Fantasea Nano Flash

(Cat. No. 6115)

Instruction Manual

1. Introduction

The **Nano Flash** is a universal underwater slave flash especially designed for compact digital housings. It triggers in sync with the camera built-in flash and was designed to significantly improve the colors in underwater photographs, as well as to retrieve the light absorbed by water. The **Nano Flash** is recommended at all depths, during daylight and night dives. It also enhances images by allowing for diverse creative lighting opportunities, while reducing the amount of backscatter in the images and preventing the shadowing effect caused by the camera internal flash, especially when accessory lenses are mounted on the housing lens port.

2. Nano Flash Specifications

- Compatible with all compact digital cameras
- Guide number 12 (Air: ISO 100 x 1 meter)
- Uses 2 x AAA batteries
- Depth rated to 60 meters / 200 feet
- 3 pre-flash modes

- 3 power output settings
- Made of Polycarbonate and stainless steel
- Dimensions: 47 x 97.5 x 104.5 mm / 1.9 x 3.8 x 4.1 inch (DxWxH)
- Weight: 200g (7.0 oz)

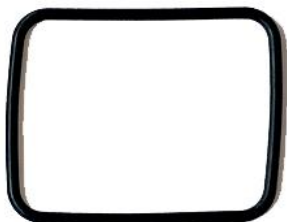## 3. Identification of Nano Flash Parts

Nano Flash

Nano Flash Housing
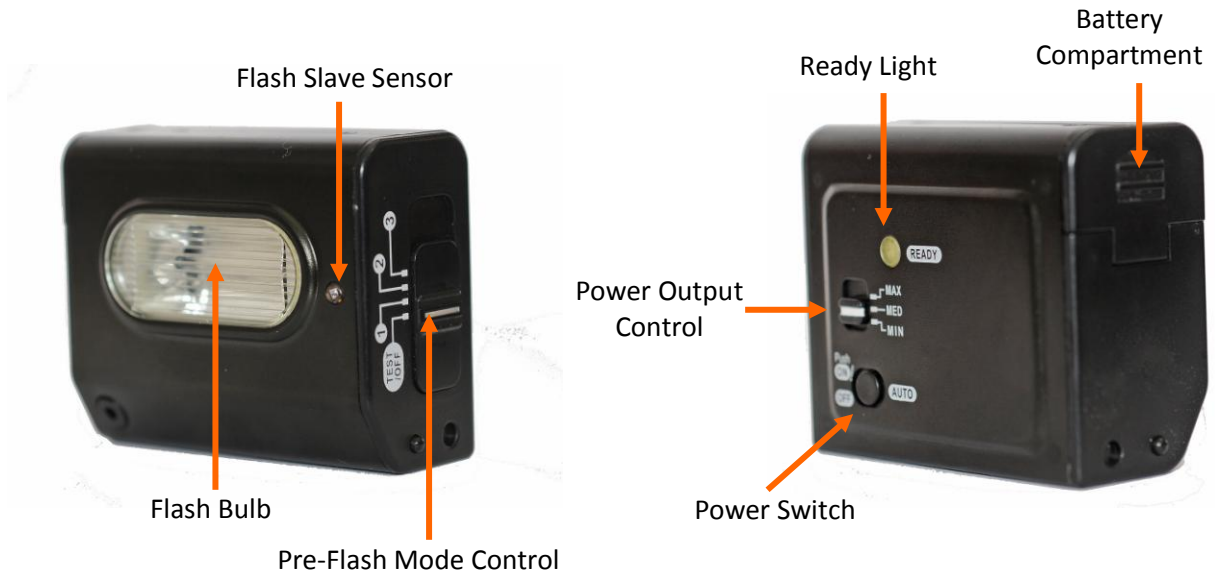

Diffuser Holder

Spare O-Ring Seal
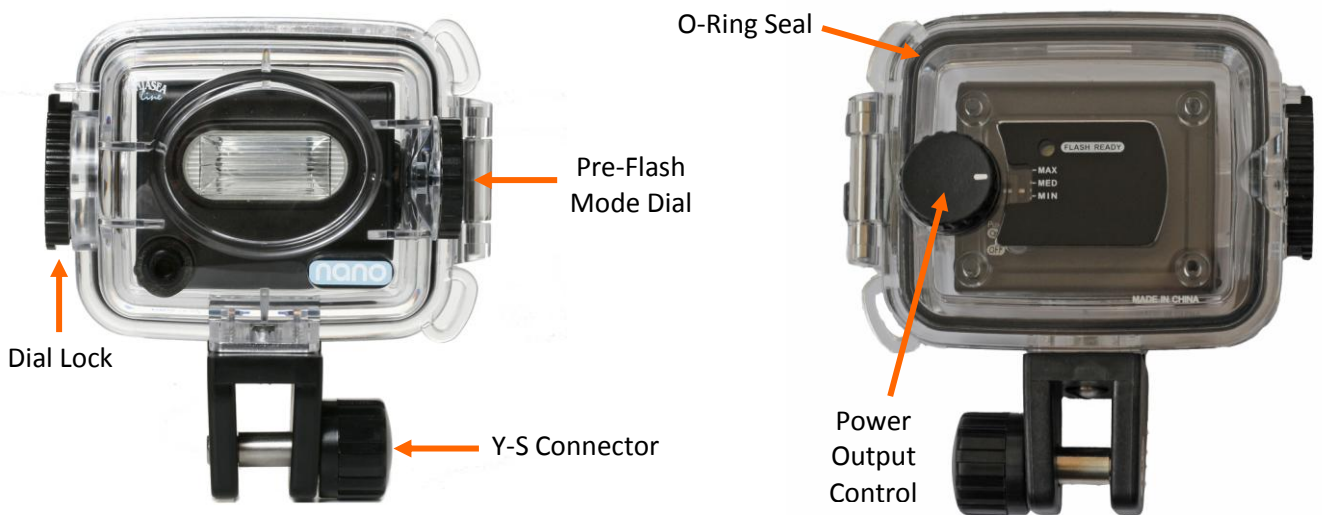

3 x Flash Diffusers

Silicone Grease

Nano Adaptor Kit

Nano Flash Controls & Features

Flash Slave Sensor

Flash Bulb

Pre-Flash Mode Control

Ready Light

Battery Compartment

Power Output Control

Power Switch

Nano Flash Housing Controls & Features

O-Ring Seal

Pre-Flash Mode Dial

Dial Lock

Y-S Connector

Power Output Control

4. Instructions For Use

a. Test the Watertight Seal of the Nano Flash Housing

Prior to installing the Nano Flash inside the Nano Flash Housing, test the housing in a shallow water pool in order to verify that it is perfectly watertight sealed. Make sure no bubbles escape from it and that no water enters the housing.

3

b. Open the Nano Flash Housing

    i. Release the security lock by gently pulling it out (image #1).

    ii. Rotate the Dial Lock clockwise till it reaches an angle of 45 degrees (image #2).

    iii. Open the rear cover and take the Nano Flash out of the housing.
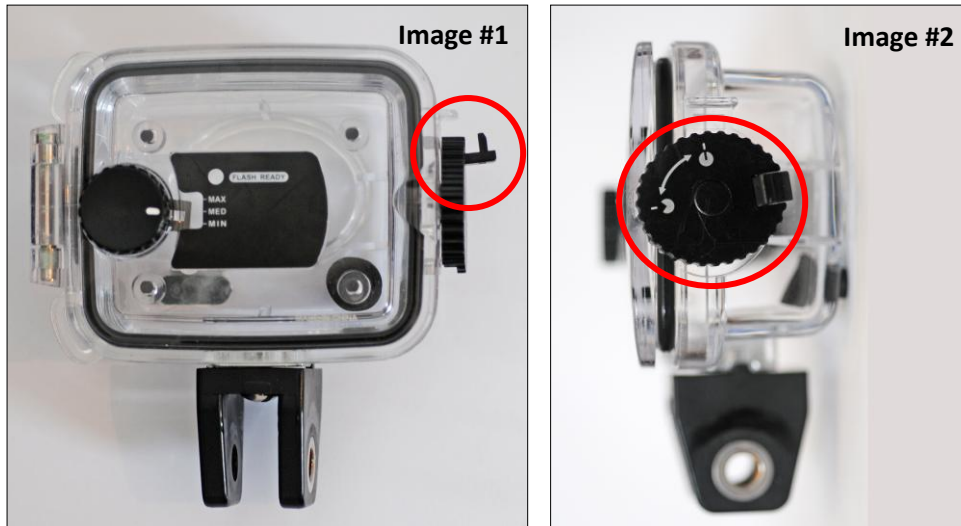
c. Install Batteries Inside the Nano Flash

    i. Make sure that the Pre-Flash Mode Dial is set to the "TEST/OFF" position.

    ii. Open the Nano Flash battery compartment by gently sliding the lid outwards and then lifting it.

    iii. Install 2 new AAA batteries according to the + and − marks found underneath the battery compartment lid.
   - Do not mix new and old or different types of batteries, as this may lead to an over-discharge of the weaker battery, resulting with gassing or leaking of fluid from the battery.
   - Please note that the Nano Flash wasn't designed to be used with rechargeable batteries.

    iv. Close the battery compartment lid by gently pushing it down and then inwards. Make sure that once you stop applying pressure on the battery compartment lid, it remains closed.

    v. Turn on the flash by turning the Pre-Flash Mode Dial to "1". If batteries were properly installed, the Ready Light at the back of the flash should turn on after a few seconds.

    vi. When the Ready Light is on, the flash can be tested by turning the Pre-Flash Mode Dial back to the "TEST/OFF" position.

    vii. Important Notice: Do not allow any drops of water to enter the battery compartment when installing or removing batteries.

d. Install the Nano Flash Inside the Housing

    i. Make sure that the both the Pre-Flash Mode Dial on the Nano Flash Housing and the Pre-Flash Mode Control on the Nano Flash are set to the "TEST/OFF" position.

    ii. Slide the Power Switch at the back of the Nano Flash to "AUTO".

    iii. Insert the Nano Flash carefully into the front door of the housing, making sure it seats fully.

    iv. Prior to closing the Nano Flash Housing, the O-ring, positioned at the back door, should be visually inspected. If there is any debris present, including dirt, sand, dust, hair, grease or other matter, it must be cleaned to ensure 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.

    v. It is recommended to apply a slight layer of silicone on the O-ring. Use the O-ring Remover in order to remove the O-ring from its groove and make sure it doesn't get scratched, stretched or damaged when being pulled out. Please 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 necessarily better, and in some cases might interfere with the watertight seal of the Nano Flash Housing.

    vi. When replacing the O-ring seal, place it back into the same groove you have taken it out of. Be sure it is completely positioned in the channel for a proper seal.

    vii. Close the back door of the housing. Make sure you close it completely.

    viii. Rotate the Dial Lock counterclockwise until the Security Lock is pointed upwards. Lock the Dial Lock by pushing the Security Lock in (image #3).

Image #3

e. Select the Proper Pre-Flash Program for Your Camera

    i. Please note that watching the Nano Flash fire does not mean it triggers on the right timing. If it is not synchronized with your camera, this will usually result with underexposed images.

What are Pre-Flashes?

Pre-flashes are one or more flashes given out to assist in the focusing and exposure setting of the camera before the actual picture-taking primary flash is fired. It is important to set the Nano Flash to the correct pre-flash setting so it fires in sync with the primary flash of the camera.

The Nano Flash features 3 different pre-flash settings (image #4):
1 – For cameras with no pre-flash
2 – For cameras with 1 pre-flash
3 – For cameras with 2 pre-flashes

Image #4:
3 pre-flash programs

ii.   In order to properly synchronize the Nano Flash with your camera, you should determine which pre-flash program on the Nano Flash is the most suitable with your camera internal flash. In order to do so, please follow the instructions below:
1. Place your digital camera in front of the Nano Flash within a distance of approximately 1 meter, so they are facing each other.
2. Set your camera built-in flash to ON.
3. Turn the Nano Flash on by setting the Pre-Flash Mode Dial to "1" and take a picture with your camera. Do the same when the Pre-Flash Mode Dial is set to "2" and "3".
4. Compare the 3 images taken in the 3 different pre-flash modes. The most overexposed image indicates the correct Nano Flash pre-flash mode for your camera.
5. Turn off the Nano Flash by setting the Pre-Flash Mode Dial to "TEST/OFF".

f. Test the Watertight Seal of the Nano Flash

After closing the Nano Flash, always test it in a shallow water pool prior to diving with it, in order to verify that it is perfectly watertight sealed. Make sure no bubbles escape from it and that no water enters the housing.

g. Mount the Nano Flash on an Arm

   i. Remove the screw from the Y-S Connector at the bottom of the Nano Flash Housing by unscrewing it all the way out.

   ii. Position the Nano Flash on top of the arm so that the Y-S Mount on top of the arm is aligned with the Y-S Connector at the bottom of the Nano Flash (image #5).

   iii. Install the screw all the way through the Nano Flash and arm. Tighten it enough to keep the Nano Flash within a fixed position (image #6).

Image #5

Image #6
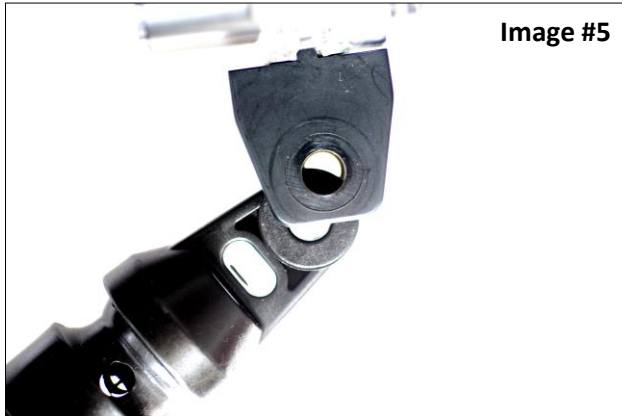
h. Attaching a Nano Fiber Optic Cable to the Nano Flash (optional)

Although the Nano Flash features a slave sensor and is capable of synchronizing with the camera internal flash without using any cables in most diving conditions, a fiber optic cable ensures the best synchronization between the camera internal flash and the Nano Flash at all angles and within various diving conditions, especially when photographing in shallow clear water with bright ambient light.

   i. The fiber optic cable consists of two ends: One is attached to a white plastic fitting (flat white plastic at the end of the cable with Allen screw inside), and the other is loose (image #7). Insert the exposed end of the fiber optic cable (the end without the fitting) into the

Image #7

small hole of the black Nano Adaptor unit, starting from the end that features a screw and pushing it towards the end that features an O-ring, until the fiber optic cable reaches the end of the adaptor.
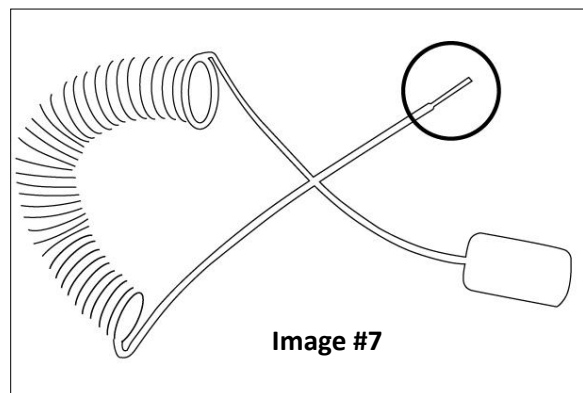
   ii. Use the tool included in the Nano Adaptor Kit in order to tighten the screw on the adaptor (image #8 on the following page). Tighten it enough to

stabilize the fiber optic cable inside the adaptor, but don't tighten it too strongly. **Tightening the screw too much might damage the fiber optic cable.**

iii. Install the black and clear plastic diffuser cover on the Nano Flash Housing.

iv. Insert the Nano Adaptor inside the lower right grommet (the one with the wider hole) of the black diffuser cover, so that the adaptor screw doesn't get in its way. Insert it all the way to the end, and do not use force once you encounter any resistance (image #9).


Image #8

Image #9

Image #10

v. If attaching the Fiber Optic Cable to a Fantasea FP7000 Housing or any other housing that features a dedicated fiber optic cable attachment configuration (image #10), please refer the housing instruction manual for specific instructions regarding attaching the fiber optic cable to the camera housing. If attaching the Fiber Optic Cable to any other standard camera housing, please follow the instructions below.

vi. The other end of the fiber optic cable attaches outside of the camera housing - opposite the camera internal flash - by using both sides of the Velcro strip included in the kit. The white plastic fitting normally comes with the Velcro tape attached and therefore you are only required to apply the other side of the Velcro strip on the housing to receive it (images #11 and #12 on the following page). If your housing features a built-in flash diffuser, the Velcro strip should be attached beneath it, directly to the housing. If possible, place the Velcro strip between the built in flash diffuser and the housing, positioned opposite the internal flash of the camera.

Image #11	**Image #12**
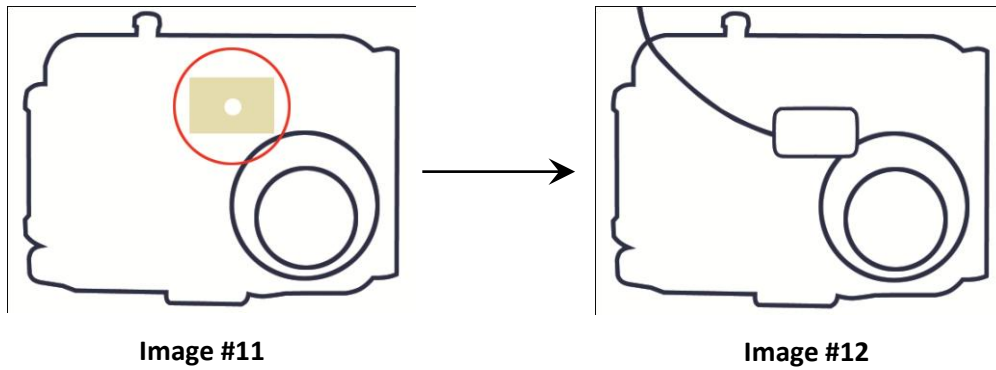
vii. It is preferable to totally block out the internal flash of the camera after attaching the camera side of the cable by applying black electrical tape over the fiber optic connector attached to the housing case. This effectively achieves two things: it diminishes the effects of backscatter, as well as eliminates any shadowing effect caused by lens accessories mounted on the housing lens port. Removing the built-in flash diffuser will have no affect on lighting.

viii. In some cases, after using the fiber optic cable frequently or for a long period, you might encounter a decrease in performance. You can easily solve this problem by cutting 1 cm/0.3 inch off the fiber optic cable ends, using a sharp tool and performing a very straight angled cut. This allows you to remove any worn ends and to expose a new portion of the cable.

i. Taking Photographs with the Nano Flash

i. Turn the Nano Flash on by setting the Pre-Flash Mode Dial to the pre-flash program found most compatible with your camera (section e).

ii. Position the flash in a way that it is pointed at your subject. Also, if a fiber optic cable isn't attached to the Nano Flash, make sure that nothing blocks the slave sensor, so the Nano Flash can synchronize with your camera internal flash.

iii. Set your camera built-in flash to ON ("flash always").

iv. Take a photograph by pushing the shutter-release button of the camera. The camera built-in flash fires and triggers the Nano Flash as well. Always take photographs with the Ready Light fully lit up.

v. Adjust the output of the Nano Flash by turning the Power Output Control to achieve the desired exposure in your photograph.

vi. Removable Flash Diffusers**:** It is highly recommended to install a diffuser when shooting wide angle or extreme macro images. In wide angle photography, the diffuser can be used in order to spread the light more evenly and in a way that it covers a greater angle. In macro photography, the diffuser

can be used to absorb part of the light when the flash is too powerful, even when set to the lowest output. In order to install any of the flash diffusers, first install the Diffuser Holder on the flash housing by simply clicking it in. Then slide any of the diffusers through the slot found at the top of the Diffuser Holder (image #13). It is recommended to secure both the Diffuser Holder and the flash diffusers to the flash by secure strings.

vii.   When the Nano Flash is not in use, it is best to turn it off in order to prevent exhaustion of the batteries.

Image #13

#1
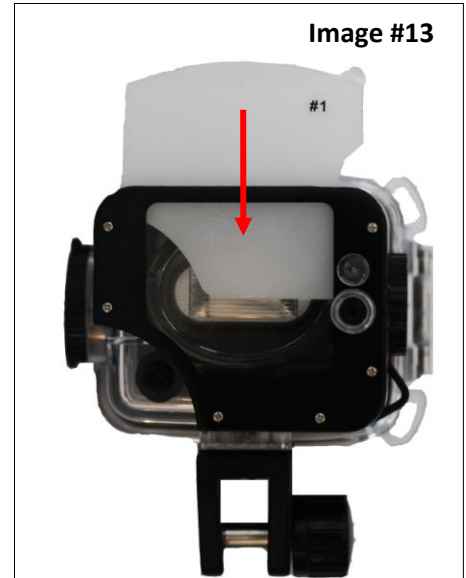
j. Care & Maintenance

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

i.   Submerge the flash in fresh water for about 20 minutes after every dive in order to dissolve the salt water crystals from around the controls and openings of the flash. Manipulate each of the movable controls to assist the removal of salt particles from these tight areas.

ii.   Allow the flash to dry thoroughly before packing it away for the day or for the trip home. You may use a soft towel or cloth to dry the flash. Be sure there is no grease or other debris on the towel.

iii.   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.

iv.   It is recommended to slightly lubricate the 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 necessarily better, and in some cases might interfere with the watertight seal of the flash.

v.   Do not drop the flash on hard surfaces. It is not a shock absorber, and could crack, affecting its watertight integrity. It could also cause damage to the electronic components inside.

vi.   When travelling, remove batteries, leave back the door loose or unassembled and pack the unit in a protected fashion in a padded case or bag.

vii.   Never dive with the Nano Flash to a depth greater than 60 meters/200 feet.

viii.   Never store the flash or housing in high temperatures (above 60C/140F degrees).

   ix.   Never use petroleum, alcohol, benzene and paint thinner to clean the flash, housing or O-ring.

Fantasea Products Consumer Limited Warranty

"Fantasea" warrants this Fantasea Line branded product against defects in materials and workmanship under reasonable use for a period of ONE (1) YEAR, (two years, where required by law as determined by the origin of the authorized dealer). This warranty is effective from the date of retail purchase from Fantasea or an authorized Fantasea dealer, by the original end-user purchaser ("Warranty Period"). This warranty does not cover any commercial use of the product. If a product defect arises and a valid claim is received within the Warranty Period, at its option, Fantasea, or its authorized service facilities will either (1) repair the product defect at no charge, (2) exchange the product with a product that is new or which has been manufactured from new or serviceable used parts and is at least functionally equivalent to the original product. The warranty will not extend beyond the original warranty period.

Your Fantasea Product should be registered within 30 days of purchase. You must keep the proof of purchase which indicates the date on which the purchase was made; as you may be required to show proof of purchase if you need warranty service. The following conditions apply: 1. This warranty extends to the original purchaser only. It is not assignable or transferable. 2. The warranty does not cover damage resulting from misuse, abuse, negligence, or accidents. Proper maintenance of the Product is the responsibility of the owner. 3. The warranty does not cover damage directly or indirectly resulting from the use of unauthorized replacement parts or service performed by unauthorized facilities. 4. This warranty does not cover any damage to any other product used in conjunction with the Fantasea product, including cameras and lenses, and resulting from any defect in the product materials or workmanship. 5. The cost of sending the product back to Fantasea or its authorized service facilities is the responsibility of the customer. 6. The warranty does not cover any incidental damages resulting from any defects in the product. This expressly includes any travel reimbursements or any other costs associated with the purchaser's optional use of the product. The conditions of this warranty are expressly in lieu of all other expressed warranties, including the payment of consequential or incidental damages for the breach of any warranty. Please register your product on line at this URL: http://www.fantasea.com/registration.

For further information, please contact us at www.fantasea.com/contact

or visit our website www.fantasea.com