

# **Ikelite Canon Rebel XT eTTL2**

by David Haas

For two weeks I used Ikelite's newest dSLR housing for the Canon Rebel XT in the Bahamas on back-to-back trips I hosted. I used two zoom lenses for medium close and wide angle shooting (I'm not a macro devotee.) Daily I transferred the "keepers" to my **30 GB Photo iPod** and then evaluated the results on my **20" G5 iMac** upon returning home. The **Ikelite eTTL2 circuitry** does a great job!

But first a bit of history on using TTL underwater, especially for wide angle shooting.....

My last SLR film camera was a "poor man's" F100, the Nikon N80. While it had it's detractors (surprisingly due to the low cost, go figure :) it produced beautiful images on fine grained slide film at a cost of 1/3 the Nikon F100 body. This allowed me to have two bodies for surface shooting and a back-up in case of the dreaded F-word. Friends and I conducted tests and then "lied" to the camera for wide angle shooting. Using a Nikon 18-35 mm lens and 20 mm fixed lens we routinely dialed in -1.3 EV compensation that resulted in the flash "quenched" light output from a full power dump. Dependent on the f-stop selected and strobe to subject distance this produced very good exposures. Somewhere around 85-90% accurate for wide angle shooting! This is simply a variation on the technique discussed by Jim Church and Howard Hall in their books on doubling the ISO on a Nikonos V for wide angle shooting.

The newest dSLR cameras incorporate almost imperceptible "pre-flashes" when connected to dedicated flash units plus some use distance in the exposure calculation. This gave underwater housing and strobe manufacturers a new set of problems. Ikelite cracked **Canon's eTTL** code on the **Rebel** first, making it usable with the quick recycling **DS125** strobe and **DS50** (when used with fairly high capacity NiMH batteries.) Since then Ikelite's resident genius Roger has deciphered **Canon's eTTL2 code** present in both the **Canon EOS 20D** and now bantamweight **Rebel XT** (350D elsewhere in the world), plus **Nikon's iTTL** in **Nikon's D70** camera.

So how does one use the **eTTL2** (and now Nikon's iTTL) to an advantage? By using the Ikelite housing **FEC** (Canon's moniker for Flash Exposure Compensation). In medium to close up shooting you can usually leave the **eTTL2** setting on "no adjustment" and the flash and camera will talk to each other based on your selected f-stop. As long as you're in a range of distances for a **particular f-stop at a chosen ISO** (detailed on guide stickers furnished with DS125 and DS50 strobes) the flash will constantly try to adjust **output to an optimum exposure**.

**Canon's eTTL2** is on a par with Nikon's iTTL according to Ikelite's engineers for flash exposure accuracy when a subject fills a good portion of the frame and isn't grossly lighter or darker than "average".

**Notice I said "optimum"**. If shooting an extremely light or dark subject an adjustment of a little more or less FEC may be necessary. Filling the frame with a subject that will reflect the light back to the camera, the camera will communicate to the strobe "**Hey!, I have enough light for your chosen f-stop!**" and the strobe "quenches" to less than a full power flash.

Adjustments can be made right at the back of the housing and are confirmed by a yellow LED lighting up over a number indicating how much FEC you've selected. For this to work the DS125 or DS50 strobes need to be set to TTL of course!!!!

For **wide angle shooting** a new set of problems keeps any TTL system from exposing correctly. Generally wide angle shots contain large areas of non reflective matter (WATER!) and hence the camera keeps wanting to put out all the flash power it can muster, up to a full power dump. This usually results in a washed out overexposed foreground subject. Using **Ikelite's eTTL2** I simply dialed in anywhere from **minus .5 to -1.5 FEC** and selected an f-stop which the guide number showed it could work within. And voila', very well exposed wide angle photos!

In "**M**", aka **Manual Mode eTTL2 still works**. The advantage of selecting a shutter speed for background water color, then an f-stop for say, 2' - 5' and letting the camera and strobe communicate light output allowed me to concentrate on the viewfinder pulling the trigger when I liked the composition. Being able to simply toggle the FEC up and down from the housing back was easier than constantly reaching up and adjusting strobe controls IMHO, too.

Finally, if you just **have to use manual flash** the **Ikelite eTTL2 system** provides 10 steps of manual strobe output by simply holding down both buttons and confirming the system is now in **manual versus TTL**.

Below is a link to Ikelite's area showing a few samples. All shot with **Canon's 17-85 mm or 10-22m EF-S lenses and a single DS125 strobe**.

[http://www.ikelite.com/web\\_pages/triv\\_haas350xt.html](http://www.ikelite.com/web_pages/triv_haas350xt.html)

**Three final points to be aware of:**

- A switch below the Ikelite dSLR housing tray should be set for the Ikelite DS50 or DS125 strobe you are using.
- If you turn the strobe off and back on the **eTTL2 system** resets and you must dial in whatever FEC you previously selected.
- If you try and rapidly change the FEC after shooting and the camera's meter is still active (4-6 seconds or so) the FEC will not respond until this timing circuit finishes.