

## 26308 TTL Converter for Nikon

Instruction Manual

### FOREWORD

Thank you for your purchase of a NAUTICAM product.

At NAUTICAM, we pride ourselves in the ability to recognize the requirements of professional as well as amateur underwater photographers and fulfill them through the innovative designs of our products. We strive to achieve a high level of user-friendliness by allowing stress-free installation and easy operation of all important functions of the camera.

Please read this manual carefully before using the product, this will maximize its performance as well as its lifetime.

### WARRANTY

All NAUTICAM Products are warranted against any material and manufacturing defects for two years from the date of purchase for consumer use. This warranty only applies to products purchased from authorized NAUTICAM dealers and does not extend beyond the original retail purchaser.

To return your product for service, please contact your regional authorized service center(s). Please note that this warranty only applies when the product is purchased in the territory where the service center is located.

NAUTICAM does not hold responsibility for damage, of any nature, to any equipment used with and/or placed within our products.

NAUTICAM accepts no liability for any loss of captured images or the inability to capture images even if it is due to the malfunctioning of our products.

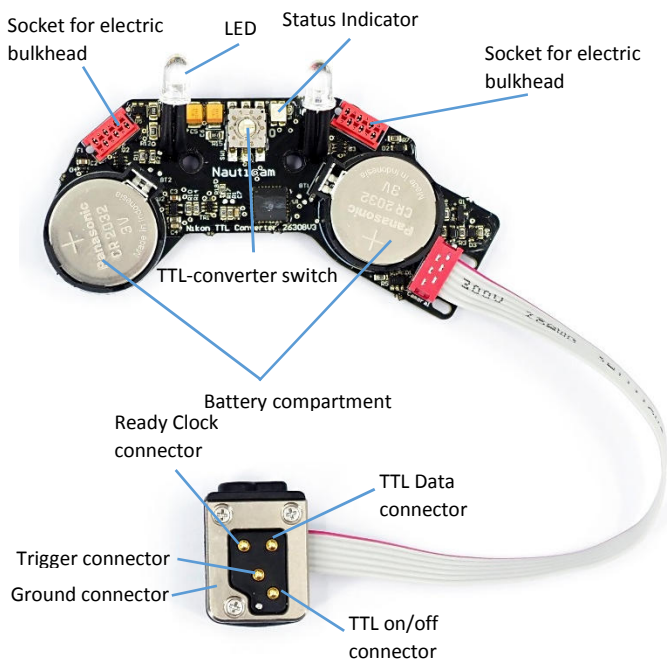
Unauthorized modifications and/or repairs of our products will automatically invalidate the warranty.

Product photos may differ from actual products.

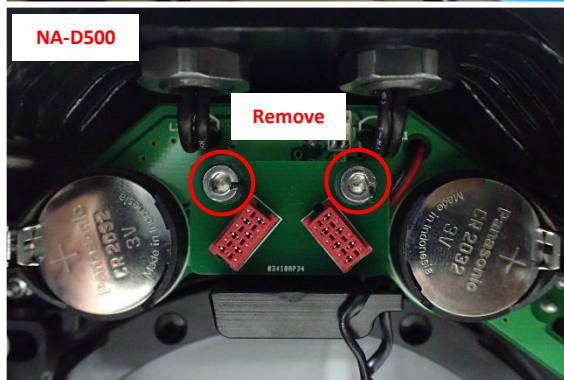
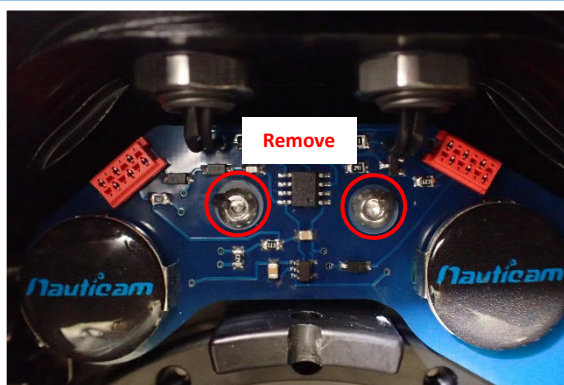
### PRECAUTIONS

- Use only batteries approved for use in this product, do not mix old and new batteries.
- Check the battery terminals before installing into the product.
- Remove batteries for storage, do not store the product in an environment of high humidity.
- Do not leave the product in direct sunlight for prolonged periods.
- Keep out of reach of children, failure to do so could result in injury.
- Defective products should be shipped to our distributors for service, unauthorized disassembling and/or modifications could result in malfunction.

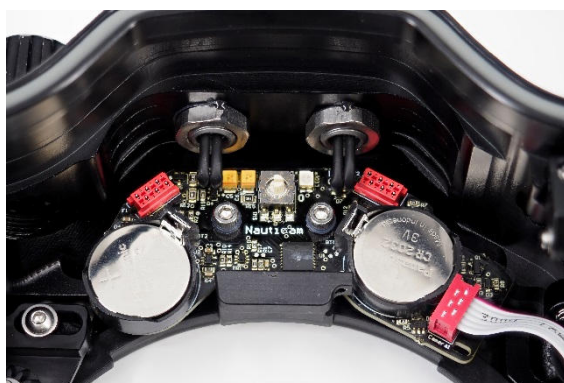
### IDENTIFICATION OF PARTS



### INSTALLATION



Remove the original LED flash trigger from the housing by unscrewing the two screws as indicated above.



Install the TTL converter and simultaneously insert both LEDs into the optical bulkheads.

**ATTENTION:** Using any thin long tool (for example a small allen key) to push both LEDs as deep inside the optical bulkheads as possible. The LED must be close to the transparent optical element inside the bulkhead to get normal quality of TTL work, otherwise you will get a wrong exposure of underwater shots.

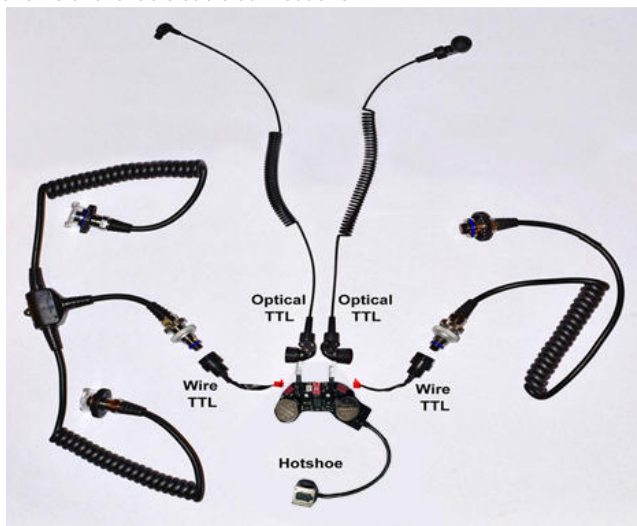
Insert CR2032 batteries into battery holders. Before installation check that "plus" terminal of each battery is in Up position.

Carefully check fiber optical cables. Recommended to use only original NAUTICAM fiber optical cables. In case of using bad quality or damaged cables you will get a wrong exposure of underwater shots.

### CABLE CONNECTIONS

- TTL-Converter maintains synchronization for underwater strobes by Fiber Optical cable connection and by electric cable connection as well.
- Maximum 2 pcs Nauticam Fiber Optic cables can be connected (via housing optical bulkheads).
- **IMPORTANT!** Nauticam Dual fiber optic cables cannot support reliable TTL operation at optical bulkheads in this system, because of their connector construction. Please use only single fiber optic cables.
- Maximum 2 pcs Electric cables can be connected (via housing electric bulkheads).
- Dual electric cables ("Sea&Sea", "Ikelite") are supported by system at each electric bulkhead as well.

Scheme of available cable connections:



## SHOOTING IN TTL MODE

- Set and check camera settings before underwater shooting:
  - Set appropriate camera's Exposure Meter Type ("Matrix", "Central-weighted, "Point") according your shooting tasks. Right type of exposure metering is the key setting for accurate TTL work. In case of wrong setting, the shot may be overlighted, or underlighted.
  - For TTL operation user can set desired sync speed by camera menu, excluding sync speeds marked as "Auto FP". According the construction underwater strobes cannot work in FP synchronization, that is why "Auto FP" camera command is free for them, and it is assigned in TTL Converter firmware for switching system to "Controlled Manual Mode". Photographer should use it to switch TTL / M underwater.
  - Set "exposure compensation" and "flash exposure compensation" to "0ev", as initial settings.
  - Set appropriate ISO. TTL-Converter can work in ISO range 50...25600. Recommended to use ISO 50...400 for best resolution and TTL accuracy underwater. For Macro shooting recommended ISO 50-100.  
Be careful choosing extremely high ISO or "Auto-ISO" mode, it may cause overlighting by underwater strobes.
  - Set camera aperture and shutter speed according real underwater conditions and shooting task.
  - Set recommended apertures F8-F16 for wide angle photo, and F16-F22 for Macro photo, as initial settings.
  - Use other settings recommended by your camera User's Manual.
- For normal TTL accuracy the minimum distance from strobe to an underwater subject must be no closer than 0.35 m.
- Set underwater strobe dial switch to desired TTL mode. Please refer to strobe User's Manual to choose appropriate mode. Usually it marked "S-TTL" ("TTL", "DS-TTL") on the strobe's body.
- Set (+/-Ev) dial switch on the strobe body to "0ev" position, as initial setting for Optical TTL usage.
- For Z-240 electric wire TTL usage set (+/-Ev) dial switch to position "TTL" (another words "9 o'clock" position)
- Set TTL-Converter rotary switch according your strobes type:
  - **0** – Simple Manual Mode (no TTL, pre-flashes are disabled)
  - **1** – Inon Z-240 / Z330
  - **2** – Sea&Sea YS-D1
  - **3** – Sea&Sea YS-D2 / YS-D2J
  - **4** – Sea&Sea YS-250
  - **5** – IkeliteDS-161/160
  - **6** – Inon D200/S2000
  - **7** – Seacam Seaflash 150/160 (electrical only)
  - **8** – Sea&Sea YS-D3 (electrical only)
  - **9** – reserved
- Slide Hot Shoe connector into the camera Hot Shoe socket.
- Camera recognizes Nikon compatible TTL device on its HotShoe and confirms it by appropriate symbol "Flash" on the service screen.
- Dive and make TTL underwater photo, checking image quality and histogram via camera LCD.

- Dependently of concrete underwater subject type, strobes condition, ambient light underwater and etc., photographer should use +/- TTL correction ("Flash Exposure Compensation") to reach balanced TTL lighting.
- Photographer can adjust +/-TTL correction by 2 ways:
  - Use optical +/- TTL correction (+/-Ev) dial switch on the underwater strobe body (available for Fiber-optical connection only).
  - Use camera's "flash exposure compensation" function for +/- TTL correction (available for both Fiber-optical TTL and Electric Wire TTL connections). Available range for Nikon cameras "Flash exposure compensation": -3ev...0...+1ev. User can adjust it by steps 0.3ev or 0.5ev (set by camera menu), viewing +/-Ev value on the camera screen.
- TTL-Converter maintains normal accuracy TTL lighting control only for underwater conditions. Land tests may give little bit different results.
- Continuous shooting in CL/CH camera modes are available for all modes of TTL Converter. But, underwater strobe usually recycles a significant time, so the shots in series will have different lighting. To reach a constant lighting for few shots in series, user should shoot in Manual mode at minimum strobe powers.
- TTL-Converter activates automatically (switch ON) when user pushes camera's Shutter Release Button for focusing or shooting. Device goes to standby mode (switch OFF) also automatically few seconds later, according the camera command, or after disconnection of camera's HotShoe.
- **IMPORTANT!** In some shooting conditions TTL may be not effective or out of working range. This case please use Manual modes.

## SHOOTING IN CONTROLLED MANUAL MODE

- Switching to Controlled Manual mode during the dive (underwater) is a useful feature. It gives possibility to set strobe power manually by the camera controls. User need not to set power manually on underwater strobe body, he can keep hands on the housing.
- Underwater strobes must be set in "S-TTL" ("DS-TTL II") mode. Strobe's dial (+/-Ev) corrector set to "0" position.
- Switch TTL-Converter to Controlled Manual Mode using the camera menu:
  - Bracketing/flash >> Flash sync speed >> 1/200 (Auto FP).**  
Camera setting for any sync speed marked as "Auto FP", points TTL-Converter to Controlled Manual Mode without pre-flashes. Then underwater strobe light power can be adjusted by camera controls, using "flash exposure compensation" function.
- Available adjustment range for underwater strobe: from Minimum strobe's power (displays as "-3ev" on camera screen) to Maximum strobe's power (displays as "+1ev" on camera screen). Possible to set step 0.3ev or 0.5ev, by menu.
- TTL-Converter does not make pre-flashes in this mode.
- Pay attention, that "Auto FP" function also makes available to set very fast shutter speeds on the camera. To avoid mistakes for lighting using underwater strobes, set shutter speeds not faster than *speed of synchronization* for your camera. Most Nikon cameras with mechanical shutter have maximum sync speed 1/200 or 1/250 (without Auto FP). Some old Nikon cameras have electronic shutter and maximum synchronization speed up to 1/500 (without Auto FP).

## SHOOTING IN SIMPLE MANUAL MODE

- Switch system to "M" mode by setting TTL-Converter onboard rotary switch to "0" position. This operation can be done only before submerging, when the housing is open. The constant Manual mode will be set in the system.
- TTL protocol is totally disabled. In this mode TTL-Converter makes fixed pulse at each shutter release of the camera.
- Such mode is recommended for creative shooting with long fiber optic cables (up to 40 m length).
- In this Manual mode all Pre-flashes are disabled in system. User should set "M mode without Pre-flashes" by the dial switch on the strobe body, and adjust strobe light intensity by the second dial switch on the strobe body.

## SHOOTING IN MANUAL MODES OF UNDERWATER STROBE

- Photographer can easy set Manual mode using the main dial switch on the strobe body, independently of TTL-Converter current mode. This is simple classic way to switch for shooting in Manual mode.
- Set appropriate type of M mode on the strobe body.

- If TTL-Converter is in TTL mode, then set “Manual mode with pre-flashes” by the switches on the strobe body.
- If TTL-Converter is in “Controlled Manual Mode” or “Simple Manual Mode”, then set “Manual mode without pre-flashes” by the switches on the strobe body.
- Adjust strobe light power by the second dial switch on the strobe body.

## SHOOTING WITH FLASH OFF

- Photographer can assign “Fn” button to option “flash off” (by camera menu).
- Pushing the “Fn” button, user can shoot with flash off.

## STATUS INDICATOR

The status indicator will display the battery status as well as modes selected. It will flash GREEN/BLUE/RED when shutter release is triggered.

**GREEN** – In TTL mode, battery OK.

**BLUE** – In Manual mode, battery OK.

**RED** – Battery low, replace battery.

## STORAGE

- After shooting please switch off the camera.
- Slide off TTL-Converter’s connector from the camera’s Hot Shoe socket. This way you defend the TTL-Converter from any accidents. Also, you save TTL-Converter’s battery, because its current consumption is minimum then.
- For a long time storage remove batteries from TTL-Converter.

## OPTIONAL ACCESSORIES

26074 M14 Nikonos 5-pin Bulkhead with Micro Connector for Nikon TTL Converter



26075 M14 Ikelite Style Bulkhead with Micro Connector for Nikon TTL Converter

26216 Universal Optical Fiber Cable

## SPECIFICATIONS

Compatible Cameras:	All Nikon DSLR
Compatible Housings:	NA-D6 / D5 / D500 / D850 / D780 / Z7 / Z7II / Z50
Compatible TTL Strobes:	INON: Z-240 type4, Z330, D200/S2000 Sea&Sea: YS-D1, YS-D2, YS-D2J, YS-D3, YS-250 Ikelite: DS-161, DS-160 Seacam Seaflash 150/160 (F1-SF150-SF160)
TTL Outputs:	2 Optical, 2 Electric wire
Camera ISO range:	50 ~ 25600
Continuous Shooting:	Compatible
Rear Curtain Sync:	Compatible
Switching TTL/M modes underwater:	Yes, by camera menu
TTL Flash Exposure compensation:	Yes, by camera controls
Maximum Fiber optic cable length for “TTL” operation:	3meters
On/Off switch:	Automatic
Battery Type:	CR 2032 x2pcs
Battery Capacity:	5-7 years or 75000 flashes
Dimensions:	85mm x 45mm x 13mm
Weight:	Approx. 25g (without batteries)