26308 TTL Converter for Nikon (Compatible with NA-D5/D500)

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.

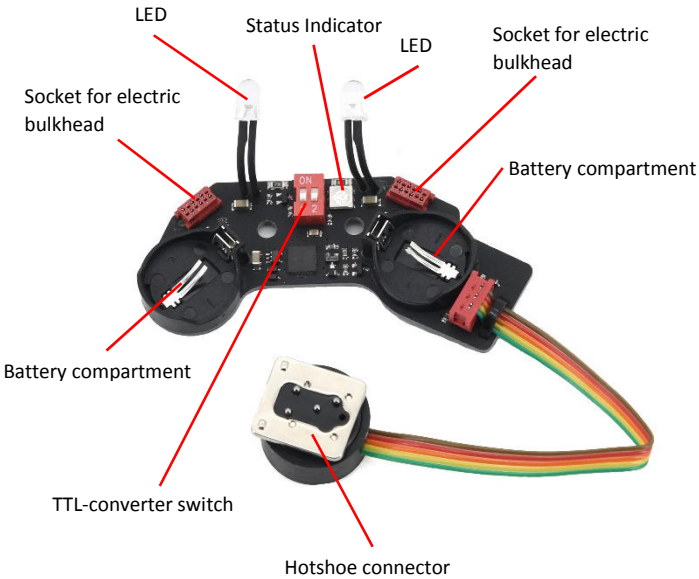
NAUTICAM accepts no liability for any loss of captured images or the inability to capture images even if it is due to the malfunctioning of our products.

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

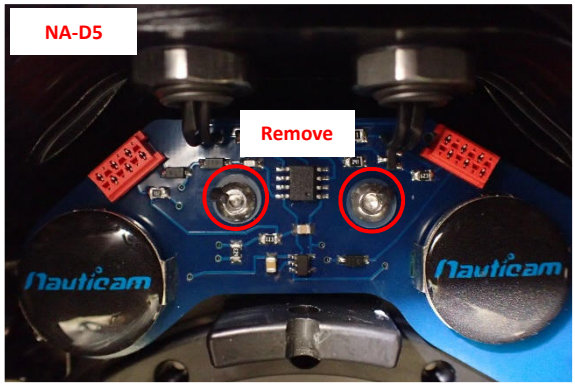
Precautions

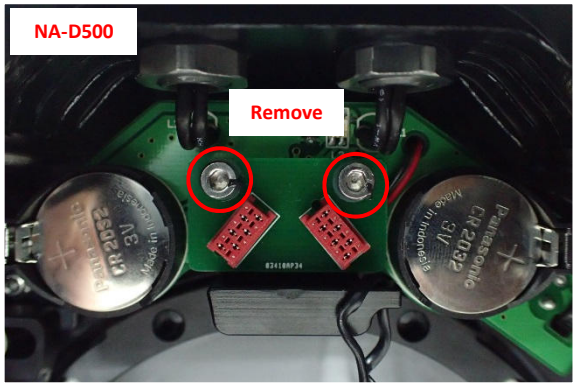
- Use only batteries approved for use in this product, do not mix old and new batteries.
- Check the battery terminals before installing into the product.
- Remove batteries for storage, do not store the product in an environment of high humidity.
- Do not leave the product in direct sunlight for prolonged 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 mal-function.

Identification of Parts

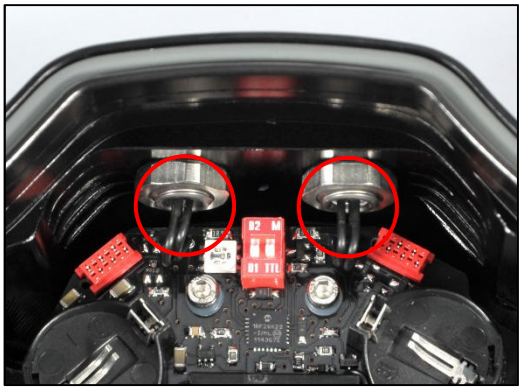


Installation





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 Optical TTL Synchronization by fiber optical cables and Electric Wire TTL Synchronization by Electric wire cables (sync cord), which can be used separately or together. TTL also works in mixed type Synchronization (Optical + Electric Wire). All these types of synchronization give different quality of TTL work. Maximum precision of TTL control can be reached with Optical TTL synchronization (via Nauticam fiber optical cables).

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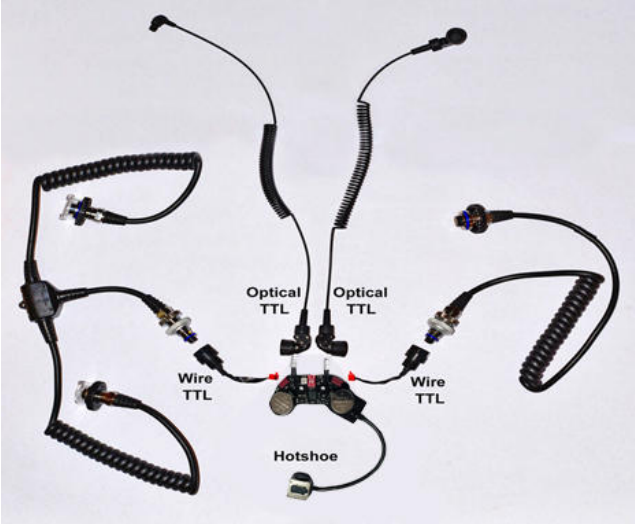
Scheme of available cable connections:



SHOOTING IN TTL MODE

- Check camera settings before underwater shooting with TTL:
  - 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 overexposed, or underexposed.
  - 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 overexpose 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.
- **IMPORTANT!** For macro shooting it is strongly recommended to use a **diffuser** for underwater strobes. Diffuser significantly improves light distribution and TTL accuracy, prevents overexpose for macro shooting.
- For normal TTL accuracy the minimum distance from strobe to an underwater subject must be no closer than 0.3m.
- 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 onboard switch 1 and 2 according your strobes type:
  - **OFF, OFF** - Z-240, YS-D1
  - **OFF, ON** - YS-D2
  - **ON, ON** - YS-250
  - **ON, OFF** - DS-161, DS-160
- Slide Hot Shoe connector into the camera Hot Shoe socket.
- Camera recognizes TTL device on its Hotshoe and confirms it by appropriate "Flash" symbol on the 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, to reach a constant lighting for all shots in series, user should shoot in M (Manual) modes. Recommended to use minimum light levels at M mode for such aims.
- 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.
- 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 (WITHOUT BATTERIES)

- TTL Converter can work without batteries (by electric wire cables only!) in simple Manual Mode.
- Underwater strobe must be set to Manual mode without preflashes, by its dial switch.
- Communication protocol between camera and TTL Converter is totally switched off. The "flash" sign disappears on the camera screen.
- Power of underwater strobe lighting can be adjusted only by strobe's dial switch.

SHOOTING WITH FLASH OFF

- Photographer can assign "Fn" camera's 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.

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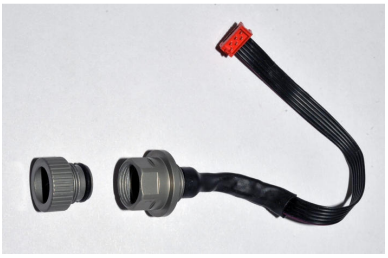
OPTIONAL ACCESSORIES

26704 M14 Nikonos 5-pin Bulkhead with Micro Connector for Nikon TTL Converter (Compatible with NA-D5/D500)



26705 M14 Ikelite Style Bulkhead with Micro Connector for Nikon TTL Converter (Compatible with NA-D5/D500)

26211 Nauticam to INON optical fiber cable

26212 Nauticam to Sea & Sea optical fiber cable

26221 Nauticam to INON dual optical fiber cable

26222 Nauticam to Sea & Sea dual optical fiber cable

SPECIFICATIONS

Compatible Cameras:	All Nikon DSLR
Compatible Housings:	Nauticam NA-D5 / NA-D500
Compatible TTL Strobes:	INON: Z-240 type4 Sea&Sea: YS-D1, YS-D2, YS-250 Ikelite: DS-161, DS-160
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)