



Manual for the FS500 Housing

For Nikon Coolpix S500 & S510 Digital Cameras



TABLE OF CONTENTS

TABLE OF CONTENTS	2
GENERAL INFORMATION.....	3
THE FANTASEA FS500 HOUSING.....	3
FANTASEA FS500 USES	3
GENERAL CAMERA DESCRIPTION	10
NIKON COOLPIX S500 AND S510 FEATURE HIGHLIGHTS.....	11
USING THE FANTASEA FS500 HOUSING	12
OPENING THE HOUSING.....	12
INSERTING CAMERA.....	12
CHECKING THE O-RING	13
CLOSING THE HOUSING.....	13
VIEWING THE SUBJECT	15
TAKING THE PICTURE	15
CHOOSING IMAGE FILES	15
BATTERY LIFE.....	16
USING THE FLASH.....	17
ACCESSORY SLAVE FLASH.....	17
LENS ACCESSORIES	18
FANTASEA COOLPIX ACCESSORY SYSTEMS AND SETS	18
SHOOTING TECHNIQUES.....	19
EXPOSURE MODES (PRE-SET BEFORE CAMERA INSERTION)	19
ZOOM CONTROL	19
MACRO FOCUS.....	19
QUICK REVIEW	19
CAMERA STANDBY MODE	20
CARE & MAINTENANCE	21

GENERAL INFORMATION

THE FANTASEA FS500 HOUSING

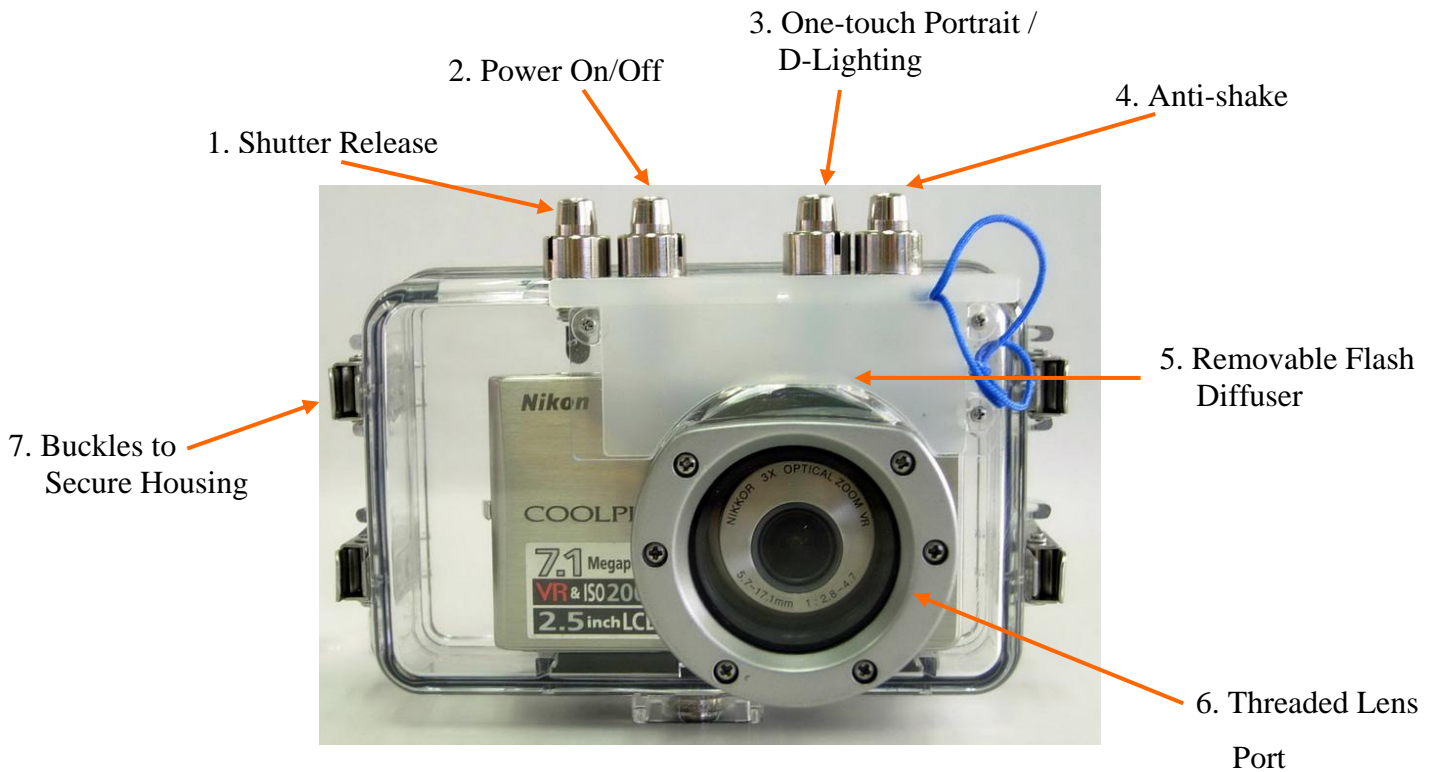
Fantasea has specially designed the FS500 housing for the Nikon Coolpix S500 and S510 cameras. This housing is ideal for outdoor and underwater photographers who enjoy the camera's automatic exposure features for capturing fast action pictures easily and creatively. The FS500 housing insures easy handling and accurate access to camera functions through the critical placement of push-button controls and a compact design.

The FS500 housing provides all essential control functions: On/Off, Shutter Release, D-Lighting, Anti-shake, One-touch Portrait, Mode, Zoom In/Out, Menu, Flash, Exposure Compensation, Timer, Macro, Playback and Delete, and has a built in Flash Diffuser and an anti-glare hood over the LCD screen.

FANTASEA FS500 USES

The Fantasea FS500 housing is designed as an underwater/outdoor camera housing. It features double O-ring on all controls, and has a working depth of 200 feet/60 meters. Underwater photographers can dive or snorkel and capture all the excitement of this fascinating world, while outdoor photographers also have the option of capturing the action of such activities as white water and paddle sports, swimming, sailing and boating, surfing, fishing and hunting, backpacking and camping. The Fantasea FS500 will protect the Coolpix S500 and S510 cameras from water, sand, dust, and other damaging elements.

Top/Front Side of Housing



Numbered description below refers to corresponding numbers on above graphic.

1. Shutter Release

This is a two stage shutter-release button. First lightly press the shutter-release button halfway, stopping when you feel minimal resistance. Once the camera has focused, press the shutter-release button the rest of the way down to release the shutter and take the picture.

2. Power On/Off

To turn on the camera, press the power switch. The power-on lamp (green) will turn on for a moment, and the monitor will turn on.

To turn off the camera, press the power switch again.

3. One-touch Portrait / D-Lighting

- One-touch Portrait: For portrait shots, press the One-touch Portrait button when the camera is in auto, high-sensitivity, scene, movie or anti-shake modes. The following features are automatically activated:
 - Portrait: Portrait subjects stand out clearly.
 - Face-priority AF: The camera automatically detects and focuses on faces.
 - Advanced red-eye reduction: Reduces "red-eye" caused by the flash.

Press the One-touch Portrait button again to return to the shooting mode selected in the shooting mode selection menu.

- D-Lighting: can be used to create copies, with enhanced brightness and contrast, brightening dark portions of a picture. Enhanced copies are stored as separate files.
 - Select the desired picture from full-frame or thumbnail playback mode and press the D-Lighting button.
 - Press the multi-selector up or down arrows to choose "OK", and press the OK Button to confirm your selection.

4. Anti-shake

For anti-shake mode, press the Anti-shake button when the camera is in shooting mode. Anti-shake mode reduces the effects of camera shake and blurred subjects, and produces clear images. This mode reduces blur when shooting subjects in motion.

- The higher sensitivity is set and the shutter speed will be faster than in auto mode.
- Flash mode and self-timer are set to off.

Press the Anti-shake button again to return to the shooting mode selected in the shooting-mode selection menu.

5. Removable Flash Diffuser

The Flash Diffuser is used to diffuse the flash's intensity [the internal flash]. See the section on "Accessory Slave Flash" for additional information.

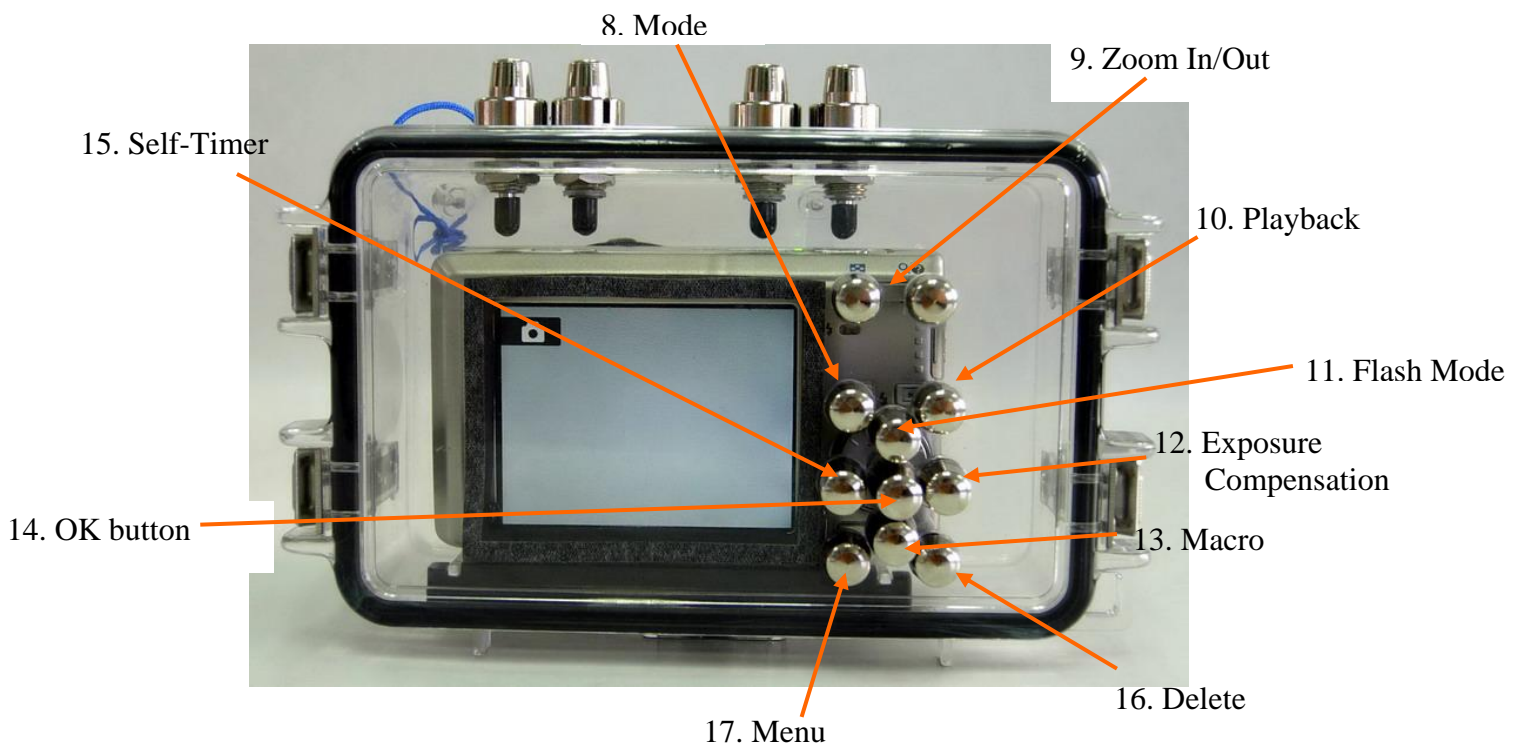
6. Threaded Lens Port

Refer to the section "Inserting Camera" for useful information.

7. Buckles to Secure Housing

Refer to the section "Using the Fantasea FS500 Housing" on how to open and close the camera housing.

Back Side of Housing Buttons



Numbered description below refers to corresponding numbers on above graphic.

8. Mode

- Press the Mode button during shooting to display the shooting mode selection menu (Auto mode, Scene mode, Setup mode, High sensitivity shooting mode, Movie mode or Voice recording mode), or during playback to display the playback mode selection menu (Playback mode, Audio playback mode, List by date mode, Calendar mode or Setup mode).
- Use the multi selector to choose the desired mode.
- Press the Playback button to switch between the mode selection menus for shooting mode and playback mode.

9. Zoom In/Out

- Use the Zoom buttons to activate optical zoom. Press "W" to zoom out, increasing the area visible in the frame, or "T" to zoom in, so that the subject fills a larger area of the frame. When the camera is zoomed to the maximum magnification (3x), holding "T" down triggers digital zoom. The subject is magnified up to 4x, for a total magnification of 12x. A monitor indicator shows the current zoom ratio.
- Press "W" in full-frame playback to display pictures in "contact sheets" of four or nine thumbnail images.
- Press "T" to zoom-in on still images displayed in full-frame playback.
- When entering a menu, press "T" to view a description of the currently selected menu option.

10. Playback

- Press the Playback button to enter full-frame playback. Multi-selector buttons may be used to view pictures.
- Press Playback button again or press the shutter-release halfway to return to shooting mode.
- If the camera is turned off, hold down the Playback button to turn the camera on in playback mode.

Multi-Selector buttons (11-15)

11. Flash Mode

In order to select a flash mode:

- Press the Flash Mode button.
- Use the multi-selector up/down arrows to choose the desired flash mode (Auto, Auto with Red-Eye Reduction, Off, Fill Flash and Slow Sync), and press "OK".

12. Exposure Compensation

Exposure Compensation is used to alter exposure from the value suggested by the camera to make pictures brighter or darker.

- Press the Exposure Compensation button.
- Press the multi-selector up/down arrows to adjust exposure, and press "OK".

13. Macro

Macro Close-Up mode is used for taking pictures of objects as close as 15cm/3.9 inch.

- Press the Macro Mode button.
- Press the multi-selector up/down arrows to choose "On", and press "OK".
- Press "T" or "W" to frame the picture, focus and shoot.

14. OK Button

Push this button to confirm a selection.

15. Self-Timer

The camera is equipped with a ten-second and three-second timer for self portraits. When using the self-timer, mount the camera on a tripod or rest it on a flat and stable surface.

- Press the Self-Timer button.
- Press the multi-selector up/down arrows to choose 10 seconds or 3 seconds, and press "OK".
- Frame the picture, press the shutter-release button half-way to focus, and then all the way down.

16. Delete

- Press Delete to delete the picture currently displayed in the monitor in full-frame playback. Press the multi-selector up/down arrows to choose "Yes", and press "OK".
- In Shooting Mode, press this button to delete the last picture taken. When the confirmation dialog shown at right is displayed, press the multi-selector up/down arrows to choose "Yes", and press "OK".

17. Menu

Press the Menu button to display the menu for the selected mode:

- Shooting menu
- High-sensitivity menu
- Scene menu
- One-touch portrait menu
- Movie menu
- Playback menu
- Calendar menu
- List by date menu
- Setup menu

Note!

It is strongly recommended that you familiarize yourself with all the controls topside before using these controls while diving.

GENERAL CAMERA DESCRIPTION

The new Coolpix S500 and S510 cameras bring world-class photographic results to professionals and amateurs alike, packed into a sleek compact casing.



A recent addition to the COOLPIX line of cameras are slim, lightweight models with an impressive imaging performance of 7.1 megapixels on the S500 camera and 8.1 megapixels on the S510 camera, optical image stabilization (VR), and sporting a 2.5-inch large, bright LCD monitor. They support smooth composition as well as enjoyable image playback anywhere. The Coolpix S500 and S510 power up in only 0.8 seconds and have a practically imperceptible shutter release time lag of less than 0.005 seconds. These cameras offer a powerful x3 Zoom Nikkor lens with a range of 35-105mm, and a focus range of 50cm in Camera Mode or 15cm in Macro Mode, making it possible to accurately capture the detail and color of both the smallest nature shot and the widest landscape panorama as well as augmenting the digital camera's versatility underwater. The optical stabilization (VR) feature compensates for camera shake to produce clearer, steadier images, especially when shooting moving objects like underwater life. In combination with the high-sensitivity mode, which extends to as high as ISO 2000, the VR functions also enables the user to take quality photographs in lower light conditions. All functions are optimized to respond immediately, ensures that the user never misses a fleeting opportunity for a great shot, which is extremely important when shooting underwater fast moving objects.

NIKON COOLPIX S500 AND S510 FEATURE HIGHLIGHTS

□ ISO 2000 capability

Light sensitivity can be manually set as high as ISO 2000. This allows the use of faster shutter speeds to avoid blurred results when shooting moving objects or in locations with insufficient lighting. In high sensitivity mode, the ISO is automatically adjusted from ISO 50 to as high as ISO 2000, to ensure optimal exposure and carefree shooting in lower light.

□ Anti-shake

One press of the button activates Anti-shake mode for clearer results in low light or at telephoto focal lens settings. High-ISO automatically sets the optimal ISO and works with VR (Vibration Reduction) to deliver steady results, while BSS (Best Shot Selector) selects and saves the sharpest image from up to ten sequential shots.

□ VR Image Stabilization

The COOLPIX S500 and S510 offer the advantage of optical lens shift VR (Vibration Reduction), which cleverly detects any camera shake and accurately compensates for it to produce sharper, steadier images, like moving subjects in the underwater life.

□ White Balance

The COOLPIX S500 and S510 feature Auto Exposure with TTL control, and a choice of 7 manual modes: Direct sunlight, Incandescent, Fluorescent, Cloudy, Shade, Flash and White Balance Preset.

USING THE FANTASEA FS500 HOUSING

OPENING THE HOUSING

1. Release all four latches at the same time, and lift off back half to open housing.

INSERTING CAMERA

Since the **Fantasea FS500** is specifically designed for the Coolpix S500 and S510 digital cameras, inserting the camera into the housing is quite simple.

1. Mount the camera on the removable tray, using the tripod screw.
2. Slide the tray and camera into the housing tray slot. Make sure it is completely inserted.
3. Make sure the camera lens is centered in the rounded port area and that the lens does not distort the round black rubber seat. The housing is designed to have the camera fit in place perfectly, but if you are not careful, it is possible to put it in at an improper angle and hence it will be impossible to get a good seal or easy closure of the housing.
4. *After camera insertion, be sure that the extended camera lens does not catch or bend the black rubber seat on the inside of the lens port. It is vital that the lens does not disturb this rubber seat.*

 Notes:

- 1. It is recommended to make some camera settings prior to inserting camera into the housing. Please refer to the Coolpix owner's manual for menu options and personal preferences.**
- 2. Take a few test shots: it is recommended to turn the camera "on" and program to "Flash Always" mode before inserting into housing and then take test shots to make sure all systems are working.**

Underwater photographers will probably want to set the flash mode to the *flash always* setting to insure they always have a flash with every exposure. It is also wise to set the focus mode to allow the lens to focus in the macro range for capturing great images of the tiny and exotic subjects that you can find underwater.

CHECKING THE O-RING

Prior to each closure of the housing the O-ring should be visually inspected. If there is any debris present, including dirt, sand, dust, hair, grease or other matter, it must be cleaned to insure a proper watertight seal. Cleaning the O-ring is a simple matter of wiping it with a damp, soft cloth to remove the foreign matter. Be careful the cloth you use does not leave any of its own material behind as this can also affect the effectiveness of the seal. When replacing the O-ring, place it back into the groove starting at the same corner and gently put it in by pressing it into the groove all around the housing until it is all sitting in the groove and no part of it is sticking up or out of the groove. You can then apply a slight layer of silicone if you have not done this yet. Be sure it is completely seated in the channel for a proper seal.

Note

Lubrication of an O-ring does not improve the seal. It only reduces the amount of friction on the O-ring when it is being moved into sealing position. The amount of lubrication required on the O-ring is only enough to allow it to slip into place without friction, so it does not twist or become dislodged. More grease is not better, and could in some cases have a negative affect if it is applied in large amounts to form a build-up that could trap any debris or foreign matter.

CLOSING THE HOUSING

1. Place housing back over front and align the complete mating surface of the housing and the O-ring, forming a proper seal.
2. Position all four latches over latch hooks in ready position.
3. Close one of the bottom latches first, maintaining pressure on the other side. Proceed by closing the other side's top latch. Then close the remaining bottom latch and the remaining top latch. Test all latches carefully to make sure that they are completely locked into place and not just pushed down. Try to open them to make sure that they cannot open accidentally.

4. Inspect the O-ring for proper closure. A complete seal can be visually confirmed by the O-ring around the complete circumference of the housing.
5. Always take the first dive without your camera in the housing just to make sure there is no leakage from damage to the housing. During the dive—especially at the beginning of descent—take special care to look at the housing to make sure no bubbles are escaping from it and that no water is entering. Generally, if there is a problem with the seal, you will discover it in the first seconds of the dive.
6. After use, when opening the housing, it is important to hold it so the lens port is facing down. This will prevent the camera from slipping out of the housing while being opened. Release the four latches in the same order described for closing them in step 3, and take off the back side of the housing. Gently pull both the tray and the camera outside of the housing and unscrew the tripod screw out of the camera in order to disconnect it from the tray.

VIEWING THE SUBJECT

The S500 and S510 cameras do not have the standard eyepiece but underwater photographers and outdoor photographers will appreciate the large 2.5 inch LCD viewing monitor for composing photographs. The LCD monitor will allow you to see your subject in sharp focus and framed properly. Hold the camera housing in your outstretched arm at a position that is both comfortable and also allows you to easily see the LCD monitor, for best compositional options.

TAKING THE PICTURE

Once you have composed your scene or subject in the LCD monitor, depress the shutter release button to take the picture. A half depress will activate the live viewing ability of the LCD and allow the camera to focus, once in focus and ready to shoot a green light will appear on the LCD monitor and the camera is ready to take the picture. Press down the shutter all the way to complete image capture. You may notice a pre-flash and slight delay in the shutter release. This is to allow the camera to make its final focus and exposure calculations before taking the picture. With a little practice, you will become used to this and taking pictures of moving subjects will become easier and natural.

CHOOSING IMAGE FILES

There are several image file options to choose from that offer different resolution and file sizes. This determination must be made prior to camera insertion from Menu options. Please refer to the Coolpix instruction manual for details on setting these preferences.

BATTERY LIFE

Rechargeable Li-ion Battery EN-EL10

There are certain things that users can control to help with battery life. The most important is to set the camera to turn the LCD off after a short time, during periods of non-use. It can then be automatically turned back on if you depress the shutter release control half way. Please refer to the Coolpix instruction manual for details on how to make this adjustment setting. It is always wise to have backup batteries in case you do run out of power. The supplied battery can be recharged many times and offer an economical and environmentally friendly power source.

USING THE FLASH

The Coolpix has a built-in flash, which will illuminate nearby underwater subjects. For subjects that are farther away, an accessory slave flash is recommended (See Below). A built-in flash diffuser is supplied which will help achieve a wider and softer light source thereby providing more coverage and less likelihood of *backscatter* (the unattractive snowstorm affect of the flash reflecting off the suspended particles in the water). Further reduction of *backscatter* can be achieved by using an accessory off-camera slave flash. This will be discussed in more detail.

The need for artificial light to maximize color reproduction is necessary in nearly all pictures. Therefore it is strongly recommended that you set the flash mode to *Flash Always*. This will insure the flash fires on every exposure regardless of the ambient light conditions (Please refer to the camera's instruction manual for more details).

Outdoor photographers do not have this same concern. There is no backscatter to be concerned with, and due to the ability of the flash to travel farther and more effectively in air as compared to in water, there is normally not a need for an accessory flash to provide proper illumination for most subjects.

ACCESSORY SLAVE FLASH

If you use the Coolpix built-in flash as the master, you can trigger a second *slave* flash to provide more artificial light when needed. To do this, you must use an accessory flash that has a *slave* feature built in. The flash from the Coolpix must be aimed or bounced toward the accessory flash's *slave* sensor, or other fiber optic sensor. This will trigger the slave to fire in sync with the master flash.

When using an accessory slave flash with fiber optic cable, it is recommended to black out the internal camera flash. The internal flash is located near the camera lens and can contribute to backscatter by illuminating floating particles close to the lens port.

If the sensor of the fiber optic cable is attached to the outside of the housing directly above the internal flash and taped over with black tape—it will block out the light from the internal flash but transmit the light pulse to the external slave flash

 Note

Be sure to use a slave flash that has the ability to ignore the built-in pre-flash in digital cameras, and synchronizes with the shutter release.

LENS ACCESSORIES

The Fantasea FS500 features a 46mm threaded lens port. This thread port is designed to work with some of the wide-angle and macro adapters that are currently on the market. Fantasea Line offers the following lens accessories:

- FWAL-01 Wide Angle Lens: an accessory Wide Angle Lens which fits over the housing port and can be installed and removed during the course of the dive.
- Red Filter 46 - fits over the housing port and can be installed and removed during the course of the dive. The filter is mounted on the housing lens port and held in place by screw thread.

For more information on these items, see your local photo dealer or visit our website at www.fantasea.com

FANTASEA COOLPIX ACCESSORY SYSTEMS AND SETS

Fantasea offers a variety of sets for Coolpix and other housings. These sets are made up of quality accessory products which will enhance and improve your underwater images. Accessory products include external flash systems, flexible arms, trays, filters, wide angle and macro lenses, fiber optic cables and more. Below you can see one sample system. For more information please refer to our website or to the Fantasea Dealer where you purchased your housing.



SHOOTING TECHNIQUES

EXPOSURE MODES (PRE-SET BEFORE CAMERA INSERTION)

There are several exposure modes for photographers to choose from, depending on the situation. Underwater it is recommended that you shoot in the Auto mode on the camera in which ambient light and artificial light will be automatically controlled by the camera according to the lighting conditions. You can also select different light meters to use, based on the situation and your personal preferences. Additionally, you can choose the Auto White Balance setting for color temperature control, or experiment with some of the other modes to see which will work best underwater. These settings do not have to be made ahead of any dive, as they can be accessed through the housing controls while underwater.

Please reference the Coolpix instruction manual for details on how to set these camera options, and under what conditions the different choices would be used.

ZOOM CONTROL

Zoom in for telephoto photos and larger subject size. Zoom out for wide-angle scenes. It is generally not recommended to use the zoom underwater as it is preferable to get physically closer to your subject. The digital zoom has no value at all.

MACRO FOCUS

For capturing the tiny and exotic subjects that require close focus. Macro focus is possible when the lens is in the wide-angle position.

QUICK REVIEW

Immediate review of most recent image is available that will confirm that you captured the shot you want. However, if you want to scroll through your images, or delete images from the memory card, this should be done when you are topside and the camera is out of the housing.

CAMERA STANDBY MODE

You can access the camera's menu to select the length of the inactivity period. Inactivity period is the length of time before the camera goes into *standby mode*. Options are 30 seconds, one minute, five minutes, and 30 minutes. This feature allows you to conserve battery power by placing the LCD monitor on standby [sleep mode]. It is recommended that this option is set for 30 seconds to conserve battery power. If set for longer periods of time the LCD screen will heat up and that will produce condensation and fogging of the lens port. Condensation on the lens port will have a negative impact on the quality of the images taken.

When you want to resume shooting, pressing the shutter release half-way will re-activate the camera. However, if after the camera goes into standby, a further period of three minutes goes by without any activity, the camera will turn off [deep sleep mode]. You can turn it back on by pressing the On/Off Power button. The Welcome to Nikon Coolpix screen will appear then it will display last image taken.

CARE & MAINTENANCE

The Fantasea FS500 housing requires only a minimum amount of care for reliable performance. The following tips will enable you to get the best results.

1. Always rinse your housing with a strong stream of fresh water and if possible soak housing in fresh water tub or rinse tank for about 20 minutes after every dive in order to dissolve the salt water crystals from around the controls and openings of the housing. Manipulate each of the movable controls to assist the removal of salt particles from these tight areas.
2. Allow the housing to dry thoroughly before packing away for the day or for the trip home. You may use a soft towel or cloth to dry the housing. Be sure there is no grease or other debris on the towel.
3. Visually check the condition of the O-ring before every dive. If it is dirty, clean it with fresh water and dry it with a soft cloth as described above. If it is damaged in any way, such as cut or perforated, replace it immediately.
4. It is recommended to slightly lubricate the housing's O-ring periodically. It's important to note that the amount of lubrication required on the O-ring is only enough to allow it to slip into place without friction, so it does not twist or become dislodged. More grease is not better, and could in some cases have a negative affect if it is applied in large amounts to form a build-up that could trap any debris or foreign matter.
5. Be careful not to get greasy fingerprints or dirt on the lens port. This will affect the image quality. Wipe any dirt or grease off with fresh water and a soft cloth.
6. Do not drop the housing on hard surfaces. It is not a shock absorber, and could crack, affecting its watertight integrity. It could also cause damage to the camera inside.
7. Travel with the housing protected in a padded case. It is best to remove the camera from inside the housing when traveling and provide it with its own protective case, or compartment.
8. Never dive with the Fantasea FS500 housing to a depth greater than 200 ft/60 meters.
9. It is recommended to have annual maintenance of all Fantasea housings. This includes visual inspection and possible changing of all seals / gaskets / o-rings. It is recommended to use an authorized Fantasea Service Center for this purpose. Please contact Fantasea Line by email: service@fantasea.com , or visit the Fantasea web site www.fantasea.com.

10. It is recommended that you select the shortest time option on the menu, for placing the camera into standby during periods of inactivity. This will conserve battery power and reduce the heat given off by the LCD screen, which can contribute to condensation inside the housing and fogging.
11. It is strongly recommended to take the first dive without the camera inside the housing. You should check that the water tight seal has not been affected during transport and long periods of storage.
12. It is likewise recommended to visually monitor the housing during every descent, especially for the first 10 meters/33 ft. If water is observed entering the housing or bubbles escaping from it, the housing should be rotated to a *port down position* and held that way as you return to the surface immediately and get out of the water.