

Nikon D750 and Nauticam NA-D750

by Alex Mustard

On paper, Nikon's newest full frame SLR is most tempting. It boasts a 24MP FX sensor, which DxO's tests show just beats the new D810 for dynamic range and noise at the pixel level. It shoots at 6.5 frames per second and has autofocus that Nikon say doesn't just match the D810, but improves on it. For the videots, it can record full HD at 60p, 50p, 30p, 25p and 24p and uncompressed recording via the HDMI socket, with auto-ISO for smooth exposure compensation.

The D750 has a 100% viewfinder (the D700 is the only FX Nikon that hasn't), a new tilting, higher resolution screen and also squeezes in build-in WiFi (those last two have very limited applications underwater). And this is all wrapped up in a smaller, lighter, less expensive camera body, attractive to the travelling photographer and means smaller housings too.

Nauticam already have a housing out and with other brands sure to follow soon, I took the D750 to the Red Sea to put it through its paces, enjoying excellent encounters with oceanic whitetips and spinner dolphins and shooting classic Red Sea reef life and scenery extensively: both bright sunny coralscapes and dark atmospheric caverns.

The D750 is likely to be most tempting to existing Nikon shooters probably looking to upgrade from 12MP FX Nikons or any DX Nikons. The aim of this review is to tell you about the key features of the Nikon D750 and Nauticam NA-D750 and to discuss their performance critically, pointing out both strengths and weaknesses for underwater



use. I will also make comparisons with other current Nikon SLRs.

Nikon have pitched the D750 occupying a new niche between the D610 and D810. It is Nikon's fourth 24MP FX camera (after the D3X, D600 & D610), but the marketing bumf stresses the sensor is all-new, the autofocus is an improved mark II version of the 51-point Multi-CAM 3500 from the D810 and like the D810 and D4S, it has the new Group Area AF mode (the D610 uses the less advanced 31-point Multi-CAM 2700).

Autofocus is one of the D750's trump cards and includes the new grouped AF mode introduced with the D4S and claims improved low light performance over even the D810. The last Nikon camera I had with a moveable group of AF points was the Nikon D2X, so I am excited to see it back.

Grouped AF is useful for many common underwater scenarios. For example in wide angle shooting it is a useful mode, say when taking a



series of vertical reef scenics, as the AF group can be left in the lower third of the frame, where the foreground subject is likely to be, so ensuring precise focus for the optimum depth of field. However, I must admit that I have zero complaints about how Auto-Area AF works for these shots.

For macro shooting the grouped AF worked, but I found it slower than using single point (the fastest) or 3D tracking (the most versatile) for keeping a subject in focus. I also found it a little less accurate than either of the other two modes. Ultimately, the grouped AF did not fulfil my anticipation, but it is certainly nice to have the option and more time with the system might reveal more uses for it.

The famous coral caverns of southern Egypt were ideal for testing low light AF with both wide angle and macro subjects. Although I didn't do side by side tests, I am very familiar with the performance of my cameras in these conditions.



Alex Mustard putting the D750 and Nauticam NA-D750 through their paces in the Red Sea, photo by Gabriel Jimenez

The D750 AF coped very well when shooting wide angle and I didn't have switch over to thumb focus at any point. It felt a little less sure-footed than my D4, but I attribute that to using a much smaller dome port on this trip. Shooting fish portraits, especially with a 2x AFS teleconverter I felt the camera struggled more than mine does, but ultimately is still performed very strongly and remains one of the finest AF systems in any camera to ever go underwater.

The image quality of the Nikon D750 is from the top drawer,

there can be zero debate about that. In terms of dynamic range, DxO measure it pipping both the D800 and D810 at ISO 100 and 200 and having a larger advantage above ISO 1000. As with all of Nikon's cameras the noise comes in gradually as the ISO clicks up. With such high resolutions the noise then disappears again when the files are downsized. The result is that the main limitation of high ISO is really on final reproduction size. As a result, I would say that there is no 4 figure ISO that is unusable, but the higher the ISO the smaller the image



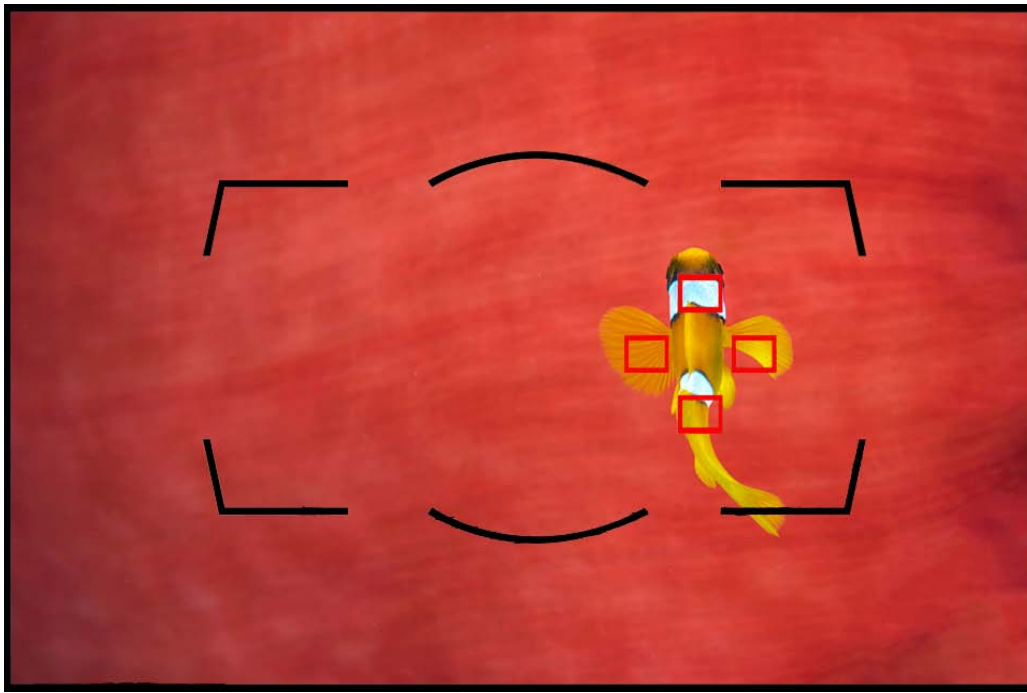
Unlike previous mid-level FX Nikons, the D750 gets the full, state of the art, autofocus system, which is always valuable for underwater photographers who like shooting moving subjects, like this fangblenny. Nikon D750 and Nikon 105mm VR with Nikon 2x AFS teleconverter. Nauticam housing, Seacam strobes. 1/250th @ f/16. ISO 250

must be reproduced (I stayed below 3200 when not specifically testing ISO).

My main surprise was that there was not more of a difference between the new 24MP FX D750 and year old 24MP DX D7100. The full frame camera is clearly better than the DX, but not by as much as many would expect. The DxO results shows only a one stop advantage across the ISO range. And critically a DX shooter can definitely shoot one stop more open

than an FX shooter and produce the same corner sharpness behind any dome. In short neutralising the on-paper high ISO advantage of FX over DX in the real underwater world.

The D750 gives away 12MP to the D810, but I find 24MP a more desirable resolution than 36. Although I accept my view is biased by how much I shoot and my professional clients' requirements. I find the D800/D810 RAW files too hard-drive bloating, and while the



The latest generation of Nikons offer a grouped AF mode, where a cluster of sensors are active and the cluster can be moved around the frame. Nikon D750 and Nikon 105mm VR. Nauticam housing, Seacam strobes. 1/250th @ f/18. ISO 250

resolution advantage 36MP is clear on my computer screen it disappears when my images are published, as magazines can only put so many pixels on the page.

The only D750 spec that feels a slight let-down is that the flash synch maxes out at 1/250th and you can't sneak it up by a third of a stop to 1/320th, as you can on many other Nikons. I also felt that the viewfinder was a little inferior to that on the prosumer D810.

In short the camera clearly

outguns the D610 and does deliver on its promises, pushing the D810 very close in every department, at an enthusiast's price, size and weight.

Five years ago I reviewed my first Nauticam housing for the Nikon D700, concluding that it was a nice product, with room for improvement of the primary controls, but certain to see Nauticam putting a cat amongst the pigeons of the housing market. Five years on and Nauticam are a dominant force in the market, but more impressive to me is that they



Image quality is exceptional capturing detail, colour and dynamic range even at high ISOs. Nikon D750 and Sigma 15mm and Kenko 1.4x teleconverter. Nauticam housing. Seacam strobes. 1/100th @ f/14. ISO 250

have constantly worked to improve all aspects of their designs and characteristically the NA-D750, being the newest, has fresh innovations. Nauticam really listen to underwater photographers and their products are all the better for it. The primary controls on the NA-D750, which caused gripes in my original NA-D700 review, are now exemplary in the industry.

The dials for aperture and shutter speed (which are also used for scrolling through various settings)

are deeply sculpted, perfectly geared and easy to use with the lightest of touches with just a single finger. They are a pleasure to shoot with. I also really love Nauticam's multi-selector solution, which is used for moving focus points around and for navigating menus.

Some housing manufacturers aim to replicate the feeling of using the camera on land in their housing design. Nauticam aim to exceed the ergonomic solutions of the camera by placing a number of the most



An anemonefish rubs mucous from a tentacle onto freshly laid eggs to protect them from stings. The Nauticam NA-D750 has excellent primary controls to help you catch the moment. Nikon D750 and Nikon 105mm VR. Nauticam housing, Seacam strobes. 1/250th @ f/18. ISO 200

important controls for underwater shooting on levers designed to be pushed with your thumbs. On the left side of the housing there are levers for ISO and Playback, and on the right side for Video Record, Thumb Focus (AF-ON), Info and a small one for exposure compensation.

Nauticam's design philosophy is based on finding optimal ergonomic controls almost regardless of how complex this makes the designs. I completely understand the motivation behind this approach, but as a field photographer I worry about designs I feel are overly complex. Travel and time in the ocean have a way of revealing weaknesses.

Any ergonomic dislikes? The thumb lever that many underwater photographers value the most is the one that activates the button for AF-ON, allowing autofocus to be separate from the

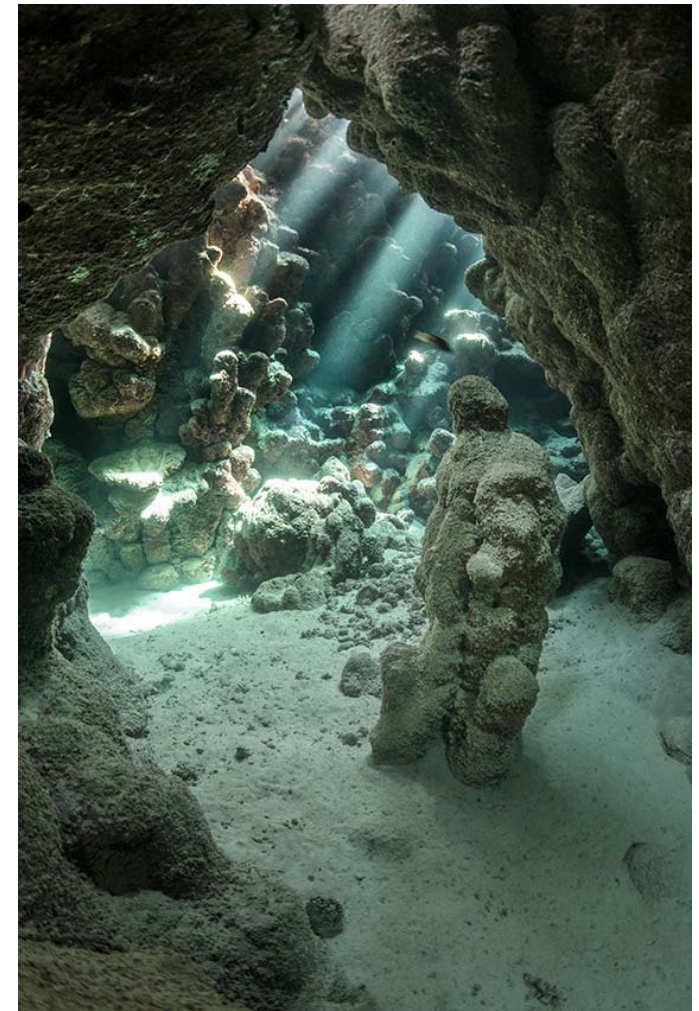


The D750 can rattle along at an impressive 6.5 frame per second, ideal for action, like these spinner dolphins. Nikon D750 and Sigma 15mm. Nauticam housing. 1/400th @ f/6.3. ISO 1800 (Auto).

Dark caverns are a challenge for both AF and high ISO capabilities and the D750 is strong on both fronts. Nikon D750 and Sigma 15mm. Nauticam housing. Magic Filter. 1/3rd @ f/7.1. ISO 1600

shutter release. This is usually called back-button focus or thumb-focus. Nauticam have moved their shutter release lever on the NA-D750, so it is higher relative to the handle of the housing and this makes it much harder to simultaneously reach the thumb focus. Every photographer has slightly different hands, but if this feature is important to you, make sure you check it.

Nauticam also have an industry leading vacuum system on their housings. They were not the first housing manufacturer to fit vacuum seals, but, to date, theirs are the best integrated. And that gets even better with the NA-D750, which has a



new button to allow you to reset the system when only opening the port to change lenses.

It is easy to surmise that the NA-D750 is a first class housing. It is compact, yet not too heavy in the water. It is fully featured with excellent ergonomic solutions, especially with industry leading solutions in the multi-selector and integrated vacuum system.

The Nikon D750 is a highly specified, highly capable camera, which is most definitely suited



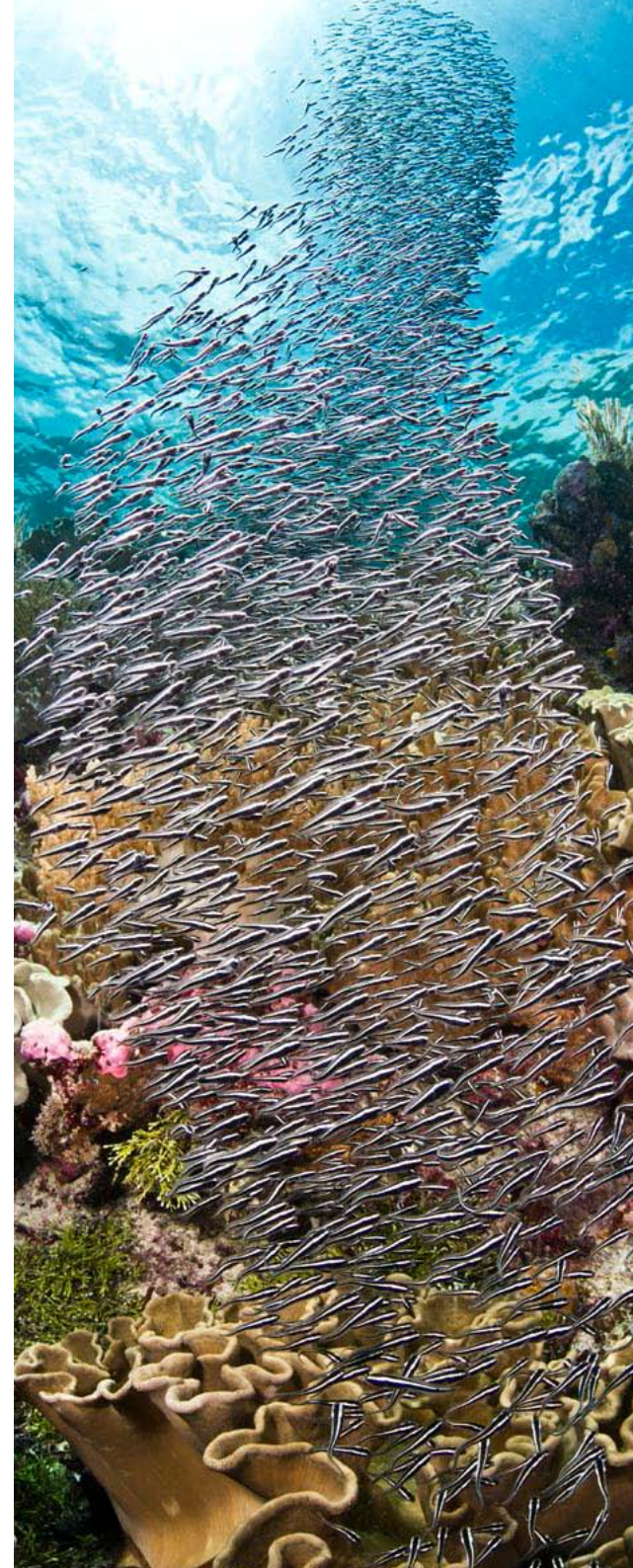
Overall the Nikon D750 is an excellent underwater camera, highly suited to travel and capable of stunning image quality across many genres of underwater photography. Nikon D750 and Sigma 15mm. Nauticam housing. Magic Filter. 1/50th @ f/14. ISO 400

to underwater photography. It is far more of a tempting prospect in respect of the D810, than the D600 was compared with the D800. Unlike the previous generation, the cheaper option now has marginally better autofocus (and higher frame rate) meaning it is now arguably better at getting the shot.

The D750 costs considerably less (the price of a quality piece of glass) and matches the D810 in many aspects of image quality. That said

the DX format D7100 should not be ignored either, and perhaps hits the sweetest spot of all Nikon's offerings for underwater shooting. In short, Nikon users are lucky to have such options, there are no bad choices.

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An experience without equal

"I dream of photographing underwater marine environments in wide angle where the water is clear, the light is beautiful, and the reef is healthy and teeming with marine life. Of all of the destinations I have visited around the world, Wakatobi remains the one where I was really excited on every dive by an incredible underwater perspective that made me think: 'OMG, how beautiful.'"

Warren Baverstock



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