



photo & video

Traveling with dive gear and underwater photo equipment is problematic

Text by Larry Cohen
Photos by Larry Cohen
and Olga Torrey

Anyone who has been on an airplane in the last five years knows the number of bags and weight limits keeps dwindling. This is very problematic for the traveling photographer. Add scuba gear and housings and the problem multiplies.

I have been an Olympus DSLR user for many years. I continued to use the Olympus E-620 after the camera was discontinued and the system was no longer supported. My travel rig consisted of two E-620 bodies, the 14-54mm f/2.8-3.5 II Zuiko and 18-180mm f/3.5-6.3 ED Zuiko lenses for topside photography.

Underwater the 7-14mm f/4.0 Zuiko ED was my go to lens with the Olympus 50mm f/2.0 Macro ED Zuiko lens for small subjects. I used the Olympus PT-E06 underwater housing with Olympus ports. This system is much smaller than most DSLR rigs but it still filled the bags and took me to the weight limit when traveling.

The old four thirds system still performed well, but it was time for an upgrade. After looking at all the options, I decided to stay with Olympus and their OM-D E-M1. This is the top-of-the-line pro micro four



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Have Camera, Will Travel

— *Tips for the Traveling Underwater Photographer*

thirds camera.

Starting in 2008 both Olympus and Panasonic went over to the micro four thirds system for mirrorless cameras. The sensor size is the same as my original

four thirds system. Unlike four thirds systems, the micro four thirds system does not provide space for a mirror box and a pentaprism, which is the traditional design for SLR cameras. Using just the

LCD and in some cases, an electronic viewfinder, smaller camera bodies could be designed. The lenses have a shorter flange focal distance, so the lenses are much smaller. Many other lenses could

be used on these camera bodies if a lens adapter exists. But at this time, very few underwater housings are compatible with these lenses and adapters.

Because of the small size of the cam-



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era and lenses, housing companies can produce smaller housings and ports. This is a benefit to the traveling underwater photographer. Because of the small size and the availability of lenses, I decided to embrace this system.

For topside I use the M. Zuiko Digital ED 12-40mm f/2.8 PRO and the M. Zuiko Digital ED 40-150mm f/4.0-5.6 R lens. Underwater, the Panasonic Lumix G Fisheye 8mm/f3.5 has become my main lens, and I use the M. ZUIKO DIGITAL ED 60mm f/2.8 Macro for small subjects. These lenses perform equally well on land. All of these lenses and two bodies fit in a small camera bag.

Housings

I used Aquatica housings back in the days of film. I was very happy to see the Canadian company is now support-



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ing small mirrorless cameras. I was able to purchase one of the first Aquatica AE-M1 housings for the Olympus OM-D E-M1. This anodized aluminum and stainless steel housing is

only 9 x 6.25 x 4.5", and weights 2.1kg/ 4.75pounds, but is built like a tank.

The housing can access all important camera controls. The controls are placed for easy access. I did find that the front control dial was easier to reach without moving my hand from the grip than the rear dial. The camera's default controls allowed you to access the aper-

ture from the front dial and the shutter speed from the rear dial. Since I change the shutter speed more often than the aperture, I customized the controls. Now the rear dial accesses the aperture and the front dial the shutter speed.

Underwater photographer Alex Mustard explains how to customize the OM-D E M5 for underwater use in the Nauticam housing in this WetPixel article: <http://wetpixel.com/articles/using-the-olympus-om-d-e-m5-underwater/>

ing. One of the best recommendations is how to change the video button to a focus lock button.

Focus lock by holding the shutter button down half way is a technique used by many photographers. But it is not easy to feel the halfway point when the camera is in a housing.

Tips

Olympus 9-18mm is good for reef scenes when you don't want distortion (left); Panasonic 8mm fisheye used to photograph a diver (far left). The lens is wide enough to show the environment

(If you read this with the camera in your hand, it makes perfect sense.)

The recommendations are excellent and work with the OM-D E-M1 in the Aquatica hous-



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Panasonic 8mm fisheye allows for a close-up of the volitans lionfish and still have a wide view of the reef. The fisheye creates an interesting curve to the background



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Seaweed blenny taken with Olympus 60mm macro

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Circuit board inside housing is both a moisture and vacuum alarm



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On both the OM-D E-M1 and 5, you could customize the controls so the video button locks in focus. This way you hit the lever that is usually used for video to lock in the focus, rather than just pushing the shutter release to capture the image.

Lenses and domes

When I first got the housing I used the 4-inch fisheye dome for the 8mm lens and the 0-60 flat port for the 60mm macro. The 4-inch dome is made with BK-7 glass and the macro port is made of optical grade acrylic. I also have manual focus rings on both lenses.

Later I added the Olympus M.Zuiko Digital ED 9-18mm f/4.0-5.6. In the 30205 SW8 optical grade acrylic dome with 30602 extension ring this lens performs better than the Panasonic 7-14mm.

Corners are sharper and in general the lens is sharp and produces images with good contrast. The lens is wide enough to get close to subjects but by zooming to 18mm is good for

for the 60mm macro lens.

Strobes

I continue to use dual Olympus UFL-2 strobes. These strobes have been discontinued. But I find being able to con-

Bubble coral photographed with the Panasonic 8mm fisheye (right); Olympus 9-18mm is a good lens for large subjects when you cannot get really close (below)



Tips

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subjects a little farther away and close-up wide-angle.

Since the Olympus M. Zuiko Digital ED 12-40mm f/2.8 PRO uses the same dome and extension, I purchased the zoom ring. This lens is very good for small to medium size subjects that are too large

control the strobe power from the camera to be a useful. The strobes are mounted on TLC ball joint arms consisting of two 8-inch sections.

The OM-S E-M1 does not have a built-in flash, but the small FL-LM2 hot shoe mounted flash is included with the cam-

era. The Aquatica housing is designed so you could attach the flash and use it to fire external strobes with fiber optic cables. You do have to set the camera so the flash will fire in the down position.

The housing has dual fiber optic cable ports that are compatible with Sea & Sea style cables. Inon adapters are included.

The fiber optic cable ports are positioned above the flash. There is an aluminum reflector inside the housing so the light will bounce up and hit the fiber optic cables.

It is important to have quality cables or the strobes might not fire. The new Sea & Sea Fiber-Optic Cable II works without problems. My five-year-old Sea & Sea Fiber Optic Sync Cable L-Type did miss fire at times.

Seals and sensors

The Aquatica housing features the SURVEYOR moisture and vacuum sensor alarm. This system includes the Surveyor moisture and vacuum sensor circuit, a pressure valve and vacuum pump. The SURVEYOR

circuitry integrates a water detection function that remains on when a battery is inserted. Should the slightest amount of water make contact with the sensor probes, it will trigger an alarm using both an audible signal and a rapidly flashing red LED light.

To fully test the sealing integrity of the



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Create a dark background by using a fast shutter speed



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Pressure valve on the AE-M1 housing



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housing, you use the optional vacuum pump and pressure valve to create a vacuum. All you have to do is push the on button and attach the pump to the valve. After pumping out all the air a green LED light blinks every 5 seconds. This way you know the SURVEYOR system is monitoring the housing and that it is safe to enter the water.

If the vacuum is lost, the alarm warns you with both an audible signal and a rapidly flashing red LED light. Creating the vacuum also seals the housing so it is impossible to open the housing by accident. This definitely gives you a warm and fuzzy feeling.

Same same but different

My dive buddy Olga Torrey shoots with the Olympus OM-D E-M5 in a Nauticam housing. She has the Olympus 12-50mm f/3.5-6.3 ED M.Zuiko EZ and the Panasonic Lumix G Vario 7-14mm f/4.0 ASPH. Lenses. Having the same system we could

share lenses but not ports.

The Olympus 12-50mm lens has a macro button. Nauticam designed an interesting gear for this lens. In the port the gear not only allows zooming but you could access the macro button. This way you could capture tiny and medium size subjects on the same dive.

Olga captures both stills and video with her camera. She has a video light and Sea & Sea YS-02 strobes mounted on each side of her housing. The YS-02 is a powerful small strobe with

Tips

Portrait of Olga Torrey underwater with her rig, taken with Olympus 12-40mm lens

a wide beam angle and fast recycling time. The strobe power has to be controlled manually. Since it has a continuous power dial this is easy. The Beneath the Surface 1/2-inch Double-Ended Ball Flex Arms easily support the weight of both lights. By using the Beneath the Surface Arm

Triple Clamp the strobes could be mounted right next to the video light.

After assembling all the camera gear, it is time to jump on a plane and do some traveling! □



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Using the vacuum pump to create a vacuum

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GoPro Hero4

GoPro have announced the release of their new HERO4 models. The HERO4 Black features 4K video and will retail at US\$499, the Silver has a built-in touchscreen at will retail at US\$399. Both camera feature improved user interfaces and manual color, sharpness, exposure and ISO control using Protune. GoPro also announced a budget camera, the HERO which will retail at US\$129.



Seacam focusing for Nikon D810

Seacam has announced the release of its new Silver housing for the Nikon D810 DSLR. The housing is milled out of a saltwater-proof light metal alloy that has been twice hardened and high-value anodized and features the use of high quality stainless steel, anodized aluminium and premium synthetic fittings throughout. All control shafts and buttons are double sealed with seamless, high-quality precision O-rings and Seacam state that all of the D810 functions can be accessed.

Nikon D750

Nikon has released another full frame FX DSLR camera - the D750. The new camera fits in between the D610 entry-level FX model and the highly regarded D810 DSLR. The D750 features a new 24.3 megapixel CMOS sensor, Nikon's EXPEED 4 image-processing engine and is claimed to have image quality that surpasses the 36 megapixel D810 at high sensitivities. The camera will shoot at 6.5 fps, has an AF system works down to -3 EV and the body retails for US\$2300.



Venom 50

The Venom 50 is a very compact video light suitable for both stills and video and comes fitted with white, red and UV LED's in one small unit. The lamp which will be available from mid Nov will according the manufacturer be the smallest 5000 lumen rated light available. Burn time 1 hr. Remote control by IR with optical cable is optional.



Canon EOS 7D Mark II

Canon has raised the stakes in the cropped APS-C/DX sensor cameras with the release of their long awaited successor to the 7D SLR camera. The new EOS 7D Mark II features a new 20.2 megapixel APS-C Canon CMOS sensor and Dual DIGIC 6 Image Processors. With an ISO range of 100-16000, a burst rate of up to 10fps and 65 point auto-focus that will operate down to -3 EV the new 7D is a very capable camera which also features Canon's Dual Pixel CMOS AF system and iTR (Intelligent Tracking and Recognition) scene recognition system. The EOS 7D Mark II is available from November 2014 at a retail price of US\$1800 for the body only.



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