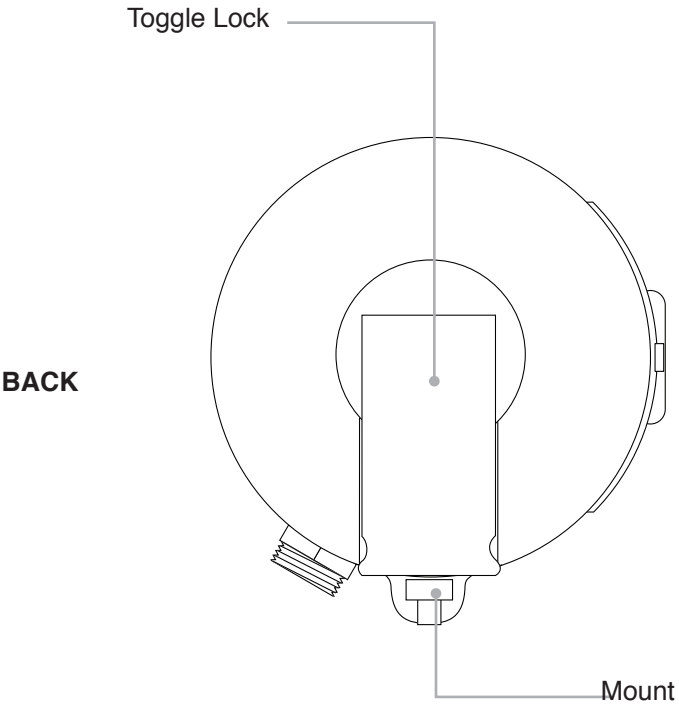
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# Getting to Know Your Strobe

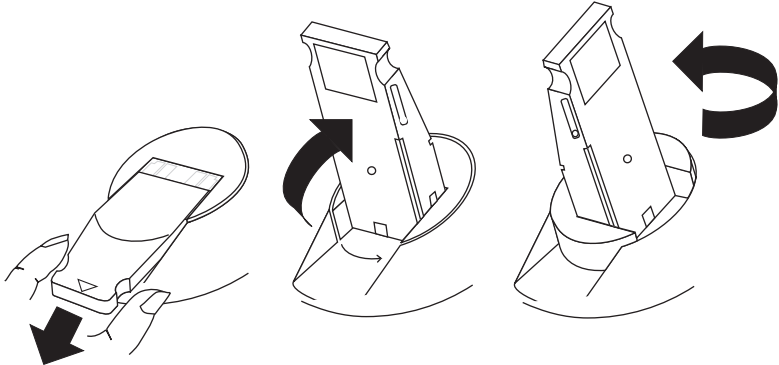




# Setting Up Your Strobe

## Removing the Battery Pack

- » **The battery pack is NOT waterproof when detached from the strobe front.**
1. Turn the Power Switch to the OFF position and place the strobe face down on a flat surface.
  2. Slide the toggle lock out and flip up.
  3. Rotate the toggle lock counter-clockwise 90 degrees.
  4. Remove the Battery Pack from the strobe front.



## Attaching the Battery Pack

- » **Never attach a water damaged battery pack to a strobe. Use of a water damaged battery pack is a safety risk and can cause damage to the strobe electronics.**
1. Turn the Power Switch to the OFF Position and place the strobe face down on a flat surface.
  2. Check that the o-ring is in place and that the sealing surfaces are clean. It is not necessary to lubricate the o-ring.



3. Place the toggle lock in the open position by sliding out, flipping up, and rotating 90 degrees counter-clockwise.
4. Align the battery pack with the front of the strobe. The switches on the side of the strobe and battery pack will line up when properly oriented.
5. Press the battery pack down gently but firmly until it is flush with the strobe front.
6. Press firmly on the toggle lock and rotate clockwise 90 degrees until it stops.
7. Flip the toggle lock down and slide in to the locked position.

## Using the Diffuser

The standard diffuser may be attached to further soften and spread the edges of the strobe's light output. The addition of a diffuser to any strobe or light will reduce the effective power of the light.

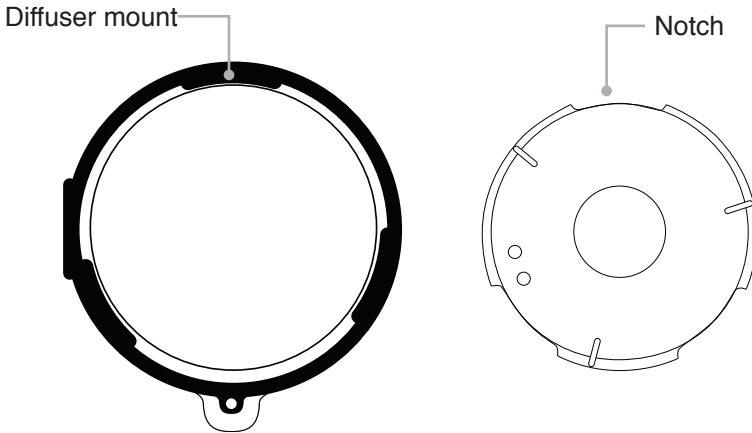
The standard diffuser reduces the effective guide number of the flash by approximately one f/stop.

An optional Dome Diffuser is available separately to spread out the light even more when shooting wide angle or macro.

## Attaching the Diffuser

1. We recommend attaching the diffuser to the strobe with a string or lanyard using the two holes in the diffuser. This will prevent accidental loss when not in use.

2. Align the notches in the diffuser with the Diffuser Mounts on the front of the strobe.



3. Press the diffuser down and rotate counter-clockwise until it stops.

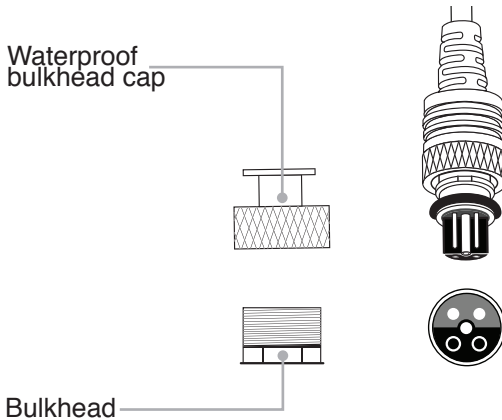
## Choosing an Arm System

- An aluminum ball socket arm system is recommended to adequately support the strobe while allowing the most flexible positioning options.
- Most arm systems are designed for underwater use and may not fully support the strobe above water. Be careful when transporting the system above water.
- The mounting point is located on the bottom of the strobe. Slide the mount into the strobe until it stops. Be careful not to cross-thread the screw when installing.
- Although not necessary, you may apply a small amount of Ikelite silicone lubricant to the screw prior to attaching the strobe mount to avoid seizing up with long term use. **DO NOT** apply Loc-tite or any other thread locking product as this may cause damage to the strobe's plastic components.

## Attaching a Sync Connector

» **A bulkhead cap or waterproof connector must be attached to the strobe for waterproof operation. Never submerge the strobe without either a bulkhead cap or compatible waterproof connector attached.**

1. Remove the bulkhead cap.
2. Lightly lubricate the connector o-ring. We recommend using only Ikelite silicone lubricant to eliminate the possibility of swelling due to incompatible compounds.
3. Line up the pins and receptacles and insert the sync cord plug into the bulkhead. The plug should slide easily into the bulkhead. If you feel resistance, do not force it. Remove the plug and check alignment.

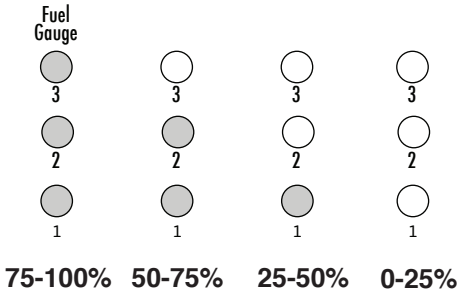


4. Rotate the knurled retaining ring until snug on the housing bulkhead. Do not use pliers or tools to tighten the retaining ring.

# Using Your Strobe

## Checking Battery Level

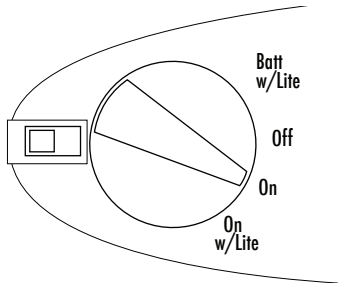
When the switch is rotated to the Batt w/Lite position, the Fuel Gauge will indicate approximate remaining battery level. Each LED represents approximately 25% of the battery capacity.



The Fuel Gauge does not indicate remaining battery life when the strobe is in the Off, On, or On w/Lite positions.

## Turning the Strobe On

The strobe has three ON positions which each affect the function of the flash, video or modeling light, and indicator LEDs.



### BATT W/LITE

Counter-clockwise one stop from OFF. Use this position to (1) check the approximate battery level remaining; or (2) to use the strobe as a video or focus light.

In this position the LEDs marked 1 / 2 / 3 indicate the approximate remaining battery level. The flash does not fire in this mode. The video (**DS161**) or modeling light (**DS160**) stays on. The exposure switch will increase or reduce the intensity of the video light (**DS161 only**).

This switch position is designated “Batt” on older battery packs. The operation is the same.

### ON

Clockwise one stop from OFF. In this position the LED marked 2 on the Fuel Gauge acts as a visual indicator that the strobe is ready to fire. The flash does fire in this mode. The video (**DS161**) or modeling light (**DS160**) is off.

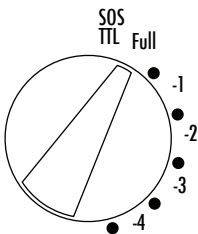
### ON W/LITE

Clockwise two stops from OFF. In this position the LED marked 2 on the Fuel Gauge acts as a visual indicator that the strobe is ready to fire. The flash does fire in this mode. The video (**DS161**) or modeling light (**DS160**) is on.

The video or modeling light will momentarily turn off and back on when the strobe is fired to avoid overexposure or hot spots in the image.

## Using the Exposure Switch

The strobe has 11 exposure switch positions which affect either the output of the flash or video light (**DS161 only**), depending on which ON position the strobe power switch is in.



### SOS / TTL

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- In ON or ON W/LITE power setting, the strobe will automatically adjust the flash duration based on signals received from the camera or trigger device. Use only with compatible systems and accessories; refer to your housing instruction manuals for information on TTL compatibility with this strobe.
- In BATT W/LITE power setting, the video or modeling light will pulse in the pattern of the international SOS emergency signal: 3 short pulses, 3 long pulses, 3 short pulses.

## FULL

- In ON or ON W/LITE, the flash fires at full power each time.
- In BATT W/LITE, the video or modeling light will be on at full intensity.

## FRACTIONAL POWERS ( • -1 • -2 • -3 • -4 • )

- In ON or ON W/LITE, the flash fires at a fractional power setting each time. The difference between each switch position is 1/2 f-stop. In photography, a decrease of one f-stop reduces the light in half. Therefore, the -1 setting is equivalent to 50% flash power.
- In BATT W/LITE, the video light will decrease in 1/2 f-stop increments (**DS161 only**).

## Positioning the Strobe

- Use the built-in video or modeling light to make sure your strobe is positioned in the correct location in relation to your camera frame.
- Adjust the angle of the strobe as the distance between you and your subject changes.

## Firing the Strobe

- Test fire your system on the surface prior to gearing up for your dive. Make sure that the strobe fires during your photo at the exposure level you expect.

- The Ready Light LED on the side of the strobe will glow red when the strobe is ready to fire.
- The Ready Light LED doubles as a confidence signal. The LED will momentarily glow green after the strobe fires if the strobe has received a TTL quench signal.
- If the Ready Light does not glow red, check that the battery pack is fully charged and the strobe power switch is set to the ON or ON W/LITE position.

## Maintenance

### Post-Dive

1. Rinse your strobe and camera system in fresh water. Do not remove the battery pack or sync cord prior to rinsing.
2. NEVER leave your system in a fresh water rinse tank. Collisions with other peoples' gear can cause scratches or damage to your equipment.
3. 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.
4. Check the memory card capacity and battery life of your camera and strobe(s). Recharge as necessary.
5. Always re-check o-ring seal after removing the battery pack from the strobe. Most importantly, make sure the o-ring is in place prior to re-attaching the battery pack.

### Travel and Storage

1. Remove the sync cord or triggering device from the strobe's bulkhead.

2. Lightly lubricate the threads of the bulkhead. Be careful not to get lubricant inside the gold connectors or rubber grommet inside of the bulkhead.
3. Attach the waterproof bulkhead cap to the bulkhead.
4. Rinse the strobe with fresh water and dry thoroughly.
5. Remove the battery pack and charge according to its instructions.
6. Attach the battery pack cover to the battery pack.
7. Store the strobe front and battery pack in a cool, dry place.
8. Like regulators and other pressure-sensitive equipment, we recommend careful care and cleaning along with bi-annual replacement of the factory seals.

## Troubleshooting

### **Water enters the battery pack.**

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- Remove battery pack, clean and dry the strobe front.
- Dispose of the battery pack at an approved local facility.
- Replace the battery with a new battery pack.
- Never re-use a battery pack that has been exposed to water.

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

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

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

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- Adjust strobe exposure setting.



- Adjust aperture (larger), shutter speed (slower), or ISO (lower) setting.
- Move strobe(s) closer to your subject and check aiming.

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### **Strobe will not fire when using sync cord.**

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- Make sure the strobe is turned on.
- Try a different sync cord.
- Restore camera to factory default settings and then re-configure according to the housing instructions.

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### **Strobe will not fire when using an optical sensor.**

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- Make sure the strobe is turned on.
- Test fire the strobe through the bulkhead. If it does not fire through the bulkhead, then the strobe must be returned for repair.
- Make sure the signal flash is firing.
- Make sure the strobe sensor is pointed directly towards the signal flash.
- Move the strobe sensor closer to the signal flash.

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

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- Charge or replace battery pack.
- Make sure the strobe is turned on.

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

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- Position your strobe(s) farther away from your lens and at a slight angle.
- Avoid using strobes in extremely low-visibility conditions.

## Photo Tips

1. Be mindful of your depth, decompression limits, air supply, the location of your dive buddy, and the proximity of other divers at all times. No photo is worth risking your safety or the safety of others.
2. Move in close to your subject to photograph through as little water as possible. Try to keep things within arms reach. We recommend trying to keep within 3 feet (1 m) of your subject or less.
3. Make sure your strobe is pointing towards your subject. Your strobe position may need to be readjusted between shots.
4. Don't chase your subject—watch its behavior, position yourself appropriately, and then wait for it to come to you.
5. If possible, position yourself slightly below your subject and shoot at an upward angle.
6. Use a wide angle lens to get closer to large subjects.
7. Take your time and take several photos of each subject, and vary your angle and/or camera settings slightly between photos. The professionals come back each day with hundreds of photos to sort through!
8. Don't trust your camera's LCD. Never delete a photo until you see it on a computer screen.
9. Try to keep the sun behind you when shooting portraits.
10. Avoid using a flash in extremely silty or low-visibility conditions.
11. It is important to respect all living creatures underwater: people, marine life, and coral. While we encourage you to get close to your subject while taking a photograph, please don't touch or disturb the things you find underwater.

## **Limited Warranty**

The DS160 or DS161 strobe front is warranted against any original manufacturing defects for a period of two (2) years from the original date of purchase. All other components including the battery pack and smart charger are warranted against any original manufacturing defects for a period of one (1) year from the original date of purchase. Defective products should be returned to Ikelite postage paid. Ikelite will, at its discretion, (a) repair utilizing new, remanufactured, and/or recycled parts; (b) exchange for a new product or; (c) exchange for a refurbished product; and return to customer prepaid. All other claims, of any nature, are not covered. Except as mentioned above, no other warranty, express or implied, applies to this product.

## **Service and Repairs**

No prior authorization is required to obtain either warranty or non-warranty service. 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 or very low.



## 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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