

UW Technics TTL flash converters

by Phil Rudin

UW Technics is a group of companies which develop and produce electronic devices for underwater housings and underwater flashes. The company's home offices are in Moscow, Russian Federation.

UW Technics TTL flash converters can trigger a verity of flashes via sync cords or fiber optic cables. The TTL converters are compatible with many DSLR and Mirrorless cameras from Canon, Nikon, Olympus, Panasonic and Sony. The TTL converters are also designed for a verity of different housings.

Canon converters are made for Aquatica, Hugyfot, Ikelite, Isotta, Nauticam, Nexus, Nimar, Seacam, Sea & Sea, Seafrogs and Zillion housings. Nikon converters are made for Aquatica, Hugyfot, Ikelite, Isotta, Nauticam, Nexus, Nimar, Seacam, Sea & Sea and Seafrogs.

Olympus converters are made for Nauticam and Seacam. Panasonic converters are made for Isotta, Nauticam and Seacam. Sony converters are made for Ikelite, Isotta, Nauticam, Sea & Sea and Seafrogs.

Also within these housing manufacturer's, different housings may require different flash converters. Make sure that you consult your authorized UW Technics dealer or the manufacturer for the correct TTL converter for your camera and housing. Each unit comes with a helpful instruction manual which is easy to understand.

For my review I have been testing the UW Technics 11075-HHS TTL converter for Nauticam

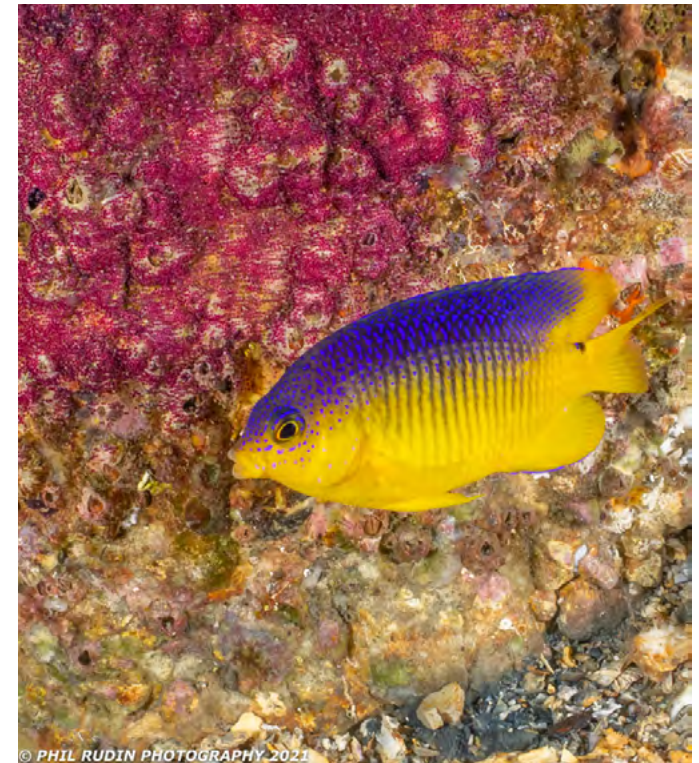
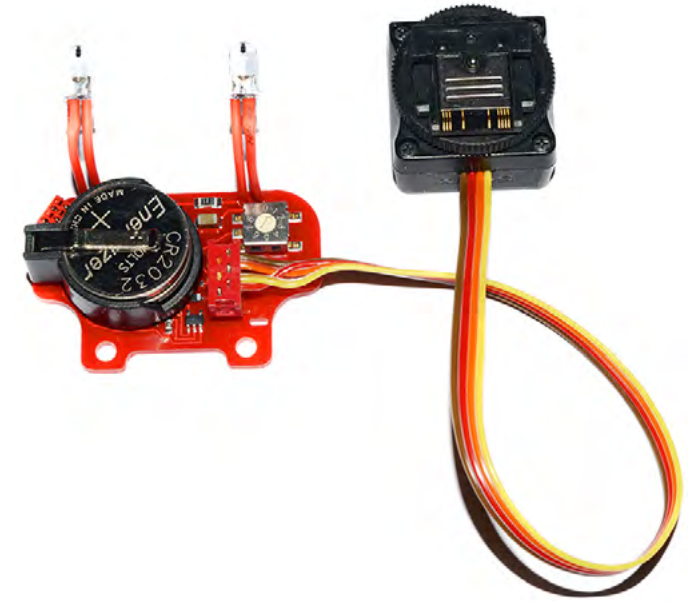
housing's using Sony A7/R II/III/IV, A1, A9 and A9 II series cameras. My NA-A1 Nauticam housing is for the Sony A1. Currently this converter is compatible with the Ikelite DS161, DS160, Inon Z-330, Z-240, S-2000, Retra Pro's (including Retra HSS support), Sea&Sea YS-D1, YS-D2 (made in China only), YS-250 and Subtronic Pro 160 and Pro 270 flashes.

As of this writing high speed shutter mode is only available using the Retra Pro strobes which allows sync up to 1/8000th sec. Not all of the converter models support the same strobes so be sure to check the uwtechnics.com web site to see which flashes are supported for your camera and housing type.

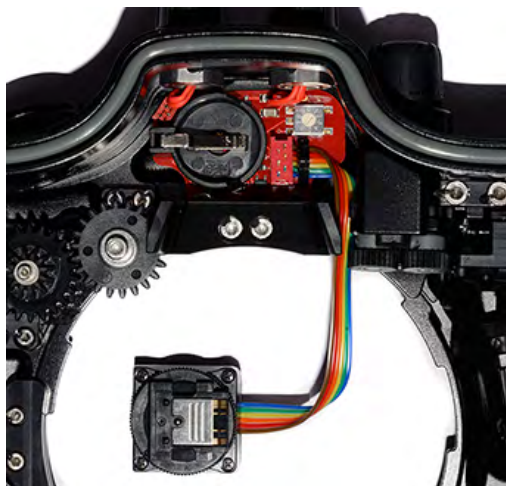
My UW Technics trigger is designed for use with fiber optic cables and was very easy to install into my housing. Simply remove the two Allen screws holding the press block at the front top inside the housing and replace them with the longer screws provided with the trigger board.

Before installing the trigger board make sure that the two CR2032 batteries that power the board have the "plus" terminal in the up position. Use the screws to mount the trigger board back into the housing over the top of the press block and you are done.

Cocoa Damselfish Juvenile, feeding on Sergeant Major Fish Eggs. UW Technics, Sony A1, Sony FE 28-60mm at 35mm, Nauticam WWL-1B, Two Inon Z-330 flashes in S-TTL, ISO-250, F/14, 1/400th sec



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Schooling French Grunts, Teardrop Reef, Palm Beach, Florida, Sony A1, Sony FE 14mm F/1.8, Nauticam housing, Two Inon Z-330 flashes, UW Technics in S-TTL, -1 stop exposure compensation, ISO-320, F/13, 1/125th sec

second in APS-C mode. With a manual trigger the camera will only sync to 1/250th sec. It makes no difference if you shoot the flash in TTL or manual the higher speeds for the A1 will work both ways with my Inon Z-330 flashes.

Once the trigger is connected to the camera while mounted in the housing you can test fire the trigger. One of the things I really like about the UW Technics trigger is that it turns on when you turn the camera on and off when you turn the camera off. I have used several flash triggers in the past both manual and TTL that require you to turn the unit on before closing the housing and then off when the housing is opened. On more than one occasion I have had to release the vacuum on my housing because I forgot to turn on the trigger. I am sure this feature also extends battery life.

Once the camera is turned on you can trigger the camera and you should see the bright red LED's flash through the fiber optic ports. I always test fire my strobes prior to a dive to be sure that everything is on and functioning properly.

The trigger board holds two red LED optical lights which are pushed into the optical bulkheads on the housing to the maximum depth. The wires holding the red LED's will need to be gently bent for installation. A color coded wire extends from the trigger board to the proprietary mount which pushes into hot shoe on the camera. Make sure that the foot is pushed as far forward in the hot shoe as possible so that all contacts connect properly.

When I say that the mount is proprietary it is identical to the mount on any Sony land flash. This proprietary connection is needed for proper TTL performance with each flash type and to take advantage of the highest sync speeds possible with for your chosen camera.

The Sony A1 will sync to 1/400th of a second in full frame and 1/500th



I have two Backscatter MF-1 flashes which are small and only fire in manual mode. While not on the UW Technics list of compatible flashes they work fine in manual and sync up to 1/500th sec. I suspect other manual flashes not listed using fiber optics will work as well.

Be aware that the wiring is long enough to stick out of the housing when the camera is mounted or when it is removed. Always check to make sure that the wires are fully pushed inside the housing before sealing the rear cover. Pinching the wiring can damage the unit and prevent a properly sealed housing.

What is TTL

When your camera directly controls the output of your flash by metering the light output 'through-the-lens' it is referred to as TTL. TTL +/- flash exposure compensation is controlled in the camera menu and works using TTL enabled flashes like the Inon Z-240 and Z-330 strobes with S-TTL.

TTL works by firing one or more pre-flashes when the shutter is half pressed. The camera's metering system then measures the pre-flash(s) along with the ambient light level to calculate the power needed from the flash to make a proper exposure.

The pre-flash is metered in a

few micro-seconds before the shutter is released triggering the main flash. The duration of the main flash exposure is determined by metering based on ISO, aperture, TTL exposure compensation values and the selected metering mode, i.e. spot, center weighted and so on.

Shutter speed will have little noticeable effect on the flashes TTL output because the flash occurs within 1/1000's of a second while the shutter moves much more slowly in most cases. Each camera manufacturer has a different propriety TTL protocol hence the need for different UW Technics triggers for each camera brand. The UW Technics triggers have the same hotshoe design as the camera brand being used and they mimic each brands dedicated flash protocol.

I have used TTL flashes underwater since the film days and have found TTL to be most effective for macro and close focus wide angle photography since it relies on accurate metering by the camera for proper exposure. The larger the primary subject is in the frame the better the TTL will work because the metering will be more accurate.

With wide-angle, if the foreground of an image being lit by the flash only takes up say the lower third of the frame while the area lighted by ambient light takes up two-thirds of the frame the TTL exposure may be much less accurate. In this situation flash exposure compensation will need to be applied for TTL to work correctly.

While +/-flash exposure compensation can resolve some TTL exposure issues, shooting in manual and changing the flash power level, aperture, ISO or shutter speed can be just as accurate.

Field testing the UW Technics TTL converter

My equipment for this review was the Sony A1 camera, Nauticam NA-A1 housing, Sony FE 90mm F/2.8 macro lens, the Sony FE 14mm F/1.8 lens with ZEN Underwater 230 mm optical glass dome port and the Sony FE 28-60 with Nauticam WWL-1B water contact optic. I also used two Inon Z-330 flashes with fiber optic cables for both manual and S-TTL exposures.

The flashes were set to manual output using the EV control on the left rear of the flashes to control power output. For all TTL I used the S-TTL setting which is the first setting on the power switch with the Z-330 EV control centered on +/-0.0. To control the S-TTL I used the +/-flash compensation in the super menu accessed through the Fn button on the camera. For both manual and S-TTL I used the cameras color histogram when reviewing images to judge exposure not the LCD image. I shot mostly manual mode in the springs and local waters with wide angle. I also shot Blackwater macro using the Backscatter MF-1 flashes which are manual.

When using Inon S-TTL for macro I use +/-flash compensation with the Z-330 EV controller the output is much less accurate than using the cameras EV settings. Keep in mind that flash compensation is changed in the (Sony) super menu while the exposure compensation dial on the camera is for (+/-) ambient light changes.

The combination of the UW Technics trigger and the Inon Z-330 S-TTL produced accurate and pleasing exposures with little need for added +/-flash compensation. Very dark subjects had a tendency to overexpose while bright white subjects would under expose. This is a result of the camera's



Juvenile Tuna (8cm), Off Palm Beach, Florida, Blackwater dive, Sony A1, Sony 90mm F/2.8 macro, Nauticam NA-A1 housing, Two Backscatter MF-1 flashes. ISO-500, F/16, 1/400th sec

18% gray metering system trying to make very dark subjects lighter and very light subjects darker.

Adding from +/-0.3 to +/-1.0 stops flash compensation usually resolves the over/under exposure issue. If you find yourself needing to add more than +/-one stop of light chances are the flashes are not aimed correctly, the flashes are too far away from the subject or in the case of shooting wide open (F/2.8) may be too close to the subject.

If you are looking for accurate TTL across a range of subjects the UW Technics TTL-converter should be on your short list for consideration. The Nauticam version retails for \$450.00 and plug-in Ikelite and Nikonos bulkheads for wired flashes can also be added for \$150.00. The UW Technics TTL triggers can be purchased through the uwtechnics.com web page or at authorized retailers world wide.

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www.uwpmag.com