

Aquatica AD90 Review

Into the Deep with HD and RAW

by Tim Rock

I'm sure many of you reacted as I did when the Nikon D90 was first announced and the news that this DSLR included HD video. Being an old TV news guy, I thought the opportunity to play with HD was a real bonus. Plus, this camera had a lot of bang for the buck.

The sensor in the D90 is about as good as it gets for this class of camera at this time. The camera is small and a bit light but with a power grip, it adds just enough weight and bulk and feels really good above the water. I've used it on assignments and the playback window is large and colorful, so you can tell at a glance if you have a nice shot.

So when the housing arrived from Aquatica, I was happy to see it was also small, compact and light. Mine has a shiny, spackled black finish and looks pretty cool. The camera fits the housing like a glove and it has a lot of buttons. This means virtually every function is accessible underwater. That means roughly 40 buttons, knobs, bulkheads and other appendages poke out from the housing body.

Like most cameras nowadays,

you don't need 80% of the functions available. But it's nice to know should a situation present itself and you have sufficiently memorized the manual, you can do just anything you want while cavorting with the turtles and fishes. There's even an editing function so you can kill deco time by working on your show. Read the section in the accompanying Aquatica manual that says "Controls in Detail" if you're not sure what button does what to what.

All of the Aquatica ports work on this housing and there is a lens port and gear chart that comes with the manual or you can ask your Aquatica dealer just what you need for your lens of choice. This chart is also found at www.aquatica.ca.

My favorite lens is the Tokina 10-17mm wide angle zoom. Even though the chart suggests a modest extension ring, using the 8" dome the lens does focus sharp and clear without it. The macro shots and fish in this review were shot with a Sigma 50mm Macro lens. It is also my favorite as I can shoot anything from shark and diver portraits all way down to Christmas tree worms and pygmy





seahorses.

There is a new AD90 housing function called a port lock. I overlooked this little gem about three dives into my Philippines trip and the results weren't pretty or dry. Don't ask. Read about it and use it properly and the port now clicks into place and cannot be budged. Accurately, it's called the Port Release Mechanism Button. There is a long section about it that I adroitly managed to overlook.

The quick release tray is small and allows you to change batteries now without taking the tray off the camera. You still have to take it out of the housing, but that's a snap as it goes in and out on two posts so the camera always stays perfectly in place. The hotshoe lead is also longer so you can quickly change cards and batteries by just sliding the tray out a

bit, do your work and slide it back in. Hotshoe stays connected.

I shoot everything in Manual mode but this camera has iTTL capabilities. This is really good news for macro enthusiasts who like to use this setting. It is usually quite good to excellent for close-up exposures. Wide angle can let in a bit more light and fool the camera sometimes. But many macro guys swear by iTTL. So now if you want it, you got it.

My first series of shots along the South Airport reefs at Tubbataha were a bit of a surprise. They seemed overexposed. Then I remembered the default ISO for this camera is 200. I was used to 100 in virtually every other DSLR I had ever used. So this meant faster shutter speeds and higher F-stops. There is a way to get around this using the Lo-1 setting, which can



make highlights more critical. But, this setting also has greater dynamic range (a very good thing) and less noise than ISO 200. Basically, the lower the ISO setting means the lower the noise and the higher the dynamic range will be. This is because below the lowest numbered ISO, the raw data is shifted toward the right; so there is an increased possibility of clipping highlights. But the color and overall photo is strong and vibrant. But I have been using the default ISO 200 most of the time and am getting used to the greater depth-of-field and other pluses that using more light can

bring. It especially helps with fast moving objects like dolphins where you can crank up the shutter speed for natural light.

The housing has a large window equal to that of the D90 so reviewing is a real pleasure. The size allows you to get into smaller spaces and close for CFWA shots. With strobes attached, the weight is still fine. Bigger housings can give you photographer arm (or neck) at the end of the dive. But the fatigue factor is low with this.

So how about the video?

Well, Nikon didn't design this

aspect very well quite frankly. Even when you thumb through the D90 manual, you'll be hard pressed to find out much about this popular and groundbreaking DSLR function. At this writing, the Nikon D300s was out with a better system and Canon's higher end EOS 5D Mark II is also available.

But for us beer and burger guys, hey, it is HD. There are also lower video settings that give longer recording time and don't chew up so much card space. However this HD setting doesn't really chew up as much as you'd think. It looks pretty good and sounds fine (its mono). And the beauty of this is that you can pretty quickly get used to the few hoops Nikon wants you to jump through as far as focus goes and go right from shooting stills into video mode with a couple of quick button pushes. The housing is small enough so this can all be done with your right thumb.

And if the action is fast and furious and would make a great still image, you can shoot stills right in the middle of video recording. You can also use the LIVE VIEW setting, which activates the electronic SLR function and makes the review screen live. This is how you record video but it's useful in still composition as well.

Hand holding this little housing and keeping a nice steady shot while

swimming isn't so bad. Even shooting a wide video shot is pretty easy if you keep yourself weighted down and your elbows tucked into your chest. For viewing, in shallower water you could use some sort of lens hood, especially with a strong sun at your back. But down past 20 feet, there's not much of a problem. Colorwise, a Magic Filter is helpful if video is the main goal of the dive. I suspect if you wanted, you could add video lights to the equation but you'd have to turn them on and off manually.

In my short diving experience with this unit its best used as a still camera with the video there if the situation presents itself. For macro, the D90 focusing again represents a challenge. For really small stuff, you have to pre-focus and then change to video mode. The camera then retains that focus and depth-of-field. So to really have a frustrating dive, I shot video of really small or really active marine life in Guam's Tumon Bay Marine Preserve with a flat port and a Sigma 50mm macro lens.

I quickly found that a small, weighted tripod would have helped me greatly. Even holding it solid to the sand showed a bit of sway. I was able to manage enough shots for cutaway length images (a good 2-3 seconds). But longer macro video sequences require a bit of planning. I also tried carrying a clip-on 2-pound



weight and this did help quite a bit with handheld video macro and close-ups. But a sacrificial tripod would be needed for any sort of real production.

In all, I've really been having fun with this housing, which is what it's all about. It's a light, rugged, professional quality housing that you expect from Aquatica and it will open new horizons for the creative demons in you waiting to explode on the silver screen... er, RGB monitor.

See sample video on YouTube

<http://www.youtube.com/watch?v=OiF9ed1j9dA>

Successful innovations by Nikon and Aquatica make this combination a great little tool for the amateur and pro.

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Underwater
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