

Filter fulfilment

by Peter Rowlands

In my review of the Nikon Coolpix 5000 and Subal CP5 housing (UwP8 Aug/Sept 02) I was praising the ability of the “manual white balance” facility. This is a feature which video cameramen have benefited from for a long time but it was not until the advent of digital still cameras that this feature became available to stills photographers.

Conventional (film) still images can/could be improved by adding colour filters to reduce the strong blue/cyan cast of clear water and, if the depth of water and strength of filter are chosen correctly, the results can be very impressive but what a conventional camera does not have is any way of adjusting colours “in” the camera. It merely records the light being presented to it.

Digital still cameras, on the other hand, have electronic circuits which automatically try to get the white balance correct. However, they are not designed to compensate for the blue/cyan casts as well as they are for the reds (much more common in land photography) and what I found with the Coolpix 5000 was that the manual white balance was good up to a certain point/depth and then it just seemed to panic and add huge amounts of red, which proved far too strong. There was no subtle increase after a certain point.

I have been shooting video underwater for many years and I always use a URPro filter in front of the lens when shooting



Believe it or not, this shot was taken at 18 metres with a URPro filter held on with tape between the Nikon Coolpix 5000 and the EC68 wide angle lens. I'm still considering a more elegant way to place the filter!

in blue water. These are American-made filters with a strong red cast (and some other colour added which they keep

secret and have patented). They also produce another filter for green water. The combination of the URPro filter and the video

cameras' capability to adjust the white balance has produced beautiful, colourful shots without the need to add any extra light.

Bearing this in mind I was keen to apply the same principle to my digital stills photography (video cameras are, after all, digital still cameras which happen to take 25 shots per second) so when I was in Dominica recently I put the URPro filter to the test with a Nikon Coolpix 5000 in a Subal CP5 housing as well as an Olympus C40 in their PT-012 housing.

Digital cameras are changing the way we take images underwater and, to a certain extent, they are rewriting the rule books. They are capable of taking much better shots than conventional still cameras although, to achieve the equivalent resolution and rapid response, you will have to dent your bank balance. The reason they are so groundbreaking is that they have the ability to 'adjust the white balance'. This only really applies to available light photography but this is/was where conventional photography was such a poor performer.

Digital still cameras are not, unfortunately, perfect and their white balancing capability is limited unless you buy a digital SLR. Adding a URPro filter will give better colour down to as much as 60 feet/20 metres but, the biggest benefit is that you will not have to manually white balance each time. This involves going into menus, scrolling down and then performing the white balance. That isn't too much bother if you stay at the same depth but go deeper or shallower and you will have to white balance again.



(Above) Available light shot taken with an Olympus C40 set to auto white balance

(Below) The same set up as above but with a URPro CY filter screwed into the lens filter thread



With a filter such as the URPro, what you are doing is helping the auto white balance do its job and that means you can let the camera do the adjusting (and you see the effect on the LCD screen before you take the shot). The result is an amazing but simple combination which will improve the quality of your

available light shots beyond all recognition.

So, I hear you think, "What are the disadvantages?" and it is true - the combination is not perfect.

Firstly, any colour correcting filter will reduce the amount of light reaching the 'film' sensor/chip. I reckon the



(Top)

Available light shot shows that the auto white balance is doing a creditable job and giving better contrast than a conventional film camera would not have been able to achieve.

(Centre)

The same subject lit with the built-in flash has added colour to the stem but as the light from the flash falls off the cyan cast takes over.



(Bottom)

Using the URPro CY filter produces a much more natural image as it compensates for the cyan cast over the whole frame regardless of the camera to subject distance.



All shots taken with a housed Olympus C40 with auto white balance

URPro reduces the light by just over one stop. This will mean a wider aperture or slower shutter speed. That reduction is not a big problem in shallower water but I found I had to change the 'film speed' to 400 to achieve sharper results. This produces shots with slightly more grain ('noise' in digital-speak) but, to be honest, I am a fan of this slight grain as I think it adds more atmosphere.

The second limitation is that the strength of filters such as the URPro mean that the cameras electronics can't achieve a suitable white balance in shallower water around 10 feet/3 metres or less and the results will be too "colourful". The solution is simple - just take off the URPro and let the camera do the white balancing - so there is really only one slight downside,

Using any additional light, either from the models torch or an external strobe will result in the colour being too red so the filter should only be used with available light. To balance the colour in this shot a blue filter on the torch would have helped.

the reduction in light levels.

As far as I'm concerned, that slight reduction in light level is well worth putting up with and I, for one, will never travel without a URPro filter again. I'll even go further than that and say that the combination of a digital stills camera and a URPro filter will change the quality of available light images from now on.

Sceptical readers may think I was given my URPro filters in return for free publicity but I have been using them for many years and I have bought them all. So there.

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