

Light & Motion Titan D100

by Rodger Klein

Light & Motion introduced the new Titan D100 at DEMA 2002 and it began shipping this past summer. I finally was able to give one a serious go for 2 weeks this past August while I was conducting one of my digital workshops aboard the Kona Aggressor. It's one thing to go out diving for a few days of housing testing, but after doing as many as 5 dives per day, everyday for 2 weeks, I was able to work every feature of this housing and then some.

As usual, Light & Motion has delivered a work of design art. Ergonomically efficient, it has both manual and electronic controls. The rear panel includes all available manual controls as well as the ROC (Remote Optical Controller) display. The ROC controls, as well as the Main Dial (Aperture) control, the Sub Dial (shutter), and Auto Focus control are located on the left and right handles (it's possible to swap the Main and Sub dial functions if you choose). Unlike manually operated housings, the Titan D100 allows total control of shutter, aperture, auto focus, and strobe power remotely from these handles.

The ROC System

With the E20 housing, Light & Motion introduced their revolutionary ROC strobe control system. That system, which allows the user to obtain up to 12 manual power levels on most TTL compatible strobes, migrated to the Tetra 5050 and



the Tetra Coolpix 5000 housings. It is also the one of the main features of the new Titan D100, but with some serious improvements.

With the Titan E20, I had always felt that the placement of the electronics was vulnerable to moisture or some other type of damage. With the Titan D100, Light & Motion has done a couple of things to almost eliminate these concerns.

All of the electronic contacts are now specially coated to prevent moisture and even direct water damage. The main electronics board is not only fully coated but it is enclosed safely in the camera





*Camera: NikonD100. Housing: L&MTitan. Lens: Nikon 16
Lighting: 2 Sea& Sea YS 90DX. Film: none IBM Microdrive
1/125 f/13. Manual exposure*

tray. There is also a moisture sensor, which will set off a "light show" on the ROC board if any moisture is detected.

Although I am embarrassed to admit it, I was inadvertently able to test this system...not once but TWICE. Yes, I flooded my Titan D100 on 2 different occasions while in Kona (the first time I have ever flooded any type of housing). The first time it happened I was sure both my camera and housing were toast. I was so confident of the Titan's double o-ring system that I didn't realize that

the moisture alarm was "yelling" at me until I had descended about 20 feet. Once I realized what was happening, I ascended slowly to the Aggressor's swim step, handed the housing up to one of the dive staff, and made a beeline for the camera table.

To make a long story short, there was about 2 inches of water in the port area (I had pointed the housing port down as soon as I realized what was happening), the camera bottom, tray and other electronics were very wet. I dried everything off and put the



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Lighting: 2 Sea& Sea YS 90DX. Film: none IBM Microdrive
1/125 f/11. Manual exposure*

camera and housing in the engine room overnight to absorb all remaining moisture. The next morning, to my amazement, the camera and housing worked perfectly.

After some investigation, I figured that the leak was caused by my carelessly pinching an o-ring on the front port. So, from that point on I began to check the housing in the rinse tank prior to each dive, as well as immediately upon entering the water. It was during my second week on the Aggressor that it happened again. But this time I was ready and

only a little bit of water made it into the housing. After drying everything off on the camera table, the camera and housing worked perfectly and I just went back in the water as if nothing happened. From that point on I realized that the electronics in this housing have really been perfected.

Housing Optics

As with other Light & Motion products, no expense has been spared in the development of housing optics. The most impressive feature here is an



Camera: NikonD100 Housing: L&MTitan Lens: Nikon105
 Lighting: 2 Sea& Sea YS 90DX Film: none IBM Microdrive
 1/125 f/18 Manual exposure



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 1/125 f/11 Manual exposure



all Optical Glass 8" Dome wide angle port which supports Nikon 14mm, 16mm, 18mm, 20mm, 24mm, 17-35mm, 18-35mm, and the

new 12-24mm lenses. Some lenses require an extension ring.

Also available is the Macro port that will accommodate the Nikon 60mm Macro and the 105mm Macro (with an extension ring) and



Conversion Rings are available for Sea & Sea, Subal, and Aquatica ports. Zoom and focus rings are also available for supported lenses.

One of my favorite features: Latches



Probably one of the most overlooked features of any underwater housing is its latch system. I am of the opinion that Light & Motion makes the most user- friendly latches available. Unlike other housings that require 3 and sometimes 4 release

latches, Light & Motion makes it very easy to install and remove the housing back. Other latch systems I have used can be tricky when installing the back and the latch can get caught between the front and back elements of the housing, possibly damaging an o-ring.

Camera Tray System

The camera tray system is another elegant solution. The tray contains the ROC electronics, hot shoe connector, camera connection, gears for the focus mode selector, and a lever to allow lens removal when



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Lighting: 2 Sea& Sea YS 90DX Film: none IBM Microdrive
1/125 f/18 Manual exposure*



*Camera: NikonD100 Housing: L&MTitan Lens: Nikon 16
Lighting: 2 Sea& Sea YS 90DX Film: none IBM Microdrive
1/125 f/16 Manual exposure*



guides that keep the camera in exact position inside the housing. By pressing the metal release bar on the right of the camera tray, the camera and tray just pop out.

Attention to Detail

Since the Titan D100 has a number of electronic controls, it needs to communicate with the camera. On the bottom of the Nikon D100 are a series of contact pins that allow the housing to access all of the features electronically.

These pins are covered by a



rubber gasket, and until I used this housing and had to remove this cover, I didn't even know that they were there. It is necessary to remove the

gasket to reveal the contact pins, and when the camera is mounted on the tray it actually plugs in.. This allows for total housing to camera communication.

Paying great attention to detail, Light & Motion designed the camera tray with a little cutout area that allows you to safely store the rubber gasket while it is off the camera. Very cool.

changing ports. You can easily change lenses without having to remove the camera from the housing.

The camera tray is mounted to the housing through a pair of metal



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Wish List

There are a few things I would wish Light & Motion had done differently:

- * The camera can only be turned on when it is inside the housing. You cannot turn the camera off. According to Light & Motion, this was a design decision dictated by the placement of the shutter release. Since the camera will "go to sleep" by itself, there shouldn't be significant battery drain...but I just like to be able to turn the camera completely off while it's

inside the housing. If I don't want to remove my Microdrive or change batteries between dives, it would be great if it wasn't necessary to open the housing to turn the camera completely off.

- * I wish the moisture sensor gave an audible alarm and not just a visual alarm on the ROC. If the housing is going to flood, it will most likely happen at the beginning of a dive, so it's necessary to pay attention to the ROC once the housing is in the water. If you are diving off of a skiff, say in Fiji or Coco, hearing an audible alarm

would be of great value.

Overall Impression

The Light & Motion Titan D100 is really an impressive system. Perfectly balanced in the water; outstanding optics with ability to use your existing ports; extensive feature list including all camera controls and the upgraded ROC system, I have to say that I love this housing.

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