

# Canon G7X & Fantasea FG7X housing

by Phil Rudin

Three years ago Sony raised the bar for pocketable compact cameras when they introduced the Sony Cyber-shot RX100 which is the size of the Canon S-series line with a new 1"-type sensor. The 1-inch type sensor is about 2.8 times larger than conventional compact camera sensors and offers a substantial gain in overall image quality.

Now in its third incarnation I reported on the Sony Cyber-shot RX100 III and Fantasea Line FRX100 III housing in issue #83 of UWPMAG.com. Fantasea Line has since introduced a similar FG7X housing for the Canon PowerShot G7X the first Canon compact to adopt the 1-inch type sensor technology.

## Canon G7X

Compact cameras have been very popular among underwater photographers for years both as reasonably priced entry level systems and for more advanced underwater shooters.

Canon's PowerShot G7X compact has generated substantial interest among underwater enthusiasts

and is clearly aimed at competing with the Sony RX100 III.

The Canon G7X has the large 20 MP "one inch" (13.2 mm X 8.8 mm) BSI CMOS sensor which falls between the larger M43 sensors for mirrorless cameras and the more commonly used 1/2.3 inch to 2/3 inch sensors found in most of today's digital compacts.

This larger sensor provides excellent image quality for a truly pocketable compact camera. Canon G7X sports a 24-100mm (35 mm) equivalent F/1.8 to 2.8 lens with a click control dial around the lens, a dedicated exposure compensation dial, 3.0" 1.04m dot LCD (740 X 480 pixel) a 3:2 format flip-up design, built-in ND filter, Wi-Fi and much more.

The camera records in RAW and has 1920 x 1080 (60p, 30p) max resolution video in MPEG-4 and H.264 formats. The NB-13L lithium-ion battery life is not as high as some of the competition but unlike the Sony line it has an external battery charger which plugs directly into a wall socket so that you can be charging a second



battery while using the camera.

The Canon G7X image quality is excellent and I could see no noticeable differences between the Canon G7X and Sony RX100 III raw and jpeg files.

## Fantasea FG7X housing

Fantasea Line is an international company with world distribution of water sports photo products and accessories.

The Fantasea product line includes an assortment of affordable underwater housings for Canon PowerShot, Nikon Coolpix and Sony Cyber-Shot compact cameras. Fantasea also offers a complete line of underwater optics, adapters, lens holders, color filters, arms, trays, connectors, underwater lighting, LED lighting and more. Fantasea has established a good reputation for affordable equipment and excellent customer service.

The Fantasea FG7X housing for Canon PowerShot G7X is quite small for an injection molded Polycarbonate housing offering complete control over all camera functions.

Without accessories the housing is 16 X 11 X 12.5 cm (6.3 x 4.33 x 4.92 inches) This housing is rated to a respectable 60 meters (200 feet) and is ergonomically designed in every respect for a housing of its size.

The main issue with housings of this size in general is that with a growing number of controls especially on the rear of the housing the control buttons tend to be bunched together making it difficult to distinguish between control functions when wearing gloves.

The control wheels, zooming lever and push buttons on the Fantasea housing are large, well laid out and nicely labeled for ease of use. The housing



is a clam shell type housing with the front and rear sections of the housing held together by the hinge on the left side of the housing when viewed from the rear.

The right side of the housing has a rotary cam locking device which will not open without depressing and holding the red cam locking latch. The front and rear sections of the housing each have an o-ring providing an excellent dual seal when the housing is locked shut.

The front half of the housing is made from black Polycarbonate while the rear door is clear allowing a view of the interior camera controls and any leakage into the housing.

A moisture detection system is also included with the housing and has both a red flashing light and audible alarm which will sound in the unlikely event of a leak. The moisture detector uses a 3V lithium CR 1220 battery which is included and can be commonly found in most parts of the world.

The large three inch LCD has a removable anti-glare hood which attaches to a rail at the top and bottom of the LCD on the rear of the housing.



All attachments come with a lanyard so they won't be lost if removed or knocked loose.

The left hand side of the housing has a dial which can be turned counter-clockwise to pop up the camera's onboard flash. This is a very useful control when using external strobes being fired with fiber optic cords. On more than one occasion I have forgotten to pop up the camera flash before going in the water and it is a real pain when you realize you have no control over that mistake except to surface and open the housing.

The rear door cluster of controls to the right of the LCD surrounds the Function set/Control Dial. The Drive Mode/up arrow push button is above the Control Dial and the Display/down arrow is below the Control Dial. To the left is the drive Macro/Left arrow and to the right is the Flash/Right arrow push button. Above the five push button cluster to the left is the Ring Function Selector/Delete button and to the right is the Video button which I did to manage to accidentally activate.

Below the cluster to the left is the playback button, a Menu button and to the right of the Display button is a Mobile Device Connection lever which turns counter clockwise. The top rear door has the Exposure Compensation dial and the front top of the housing has the on/off push button, shutter push button, lens zooming control lever, a metal cold shoe for mounting strobes and focusing lights and the Mode Dial.

The front of the housing has a removable fiber optic mounting plate for two optical cords. When removed you find a clear window which can be used with the pop-up flash and a supplied defuser for basic strobe lighting. The flat lens port is the rectangular shape common to all Fantasea housings except for the Sony RX100 III housing.



An accessory EyeDapter which snaps to the front of the port allows you to mount 67 mm threaded accessory lenses and filters like the SharpEye M67 +8 closeup lens.

The left side of the housing also has a unique control wheel which accesses the lens control ring and is operated with the left hand. I really like the versatility of this arrangement and had aperture control assigned to the control wheel allowing me to change F/stops with my left hand while I controlling the shutter release with my right hand.

Included with the housing along with the things listed above are a hand lanyard, silicone grease, screwdriver, silica gel packs, spare O-rings, O-ring remover, diffuser quick release security strings and a very useful hand strap which adds a good deal of extra support when hand holding the housing.

A very user friendly downloadable instruction manual can also be found at the [fantasea.com](http://fantasea.com) web site. This manual provides information on setting up the camera and housing for underwater use along with other useful information.



## In the field

I used the Canon/Fantasea system with several different configurations of trays, strobe arms and accessory lenses shooting both closeup and wide angle with my Inon Z-240 strobes. I also used the on-board pop-up flash and included diffuser for some pool shots with a model and found it to work well in the proper setting.

For wide angle I used the Fantasea Line housing with two Inon Z-240 strobes mounted on standard arms. Mounts for a variety of excellent strobes are also available from Fantasea. For wide angle I used the Fantasea BigEye lens F series

