

Nikon Z6 And Ikelite 200DL housing

by Phil Rudin

One of the most interesting new stories for 2019 has been the competition in what has been broadly referred to as the “Mirrorless Wars”. Sony has owned the mirrorless “full frame” camera market for over five years now gaining higher levels of market share and product credibility each year. Sony now occupies the number one spot in the 35mm full frame mirrorless market out selling all of the other camera brands.

For over a year now many other established manufacturers have taken the full frame mirrorless plunge creating the largest transformation in the camera industry since post World War II excluding cell phones.

This leap into the full frame mirrorless market with the announcement of the Canon R-mount, Nikon-Z mount and Panasonic-L mount cameras has produced quite a ripple effect across the entire photography community. All three camera systems use new lens mount designs which require all new native lenses and only a limited number of these new lenses are suited to underwater photography.

A prime example of native lens rollouts is that after six years Sony still doesn't offer a full frame FE Fisheye lens or Fisheye zoom. Like the first Sony FF mirrorless cameras when they were introduced Canon and Nikon have launched a verity of lens adapters for use with current full frame DSLR lenses.

One of the advantages of these new camera systems is that current Canon and Nikon DSLR users can move DSLR glass, ports, extensions,

gears and move over to a new mirrorless housing system.

Canon and Nikon have each taken a different approach to the rollout of their new full frame mirrorless systems. Nikon was first to announce two new mirrorless bodies; the 24.5MP Z6 for \$2000.00/£2100.00 and the 45.7MP Z7 for \$3400.00/£3400.00. Within weeks Canon introduced the EOS R a 30.3MP mirrorless body for \$2300.00/£2350.00. Since the initial rollout Canon and Nikon have added more bodies and lenses to their systems with yet more rollouts in the pipeline.

Panasonic has taken yet a different full frame approach entering into a lens mount alliance with Leica and Sigma which extends the current Leica-L lens line rather than introducing a completely new lens mount. This is an approach much like the one taken by Olympus and Panasonic when they first introduced the M4/3 open lens alliance. The open M43 lens platform has allowed dozens of lens manufactures to compete in the M43 space and now hundreds of different lenses are offered.

Nikon Z6

Nikon's Z6 is a midrange 24.5 megapixel camera with a BSI-CMOS full frame sensor. This camera has been widely reviewed as excellent for a FF camera at this price point.

Several of the Z6 features that make it suitable for underwater photography include a new hybrid autofocus system which has been much improved



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through firmware updates over the past year. A robust 3.69M-dot OLED viewfinder, five-axis image stabilization, 2.1M-dot tilting touchscreen, UHD full sensor 4K up to 30p video with 10-bit 4:2:2 N-Log output over HDMI and up to 100Mbps H 264 8-bit internal video capture, hybrid autofocus system with 273 phase-detect points, 12 FPS with limited buffer and more.

Battery life for the Z6 is on the low side and the body has a single XQD card slot. Like all Nikon full frame cameras the body has robust weather-sealing and top-draw build quality.

The very customizable control layouts on the Z6 and Z7 are identical allowing the cameras to be used with the same Ikelite housing. This is a huge upside if you decide to move up to the Z7 or use the Z6 as a backup camera body.

Z6 image quality and high ISO performance are excellent for its class. The Nikon Z6 has been on sale in the US for as low as \$1697.00 including the FTZ lens mount adapter, 32gb XQD memory card and camera bag for a discount of \$547.00.

The current Nikon Z lens lineup only has two

lenses which are well suited to U/W photography the 14-30 F/4 S lens retailing for \$1279.00 and a Z 24mm F/1.8 S retailing for \$997.00. Nikon plans to release a Z 20mm F1.8 S at the end of March 2020 retailing for \$1047.00 which should also be an excellent U/W lens.

Currently all of the after market Z mount lenses are manual focus but I am sure we will see AF versions soon. Nikon offers the FTZ mount adapter that allows Nikon F lenses to be adapted to Z-bodies for a retail price of \$247.00 in the US. With this adapter you can use most of Nikons excellent full frame lenses like the Nikon AF-S 8-15mm Fisheye zoom, 16mm F/2.8D fisheye, AF-S 60mm and 105mm F/2.8 macro lenses plus the AF-S 16-35 F/4, AF-S 17-35 F/2.8 and many more. Some APS-C lenses can also be used but at a cost in overall resolution.

Ikelite 200DL Housing for Nikon Z6 & Z7 & DL Port System

Ikelite is a U.S. company which has been making underwater photography equipment for over fifty years. The company has an outstanding reputation for customer service both with new and aging equipment, offering upgrades and fast service turnarounds to their many

loyal customers.

The Nikon 200DL Z6 housing has four main components, the front “box” where the camera sits, a flat rear door, the removable front port and the camera tray which attaches to two tripod mounting points on the bottom of the camera. The camera tray attaches to the tripod thread on the bottom of the camera and then slides into the front part of the housing. Once the camera is aligned in the housing the flash sync cord slides into the hotshoe on top of the camera and the housing is ready seal.

The rear door of the housing is then secured by facing the housing down and making sure that the rear door O-ring has properly seated in the front half of the housing. The three heavy duty lid snaps are then secured by pushing down, you should hear the lid snaps click into the locked position and you should not be able to lift the snaps without pushing in the snap locking device. I like to use equal pressure on the two side lid snaps so that they lock simultaneously followed by the top lid snap.

Once the camera is secured inside the housing you can see the controls on the camera and align them with the housing controls. You can also see that the O-ring is aligned properly in the O-ring groove.

The right hand side of the housing has the shutter release, back



button control lever and aperture control dial. The left hand side has the lens release control which allows you to change lenses by removing the port and not the camera from the housing. The left side also has the zoom/focus control dial and the vacuum port.

The bottom of the housing has two mounting threads for mounting the included tray to the housing. The top of the housing has the sync port for an external strobe cord, controls for on/off, video, ISO settings, LCD/EVF push control, mode control and



an extra threaded bulkhead for adding things like an HDMI monitor. Also on top is a nifty mounting device for your



Large Mouth Bass, Ginnie Springs, Florida, Nikon Z6, Z 14-30mm F/4 S, at 17.5mm, ISO-640, F/13, 1/125th sec, Ikelite housing, 8 inch compact dome port, Two Ikelite DS-161 flashes

Go Pro so that you can shoot stills with the housing while running Go Pro video at the same time (Go Pro not included). The mounting point can also be used for video lights, focus lights, flash and other accessories.

The rear door for the housing has controls for menu, shutter speed, LCD view, AF point/magnify button, AE/AF lock button, up/down/left/right arrows, set/OK button, playback button and erase button. The rear door also has an optical pickup finder which helps you view into the rather large viewfinder on the Z6 camera.

Ikelite also offers optional 45 degree and 180 degree optical viewfinders which I highly recommend.

If you prefer using the LCD screen for composition it can be tilted up about 15 degrees inside the housing to give a better view of the screen underwater. You can also see the small information LCD panel on the top right side of the camera body an advantage over an aluminum housing.

One of the nice advantages of the Ikelite Nikon Z6 & Z7 lineup is that both of the camera bodies use the



Kayakers, Ginnie Springs, Florida, Nikon Z6, Z 14-30mm F/4 S, at 30mm, ISO-640, F/14, 1/125th sec, Ikelite housing, 8 inch compact dome port, Two Ikelite DS-161 flashes

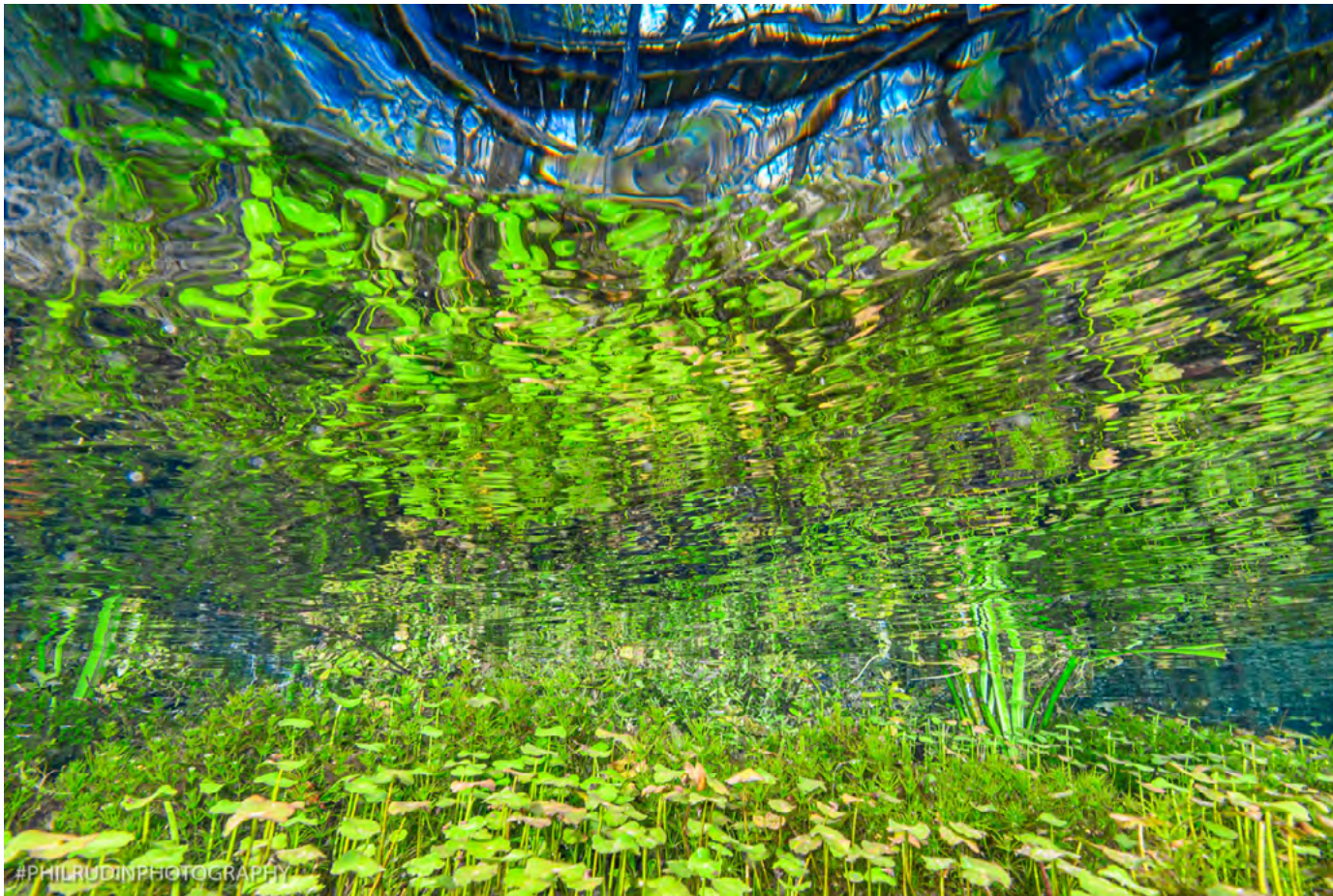
same magnesium alloy frame with near identical button placement so one Ikelite housing can be used with both cameras.

The Ikelite Nikon Z6 housing design features the opaque light gray ABS-PC polycarbonate material for the front section of the housing with a transparent polycarbonate housing back. This attractive gray housing color matches the Ikelite DS strobe line and always drew lots of attention from other photographers when I was on location. The light gray housing color also shades the camera and

provides extra protection from the sun during long boat rides.

The Nikon Z6 housing has Nikon TTL support using the optional DL1 DS Link with the NT3 Hotshoe kit. The \$375.00 optional kit allows all current Ikelite DS flashes to be used in TTL mode. The DL1 DS is a bulkhead plug-in which does not require any batteries. The housing can also be purchased with a manual sync adapter.

Exposure compensation in TTL mode is supported using the cameras built-in controls which can be accessed in several ways and assigned



Blue Springs, Florida, Water plant reflections, Nikon Z6, Z 14-30mm F/4 S, at 14mm, ISO-640, F/10, 1/60th sec, Ikelite housing, 8 inch compact dome port, Two Ikelite DS-161 flashes

to different function buttons to suit the users' needs.

Other TTL flashes from Inon, Nikonos and Sea & Sea can also be used with Ikelite electronic sync connections but only in manual exposure modes.

The Nikon Z6 housing features the very robust Dry Lock (DL) port system. "Dry Lock" refers to the placement of a single o-ring on the outside of the port mount rather than on the port. This system improves visibility and reduces the chances of water dropping onto the image sensor. DL & DLM (for

smaller housings) ports are the lightest in the market at this time.

I have reviewed several Ikelite housings using this port system over the past three years in all conditions including rough seas and surf, jumping and bankrolling from boats, dragged through sand and more without any concern for failure. Attaching the ports is quick and secure using just three retaining screws to center and hold the ports secure. A system of optional Ikelite extensions and gears

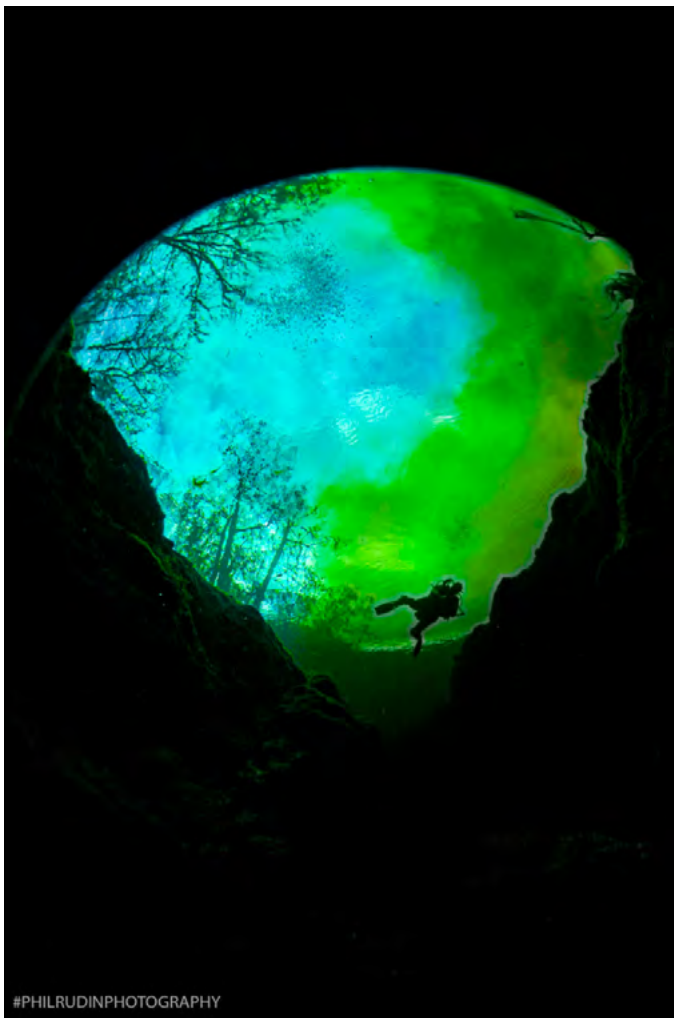


Cypress Tree Roots, Little Devil Run, Florida, Nikon Z6, Nikon 8-15mm Fisheye, at 8mm, ISO-320, F/10, 1/60th sec, Ikelite housing, 8 inch compact dome port, Two Ikelite DS-161 flashes

can accommodate a huge variety of lenses with ease.

The 200DL Z6 housing includes a base tray with a left-hand quick release handle and rubberized grip, mounting threads for an optional right grip, port opening cover which locks in place using the three threaded port locking screws, a waterproof bulkhead cap to protect the flash cord socket when not in use, silicone O-ring lube and a one year warranty.

A verity of optional zoom/focus gears are available which cover a wide range of Nikon Z, AF-S lenses and AF DX lenses using the FTZ mount adapter. I recommend Nikon's Full Frame lenses



70% crop, Florida Red-Bellied Turtle, Little Devil Run, Florida, Nikon Z6, Z 14-30mm F/4 S, at 26.5mm, ISO-640, F/13, 1/100th sec, Ikelite housing, 8 inch compact dome port, Two Ikelite DS-161 flashes

Diver Silhouette, Devil's Ear Spring, Tannic water color from Santa Fe River, Florida, Nikon Z6, Nikon 8-15mm Fisheye, at 8mm, ISO-320, F/20, 1/320th sec, Ikelite housing, 8 inch compact dome port

vacuum, Ikelite recommends pumping until the pump gauge reaches 5 to 10 inches of mercury. I have found the vacuum system to be flawless but I always travel to the dive site with the pump in the event I need to release pressure and open the housing. The vacuum gauge and pump sell for \$60.00 The valve can also be retro fitted by the user into current and many discontinued housings, check with Ikelite for compatibility with the housing you own.

The Ikelite zoom and focus gears simply push onto the lens from the rear being held in place with springs and the lens is then mounted to the camera from the front of the housing before the port is installed. The gears are driven by the zoom wheel on the left side of the housing. Like many of the

recent wide zoom lens designs the Z 14-30mm lens is at its widest (14mm) end when it is close to the dome and at the 30mm end when it is retracted back into the dome extension.

Field testing the Ikelite 200DL housing and Nikon Z6

For this review I used two wide angle Full Frame Nikon zoom lenses and the Ikelite DL compact 8 inch dome port. This port is a cross section of the larger DL 8 inch dome port. I have used this port on several Ikelite housings in the past and found it has several upsides.

First it is very small and light compared to the full size 8 inch port, second it is much less buoyant making it more well balanced with both of the lenses tested, third it is easier to install in some cases, fourth it works well for split (over/under) shots and fifth it cost \$100.00 less than the full size 8 inch port.

The larger 8 inch port is better overall for splits because of the greater surface area but the compact port is still quite good for the price. The compact port also has a removable dome shade for using circular fisheye lenses.

I used the Nikon AF-S 8-15mm F3.5-4.5 ED fisheye with the FTZ mount adapter which needs to be mounted to the camera and installed from the rear of the housing, port extension 75028 (28mm) and zoom gear 5509.28.

I also used the exciting new rectilinear Nikon Z 14-30mm F/4 S with the 75050 (50mm) port extension and the same 5509.28 zoom gear. This is my first review with both of these newer lenses and they are both well worth the investment. If you are a fan of the 8mm circular fisheye and full frame

over the APS-C lenses because of the reduced pixel count in APS-C. The ikelite.com web site has a complete lens chart which is continually being updated as new lenses are released.

The housing also comes with the vacuum valve for the optional and recommended vacuum system. Pushing a button pops the valve plug out of the valve and allows the vacuum pump to snap into place. The snap means the seal has been made. Several squeezes on the pump handle draws the



Florida Red-Bellied Turtle, Little Devil Run, Florida, Nikon Z6, Nikon 8-15mm Fisheye, at 8mm, ISO-320, F/13, 1/125th sec, Ikelite housing, 8 inch compact dome port, Two Ikelite DS-161 flashes

fish-eye you will love this professional quality weather-sealed lens.

Focus is fast and accurate and I very much liked using it with the small compact Ikelite dome. The Z 14-30mm is also weather sealed and focuses to about 28cm (11 inches) working very well behind the compact dome as well.

As I have stated in many past

reviews of full frame cameras I try to shoot at F/13 or higher and adjust ISO and shutter speed to get proper exposure. This was the case again as I tested the limits of both of these lenses.

For those of you thinking about moving from a sub-full frame system to a full frame system remember the reduced depth of field at any given F/

stop over sub-full frame can present a few issues. The shallower DOF associated with full frame cameras requires more critical focus so taking a machine-gun approach to shooting may result in high numbers of poorly focused images. Also high megapixel cameras like the 45.7MP Nikon Z7 and rumored Z8 60MP tend to highlight the flaws associated with many lenses of inferior quality so choose wisely when investing in lenses you may be using for years.

Both lenses mount to the front of the camera once it is installed in the housing then the dome is installed over the lens. This is a very easy process if you follow the installation steps correctly. Once the dome is mounted you can test fire the flashes and then pull the vacuum as the final step before going in the water.

For this review I was using two Ikelite DS-161 flashes with the DL1 DS TTL link and Ikelite dual flash arms. In the water I found the system to be very well balanced with both lenses. It was easy to keep the system level holding it with one hand underwater and while doing splits.

My review housing shipped with the optional 45 degree optical viewfinder which I find

very useful when shooting split images and macro. For many of the wide underwater shots I switched between the viewfinder and the LCD depending on the situation.

Because the Z6 is a new camera to me it took several dives to fully understand the proper settings which worked best for me. I set the camera to manual and adjusted ISO, shutter speed and F/numbers on the fly. I used the excellent Ikelite TTL flash system rather than my usual manual strobe settings also with excellent results.

I did not need to use much exposure compensation with the meter set to center weighted metering. Other settings included A1 white balance, single-point AF, AF-S, RAW-L and JPEG-L. I used settings from 100 to 640 ISO, At 1/30th to 1/200th sec and F/ 7.1 to F/22.

My biggest gripe with the camera is that I found the battery life to be less than I would expect from an all new camera line. Auto focus was much improved with the Z6 V2.0 firmware I was using over the first generation firmware for the Nikon Z7 I reviewed back in November of 2018. A version 3.0 firmware has just been released for the Z 6 and Z7 which should further improve overall auto

focus, tracking and eye AF.

The Z6 build quality and weather-sealing are superb. The camera has excellent image quality and high ISO performance.

If you are looking to make the switch from an ageing full frame DSLR or moving up from APS-C I am sure you would not be disappointed with the Z6. For those few who need or just want a much higher megapixel FF mirrorless body the Nikon Z7 will fit the bill and the same Ikelite housing.

The Ikelite 200DL Nikon Z6 housings retail in the US for \$1695.00/£1650.00, the DL

eight inch compact dome port is \$350.00/£360.00 port extensions are in the \$200.00/£210.00 to \$250.00/£285.00 range, with gears in the \$25.00/£28.00 to \$35.00/£33.00 range depending on the lens being used. The Ikelite system and Z6 camera are attractively priced and an excellent value.

Thanks again to the outstanding Ikelite team for their assistance and support with the underwater equipment used for this review.

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