DX-400D

06126 # DX-400D

Instruction Manual
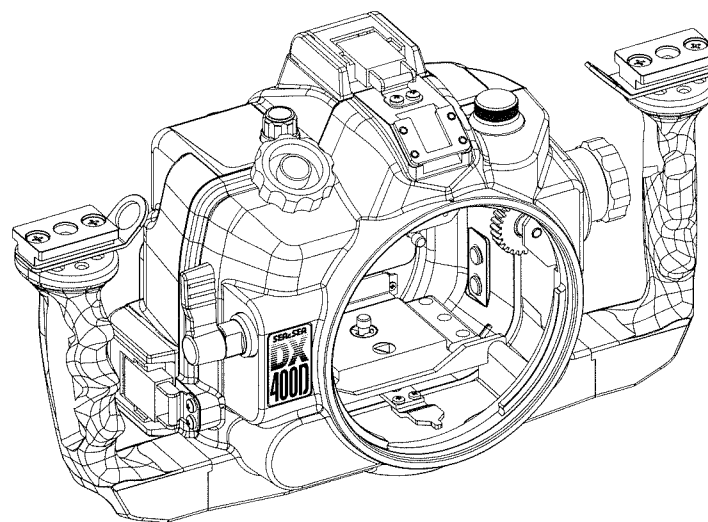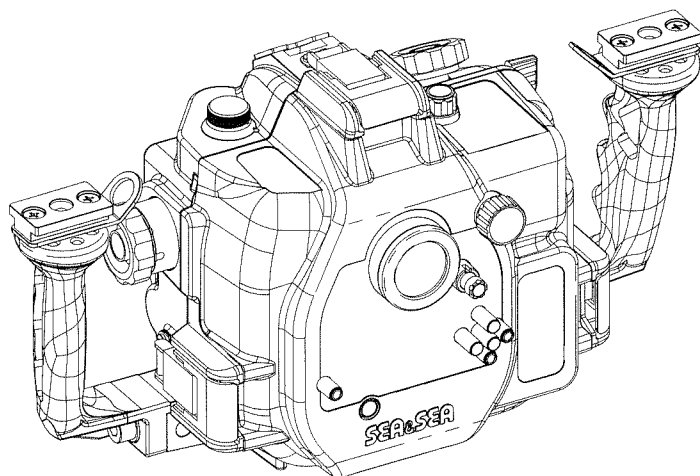
SEA&SEA

DX-400D

UNDERWATER HOUSING for Canon EOS Digital REBEL XTi / 400D

Introduction

Thank you for your purchase of a SEA&SEA product. For proper operation of the product and safe handling, please read the following instructions carefully before use. This manual should be retained for future reference

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Safety Precautions

●For safe handling of the product, please read the following precautions carefully before use.

* Failure to heed the precautions listed below could result in serious consequences. To prevent injury or damage to yourself and/or others, please observe the precautions as they contain highly important information related to personal and product safety.

⚠ WARNING : Situations that could result in severe injury or death.

⚠ CAUTION : Situations that could result in property damage or personal injury.

⚠WARNING

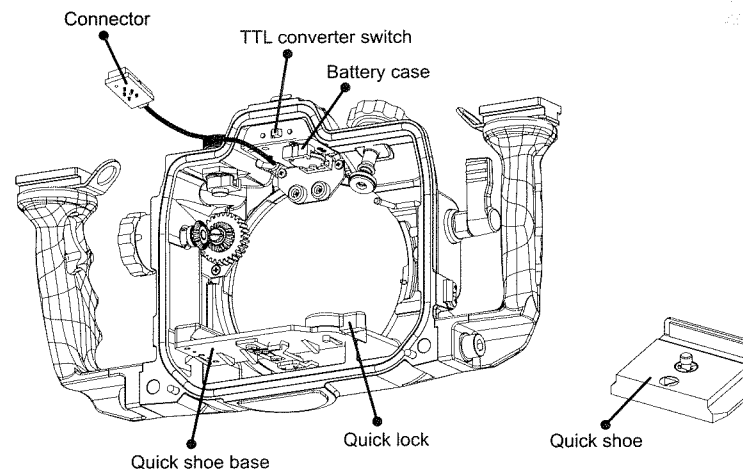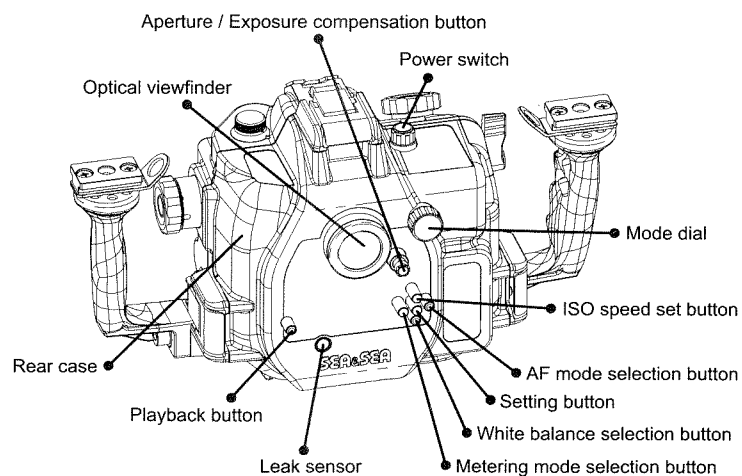●Keep out of reach of children to prevent accidental ingestion. If swallowed, seek medical advice immediately.

⚠CAUTION

●Read the instruction manual and observe proper precautions before use of the product.
●Carefully observe the instruction manual for the compatible camera for this product before use.
●Unauthorized disassembling and/or modification could result in malfunction or flooding, and void product warranty. Take the product to a SEA&SEA authorized service center for repair or inspection.
●Should you notice smoke or an unusual smell coming from the product, turn it off and remove the batteries immediately, taking care to avoid burns. Continued operation could result in injury. After removing the battery, take the product to a SEA&SEA authorized service center for inspection.
●Discontinue use and turn the product off immediately should you notice flooding or leakage.
●When the product is flooding, interior pressure may build up. Please be careful when opening the product as water may spurt out or the cap may open explosively and cause injuries.

- The product has been constructed with an airtight seal. When packing the product for airplane travel, do not seal-up the product to alleviate pressure build up due to atmospheric changes.
- Do not open the product in a wet or sandy environment. Protect the interior from moisture and debris in order to prevent malfunction or flooding.
- Keep away from strong magnetic fields. Do not use or store this product in the vicinity of equipment that generates strong electro-magnetic radiation or magnetic fields. Strong static charges or the magnetic fields could cause malfunction, or affect the product's internal circuitry.
- Avoid strong shocks/impacts or excess stress to prevent malfunction, damage or breakdown. Make sure that the product has been securely mounted to other products in order to prevent injury, fall or missing.
- Do not rest heavy weight on the product. It might deform the outer casing, damage internal parts, make the waterproofing fail, or result in fire or electric shock.
- Please note that some marks may be left on the camera scraping against the dials or gears of the housing.
- Handle the product carefully so as not to scratch the front port, the lens, the flash window or the finder.
- Always dry the front port, the lens, the flash window or the finder using a soft cloth to prevent stain or salt residue from marring the glass surface.
- Rinse the product with fresh water, after underwater use. Ensure that the product is waterproofed before rinsing. Refer to [Maintenance and Storage] for details.
- Make sure that the connectors have been secured with the connector caps before rinsing the product with fresh water, after removal from other products.
- Never use chemicals, cosmetics, any petroleum solvents such as paint thinner, or neutral detergent on the product. They may deform and damage the product.
- Do not leave the product in places with hot temperatures such as inside of a car or in a car trunk in summer. The heat may deform plastic parts of the product, damaging internal parts and resulting in potential fire or electric shock. If the product is sealed tight in hot conditions, heated air expanding inside the product may deform the casing and ruin the waterproofing.
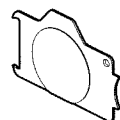
- Do not store the product in wet or high humidity place, to avoid mold, rust, corrosion or malfunction.
- Do not store the product with naphthalene or camphor mothballs, or in locations such as a laboratory where chemicals are used. This environment can cause mold, rust, corrosion or malfunction.
- SEA&SEA assumes no liability for compensation of loss of captured images or expenses caused by loss of images, even if you are unable to shoot due to a product defect or malfunction.
- SEA&SEA will not be responsible for the replacement or compensation for cameras, lenses or those accessories damaged due to your invalid operation.
- SEA&SEA assumes no liability for errors or discrepancies in this manual.
- Carefully observe the O-ring maintenance manual for the handling of O-rings before use.

Identification of Parts

Locking latch
Accessory shoe
Main dial
Strobe bulkhead
Bracket shoe
Lanyard hook
Focus /
Zoom dial
Shutter-release
lever
Ergo grip
Port lock
Front case

Aperture / Exposure compensation button
Power switch
Optical viewfinder
Mode dial
ISO speed set button
Rear case
AF mode selection button
Setting button
Playback button
White balance selection button
Leak sensor
Metering mode selection button

Connector
TTL converter switch
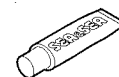Battery case
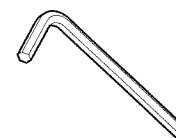Quick lock
Quick shoe
Quick shoe base

Accessories

Before using this product, check to make sure that all accessories are present.
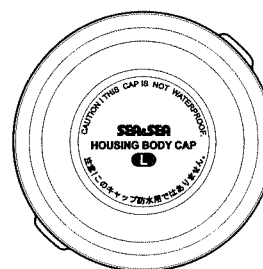
● O-ring remover
● Silicone grease
● Hex wrench
● CR2032
Lithium battery
(for TTL converter)

● Housing body cap

● O-ring maintenance manual
● Instruction manual

Opening and Closing the Housing

《Opening the Locking Latch》

To release the locking latches, press down on the security lock, then push the latches forward (Fig. 1). Removal of rear case will be easier by re-locking the latch while the latch is off the hook (Fig. 2).

⚠CAUTION

● To prevent injury, lift the locking latch with the ball of your finger and not with your fingernail.
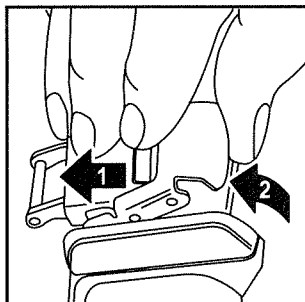
Fig.1

《Closing the Locking Latch》

Press the rear case against the front case and close the locking latches on the left and right sides simultaneously. Then close the top latch.

⚠CAUTION

Fig.2

● Examine the O-ring and O-ring channel.
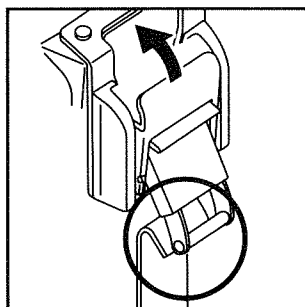● Snap down the latches until you hear a clicking sound. This indicates that the latches are securely closed.

Attaching and Detaching the Port

《Attaching the Port》

1. Pull up the port lock at the bottom of the Quick Shoe Base in the front case to the OPEN position (Fig. 3).
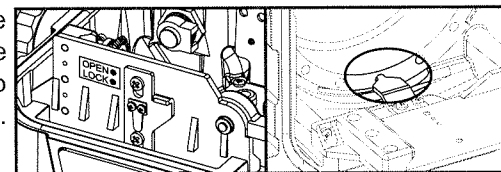
Fig.3

2. Align the OPEN mark on the port with the index mark on the housing indicated in Fig. 4. Insert the port into the front case of the housing and turn the port clockwise until it stops.
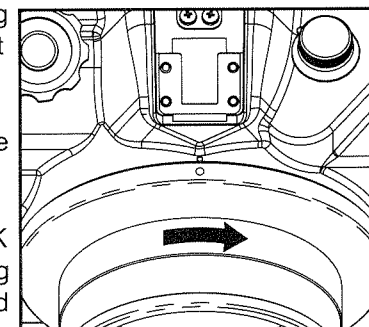
3. Make sure that the markings on the housing and port meet.

4. Push down the port lock to the LOCK position until you hear a click, making sure that the port lock pin is fully engaged with one of the port notches (Fig. 3).

Fig.4

《Detaching the Port》

1. Pull up the port lock to the OPEN position (Fig. 3).

2. Hold the front case firmly and turn the port counterclockwise.

⚠CAUTION

● Never attempt to remove the port with the port lock at LOCK position. It may damage the camera base.
● Ports for NX-90PRO are compatible with the this product but the bayonet mount must be modified. For details, please contact SEA&SEA or a SEA&SEA authorized dealer. (Ports with black bayonet and 4-digit part number need to be modified. Ports with gray bayonet and 5-digit part number can be used with this product without modification.)

Mounting the Camera to the Housing

《Mounting》

1. Remove the eyecup from the camera (Fig. 5).

2. Attach the quick shoe to the tripod soket of the camera and secure with the screw (Fig. 6).

Fig.5

Fig.6

3. Attach the selected lens to the camera. Select focus mode (AF or MF).

4. Turn the quick lock to the OPEN position as shown in Fig. 7.

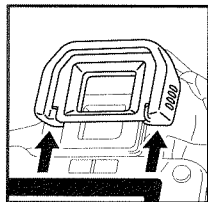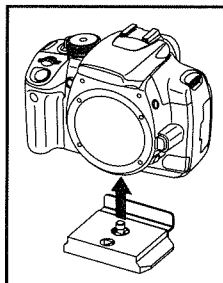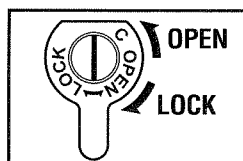OPEN
LOCK

Fig.7

5. Slide the camera into the front case.
   * At this time, make sure that the sync connector is placed outside the front case. Slide the camera into the housing while turning the focus knob to ensure that the camera and housing gears will mesh well with each other (Fig. 8).
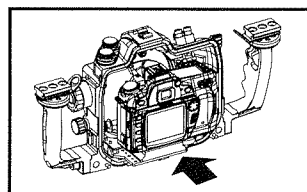
Fig.8

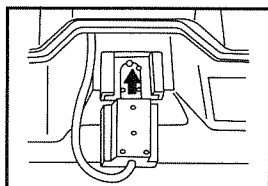6. Turn the quick lock to the LOCK position to lock the camera into place.

7. Insert the sync connector into the accessory shoe of the camera as shown in Fig. 9.

Fig.9

8. Fit the rear case with the power switch extended onto the front case and close the locking latches (Fig.10).
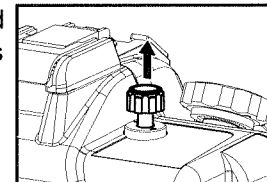
⚠CAUTION

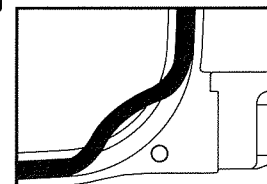● When installing the O-ring, make certain that the O-ring is properly seated in the O-ring groove (Fig. 11).

Fig.10

《Removing》

1. Detach the sync connector from the camera.

2. Turn the quick lock to the OPEN position.

3. Pull out the camera from the front case.

Fig.11

⚠CAUTION

● When connecting and disconnecting the sync connector, hold the connector firmly between thumb and forefinger. Do not push, pull, twist, or bend the cord. Abusive handling can damage the cord.

Attaching the Strobe to the Strobe Connector

1. Remove the bulkhead connector cap.

2. Examine O-ring on sync cord connector for cuts or debris. Lubricate O-ring lightly.

3. Align the notch in the sync cord connector with the index mark on the housing's bulkhead connector. Insert the sync cord connector into the housing's bulkhead connector.
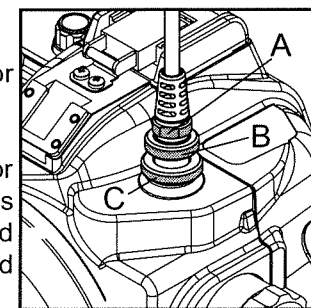   Push the cord in until the O-ring is seated.

Fig.12

4. Rotate part (B) clockwise till secure (Fig. 12).

5. Turn part (C) till it securely holds the bulkhead connector to stay.

6. To disconnect, loosen and release the connector end by reversing steps 1-5 above. Pull part (A) straight out. Never pull, twist or bend the cord for disconnection.

⚠CAUTION

● To remove the sync cord after use underwater, turn the housing upside down, and then pull out the sync cord. This will prevent water from dripping into the bulkhead connector. If it gets wet, dry it immediately.
● SEA&SEA's strobes equipped with N-type connectors are the only recommended strobes for this housing. Use of other strobes may cause malfunction of the housing.

TTL Converter Switch

● The default setting of this product is TTL mode. Direct connection of strobes to the bulkhead connector enables TTL photography.
* Set the mode switch of strobes to "TTL" for TTL photography.
* Refer to the instruction manual for the strobes for details on operation.

⚠CAUTION

● Ensure to use the same type of strobes when using two strobes together. Using two of the different strobes will generate unbalanced light.
* As for YS-90 series, all strobes are the same type.

● User with cameras supporting E-TTL II should select "Average" in custom functions menu "E-TTL II". Please refer to the instruction manual of the camera for the setting.
Refer to the strobe instruction manual for proper usage of strobes.

● This product is compatible only with the SEA&SEA strobes below. Use of any other strobe will void the product warranty for all equipment.

◎ Compatible strobes: SEA&SEA YS-120, YS-110, YS-90 series and YS-60

《Removing / Installing the battery》

● Install the CR2032 Lithium-ion battery (included with this product package) in the battery case of the front case.
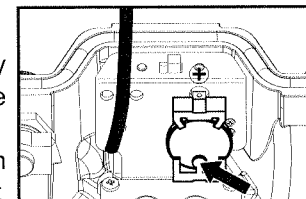You will hear it click. Be sure the direction of terminals (plus and minus) are correct before installing.

Fig.13

* Insert the battery bringing the positive (+) terminal into view.

● To replace the battery, use CR2032. In order to take out the battery, push the circular part in the center firmly and it will come off (Fig. 13).

◎ We recommend replacing the battery every 1,000 flashes of connected strobes.
◎ Remove the battery when not in use. Store this product with the battery removed.

《Manual strobe photography》

● Slide the TTL converter switch toward the "M" position with a thin rod (Fig. 14).
* Set the mode switch of strobes for manual photography.
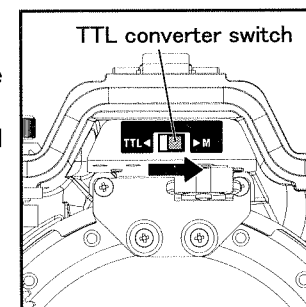
TTL converter switch

Fig.14

External Controls

《Power switch》

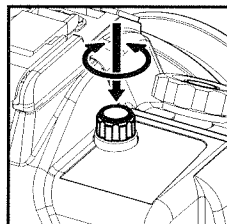This switch provides ON/OFF control for main power and illuminator of the camera (Fig. 15).

Fig.15

《Aperture / Exposure compensation button》

Rotate the main dial while pressing the button down to control these functions.
While holding it down, turn it till it stops; the button will remain in the down position (Fig. 16).
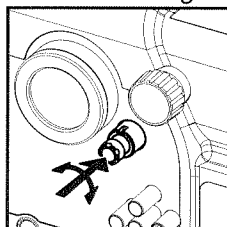
Fig.16

《Focus / Zoom dial》

When camera is set for Manual focus, insert convex part of the dial into deeper groove of spacer (Fig.17).

* Gear (option) must be set on the lens to use this dial.
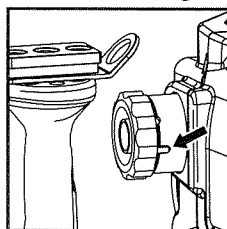* When using zoom lens, set zoom gear (option) to zoom in/out easily.

Fig.17

When using Auto focus, insert convex part of the dial into shallower groove of spacer (Fig. 18).

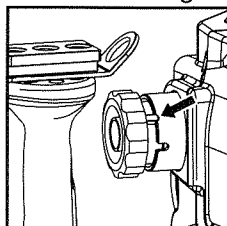* Inserting the convex part into deeper groove may cause damage to the lens.

Fig.18

For information regarding the controls of the Canon EOS Digital REBEL XTi / 400D camera, please refer to the instruction manual packaged with the camera.

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Leak Sensor

The leak sensor blinks red when sensing a water leak while the housing is submersed under water (Fig. 19). When the leak sensor blinks, come to the surface as soon as you know it's safe, and take out the camera. Also, when a lot of water leaks in, the air pressure rises inside and it is very dangerous. Be very careful when taking off the locking latches.
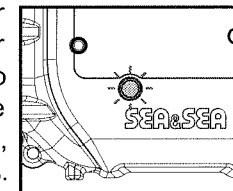
Fig.19

《Removing / Installing the battery》

The battery included in the rear case is the battery for the leak sensor. To replace the battery, use CR2032. In order to take out the battery, push the circular part in the center firmly and it will come off. (Fig. 20)
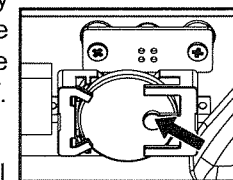
● Insert the battery bringing the positive (+) terminal into view.

Fig.20

Viewfinder

This product is equipped with 0.66x standard viewfinder.
It is replaceable and can be changed depending on the environment. Replace the standard viewfinder with optional viewfinder unit if necessary.
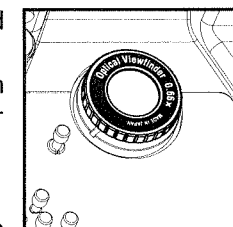
● How to replace
1. Loosen the viewfinder unit attached to rear case by turning counterclockwise and remove (Fig. 21).

Fig.21

* Be careful not to touch grease on a screw thread part.

2. Ensure that no dust, dirt, or rust is inside of the viewfinder, then turn the optional viewfinder unit clockwise to tighten.

* Do not touch the lens.

● Carefully observe the instruction manual for the optional viewfinder before use.

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Maintenance and Storage

⚠️CAUTION

● Never use chemicals, cosmetics, any petro-leum solvents such as paint thinner, or neutral detergent on the product. They may deform and damage the product.

● After each use in salt water, make sure it's watertight, then soak it sufficiently in fresh water.

● Insufficient soaking causes damage by salt to the product. Salty residue may be left on the product where it will crystallize as it evaporates. Crystallized salt is hard to dissolve and difficult to be removed once formed, and it will result in water leakage.

● After rinsing, dry the product well with a soft dry cloth, then let the product dry in the shade, out of direct sunlight.

● Do not dry the product by heating (using a hair dryer, for example). Heating can deform and damage the product.

● If you will not use the product for an extended period of time, store it away from high temperatures, high humidity, direct sunlight, or extreme cold.

● Do not store the product with naphthalene or camphor mothballs, or in locations such as a laboratory where chemicals are used. This environment can cause mold, rust, corrosion or malfunction.

● Always remove the camera from the housing after use. Thoroughly wipe off water before opening the housing and avoid any water drops inside the housing.

● After using the product, maintain the O-rings before storing. Examine the O-rings before and after each dive. We recommend early exchange of the O-rings, at least once a year.

● Every two years we recommend a complete overhaul of O-rings regardless of the frequency in use, for the best performance of the product.
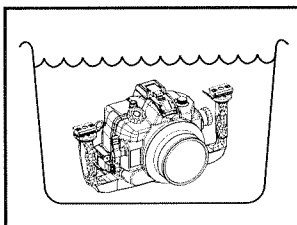
About the PASSED Label

The Pressure Test Passed label on a product indicates that the product has passed the SEA&SEA pressure test and is waterproof at depth.

Specifications

【Compatible camera】 Canon EOS Digital REBEL XTi / 400D

【Controls】 Power switch, Shutter-release lever, Main dial, Aperture / Exposure compensation button, Focus / Zoom dial, Mode dial, Playback button, ISO speed set button, AF mode selection button White balance selection button, Metering mode selection button, Setting button

【Construction】 Front case: Corrosion-resistant aluminum alloy Rear case: Polycarbonate Grip: Corrosion-resistant die-cast aluminum alloy

【Depth rating】 60m / 200ft

【Dimensions】 350x180x135mm / 14x7.2x5.4inch (WxHxD)

【Weight】 Approx. 2,700g / 94.5oz (Housing only)

【Underwater weight】 Approx. -750g / -26.3oz 《when equipped with 60mm lens + Compact Macro Port Base + Compact Macro Port S (35)》

* Specifications and appearance are subject to change without notice.