



## **DS230 Strobe with Modeling Light**

Product Numbers 40230US • 40230EU • 40230AU • 40230UK • 40230X

## 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

- DS230 Strobe Front # 40230X
- Rechargeable NiMH Battery Pack # 40066BK (installed)
- Battery Pack Cover # 0591.4
- Smart Charger for NiMH Battery Pack # 0083.92 US / 0083.93 European / 0083.94 United Kingdom / 0083.95 Australian
- 1" Ball Mount # 4081.4 (installed)
- Waterproof Bulkhead Cap # 9104.7 (installed)

## **Important Notices**

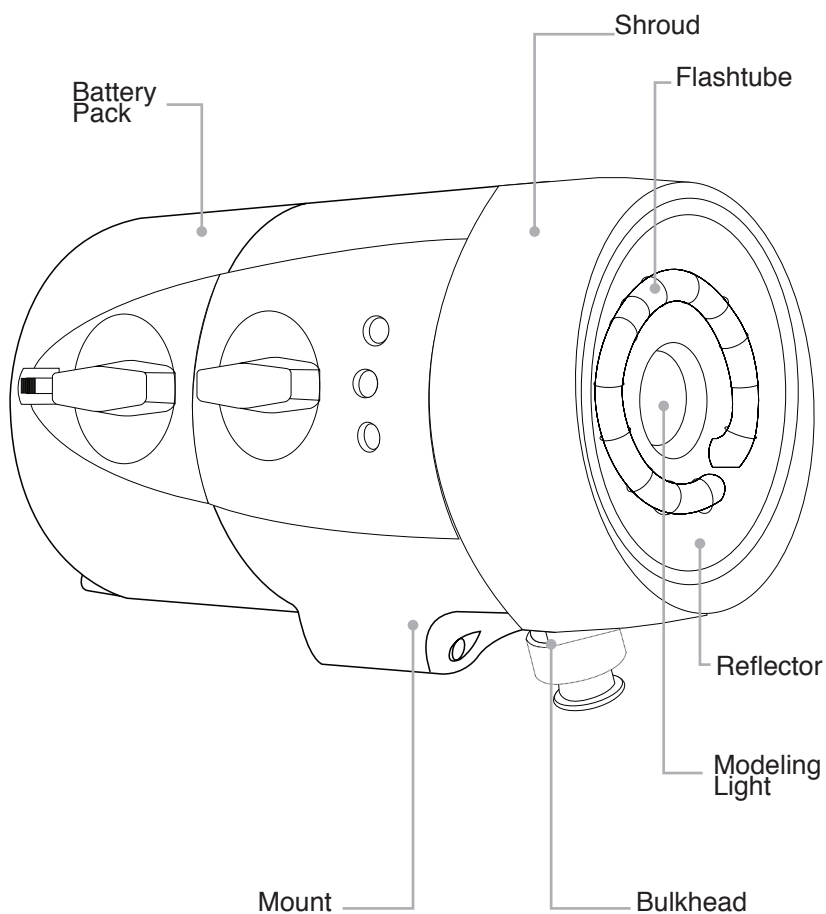
- » **DO NOT lubricate or remove the battery pack o-ring.**
- » **DO NOT use lubricants, cleaners, or any chemical on the o-ring or battery pack.**
- » **The battery pack is NOT waterproof when removed from the strobe front.**
- » **NEVER use, ship, or travel with a water damaged battery pack. Use of 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. DO NOT expose the battery pack to excessive heat above 45°C or excessive cold below -15°C.**
- » **DO NOT discard, crush, or incinerate. Check local rules and regulations on electronic waste disposal and use an approved recycling facility.**
- » **The bulkhead on this strobe is hard anodized aluminum (black in color). Older sync cords and converters feature nickel plated brass components (silver in color). When attaching a silver colored plug to this bulkhead, the connectors must be detached and properly cleaned after each day of diving to prevent seizing of components.**

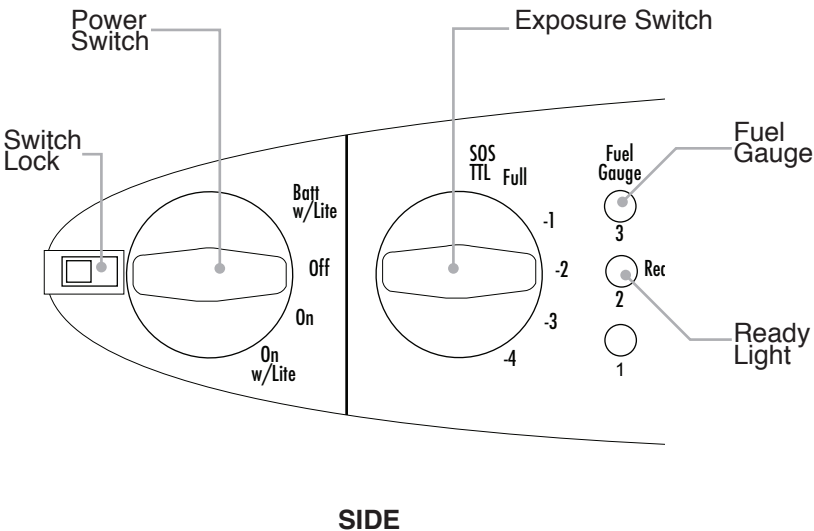
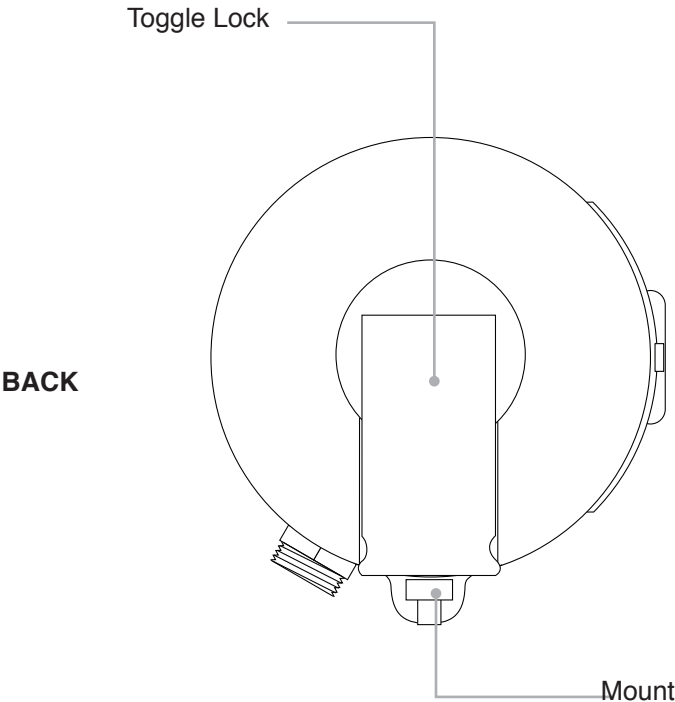
# Contents

<b>About this Product</b>	<b>2</b>
<b>Included in the Box</b>	<b>2</b>
<b>Important Notices</b>	<b>3</b>
<b>Getting to Know Your Strobe</b>	<b>6</b>
<b>Setting Up Your Strobe</b>	<b>8</b>
Removing the Battery Pack	8
Charging the Battery Pack	8
Attaching the Battery Pack	10
Using a Diffuser	11
Choosing an Arm System	11
Attaching a Sync Connector	11
<b>Using Your Strobe</b>	<b>12</b>
Checking Battery Level	12
Turning the Strobe On	13
Using the Exposure Switch	14
Positioning the Strobe	15
Firing the Strobe	15
<b>Maintenance</b>	<b>16</b>
Post-Dive	16
Travel and Storage	16
<b>Learning about Underwater Photography</b>	<b>17</b>
<b>Troubleshooting</b>	<b>17</b>
<b>Limited Warranty</b>	<b>19</b>
<b>Service and Repairs</b>	<b>19</b>
<b>Contact Us</b>	<b>20</b>



## Getting to Know Your Strobe

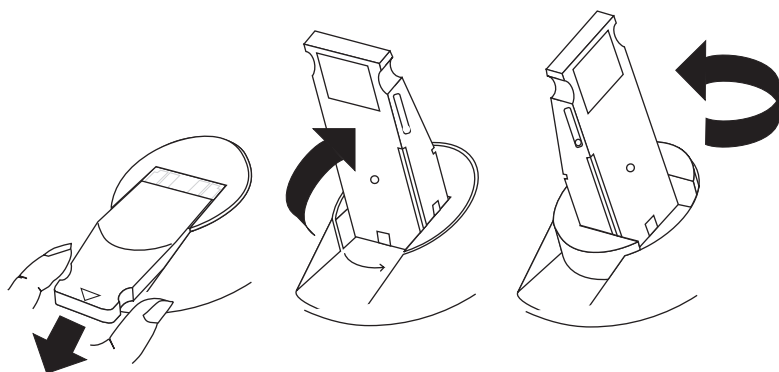




# Setting Up Your Strobe

## Removing the Battery Pack

- » The battery pack is **NOT** waterproof when detached from the strobe front.
  - » Do not remove or lubricate the battery pack o-ring.
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.



## Charging the Battery Pack

- » Use only a compatible Smart Charger for NiMH Battery Packs. Do not attempt to charge the pack with other chargers. Use of an incompatible charger is a safety risk and may cause irreparable damage to the pack.
- » Operation of this charger with battery packs other than those intended is dangerous and could result in damage to the battery pack or charger.



- » **To extend the lifetime of the pack, avoid fully discharging the battery pack.**
- » **If the battery pack is nearly depleted, we recommend charging to approximately 50% prior to long-term storage.**
- » **When storing for extended periods of time, cycle the battery pack by discharging and charging at least once every 6 months. Failure to cycle the pack will reduce the capacity of the battery pack over time.**
- » **Approximately 20-40% of the battery pack capacity will drain when left idle for a month. The lost capacity will typically be recovered after two or three charge/discharge cycles. Lost capacity may not be recoverable if the battery pack is stored for over 6 months without cycling.**
- » **Do not recharge a fully charged battery pack.**
- » **Disconnect the charger from the battery pack and outlet when not in use.**
- » **This charger is for indoor use only in dry locations. Keep the charger away from fire and other sources of heat.**
- » **Battery pack and charger contain no user-serviceable parts. Do not attempt to open these products. Replace if damaged.**

Charge the battery pack in a cool, dry place. Operating and storage temperature is 5°C/41°F to 30°C/86°F. Never leave the battery pack unattended while charging.

The charging indicator LED on the front of the smart charger indicates the charge cycle. The indicator may take a few seconds after plugging into a battery pack to reflect the current charge state.

## **GREEN**

The charging indicator LED on the front of the charger glows green when the charger is plugged into a power source and when the pack is fully charged. When glowing green the charger is in trickle charge mode.

## **RED**

The charging indicator LED glows red when charging the pack. Typical charge time is 4 hours.

## **RED/GREEN ALTERNATING**

The charging indicator LED alternates red and green lights when attempting to pulse charge a deeply depleted battery pack up to a usable voltage. If the charger does not switch to a solid red light within a few minutes it is time to replace the battery pack.

## **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.**
  - » **Do not lubricate the battery pack o-ring.**
- 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. Do not 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 a Diffuser

The DS230 flashtube and reflector are designed for exceptionally smooth, even coverage without the addition of a diffuser. The optional Dome Diffuser # 4069.2 may be added to increase the spread of the DS230 beam.

## Choosing an Arm System

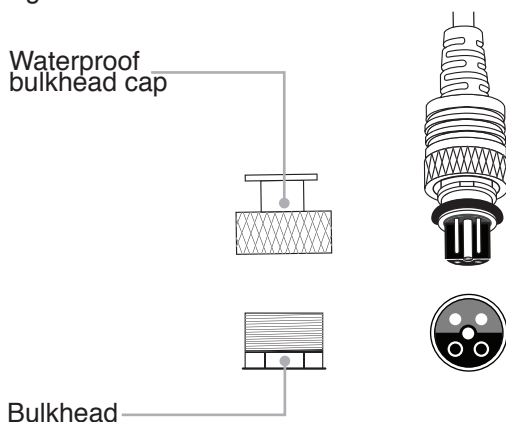
- An aluminum ball socket arm system is recommended to adequately support the strobe while allowing the most flexible positioning options.
  - Most arm systems are designed for underwater use and may not fully support the strobe above water. Be careful when transporting the system above water.
  - The 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.
- » **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.**

- » **The bulkhead on this strobe is hard anodized aluminum (black in color). Older sync cords and converters feature nickel plated brass components (silver in color). When attaching a silver colored plug to this bulkhead, the connectors must be detached and properly cleaned after each day of diving to prevent seizing of components.**

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.

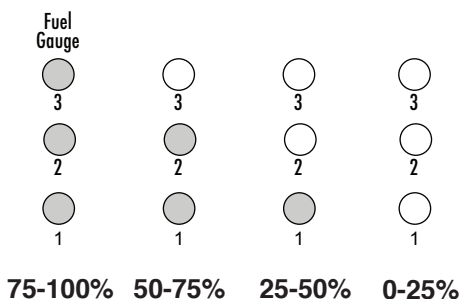


4. Rotate the knurled retaining ring until snug on the housing bulkhead. Do not use pliers or tools to tighten the retaining ring.

# Using Your Strobe

## Checking Battery Level

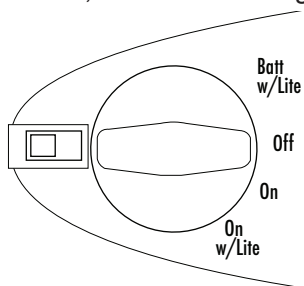
When the switch is rotated to the Batt w/Lite position, the strobe will fire one test shot and the Fuel Gauge will indicate approximate remaining battery level. Each LED represents approximately 25% of the battery capacity.



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 modeling light as a constant-on light.

In this position the LEDs marked 1 / 2 / 3 indicate the approximate remaining battery level. The flash will fire once when the battery pack is first switched to this mode. The flash will not fire in response to a camera trigger. The modeling light stays on.

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 modeling light is off.

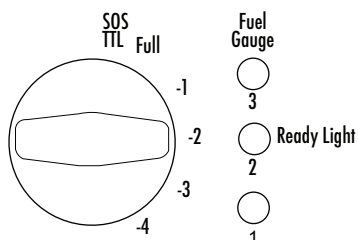
## ON W/LITE

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 modeling light 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, depending on which ON position the strobe power switch is in.



## **SOS / TTL**

- 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 (-0.5, -1, -1.5, -2, -2.5, -3, -3.5 -4, -4.5)**

- 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.

## **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.

## Rapid Firing

This strobe is capable of rapid firing multiple frames per second in continuous shooting mode.

For best performance, it is recommended to allow the strobe to rest for 2 minutes after every 10 shots when shooting in high speed continuous settings.

Protection circuitry built into the strobe will automatically force a rest period if heat conditions within the strobe become dangerous. This may be at different points depending on use and environment. During the rest period the strobe will not trigger. The strobe will automatically allow triggering again when the strobe has returned to a safe operating temperature, typically within 1-2 minutes.

- » **Some frames may be missed at extremely high speeds and/or when shooting above half power.**

## 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.

## **Learning about Underwater Photography**

Visit <http://www.ikelite.com/photoschool> or scan the QR code:



# 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.

## **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.

## **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.

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

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

### **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.

## **Limited Warranty**

The 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 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**

We are most interested in performing any service to ensure that all products perform as intended.

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  
Attention: Service Department  
50 W 33rd St  
Indianapolis, IN 46208 USA  
+1 (317) 923-4523  
ikelite@ikelite.com

For detailed instructions on returning your product for service including important information on international customs 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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