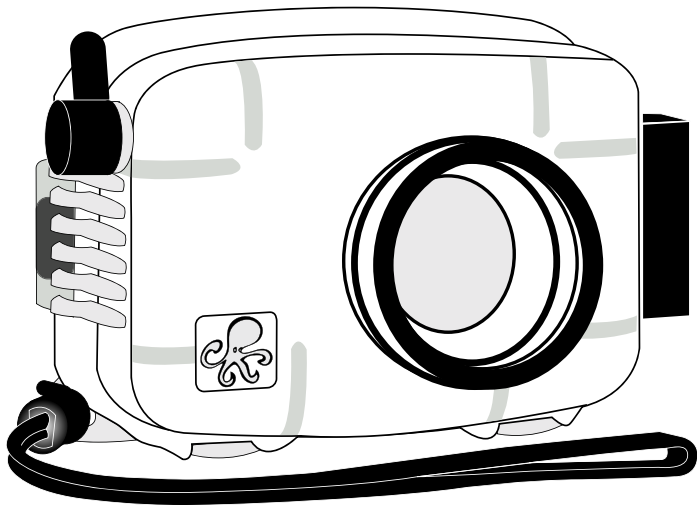




## ULTRAccompact Housing Instruction Manual

**DC-100 Digital Style - 2.2" and 3.0" Diameter Ports**



Thank you for your purchase of Ikelite equipment. Please read this instruction manual completely before attempting to operate or dive with this product. See the included "Supplemental Instructions" for control locations and camera settings specific to your camera.

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## Product Registration

Please take a moment to fill out the online **Ikelite Product Registration** form at <http://www.ikelite.com/forms/regForm.htm>.

### Package Contents

- ULTRAccompact Housing
- Supplemental Instructions
- Silicone Lubricant
- Lanyard
- Diffuser
- Deflector
- Extra Control Tips

### Preparation

This product has been water pressure tested at the factory and is depth rated to 200 ft. (60m). Thoroughly inspect and immerse the empty housing completely in water before installing a camera. If any fogging occurs or droplets of water enter the housing, do not install a camera. Clean the housing main o-ring and retest to make sure that it is watertight. Refer to the Troubleshooting section, page 13.

We suggest that you read this instruction booklet thoroughly before use to have a full understanding of where each camera control is located, and what function each control provides. Please read your camera manual thoroughly to have a full understanding of each camera function. If you are new to underwater photography, be sure to read the Photo Tips section.

Due to the power required to operate the camera and LCD screen start each dive with a fully charged camera battery.

## Initial Camera Setup (for most point and shoot digitals)

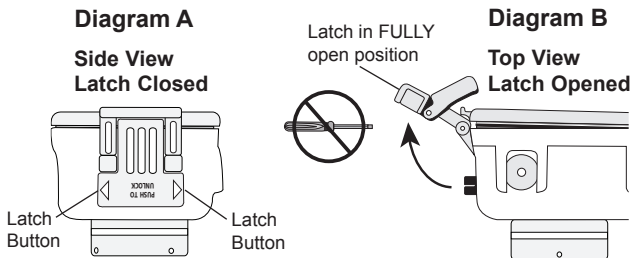
- Read the camera manual thoroughly to obtain a full understanding of each camera function before attempting to use inside of the housing.
- Start each dive with a fully charged camera battery and sufficient unused memory.
- Set ISO to the lowest setting available.
- Set camera to least automated mode.
- Enable the close-up/macro 🐾 mode to allow for close-up focusing.
- Set the flash ⚡ to fire every time you shoot if using the built-in flash or an external slave strobe.
- If possible, set the aperture to the smallest available setting.

## Opening the Housing

Place the housing face down in your lap or on a flat surface.

Depress opposing latch buttons simultaneously to open housing, see diagram A. Once the latch is unlocked, rotate the latch handle up and away from the housing until it stops, diagram B. This motion will also break the housing o-ring seal and open the housing back slightly. Latch must be rotated to the FULLY open position to ensure easy opening of the housing. Do not use metal objects to assist in opening the back. Rotate the hinged back to its open position.

**Caution:** Do not operate the housing shutter control lever until the camera is installed, otherwise shutter spring damage could occur. Does not apply to housings with a push button shutter control.



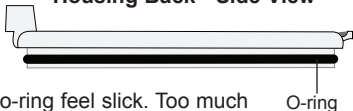
## Main Housing O-ring

Check to see that there is an o-ring on the housing back and that it is clean, **lightly lubricated**, and in its proper location, diagram C. Only

apply enough lubricant to make the o-ring feel slick. Too much lubricant can attract debris and adversely affect the housing seal.

Too little lubricant can result in difficulty closing the housing.

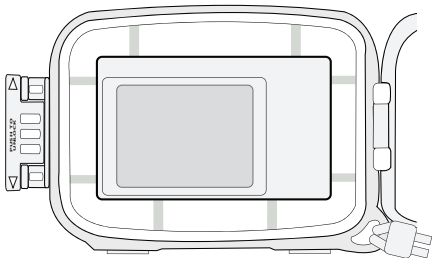
**Diagram C**  
**Housing Back - Side View**



## Installing the Camera

Pull out on housing controls until they stop. Place the camera face down into the front housing ribs as shown, diagram D.

**Diagram D**



## Closing the Housing

Rotate the hinged back onto the housing front. Close the latch and make sure it locks. Latch will “click” into its locked position. Latch buttons will NOT be depressed when latch is properly locked, see diagram A, page 4. Return housing controls to their operating position. Make sure the housing controls line up with the camera controls.

## Safety Check

Inspect the o-ring seal through each side of the housing. A good seal should appear as a solid black line. Make sure that no stray hairs, lanyards, or other objects cross the o-ring seal.

## Usage

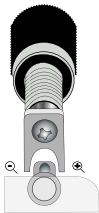
### Turn Camera On

Turn the camera on and operate each of the housing controls to get a feel for using the camera in the housing.

**You are now ready to shoot underwater photos!**

### Zoom Control (lever type only)

After you have used the housing's zoom control, it must be returned to the center position to disengage. If the housing zoom control is pushing the zoom lever in either direction, you may not be able to take a picture or access other functions. This is because the camera is receiving a signal from the engaged zoom control.



Zoom Control  
"Disengaged"  
(Center Position)



Zoom Control  
"Engaged"

### Using the Camera's Built-in Flash

If you are shooting with the camera's built-in flash and the camera's lens is set to the widest angle, you may need to zoom the lens slightly or a dark area may appear in a lower corner of close-up photographs. The lens port may block some of the light. Install the Diffuser and zoom in slightly to eliminate any dark areas noted in your photographs. You can test this above water. See Diffuser and Deflector Use, page 7.

For the best results and to shoot photographs closer than 2 feet (0.6m), we recommend using an external Ikelite Substrobe. An external strobe can be positioned so nothing blocks the light path between the strobe and the subject.

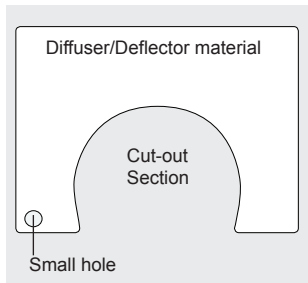
The camera's built-in flash **CANNOT** be used with optional Wide-Angle or Accessory lenses.

## Diffuser and Deflector Use

A diffuser and deflector are included with the housing. The diffuser is white transparent plastic. The deflector is also white but is not transparent.

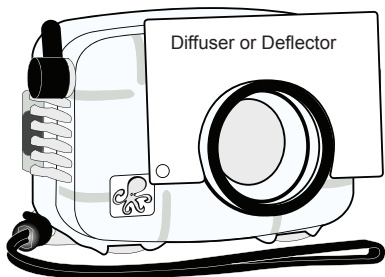
To install the diffuser or deflector, push the “Cut-out Section” into the port groove until it stops.

Note the Small Hole. To avoid losing the diffuser or deflector, you can attach a fishing line or string to this hole.



The **diffuser** should be installed when using the camera flash. When shooting close-up photographs with the camera flash and at the camera lens's widest angle setting, the lens port on the housing can block a portion of the light from the camera flash. This can result in a shadow in a lower corner of the frame. Zoom the lens to eliminate the shadow (*You can test this above water*).

The **deflector** should be installed when using an Ikelite external strobe. The deflector will block and redirect the camera flash to the AF35 slave unit or an EV Controller which controls the external strobe output.



Housing shown with Diffuser or Deflector correctly installed.

## Entering the Water

As soon as you enter the water, take a moment and check the housing to see that it is properly sealed.

Next, check to see if there are any bubbles on the face of the lens port. If there are, take your finger and remove them. If there are bubbles on the lens port they can produce soft focus spots in your photos or video.

## Maintenance

### Lens Port

Treat the glass in the lens port as a camera lens. After use, rinse and gently dry the outside lens port to avoid water spotting. To clean, use a mild soap solution or lens cleaner. Do not rinse the inside port glass. **Do not use alcohol or window cleaner on the Lens Port.**

### Control Maintenance

Ikelite controls are designed to provide years of reliable service with minimal maintenance.

Push button controls require no maintenance other than rinsing in fresh water after saltwater use. If a push button control becomes difficult to push, or if it sticks when depressed, soak the housing in luke warm fresh water. After a few minutes operate the push button. If this does not correct the problem, return the housing to Ikelite for routine maintenance.

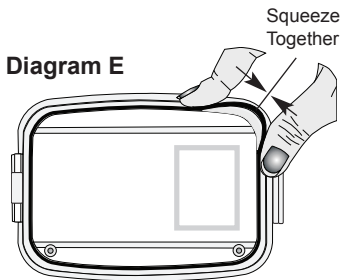
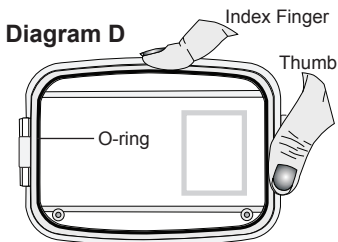
If a housing control shaft becomes “sticky” and hard to operate, return the housing to Ikelite for routine maintenance.

## O-ring Maintenance

We recommend that you clean the main housing o-ring and main housing o-ring channel before each day of diving.

1. To remove the o-ring, place index finger and thumb on the o-ring as shown, diagram D.
2. Squeeze the o-ring into a loop by pressing down on the o-ring and squeezing your index finger and thumb together, diagram E.
3. Grab the o-ring loop with your other hand and remove the o-ring from the housing back.
4. Wipe the o-ring channel clean with a paper towel, napkin, or lint-free wiping cloth.
5. Clean and **lightly lubricate** the o-ring. Use Ikelite lubricant only. Put a small amount of Ikelite lubricant on your fingers. Pull the o-ring through your fingers to apply a light coating of lubricant. Apply only enough lubricant to make the o-ring feel slick. **Do not stretch the o-ring.** This light coating of lubricant will help to keep the o-ring from drying out and will help to show a dark sealing line when the housing back is properly sealed.
6. Very lightly lubricate the o-ring sealing surface on the housing front.

**CAUTION:** Never use a screwdriver or metal object to remove the main housing o-ring. This could damage the housing and o-ring, which could result in a leak.



## Lubricant

Ikelite provides silicone lubricant with the housing. We recommend you use only Ikelite lubricant on Ikelite products. Other brands may cause the main housing o-ring to swell and not seal properly.

Use only enough lubricant to lightly cover the main housing o-ring or lubricate a sticky control. Wipe off any excess lubricant with a clean cloth. Lubricant is not a sealant, it is used to reduce friction. Excessive lubricant can collect sand and dirt which may interfere with proper sealing.

### CAUTION:

**Never use spray lubricants as the propellant ingredient can cause the plastic housing to crack or o-rings to swell.**

## Housing Maintenance

In addition to normal maintenance, we recommend that the housing be returned to Ikelite periodically to be checked and pressure tested.

- **Do not** leave the camera and housing in direct sunlight for prolonged periods. Heat may damage the camera.
- **Do not** ship the camera in the housing.
- Keep the main housing o-ring clean and **lightly lubricated**. To lubricate, remove the o-ring from the back.

**NOTE:** Housing may be hard to open and close if the main housing o-ring is not properly lubricated.

- Keep the area where the o-ring fits and the sealing surface of the housing clean.
- If removing a housing push button, **do not** re-use the E-clip. Contact Ikelite for replacement E-clips (part 0319.12).
- Leave housing latch in the open position when not using the housing for extended periods.

## Housing Maintenance - continued

- Rinse the housing exterior thoroughly in freshwater after each saltwater use. Move each push button in and out several times to release trapped saltwater. Dry housing with a soft cloth. Dry the lens port to eliminate water spotting. **Do not** use alcohol or window cleaner on the Lens Port. After several uses in saltwater, soak the housing exterior in a mild soap solution, rinse and dry before storing. When storing the housing, remove the main housing o-ring, lightly lubricate, and place in a plastic bag. Place the plastic bag with o-ring, inside the housing for safe keeping.

### Photo Tips

- The number one rule in underwater photography is to eliminate as much water between the camera and subject as possible. Get as close as you can to the subject, then use the zoom. If you are using flash for still photos, subjects beyond 6 feet (1.8m) will not have much color regardless of strobe power.
- The camera's built-in flash is very close to the camera lens. The flash can light up any suspended particles in the water and they can be recorded in your picture. This effect is called backscatter. To eliminate as much backscatter as possible, photograph close or use an external strobe. Photograph in clear water; do not stir up the sand or silty bottom. If backscatter becomes a problem in the environment you are photographing, an external flash will help eliminate much of the backscatter.
- Many digital cameras have a slight lag time between when you press the shutter release button and the camera actually takes the picture. Hold the camera steady a second or two after pressing the shutter release button.

## Photo Tips - continued

- Do not shoot down on subjects as they will quite often blend into the background and be difficult to see in the photograph. Shoot subjects straight on or shoot up at a slight angle using the blue water as a contrasting background.
- Underwater flash is used to restore the warmer colors filtered out by the water as well as to illuminate the subject. When photographing underwater, set the camera to use flash on every shot. If the camera's flash is set to AUTO and the sun is behind your subject, the camera may see enough light and not fire the flash. With the sun behind the subject, the subject is shaded (dark) and needs flash for a good exposure.
- If your camera consistently overexposes the image when using daylight or flash, you may want to adjust your camera's exposure compensation settings.
- If you error in exposure, it is better to have the image slightly underexposed rather than overexposed. An overexposed image is missing color information which cannot be adjusted in a photo processing program. A slightly underexposed image has color information that can be adjusted.
- It is important to respect all living creatures underwater, including people, marine life, and coral. While we encourage people to get close to their subjects when taking a photograph, they should not touch, lie on, or in any way disturb the things they find underwater.

## Troubleshooting

Problem	Solution
Water enters the housing	<ul style="list-style-type: none"><li>- Remove, clean and properly lubricate the main o-ring.</li><li>- Look for hairs, dirt, or foreign debris crossing the o-ring seal.</li><li>- Reassemble the housing without a camera installed and pressure test or take diving.</li><li>- Return housing to Ikelite for routine maintenance.</li></ul>
Pictures are too blue or too green	<ul style="list-style-type: none"><li>- Use custom (manual) white balance if available.</li><li>- Add an optional color correcting filter.</li><li>- Add an external strobe.</li><li>- Move in closer to your subject when taking a picture.</li></ul>
Housing is hard to close	<ul style="list-style-type: none"><li>- Lightly lubricate main housing o-ring, see page 9.</li><li>- Make sure that the camera is installed correctly.</li></ul>
Camera does not take a picture	<ul style="list-style-type: none"><li>- Install a fully charged battery.</li><li>- Make sure the housing zoom control is centered and not engaged.</li><li>- There is not enough available light for the camera to properly focus. Add a focusing light or strobe with a built-in focusing light to your system.</li><li>- Select macro mode when shooting close-ups.</li></ul>

Problem	Solution
<p>Image is over- or under-exposed, or a corner of the image is dark</p>	<ul style="list-style-type: none"> <li>- Check that the camera flash is firing when taking a picture. Camera flash should be forced “on.”</li> <li>- Make sure the deflector is installed when you are using an external strobe.</li> <li>- Make sure the diffuser is installed when you are NOT using an external strobe. Zoom in slightly to eliminate any dark corners.</li> <li>- When using an external strobe, make sure it is turned on, set properly, and it’s battery is charged.</li> <li>- Change camera shutter speed and/or aperture.</li> <li>- Move closer to or further away from the subject.</li> </ul>
<p>Fogging occurs on the Lens Port</p>	<ul style="list-style-type: none"> <li>- Humid air is trapped inside the housing. The camera produces heat and may condense any trapped moisture forming fog on the lens port. Close the housing in an air-conditioned room or vehicle, or in front of an air-conditioner.</li> <li>- The housing should not be in direct sunlight for an extended period of time.</li> <li>- Purchase desiccant packs from a local camera store. Place one or two packs in your housing before each day of diving.</li> <li>- If water droplets or moisture is present around the controls or sealing areas, return the housing to Ikelite for evaluation.</li> <li>- Clean the main housing o-ring and sealing surface of the housing, see page 9.</li> </ul>

Problem	Solution
Push buttons or controls are sticky and hard to operate	<ul style="list-style-type: none"> <li>- Remove the camera and rinse the closed housing in freshwater. Vigorously press each push button in and out several times to release any trapped saltwater or debris.</li> <li>- If a control is sticky, grab the control knob, pull it out, and then push back in.</li> <li>- Return housing to Ikelite for routine maintenance.</li> </ul>

## Replacement Parts

Main Housing O-ring 0132.45

Replacement Lanyard 0321.10

Replacement Vinyl Port Covers 0200.02 (2" port), 0200 (3" port)

Ikelite Lube 5020 (4 - 1cc tubes)

For light lubrication of the main housing o-ring.

## Recommended Accessories

A full range of accessories is available to support your housing. Please visit [www.ikelite.com](http://www.ikelite.com) to see the most current information about recommended accessories.

### Tray and Handle(s)

Add stability and gripping point(s) for comfortable use of the housing above and below water. Some tray and handles offset the slightly positive buoyancy of the housings. Handles offer attachment points for external lighting systems.

## Recommended Accessories - continued

### External Strobes

A separate external strobe adds color to restore the warmer colors filtered out by the water as well as to illuminate the subject. Add a second strobe to eliminate shadows and evenly light your subjects.

### Video Lighting

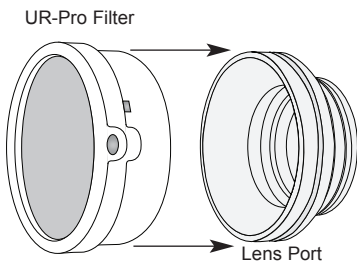
External video lights add color when using the video/movie mode of your camera. Primary video lights are specially color balanced to provide natural tones.

### Travel Cases

Protect your investment and travel with ease. An optional Carrying Case or Travel Bag will accommodate the housing with a single AF35 or DS51 strobe, single tray with handle and accessories.

### External Color Correcting Filters

Color filters such as the UR-Pro Filter replace some of the reds, oranges and more natural tones that would otherwise be lost underwater. Effective in relatively shallow, sunny conditions. Available for tropical blue water and green water settings. For optimum results use in combination with “custom (manual) white balance.” Check your camera user guide for information on this option (if available). Not recommended when using external strobes.



Please refer to the “supplemental instructions” manual for UR-Pro Filters that are compatible with your housing.

## Recommended Accessories - continued

### UR/Pro Filter (Blue Water)

The UR/Pro underwater color correcting filter is designed to restore some of the warm colors filtered out by the water. For available light use only. Not recommended for use with an external flash.


### UR/Pro Filter (Green Water)


Enhances contrast and alters the color of green water to give your subject a rich, natural tone. For available light use only. Not recommended for use with an external flash.

## Accessory Lens Information

Please refer to the “supplemental instructions” manual for Accessory Lens information.

## Please Read If Using an EV Manual Controller

The EV-Controller used with Ikelite DS Substrobes has two user settings. One setting is for strobe selection, the other is for pre-flash “P” or non pre-flash “.

 Most cameras use a pre-flash. This means the EV-Controller should be set to the pre-flash “P” position when used with this camera as a slave. If a manual mode is used that does not emit a pre-flash, set the EV-controller to the non pre-flash “.

## Technical Support

Please read the troubleshooting section of this instruction manual before contacting technical support.

### Ikelite Technical Support

Email: [ikelite@ikelite.com](mailto:ikelite@ikelite.com)

Phone 317.923.4523

Fax 317.924.7988

## **Returning Products for Service**

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 instructions on what you want us to do. Always include name, shipping address, email address, and phone number inside of the package. Send postage paid to:

Ikelite Underwater Systems  
Attention Service Dept.  
50 West 33 Street  
Indianapolis, IN 46208 USA

No reimbursements for postage paid will be issued.

You may also want to insure the package.

## **Returning Products for Service (outside the United States)**

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.

## **Limited Warranty**

This Ikelite product is warranted against any 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.



**Ikelite Underwater Systems**  
**50 West 33rd Street**  
**Indianapolis, IN 46208 USA**