

Little miracles

by Peter Rowlands

I think it's fair to say that there has never been an easier time to start underwater photography and also that it has never been simpler to get good results straight away.

When I started, disposable flash bulbs were the order of the day, the Nikonos 15mm didn't exist and most of us made Perspex housings as there was very little commercially made equipment. We had to invent solutions as we went along and this made producing good shots very frustrating but, when it worked, very exhilarating.

Nowadays with the advent of compact digital cameras and, more importantly, their amazing plastic housings, underwater photography is not only easier but first timers can also get good images at the push of a button for very little money. The result is that more and more divers are taking cameras underwater and again, more importantly, are encouraged by the pictures they see so they keep taking pictures.

In the old days it was so difficult to get good shots that the drop out rate was extremely high but nowadays not only is the take up rate phenomenal, the drop out rate is far less.

Whilst a large part of this success is undoubtedly due to the capability of compact cameras I think that the plastic housings for them are nothing short of little miracles.

Traditionally underwater camera housings were custom built by individuals and small companies. They had little capital to invest and most were hand



Depending on the number of controls, these housings are made up of over 200 individual parts!

manufacturers like Olympus, Sony and Canon to name but a few we have seen large investments being made to mass produce plastic housings which not only work very well but end up being incredibly inexpensive.

When something is cheap we tend not to value it too much but I maintain that these plastic housings are nothing short of revolutionary and from my experience they are amazingly reliable and extremely robust.

From my associations with the underwater photo trade I have seen literally thousands of these housings being sold yet very, very few have caused problems or needed repair. As someone who has earned a significant part of my income from servicing underwater cameras, this has proved a very frustrating trend!

The design of these housings required new mechanical problems to be solved. Traditionally



Excellent results can be achieved right out of the box. This shot was taken with the standard lens on an Olympus C40 in a PT-012 housing using the built-in flash with Auto exposure.



A balance has to be achieved to allow the user to push a spring loaded control yet not allow water pressure to do so as well. The solution is a combination of spring strength and O ring tension to achieve waterproof operational success.

most camera functions were controlled by fixed O ring sealed shafts which rotated but the new compact cameras are covered in small push buttons, the controls for which not only need to be very accurately positioned but also designed to work under water pressure.

A balance had to be achieved to allow the user to push a spring loaded control but not allow water pressure to do so as well. The solution was a combination of spring strength and O ring tension to achieve waterproof operational success.

With modern computer controlled design and production there is a precision and consistency which was just not possible financially in the old days. The result is housings which

perform very well yet cost very little.

I recently got hold of an Olympus housing which had been written off due to damage to the small plastic lugs which retain the front port. This is a weak design despite all the computer controlled wizardry! I wanted to use some of the controls on a video housing I was making but, rather than just remove the controls I wanted, I decided to strip the housing completely to find out how many individual parts they were made of. This particular one had well over 200 individual parts!

I'd rather not think of how these housings are assembled. I very much doubt that machines are involved once the parts have been made, rather there are banks of low paid workers assembling these housings for us to enjoy the end product. That, I guess, is capitalism for you.

So the next time you dive with your compact digital camera, spare a thought for the time and investment which have gone into producing these little miracles.

We've never had it so good!

In the next issue of UwP we'll look at how these small inexpensive setups can produce amazing results.

Peter Rowlands

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