

JUST ADD WATER

Underwater Photography with the Canon G10 Compact



By Nick Melidonis

M.Photog.

In my early attempts with underwater photography, I used Nikonos V cameras and strobes, but I found it frustrating only being able to shoot 36 exposures per dive. There were also challenges with metering and framing and eventually I gave it away as a hobby.

Last year when friends asked if I would join them diving in Manado, Sulawesi, I jumped at the chance. I borrowed a friend's ageing Sea and Sea compact underwater camera and enjoyed a week of absolute bliss in a tropical island paradise with warm, crystal-clear water and sea life that ranks it as one of the best dive spots in the world. My photos, however, were very disappointing. Most photos were blurry, the compositions were too busy and the shutter lag was so long that I had the best collection of fish tails disappearing from the frame edges in the group.

This year when I returned to Sulawesi, I was determined to be better prepared. I initially explored the possibility of using my older Canon SLR bodies

with some good underwater housings, but the size, weight and cost deterred me. More research revealed that many serious underwater photographers were now considering the popular Canon PowerShot G10 camera due to the excellent 14.7 megapixel sensor, its compact nature, the five-times 28mm wide-angle zoom and its video capabilities.

Canon also produces the WP-DC28 compact housing for the G10 and at \$300, it's a good low cost solution for diving at a modest price. It will also allow an external strobe to be fitted to it.

The refractive magnification underwater (1.3X factor) turns the decent 28mm into a very ordinary 36.4mm wide-angle. To overcome the magnification factor, underwater photographers often employ a wide-angle conversion dome port. The simpler Canon housing didn't have that option so I decided to get the US-made Ikelite clear polycarbonate housing for the Canon G10 and the corresponding WD-4 Dome port to maintain the Canon's 28mm wide angle-of-view underwater.

The equipment mentioned in this article. (Left, clockwise from the top) Ikelite housing, DS51 strobe light and ball socket arm assembled; Ikelite housing with the WD-4 Dome port attached; Canon Powershot G10 camera; and an enlarged view of the DS51 strobe. (Right) The author using the fully assembled kit underwater.





The instructions make it sound easy, but I confess I found the system of trying to press the dome port onto the Ikelite housing's standard port hard work, and once on, I nearly screwed the housing's standard port off while trying to remove the dome underwater for a macro shot (Ikelite recommends fitting and removing the dome port underwater). This produced some leakage in the main housing which I fortunately saw in time to correct. Why a top underwater housing manufacturer has such a primitive system of assembling the port underwater escapes me, but once on, the dome worked well and produced good quality for most of my wide-angle images.

The Ikelite controls are easy to use and the clear polycarbonate housing also shows any leakages very quickly as the O-ring is clearly visible. The Ikelite DS51 strobe can be attached and I found it produced a powerful, wide, soft light with its diffuser in place.

During the last day's diving, the diffuser slipped off and I lost it. The strobe still worked fine, but the harsh light produced was confined to a smaller angle. I now know it's important that all parts of your underwater kit have lanyards or some means of securing them to you and to each other. When you encounter rips or currents underwater, it's easy

to lose things. In our case, we were mostly wall diving and anything lost would finish up at least one kilometre below!

The DS51 strobe uses four AA re-chargeable batteries and it was easy to charge these up every night, together with the G10's battery.

A good strobe will give you at least 120 flashes at full power with a recycling time of around one second. On a multi-dive day, you don't want a flat

Numerous turtles were found either relaxing within the reef caves or gliding gracefully into the abyss beyond. These large creatures appeared at ease with the divers and photographing them was not difficult.



The amazing clarity of the water and reef at Manado were captured with a Canon 400D camera and 10-22mm wide-angle lens with a polarising filter. The final image was produced from a hand held stitch of five images (vertical format for least distortion and maximum file size), using PTgui software.



The beautiful colours of a Feather Star and soft coral were placed against the deep blue water on the edge of the sheer wall of the coral reef. Simple compositions with neutral backgrounds produced the best underwater images.

battery in the afternoon or recycling times of five seconds which can be frustrating when the action starts. To get the strobe away from and above the camera housing, Ikelite recommends a ball socket mounting arm and sync cord to connect the strobe and housing. I found this combination worked very well and as you'll read below, this assisted enormously in reducing backscatter.

Tips and Tricks

Underwater photography requires a whole new set of skills that I slowly acquired after much trial and error.

Get In Close. This is the golden rule for underwater photography. Fine sediment produces backscatter in water and shooting flash directly at it causes the light to reflect back into your lens. The result can resemble a snowstorm. Reducing the column of water between you and your subject and raising the flash above the housing to point down and to the side of the subject will reduce backscatter by reflecting the light away from the lens.

I never tired of watching the antics of Anemone Fish protecting their host. To prevent blurring of the image, I used a shutter-priority setting at 1/100 second.



The reason you need a wide-angle lens is to get as close to your subject as you can for a clearer, sharper image. Also move with purpose in the water and avoid jerky movements.

Understand your Subject. Get to know the marine habits of your subjects; when they move around and eat and how they react to your presence. My companions on the trip were well read on the marine life and our dive masters explained the main attractions we would encounter before every dive.

Light and Colour Underwater. Due to the fact that the density of water is 800 times more than air, the penetration of sunlight is reduced significantly. At three metres, red is gone and at five metres, orange is gone. Yellow disappears at 10 metres, 18 metres for green and at 30 metres, only blue remains. The coral undersea colours are fine if you are snorkelling on the shallow surface and pointing the camera straight down, but for any decent dive, colour will disappear quickly and a strobe light is necessary to recapture the brilliant colours of a tropical coral reef.

Some of our group with simpler compact cameras set the white balance to an 'underwater' setting which produced a much warmer result to the normal blue/green images. I and the other members of our group carried powerful hand held underwater torches which we occasionally shone onto our subject matter for more light or to light up backgrounds such as caves. The torches were also useful for shooting video. I spent around \$1000 on a reasonable movie light to use with the G10 housing but a sudden lurch of the boat on the way to the dive site on day one saw it roll overboard to disappear down the wall of the reef. Although it was covered by insurance, I had to revert to the hand torch for the rest of the trip when shooting video.

I learnt quickly that the reason our dive masters chose certain dive spots at different times of the day was to keep our backs to the sun so we could make the best use of natural light on the reef. For example, our first dives for the day were between 9am and

11am. I found that shooting down on a subject against the background of the reef created a busy, cluttered scene with many distractions. Positioning myself to shoot subjects horizontally or up against a deep blue, neutral background, made the main subject matter stand out well, especially when the strobe brought out the reds and other warm colours of the reef and corals. The usual rules of photo composition apply here in keeping the picture simple while avoiding clutter and mergers (outlines of objects merging into each other producing a confusing composition).

An interesting variation was to shoot up at the subject silhouetted against the sun. With a Tv (shutter-priority) setting of 1/125 second or faster, the sun's rays radiate out and are known as 'cathedral lights'.

Camera Settings. It took a while for me to come to grips with satisfactory settings. The Ikelite manual suggested an aperture-priority setting of around f5.6 to f8 at ISO 100 which would produce a shutter speed of 1/60 second with the strobe. In practice, I found that the ambient light on dives from 20 to 30 metres was too low and although the strobe froze the subject matter, the effect was similar to a rear curtain sync shot, with a speed light where the background was blurred and soft at best. Changing the setting to Auto produced a similar effect and more opportunities lost. Eventually, I tried a shutter-priority setting with the shutter speed set to 1/125 second and the strobe on TTL and hoped it would adjust the fill light accordingly. The fill light produced with this setting was good for the close distances and subjects were sharp with good colour. By the time I worked all this out, I was on my final two to three dives, but I'll remember these lessons for next time.

I set the G10 to shoot RAW files and with the extra bit of depth and tonal range, I obtained very good results. The instant feedback of the images viewed on the large screen was a delight and I could read the histogram and other settings easily through my dive mask. Shooting video was also a breeze and this produced an extra dimension to the shoot.

Keeping Things Watertight. An excellent piece of advice I was given was to try the housing and strobe without the camera inside to ensure there weren't any leaks. I tied a strong cord to the housing and lowered it several metres below my boat at the yacht club and left it there for a couple of days. Fortunately, all was well.

I was also advised to lightly smear my finger with O-ring grease and run every O-ring through my fingers. This puts a thin film over the o-rings and should be done prior to a trip. Then, whenever using the camera, these seals should be checked to ensure they are free of sand, hair and grit which could affect the waterproofness. With the Ikelite system, the clear housing would show imperfections in the seals easily.



The vibrant colours of this sea urchin are so vivid that it almost appears as though it has a series of internal lights within its structure. The extensive variety of sea urchins encountered here was amazing.

Manado Sulawesi

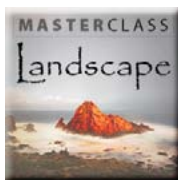
Manado is an interesting small Indonesian city on the northern tip of Sulawesi (known by the ancient name 'Celebes'). The Nusantara Dive Centre and resort (NDC) is about 25 kilometres from Manado on a beautiful stretch of water close to a volcano and surrounded by small islands. It has very comfortable, air-conditioned cottages and hotel rooms, a large pool and restaurant area with friendly staff. Trained dive masters arrange daily diving (two to three dives per day) using traditional, motorised wooden boats to take divers to numerous, world class dive sites. The water is basically calm, crystal-clear and each dive site has its own attractions varying from sandy bottoms to the exhilarating wall dives.

For one week's diving (small groups) including the boat, dive masters and assistants, accommodation, full board and transfers, expect to pay around US\$1000.

For something different, try a diving holiday when you next consider travelling. If some of your family don't dive, the shallow reefs surrounding the many islands in Sulawesi are excellent for snorkelling and there is a good selection of cameras on the market today that just need you to 'add water' for some photography fun.

To see more of my images from Manado, use this link to my website <http://nickmelidonis.com/galleries/sulawesi/>.

Nick Melidonis is a triple Master of Photography and was awarded the 2008 AIPP Australian Professional Landscape Photographer of the Year. He won this award twice before in 2000 and 2001. Nick leads photo and cultural tours to the Greek Islands and conducts seminars and workshops, including two new exciting Creative Photoshop Workshops (see his new website), and is available as a speaker. You can contact Nick at nick@nickmelidonis.com or visit his website at www.nickmelidonis.com. Nick has recently launched 'Iconic Images' with photographer Denis Glenon and some exciting competitions, photo events and projects will be announced soon. Check the website at www.iconicimagesinternational.com for more details and leave your email address to be informed of lots of courses, tours, field trips and competitions.



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PHOTO TAKEN ON THE 2009 AWAY | HAMILTON ISLAND EVENT

AWAY | HAMILTON ISLAND

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Sunday 1 August to Friday 6 August 2010, Hamilton Island, Great Barrier Reef

Don't miss out on the next Away | Hamilton Island Photography Course. The 2009 event was simply spectacular with photography from helicopters, whale sightings, a mock wedding, Photoshop skills and much much more! Attended by both enthusiasts and professionals, the 2009 event was fantastic and we're planning to make the 2010 workshop even better! Spend time in the field, working hands on with three of Australia's best known photographers, in one of the most beautiful locations in the world, Hamilton Island. Workshop sessions will cover both technical and aesthetic aspects, as well as the promotion and marketing of photography. Watch David Oliver demonstrate portrait and wedding techniques, listen to Peter Eastway explain the subtleties of his landscape technique, and let Bruce Pottinger demystify the complexities of digital processing and printing. And don't forget the thrilling trips to amazing Whitehaven Beach and the Great Barrier Reef, including helicopter rides. See you there.

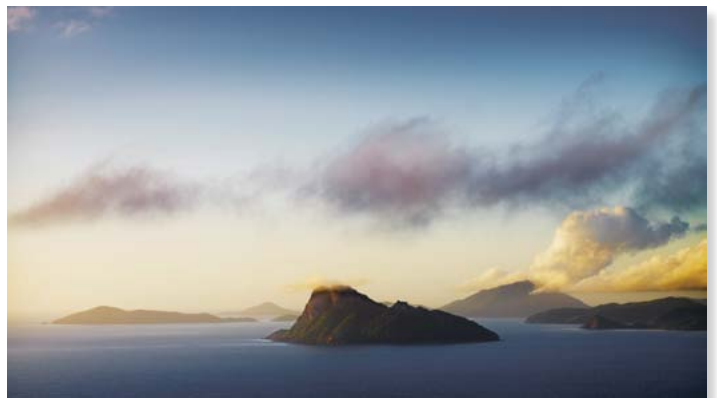


PHOTO TAKEN ON THE 2009 AWAY | HAMILTON ISLAND EVENT

Workshop packages include:

- Workshops with expert tuition from David Oliver, Peter Eastway and Bruce Pottinger
- Five nights accommodation on Hamilton Island, Great Barrier Reef
- Four lunches and four dinners
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David Oliver

AIPP Grand Master of Photography, David Oliver is an award winning wedding and portrait photographer. David will give presentations and workshops on lighting, wedding photography and shooting techniques.



Peter Eastway

AIPP Grand Master of Photography, Peter Eastway is an award winning landscape and travel photographer, and the editor of *Better Photography* magazine. He will give workshops and presentations on landscape photography.



Bruce Pottinger

An Honorary Fellow of the AIPP, Bruce is both managing director of L&P Digital Photographic and a professional photographer. Bruce will act as a leading digital adviser and help you through digital processing and printing.

A Great Event!

"I first met David Oliver on a previous Hamilton Island photographic week and was immediately taken by his relaxed, friendly and professional manner. He proved to be most approachable at any time, his photographic experience is second to none and he is willing to share everything in his typically unselfish manner. More recently I met Peter Eastway, again at a seminar, and he too proved to be friendly and professional with that same relaxed manner. Among the top photographers in the world, they are especially brilliant when speaking together: unending banter with a hidden but total respect for each other. I cannot think of two photographers I would rather learn from."

Chris Carter (England)



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