

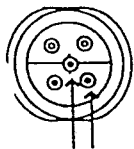
TROUBLESHOOTING

STROBE WILL NOT FIRE

1. Check the strobe ready light. Turn the strobe OFF and then back ON. Make sure that the switch has actually clicked into position.
2. Make sure the strobe charger is operating properly and the ni-cad batteries are fully charged. Or check that alkaline batteries are inserted according to the polarity markings. It is possible to buy bad "new" batteries; check the voltage output with a meter.
3. Check the mode switches on the camera and strobe.
4. Check the sync cord connection at the camera and strobe. Visually check that the internal TTL cable has been properly connected to the camera.
5. Disconnect the external sync cord from the housing, but leave the cord connected to the strobe. Position the end of the cord with the raised half-circle encompassing the receptacles towards you.

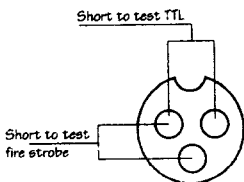
Short across the center and lower right receptacles.

If the strobe does not fire, the problem lies in the strobe or cord. *If you short across the wrong receptacles, you will damage the strobe electronics!*



Short between these contacts

6. If the strobe fires, reconnect sync cord to the housing. Open the housing, and remove the internal TTL cable from the camera. Position the end of the cable with the notch positioned at the top and then short across the appropriate receptacles.
7. If the strobe fires, reconnect the internal TTL cable making sure that it makes good connection with the camera. There may be a problem with the camera.
8. If the system still does not fire, return the housing and/or strobe to authorized Ikelite personnel. DO NOT self repair.



IKELITE DIGITAL CASE

SUPPLEMENTAL INSTRUCTIONS FOR:

#6170 NIKON COOLPIX 950
#6175 NIKON COOLPIX 990

This supplemental set of instructions describes additional features specific to your housing model. Prior to testing the system in the water, please read this supplement along with the general instruction manual to become familiar with its features and functions.

Ikelite Digital Cases are slightly negative in salt water for stability. Housing has been water pressure tested at the factory and has a working depth of 60m (200').

CAMERA FLASH

Always turn the camera flash OFF before using the housing as the built-in flash on the camera is not usable inside the housing. Use of the built-in flash could damage components inside the housing.

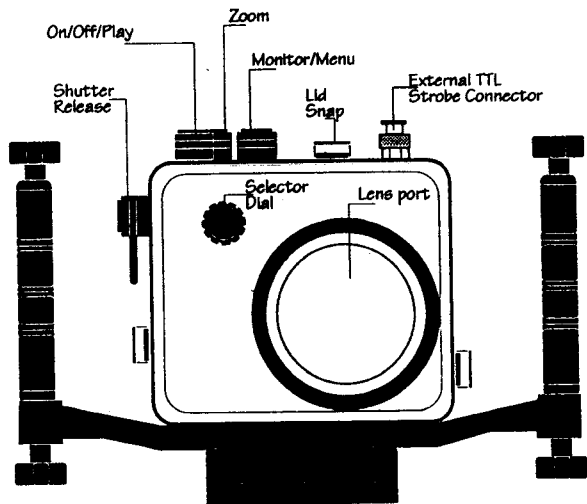
See the subsequent section "Turn the Flash Off".

ring
6175 - return

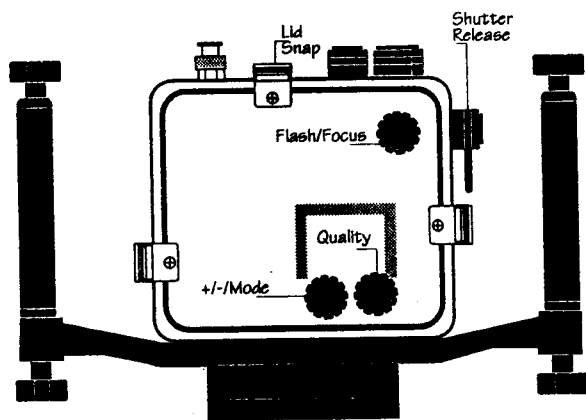
COOLPIX 950

HOUSING CONTROLS

- On/Off/Play
- Shutter Release
- Power Zoom
- Monitor/Menu
- Selector Dial
- Flash/Focus
- +/- / Mode
- Quality



FRONT VIEW



BACK VIEW

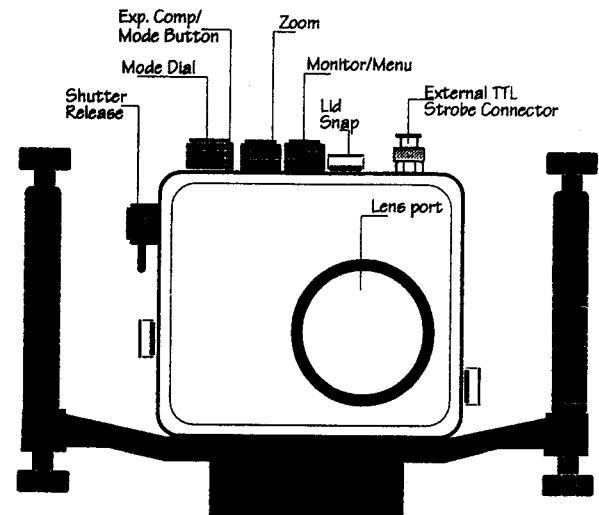
COOLPIX 990

HOUSING CONTROLS

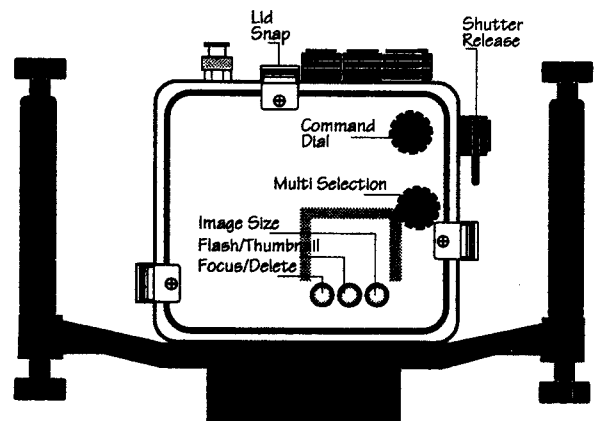
- Exposure Compensation / Mode Button
- Shutter Release
- Mode Dial
- Zoom
- Monitor / Menu
- Command Dial
- Multi Selection
- Image Size
- Flash / Thumbnail
- Focus / Delete

MULTI SELECTION

Rotate the indexed multi selection control to depress the desired function button to make the desired selection. Then rotate this control to the resting (up) position to lock the settings and return the camera to normal shooting mode. This control must be in the resting (up) position when installing or removing the camera.



FRONT VIEW

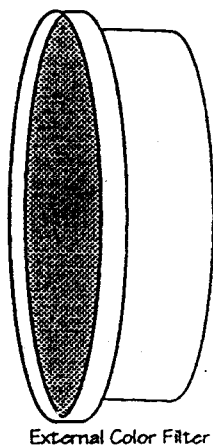
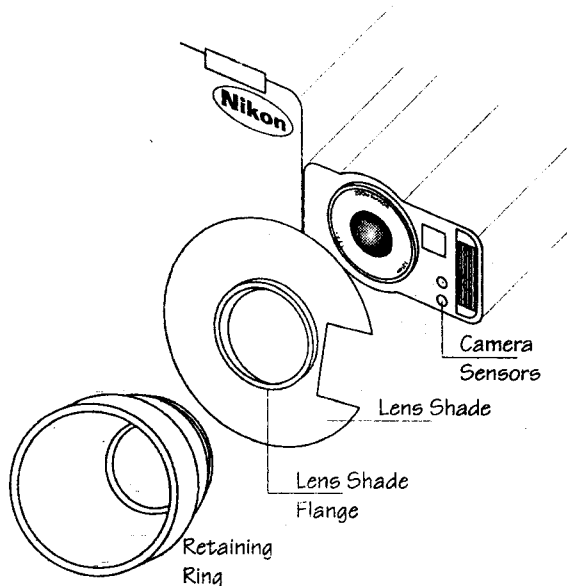


BACK VIEW

PREPARATION

PACKAGED WITH HOUSING

- Lens Shade
- Retaining Ring
- External UR/Pro Color Filter
- Silicone Lubricant



PREPARATION *continued*

CAMERA LENS CHOICES

The Ikelite housing accommodates the Coolpix camera with the standard lens.

For wide angle, the following optional lenses can be used. Ikelite offers optional 0.7x 26mm-equivalent wide-angle lens adapter #0904.37. The discontinued Nikon-brand 24mm wide-angle lens WC-E24 is also usable.

Unfortunately, the newer Nikon 24mm WC-E63 wide-angle lens adapter can NOT be used with the Ikelite housing. This lens is too large in diameter and also blocks the TTL metering sensor on the camera.

The other lens adapters offered by Nikon also can NOT be accommodated in the housing.

LENS SHADE

The lens shade helps block light reflection and refraction. Place the lens shade over the camera lens with the protruding flange positioned away from the camera. Rotate the lens shade to position the cut-out notch over the two front sensors so they will not be blocked.

When using the standard lens, position the lens shade as described above and then carefully thread the retaining ring into the camera. The retaining ring will compress against the lens shade to secure it in place.

When using an optional lens, position the lens shade as stated above and then carefully thread the optional lens on the camera. The separate retaining ring is not needed, as the optional lens will secure the shade in place.

COLOR FILTER

The external UR/Pro Color Filter is described in the main instruction manual. The Color Filter can be used in conjunction with the optional video light but should NOT be used in conjunction with the optional strobe flash.

We suggest installing the Color Filter strap over the contour handle to help assure that it will not be lost.

BATTERY

Install 4 fully charged AA-size batteries in the camera. Select from the following battery choices; we recommend the nickel metal hydride rechargeables.

- AA rechargeable **nickel metal hydride** batteries
- AA rechargeable **ni-cad** or AA **alkaline** batteries

FINAL PREPARATION

The camera's auto focus feature is utilized underwater. For best results, move in close to your subject and use the wide angle range to shoot thru as little water as possible. About 1/2 - 3/4 of the zoom range is accessible underwater. We recommend initially selecting the wide angle setting for the zoom.

CAMERA SETTING

Zoom Lever	-	Wide Angle Setting
Flash	-	Off

The built-in flash on the camera is NOT usable inside the housing. Always turn the camera flash OFF before using the housing. See the following section.

TURN THE FLASH OFF

Always turn the camera flash OFF before using the housing as the built-in flash on the camera is not usable inside the housing. Use of the built-in flash could damage components inside the housing.

COOLPIX 950

Procedure to turn OFF the Coolpix 950 flash.

1. Turn the Coolpix 950 camera ON and place in the REC M mode.
2. Press the menu button.
3. Use the arrow buttons to scroll to SET UP and press the shutter button.
4. Use the arrow buttons to scroll to CONTROLS and press the shutter button.
5. Use the arrow buttons to scroll to INTFLASH and press the shutter button so the box is checked.
6. Press the menu button to return to the normal viewing screen.

There is no icon on the LCD screen of the CP950 showing that the internal flash has been disabled; therefore, make sure the INTFLASH box is checked in the menu settings.

When using an external strobe, depress the flash button on the CP950 and scroll thru the flash menu until only the external lighting bolt is displayed in the top viewing screen. The other external flash settings, such as slow and auto, should not be used underwater.

COOLPIX 990

Procedure to turn OFF the Coolpix 990 flash.

1. Turn the Coolpix 990 camera ON and place in the REC M mode.
2. Press the menu button.
3. Use the arrow pad to scroll down to SPEEDLIGHT OPT. and press the right arrow.
4. Press the down arrow to Speedlight Cntrl and press the right arrow.
5. Press the down arrow to Int Flash Off and press the right arrow.
6. Press the menu button to return to the normal viewing screen.

Two lightning bolts should now be displayed in the LCD screen on top of the CP990 camera. One of the lightning bolts should be encircled with a diagonal slash thru it which indicates that the camera flash is disabled. The other lightning bolt is for the external flash.

When using an external strobe, depress the flash button on the CP990 and scroll thru the flash menu until only the two lightning bolts are displayed in the top viewing screen. The other external flash settings, such as slow and auto, should not be used underwater.

INSTALLATION

CAMERA TRAY

Slide the camera tray out of the housing. Place the camera against the stabilizing pins on the tray. Secure the camera to the tray with the tripod mounting bolt. The camera should fit easily on the tray and should be parallel with the sides of the tray.

INTERNAL TTL CABLE

Connect the TTL cable inside the housing to the camera ONLY when using an external strobe flash. It is NOT necessary to connect the TTL cable to the camera when using a video light or color filter.

Before connecting the TTL cable, first secure the lens shade to the camera and mount the camera to the tray. Then route the TTL cable around the camera lens and behind the lens shade. Tilt the lens head to more easily connect the TTL cable. Properly align the plug on the TTL cable and connect it to the camera socket.

INSERTING THE CAMERA

Slowly slide the camera tray (with camera mounted) back into the housing. Be certain to guide the lens shade into the port opening as you install the camera.

DO NOT force this installation; if the controls and internal TTL cable are out of the way and everything is lined up properly, the camera and tray will fit easily inside. Make certain that the tray is completely in the housing.

Make sure that the internal TTL cable does not interfere with the housing seal.

HOUSING CONTROLS

Align the housing controls with the camera functions and operate each control to see how it works with the camera. Some controls such as shutter release will be used frequently. Other controls may seldom be utilized. Refer to your camera owner's manual for the proper function of each camera control. Look thru the back to be sure that you can see into the viewfinder.

When using the housing controls, especially the shutter release, do NOT use excessive force because you could damage the camera.

Always turn the camera flash OFF before using the housing as the built-in flash on the camera is not usable inside the housing. Use of the built-in flash could damage components inside the housing.

CAUTION

Make sure that the internal TTL cable does not interfere with the housing seal.

If the housing controls are not properly positioned, they could interfere with the housing seal.

EXPOSURE MODE

CAMERA FLASH

Always turn the camera flash OFF before using the housing as the built-in flash on the camera is not usable inside the housing. Use of the built-in flash could damage components inside the housing. See the previous section "Turn the Flash Off" for the procedure.

When using an external strobe, also select the proper external flash setting on the camera.

EXPOSURE MODE

The following exposure information is applicable regardless of whether you use the color filter, optional strobe, or optional video light.

We recommend that you rotate the camera's mode dial to the Manual mode (REC M setting). Then set the shooting mode to the "A" aperture priority. Adjust the aperture as necessary to obtain the correct exposure. You may also access the exposure options or metering in the camera menu to adjust exposure compensation. We also recommend using center-weighted metering.

Note that some exposure corrections can be made in a photoshop program via your computer after your digital images have been downloaded.

LIGHTING TECHNIQUES

Often times the external UR/Pro underwater color correcting filter provided with the Ikelite housing is all that is needed to obtain quality photographs underwater. The color filter is recommended only for *sunlight situations underwater* between 7.5m and 24m depth (25'-80'). The color filter is described in the main instruction manual. The color filter can be used in conjunction with the optional video light but should NOT be used in conjunction with the optional strobe flash.

Add an optional video light or strobe flash to illuminate the subject and bring out the subject's true colors. Due to the loss of color when light passes through water, move in on your subject to photograph thru as little water as possible.

The maximum recommended lighting distance underwater with **any manufacturer's video light or strobe** is 1.8m (6'). Selecting a subject at a greater distance underwater will provide mainly bluish color silhouette type images. For more natural looking photos, add a second video light or strobe to control the highlights and shadows of your subject.

OPTIONAL VIDEO-LITE

Ikelite offers Video-Lites which provide constant and even lighting and allows the camera to adjust for correct exposures. The optional Pro Video-Lite II snaps underneath the Digital Case in place of the quick-release base. The arm for the lite head mounts to the end of the bottom bar and the switch mounts to the top of the vertical contour handle.

Optional Ikelite Modular or Super-C Video-Lites mount to the end of the bottom bar or contour handle on the Digital Case.

OPTIONAL STROBE

OPTIONAL TTL SUBSTROBES

Ikelite offers a full range of TTL Substrobes that automatically compensate for distance, f-stop, and filters. The Coolpix uses simulated TTL which reads the light from the Ikelite TTL Substrobe and automatically signals the strobe to turn itself off when the exposure is correct. The housing features an external Ikelite TTL female bulkhead to connect the strobe.

The potential exists for the TTL strobe to slightly overexpose up to one f-stop in some situations due to variables related to each shot and the constraints of the underwater camera housing. If necessary, adjust the camera's exposure compensation mode or adjust the exposure later in a photoshop program via your computer.

When using dual Substrobes, connect the second Substrobe to Ikelite's optional Remote TTL Slave sensor #4100 described below. This TTL sensor eliminates the need for a dual cord. If you prefer to use the dual cord, then you **MUST** order special Substrobes specifically modified for the Coolpix with dual strobes. This strobe modification is **ONLY** necessary when using the dual cord with the Coolpix.

REMOTE TTL SLAVE #4100

For more natural looking photographs, add a second strobe to control the highlights and shadows of your subject. In a dual strobe system, link the secondary strobe via cable to the camera. Then combine the primary strobe with Ikelite's Remote TTL Slave, which eliminates the need for a dual cord. Full TTL functions are provided via slave sensors so the primary strobe has the freedom to be hand held and maneuvered without the inconveniences of a long connecting cord.

FLASH CONNECTOR

TTL flash connector on the housing permits Ikelite TTL Substrobes to be connected; remove the waterproof cap and select the appropriate sync cord. When a sync cord is not connected, the waterproof cap **MUST** be secured on the connector before going underwater.

Different model Ikelite TTL Substrobes can be combined using the Remote TTL Slave or dual cord #4103.2. Detach the sync cord for ease in packing.

USE ONLY IKELITE TTL SUBSTROBES

#4103	Connects 1 TTL Substrobe to this housing.
#4103.2	Connects 2 TTL Substrobes to this housing

See previous section for description of Remote TTL Slave which eliminates the need for dual cord #4103.2.

DO NOT use these TTL cords with a non-TTL strobe. You will damage the camera circuitry.

If you use the dual cord #4103.2, then you **MUST** order special version Substrobes specifically modified for dual strobes with the Coolpix. This strobe modification is **ONLY** necessary when using the dual cord with the Coolpix. To eliminate this problem, use the optional Remote TTL Slave sensor #4100 for the second strobe.

FLASH CONNECTOR

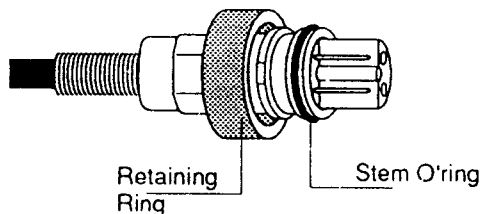
continued

CONNECTING THE CORD

1. Turn the Substrobe OFF and make sure all components are dry. Clean and lightly lubricate the stem o-ring and connector threads. Check o-ring for nicks or cuts. Never use spray lubricant.
2. Note positioning of the receptacles and pins. Properly align the end of the sync cord and insert into the housing connector. When using the #4103 cord, both cord ends are identical; either end can be connected to the housing.
3. Hand-tighten the knurled retaining ring on the sync cord. Push the connector body further into the housing connector and continue to tighten the knurled ring.

DO NOT leave the sync cord connected for prolonged periods as electrolysis can make removal impossible.

DO NOT disconnect the sync cord from the housing or strobe underwater or when wet. Connections are NOT waterproof when not connected.



LUBRICANT

Use only Ikelite brand silicone lubricant with Ikelite brand o-rings as other brand lubricants can cause Ikelite o-rings to swell in size. DO NOT use spray lubricant as it may cause cracking of the plastic.

Ikelite silicone lubricant is provided for sync cord o-ring. Use only enough lubricant to lightly cover the o-ring; wipe off any excess with a clean cloth. Lubricant only reduces friction; it is NOT a sealant.

TTL READY LIGHT

CAMERA READY LIGHT

Reference the ready light on the camera viewfinder; it will glow when strobe has recycled and is ready to fire.

The camera ready light comes back on steady if the exposure was correct. If the strobe fires at maximum power, the ready light will blink for about 4 seconds warning that the photograph may be under-exposed. Check the exposure in the rear LCD screen and move in closer to the subject if under-exposed.

STROBE READY LIGHT

Ready light on the Ikelite Substrobe 50, Ai, 100A, and 200 also indicate correct and incorrect exposure as mentioned above. Ready light on the other Ikelite Strobes does NOT differentiate between correct and incorrect exposure.

DOME PORT

REASONS FOR THE DOME PORT

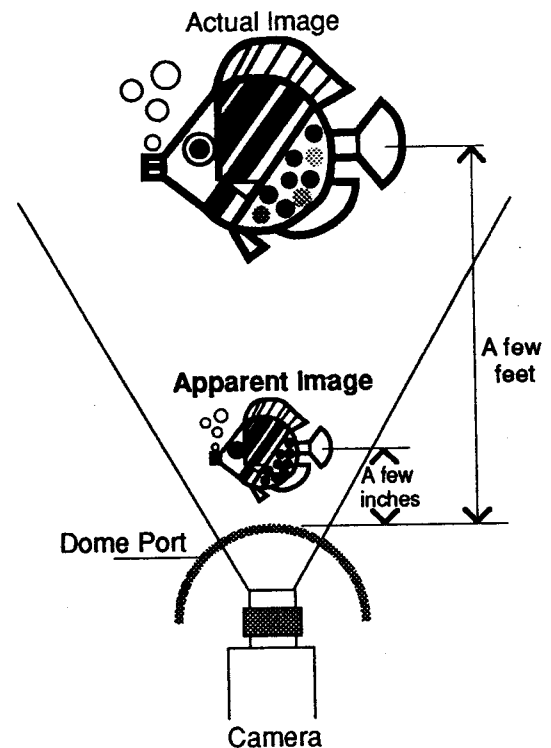
- Increases color saturation.
- Corrects for refraction, thereby providing the same coverage angle underwater as above water.
- Increases definition of underwater images.

HOW THE DOME WORKS

The dome port offers no special optics *above water* and simply functions as a clear window.

Underwater, the dome functions as a lens by creating an apparent image of the actual subject. This apparent image is located a few inches in front of the dome even though the actual subject may be several feet away.

Treat the dome port as a camera lens. The dome corrects for refraction to maintain the same coverage angle underwater. Molded by one of the world's leading lens manufacturers, Ikelite's dome is specifically designed for underwater photography.



AUTO FOCUS

Camera's auto focus feature must be used underwater. Initially set the zoom control to the wide-angle setting. The camera will automatically focus on the subject. The wide-angle setting is the preferred setting underwater because it provides excellent depth of field and allows you to move in closer to your subject. See the general housing instructions for additional information.