

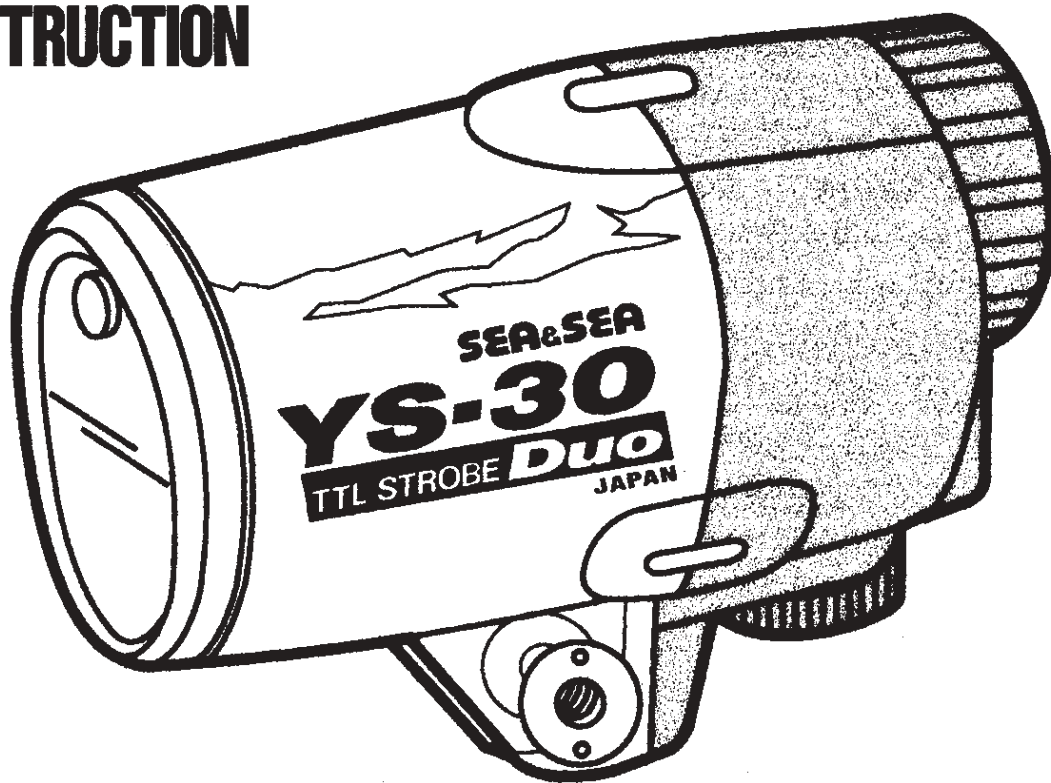
SEA&SEA



UNDERWATER AUTO STROBE

YS-30TTL/Duo

INSTRUCTION



- Yellow Sub

YS-30TTL/Duo

Instruction Manual

Thank you and congratulations on your purchase of SEA & SEA's YS-30TTL / Duo Strobe. For proficient operation of all strobe functions and to maximize performance, please read this manual thoroughly before use. Retain for future reference.

Table of Contents

Safety Precautions	2
Handling the O-ring	4
Handling the Sync Cord	5
Identification of Parts	7
Before Taking Pictures	
How to Install the Batteries	8
Taking Pictures	
Operating the Controls	9
Exposure Calculation Table	10
TTL Distance Table	11
About the Cordless TTL System	12
Maintenance and Storage	13
Specifications	14

Safety Precautions

Please observe the following precautions as they contain highly important information related to safe handling of the equipment. Failure to heed these precautions could have serious consequences.

Definitions:

WARNING!: Situations that could result in serious injury or death.

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

General Precautions for Operation of the Strobe

⚠ WARNING!

- Use only manganese, Ni-Cd or alkaline batteries. Other batteries may emit hydrogen gas and possibly cause an explosion.
- Do not fire this strobe with the reflector facing down on a table or floor as it may cause overheating of the internal circuitry and/or fire.
- Do not trigger the flash near combustible materials. It may cause fire.

⚠ CAUTION!

- Always make sure that the strobe and accessories are securely assembled to prevent them from falling off, becoming lost, causing personal injury or equipment malfunction.
- Do not attempt to disassemble the strobe. Internal high voltage circuitry can cause personal injury.
- Do not alter or modify the strobe. User modifications can result in flooding. User modifications will void the warranty.
- If you detect smoke or an acrid odor, discontinue use immediately. Remove the batteries from the strobe. Send to an authorized Sea & Sea dealer.

- In the event of flooding, turn off strobe and camera. Discontinue use immediately. Remove batteries from camera and strobe. Beware of increased pressure inside the strobe. Handle with extreme care when opening.
- Do not short circuit the connector pins. It may cause equipment malfunction.
- During transportation or when not in use for a long time, remove batteries to avoid unwanted battery consumption due to accidental activation of the power switch.
- Sea & Sea Products Ltd. will not be responsible for costs incurred for film and/or processing should malfunction of the YS-30TTL / Duo strobe, camera, or accessories result in unsatisfactory photographs.
- The YS-30TTL/Duo strobe incorporates plastic parts. Do not subject this strobe to extreme heat, such as on a car dashboard or in direct sunlight. Plastic parts are prone to warping.

Precautions for Storage of the Strobe

⚠ CAUTION!

- When not in use for a long period of time, remove batteries; possible battery leakage will cause malfunction.
- Do not store in a damp or humid environment.
- Do not store in a chemically laden environment. Naphthalene, camphor or other harmful chemicals can cause mildew, rust, corrosion and other damage to the metal and rubber parts in this product.
- When not in use for a long period of time, attach to the camera, and trigger the shutter release (film and batteries are unnecessary). This will exercise the internal parts and keep the strobe in good working condition.

Handling the O-Ring

The O-ring on the front case of your YS-30TTL / Duo provides an airtight waterproof seal. Improper handling and maintenance of the O-ring can cause flooding. Please observe the following precautions carefully.

●Remove the O-ring for inspection.

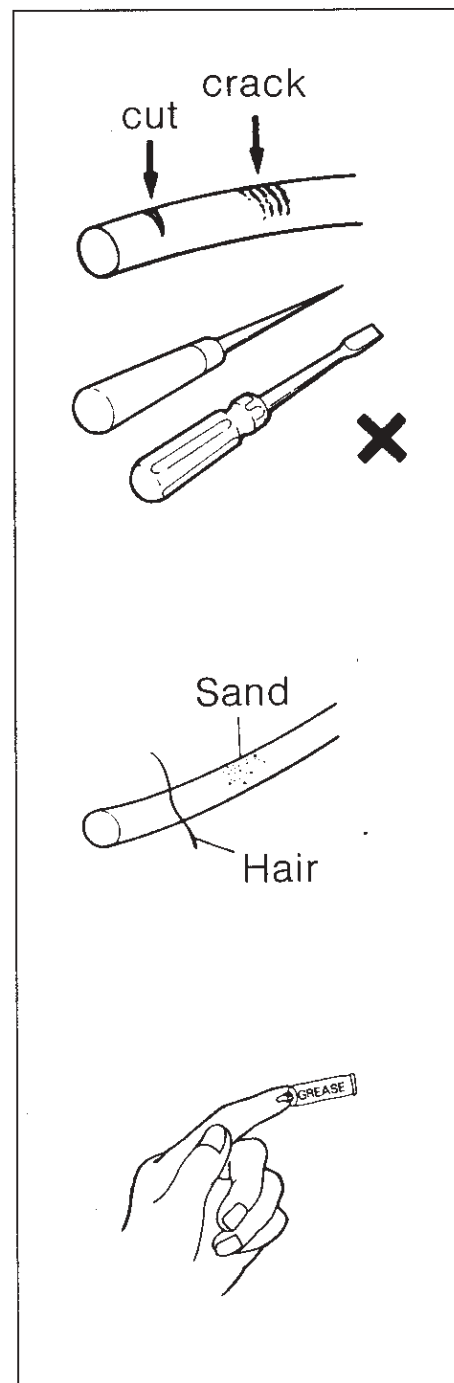
Before use, remove the O-ring from its groove and carefully check the O-ring, the O-ring groove and the O-ring contact surface. A thorough examination of the O-ring and O-ring groove is not possible unless the O-ring has been removed.

●Always inspect the O-ring for scratches, cracks or cuts.

If the O-ring is damaged, it must be replaced. Never remove the O-ring with a sharp tool. To avoid damaging the O-ring, use the O-ring Remover a tool especially made for O-ring removal.

●Inspect for debris.

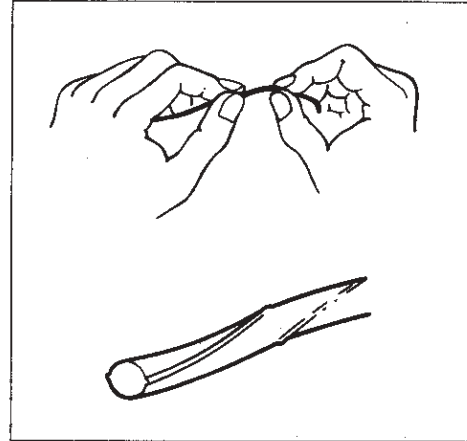
Make sure that there are no foreign particles, such as dust, sand or hair, on the O-ring, O-ring groove or O-ring contact surface. Such contamination will breach the seal and cause flooding. If necessary, wash the O-ring thoroughly in fresh water and dry with



a lint-free cloth. Use a cotton swab to clean the O-ring groove and contact surface.

●**Lubricate with silicone grease.**

Silicone grease protects the O-ring from drying and abrasion. Dab a small amount of grease onto your finger and draw the O-ring through your fingers until evenly coated. Use the silicone grease sparingly. Too much grease attracts debris.



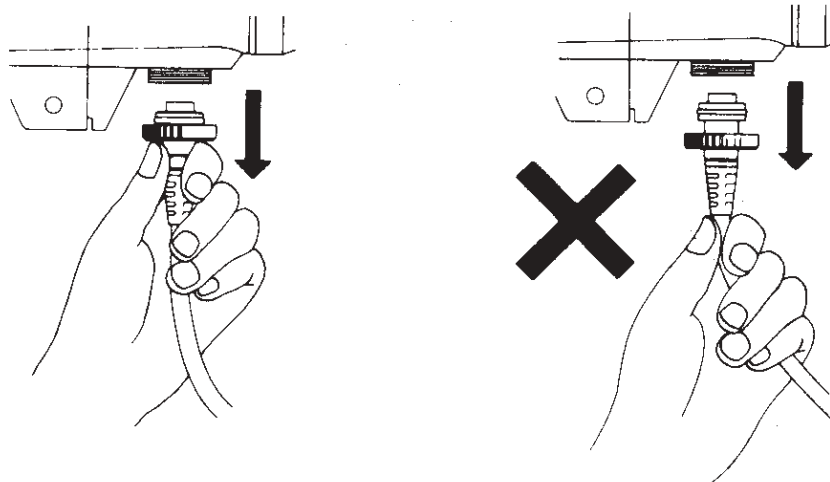
Handling the Sync Cord

The sync cords are detachable. After use, when detaching the sync cord from the strobe or camera, be sure the bulkhead connector is facing downward so that any trapped water will drip out and away from the interior of the connector.

When detaching the sync cord, grasp the connector end, not the cord, and pull out. Never pull, twist or bend the cord as it may damage the electrical wiring.

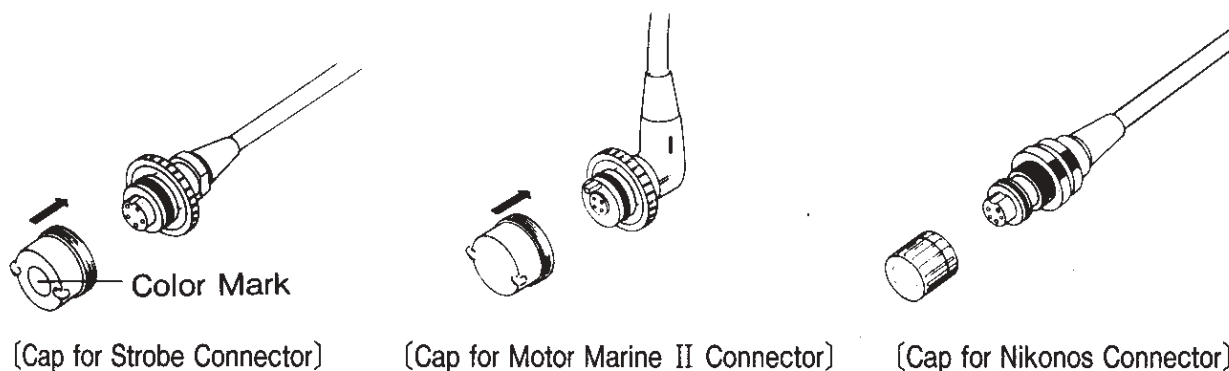
Before storing the sync cord, lubricate the O-ring. Cover the connectors with their plastic protective caps.

It is recommended that you have an extra sync cord for use in an emergency.

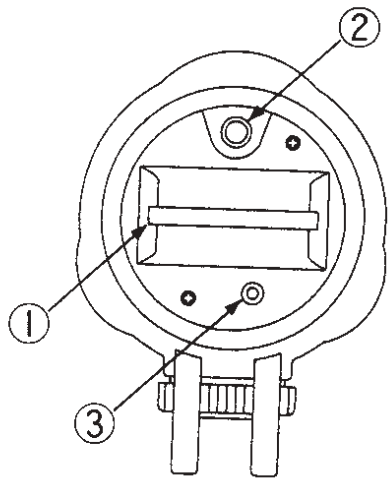


Note

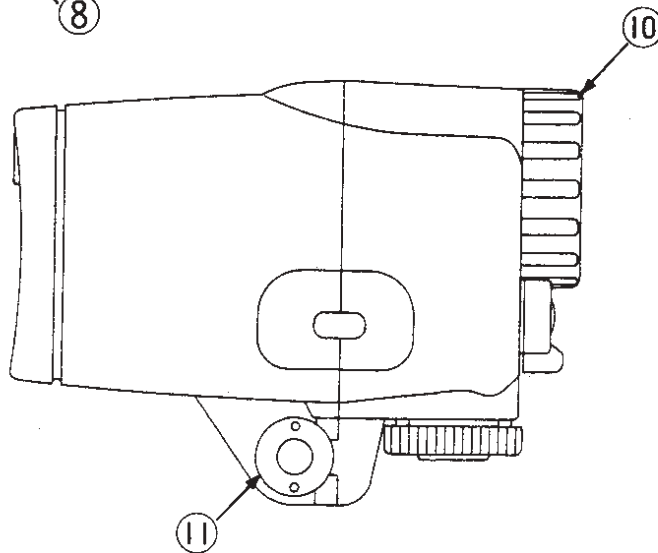
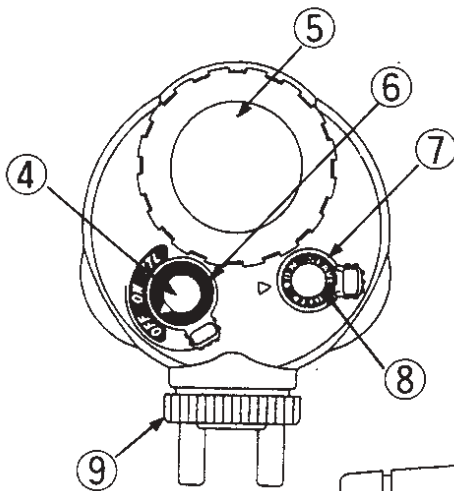
- ※ Do not touch the connector's contact pins with fingers. Be careful not to get silicone grease on the contact pins. It will impede its function. If grease does accidentally contaminate the pins, clean with alcohol.
- ※ Whenever the sync cord is not attached to the camera and strobe, protect the ends of the connector with their protective caps. Please note that the cap for the end of the connector that attaches to the strobe is different from the end of the connector that attaches to the camera.
- ※ Before rinsing a detached sync cord, be sure to put the connector caps on the exposed ends.



Identiflcatin of Parts



- 1 . Flash
- 2 . TTL Slave Sensor
- 3 . Slave Sensor
- 4 . Ready Lamp
- 5 . Battery Cover
- 6 . Power Switch
- 7 . Slave On/Off Switch
- 8 . TTL Lamp
- 9 . Bulkhead Connector/Connector Cap
- 10 . Battery Cover
- 11 . Arm Mounting Nut



Before Taking Pictures

How to install the Batteries

The YS-30 TTL/Duo requires two AA alkaline or nicad batteries.

1. To remove the battery compartment cover, turn counterclockwise. (Figure 1)
2. Make sure that the power switch is in the OFF position. Insert two batteries with the polarity shown in the battery compartment. (Figure 2)
3. Examine the O-ring for cuts or debris. Lubricate the O-ring lightly.
4. Fit the battery cover in place, push down, and turn clockwise.

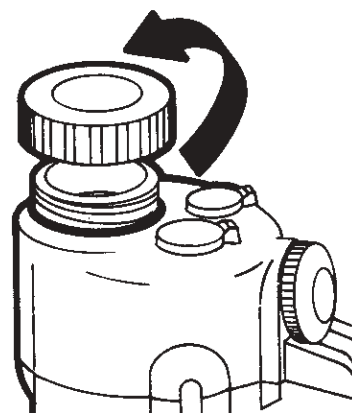


Figure 1

Caution:

- Never replace batteries with wet hands.
- Use extreme care not to allow water from your hair or wetsuit to drip into the battery compartment.
- Always replace with fresh batteries of the same kind. Never mix manufacturer's brands.

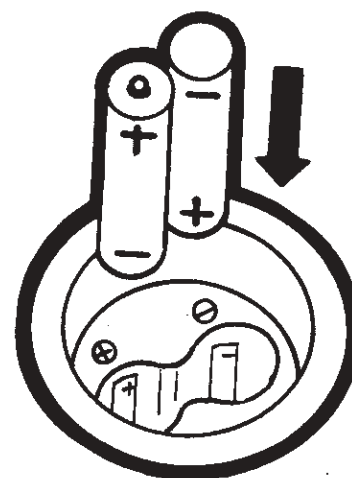


Figure 2

Taking Pictures

The YS-30 TTL/Duo has two controls: the power switch and the slave ON/OFF switch. You can select either manual or TTL with or without a sync cord.

Operation of the Switches

<Power Switch>



<ON> With the power switch in the ON position, the YS-30 TTL / Duo operates as a manual strobe, Guide Number 20. Use the "Manual Exposure Table" included in this manual on page 10.

<TTL> When the power switch is in the TTL position, the YS-30 TTL / Duo automatic TTL mode is activated. In this mode, the strobe automatically measures the brightness of the subject and controls the light output to obtain a correct exposure. With the proper aperture and strobe-to-subject distance (see table on page 11), the TTL confirmation lamp (green) will light up for approximately three seconds. If the subject is out of the proper strobe-to-subject range, the strobe will fire at full power and the TTL confirmation lamp will not light up. You will have an overexposure or underexposure. Recheck the distance and the aperture and shoot again.

Note: The Manual and TTL exposure calculation table decals packaged with this strobe should be applied to your strobe for reference underwater.

<OFF> Turn the switch to the OFF position when not in use.

<Slave On/OFF Switch>



<ON> In this position, the slave function is activated. Set the switch to this position when you want to use the strobe without a sync cord.

<OFF> In this position the slave function is disabled. Turn the switch to this position when you use the strobe with a sync cord attached or when you use the YS-30 TTL/Duo as your primary strobe.

Note

If the slave ON/Off switch is set at the OFF position and no sync cord is attached, the strobe will not fire even if the power switch is set at ON or TTL.

Exposure Table

MANUAL EXPOSURE							
F-STOP	I S O					Distance	
	25	50	100	200	400	m	ft
				2.8	4	5	16
			2.8	4	5.6	3.5	11
		2.8	4	5.6	8	2.5	8
	2.8	4	5.6	8	11	1.8	6
	4	5.6	8	11	16	1.2	4
	5.6	8	11	16	22	0.9	3
	8	11	16	22		0.6	2
	11	16	22			0.4	1.4
	16	22				0.35	1
UNDERWATER EXPOSURE TABLE							

Aperture must be adjusted according to the distance between strobe and the subject in strobe photography. This table is for your reference in manual photography.

Note

The above exposure table is a guide to show the correlation between the distance and an appropriate F-STOP. You may have to further adjust from the above table - depending on the underwater condition and visibility.

TTL Range

TTL							
F-stop	I S O					Distance	
	400	200	100	50	25	m	ft
	4	2.8				0.7~5	2.3~16
	5.6	4	2.8			0.5~3.5	1.6~11
	8	5.6	4	2.8		0.4~2.5	1.3~8
	11	8	5.6	4	2.8	0.3~1.8	0.9~6
	16	11	8	5.6	4	0.3~1.2	0.9~4
	22	16	11	8	5.6	0.3~0.9	0.9~3
		22	16	11	8	0.3~0.6	0.9~2
			22	16	11	0.3~0.4	0.9~1.4
				22	16	0.3~0.35	0.9~1
UNDERWATER EXPOSURE TABLE							

In TTL photography, the correct combination of f-stop and strobe-to-subject distance is determined by film speed. Use this table as a reference for the proper combination with the film you are using.

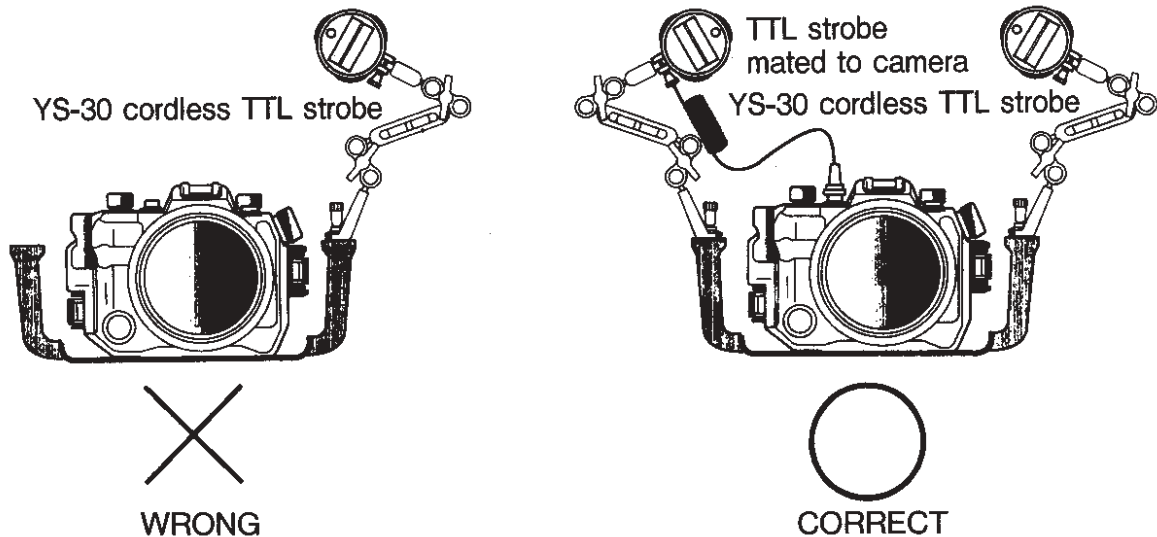
Note

- The above exposure table is intended as a guide to show the correlation between the distance and the aperture. Adjustments may be necessary depending upon the underwater conditions such as visibility and the brightness of your subject.
- If the subject is not in the correct distance range, the strobe will fire at full power and the TTL confirmation lamp will not light up. Recheck the distance and f-stop and try again.

About Cordless TTL Photography

What is a cordless TTL system?

In dual strobe photography, the YS-30TTL/Duo operates as a second TTL strobe when a master strobe in TTL mode is mated to the camera. It is capable of automatic TTL operation without a sync cord. To activate the YS-30's TTL system, turn the power switch to TTL and the slave ON/OFF switch to ON. When you trigger the camera shutter, the master strobe fires, triggering the YS-30 in TTL slave mode. The TTL circuitry within the camera limits the light from the master strobe which in turn limits the light from the YS-30, thus yielding a correct exposure.



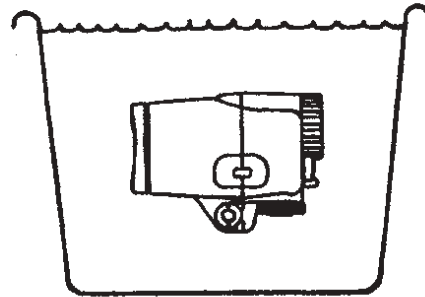
Note for using YS-30TTL/Duo as a cordless TTL strobe.

1. To use the YS-30TTL/Duo as a cordless strobe, you need another TTL strobe connected to the camera. The YS-30TTL/Duo operates only as a sup-strobe and cannot perform cordless TTL photography alone.
2. Please observe the distance ranges shown in the TTL range table in this manual. Correct exposures cannot be achieved if the subject is out of range.
3. The master strobe's guide number must be equal to or higher than the YS-30's.

Maintenance and Storage

1. Rinse this product well with fresh water after use with all the waterproofing covers and caps on.
2. After rinsing, wipe off the water and keep the strobe in a cool and dry place.

Note Do not use heater or drier to rapidly dry the strobe.



3. Remove batteries after use. Wipe off the water completely and be careful not to let water drip into the battery compartment. If the battery compartment gets wet, dry immediately.
4. After use, apply some silicone grease on the connector O-ring and close the connector cap.
5. When storing the strobe for a long period, take care not to expose the strobe to high temperature, high humidity, direct sunlight or extremely low temperature.
6. Disconnect the sync cord from the camera, remove the waterproof connector O-ring, apply some grease on the O-ring and put it back in position.
7. Clean the connector at both ends of sync cord, apply some silicone grease on the O-ring and seal with the connector caps. Remember to use the appropriate strobe cap and camera connector cap.

Specifications

- Controls and Functions
 - ⟨Power/Slave Switches⟩ ON/OFF/TTL
 - ON: Full flash as a slave/full flash in manual mode
 - TTL: Cordless TTL mode/corded TTL mode
 - ⟨Slave ON/OFF Switch⟩
 - ON: Slave mode enabled
 - OFF: Slave mode disabled
 - Guide Number: 20 (land, at full flash)
 - Lighting Angle: 55° vertically/80° horizontally (land)
 - Battery Life: (at full flashing)
 - Approximately 250 flashes with AA Alkaline batteries
 - Approximately 140 flashes with AA Ni-Cd batteries
 - Recycle Time: (at full flashing)
 - Approximately 5 seconds with AA Alkaline batteries
 - Approximately 4 seconds with AA Ni-Cd batteries
 - Color Temperature: 5900°K ± 200°K
 - Battery Requirements:
 - 2x AA Alkaline batteries (1.5Vx2=3V) or
 - 2x AA Ni-Cd batteries (1.2Vx2=2.4V)
 - Depth Rating: 60m (200feet)
 - Cordless TTL system available at TTL mode
 - Sync Cords (Detachable):
 - Strobe Sync Cord S
 - Strobe sync Cord N
 - Strobe sync Cord MS
 - Indication:
 - READY Lamp: Red LED lights up when charging is complete
 - TTL Lamp: Lights up for approximately 3 seconds when auto light adjustment worked appropriately
 - Weight: 410g (land), -60g (underwater), including batteries
 - Dimensions: 71mm (W) x130mm (L) x96 (H) (2.8x5.1x3.8")
 - Accessories: 2 AA alkaline batteries, arm holder bold, O-ring, silicone grease, exposure tabledecal, TTL distancetable decal
- * The above specifications are based on normal room temperature (25°C). The data shown for Ni-Cd batteries are reference values for fully charged Ni-Cd batteries of rated capacity 700mAH. Specifications are subject to change without notice.