

Late Night Thoughts on the Seacam Nikon D200 housing

by Pete Atkinson

I like Toyotas. Reliable and value for money. However, I had admired Seacam housings every time I saw them at the Antibes Festival in France. These were the Rolls-Royce of underwater housings, beautifully engineered, the best materials, a superb finish and attention to every detail. At that time I was using home-made Perspex housings. Later I switched to Subeye cameras.

It was the advent of digital that finally persuaded me that building a housing with about 23 controls would be no fun at all. So Seacam seemed the logical choice. I wanted a great housing with the best optics to make the film/digital transition as smooth as possible. There would be enough problems with managing the workflow; I didn't need additional difficulties from the housing. You can see where this is going... I live in Cairns, Australia. You can buy a new Holden Barina car for less than I paid for a D200 housing, the Superdome and S180 viewfinder, macro port and a few other bits and pieces. Which gives you an idea of comparative costs. Admittedly, it's a crap car, but you can get a new Toyota for not much more.

So for all that money you might expect everything to be perfect...

OPTICS and PORTS

The first problem was the 12-24mm zoom. The recommended port extension with the Superdome was 35mm. I tried this, and the corners were the



Port side of housing showing focus (top) and zoom (bottom) and also flash compensation control. Flash



Seacam recommended 35mm extension with Superdome. No dioptre. Quarter crop, corner bottom left. 12-24mm at f8. 1/125th ISO 100

worst I had ever seen, with any underwater optical system. The softness extended a quarter of the way into the picture. It was unusable. I calculated where the dome should be and it was 20mm out, so



Starboard side of Seacam showing S180 viewfinder with Superdome and shutter, command dial, AF/AE lock and sub-command dial controls.



55mm extension with Superdome and B&W +3 dioptre. Quarter crop, corner bottom left. 12-24mm at f8. 1/100th ISO 100

I added another 20mm extension and a +3 B&W dioptre (not recommended by Seacam at the time) and now the corners are good. I'll address this more fully in another article. I felt I could manage



10.5mm fisheye, f11, 1/15th



Sigma 15mm fisheye and Superdome. No extension. f8 1/90th iso 100



Rear of the housing with the S180 viewfinder



Home-made Superdome cover made from 225mm UPVC end-cap and a short piece of pipe. With Darin Limsuansub!

with only the Superdome and the 60 macro port with extenders. The Superdome is very forgiving with the 10.5mm fisheye (without port extenders) even though the dome is theoretically in the wrong place. The corners are pretty good so I can't justify the hemispherical fisheye port and its extra weight and cost. The Superdome I ordered came with an optical coating which I can't see and I can't tell you if it's worth it. Standard is a foam neoprene cover, which is more rugged than a piece of old wetsuit. However, I wanted something more substantial. Fortunately a 225mm UPVC end cap is exactly the right size to fit over the lens shade. I glued a section of pipe inside to fit the shade precisely. (see photo) Generally I put the housing down on the lens shade, leaving the glass about 6mm clear of the surface. Be warned, if you pick it up one-handed off concrete,

as it rolls, the glass dome will hit the concrete. I can show you the scratches. The lens shade is great, firmly attached with machine screws. Aquatica could learn from this.

The Sigma 15mm fisheye works well in the Superdome too, with good corners.

Mine is a manual lens so I have to control focus and aperture with gears. I can use an extender on the 60 macro port for the 105 macro. The port extensions are plastic, beautifully made with green nitrile O-rings. I like green, it's far easier to see dirt on them.

The ports are installed with what Seacam call a bayonet screw. This is just marketing because screw threads have had a bad rap. Seacam ports have a coarse screw thread which installs in a single turn. It's well engineered, works faultlessly and would be impossible for a sane person to cross-thread. The O-ring is a piston fit in the housing. Why Nexus persist with that face seal for their ports I have no idea.

VIEWFINDER

I bought the S180 viewfinder, which is fantastic. But it's heavy, expensive (1800 euros) and I'm not sure it's necessary. It also obscures some of the rear LCD display. I tried a Nexus D2X housing I tried had a simple viewfinder with a lens you screw on the camera. I could see all the frame without moving my head. Subal has a 180 GS viewfinder with a similar view as the Seacam for about half the price and a lot less weight. Seacam have a rotating 45 degree viewfinder too. But the Subeye had a 35 degree viewfinder which took some getting used to. It's ok for horizontals, but for vertical macros it's a nightmare. I'd recommend a straight-through finder.

ERGONOMICS and CONTROLS

The trim in the water will depend on which dome and extensions you are using and which viewfinder you have. For me (I never wear gloves and try not to go near cold water, even in the bath) the handles were too far from the controls. So I took them off, filed off some plastic at an angle and reassembled them with the anode plates on the outside of the handles, to get them a bit closer. So long as the anode is in electrical contact with the housing it will do its job. I also had to file some of the handle away so the catches still had swinging room. Now I can reach the command and sub-command dial controls with ease.

Reverse the functions of command and sub-command dials on the camera to put aperture control on the command dial at the back; this makes life far easier.

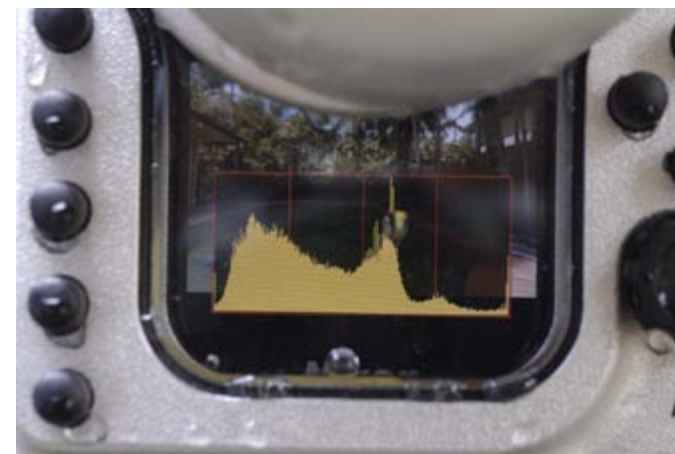
The layout of the shutter release, command

dial controls, AF/AE lock on the starboard side is perfect. The shutter release is spring loaded and long enough to give precise control of the metering switch without accidentally taking a picture. The Nexus D2X housing I tried had a short shutter release without being spring loaded. It felt dead and was designed with no thought at all. How hard, really, is it to get these simple things right? On the port side, there are two controls for zoom and focus. You can use one for aperture (as I do for my manual Sigma 15mm) but that puts focusing on the bottom control which is awkward to use. The housing is designed to have zoom on the bottom and focus on the top, which makes sense. With the 12-24 you can't have manual focus if you want zoom control, but modern AF is generally far better than focusing by eye.

All other controls can't be reached while you are holding the handles (except with your nose), but this is a problem with most housings. The housing has all the controls you need and some you probably don't, including the flash adjustment button missing on the Subal. I elected not to have the CSM switch at an additional cost of 275 euros! But I'm sure it was gold plated.

LCDs

I have a prescription mask, usually with lingering spit, and I can't see much useful even on the nice 2.5" LCD of the D200 in a housing. To obscure the picture even more, I have the big yellow histogram on all the time. This is the information I want; I can see my lousy composition when I take the picture. I want to make sure the highlights aren't burnt out and the hump of the histogram is in the middle or to the right of the middle. I set the camera



Much of the LCD picture is obscured by the histogram and the viewfinder.

Image Review to "ON" so the picture shows after every shot. This way I can check the histogram without fiddling with buttons. One other major area of concern is the window for the top LCD. It's sloping and offers an angled view of the LCD. If you are in sunlight, it's almost impossible to see the figures on the LCD and I struggle to read the ISO and compensation displays on the front edge which often fall into shadow in sunshine whether the LCD backlight is on or off. My eyes aren't great but other housings (Nexus and Subal for example) have windows directly above the display which are easy to read. Perhaps an additional LED inside the housing to illuminate the display might help; this could be run off the leak detector battery and triggered by the LCD illumination on/off control. You can set the camera to have the top LCD backlight on any time the meter is on. But it doesn't help much except at night.



Sloping window for top LCD frequently throws shadow across part of the LCD.

GEARS

On most housings these cost about half the GDP of some African nations. The Aquatica has metal gears, unnecessarily heavy. I bought a zoom gear for the 12-24 (128 euro) and made the rest myself for about 15 quid each. They are white polyacetal spur gears with 85 teeth, 10mm wide and about 87mm diameter. On the packet it says SH 10 85. (85 is the pitch diameter.) I bought mine from www.tea.net.au PVC drainpipe (about 69mm o.d.), a scrap of innertube and a few drops of Superglue comprised the remainder of the components with a bit of lathe work. I sprayed them black to prevent internal reflections.

ACCESS

The back is held on with two over-centre catches with locks to prevent accidental opening. These are great.



Home-made gears for the 10.5 fisheye and Sigma 15mm fisheye.

Once the back is open I can plug in the USB cable to download, or eject the card without removing the camera. To change the battery, I need to remove the camera, but it is a simple matter to unscrew it.

With the back open, you can see plenty of space around the camera. If you want the smallest and lightest D200 housing, I doubt the Seacam is it. When you put the back on, the AF select control must be in the right position (Aquatica sensibly have this control spring-loaded) as must the on/off switch. Aquatica and Subal also have elegant spring-loaded command wheel controls which engage consistently with the camera controls.

LEAK DETECTOR

This is an optional extra, but really it's crazy to be without one. In an acrylic housing you can see the water pouring in, but with a metal housing you have no idea until the camera is pushing up daisies.

FLASH

I use Ikelite Substrobe 200 flashguns because I like paying for excess baggage. If they died, I might look at the Sea&Sea YS 110 flashguns and see if they had an adequate beam spread. I can do without the power of the SS200 but not the coverage. You need strobes that will keep going for as many shots as your CF card can hold. I removed all but the centre pin in the hotshoe connector to keep the camera happy and so far I don't find the lack of TTL a problem; but I shoot mostly wide angle.

CONCLUSION

Well I guess the Seacam is still the Rolls-Royce of housings. If I were doing it again, I would look carefully at Aquatica, Subal and Nexus and see if I could modify any irritations out of them. I tried Tobi Bernhard's Subal D2X at the weekend, and liked it, the ports and shades are great, the GS viewfinder impressive, controls smooth and well placed. The Seacam angled window for the top LCD is beyond modification unless the shape of the back casting is changed. Perhaps a white LED inside might help illuminate this. It is superbly engineered with no compromises. But it's big and heavy; 7kg with the Superdome, S180 viewfinder and D200 with a lens. The small viewfinder would save a lot of weight and size and I should have tried it first. Test the dome optics yourself, don't rely on any manufacturers recommendations. Or, for that matter, mine!

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Nexus.

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