

INON X-2 Housing for the Canon EOS 60D

by Phil Rudin

For close to thirty years now I have owned Inon strobes. First a pair of Inon Z-220's which I used with my Nikonos RS cameras and now Inon Z-240's. All of the strobes are more than a bit beaten up now but still work as well as the day they were new and none has ever needed servicing. When I met Takuya Torii the Division Director for Inon's Global Operation Division at DEMA in November of 2011 and he offered me the opportunity to field test the Inon X-2 housing I was anxious to see if the X-2 housing was as good as my time tested strobes.

Inon Inc., is a Japanese company well known in the underwater photography world. Inon first announced the X-2 housing for the Canon EOS 10D and 20D cameras in February 2006. Since then Inon has followed up with Inon X-2 housings for the EOS 30D, 40D and 50D cameras. The release of the latest time-proven Inon X-2 for the EOS 60D was announced in October 2011.

THE CANON EOS 60D



The Canon EOS 60D camera has an 18.0 Megapixel CMOS sensor with the high performance DIGIC 4 image processor, a nine point cross-type auto focus system and 1080p HD video recording with manual controls. The camera will appeal to a wide range of underwater photographers from the enthusiast to the semi-pro level. The EOS 60D sits between the Rebel ESO 600D (kiss X-5) line and the EOS 7D which is currently Canon's top APS-C sensor offering. A wide range of reviews can be found on the camera so I won't go into a lot of detail except to say that EOS 60D is well



suited to underwater photography. Canon also has a wide range of lenses including several macro and ultra wide primes and zoom lenses which are clear winners for underwater photography. A verity of third-party lenses like the Tokina 10-17mm zoom are also supported for the Canon APS-C sensor cameras. My review will address shooting stills and I will leave the cameras video ability to others.

INON X-2 HOUSING for EOS 60D

The Inon X-2 for EOS 60D is a lightweight and durable corrosion resistant aluminum alloy body which separates into two half's. The front

half has the shutter release, shutter lock switch, main control dial, two M6 base mounting points, two double optical D connectors, flash up lever, zoom/focus knob, two lanyard mounting points and the two lock catches. The rear half of the housing has the power switch, mode dial, leak sensor buzzer/LED, a flash lowering lever, AF mode selection button, drive mode button, ISO speed button, metering mode button, top LCD panel window, AF start button (to AF off the start button and not the shutter release), AE lock/index button, Quick control dial, live view/movie shooting button, playback button, setting button, information button,

menu button, erase button, the rear LCD monitor window and the two stainless steel locking buckles which hold the housing half's together when closed. The housing is sealed by a single thick yellow main O-ring in the front half of the housing. The listed buttons, dials and levers are installed into brass bearings which prevent the aluminum housing body from being damaged by frequent movement of the controls. The flood-free optical D connectors can support up to four fiber optic cables which fully support the Inon line of S-TTL Auto Strobes. The simple and reliable "S-TTL" strobes include the Inon D, S and Z series strobes, as well as models from other manufactures. The front half of the housing also has two ports for bulkheads connectors like the Nikonos V and S6. These ports can also be used for adding things like a remote trigger and more.

The rear LCD window supports four different interchangeable viewfinders including the waterproof budget window, the pick-up finder II which extends the eye point without vignetting through a face mask, the straight life size (x1.0) viewfinder and the 45 degree life size (x1.0) viewfinder which rotates 360 degrees to allow shooting in vertical or horizontal composition. My X-2 housing was equipped with the straight life-size (x1.0) viewfinder



for field testing. I have used an Inon 45 degree finder for years with my personal housing so it was interesting to see the differences between the two. Both viewfinders provide an greatly enlarged view of your subject in the viewfinder and are well worth the added investment. I favor the 45 degree finder for macro and the straight finder for moving subjects like sharks and schooling fish. All of the Inon viewfinders can be removed and re-installed in the field with a small dedicated tool in less than five minutes. I always recommend a dunk test without the camera in the housing when changing the viewfinder in any

housing system.

The X-2 housing supports a wide range of lenses from the Sigma 10mm fisheye and Canon EF 8-15mm zoom to the Canon 180mm macro USM. Ports thread onto the the port mount and include the 170mm coated optical glass dome for the Canon EF 8-15mm, Sigma 10mm and Canon 15mm fisheyes, EF 20mm, Tokina 10-17mm and more. A 162mm dome port can also be used with the above listed lenses. Inon also has a very unique line of MRS macro ports for a variety of Canon macro lenses that can be manually focused utilizing magnetic attraction. Magnetic gears are made



Lionfish 60mm macro, ISO100, 1/250th, F/13

for the EF-S 60mm, EF 100mm's and EF 180mm macro lenses which provide smooth rotation of the lens barrel by turning the magnetic ring on the macro port much like the lens is controlled on land. A verity of extension rings can also be added between the housing body and macro port to support tele converters from X1.4 to X3. Unlike lens gears that are driven from a control in the housing body the same magnetic gear can be used with all of the tele converters

because the lens and port always remain in line when the extensions are added. The MRS 100 macro port can also be used with extension ring type M to lengthen the port for use with the EF 180 macro. Add extension ring 58 or 81 and 180 macro can be used with the EF 1.4X or 2X tele converters. Focus and zoom gears for non-macro lenses and the EF 50mm macro work off the housing zoom/focus control.



INON UFL-MR130 EFS60 SEMI-FISHEYE LENS

The Inon MRS60 port II is designed for use with the Canon EF-S 60mm F/2.8 USM macro lens and is equipped with the magnetic ring and gear. The unique front glass element is threaded and double O-ring sealed. When removed it can be replaced with the UFL-MR1330 EFS60 micro semi-fisheye relay lens. This rather odd looking double coated optical glass lens made from fourteen elements in eleven groups is designed to capture



Arrow crab UFL-MR130 EFS60 lens, ISO500, 1/125th, F/32

a distinctive ultra wide (130 degree) underwater images with a 0 cm focusing distance. The 312mm (12.28 inch) lens allows you to get very close to shy subjects without scaring them off. The 0 cm focusing distance allows tiny subjects to be captured with a wide background. This lens does not work in S-TTL and due to the extremely shallow depth of field auto focus is not practical making the MRS magnetic focus port a great tool. The 60mm macro lens needs to be set in the F/13 to F/32 range to obtain a sharp image with this lens. The 45

degree or straight viewfinder would be recommended for best results. Inon makes a port arm which can be installed onto the UFL-MR130 lens to mount strobes or a focusing light.

MY THOUGHTS ON FIELD TESTING THE INON X-2

My first dives with the X-2 housing were during a trip to Belize one week after DEMA. I was diving in Placencia with Splash Dive Center in the area of the Silk Keys. During my field testing I only had access to the MRS60 port II for the Canon

EF-S 60mm macro lens so my field review will focus on that lens and port system. The housing was setup with an Inon dual arm base and two Inon Z-240 strobes using fiber optic cables. The housing is very easy to assemble with the straight viewfinder and macro port being mounted in less than three minutes. The MRS60 gear slides onto the front of the lens without need for tools. If you have ever cursed at your DSLR housing while trying to align a zoom or focus gear with the pinion gear in the housing body you will appreciate the ease of installation with the magnetic gear. As you begin to slide the camera into the housing the magnetic attraction between the gear and the port pulls the camera into exact alignment over the tripod mounting screw. This screw is spring loaded and aligns in the tripod hole and threads with ease. To reduce the size of the housing the pop-up flash does fully deploy and should be raised after the camera is in the housing. This is done by turning the camera on and using the flash level on the front of the housing. The two locking buckles then secure the rear of the housing into place. When the housing back is removed access to the SD card is easy, however the camera needs to be removed from the housing to change its battery. I shot all of my field tests in the manual mode used by most underwater photographers

using the F/stop and shutter speed control dials most often during my dives. The shutter speed dial is next to the shutter and can be accessed with the right index finder without taking your eye away from the viewfinder. The large F/stop dial sits below the right thumb which allows it to be controlled with the palm of your hand while holding the ergonomically designed grip built into the right side of the housing. Changes in the cameras menu can also be made to assign different functions to these commend dials. In the water I found holding the housing and moving the commend dials with just my right hand to be very easy. The auto focus start level is also under the right thumb

and was set on the camera to control AF. With the lens switch set to AF this control can be used to AF the lens. If you want to use the manual focus just turn the port ring and the MRS system moves focus manually. The shutter will fire any time it is pressed in this configuration without re-focusing the lens. I really like this setup if you tend to switch from manual to AF several times during a dive. While the MRS magnetic focusing system may not be a exact as a fine tooth gear and pinion system it works very well for ensuring that the lens has reached 1:1 and worked quite well in my field tests with the UFL-MR130 semi-fisheye lens. In the water the 60 mm macro quickly locked focus in AF mode without the need for a focusing light. I had the housing setup with two Inon 200mm (7.9in.) float arms and two

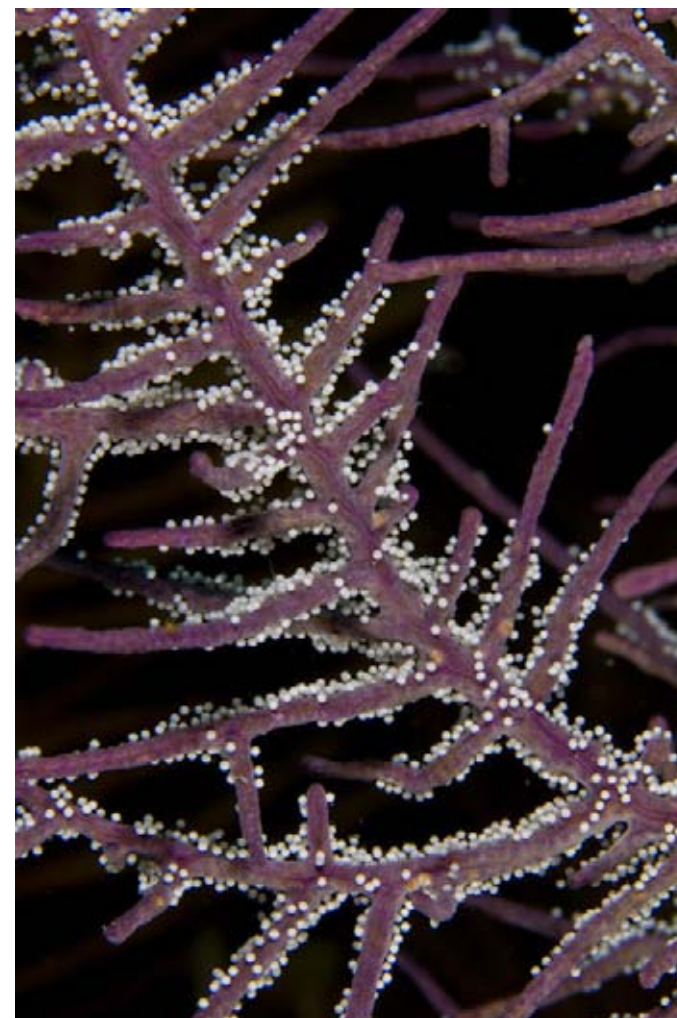


Hard coral 60mm macro, ISO100, 1/250th, F/14



Green moray eel 60mm macro, ISO100, 1/250th, F/10

ULCS float arms which balanced the housing quite well with the macro port. Using the long semi-fisheye lens I put three 56 gram (2 oz.) close cell foam blocks near the end of the lens to add lift and trim up the system. This worked well and kept the lens from tipping down during the dive. I tested the semi-fisheye at the well known Blue Heron Boulevard Bridge in Palm Beach County Florida. The MR-130 installs by removing the threaded MRS60 port lens and replacing it with the long fisheye. The lens sits directly in front of the 60 macro lens when attached to the port so that there is an air interface between the two lenses. In the water the MR-130 is a challenging lens to master. I takes patience, determination and time in the water to



Gorgonian with eggs 60mm macro, ISO100, 1/250th, F/14

begin to master this unique lens. The depth of field for this lens is very shallow so trying to get a sharp animal eye with a 130 degree angle of view is a real challenge. The reward for your persistence with this lens are some very remarkable image possibilities.

The removable MRS60 port glass has a 67mm threat for adding closeup lenses to the front of

the port. The port glass should be tightened to the port with a small spanner tool designed by Inon for the job. I hand tightened the port glass and then installed a closeup lens and when I went to remove the lens the entire port glass started to come with it. Had I been in the water this could have caused a flood.

The Inon X-2 is a housing I would have no problem recommending as a solid high quality tool for the Canon 60D camera. In the US the housing runs around \$3295 with the pickup finder, \$3579.00

with the straight finder and \$3679.00 with the 45 degree finder. The MRS 60 port II is \$419.00 and the gear is \$169.00. The UFL-MR130 micro semi-fisheye relay lens is \$1099.00. US prices as of December 2011.

I would like to thank Takuya Torii for use of the Inon equipment, ReefPhoto video in Ft Laud. Fla. for technical support and Splash Dive Center in Placencia Belize for their wonderful hospitality during my field testing.

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