

Canon 40D and Hugyfot HFC 40D

by Karin Brussaard

The Canon 40D is the successor to the 30D. A striking feature of the Canon EOS 40D compared with its predecessor is the introduction of Live View. Also almost inevitably is the increase of pixels to 10.5 million; its older brother has to settle for 8.2. A more important difference is the faster processor (DIGIC III) enabling work with 14 bytes. It delivers improved dynamic range and thus nicer pictures. The LCD monitor has increased from 2.5 inch to 3 inch. The amount of pixels on the LCD monitor however remained the same, 230,000. And although Live View could offer a solution for underwater photography, so far its use is still rather limited. You can use the auto focus when you use the AF-ON button. Unfortunately the monitor turns black when pressing the AF-ON button, (since the mirror needs folding up in order to focus) which makes it difficult to decide your composition.

The good thing about the Canon EOS 40D is its fast start-up time. After activating the camera, the filter in front of the sensor vibrates to get rid of dust. It takes not even a second and it didn't give me the feeling I missed a shooting moment. If you do get that feeling however, then it is good to know that the cleansing gets skipped the moment you press the shutter release; this button holds a priority position. And finally the camera is well-sealed and protected against water and dust. The seals have been vastly improved compared to the 30D and you don't have to hide the 40D from a rain shower. It is a

welcoming feature in the wet environment of a boat, a place I often find myself in as a diver.

The underwater housing that will take the Canon EOS 40D is the Hugyfot HFC 40D. Hugyfot started building underwater housings in 1953. The latest underwater housing, the Hugyfot HFC 40D appears on the market 55 years later. One can state for sure that Hugyfot has a lot of experience in developing underwater housings and they have been manufactured by Green Force since 2004.

Characteristics of the Hugyfot housings are their round curves. It has a nice round shape and the housing looks more than sophisticated. The matte black combines extremely well with the red colour of the shutter release button. Besides that the housing is astonishingly small. It fits the camera like a glove.

The HFC 40D is milled out of a solid block of aluminum with the aid of a 5-axis CNC milling machine and computer aided design (CAD). It weighs 2649 grams (without camera or port) and has been tested to 300 feet. This is deeper than most other brands. In addition, because the housing is made of aluminum, less condensation will appear inside than in a plastic housing. During our dives we encountered large temperature changes - 33 degrees Celsius on the surface and sometimes only 16 degrees on depth - and I was very happy with the latter feature. My housing never suffered from condensation, not once, while my buddy's plastic





underwater housing became completely steamy at times.

Hugyfot offers three ports: a macro port, a wide angle port and a fisheye port. In combination with a port adapter of different lengths many lenses can be used underwater: Canon (100 and 60 mm macro, 10-22, 16-35, 18-55 en 17-40), Sigma (50, 70 en 105 mm macro, 10-20, 12-24 and 17-70) and Tokina (100 mm macro, 10-17 fisheye and 12-24). For other lenses you can contact Hugyfot and they can advise you as to which port and adapter you should use. The ports connect to the underwater housing through a bayonet mount. This system works excellently. The ports are so firm that I was never scared I'd loosen one accidentally. Furthermore zoom rings and focus rings are available to enable using the zoom function of the lenses or to manually focus underwater.

I used the EOS 40D with the Tokina 10-17 3.5-4.5 AT-X DX fisheye lens in combination with the fisheye port. This lens is the first fisheye with zoom function. The crop factor of 1.6 makes the lens a classic 16 mm fisheye lens on 10 mm. While

increasing the zoom, the angle of view gets smaller and the deviation characteristics of a fisheye lens disappear. The 17 mm equals a 27 mm lens. The fisheye port is suitable for this fisheye lens without adapter. The top and bottom contain a lens hood. Not only very convenient for blocking the reflection of sunlight in the port but also to place the housing upside down on a surface. Thanks to the extended sun hood the round port is well-protected. The port is made of acrylic. Acrylic is just a tad more scratch-prone than glass but it's easy to wipe off the scratches. The fisheye port works excellently with this fisheye lens and does not suffer from any distortion in the corners.

In order to capture the small species I took the Canon EF 100 2.8 USM macro lens and the macro port with me. The minimum focal distance of this lens is 31 cm. Compared with the 60 mm macro lens, you can capture a shrimp in a 1:1 ratio from a larger distance. Normally I would keep the distance between the lens and my object as small as possible because colours underwater fade fast when the distance increases. When trying to capture

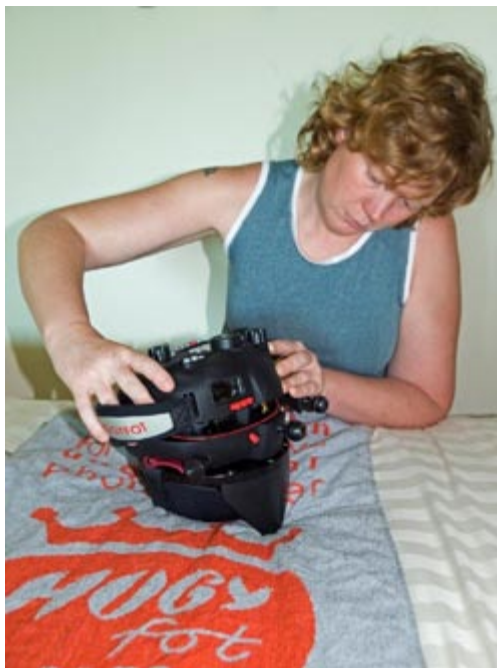
shy animals a larger distance is an advantage. In that case the flash has to work a bit harder. The combination of the Canon 40D with the 100 mm macro lens delivers a quite fast auto focus.

The HFC 40D is standard equipped with two Nikonos flash connections. Operating the two Sea & Sea YS 110 flashes worked out fine. I used these flashes manually. A TTL converter can be installed in the housing. The built-in leak detector is super sensitive. When it detects the smallest bit of damp it starts beeping. In a country like Panama, with a high humidity rate, this sensitivity may be annoying. For example, once when I was changing the batteries and the memory card, the leak detector started to beep. It surely startled me as I was certain I dried the camera thoroughly before opening it in my hotel room.

The underwater housing incorporates a grip on its left side. On top of the grip the connection for two flash arms is positioned. The second connection is on top of the housing, in the centre. To the right there is a hand strap made of neoprene for your hand. This strap is adjustable and fits large as well

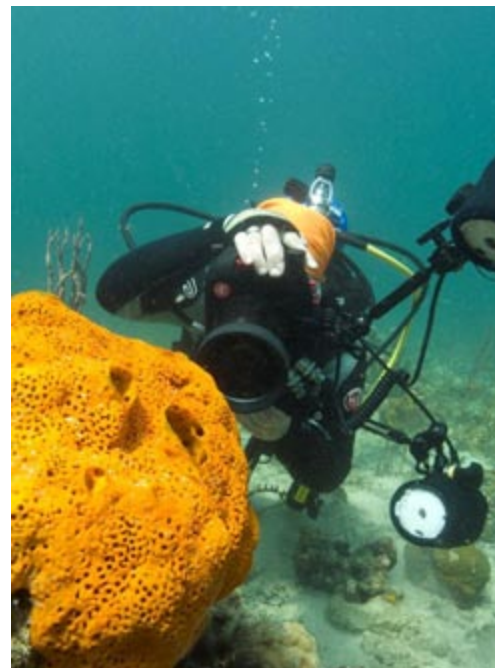
as small hands offering a good hold of the housing. It also facilitates diving with thicker or thinner gloves. You can also swap this strap for a normal grip with flash connection. That way you can use flash arms of equal lengths to operate two flash units at the same distance and the same angle from your object. I had to use a longer flash arm for the right flash unit to manoeuvre the flash in the same position as the left flash unit.

The underwater housing closes with two Allen screws. The manual states you have to tighten the Allen screws normally and not too tight with the included Allen wrench. I am a bit scared; how do I know they are tightened enough? And if I don't do it correctly the underwater housing might get flooded. Pascal Eeckhout of Hugyfot told me just before my departure that I would feel it when the Allen screws are correctly tightened. Somewhat tensed I try to tighten the Allen screws for the first time and I soon discover what Pascal had already told me, that it is easy enough. At one stage both sides of the underwater housing are perfectly fitting together and you can feel that. Testing the now closed underwater housing in the hotel room's washbasin comes out positive I guess; the leak detector does not beep. Now that I can feel it in my fingertips, I am brave enough to open

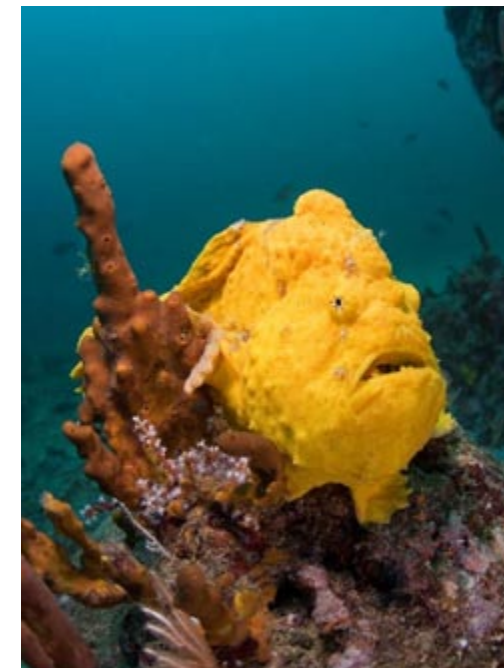


and close the underwater housing daily and to take it underwater. Closed definitely means closed here.

The standard viewfinder is clear and offers an almost 100% coverage. Hugyfot has developed an optional angle viewfinder that enlarges the image and enables viewing through the lens at an angle of 45 degrees. All camera functions are operable from outside. And what's even more convenient, the functions are also described in miniature on the underwater housing. This is a handy reminder when you don't know the camera inside out yet. Despite the housing being very compact for a



DSLR, it is built for big hands. The zoom dial for example has been placed a tad too far away from the hand grip for my female hand to operate it with ease. And that is also the case with the aperture dial on the right side. I just can't reach far enough to operate this dial with my hand caught in the neoprene strap. I literally have to take my hand out of the strap before I am able to change aperture. For people in the possession of bigger hands it won't be a problem. A nice function is the button to detach the lens from the camera. You don't have to open the housing's back but you just have to change the port. And the



front of the underwater housing then lets you change the lens. However if you want to change the battery of the camera, you have to take the camera out of the housing completely. It will not suffice to just open and remove the back of the housing.

The combination of the Canon 40D and the Hugyfot HFC 40D is a good one. The underwater housing fits the camera like a glove and is very compact and waterproof to a depth of 300 feet. Its round curves and matte black colour make this housing look beautiful. Unfortunately it is somewhat difficult to operate the underwater housing for people with



small hands. The fisheye port has no obvious distortion and the housing does not suffer from steaming up at all, not even at huge temperature changes. One point of interest is the fact that the camera has to be taken completely out of the underwater housing when its battery needs changing. And the leak detector works too well at times. Live View still needs to be further developed to be of use for underwater photography.

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February 23rd, 2007



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