

# TTL CONVERTER III for Nikon 50112 for Canon 50114

## Instruction Manual

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.

### Safety Precautions

\* 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.

⚠ **DANGER** : Situations that involve a high risk of severe injury or death.

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

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

### ⚠ DANGER

- Never attempt to disassemble, repair or alter the product yourself to prevent significant electrical hazard due to the high-voltage circuitry in the product. Do not heat the product or put it into a fire, this could result in explosion or fire. Unauthorized disassembling and/or modification could result in malfunction or flooding, and avoid product warranty. Take the product to a SEA&SEA authorized service center for repair or inspection.

### ⚠ WARNING

- Pay particular attention to opening the battery cap to avoid injury. Heat from the batteries may cause pressure buildup inside the battery compartment, and could result in cap explosion with unexpected force.
- Avoid water or foreign objects inside the product. Discontinue use and turn it off immediately should you notice flooding or leakage. Continuous use could result in complete damage to the product.
- Do not use the product in the presence of flammable gas, as this could result in explosion or fire.
- 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.
- 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.
- Do not open the chassis or connector cap in the vicinity of open flames.
- 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 carry the camera or housing by holding the accessories such as arm, cable, strobe, etc. Heavy components may fall and cause damage or injury.
- 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.
- Rinse the product with fresh water, after underwater use. Ensure that the product is waterproofed before rinsing. Refer to [Maintenance and Storage] for details.
- 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.
- Carefully observe the O-ring maintenance manual for the handling of O-rings before use.
- SEA&SEA assumes no liability for errors or discrepancies in this manual.
- Specifications and appearance are subject to change without notice.

### 《Safety Precautions for Use of Battery》

#### ⚠ DANGER

- Never expose the battery to flame or fire, or to excessive heat.
- Never attempt to disassemble, alter or directly solder the battery. There are no user-serviceable parts. Tampering with battery may expose you to dangerous voltage, battery acid, or electrical shock.
- Never short-circuit the terminals of a battery, as it could result in battery leakage, heat generation, fire, or explosion. Avoid contact with all metal objects during transporting and storage.

- Move leaking batteries away from fire or open flames immediately. The leaked fluid and its vapor are combustible.
- If the battery leakage contacts your skin or clothing, flush the affected area repeatedly with clean water. It may irritate your skin. Should it get into your eyes, immediately rinse them with plenty of water, avoid rubbing and seek medical advice.
- Never attempt to insert the battery upside down or backward, as it could result in battery leakage or explosion. Always confirm the direction of plus and minus before installation.
- Never connect a battery directly to a plug outlet or car cigarette lighter.

### ⚠ WARNING

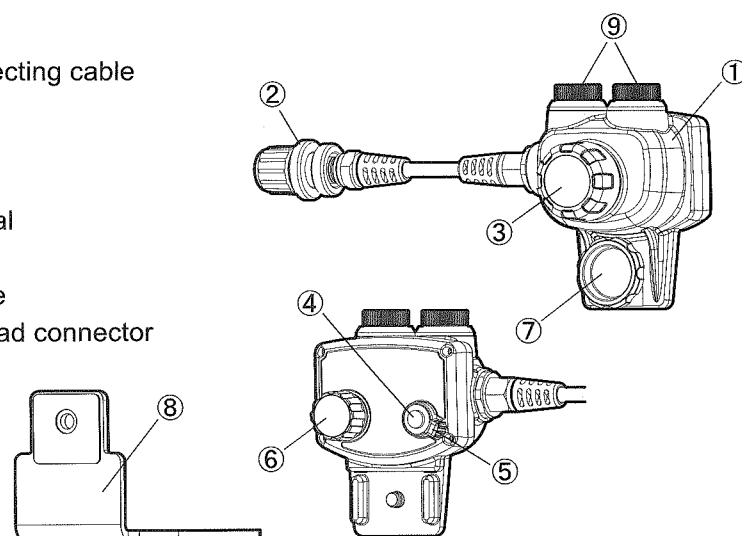
- Keep dry. The battery is not waterproof, and may malfunction if immersed in water or exposed to high levels of humidity. Rusting of the internal mechanism can cause irreparable damage.
- Do not remove and/or damage the case of a battery. It may cause battery leakage, overheating or explosion.
- Never use batteries should you notice any changes such as leakage, discoloration or deformation. When you notice the situation as abnormal, discontinue use immediately and take the product to a SEA&SEA authorized service center for inspection.
- Keep out of reach of children to prevent accidental ingestion. If swallowed, seek medical advice immediately.
- Do not leave or use batteries in an extreme hot environment. This may cause battery leakage, overheating or battery performance deterioration.

### ⚠ CAUTION

- Avoid strong shocks/impacts or excess stress to batteries.
- Turn the equipment off after use. Remove batteries from the equipment when not in use.

## Identification of Parts

- ① TTL converter
- ② Camera connecting cable
- ③ Battery box
- ④ Power lamp
- ⑤ Power knob
- ⑥ Adjustment dial
- ⑦ Fixing knob
- ⑧ Mounting plate
- ⑨ Strobe bulkhead connector



## How to Use

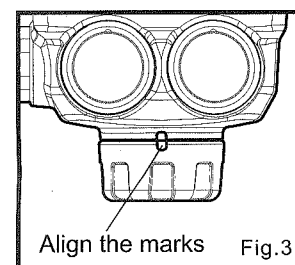
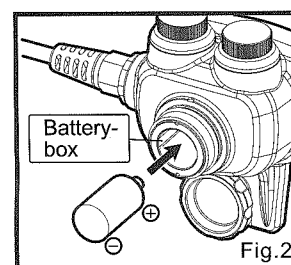
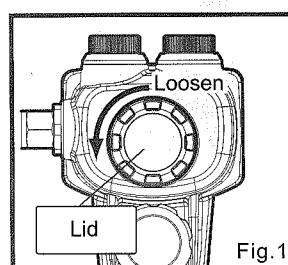
### 《Battery Installation》

#### ⚠ CAUTION

- Before installing or replacing battery, wipe all moisture off the product and make sure your hands are dry.

This product is powered by a CR-2 lithium battery.

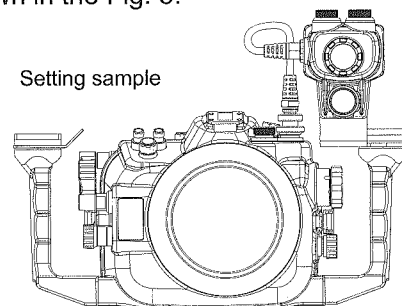
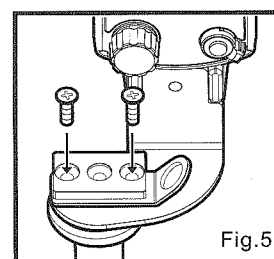
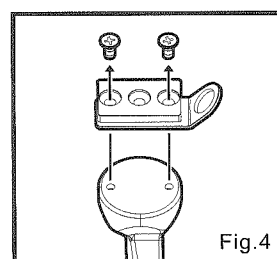
1. Turn the battery cap counterclockwise and remove. (Fig. 1)
2. Install the battery in the product with the correct orientation: observe the ⊕ and ⊖ signs (polarity) on the battery box and match the battery's polarities to the signs. (Fig. 2)
3. Make sure that the lid surface that contacts the O-ring is undamaged and has no grit or debris on it. Make sure that the O-ring is also undamaged and free of grit or debris. Apply a small amount of silicone grease to the O-ring.  
\* Refer to the "O-ring maintenance manual" for details.
4. Firmly turn the lid clockwise until it stops. Align the marks on the lid and the battery box. (Fig. 3)



### 《Mounting to Housing Grip》

This product can be mounted to a SEA&SEA left hand grip.

1. Remove the two screws (short screw x 2) on the left grip of the housing with a cross slot screw driver to disassemble. (Fig. 4)
2. Place the mounting plate between the part and the grip, and mount securely with the supplied screws (long screw x 2) as shown in the Fig. 5.



### ⚠ CAUTION

- This product cannot be mounted to a SEA&SEA right hand grip.

《Connection to Other Equipment》

⚠ CAUTION

- Before connecting the product to other equipment, make sure to turn off all equipment. Plugging in/out the code while equipment is ON will cause damage or trouble.
- When turning on the equipment connected to the TTL converter, make sure to turn on the converter first, then turn on other equipment. Sometimes strobe connected to the converter fires when the power of the converter cycled. This is not malfunction of the converter nor the strobe. TTL converter works properly after the firing of the strobe.
- Be sure to connect the camera connecting cable to the converter connector on the camera housing. Connecting the cable to other connectors will cause damage on the connector.
- Camera may not recognize the strobe depending on the condition. In such situation, turn off all equipment, then turn on the power of the converter.
- Converter connector and strobe connector on the housing cannot be used at the same time. When used together, the TTL converter will malfunction.

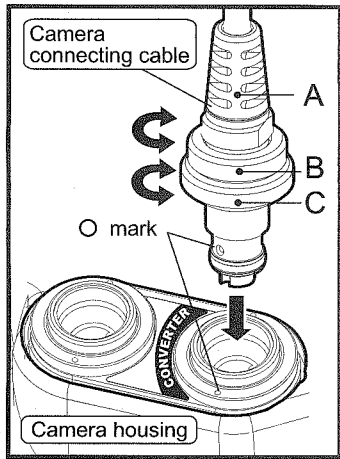
[How to connect with a camera housing]

This product can be connected to a camera housing equipped with converter connector.

\* Refer to the compatibility list for compatible housings.

Camera connecting cable connection

1. Remove the connector cap of the converter connector on the camera housing.
2. Examine O-ring on camera connecting cable for cuts and debris. Lubricate O-ring lightly.
3. Align the O marks of the cable and the converter connector on the housing. Insert the cable straight into the converter connector and push in until the O-ring is seated.
4. Rotate part (B) clockwise till secure.
5. Turn part (C) till it securely holds the connector to stay.
6. To disconnect, loosen and release the cable end by reversing steps 3-5 above. Pull the cable straight out by holding part (A).



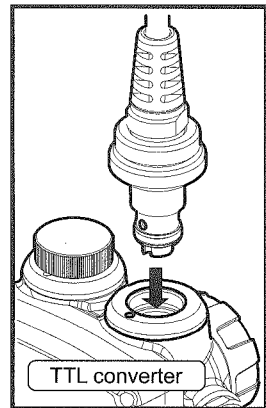
[How to connect with strobes]

This product is equipped with two strobe bulkhead connectors, and can be used with either one or two strobes. Use of the same type of strobes is highly recommended for a two-strobe TTL setting. Using two different strobes will generate unbalanced light due to the different specifications.

- \* Refer to the compatibility list for compatible strobes.
- \* As for YS-90 series, all strobes are the same type.
- \* Refer to the compatibility list for details of a two-strobe setting.

Sync cord connection

1. Remove the strobe bulkhead connector cap from this product.
  2. Connect the sync cord to the strobe bulkhead connector on this product.
- ※ Refer to the strobe's instruction manual for details.



[Handling the sync cord]

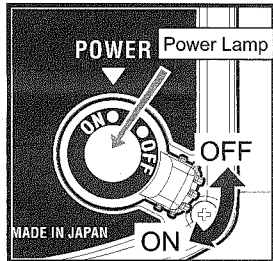
⚠ CAUTION

- Do not touch the connector's contact pins with fingers or contaminate the pins with silicone grease. If contaminated, clean with alcohol.
- When the sync cord is detached from the strobe or converter, be sure to cover both connectors ends with the plastic cap.
- When rinsing the sync cord after use, if the sync cord has been detached from the strobe and/or converter, be sure both ends of the connector are protected with their plastic caps.
- When detaching the sync cord from the converter, always hold the converter with the bulkhead connector facing downward to prevent any water trapped between the sync cord and bulkhead connector from penetrating the bulkhead connector.

《Operating Instructions》

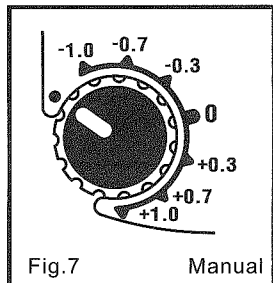
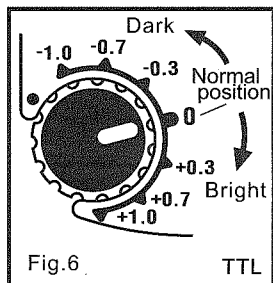
[Power knob]

Turn the switch clockwise to turn on power, counterclockwise to turn off power. Green LED lights up when turning on power, and converter will activate. Red LED will lights up when the battery is running low. Change the battery when the power lamp lights up in red. Leave the power OFF when not in use.



[Adjustment dial]

This dial adjusts the light during TTL mode (Fig. 6), and it also switch over TTL mode and manual mode. (Fig. 7)



《Settings for Shooting》

[TTL photography]

1. Set the adjustment dial within the TTL range (-1.0 to +1.0) as shown in the Fig. 6.
  - \* For normal use, keep it at " 0 ".
  - \* Some optional settings may be required for the camera depending on the connecting equipment. Refer to the compatibility list for details.
2. Set the switches of the strobe for TTL photography.
  - \* Turn OFF the slave function of the strobe if it is available. Refer to the strobe's instruction manual for details.

⚠ CAUTION

- Be sure to set the camera as below for TTL photography.
  - \* Set the ISO speed to less than ISO 200.
  - \* Set the shutter speed to faster than 1/3 minutes.
  - \* Set the shutter curtain sync timing to 1st curtain sync.
  - \* Select "1: Average" in custom functions menu "E-TTL II " when using with Canon cameras supporting E-TTL II .
- Refer to the camera's instruction manual for the setting.
- A preflash is fired when the converter is set in the TTL mode.

[Manual photography]

1. Set the adjustment dial to the ● (Manual) position as shown in the Fig. 7.
2. Set the switches of the strobe for manual photography.
3. Adjust the amount of light for each strobe.
  - \* Refer to the strobe's instruction manual for the setting.

Manual photography for strobes with no light control function

Strobe light intensity can be controlled by the camera's exposure compensation system. It is available for strobes that do not have a light control function or only a few intensity steps.

1. Set the adjustment dial to the ● (Manual) position as shown in the Fig. 7.
2. Set the switches of the strobe for TTL photography.
3. Adjust the strobe light intensity by setting the exposure compensation on the camera.
  - \* The strobe fires at the full power when set to +0.3EV. Adjust the compensation to a negative value.

⚠ CAUTION

- This function is available only for Nikon TTL converters.
- When using with two strobes with no light control functions, light intensity cannot be controlled individually.



This device complies with Part15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, (2) this device must accept any interference received, including interference that cause undesired operation.

Maintenance and Storage

- 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.
- 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.
- When storing this product for a long period of time, remove the battery.

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

【Power】	Lithium battery CR-2
【Battery life】 * 1	Approx. 2000 flashes
【Depth rating】	60m / 200ft
【Construction】	Case: Polycarbonate, Fixing knob: ABS resin Mounting plate: Corrosion-resistant aluminium alloy
【Weight】 * 2	Approx. 320g / 11.3oz (Approx. 120g / 4.2oz underwater)
【Dimensions】	68x90x75mm / 2.7x3.6x3.0inch (WxHxD)
【Accessories】	Mounting plate, Screw × 2, Lithium battery CR-2, Silicone grease, O-ring maintenance manual
【Accessories sold separately】	O-ring set for TTL Converter (#62126)

\* 1: Number of flashes of connecting strobe. (Differs depending on use conditions.)  
\* 2: Including battery and mounting plate.

※ Specifications and appearance are subject to change without notice.



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0653-Z-01

# TTLコンバーターⅢ対応機種一覧表 Compatibility List

TTL Converter	Housing	Camera ※2						
			YS-120	YS-110 ※3	YS-90AUTO	YS-90DX	YS-90	YS-60/N
for Nikon	DX-S5Pro	S5Pro	○	○	○	○	○	○
		EV	-	-	-	-	-	-
	DX-D200	D200	○	○	○	○	○	○
		EV	-	-	-	-	-	-
	DX-D80	D80	○	○	○	○	○	○
		EV	-	-	-	-	-	-
	DX-D50 ※1	D50	○	○	○	○	○	○
		EV	-	-	-	-	-	-
	DX-D70 ※1	D70/D70s	○	○	○	○	○	○
		EV	+0.3	+0.7	+0.7	+0.7	+0.7	+0.7

※1 コネクターの改造が必要です。

With customized connector.

※2 使用するストロボに合わせて、カメラ側で露出補正、もしくは調光補正をおこなってください。

Adjust the exposure compensation or flash exposure compensation of the camera depending on the connected strobe.

※3 YS-110と異なるストロボを2灯で使用する場合は、YS-110にディフューザーを付けて使用してください。

Please attach the diffuser to YS-110 when using two different strobes (YS-110 and another strobe) for a two-strobe TTL setting.

※接続対応製品は、上記ハウジングとストロボになります。(全て当社製品)

対応製品以外の製品には使用しないでください。対応製品以外でご使用になられた場合の保証はいたしかねます。

This product is compatible only with the above SEA&SEA Housings and Strobes.

Use of other equipment void product warranty.

※仕様は改良のため予告なく変更することがありますのでご了承ください。

Specifications are subject to change without notice.