

Nikon D600 vs D800

Field Review

by Alex Mustard

It was only a handful of issues of UwP ago that if you wanted a 20+ megapixel, full frame Nikon SLR your only option was the £5000 (\$8000 USD) D3x. How quickly things change; not only do we now have the 36MP D800 and D800e, but Nikon have recently introduced the D600, whose 24MP sensor outperforms the D3x in tests and costs just £1300 (\$2000 USD).

Nauticam have recently launched their new NA-D600 housing and more housing manufacturers will have versions out soon. So I headed to Norway to put the camera through its subaquatic paces. But rather than do a pure D600 review, I also packed a D800 to do a comparative test in Nauticam housings. Anyone considering one of these cameras must surely have thought about the other. Swapping between them in the same housings on alternate dives made the similarities and differences obvious, even through 7mm mitts!

Yes, I decided to use the Nudibranch Safari at Gulen Dive Centre, north of Bergen as my test

location. I realize a winter macro trip to frigid Norwegian waters isn't everyone's typical diving, but the event attracted no shortage of heavy weight underwater photographic gear. These are very much conditions where these systems need to be able shine.

The D600 is currently the second highest resolution SLR from the major players, exceeding all of Canon's cameras and only topped by the Nikon D800. However, the D600's 24MP sensor is, for many, much closer to the resolution/file size sweet spot they want, actually preferable to the hard drive punishing D800.

The D800 out specs the D600 in most areas, as you would expect from a camera that is considerably more expensive. I am sure you already know that on paper it has more pixels, as well as better build quality and better autofocus. The D800 also has a 1/3 stop faster maximum flash synch speed of 1/320th on FX, compared with 1/250th on the D600. The question I wanted to answer in Norway was "how much do you give away opting for the cheaper camera?"



The Nikon D600 and D800, Nikon's most recent FX SLRs.



The Nauticam NA-D600 ready for action in Norway. Swapping between the NA-D600 and NA-D800 on consecutive dives made the differences and similarities obvious.



(Left) Nauticam's excellent multi-selector pad is also on the NA-D600. Also note the exaggerated grooves on the dial for adjusting shutter speed (top of the frame), ideal for easily flicking through settings with just your thumb.

(Right) The D600 produces huge, highly detailed twenty four megapixel files, that have low noise and capture a high dynamic range. Do you really need more? Nikon D600 + 105mm VR + Subsee +10. Nauticam housing, Inon Strobes. 1/250th @ f/32. ISO 125.

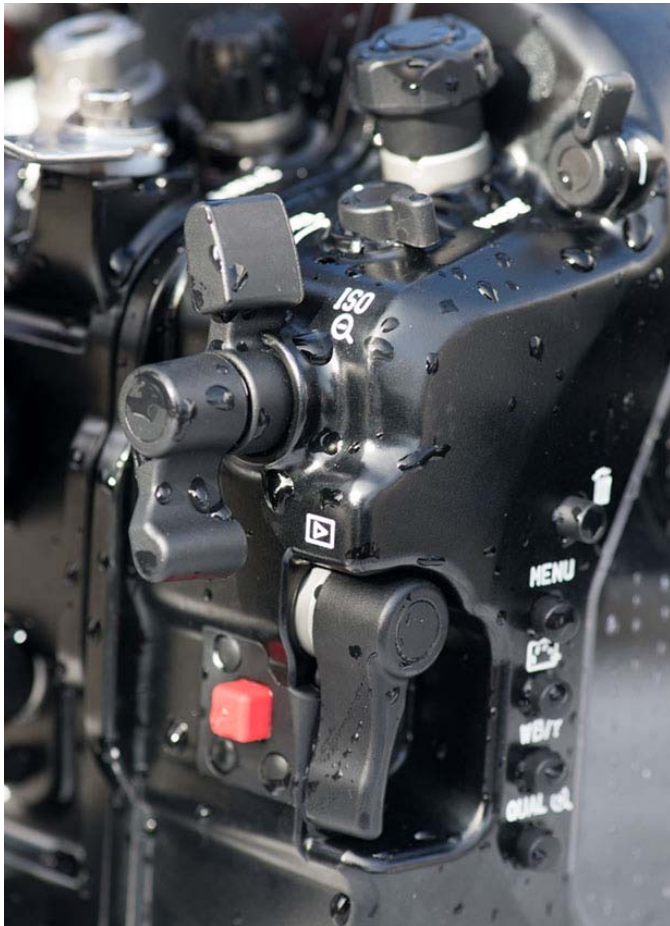
Housings

Although the Nikon D600 is considerably smaller and lighter than D800, the two Nauticam housings are very similar in size, appearance and controls. The NA-D600 is several hundred

dollars cheaper than the NA-D800 and thanks to Nauticam's constant drive to continually improve their housings, it actually adds a couple of useful features lacking from the NA-800.

Both have Nauticam's excellent multi-directional control for the multi-selector pad, first

introduced on the NA-D7000V housing. They both also have very nice control dials for aperture and shutter speed, which were easy to use, even through the 7mm of neoprene on my gloves. Also the buttons on the backs are well spaced and easy to use even with cold hands.



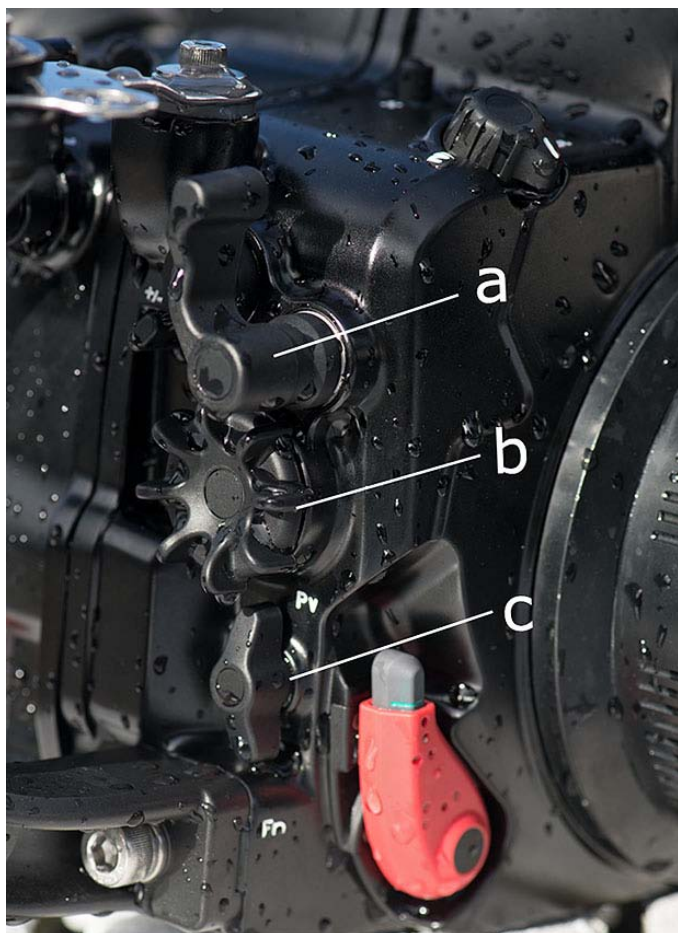
(Left) Nauticam's NA-D600 provides thumb levers to make it easier to access important controls. For your left thumb there are levers for Image Playback and ISO. (Right) Both cameras have good autofocus, but the D800 is excellent in this regard. Shooting nudibranchs at high magnifications, on moving pieces of kelp, is a tough challenge for any AF system and as the magnification went up, so the difference between the cameras was more obvious. I doubt I'd notice any difference in wide angle photography. Nikon D800 + 105mm VR + Subsee +10 diopter. Nauticam housing, Inon Strobes. 1/320th @ f/25. ISO 100.

I also like that Nauticam uses different coloured, sized and shaped buttons on their housings. On the NA-D600 the INFO and Liveview buttons are close together (see photo), but they can be swiftly differentiated, even just by touch, as a result of this thoughtful design.

As on their previous Nikon housings, the NA-D600 helpfully provides access to a number of important push button controls via ergonomic levers positioned to fall beneath your thumbs when you hold the handles. For example, the button for ISO on is accessed through a convenient lever,

positioned beneath your left thumb, as it is on the NA-D800. Although on the D600 this button is dual function, so you have to make sure that you are not reviewing an image when you try and change it, otherwise you end up zooming out the image!

The D600 does not have a dedicated AF-



(Left) A new addition for a Nauticam housing is a control (marked c on the photo) to access the programmable Fn and Pv buttons on the front of the camera. Some other manufacturers already had this feature on their D800 and D4 housings. Also shown are a) contoured shutter release and b) deeply grooved aperture control dial. (Right) A wider scene of a nudibranch feeding on hydroids, photographed using the 60mm lens. With the wider 60mm lens the autofocus performance difference between the two cameras was much harder to detect. Nikon D600 + 60mm. Nauticam housing, Inon Strobes. 1/250th @f/13. ISO 200.

ON button for back-button focus, but the AF-L/AE-L lock button can be easily customized for this function. Nauticam helpfully provide access to this button via one of the paddles.

The D600 uses multifunction buttons on the back (like the D7000), rather than having dedicated

buttons for ISO, quality, WB. While this might sound like a disadvantage, the dual use rear buttons are actually better placed to reach from the handle of the housing, then when these buttons are on top of the camera and therefore the housing, as they are on the D800, where strobe arms etc can be in the

way. So for underwater use this is perhaps a small advantage.

The most notable difference with the NA-D800 is that the NA-D600 includes a dual function lever on the front of the housing, below the aperture dial, which presses the Function (Fn) and Depth Of Field

Preview (Pv) buttons. This is a first for a Nauticam housing.

Several manufacturers (such as Aquatica, Seacam and Subal) have already introduced access to these buttons on their D800 (and D4) housings. These buttons are very useful when shooting video and recording the unprocessed signal via the HDMI port, because they allow smooth, seamless changes of aperture. It should be noted that in video mode on the D600 this powered aperture function is not available.

However, for stills shooting these controls can be customized for a variety of functions. For example, on my Subal D4, I have customized the Pv button to turn off my flashes, which is useful for shooting silhouettes on the fly.

Another neat feature that is new on the NA-D600 is a small lever that depresses the lock button on the mode dial. This lever holds its position when switched, making changing modes a one handed, rather than two handed job.

In short, the NA-D600 is an evolution of the popular NA-D800 housing. Adding a few new features and selling for less money. Nauticam fans will not be disappointed.

Cameras

The main sensation when switching between the D800 and D600 is how similar they feel. Almost everything feels the same, when using them. Through a housing (and Nauticam's 45 degree viewfinder) I felt both gave a very good viewfinder image and I didn't feel there was any noticeable difference in this area between the cameras.

When the D600 was released, quite a few of us

turned our noses up at the quoted 1/200th maximum synch speed. This can be increased to a much more acceptable 1/250th through the menus.

The main difference I noticed between the cameras is in autofocus performance. Both are very good, but switching between, the advantage of the D800 is clear. It is important to note that shooting nudibranchs at super macro magnifications in the dark waters of Norway is a stern test of autofocus. I tried to keep my use of the focus light to a minimum because it does seem to make the slugs turn away more quickly, and that means moving yourself and the risk of kicking up a sediment lying on the kelp, causing scatter in your photos.

The D600 was noticeably poorer than the D800 in both acquiring and holding focus in dark conditions with the low contrast and razor thin depth of field that results from super macro accessories such as the Subsee +10. With the 60mm the difference was much less obvious, and I suspect would be almost impossible to detect with wide angle lenses.

With super macro, I definitely needed the focus light more with the D600, than the D800, consistent with the fact that the D600's AF is quoted to work only down to -1 EV (while the D800 is rated to -2 EV ambient light). However, both are designed to work with lenses as slow as f/8 (good news for macro shooters with teleconverters).

Also the D600's MultiCam 4800FX autofocus sensor's 39 points have poorer frame coverage than the D800 (and much less than a DX camera, the new D7100 is particularly good in this regard).

Using the two cameras side by side tends to exaggerate differences. On both cameras the autofocus performance is a positive feature.



The D600's AF system has noticeably poorer frame coverage than the D800, although both are relatively poor compared to DX Nikons, especially the forthcoming D7100. But you can still avoid bullseyeing subjects. Nikon D600 + 105mm VR + Subsee +10 diopter. Nauticam housing, Inon Strobes. 1/250th @ f/29. ISO 100.



On paper the D800 out performs the D600 in most specification, but how significant are these differences are for underwater photography Nikon D800 + 60mm. Nauticam housing, Inon Strobes. 1/250th @ f/14. ISO 200.

Image quality

The D800 may be the measurebators' champ, but even in the geeky DXO mark sensor evaluation, but the D600 runs it very, very close. Almost matching the D800 in dynamic range (the difference between the D800 and D800E is the same as the difference between the D600 and D800E) and the D600 actually beats the D800 by a similarly irrelevant margin in high ISO shooting performance. The D600 can also squeeze in 1 more frame per second, however, I don't believe the D800 is really limited for underwater photography in this regard.

For underwater photography I found the D600 sensor's performance phenomenal. Image quality is as close to state of the art in resolution and dynamic range, as almost anyone could need for many years.

I know I didn't shoot sunbursts with my macro lens, but holding details on a white nudibranch, perched on a light sucking frond of kelp is a similarly tough challenge for a sensor. Both D600 and D800 were state of the art performers.

The D800 definitely realizes its extra resolution when using prime lenses and quality diopters. While the D600 files had marginally less noise at higher ISO levels, but with these latest high resolution cameras you do need think about noise in a different way because the final reproduction size of the image has a much bigger bearing on what ISOs will be acceptable in any situation. In short, I would not be afraid of turning up the ISO if you need to on either camera.

Conclusion

I prefer the D800 to the D600 for underwater photography, mainly because its superior autofocus was often noticeable when switched between them on a super macro trip in dark waters. If you mainly shoot wide angle this difference will be much harder to notice.

But I must stress that both are excellent underwater cameras, which feel and perform very similarly in the Nauticam housings. I would regularly forget which I was using and if someone said to me I had to use the D600 for all my underwater photography I would be perfectly happy.

They both produce stunning images, suitable for huge reproduction, over a wide range of ISOs. The D800 has more resolution, but also fills up hard drives quicker, with data that 9 times out of 10 most of us probably don't need. The D600 files are also huge and very, very impressive.

The price difference will probably determine the direction of a lot of sales. If you are buying a system from scratch, the total system price difference between D800 and D600 systems is much smaller. However, most people considering these cameras will probably own strobes, ports and Nikon lenses already. When considering just the camera and housing prices for the systems I used, the D800 costs \$6600 USD and the D600 costs \$5400 USD (source B&H and Reef Photo Video). This is about 20% cheaper, which is a considerable saving.

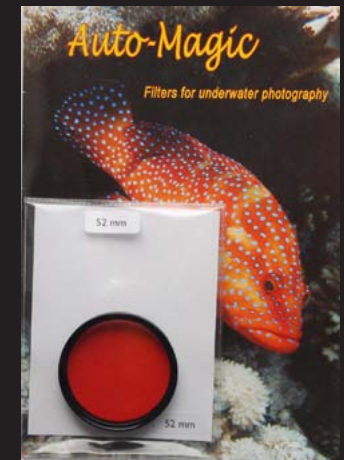
The D800 is the better camera, but if you plump for the cheaper D600 you can be assured you have a great camera that does almost everything with the same excellence. And with the improvements that Nauticam have brought to the NA-D600 housing, you can feel a little smug that you have not just a cheaper housing, but an even better one than the NA-D800.

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Acknowledgements

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