

My housing history

by Pete Atkinson

My effervescent enthusiasm for Jacques Cousteau inspired me to build my first underwater housing in 1974 for a Kodak Instamatic camera. I was 16 years old.

It had novel features. The back was held on with 14 brass wing-nuts on an expanded polyethylene gasket. It only leaked a bit!

The front was also a flat plate, but the four sides were made from a single strip, bent into a square with a hot air gun. My Dad was a polymer physicist and had access to such things. This strip was held together with 4BA machine screws and epoxy and the front was attached in the same manner.

The shutter release was triggered by a metal rod, pushed through a piece of vacuum tubing, in turn pushed through a larger hole in the housing. You had to push up on the release to depress the shutter. The film advance was a silicone pad which was pressed down and rotated.

I was young, short of cash and to my great regret I was convinced that the film I had shot of the wreck in Oxwich Bay in South Wales would be black, from insufficient light. I never had it processed. This haunts me still.

The next obsession was a

Nikonos II, which from memory was £210 at the time. In retrospect I should have borrowed money, sold my sister, anything, to get a Nikonos II and a 15mm lens which cost much more. I did get one eventually; about 30 years too late. I imagine my stock photography income over the years would have been higher, a lot higher! But this was more money than I wanted to spend (or had) and I wanted reflex viewing. And I wanted TTL flash control and other features offered by a custom housing.

This housing was built 43 years ago, around a small Fujica SLR, the ST801. The camera was mounted on the bottom of the 1/2" acrylic housing with a 28mm lens. Four wires ran from the camera, through the housing base, and emerged from the top of the handle at a socket. Two of these wires would connect the X-synch of the flash and camera, the other two would connect the flash gun's removable TTL sensor in a socket which I embedded in the floor of the housing with the contacts for that sensor in the flash housing.. So I had TTL flash control with the sensor in the housing. I think this preceded commercial remote sensing underwater by some



Tinkering with my tiny housing for the Fujica ST801 and 17mm lens aboard Eila, my home for 17 years

Here you can see the first 28mm housing, the base with the flash behind and the box top in the foreground, upside down. I'm holding the tibia of an alleged medicine man found in an underground lake in Fatu Hiva.



years.

Into this handle could be screwed either a blank plug or a microphone gooseneck which was covered with heat shrink tubing. One without adhesive inside worked best, glued only at each end.

The flash was mounted at the end of the gooseneck. This preceded commercial bendy-arms by many years. The focus control was a silicone rubber disk driven through a 90 degree gear extracted from a fishing reel.

I wasn't using dedicated O-rings at this time but modified pillar valve tops, tapped into the housing. Aperture was controlled by a flat loop of fret wire silver soldered to a metal loop around the aperture ring with a 90 degree shaft penetrating the loop. Silver solder was my friend!

I had two ST801 cameras so I then built housing for a 50mm macro lens and later a 17mm lens. For the macro port I used cast acrylic tube as used by early BSOP members and for the dome, I used a cast acrylic dome as used by Ikelite on their housings. Steve Greenaway helped me set it up correctly. For glue I was using Tensol 70.

For O-ring controls on the macro housing I used 1/8" stainless rod with simple captive o-rings in 3/8th counterbores, a technique borrowed from Geoff Tompkinson and David

Nardini. It was cheap, cheerful and it worked!

I guess some of this was rushed. The macro housing needed additional weight to make it sink. At night, in St Agnes Bay in the Scilly Isles, I inadvertently removed the weight, and now being slightly buoyant, when I placed it on the bottom, as I did when I had two housings in tow, it floated off cheerfully into the darkness.

We swam mad circles in the pitch black and miraculously my buddy Matt Ruglys bumped into it. It was fortunate that I had a buddy at all.

Geoff's pictures shot in the Red Sea with a Canon FTB were a revelation and did well at the Image 79 festival in Brighton. So I found an FTB and bought an Ikelite housing. The handle was at 45 degrees to the body and I didn't like the way it handled, so I part-exchanged it for a small sailing dinghy. That should have been sufficient warning to avoid boats, but I'm a slow learner. So I bought a bigger boat and sailed off to the South Pacific. I had read lots of books.

Somewhere in the Pacific I learned about enlarged viewfinders, so on a trip home I flew via Hong Kong where I bought a Canon F1n and a speedfinder, and some lenses.

I had a lathe in my Dad's garage in Suffolk for making the port flanges and cutting O-ring grooves and I could source bigger domes



The housing for the Canon F1n and Speedfinder, here with a macro lens

The Nikon F4 housing aboard Vigia, my second yacht

from a nautical compass technician in Auckland. Tensol 70 glued the 1/2" acrylic sheet together. The flash goosenecks were rapidly removable from the housing by removing the retaining fast-pins. I made two different backs, one with flash wiring, the other without. It was big and heavy, but then I was younger.

This was a good rig until I learned about 1/250th flash synch which the Nikon F4 offered. I was





Housings for the SB-24 flash, Nikon F90 and the Nikon F4 and miscellaneous ports

shooting sharks at Beveridge Reef in great light and very clear water and the ghost images at 1/125th bothered me. So I sold the Canon gear to a friend in Fiji and bought a Nikon F4, actionfider and some lenses and spent several weeks of 1990 in my Dad's garage building another camera housing, and two flash housings for SB-24 flashguns.

This housing made my career, and none too soon, since the digital age was fast approaching and destined to clear all in its path. I recall meeting a guy at a Visions conference in London, the owner of Wetspixel... I trotted out the usual story, 'film was better' I'll wait until digital is as good etc. My head was buried deep in the mud.

Eric Cheng was right; digital would transform everything and I was late to the party. But I had now bought a Nikonos and 15mm, only 30 years too late...

One thing about a garage, it doesn't have more than a heavy dew for testing a housing at depth. I



The Subeye reflex with the RS 13mm RW-AF fisheye lens at Ile de Pins, New Caledonia

was experimenting with a new mini-dome which was not glued, but just held in place with a captive O-ring. Unusually, I took the housing without the camera down to test it. At 35m off Moorea, there was an almighty bang and I came up with 26 pieces of miscellaneous acrylic stuffed into my wetsuit.

Here is the joy of acrylic: I had glue, I could buy acrylic sheet in Papeete and in a week the housing was repaired and operational.

Having a single camera was never much use so on another trip to the UK I built a housing for a Nikon F90. I managed to flood this at Beveridge Reef because the main O-ring was not in a groove, nor captive enough. A credit to the camera, I rinsed it thoroughly with fresh water then alcohol and dried it in the sun and trade winds. It worked! I knew it had a limited life but the important part of its life was now

I think that a trip to the Antibes Festival inspired both Darryl Torcker and I to buy Subeye



The 14" (36cm) dome made for an 18mm lens on the Subeye Reflex then converted to the Seacam D200 housing

Reflex cameras built by Jean-Claude Protta. These cameras could take Nikon lenses behind ports or the new Nikonos RS underwater lenses with an adapter. With the RS 13mm fisheye lens these cameras were a joy to behold! The cameras were prone to problems, but they were usually problems I could fix. I built a 14" dome for this for shooting half and half pictures which I later converted to fit my first digital camera housing.

At dive shows I had long admired Seacam housings, the beautiful engineering and immaculate finish. I was waiting for Nikon to come out with a small format digital camera which was acceptable to Getty Images. The Nikon D200 fitted the bill. I had got a 'Distinguished Talent Visa' for Australia and was living in Cairns. I bought a housing from the agent in Sydney. I had a pool in the garden of my house and was disappointed with the wide-angle rectilinear results I was getting.

My next housing was a Nauticam for a Nikon



D7000 which was a joy with the wonderful Tokina 10-17mm lens.

Shortly after we moved to Thailand we bought Nikon D800 cameras (my wife, Darin, is a wedding photographer) and I housed one in another Nauticam housing.

New housings I am inclined to tinker with to get them the way I like them. So away with the balls sticking out the top (which I think are ugly, apart from the practical drawbacks) and on with dovetails, which can be assembled and disassembled quickly. Optical cables are great in this regard too. The right handle was spaced too far from the housing for my small hands, so I had one made from aluminium. The 1/4" screw for securing the camera in the housing just needed a piece of 3mm TIG rod silver soldered to it, in case I had no coins left. This housing was

wonderful while I was fit and healthy, but I felt its weight as I aged and my health declined.

So the time has come to upgrade/downgrade/sidegrade to something lighter. And to get fitter of course! I am tempted to make amends for neglecting the Nikonos 15 for so long, either with a Sony mirrorless in a Nauticam and adaptor, or Pawel Achtel's new Vaquita titanium housing for the Sigma fp and 15mm, which will probably be as close as we'll get to the joy of a Nikonos 3 body and a 15mm for impromptu sliding over the side into the endless blue.

Pete Atkinson

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