

# Graham's Photoblog Newsletter

For Week Ending 3<sup>rd</sup> July 2021



## An Apology

First of all an apology for not getting out a June newsletter.

Despite all the coping strategies, and other techniques that I learned during a deep depression in 1992, during early May life suddenly turned dark again. I lost all interest in photography and everything I did seemed to be more effort than the outcome was worth.

I did try to make some follow up videos to end the Photography on a budget series but I just was not enjoying the process of going out and capturing images. I accepted some products to review which put time constraints on me to get them done and this really compounded the problem. The harder I tried to worse that I became.

Turning 72 during this period added just a glimmer of happiness as I shared this precious moment with my granddaughter, who turned 7 on the same day.

I also have been back for more tests at the hospital and tomorrow I go for a heart scan to try to get to the bottom of why such simple effort leaves me totally breathless!

I should have gone to Arran at the beginning of June however the first minister of Scotland banned all travel from my location in greater Manchester due to the fact that we, at that time, had the highest incidence of Covid-19 Delta variant! The proposed lifting of restrictions, here in the UK, were expected to be lifted on June 21<sup>st</sup> however it was postponed until the 19<sup>th</sup> July because of the increasing cases which are currently rising with daily average of 27,000 per day which is also doubling every week. Fortunately the cases of hospitalisation and deaths occurring hasn't risen at the same rate as with previous waves of the virus – largely due to mass vaccination.

The current slogan is "living with Covid" so I guess even if the restrictions end on July 19<sup>th</sup> there will still be a need to be extra vigilant!

Well that's enough excuses as to why I haven't done any tutorials and written my usual newsletter.

Next month will hopefully see a return to more personal productivity and I do have a very ambitious plan to re-invigorate my YouTube channel and broaden the appeal as I would like to hit the 100,000 subscribers before I get the final calling!

So if you just watch but haven't subscribed, please help me achieve my entry on the "bucket list!"

## Long Term BLC 12E Battery Tests

You may remember a few months ago now I started a long term lithium ion battery test to find the best battery for Panasonic Lumix cameras that use the BLC 12E battery.

Those fully charged batteries, from those tests, have been in the box now for just over 4 months and I could do the self-discharge test (finally).

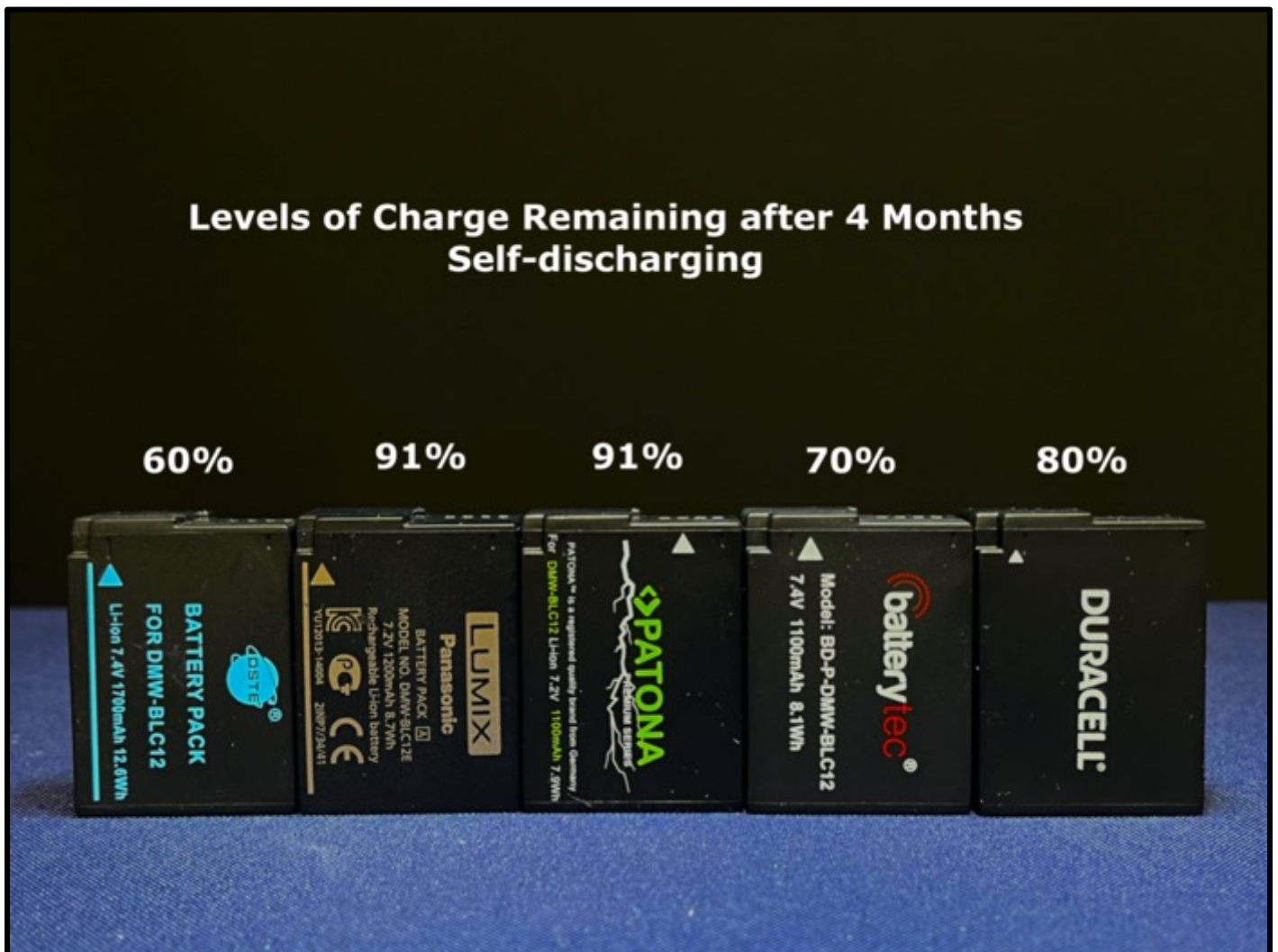
If you are not familiar with lithium ion cells they all have a degree of self-discharge when they are left on the shelf. Quite a few factors come into play as to which formulation of battery chemistry will have the least discharge but purity of materials used seems to be the number one factor.

The batteries were fully charged using the same charger until the charger cut off the charging voltage with a value of 8.4volts.

As these cells are in series within this battery each cell should be at 4.2v and the nominal voltage of the cells are 3.7 or 7.4v for the series pair. The voltage drop from fully charged to nominal happens very quickly and doesn't account for more than a few percent of the total charge capacity. It is the decline from the nominal voltage down to the threshold of discharge which is 3.2v per cell or 6.4volt for the series pair.

So all the usable capacity is from 7.4v to 6.4v. The protection circuit in the battery prevents over discharge by cutting off the output voltage however the cell still self-discharges slowly below this. If left for long periods in this state the battery may never recover when a recharge voltage is applied.

So how did the batteries fair?



Well the German brand Pantona and the Panasonic OEM battery had discharged the least whilst the DSTE battery had discharged the most.

Given also the fact that the DSTE cell was quoted as having a charge of 1700mAh (which was overstated) it is now apparent that these batteries are no longer considered to be a worthwhile purchase.

Interestingly though the BLC12 from Panasonic no longer appears on the Panasonic website and is in a back order situation with most camera stores – so what's going on here?

So overall even though the Panasonic batteries are the most costly to purchase there year on year performance is unquestionably the best option.

If you want to get the maximum number of charge/discharge cycles from a lithium cell it is recommended to charge to 2/3 of the maximum capacity (2 bars on an average charger) and swap out the battery more frequently. This is fine for stills photography but probably less useful for videographers requiring 30 minute recording times.

Just as a side note here most of the batteries used in cameras, mobile phones and other consumer electronics all tend to have some inbuilt battery management circuit which limits the charge and discharge currents and over and under voltage of the cells. Typically though those lithium ion batteries used in drones and other radio controlled devices tend not to have these cut-off voltages (you don't want a 7Kg drone dropping out of the sky when it reaches 3.2volts per cell!) instead the drone usually has a return home facility to ensure the aircraft can return safely before there is insufficient power to power the flight electronics. Again if you have depleted the battery to its minimum partially charge it before storage.

#### 4<sup>th</sup> July and Fireworks



If you live in the USA and celebrate the 4<sup>th</sup> July independence day with a fireworks party, or are going to a socially distanced party, then the following information about shooting a firework displays may be helpful.

Photographing fireworks is extremely challenging, however it provides a great opportunity to learn how to work with low light and quickly changing situations. Experiment with settings and timing and to hone your firework photography techniques. With practice, you'll find the balance between documenting and experiencing the display — capturing the moment and being in the moment!

Large firework displays can be viewed far beyond the display area giving photographers plenty of options for fantastic vantage points. It's always a good idea to scout the location around where the display will be in advance to identify the best angles to photograph the show and determine which lens focal lengths that you'll need.

Fireworks photography offers rare opportunities to play with unusual framing and compositions. Look for ways to incorporate the cityscape or landmarks into your firework compositions. Using the scenery around the fireworks zone provides context and adds dimension to your photos. Silhouettes of bystanders or recognisable objects will provide a sense of perspective and depth to the scene.

Avoid using autofocus, focus manually on a distant object and keep the focus point set there.

Long exposures are great for capturing multiple bursts within the same exposure so a tripod may be necessary to keep the camera steady for up to 30 seconds exposure.

Often the beginning of a display is the best time to capture the best shots as smoke can quickly destroy the foreground detail after a few minutes of intense display activity.

As usual keeping your ISO low with bridge cameras is a good idea or may be go up to ISO 800 with micro four thirds cameras and ISO 1200 with APS-C cameras. Use F8 and several seconds exposure and try to capture as many of the aerial fireworks as you can.

If all else fails and you only have one good star bust use that one re-size, recolour and rotate it slightly and then overlay it on the original scene with your photo editor to create a credible multiple burst display!



### **Pound Store Studio Lights!**

You don't have to buy expensive studio grade lights to create some great images – even a couple of cheap work lights from the UK store Poundland (costing £2 each) can provide surprisingly good, colour accurate light.



*iPhone 12 Pro image*

Using just my iPhone 12 pro and these two lights I was able to capture a quick table top shot – no £100 studio lamps here.

By adding diffusion and colour gels it would be possible to modify the light quality to produce an unlimited choice of light quality for these types of shot.



I'll hopefully be doing a quick tutorial about filtering these lights with Circular polarising lights to produce lighting that has no "hot spots" for photographing drawing, photographs and other objects that are often plagued with specular reflections.



This first image is just out of the camera (Canon EOS M6 mk2) with the two work lights set up at just 45 degrees on each axis to the camera. You can plainly see all the reflections coming back into the camera from any surface within the angle of incidence of each light.

Compare that to the next image where I fitted two £8 circular polarising filters to these lights and then a CPL filter to the camera lens. By tuning the light sources and the camera filter it is possible to cut out all the reflections from the curved surfaces.

I'll be sharing this technique for flower photography where reflections can be a real problem when capturing these pictures.



### **Adding New Picture Styles to the Canon EOS M50**

One of the often published recommendations for video with the canon EOS M50 is to use the Natural Picture style as it gives a “flatter” profile and able to capture more dynamic range!

Don't follow this recommendation unless you like soft, hard to grade video clips. The profile is designed to reduce sharpness and overcome some of the criticism about video that it is too crisp.

There are many other profiles that are available to achieve a lower contrast video clip (like Technicolor's Cinestyle) which provide a far better option.

You can also download and install profiles for film camera looks like Fuji Velvia, Ektachrome or Kodachrome.

Watch out for my upcoming review of the process and some of the results that you can achieve.

### **Canon EOS M50 Mk2**

When the mk2 was announced the improvements over the original Mk1 seemed to be all firmware updates and I had hoped that it could have been back ported to the original mk1 camera. This has not proved to be the case.

Because I am registered with a platinum membership to Canon's professional services (free to register and your level of registered kit determines your membership benefits) I received a “birthday” offer of a great reduction on the price of the M50 mk2 camera kit. Probably a regretful, on the moment purchase, I clicked on the purchase link and now sitting on my shelf is a still unopened box!

My justification was that I would learn all the differences between the Mk1 and Mk2 and then add the Mk2 to my list of user guides that I have written. Due to my "can't be bothered" period I just haven't unpacked it yet however I am determined to do so in the coming weeks and if there are any significant benefits over the mk1 I'll certainly let you know.

When the mk2 was announced and I could see no advantages I bought the M6 mk2. Although it doesn't have a flip out screen nor an EVF (unless you purchase one!) it does produce some really great images from its upgraded sensor and it does have a clean HDMI out if you want to use it for video recording (but you can't use it simultaneously during internal recording BOO!)

### Power Tool Battery Camera Power Supply.

I've constructed an alternative camera power supply using some cheap lithium ion power tool batteries that were recently on sale in one of our discount supermarkets (Aldi). From the nominal 20V supply from the pack I used a step down converter capable of over 3Amps to provide the nominal 7.6 volts for powering my cameras when I need an extended shooting time for video etc.



It was working without any reliability issues for a few months before I lost my mojo. I am rekindling this project to add a further level of protection so that in the event of the step down module failing in a short circuit mode (unlikely but possible) and the input voltage arriving at the camera output port I am adding a double shunt regulator to cut off the output if the voltage rises over 9v or drops below 6v as both can have disastrous consequences to the camera attached.

I've have a working proof of concept soon.

### Sony Rechargeable Lithium Cells with USB charging.

There are a number of third party batteries appearing on the market that use micro USB or USB-C charging in the Sony NPF battery line up. These would appear to offer some convenience over traditional charging. I'll be doing a full test on these units, soon



## Final thoughts!

I would just like to take a moment in closing this short newsletter to personally thank all of you who have emailed me asking how I was as they had not seen newsletters or tutorials. It was quite humbling to read some of your comments.

It really did make a big difference to how I began to climb out of the place that I was in and I am really grateful for this.

So until the next newsletter which will be at the beginning of August, stay safe, stay well and keep practicing your photography or even just enjoying a walk out in the countryside if you can to keep you mentally in tip-top condition.

All the very best

*Graham*



**Our Grandchildren – such a joy be part of their growing up**



