

The bearable lightness of the Nauticam and Nikon Z50

by Pete Atkinson

For the last seven years I was shooting with a Nikon D800 in a Nauticam housing, with the 9" glass dome and either a 16-35 or a 15mm fisheye lens. This produced beautiful files but it was big and heavy and a pain for travel. I could reduce the travel footprint by carrying only a 6" dome, no enlarged viewfinder and the 18mm and fisheye lenses, neither of which required port extensions with my custom hemispherical 6" dome.

Three heart operations, increasing age and the expense of travel convinced me that I needed the convenience of a smaller rig.

I looked online at a lot of options and settled on the mirrorless Nikon Z50. It had menus I could understand, I could use Nikkor F mount lenses with an FTZ adapter and it was small, light and inexpensive. 20MP was less than I would have liked, but sufficient for anything I was likely to shoot and it had the same sensor as the professional Nikon D500. I had used a crop sensors with the D200 and D7000 cameras and I loved the 10-17 Tokina, sometimes using it for a whole dive trip.

The FTZ adapter doesn't support the screw thread focus of the 10-17. Surely I could manually focus a fisheye? The Nikkor 8-15 zoom fisheye will work with the FTZ adapter and has a useful zoom range with a crop sensor camera (unlike on full frame for which it was designed) close to the utility of the 10-17, but it's heavier and expensive. And anyway, I already had a 10-17.

I also had a Sigma 8-16 wide rectilinear, a lens I loved on a crop sensor camera. It has modern autofocus but initially it wouldn't focus with the FTZ adapter. However Sigma in Bangkok were able to adjust it so that it would work. It needs a 50mm port extension with the 8.5" Nauticam acrylic dome and the 35.5mm N100 to N120 adapter which has a crown bevel gear control which allows you to control the zoom.

With the Tokina 10-17 I wanted to control the focus instead, or ideally both! For manual focus I made a plastic gear extension from a PVC pipe coupling. The Nauticam 10-17 zoom gear (without the inner ring) is a push fit in one end. The other end

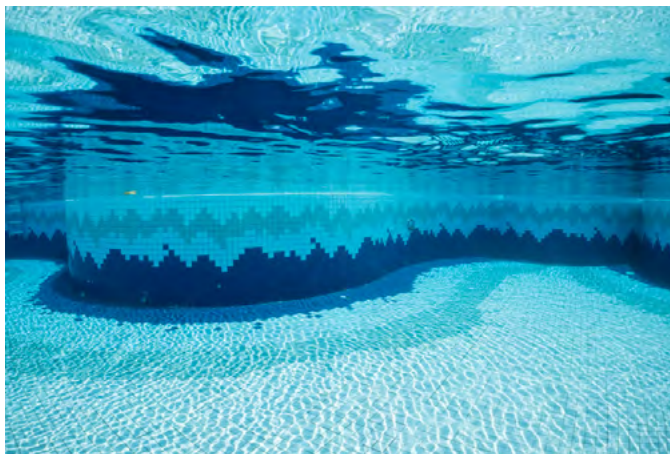
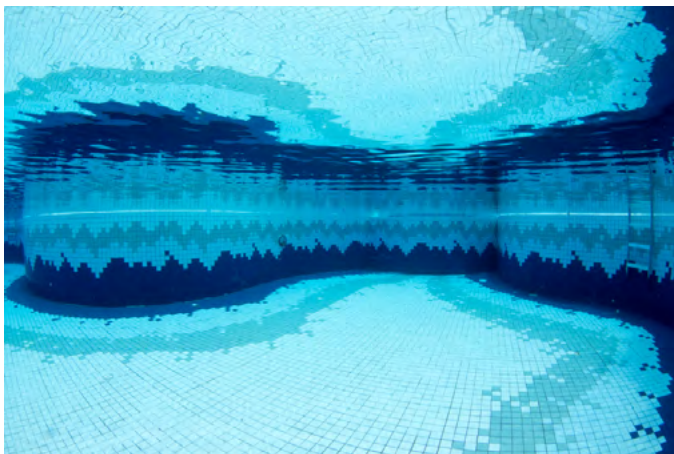


fits over the front of the lens and is secured to the focus ring with three plastic grub screws. Since I use the 10-17 mostly at 10mm, the lack of zoom wasn't a huge drawback.

But to control both zoom and focus I needed something else. Zoom was controlled with the normal zoom gear. I drilled a hole through the back-plate of an 8" Aquatica dome port (for

Tokina 10-17 with Nauticam zoom gear and home-made focus gear





Three pictures from the same vantage point. Left with the Tokina 10-17 and FTZ adapter at 10mm. Note the barrel distortion and angle of view. Centre is with the WWL-C with the 16-50 lens at 16mm. There is some barrel distortion. Right is with the Sigma 8-16 on the FTC adapter, 50mm extension and 8.5" acrylic dome port. Noticeably wider than the WWL-C and no barrel distortion.

which I had an Aquatica to Nauticam adapter) put a control through with a quadrant gear made from a radio-controlled helicopter main gear. This meshed with another part of the same main gear which was glued to a PVC drainpipe band which fitted on the focus ring of the lens. This worked, but obviously would be of limited use for fast action where the expensive 8-15 zoom fisheye would shine.

For shooting over/under pictures I noticed that if the lens was focused in the right place at f16, I didn't need to change focus at all. The focus peaking blinkies are a great help in seeing what is roughly in focus, especially shooting over/under. It was an interesting exercise putting manual focus into a dome port, but I wouldn't recommend emulating it!

I was keen to try some of the water contact optics developed by Nauticam. This influenced me greatly in my choice of a crop sensor camera. For full frame there is a WACP2, 140° degree corner to corner view. It costs over £6000 GBP and weighs

over 7kg. Or the WACP at 4kg for only about £4000.

For crop sensor or compact cameras, there is the WWL-C with 130° angle of view which costs less than £900 and weighs just over 1kg. This works with the Z50 kit lens, a 16-50. The result is like a rectilinear lens but with a lot of barrel distortion but it is a compact and convenient rig.

I was hoping that I could shoot over/under with this by trapping the water which floods the space between the WWL-C and the flat port it's mounted on with a 2mm O-ring but the topside quality did not seem as good as with a dome port. For shooting portraits of women underwater this seemed the ideal focal length. You can zoom through to a much narrower view if required.

Although I could have bought a D7500, the weight saving over a D800 seemed minimal and I wanted to try mirrorless autofocus for topside shooting.

The problem with phase detect AF on SLR

cameras is that to nail focus you need to adjust the AF fine tune on every combination of lens and body using something like a Lens Align. That's fine, unless you have four bodies and a dozen lenses - my wife is a wedding photographer. And then you find out that the AF fine tune value required for perfection varies throughout a zoom range and, slightly, with aperture! So perfect focus adjusted for maximum aperture for example, can be inaccurate at f4. Contrast detect autofocus used in mirrorless cameras looks at contrast on the sensor itself, so the mechanical inconsistencies of the lens and body don't matter.

Underwater it matters a lot less because either you are shooting wide-angle at smaller apertures with plenty of depth of focus, or you are using one body with a couple of macro lenses so adjusting AF fine tune is less of a burden.

Having used Nauticam housings since the D7000, I wanted to stay with Nauticam. The engineering is simply beautiful and there's very



With a fisheye, buildings in over/under shots look unnatural. Tokina 10-17 and FTZ adapter at 10mm. F16, 1/200th, ISO 200.



With the Sigma 8-16 lens the topside part of an over/under looks more natural. F16, 1/200th ISO 200

little that goes wrong. Apart from the 180° enlarged viewfinder, there were other things I could switch across to the new housing.

I don't like balls sticking up from the housing. Removing the flash arms is a slow and clunky procedure. I like dovetail plates on top of the handles so the flash arms can be removed quickly. That's why I love fibre-optic triggering too. So I switched across the dovetail plates. If you add these you need to modify the aluminium plates which fit in the top of the Nauticam handles. I like to use Duralac anti-corrosion paste on machine screws threaded into



aluminium so that they will come out later. At the very least use grease to keep salt water out.

The tripod mounting screw on the camera tray needs a coin to tighten, but it is simple to silver solder a piece of stainless TIG rod in the slot so that it can be tightened by hand.

The 16-50 kit lens needed a zoom



gear. I had an old Seacam gear which was the right diameter and module for the N100 port opening. Gluing in some strips of PVC drainpipe made it the right internal size which I adjusted to a push-fit with sandpaper.

There are a couple of



considerations with new cameras. We use Windows 7 and a perpetual license version of Lightroom and have no desire to get a subscription. So I have to use the free Adobe DNG converter to change the raw files to .dng before I can import them into Lightroom. This

I wanted to try the WWL-C particularly for this kind of picture in swimming pools where agility with a small rig is helpful and the zoom range is perfect. 1/200th F11, ISO 200, on camera flash and backlight flash

is simple and quick because I am not shooting thousands of pictures.

One thing I found to be a nuisance. I like to use the viewfinder for shooting but sometimes the monitor for reviewing. There's no setting for this. You need to cycle through the viewfinder only, monitor only and automatic display button to get what you want. Also the stills/video control was easily bumped into the video position. A blob of Blu-tack on the outside of the housing solved that.

When I was evaluating the Z50 I noticed that you could fire the pop-up flash at 1/32 power to trigger the fibre-optic controlled strobes, Inon Z240 strobes in my case. So I thought you could shoot a bunch of pictures like this. Not so; it will only fire when it is fully charged, so after a handful it will stop to recharge fully. So I bought an LED flash trigger from Hedwig Dieraert in Belgium and removed the prism mirror from the housing and this works perfectly if I need to shoot quickly.

I have enjoyed the learning experience setting up this new



housing. It's more complicated than my SLR housings, but it is smaller and lighter. I love shooting crop sensor again, particularly for over/under with the Sigma 8-16.

I haven't talked about macro because I haven't shot it for years. I told myself that it didn't sell commercially. Truth is, I could hardly see it!

Here are the numbers, somewhat sobering.

NAZ50, Nikon Z50, 180° viewfinder, Sigma 8-16, FTZ adapter, 100-120 adapter, 50mm extension, 8.5" acrylic dome: = 6.2kg

NAD800, D800, 16-35 with 70mm ext. 180° viewfinder, 8.5" acrylic dome: = 6.9kg

NAZ50, Nikon Z50, 180° viewfinder, Tokina 10-17, FTZ adapter, 100-120 adapter, 8.5" acrylic dome: = 5.6kg

Nauticam NAD800, D800, 15mm Sigma fisheye, 180° viewfinder, 8.5" acrylic dome: = 6.2kg



Nikon Z50 next to the NA-Z50 housing with the WWL-C water contact optic and the handle balls replaced with dovetails

NAZ50, Nikon Z50, 16-50, N100 Flat port 29, 180° viewfinder, WWL-C: = 5.1kg

One problem now, is that I want a full frame mirrorless for topside shooting and a few Z lenses...

Pete Atkinson
www.peteatkinson.com

