Newsletter for week ending 7th January 2022

Collage produced using Pixlr Smartphone App using iPhone Images

Welcome to this edition of the newsletter

So another year has ended and we now embrace 2022 with hopes of a better year with more freedom to get out and take some fantastic images and videos.
I'm not one for making New Year resolutions but if you do I hope that you have all the luck in being able to see them through!

2021 was a very sad year as I lost several very close friends and was a shock reminder that at my age the “grim reaper” is never too far away and that we owe it to ourselves to maximise whatever time we have and enjoy life if we can.
If you have the fortune to be able to spend recklessly and without consequence – then do it. (I can hear the words “Is that another new camera? – what does this one do that the other 24 don’t?). The saying “ you can’t take it with you when you go!” springs to mind again.

I’m lucky that a great career history paved way to financial stability and I have a fantastic wife who acts as the finance manager for all things needed about the house and so we have good financial reserves and of course the house will be a great asset for the “children!” to sell and enjoy the rewards when we both have departed this life!

I think for 2022 it’s going to be a year of evaluation and consolidation. I have too many cameras to be able to justify their just sitting in a display case without them being used at all.
I did try to sell 3 micro four thirds camera bodies in November hoping that they might attract Christmas sales but all the bids and offers were so ridiculously low that I ended the sales on them.
Maybe I have to accept that second hand sales are now at record lows and at best I might only be getting 30% of the original cost price in any transaction of this type.

So far I have resisted buying full frame mirrorless cameras like the Canon R5 or R6 I have such an investment in full frame DSLR cameras and full frame (EF) lenses that a switch to the new mirrorless would be a huge leap if I was to get the benefit of the new lenses.

I can’t justify the purchase on the grounds that any commercial work would warrant it as I have not done a commercially paid job for over 2 years!
I don’t have a camera club membership at the moment so the purchase would be purely for selfish reasons.

I have always kept all of the Panasonic bridge cameras from the FZ2000/2500 back to the FZ200 as I still like to be able to answer questions on these cameras and validate the answer by testing it out before getting back to the person who first raised the question.

This has been an invaluable resource such as being able to answer one of this month’s questions about battery drain in Panasonic cameras.

I still have the Sony RX10 mkIV to take out and fully review so no need for any rash purchases!

I also bought a Hohem smartphone gimbal to help with one man filming so I look forward to seeing how that works for me.

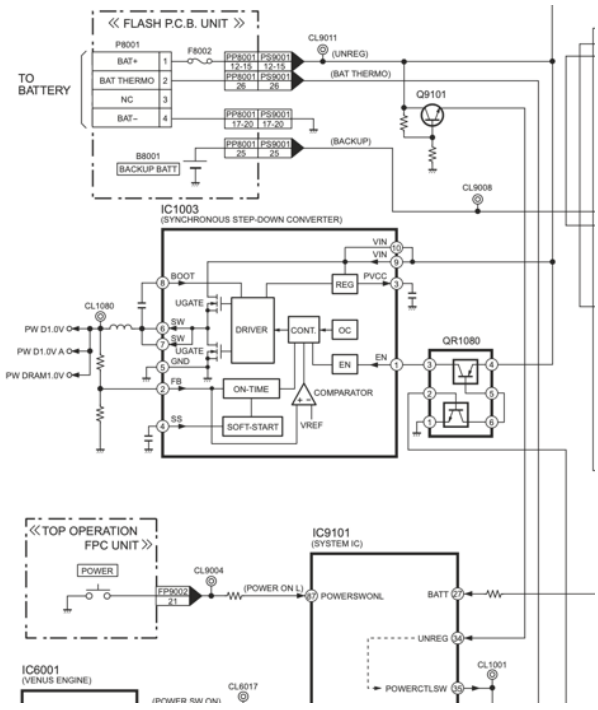
FZ300/330 Shutter button Zoom Lever Failure – an update

In my previous December 2021 newsletter I detailed a situation where a number of FZ300/330 cameras had failed due to the top zoom lever either behaving erratically, in the opposite direction or simply not at all!

I also outlined a cleaning procedure which would effectively restore the operation of the zoom lever. The video I produced about this is here https://youtu.be/TJCVQxWZMBU if you want to review this.
As a result of the newsletter request to feedback any successful results of doing this I had 43 replies saying that their zoom lever was now back to its normal functionality!
If you add this to the comments on the YouTube video I think that the cleaning process is one which can be repeated should the lever operation again become erratic.
Thanks to everyone who tried this and responded to my request.

Panasonic Lumix Bridge Camera Battery Drain whilst Powered Off

I had a question sent in about the fact that, in particular the FZ1000 mk2, seemed to have an issue where if the camera was put away for several weeks when the camera was brought out and turned on it would either not do so or have a “no battery power remains” message on the LCD screen. Even though on the surface it looks like with the switch in the OFF position there should be no power drain from any lithium battery in the camera in actual fact there is an internal circuit that is still in operation which provides a power on soft start/logic control when the switch is moved from OFF to on.
Here’s part of that circuit.



For those that can follow the schematic you may be able to see that the battery is supplying power to two step down convertors.
We are talking a fraction of the power actually used by the camera in operation. Depending upon the model this operational current can be in the order of 600mA. The standby current is in the order of 1.12mA.

Given that a fully charged battery has a capacity of 1200mAh the best case scenario without self-discharge is 1200 hours or 7 weeks before the battery is depleted.

The FZ10002 has a Bluetooth low energy circuit which is used for quicker connections using Wi-Fi and also for a Bluetooth shutter release using the Panasonic imaging or Panasonic Synch apps running on smartphones.

When this circuit is in operation this causes the camera to consume 4mA of current even when the camera is off and awaiting for the Bluetooth wake-up signal from the smartphone. In this state the battery will discharge in 13 days!
Another consideration is the self-discharge condition of the battery installed in the camera.
Panasonic batteries appear to be the lowest self-discharge due to probably the higher purity of the lithium electrolytes. Other manufacturers have much higher self-discharge currents and can even completely discharge if just left in a cupboard for several weeks.

From best to worst (left to right) BLC12 lithium ion batteries with residual charge after sitting for 2 months (out of camera) The Duracell was completely flat!
So I guess that if you intend to put away your camera for the winter months it's probably best to remove the battery from the camera (especially the FZ10002). For long term storage of lithium batteries a charge of 85% is recommended to be the sweet spot for storage and long term battery health.

Where have all the cameras gone?

If you are looking to purchase a new camera system in 2022 what choices are there?
If you look at the main manufacturer's like Canon, Sony, Nikon and Panasonic the emphasis seems to be focused on full frame mirrorless camera systems with really expensive price tags to match.
We haven't seen any new introductions to the bridge camera market for more than a couple of years and the Canon EOS M line seems to have hit the buffers after the release of the M6 mk2.
So where does this leave us? Well we could still purchase one of the bridge cameras still available like the Panasonic FZ80/82 or FZ1000 mk2 or the Sony RX10 mkIV however they will most likely be old warehouse stock. (you can check this when you first set time and date as the default year shown will be the year that the camera firmware was updated).

The Canon EOS M camera body line and lens systems are still available and the EOS M50 mk2 is still an excellent purchase in my opinion with the 15-45mm f3.5-6.3 kit lens at £700 in the UK.

The Canon EOS M50 mk2

Now is probably a good time to look at the second user market.
If you want a very good, full frame, DSLR look at the Canon EOS 5D MkIV and pair that with a 24-105mm F4 L series lens and you will have an excellent full frame system.
Typically a good condition body would cost around £1400 in the UK and a lens about £380.

With this you are getting a very professional grade camera which is likely to last for years to come. If you want a brand new mirrorless full frame then the original Canon EOS R with 24-105mm lens will cost just £1920 in the UK although it does have some limitations like no IBIS so if you are looking to shoot video this might be a problem with rolling shutter/jello effects.
If you are shooting just stills then there are many cameras, from a few years ago, that will provide excellent image quality (as demonstrated in my “Photography on a budget” YouTube video series).
Micro Four Thirds systems are just about clinging on with the Panasonic GH6 going to be released later in 2022.
Olympus sold out their imaging division but the OMD EM1 mk3 and EM10 mkIV are still popular cameras in this field.
There are now plenty of M4/3 cameras available on the second hand market and well worth investigating.
APS-C cameras like the XT-3 and XT-4 from Fuji are real enthusiast cameras and again when used with good lenses are very capable cameras for both stills and video.

It will be interesting to see where action cameras go this year as more and more of them are being used as B-roll cameras for YouTube content creators and with their ability to capture 4K video in such a small form factor make them very attractive.
Cameras like the DJI Action 2 appear to offer better image quality but with a 155 degree field of view is this just too wide?

Audio still is considered an “add on” with additional hardware needed to be able to capture decent audio. It has to be remembered what these cameras were developed for and what we have adapted their use to.

I've been less impressed with "gimbal cameras" like the Feiyutech pocket 2.

Although they appear to offer an all-in-one package to capture video for travel and special occasions etc I have not been impressed with the image quality from the ones that I have tried.
They seem to want to use extreme wide angle lenses to capture more of the scene.

This really tests lens designs and associated image processing to combat barrel distortion

Leaking Alkaline Batteries in Equipment

Leaking batteries can quickly destroy the equipment that they installed in.
Think about the number of children's toys, flash lights, clock radios, flash guns, remote controls etc. etc. We are very heavily dependant upon batteries to provide power for our portable equipment.

The advantage of Alkaline manganese batteries is that the electrodes are inside a steel container.
At the open end of the steel container, alkaline manganese batteries have a synthetic seal to prevent leaking. In addition, a liquid sealant is applied between the container and the seal to cover minute irregularities in the steel surface.
During use or storage of the batteries, the steel cannot be attacked by the electrolyte or electrodes.
This is achieved through special refining (coating) of the steel.

What causes a battery to leak?
When a battery works, i.e. releases electrical power, the chemicals inside create a gas (hydrogen). If this occurs too much, the battery cell may rupture.

This is where leakage may occur. Normally, the battery seal prevents this.
Why is that a problem and shouldn't a battery be able to withstand such pressure?
Well, yes and no! With normal use, a battery should not leak. The cell is strong enough to withstand built up gases inside. The leakage in all cases is from the base of the cell as the steel case (which is also the anode) only has a sealing gasket at the base.

Leakage happens when a battery is left in a device for too long, especially when it's not used.

Ok, what most people refer to as battery acid isn't actually an acid, it's a alkali.
I am are talking about alkaline batteries here, and alkaline is a base. This is why a mild acid, like vinegar or lemon juice, can help to neutralise it during any clean-up operation.

What actually leaks out of alkaline batteries is potassium hydroxide, which is caustic and can cause corrosion. Whilst it is a caustic substance, potassium hydroxide is still a base, which can be neutralised by a mild acid. It is a "severe irritant" when introduced to skin, and can cause respiratory problems.

When this potassium hydroxide reacts with carbon dioxide from the atmosphere it becomes the white crystalline structure that we commonly see on the leaking battery – this is potassium carbonate.

To clean up the battery compartment and the spring terminals you can try:
Place a drop of vinegar or lemon juice onto the corroded area, then wait a minute or two for the neutralising effect to take place. Use a Q-tip to wipe away the corrosion.

Having dipped a Q-tip dipped into your chosen acidic liquid, gently wipe away the crystalline white residue from the battery springs and terminal plates

Cleaning the contacts with, sandpaper or a small file may prove handy for this purpose after the initial cleaning to restore good connectivity.
If the springs are very corroded it may be possible to fit springs from a similar device or cheap toy etc.

Zinc carbon batteries are far worse culprits as the zinc case is dissolved during the creation of the electrical power. Eventually holes appear in the case on the electrolyte can easily escape.

NiMH (nickel metal Hydride) and lithium batteries do not exhibit the same leakage problems however in equipment with very low drain current it may be worth a periodic check of the batteries. With TV remote controls and torches this leakage effect may be seen more than any other product.
It is best to remove batteries from equipment not in regular use to be on the safe side.

Photographing Flowers

Wild flowers can splash patches of bright often startling colour across otherwise bare landscapes or from brilliant contrast with the subdued browns and greens of the foliage and trees.

To make the most of such contrasts try to relate the flowers to their surroundings.
One way to do this is to select a viewpoint lower to the ground and quite close to the plant as shown in the picture above that I shot of a sea-pink on a Scottish shore.

For maximum depth of field stop the lens down to a small aperture and use the depth of field preview to check both the flower and the background are in sharp focus.

Remember here that the inherent larger depth of field with 1/2.3 inch or type 1 inch sensor cameras means we don't need to be using the smaller apertures of f8 where diffraction softening may affect the image sharpness.

If the flowers are sheltered you may be able to balance a small aperture by using a slow shutter speed with the camera on a tripod or other support.

An alternative to this kind of richly detailed image is to throw foreground colours flowers out of focus so only their intense colours catch the eye.
Use a telephoto lens and select a wide aperture and also focus towards the background for best effect.

A single flower isolated from its background can make a strikingly beautiful picture.

Begin by carefully scouting for a perfect bloom. One that is not torn or eaten by insects etc.
Then concentrate on simplifying the background by choosing a position to exclude any other dominant colours if possible.
You can also temporarily tie back other blooms which may distract from your subject.
Good lighting is key and I find it best to shoot early morning and on an overcast day to prevent harsh light and uncontrolled shadows. If the blooms are in open sunshine then a soft nylon diffuser held between the sun and the plant will often yield perfect results.
Depth of field again must be carefully checked especially if using wider apertures in lower light.

I find photographing flowers to be a richly rewarding exercise and there are always examples of flowers to be found – even if they are grave pots in cemeteries – in winter there are few flowers around in a natural habitat.

Until the next newsletter, early February 2022

All the very best,

Graham