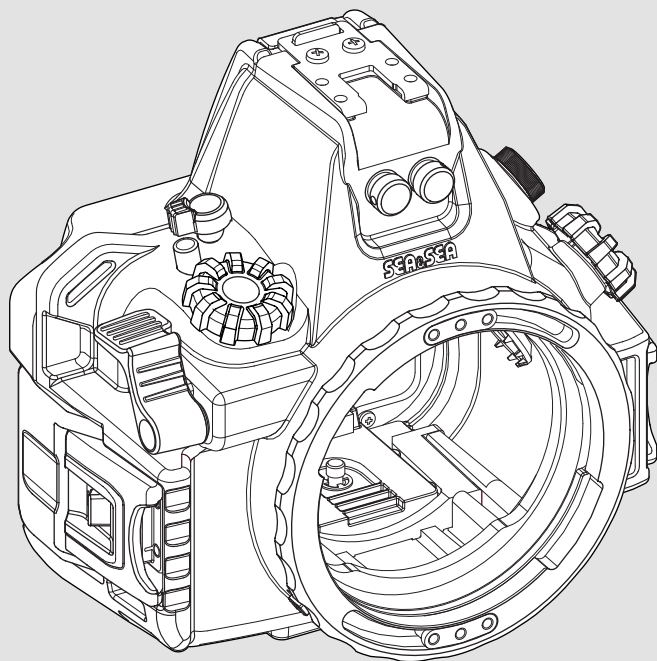


*UNDERWATER HOUSING for
Canon EOS Kiss X2 / REBEL XSi / 450D*

RDX-450D



取扱説明書
Instruction Manual

日本語

English

Introduction

Thank you for purchasing SEA&SEA products.

Please read this instruction manual carefully prior to using this product. Only with a thorough understanding of this manual's content will you be able to use the housing correctly. After reading the manual, please be sure to keep it in a place where you can easily come back to it at any time.

Note:

Pressure-resistance inspection sticker



Products bearing this sticker are those that have passed SEA&SEA's criteria-based inspection for pressure resistance.

Contents

Safety Precautions	E-2
Precautions on Handling the O-ring	E-4
Identification of Parts	E-6
Pressure balance control valve	E-7
Finder	E-8
Opening and Closing the Housing	E-9
Attaching and Detaching the Port	E-11
Mounting the Camera in the Housing	E-13
When using the fiber-optic cable	E-13
When using the YS converter	E-16
Connecting the Strobe	E-18
With the fiber-optic cable	E-18
With the YS converter	E-19
Attaching the Hand Strap	E-20
External Controls	E-21
Attaching the Optional Accessories	E-22
Maintenance and Storage	E-24
Specifications	E-25

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

- 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.
- 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] (P.E-24) 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 SUNPAK Co., Ltd. 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 SUNPAK Co., Ltd. will not be responsible for the replacement or compensation for cameras, lenses or those accessories damaged due to your invalid operation.
- SEA&SEA SUNPAK Co., Ltd. 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.

Precautions on Handling the O-ring

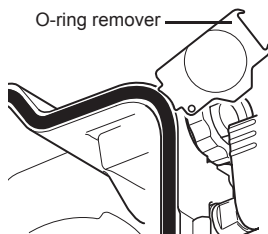
This product is kept watertight by the O-ring. To keep the O-ring functioning properly, please observe the following. Improper handling of the O-ring could cause flooding.

CAUTION

- SEA&SEA products use blue O-rings. These O-rings are impregnated with silicone oil through a special process. The lubricating effect of the O-ring lasts as long as the silicone oil is gradually seeping out from within.
- For the maintenance of these blue O-rings, make sure to use genuine SEA&SEA silicone grease (O-ring grease for use with the blue O-rings that comes in tubes with blue lettering and blue caps). If you use silicone grease from other companies or SEA&SEA's own silicone grease that comes in tubes with black lettering and black caps, the grease you apply will be sucked into the blue O-rings due to their special characteristics, which will result in insufficient grease. If this happens even once, the O-ring will not revert to its normal state and must be replaced.
- If the grease is insufficient, the O-ring will not slide, and it will become harder to open and close the waterproof parts. Because of this, it could become impossible to open or close the housing or it could cause flooding, so please refrain from using the housing with insufficient grease.

Are there any scratches or cracks in the O-ring?

Check the O-ring to make sure there are no scratches or cracks. If there are, replace the O-ring with a new one immediately. When handling the O-ring, do not use pointed metal objects, which could damage the O-ring. Use of the included O-ring remover is recommended.

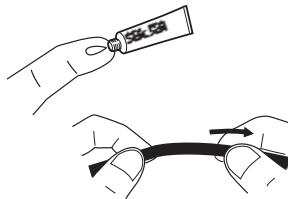


Be careful about dust, sand, and hair

Check the O-ring to make sure that there is no dust, sand, or hair on the O-ring, in the O-ring's grooves, or on the O-ring's contact surfaces. If any of these things are attached, remove them completely. If used as is, these things could cause flooding.

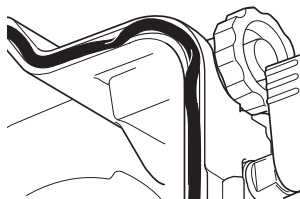
Coat with silicone grease

Silicone grease protects the O-ring from chafing. After checking the O-ring to make sure that there are no scratches, dust, or debris, apply a light coating of silicone grease to the entire O-ring with your finger. Applying too much grease will make it easier for dust and debris to adhere to the O-ring, and could cause flooding.



Do not twist the O-ring

When fitting the O-ring into the O-ring groove, insert it straight into the groove; do not bend or twist it.



Remove the O-ring for inspection before each use

In principle, the O-ring should be removed before each use so that the O-ring, O-ring groove, and O-ring contact surfaces can be checked. This is because you cannot find any sand or debris that may have gotten into the O-ring groove if the O-ring is not removed. For routine maintenance prior to each use, it is advisable to make sure to remove the O-ring.

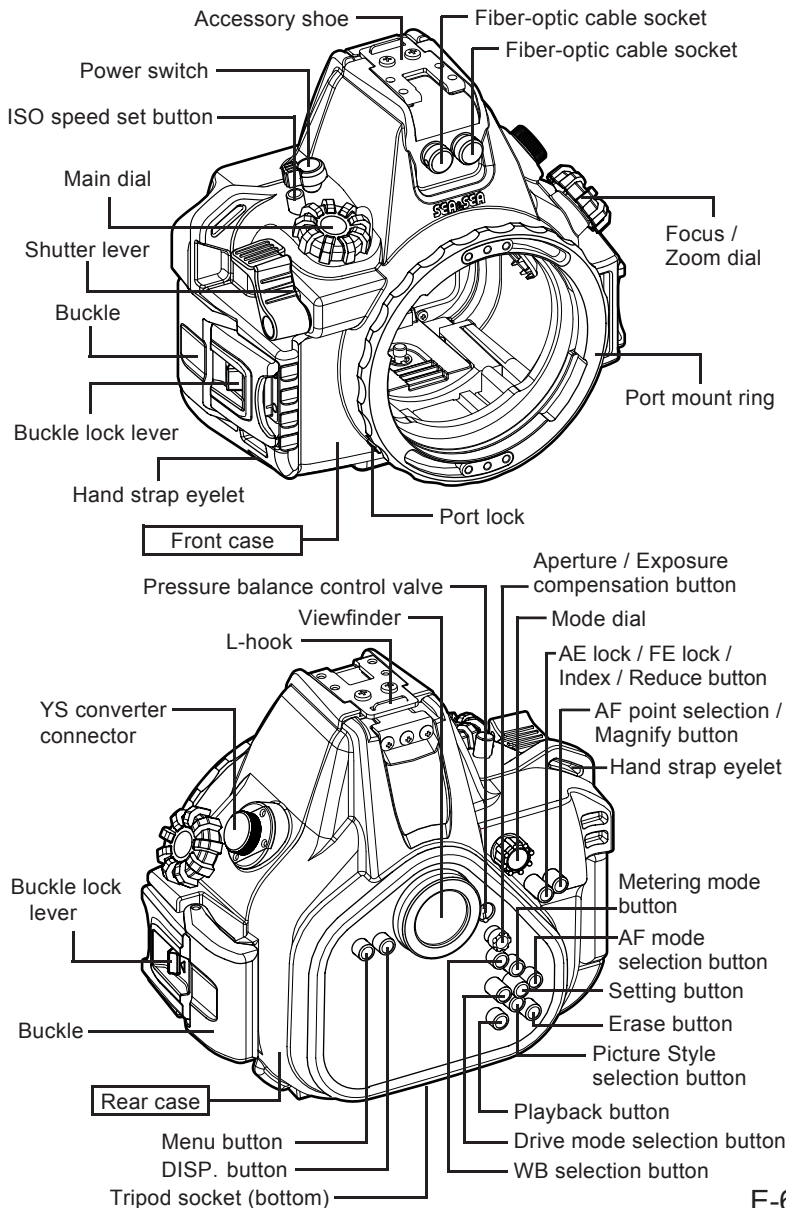
Be careful about how you store O-rings

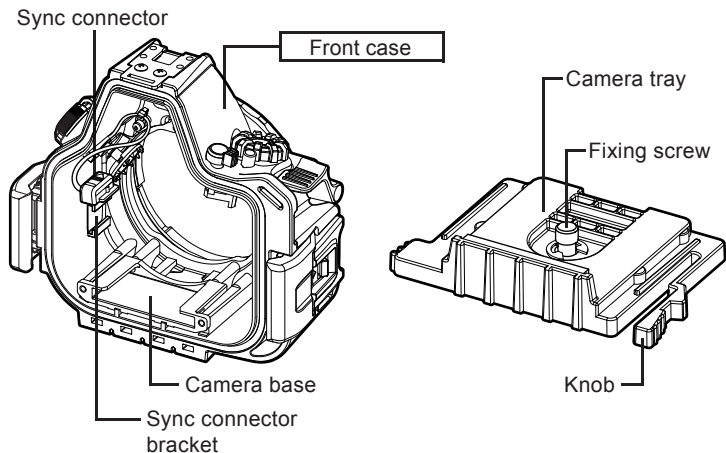
When storing spare O-rings or O-rings that you have removed from the housing, keep them in a cool place out of direct sunlight. Also, when storing O-rings, do not place heavy objects on them or twist them.

O-rings last for one year

Although it depends on how well they are maintained, how often they are used, and how they are stored, O-rings generally last for one year. It is advisable to inspect them before use, and replace them early.

Identification of Parts





Pressure balance control valve

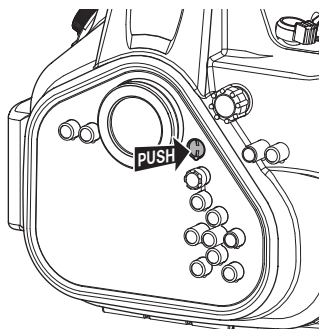
This product comes equipped with a pressure balance control valve. Pushing the valve counterbalances the pressure difference that occurs due to temperature or atmospheric changes, and makes it possible to open the housing.

How to use

Push the pressure balance control valve using a stick or other thin object.

CAUTION

- 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.



Finder

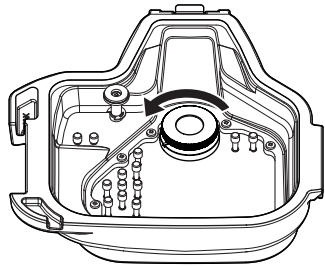
This product comes equipped with a standard finder (0.5x). The finder is replaceable; if you replace it with an optional finder unit, you can change the finder magnification to match your shooting conditions.

Replacing the finder

- 1 Rotate the finder unit mounted on the rear case in a counterclockwise direction to remove it**

- The screw areas are coated in grease, so be careful not to touch them.

- 2 Rotate the replacement finder unit in a clockwise direction to attach it**



⚠ CAUTION

- Before attaching the finder, check to make sure that there is no dust, dirt, or debris inside it.
- When replacing the finder, do not touch the surface of the finder lens.

Opening and Closing the Housing

Opening and closing the housing is done with the buckles. Here we will explain how to open and close the buckles.

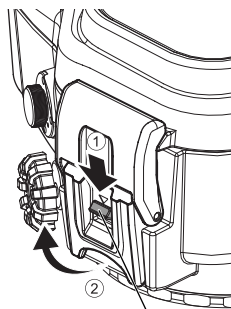
Opening the buckle

- 1 Press and hold the buckle lock lever (①), and remove the right and left buckles simultaneously (②)

⚠ CAUTION

- When removing the buckle, be sure to use the tips of your fingers, not your fingernails.

- 2 Remove the L-hook from the front case



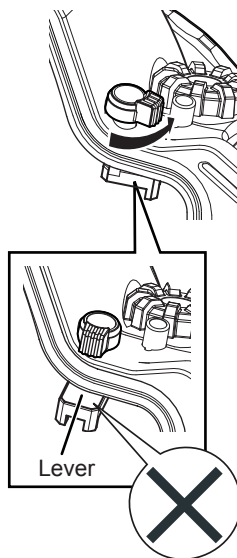
Buckle lock lever

Closing the buckle

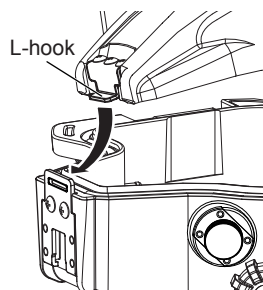
- 1 Rotate the power switch to pull back the lever

⚠ CAUTION

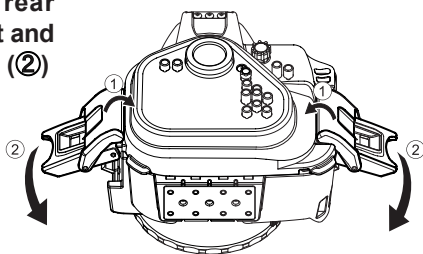
- If the lever for the power switch is protruding from the front case when the buckles are closed, the power switch could be damaged.



2 Attach the L-hook to the front case



3 Attach the buckles to the rear case (1), and close the right and left buckles simultaneously (2)



CAUTION

- Before aligning the rear case and front case, make sure there are no specks of dust, scratches, or deformities on the O-ring and the O-ring contact surfaces.
- Check to make sure that the buckles are securely locked.

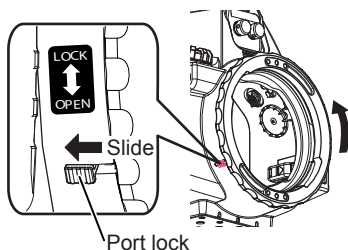
Attaching and Detaching the Port

CAUTION

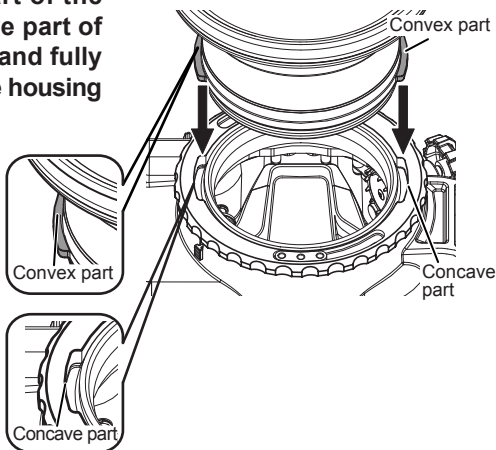
Only ports that are designed exclusively for RDX housings can be attached to this product.

Attaching the port

- 1 Release the port lock on the RDX housing (front case) by sliding it in the direction of the arrow as shown in the diagram, and rotate the port mount ring toward OPEN (in a counterclockwise direction) until it stops



- 2 Align the convex part of the Port with the concave part of the port mount ring, and fully insert the Port into the housing

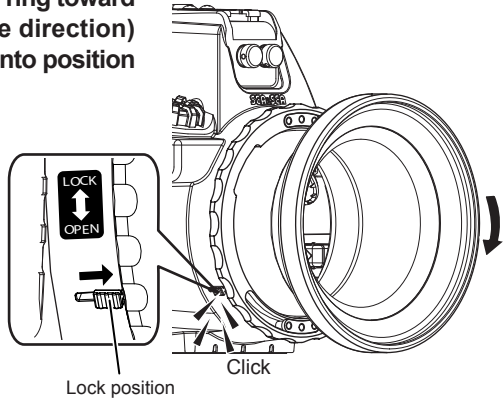


CAUTION

- Before attaching the Port, make sure there are no specks of dust, scratches, or deformities on the O-ring and the O-ring contact surfaces.

- 3 Rotate the port mount ring toward LOCK (in a clockwise direction) until you hear it click into position**

- Make sure that the port lock has returned to the lock position as shown in the diagram.



Detaching the port

- 1 Release the port lock by sliding it in the direction of the arrow, and rotate the port mount ring toward OPEN (in a counterclockwise direction) until it stops**
- 2 Hold the RDX housing (front case) firmly, and pull the Port straight off**

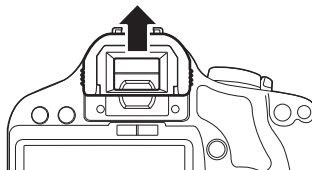
⚠ CAUTION

- Do not attempt to detach the Port with the port mount ring locked. This could result in damage to the port mount ring.
- If using NX-90PRO ports (with 4-digit part numbers and black bayonets) with this product in combination with the RDX Port Base L, it is necessary to modify the port's bayonet. NX-90PRO ports with 5-digit part numbers and gray bayonets can be used as is. For details, please contact SEA&SEA or a SEA&SEA authorized dealer.

Mounting the Camera in the Housing

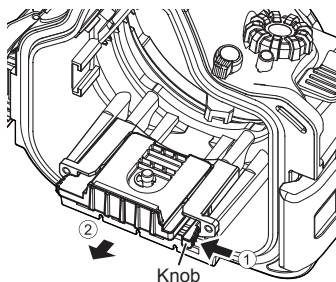
⚠ CAUTION

- Before mounting the camera in the housing, make sure the O-ring is not sticking out of its groove.
- Make sure to remove the eyecup from the camera. If used with the eyecup in place, it could cause flooding.

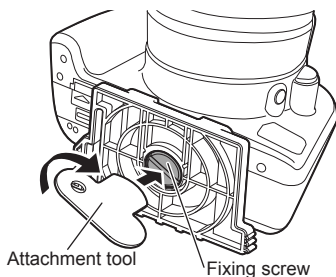


When using the fiber-optic cable (option)

- 1 Release the lock on the camera tray by pushing the knob in the direction of the arrow (①), and slide the camera tray out (②)

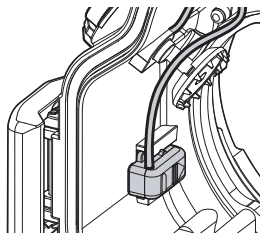


- 2 Attach the camera tray to the camera's tripod socket by fastening the fixing screw using the supplied attachment tool

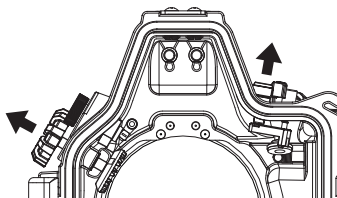


- 3 Attach the lens to the camera

- 4 Place the sync connector in the sync connector bracket inside the front case

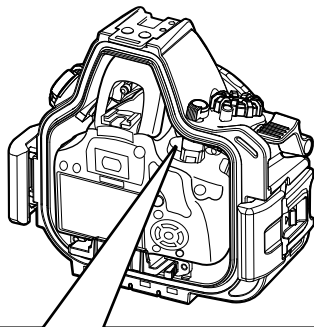


- 5 Pull the power switch and focus/zoom dial out**

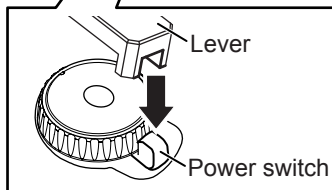


- 6 Pop up the camera's built-in flash. Align the camera tray with the camera base inside the front case, and slide the camera forward into the front case**

- Make sure that the camera tray is properly placed and the knob is locked.



- 7 Align the lever of the housing's power switch and the camera's power switch**



- 8 Place the rear case on the front case, and close the buckles**

➡ See:

"Opening and Closing the Housing" (P. E-9)

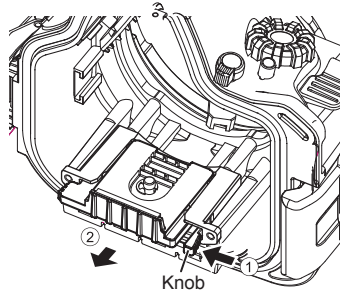
- Make sure that the O-ring is properly fitted in the O-ring groove before setting of the rear case.

Removing the camera from the housing

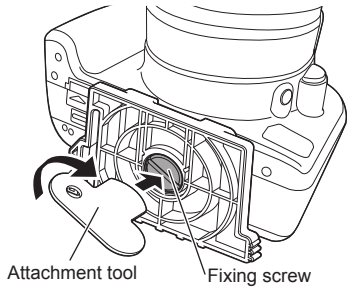
- 1** Open the buckles
- 2** Remove the rear case
- 3** Pull the power switch and focus/zoom dial out
- 4** Release the lock on the camera tray by pushing the knob, and slide the camera tray out

When using the YS converter (option)

- 1 Release the lock on the camera tray by pushing the knob in the direction of the arrow (①), and slide the camera tray out (②)

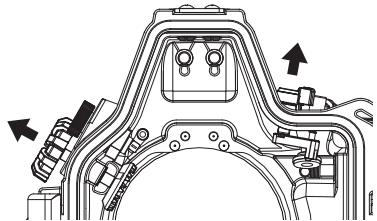


- 2 Attach the camera tray to the camera's tripod socket by fastening the fixing screw using the supplied attachment tool



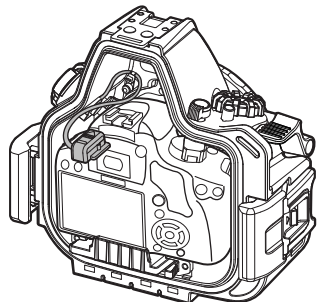
- 3 Attach the lens to the camera

- 4 Pull the power switch and focus/zoom dial out



- 5 Align the camera tray with the camera base inside the front case, and slide the camera forward into the front case

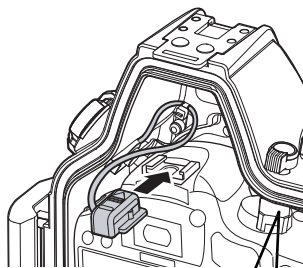
- Move the sync connector clear of the front case.
- Do not pop up the camera's built-in flash.
- Make sure that the camera tray is properly placed and the knob is locked.



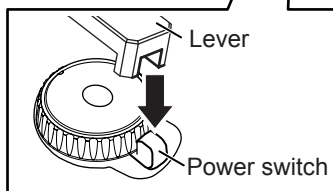
- 6** Insert the sync connector into the camera's accessory shoe

⚠ CAUTION

When inserting or removing the sync connector, be sure to hold the connector part. If you push or pull on the cord part, it could damage the sync connector or cause contact failures.



- 7** Align the lever of the housing's power switch and the camera's power switch



- 8** Place the rear case on the front case, and close the buckles

➡ See:

"Opening and Closing the Housing" (P. E-9)

- Make sure that the O-ring is properly fitted in the O-ring groove before setting of the rear case.

Removing the camera from the housing

- 1** Open the buckles
- 2** Remove the rear case
- 3** Remove the sync connector from the camera's accessory shoe
- 4** Pull the power switch and focus/zoom dial out
- 5** Release the lock on the camera tray by pushing the knob, and slide the camera tray out

Connecting the Strobe

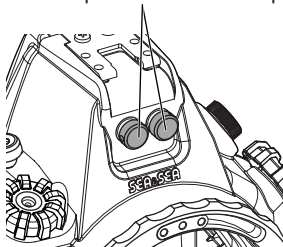
This product comes equipped with two fiber-optic cable sockets and a YS converter connector.

With the fiber-optic cable (option)

Connect the strobe with the fiber-optic cable (option) when the strobe is triggered by sensing the light from the camera's built-in flash.

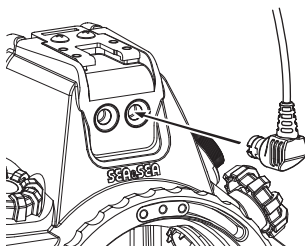
1 Remove the fiber-optic cable socket caps

Fiber-optic cable socket cap



2 Insert the fiber-optic cable's connector into the socket until it stops

- Do not remove the caps from the fiber-optic cable socket when not connecting a fiber-optic cable.



With the YS converter (option)

Connect the strobe with the YS converter (option) when the strobe is triggered in conjunction with the camera.

CAUTION

- Carefully observe the instruction manual for the YS converter before use.
- A Grip-stay L (option) is required when using the YS converter.
- Do not connect the strobe and the YS converter connector with a sync cord (option) because this will damage the YS converter connector.

1 Remove the housing's bulkhead connector cap

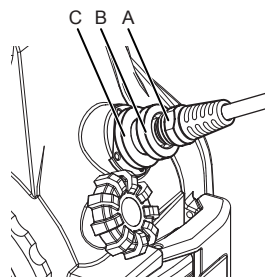
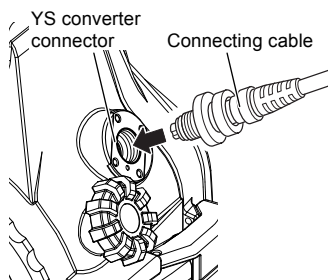
2 Make sure there are no scratches or debris on the O-ring of the connecting cable being connected

3 Align the round mark (or the notch on the tip) of the connecting cable with the round mark (or the convex part inside) of the strobe bulkhead, and then push it straight in

4 Align the B part of the connecting cable with the screws of the strobe bulkhead, and then rotate it until it stops

5 Rotate the C part of the connecting cable until it stops

- Tighten it securely.
- When removing the connecting cable, loosen C first, then B, and then pull the connecting cable straight out holding onto A. Do not pull on the cable part.

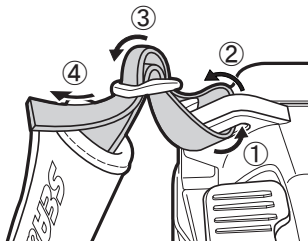


CAUTION

- After use underwater, make sure to prevent water droplets from dripping into the bulkhead connector by wiping moisture away from the bulkhead connector and then turning the housing upside down and extracting the sync cord. In the event that water droplets do drip into the connector, promptly wipe away all moisture.
- If you use incompatible strobes, not only might they not work correctly, but they may also cause the camera and the strobe to malfunction.

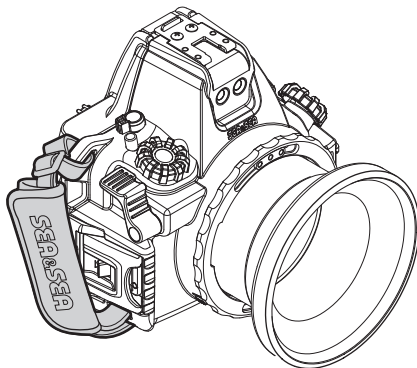
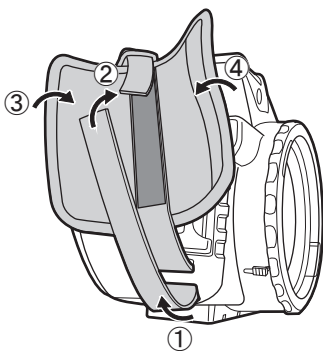
Attaching the Hand Strap

- 1 Put the hand strap through the hand strap eyelet on top of the housing as shown



- 2 Put the hand strap through the hand strap eyelet on bottom of the housing as shown

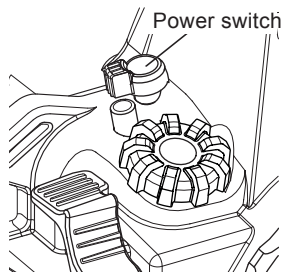
- Ensure a good grip, then fasten the velcro.
- Make sure to attach at least 2/3 of the velcro's length.
- Hold the equipment by the housing body when carrying it. Carrying the equipment by holding the strap may cause it to fall or become lost.



External Controls

Power switch

By rotating the knob as indicated, you can turn the power ON/OFF.

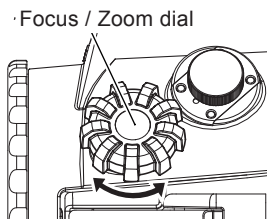


Focus / Zoom dial

When a focus or zoom gear is mounted on the lens, you can control the manual focus or adjust the zoom angle.

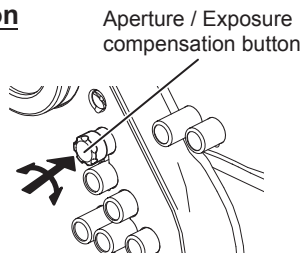
CAUTION

- The focus / zoom dial cannot be used if there is no gear mounted on the lens.
- When using a zoom gear, you cannot shoot with manual focus.
- Do not use a focus gear when you wish to shoot with autofocus. Autofocus shooting with a focus gear will damage the lens.



Aperture / Exposure compensation button

While pressing the button, rotate the main dial to make operation settings. By rotating the button while pressing it in, you can fix it in the pressed-in state.



Other controls

Please read the instruction manual for the camera.

Attaching the Optional Accessories

This product accepts SEA&SEA optional accessories. By using this product in combination with those accessories, you will be able to try various shooting techniques.

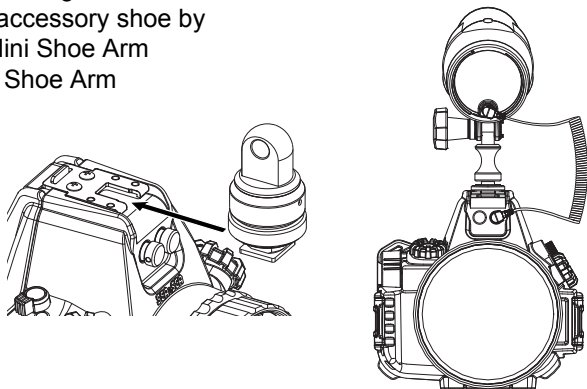
⚠ CAUTION

- Lenses, strobes and other accessories have different depth rating. Check the depth rating for each before use.
- Read the instruction manual for each accessory before use.

Accessory shoe

SEA&SEA strobes / lights can be mounted to the accessory shoe by using optional Mini Shoe Arm (#29511) or Hot Shoe Arm (#29501).

<Example>



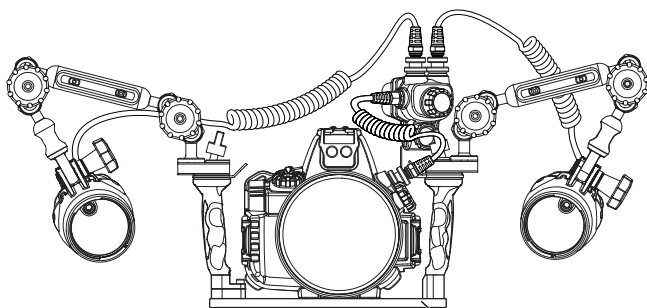
⚠ CAUTION

- The max. weight of an accessory that can be mounted to the accessory shoe is approx. 750g / 26.3oz (equivalent to the weight of SEA&SEA YS-110 α strobe).
- Remove the accessories from the accessory shoe when carrying the housing out of water.

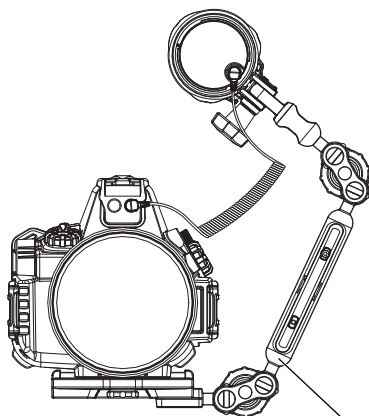
Stays / Arms

SEA&SEA stays / arms can be mounted to the housing's tripod socket.

<Example>



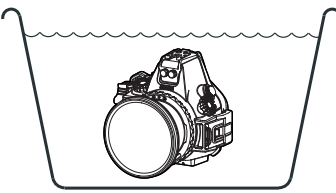
Grip-stay L



Sea Arm VII

Maintenance and Storage

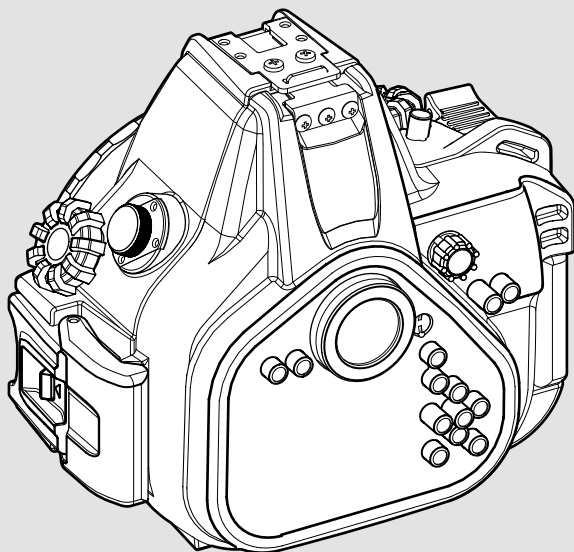
CAUTION

- Never use chemicals, cosmetics, any petroleum 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.

Specifications

Compatible camera	Canon EOS REBEL XSi / EOS 450D
Controls	Power switch, ISO speed set button, Main dial, Shutter button, Mode dial, AE lock / FE lock / Index / Reduce button, AF point selection / Magnify button, Aperture / Exposure compensation button, WB selection button, Metering mode button, AF mode selection button, Setting button, Erase button, Picture Style selection button, Playback button, Drive mode selection button, DISP. button, MENU button
Construction	Body: Polycarbonate resin (Black)
Depth rating	60 m (200 feet)
Dimensions	Approx. 200 (W) × 190 (H) × 139.5 (D) mm (14.2 × 8.8 × 6.0 inches)
Weight	Approx. 2000 g (4.4 lbs.) (housing only)
Accessories	Silicone grease, Attachment tool, Housing body cap, O-ring maintenance manual, Hand strap, Instruction manual (this manual)

* The specifications and appearance are subject to change without notice.



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