

# AOI GoPro lenses and mount

by Peter Rowlands

I don't think I would be wrong in saying that, numerically, the GoPro is the most widely used camera underwater; extremely small and light, even in its 60 metre housing, it fits in a BC pocket and produces excellent images, both stills and video.

It appealed to a whole new market outside of the traditional underwater photographer, drawn by the simplicity of its 'point and shoot' mentality and was bought in droves by divers who, up until its arrival, hadn't been interested but all of a sudden they could record their dives albeit initially with vomit inducing unsteady, unedited playback - but they were happy and oblivious of the optical distortion behind the flat port.

Now, I suspect there are lots of housed GoPros in cupboards up and down the land with flat batteries and dusty lenses once the novelty wore off next to the bread maker and exercise bike. And, photographically, there's a logical reason for that.

On its own the GoPro is an amazing invention both photographically and physically but it's a bit of a one trick pony. Great for available light scenery and wrecks

underwater but not for close ups and variety. Add the tiny LCD screen and the insensitive buttons with slow responses and the annoying Menu system and the novelty soon wore off.

Later versions of Go Pros brought excellent image stabilisation but the real saviour underwater came in the form of accessories and advances in other technology - accessories in the form of better corrected lenses, colour correction filters and the new LED technology providing much smaller, brighter and longer lasting LED lights. Things were looking up.

I was fortunate to meet AOI founder Victor Tsui and head of promotions Nick Khoo at the Dusseldorf BOOT Show in January where I had gone to see their UH-GPX Housing for GoPro HERO11 /12 Cameras. We had a very enjoyable time discussing the past and future of underwater photography equipment.

You will probably have heard of AOI but only comparatively recently I suspect but their history in underwater photography products goes back to the early days of digital as they manufactured the majority of the OEM moulded polycarbonate



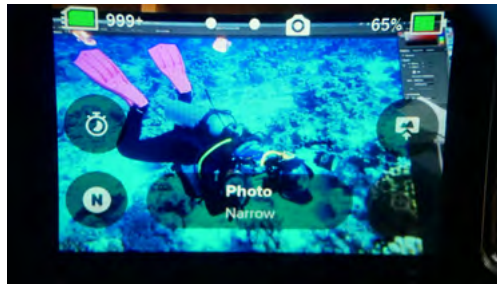
housings for major brand compact cameras which helped get digital underwater off to a very positive start. The quality, design and value for money of their products made them unsung heroes in the early days.

In 2014, in addition to their housing range, they decided to develop a series of Underwater Conversion Lenses and Lens Port Systems for underwater housings and market them under the AOI brand name. Enter the AOI UWL-03-BLK wide and AOI UCL-03 close up lenses for the Go Pro.

GoPro Hero cameras can have a super wide angle view in normal use, but once inside the housing underwater, the coverage narrows from approximately 150 to 95 degrees and it also introduces geometric



distortion. The AOI UWL-03 lens restores the angle to around 140 degrees. The UWL-03 also allows close-focus wide-angle footage by bringing the minimum focus distance



*(Top) The view through the Magnifier is much bigger and easier to compose with.*

*(Top left) The grey knurled button is well placed to release the lens with a 90° turn*

*(Left) The two handed handling produced steady footage*

be with the Pistol Grip AOI PGP-02 (my choice) or the traditional basetray and handles.

An optional accessory I was keen to try was the UMG-01 LCD Magnifier. This needs the GoPro housing rear door to be replaced with the RK-GP11-BD rear door which has rails to hold the Magnifier. Whilst the small LCD screen on the GoPro is better than nothing (the early GoPro models didn't have a screen at all) the ability to see the screen bigger sounded like a major benefit to me.

And so it was that a few weeks later, UPS delivered all of the above and I am very grateful to AOI for facilitating this.

Now March in the UK is not the ideal time to be testing underwater photo equipment, especially when it

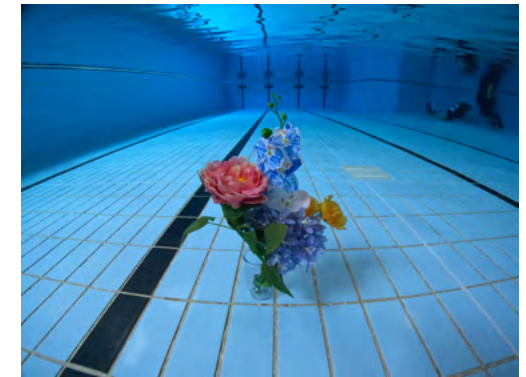


*The increase in angle is impressive and will be especially useful in limited visibility.*

has been one of the wettest on record so my initial use was in a shallow pool which gave me a good feel for the ergonomics and optics.

Optically the AOI UWL-03 is a 0.73x wet lens converter which restores the underwater angle to 140° and the sharpness and resolution are very impressive. The coverage has an element of fisheye distortion which is common in most wet lenses including the WWL-1 for example.

Ergonomically I was using the AOI UWL-03, UMG-01 LCD Magnifier and Pistol Grip AOI PGP-02. This is a compact package which reminded me of early 'run and gun' video cameras and the handling was surprisingly good, if slightly top heavy. With your left hand on the pistol grip, mask leaning on the Magnifier and right hand holding the right hand side with index finger well placed for the shutter release/stop/Start button on the top of the housing, the handling was good



and any slight wobble from a small rig was taken out by the excellent image stabilisation in camera.

I am naturally right eyed and the large, dioptr corrected, rear view port of the Magnifier was comfortable to view yet still allowed my left eye to survey the external scene and try to anticipate any activity.

I got on very well with this setup and look forward to immersing it in the saltwater world and going into more detail in the next issue of UwP.

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to about 7cm. Normally, with the latest GoPro 10/11/12 cameras, the closest in-focus point is 60cm.

Both lenses have a special bayonet fitting, and an AOI lens mount is required. The QRS-02-MB1P lens mount fits on the GoPro Housing and allows easy lens attachment and removal. The lens can be attached both on land and underwater.

Handling the set up can either