

Olympus E-410 and PT-E03 housing

by Rob Spray

As you look around a diveboat these days it's hard to avoid the feeling that every diver has a camera. I blame Olympus who helped create this niche by making dive housings for most of their output since the late nineties - ever since the PT-003 for the C-900. Now there's a great choice of excellent small cameras from numerous manufacturers. While low end competition is cutthroat Olympus are still ahead in the breadth of models they house, from point and shoot up through their range to the SLRs. Having seeded the market it may now be the top end which they will bring within easier reach. To see if their new kid is out of its depth we took it on a fun November weekend in Plymouth with the last of the good(ish) weather.

The camera

One promise of Olympus' chosen 4/3 sensor system was that smaller cameras would be possible. This has been an empty threat as the first four E-Series cameras were no smaller than average but at last that has changed. The E-410 is the smallest digital SLR available. Handling one will bring back happy memories for those with a film history. It's not quite a wafer thin, retro OM clone but feels dense and well built though even including the kit lens it's lighter than an OM-1 body. It's definitely not the bulky plastic monster that seems to be today's 'small' SLR. The E-410 is such a rapid update to the physically identical E-400, that it is clearly the model that was originally intended.



A housing comparison, the PT-E03 against the PT-E02. It's much smaller but the lens ports will be the same size. The port for the 14-42mm kit lens has a larger port than ideal but might even be useful for under/over shooting - compared to the Olympus dome port on the 02. The E-410 and kit lens weigh 2.5kg housed where the E-330 in equivalent trim is nearing 3.5kg. Once the E-410 was paired with a smaller strobe such as the UFL1 the difference could exceed 2kg.



The major change is the switch from a Kodak to a Panasonic sensor – still 10 Megapixel – which allows Liveview and other refinements. It still has two card slots, one each for Compactflash and xD memory, and can fill both or copy between the two.

The phrase 'kit lens' doesn't normally set pulses racing but the standard zoom is a tiny 14-42mm unit (28-84mm in 35mm film terms) which is sharp, light and focuses down to 24cm from the sensor. It's a great general purpose lens and a cracking starting point for use underwater. Most kit lenses are makeweights, but this one is worth its weight in gold - although not very much – it only weighs 190 grams.

The rear LCD is 2.5" but doesn't look gross

since the sparse buttons leave space for a decent layout and comfortable grip. Of course the screen can show the Liveview but also does excellent service on playback, with the first use I've seen of the orientation sensor for review. As well as tagging images portrait or landscape at capture it uses the same sensor so that portrait pictures show full screen if you stand the camera up on end. I'm sure there are other cameras which do this but it's a nice touch for an 'entry level' SLR. It doesn't feel cheap and you don't pay a premium for compactness. Although nominally the entry level Olympus it's better built than equivalent competitors and without having its functionality crippled like some.

The housing

It's all very well making a cute camera but no benefit underwater if you're forced to buy an expensive, bulky case. Every style has its place but a compact, cost effective option is a great way to bring people into the hobby. Olympus' previous SLR housings were heavy duty beauties, rated to 60m and built to fight on equal terms with the big names in the field. Now the little E-410 has earned a neat 40m case which provides all the protection a normal diver will need, the polycarbonate is thick and rigid. The PT-E03 is closer to its SLR brothers than its compact cousins but saves half a kilo and is considerably smaller.

The case closely follows the body but includes a power bulge so that the flash can be raised. The port thread is the same as the other PT-Es but the housing aperture tapers and has been reduced in bulk as far as possible. A (relatively) mass produced case allows the creation of these specialised parts where they are needed, so the drive to reduce bulk and cost can be done with a conscience. The catches are smaller than on other PT-Es but well proven and protected from accidental release. The rigidity of the case ensures the seals stay in even contact and keeping the case small helps keep it stiff. Like



The new baby, the E-410 in its PT-E03 housing with the housed FL-36 flash on a Fantasea tray and flexarm.

smaller Olympus cases the PT-E03 is rounded rather than rectangular – to reduce stress and distortion. Double 'o'-rings seal the rear door, the hinge taking the place of two catches on other PT-E cases. After greasing, the 'o' rings need a while to relax into the detour over the flash but some time spent shut fixes that.

Two camera controls aren't brought out, they're caught between the pop-up flash inside and the strobe bulkhead on the case and so can't be reached with reasonably simple buttons. One is the release for the



Neither housing is smothered with buttons but the loss of the E-330's extra liveview modes sheds 3 controls. The power bulge for the flash disguises adds to the height of the otherwise well tailored case.

flash and the other the drive mode button. Both are redundant and can be accomplished by other means. Drive is one of the top level parameters - along with ISO, white balance, flash mode, metering, focus mode, card, compression and colour rendition - which can be accessed through the rear panel status display. Just press OK and the cursor keys select the parameter you can change with the

dial. The E-410 is the base model in the range and whilst it doesn't lack for facilities or image quality beside its larger range mates the lack of real estate does mean less buttons - so users need to be familiar with the back panel control options. Some reviewers have missed this parallel control path, perhaps it's not so critical on the surface but underwater this simple aggregation is very useful under duress.

With the PT-E02 for the E-330 I complained that the bulkhead connector was vulnerable – it sprouted from the corner of the case. On the PT-E03 it's tucked in beside the flash bulge. Used with the right angled Olympus plugs this minimises the chance of snagging. It's a much better arrangement, hopefully the cases for the FL-20 and FL-36 will be revised to follow suit.

Underwater

On the surface the camera and its cute kit lens are great to use; fast and light - ideal as a holiday SLR. Underwater this translates into a body which occupies little more space than a large compact - such as a C-7070. The port is a different matter but the kit unit is as short as possible, though flared to eliminate vignetting at the wide end of the lens. It's not a compact but quite clearly a size down

from 'full size' SLRs like the E-330. Underwater the 410 was good company and as the housing is rated to 40m the buttons are less stiffly sprung than 60m housings.

I added a Fantasea tray and arm to support my housed FL-36 and the combination worked very well. The 18" offset of the flexarm gave good scatter free lighting even in Plymouth's 5-6m November vis.

The wide end of the kit lens is the equivalent of 28mm (75 degrees) and useful for scenery and larger animals - including buddies! The minimum focus distance might seem large to compact users but remember it is quoted from the plane of the sensor. Although specified as 24cm I measured 20cm - which equates to only around 7cm from the end of the lens when zoomed in. The telephoto end is equivalent to 84mm and gives reasonable near macro performance for smallish animals.

Unlike the E-330 the E-410 offers only mirror lock up liveview, it doesn't have the extra sensor to implement fulltime viewfinder type liveview. Lock up liveview can't use the SLR's normal AF without 'flapping' the mirror up and down, which takes a little time. It's in good company, every new top end SLR has followed this trend, big Canons and Nikons included. Underwater this liveview works for wide views - albeit with shutter lag - but isn't really suitable for macro subjects. This is the reverse of the situation on land, we can't always wait still enough to use the liveview for macro. The option to compose wideangle scenes is welcome as it's sometimes easier to see the 2.5" display at arms length than to contort for the viewfinder. I found the E-330's liveview more universally useful but this version is cheaper and more compact so it has compensations. Much to my surprise I was able

to catch some quite small, mobile fish with the kit lens. I thought it might be slow to focus at the tele end of its range but it did a good job and I wish I'd tried harder after a few experimental shots turned out surprisingly well. The kit lens is a great start, very few of the lenses boxed with SLRs are worth the space they occupy but the 14-42mm is compact and sharp which suits the E-410 perfectly. It offers similar (but wider angle) optical functionality to a compact's 3x zoom but has SLR focus speed and quality - it's surprising what a difference that will make even to mundane scenes.

Accessories

The flash can be raised but it wouldn't clear most ports, the intended use is to trigger slave strobes. A lightweight set up would require something smaller than the FL-36 I dived with, though it was an excellent match. The housed flashes are conspicuously bulky beside the PT-E03. With this in mind Olympus now have the small UFL1 slave strobe on their books, clearly a Sea and Sea unit which demonstrates good sense as they know a thing or two about strobes. I hope the partnership bears more fruit as it would be good to have more alternatives to the housed land flashes. Slave strobes are limited to 'normal' flash sync speed ($<1/180^{\text{th}}$) whereas the cabled Olympus FL-36 works right up to $1/4000^{\text{th}}$ second.

We were tempted to add a macro upgrade and Olympus make a very light and inexpensive F3.5 35mm macro which will enlarge up to 1:1 and fit the kit lens port. This is little brother to the very nice Olympus F2 50mm macro which is much brighter but costs 3x as much. Underwater, where greater depth of field is usually desirable, the main loss is



The kit lens isn't intended for macro but works well on small-ish animals. This 2cm cushion star is about the limit though

It's a shame the flash housing sync socket stuck out to the side.



some brightness at the viewfinder. Less light should slow focus but the extra depth of field seems to outweigh the loss and puts the next subject within easier reach. It doesn't extend as much as the 50mm so it's quicker to rack through its range. This crisp lens needs to be used close up to exploit its potential magnification – better for slugs than fish.

Practicalities

The smaller body means a smaller battery than other Olympus SLRs, but we never ran flat on a dive. Improvements in efficiency must have been made and my gut feeling is that it has the same life as my E-330, which uses the larger battery. On our 2 dive UK day trips we had no battery warnings but I'd expect to change batteries once or twice a day on a liveaboard. Of course using liveview and the flash to trigger a slave would both eat into the battery life.

My girlfriend found the compact E-410 easier to handle underwater than the E-330. The converse may be true for those with big hands, but the weight saving is worthwhile. The E-410 and kit lens weigh 2.5kg housed where the E-330 in equivalent trim is nearing 3.5kg. Once the E-410 was paired with a smaller strobe such as the UFL1 the difference could exceed 2kg. That's a big difference if you

have to hike to a shore dive or pass it one handed into a boat from a heavy sea. Men may not want to undermine their boat cred with a tiny SLR but my girlfriend says that women are less vulnerable and can see the advantages. A smaller rig is easier to manage and position underwater, causes less drag and hogs less luggage space.

We both felt that the optical viewfinder seemed smaller than on the E-330. On the surface they were the same so I think it was just a side effect of the dark days in Devon. The results straight out of the camera were strikingly sharp, really popping off the laptop back at base. We took online advice and turned off the default noise reduction at low ISO, there's no need for it.

Another interesting feature, new to me, is lossless RAW compression. It's often assumed that all compression is bad but there are two kinds; lossy methods, like JPEG which sacrifice information and lossless techniques which don't. Since maths allows perfect compression there's no reason not to use it. As a result while E-330 RAW files are 13MB the E-410 saves another 2.5 Megapixels in 9-11MB. That's a worthwhile saving, I can fit at least 1000 extra pictures on my 80GB holiday hard disk. At long last the on board USB is real 'Hi speed' which means what it says, rather than the



Dawn waiting for the boat to pick us up on a dark November afternoon in Plymouth Sound. The flash is firing through the water.

euphemistic 'Full speed' on earlier Olympus models which was older and slower. It's not as fast as a card reader but works in storage mode so the camera acts as a drive on any Mac or PC without software.

Conclusion

It's usually agreed that the quality defining element of a camera system is the lens, although bodies can have more or less features they

can only exploit the light collected for them. Choice of lens is the basic strength of an SLR system and the E-410 has access some excellent lenses, that the kit lens is worth having is a pleasant bonus too. Until now SLRs have been a Visa bill too far for all but the keenest underwater amateurs. The E-410 and PT-E03 don't make an SLR a cheap option but do trim a good 20% slice off the top.

'Liveview' has been watered down since the E-330 but remains a



angle. A generation on from the E-330 which provided too much, too soon to an SLR market which couldn't grasp it all the E-410 offers real-time exposure and white balance preview during live view. The new sensor has better high ISO noise performance too. I very rarely use anything other than 100 but once in a blue moon it may come in handy – my attempts at night dive group shots have foundered in the past, maybe now I have the camera to do it?

Dawn lurking in the kelp, the kit lens is just right for buddy shots.

useful option. As before the optical viewfinder is the best bet for macro but the screen can be great for wide

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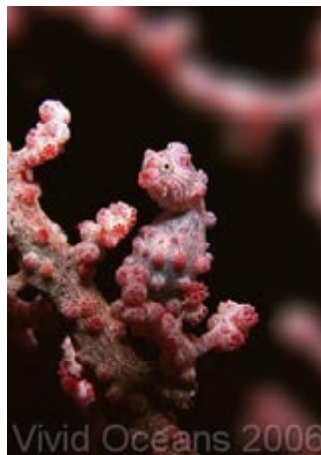
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