

Unveiled: the Nikon D2H

by **Vincent Versace**

After having the opportunity to shoot with Nikon D2H for a little under two weeks, and receiving the Spanish only version of the camera manual, I think the best way to review the D2H is first as a camera and second as an digital imaging capture system.

My two biggest complaints with the D2H are the loss of GPS capability and that the instructions about the battery and battery charger (which I did receive in English) were in need of some help. Other than that, as Nikon camera's go, or for that matter as any camera goes, I have to say that shooting with the D2H was better than any other camera I've shot with. It's a sweet camera. The ergonomics are across the board greatly improved. There are a whole series of changes, several of which I didn't know I needed until I switched back to my D1X. Which after shooting with the D2H I'm want to do.

First let's look at the changes to the simple things on this camera. On the front of the camera the moving of the AV out and DC input from the front of the camera for me was a really good idea. This gets the cords out of the way when you are trying to focus, change lenses or focusing modes when the camera is tethered. Also putting the USB type 2 connector on the side instead of in the back as was the case with the firewire connection on D1 series cameras keeps all the cords in one place and out of the way instead of in two places both of which were somewhat always in the way. Also by repositioning the manual/single servo/ continuous focus selector to the side of the lens mount instead of on the front of the camera makes for much easier and much quicker changes from the three modes. This is most helpful when the need arises for on the fly switching to continuous follow focus (shooting fast moving action) and when you need to switch to manual focus (when manual focus control is desired over auto focus). Another change along the same lines is the change to the lens release button. (Referred to as the "Liberacion del Objectivo" In my Spanish manual. Which sounds much more interesting and important than the almost pedestrian English translation) By making it larger and elliptical and seated right up to the lens mount base, rather than a circular button located on the face of the camera, it's larger size and new shape aids in the rapid ability to change lenses when the camera is on a tripod or when shooting in a darkened area. Another nice little feature I didn't know I needed is a little button located on the front right hand side of the camera on the lens mount. This is the "Dedicated Feature Button" which allows the photographer to set-up personalized shooting modes and stores them in one of the four shooting menu banks. Lastly the addition of a front command dial at the bottom right hand front of the camera is also a nice feature that I didn't know I needed until I did not have it. This is something I found to be very helpful when shooting vertically.

Next let's look at what is new and different on the back of the camera. The first nice new feature is the addition of a Microphone and playback speaker. This allows the user to record and playback up to 60sec voice data per image. This is the best way to work around the loss of being able to record GPS data. If given the choice between being able to record GPS data or voice data I would choose being able to record voice data. Again for me, this functionality is across the board far more useful. Going back to the ergonomic changes and enhancements of the D2H, the moving of the ISO selector from the top of the camera to the back of the camera as well as placing the Quality and White Balance buttons next to each other on the bottom (and the loosening of the metal protector plate that was on the D1 series cameras) and then placing the Menu, thumbnail, lock and magnification buttons on the left of the LCD is also another well considered change. It makes accessing the camera data much easier and quicker than on previous D series cameras. The next innovation is a completely clear LCD cover (enough said). Then there is a much-appreciated reduction in the size of the multi selector thumb control located to the right of the LCD. I'm a left eye shooter and my big nose has a tendency to reposition the focusing area on all my D series when I least wanted it to. Not anymore. Also the placement of the auto focus zone selector to just below the multi selector thumb control and the reconfiguration of the Auto Exposure Lock/Auto Focus Lock Auto Focus on buttons greatly adds to the ease of use and changing settings on the fly when your eye is where it should be, looking through the view finder and not where it shouldn't be looking at the back, top or front of the camera to see if you are selecting the write thing. Something that I would like to see in future cameras that follows this line of design change is the moving of the metering selector toggle from the top of the penta prism to the back of the camera. This would make for much easier switching of metering modes. (You can set-up the Dedicated Feature Button located in the front of the camera to do this, which is better than the way we have had to switch metering in the past, but it would be nice to have a dedicated button for metering and have the Dedicated Feature Button available for other things) Now that we've danced all around the LCD let's talk about it, it is significantly bigger and brighter. It is also more useful not only because of its size but because of the D2H's ability to process files faster and zoom in quicker using the enhanced magnification functionality. So for those of us accused by film photographers of "Chimping" (of which I admit to being one of great Apes) the worry of "did I get it in focus" is for all intents and purposes almost completely eliminated.

Now that we've explored the outside of the camera let's take a look at what's under the hood. In digital photography battery life is everything and with the enhanced speed of the D2H's frame rate capture, 8fps at a sustain rate of 40 frames (that's as good as the F5 with a 36 exposure roll of film), as well as the power demands of the larger, brighter LCD battery life is even more significant. I found that the new Lithium ion battery of the D2H to be up to the task. I shot 11 gigabytes of RAW+JPEG fine capture and viewed almost all of them at one time or another on the LCD and still have two power bars on the battery indicator with the only charge that the battery has had was when I first charged the battery out of the box.

If ever there were a contender for importance over battery life it would be speed. With this thought in mind there have been several welcome improvements. The first of which is the increase in the D2H's read/write speed, which is about three times faster

than that of the D1H and D1X. Also the FAT32 format and Lexar Media's WA (write acceleration) technology are supported, which means that even faster recording and reading is possible with WA memory cards and Compact Flash cards over 2GB can be used.

There has also been a quantum increase in the speed and ability of D2H's focusing system. The D2H has what Nikon calls the "Multi-CAM 2000 Auto focus Sensor Module." Which is a high speed, high precision 11 segment focusing system that has nine cross type focusing sensors that make for a very quick and very sharp focusing response no matter what the focusing situation. The D2H's auto focus system detects focus in scenes with almost twice the defocus limit of other cameras, which means more consistent and accurate focusing. Also the D2H is far more efficient in its capability for extreme focus detection. Generally all cameras detect focus in a scene up to a certain 'defocus' limit, beyond which they enter into a scanning focus mode. When a camera is in this mode, the auto focus system scans the entire focusing range of the lens before determining a point of focus. It is this process that often cause of the waste precious seconds. Not so important when you are shooting product shots or a scenic, things that aren't going anywhere anytime soon, but this short coming becomes significantly important when photographing high-speed action, like wildlife, sports, fashion or a two year old child on the go. There are now four different Auto Focusing Modes: Single Area AF, Dynamic AF with Focus Tracking and Lock-on™, Closest Subject Priority Dynamic AF and Group Dynamic AF, which is also new. How Group Dynamic Mode works is that 3 to 5 of the 11 focus areas are selected (there are two sets of focus area patterns available, which can be selected in the custom settings menu) and Dynamic Auto focus with Closest Subject Priority is limited to just those areas. This enhanced focusing ability which can bring out of focus element into focus quicker and faster coupled with the camera's ability to shoot at 8fps makes for a camera that can respond faster than my nervous system. The out come of this is no missed shots because of the camera. The only missed shots that I had were from pilot error.

Now that we've explored the D2H as just a camera, let's look at it as a digital imaging capture system. Which means the place to start is at the heart, the imaging sensor. Nikon has created it's own imaging sensor from the ground up. Which Nikon calls the "Nikon DX format JFET imaging sensor LBCAST." The LBCAST sensor is a 4.1 effective megapixels imaging sensor. The LBCAST sensor has a much thinner Optical Low Pass Filter (OLPF) than is found in other DSLR imagers. This means a more effective suppression of moiré patterns without any compromise to image resolution. It is because of the design of the sensor that it has a lower power consumption (battery life is everything), and lower dark noise. The sensor also does not need to go through a fixed pattern noise correction when the sensor is powered up which means faster "on" times (increased speed, the contender to battery life).

How the LBCAST sensor works is it draws the image signal through two channels, instead of the traditional one channel, this is to enable high-speed reading. What this means is that the process to draw out the signal by generating an electrical charge (the way a traditional CCD does it) is no longer needed. Which means both faster and with less power consumption. Also the D2H employs both a high

performance “mirror balancer” to stabilize the finder image, which is how the Nikon F5 works and an optimizing method for sending the image to the buffer (Double Buffer Control) for image processing which reduces the finder “black-out time.” Which translates to sharper images with faster write speeds.

My approach as a digital photographer has always been to treat the camera as a capturing device and not as a post processor. So the way I almost exclusively shoot is in the RAW (.NEF) file format, camera sharpening off and using auto white balancing. When it comes to the actual image file the camera captures I try to use as few bells and whistles as possible. The reason for this has to do with the color management and image editing workflow I use. What I have found with the D2H is that the auto white balance is the best I've seen on any camera to date. Also the Auto Tone Compensation (ATC) is noticeably improved from previous D series cameras. Which definitely makes life easier and aids in speeding up of any image editing workflow. Reason; if you can count on the camera to get contrast and white balance right from point of capture on a capture by capture basis, even at 8fps which the D2H can do, then any changes to contrast white balance are aesthetic rather than corrective. Which I found to be rule rather than the exception. I also found the image quality to be on par or in a significant number of instances noticeably better than the D1H and D1X. The areas that I found that were improved were in image detail, there appears to be actually more image detail per pixel, and better color saturation. Also the D2H has more or less the same amount of signal noise as the D1H and D1X. (Which is very easily dealt with noise reduction software. The software I use is NiK multimedia's Dfine 1.0.) Because of all of this I found that the files were much easier to color correct. Again which help to speed up of any image editing workflow.

One of the great boons of digital photography is that as the photographer has total control of the image. One of the great banes of digital photography is that as the photographer has total control of the image. Where this dilemma rears it's ugly head the most is when it comes to actually processing the images. How do you provide a reasonable way to create “contact sheets” of the images you've captured both for printed output and the web. If you shoot JPEG's no problem, but the control you give up over color and sharpness and the microbloxilation artifacts that you create during the JPEG compression process are simple, in my opinion, worth the price of admission. So the alternative is to shoot RAW (.NEF). Which gives you a far superior file but takes many hours of computer time to batch convert to a file format that you can use to make web pages and contact sheets. That issue has now been addressed with the creation of the New JPEG and RAW (NEF) Combination Filing System. This system enables simultaneous recording of both RAW (NEF) and JPEG's for the same shot, which is then written to the camera's Compact Flash™ card. The creation of a JPEG file at the time of RAW file capture accelerates workflow operations. Reasonably high resolution reference images which are needed immediately to create web and contact sheet content are ready and available on demand while the higher quality files that are needed for high resolution printing can be converted from NEF at a later time.

So all in all from front, back and inside the D2H in my opinion is one cherry camera and as a digital imaging capture system currently the best way to fly in the Nikon world.