



**Digital Housing**  
i n s t r u c t i o n   m a n u a l

for  
**Nikon**  
**Coolpix 8400**

Housing  
**#6194.84**

# Ikelite Digital Housing

instruction manual

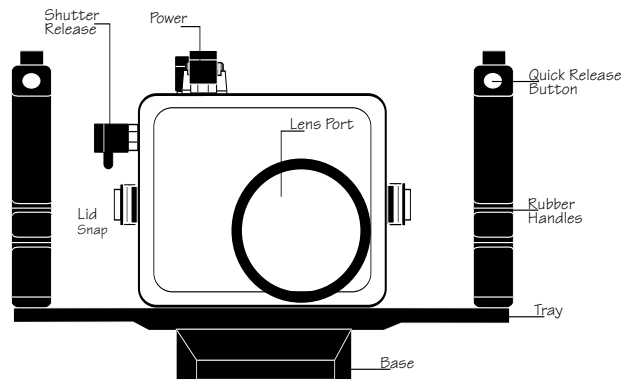
#6194.84 for Nikon Coolpix 8400



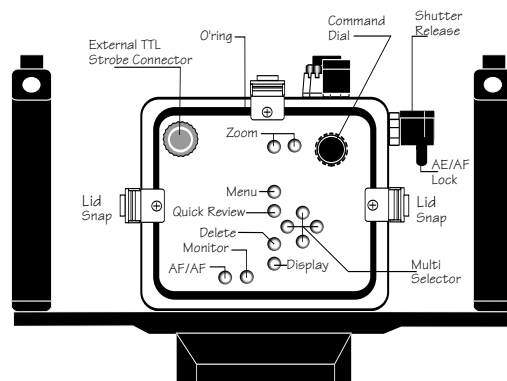
Congratulations on your purchase of an Ikelite Digital Camera Housing. Ikelite has over 30 years of experience in the underwater photographic and lighting market. Our products are designed and built in the USA by Ikelite for both the professional and amateur photographer.

The clear housing permits instant visual inspection of the camera and all sealing surfaces as well as complete monitoring of controls and camera LCD screens.

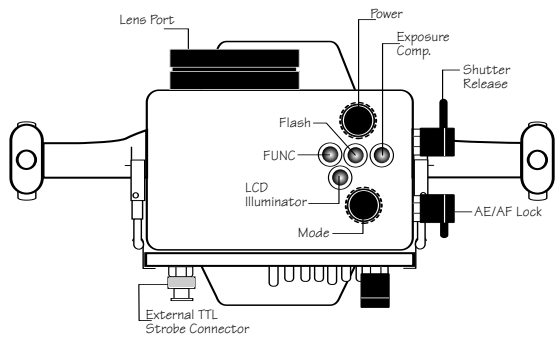
Ikelite Digital Housings are slightly negative in salt water for stability. This housing has been water pressure tested at the factory. Housing is pressure tested to 200' (60m).



FRONT VIEW



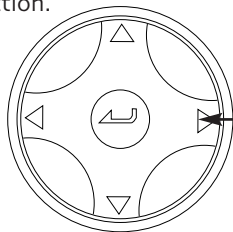
BACK VIEW



TOP VIEW

**Note:**

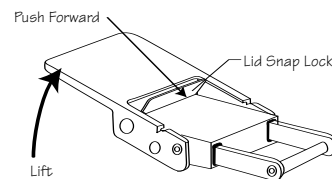
There is no housing control for the center button on the camera's Multi Selector which is used to make a selection. When the camera is in the housing and you have made a change that requires pressing the center button, press the Right Arrow button on the Multi Selector, it will make the selection.



Depress to display sub-menu, move cursor right, or make Selection

## Opening the Housing

Lid Snaps have a **Lock**. To open, push Lid Snap Lock forward and lift as shown. Keep pressure on the Lid Snap so it does not fly open quickly. *Some lid snaps have a lot of spring tension once they go over center, have a firm grip on the lid snap.*

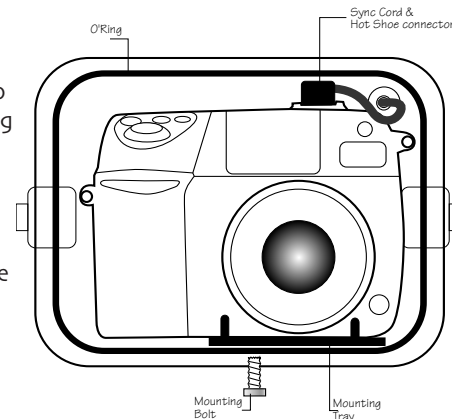


## Installing the Camera

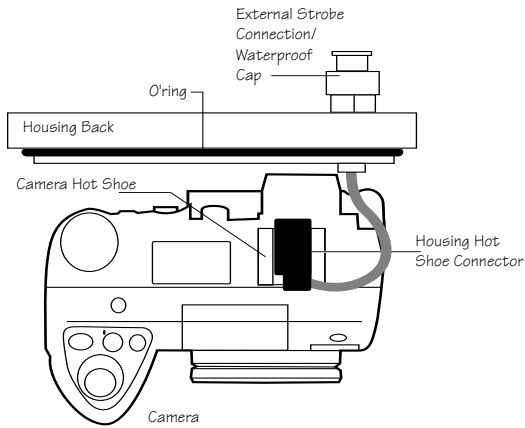
Install a fully charged battery into the camera before securing the camera to the housing's mounting tray.

Remove the back from the housing. The mounting tray for the camera is secured to the housing back. Position the camera on the tray and secure it with the mounting bolt which threads into the camera's tripod socket.

Before inserting the camera into the housing, pull out on the housing's AE/AF-L control so it does not obstruct installing the camera in the housing.



## Flash Connection



When using an external strobe connect the housings Hot Shoe Connector, slide the connector into the hot shoe of the camera from the back as shown. Slide the connector forward until it stops. This can be done after the camera is secured with the mounting bolt.

### NOTE:

The housing's External TTL Strobe Connector's waterproof cap should only be removed when connecting an external strobe with a sync cord. If no sync cord is connected to the housing the connector's waterproof cap must be in place before using the housing in the water.

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## Checking Controls

Once the housing has been closed check to see that the housing controls line up with the camera controls.

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

### CAUTION:

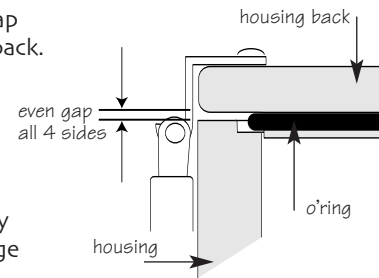
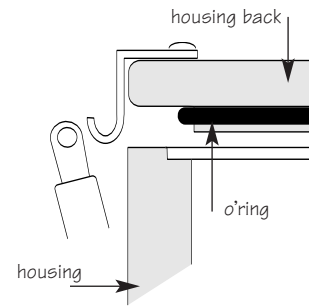
## Shutter Release

The camera's shutter release button operates in two stages. When depressed halfway it activates the camera's exposure meter and autofocus. When depressed fully it takes the picture. This half stop of the shutter release is more easily felt when using the camera out of the housing. But with some practice you can feel the half stop when the camera is in the housing. The camera's shutter release requires only minimal pressure to activate. With the additional leverage of the housing's shutter release control you can put undue force on the camera's shutter release button. This can result in damage to the camera. Digital cameras have a noticeable lag time between when you push the shutter release button and when the camera starts to do something. It is human nature to push harder when the camera does not instantly respond. Take several pictures with the camera in the housing, paying special attention to the feel of the shutter release. It only requires a very light touch.

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## Closing the Housing

1. Check to see that there is an o'ring on the housing back and that it is clean and in its proper location.
2. Guide the back onto the housing. Take care to see that the TTL sync cord does not obstruct the installation. The o'ring should touch the housing all the way around. There should be an even gap all the way around between the housing and the housing back.
3. Lift the lid snaps so they are extended and place the lid snap into the hook on the housing back.
4. To close the housing push down on the lid snaps until they snap into place. Lid snaps on opposite sides of the housing should be closed at the same time. Be sure they are down far enough to engage the lock.



### Double check -

Once the housing is closed, check the o'ring seal. Check the gap between the housing back and the housing, it should be even all the way around.

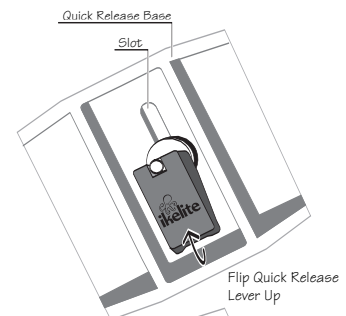
Look through the clear plastic back at the o'ring. You should see a darkened area where the o'ring is compressed against the housing back. If you do not see an even black compression seal all the way around the back, open the lid snaps, reset the housing back and close the lid snaps. Visually check the seal again.

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## Quick-Release Base, Handles and Tray

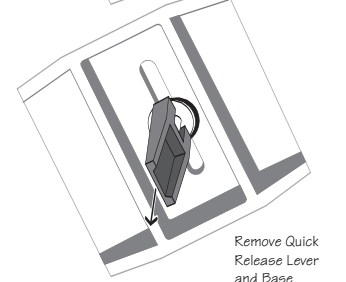
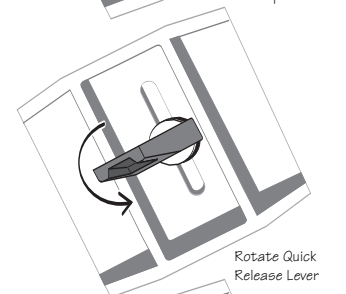
### Quick-Release Base

The Quick-Release Base is plastic. A toggle lever located underneath the base allows the base to be easily removed from the Tray. Turn the housing upside down, pull out on the toggle lever. Rotate the lever 90° to remove the base.



### Handles and Tray

The handles on the housing are rubber and the tray is aluminum. Their weight helps to offset the buoyancy of the housing. The complete assembly is slightly negative underwater for better control. The handles have a push button release for easily attaching and removing strobe arms. The tray and handles can be removed from the housing. To remove the tray, the base must be removed to gain access to the nuts holding the tray on the housing. Remove the 2 nuts, washers and rubber spacers. **DO NOT** remove the bolts protruding through the housing.



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## Lubricants

1. Ikelite provides silicone lubricant with the housing. We recommend that you use only Ikelite lubricant on Ikelite products as some other brands may cause the o'ring to swell and not seal properly.
2. Use only enough lubricant to lightly cover control shafts and o'rings. 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.**

## Lens Port

Treat the glass in the lens port as a camera lens. After use, rinse and gently dry the lens port to avoid water spotting. To clean use a mild soap solution or lens cleaner.

*Do not use alcohol or window cleaner on the Lens Port.*

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## Using an External Flash with the EV-Controller

This camera and housing can utilize the Ikelite EV-Controller with any Ikelite DS Substrobe. The EV-Controller provides 10 manual power settings in 1/2 stop increments when used with an Ikelite DS Substrobe.

### Using the EV-Controller with Sync Cord #4103.51

The EV-Controller has a bulkhead and can be connected directly to the housing with sync cord #4103.51 eliminating the need to use the camera's built-in flash.

### Camera Menu settings when using the EV-Controller with a sync cord.

Go to Speedlight Options, Pop Up set to Auto, Speedlight Control set to Internal Off.



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## Using Flash

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

If you do not have an external flash the camera's built-in flash can be used to illuminate subjects underwater. The housing has a built-in Diffuser to aid in providing even illumination.

### External Substrobes

External strobes offer several advantages over using the camera's built-in flash. External strobes move the flash away from the camera lens which helps reduce backscatter. They also expand lighting options to achieve the best lighting for different subjects and lenses. A strobe such as the DS51 is ideal for use with macro and most standard camera lenses up to 28mm. When an optional wide angle lens is added a strobe such as the DS125 is needed as it has a greater angle-of-coverage. A second external strobe can be added to fill the shadows and produce more realistic photographs.

### Using an External Flash with Sync Cord.

This camera and housing can use any Ikelite Substrobe, in the Manual Mode when connected with a #4103.51 sync cord.

Substrobe 50  
Substrobe DS50  
Substrobe DS51  
Substrobe 100A  
Substrobe DS125  
Substrobe 200

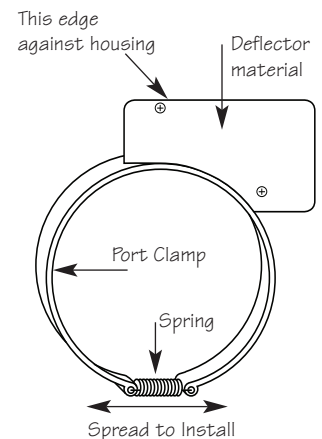
*Strobes do not work TTL with this housing.*

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## Using Flash Cont.

### Using the EV-Controller in Slave Mode

A flash Deflector is provided with the housing. When using an external flash with the EV-Controller in the slave mode the Deflector is used to redirect the camera's flash to the sensor in the EV-Controller which triggers the DS Substrobe.



### Installing Deflector

To install the Deflector spread the port clamp at the spring end and slide over the lens port. The white plastic should be placed in front of the camera flash. The port clamp should be pushed back against the front of the housing.

### Using Dual Substrobes

For dual strobes the #4103.52 dual sync cord can be used or the second strobe can be slaved using the Ikelite Remote TTL Slave #4100.5.

### NOTE:

Ikelite Substrobes manufactured before June 1, 2001 require a modification to be used in a two strobe set-up with a dual sync cord.

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## Optional Accessories

### Back O'ring #109

O'rings last for several years if properly maintained. (See Maintenance) Always carry a spare o'ring in case the housing o'ring becomes damaged or lost.

### UR/Pro Filter #6441.41

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## Control Maintenance

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

1. 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 lukewarm fresh water. After a few minutes operate the push button. If this does not correct the problem, return the housing to Ikelite for maintenance.
2. Some of the controls have long shafts. These controls can be pulled out, exposing the shaft (see drawing).
3. Some of the controls have a short shaft and cannot be pulled out exposing the shaft for lubrication. In the unlikely event one of these controls sticks or becomes difficult to operate you can remove the control from the housing and lubricate it, or return the housing to Ikelite for maintenance. To remove the control, loosen the set screw in the knob (allen wrench required); remove the knob. If there is salt or dirt build-up on the exposed control shaft, clean the shaft. Open the housing and gently slide the control shaft out of the control gland. Clean and lightly lubricate the shaft, including the end of the shaft. Slide the shaft back into the control gland and gently slide it back and forth a few times without fully removing the shaft from the gland. Replace the knob, NOTE the flat area on the shaft, the set screw in the knob should tighten down against the flat area on the control so the knob does not turn on the shaft.

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## Maintenance

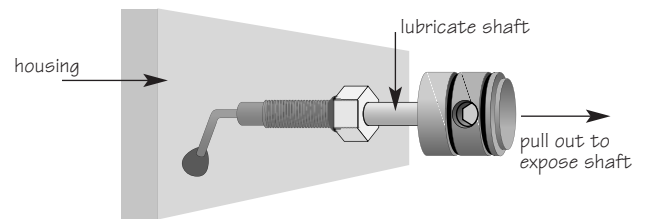
The Ikelite Digital Housing should be given the same care and attention as your other photographic equipment. In addition to normal maintenance we recommend that the housing be returned to Ikelite periodically to be checked and pressure tested.

1. **Do Not** leave the camera and housing in direct sunlight for prolonged periods. Heat may damage the camera.
2. **Do Not** ship the camera in the housing.
3. Before using the housing, always check the tightness of the **set screw** in each control knob. (See page 17) Check each **control gland** penetrating the housing to make sure they are tight. There is a slight chance that either could vibrate loose during travel.
4. Keep the back o'ring clean and lightly lubricated. To lubricate remove the o'ring from the back. Put a small amount of Ikelite lubricant on your fingers. Draw the o'ring through your fingers to apply a light coating of lubricant. Only apply 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.
5. Keep the area where the o'ring fits and the sealing surface of the housing clean.
6. Rinse the housing exterior thoroughly in fresh water after each salt water use. Dry with a soft cloth. Dry lens port to eliminate water spotting.  
After several uses in salt water soak the housing in a mild soap solution, rinse and dry before storage. When storing the housing, remove the back o'ring, lightly lubricate and place in a plastic bag. Place the plastic bag with o'ring inside the housing for safe keeping.

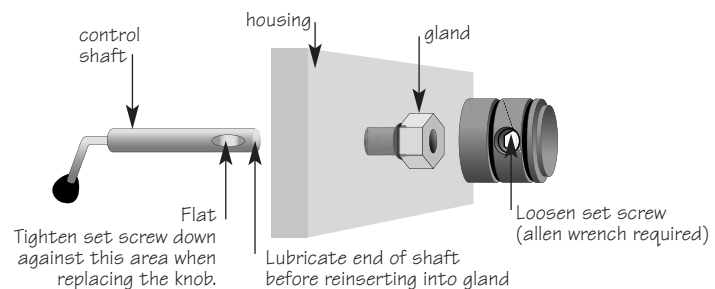
### CAUTION

*Never use spray lubricants as the propellant ingredient can cause the plastic housing to crack.*

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To lubricate the control, gently pull on the knob until the stainless steel shaft is exposed. Lightly lubricate the shaft, then move the shaft in and out several times. This will lubricate the x'ring in the Ikelite control gland. This should be done before using the housing after a prolonged storage period, or once a week when the housing is in use.



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## Photo Tips

1. The number one rule in underwater photography is eliminate as much water between camera and subject as possible. Get as close as you can to the subject, then use the zoom. If you are using flash, subjects beyond 6 feet (1.8m) will not have much color.
2. 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.
3. 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.
4. 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.

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## General Tips

1. Due to the power required to operate the camera, flash, and LCD screen it is a good idea to start each dive with a fresh set of batteries. Use NiMH or LITHIUM-ion batteries (see camera manual).
2. As soon as you enter the water, take a moment and check the housing to see that it is properly sealed.
3. 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 photographs.
4. Due to the light sensitivity of digital cameras they may overexpose close-up photographs when using an external flash. If close-up photos are constantly overexposed, use the camera menu and change the external strobe exposure to -1 or higher. Shoot a few test photographs, changing the strobe exposure compensation until you are satisfied with the results.
5. Shoot with the smallest aperture possible when shooting close-up with flash.
6. Use the macro mode for close-up photographs.
7. Shoot pictures at the highest resolution. Several printing methods require high resolution. It is easy to reduce the size and resolution, but almost impossible to increase size and resolution from a small file and obtain a satisfactory result.

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## Ikelite Limited Warranty

All Ikelite products are warranted against any manufacturing defects for a period of one (1) year from the date of purchase. Defective products should be returned prepaid to Ikelite. Ikelite will, at its discretion, repair or replace such products, and will return to customer prepaid. All other claims, of any nature, including but not limited to bulb failure are not covered. Except as mentioned above, no other warranty expressed or implied, applies to this Ikelite product.

## Returning Products for Service

Ikelite is most interested in performing any service to assure that all products perform as intended. For repair or service, return the product to the address below with your name, address, phone number and a brief description of the problem. Evidence of purchase date must be provided to obtain warranty service.

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

317-923-4523

email: [ikelite@ikelite.com](mailto:ikelite@ikelite.com)  
[www.ikelite.com](http://www.ikelite.com)



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