

Macro with the Sony A7RIII

by Dr Simon J. Pierce

Mads and I just finished up a few days of muck diving at Scuba Seraya Resort near Tulamben in Bali – which I highly recommend. The trip gave me a few days to test and refine my gear configuration for macro, so I thought it'd be useful for Future Simon – and hopefully you too – to write up some notes on underwater macro photography with the Sony A7rIII camera, Sony 90 mm macro lens, and Nauticam NA-A7RIII housing.

This is my third macro stint (following Nosy Sakatia in Madagascar and Mafia Island in Tanzania last year) with my new(ish) Sony system after several years of using micro 4/3 cameras. I'm starting to figure out what works best – for me, at least.

Exposure settings

My default settings are 1/200 sec, f/16, and ISO 200. My Sea & Sea YS-D2 strobes are set on 22. I shoot with both the camera and strobes in manual modes. I've tried to increase my depth of field by using f/22 (and ISO 200, 1/200 sec) but the resulting photos were noticeably less sharp than at f/16, presumably due to diffraction.

To get a correct exposure at f/22 I also had to bump the strobe power up to their maximum, 32, which made the YS-D2s unhappy if I was taking several shots in a row. One of the strobes started flashing at me at one point, then stopped working – I presume it overheated. It was fine after I turned it off and gave it a short rest.

I wish the camera had a faster strobe sync speed – Sony advertises 1/250 sec, but it turns out that only works for certain high-powered flash systems. Dagnabbit. It would be nice to eliminate or minimise ambient light through a faster sync speed.

Dealing with crappy autofocus

The Sony 90 mm is notoriously slow to focus. This is definitely a thing, but you can deal with it. First, set the focus limiter on the lens to 28 – 50 cm. That helps. Setting the focus mode to AFS and “release priority” might help a bit more. Ultimately I've started using the DMF focus mode – Direct Manual Focus – which is super useful. Here's a great explanatory video by Mark Galer (my main guru





for Sony camera settings):

To get the best use out of DMF, decouple the shutter from autofocus. I've set my A7rIII to back-button focus using the AF-ON button. The dedicated thumb lever that Nauticam has on the housing makes this easy to use. When you press the AF-ON button with the lever, the camera uses AFS autofocus to get close(ish) to the correct focal plane. Once it's in the correct neighbourhood, you can release the button and use focus peaking to get the exact focus you need by moving the camera forward and back slightly.

What's focus peaking? It's the best thing ever. I've set my peaking

level to High, and red in colour. The LCD (or EVF, if you use it for composition) will then highlight everything that is in focus with a red fringe. The depth of field at f/16 is reeeeeeeally thin, so the peaking makes life far easier. Frankly, I'd find the 90 mm extremely frustrating to use without this focus aid.

I do own the manual focus gear for the 90 mm, but I didn't bring it to Indonesia because it takes up bag space. I thought DMF would be sufficient. That might have been a bad call. In practice, it's really hard to find the minimum focus limit using DMF. Some of the nudibranchs we found (and when I say "we", I mean

our guide or Mads, I'm useless) were teeny, so it would have been really useful to be able to quickly set my focus distance to 28 cm.

Next time, I'll try assigning the AEL button to AF / MF toggle, setting MF to the true minimum focus distance using the gearing, then toggling to DMF if I want to change the working distance. I'll update this post once I've tried that. If that doesn't work, I guess I'll have to start using a focus light.

Mark Galer did another video on speeding up low-light autofocus for Sony systems, which I found useful while I was working out the above settings:

Customising the camera

I tend to set the camera up for the specific shooting requirements I need for different projects. I've set all the above to memory recall 2 on the camera, although it doesn't save button assignments. Aside from the above, there are a couple more customisations I make for macro:

I tend to accidentally hit the movie lever quite a lot while I'm moving around, so I've turned the movie recording function off (I wish that button could be reassigned, but it can't) when I'm not in movie mode.

My AEL button is set to ISO at present, but see above – I may change



this around, as I don't alter ISO often during macro work, and I can still use the direction pad for direct control if needed.

I've set C3 to switch manually to "Super 35" (= crop sensor, APS-C) mode, which is a 1.5x digital zoom, as a budget supermacro. I only used it a couple of times at Tulamben, but it can make it easier to get exact focus and composition with particularly tiny subjects. The files are still 18 MP with the 1.5x crop (the joy of a high-resolution sensor), so they remain eminently usable – the lens becomes, effectively, a 135 mm macro.

At some point I'd like to buy the Nauticam SMC-1 for some true

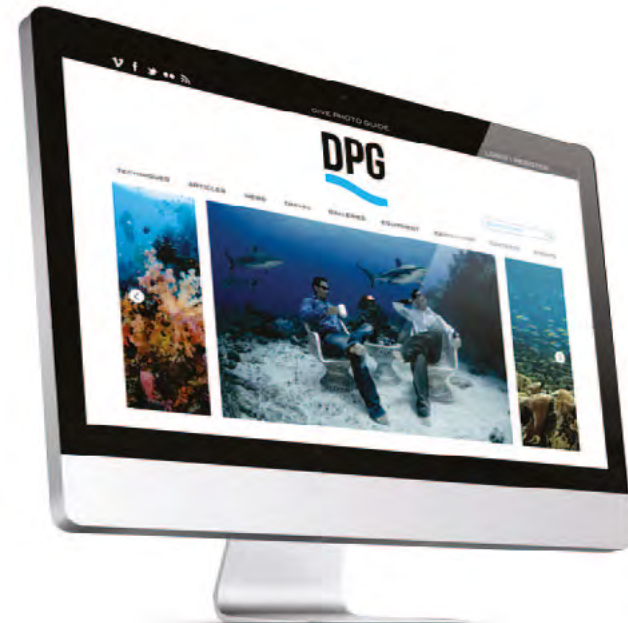
supermacro. But I digress.

Anyway, that's all very geeky, but macro is super fun! It's totally worth geeking out over. Hope this all helps someone out there... if you've got any questions or suggestions, I'd love to hear from you in the comments.

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