Graham's Photoblog Newsletter

For Week Ending 29th August 2020

You Have Spoken!

In the previous newsletter I posed the question as to how the newsletter and YouTube Channel content should continue into the future.
Many, 83 in fact, of you responded with many suggestions and words of encouragement to carry on with the blog.
I was really pleased with the response and the suggestions that you made.
Overwhelmingly the topic that kept occurring in the responses was to revisit the older cameras like the FZ200 and FZ300/330 as there is still not a lot of tutorial information on the web regarding these cameras.
Quite a few of you commented that they had just recently purchased the FZ300/330 and were working through the existing tutorials but would welcome any new material and even re-visit some of the earlier topics and perhaps expand on their content.
Many suggested doing more hands on tutorials showing how to use the camera rather than the theory.
Guest collaborations were also cited as adding some variety into the channel.
On the topic of this newsletter it was suggested that it would be okay to publish on a less frequent basis and perhaps divide the newsletter into sections so that subscribers could jump to sections that really interest them.
It was really encouraging to see the number of responses that stated that they would be sad if the newsletter was to disappear altogether.
So I have had some time to consider the available options and have decided to follow most of your suggestions, especially for this newsletter, in both the format and the content.

I will try to keep the schedule of monthly publishing towards the end of each calendar month.
Images will be full page width when used to illustrate a topic so that you can see them more clearly and the embedded resolution will go from 90ppi to 150ppi so that if you enlarge the page there is sufficient pixels to show the detail.
I will also be starting a Pinterest page dedicated to sharing information about cameras and photography.
Details will follow in the next newsletter as soon as I have designed the page and added some content.
So thanks again for your support and encouragement.

The smaller of the two island ferries "Isle of Arran"

Having anticipated the prospect of no breakfast I had packed a sandwich and as soon as we docked I drove into Brodick to my favourite bakers, Woolleys of Arran, and bought a large latte and steak pie.
I sat on the promenade and watched as the ferry made its way back to Ardrossan enjoying the pie and coffee – heavenly.
As I couldn't get access to my camping pod at the seal shore caravan park at Kildonan until 3pm I stocked up with basic essentials at the supermarket before driving to Kildonan and parking up before walking the 2 miles or so to the bay in which the common seals normally haul out of the water at low tide.

They perch on the rocks sleeping and waiting for the tide to turn before they go back out to sea to hunt again for crabs and fish.

Unfortunately that afternoon was the only bright and dry day of the trip. The next day was mostly raining all day so it was just a walk in full wet gear over the hills and back. The third day was mostly the same with a few longer dry spells but nothing sparked my enthusiasm to go out far with my camera. I was hoping for a decent weather break on the fourth day so that I could film some of the views with my drone. I set off early to get to Machrie moor where the famous standing stone circles are. It was a very dull day but no wind so I managed a few flights. The sun eventually came up and so did the 20 plus miles per hour wind – too high for safe flights with the drone.

The standing stones on Machrie moor.

Some idea of the size of these stones

Two years ago, in June 2018, an old man went missing on this moor. He did suffer from dementia and it was reported that he had set off to walk across the moor to visit a friend in a local village. When he didn't return home a search part was raised and it became a full blown search with army and police helicopters involved for several days. He was never found and his body must lie somewhere out there on the moors. A chilling thought.

The bleakness of Machrie moor.

Life existed at the standing stones dating back to 3500BC

On the way back from Machrie moor along the west coast road you pass an outcrop of rock where cormorants dry off. These shots were taken with the Fuji X-T4 with the 100-400mm lens at full stretch (600mm EFL).

Creeping in slowly to the shore line I managed some better views.

Cormorants drying out!

One of the prettiest villages on the island, Lamlash. The sun would have made the view even better but only a very cloudy day was to be had on this trip.

Kildonan bay and Pladda lighthouse with the volcanic plug of Ailsa Craig on the horizon

One of the reasons that I wanted to return to Arran was to get a few more aerial views of the island. On the day of my arrival I managed a couple of “test flights” just to familiarise myself with the controls again. This first view is of seal shore camping site at Kildonan. My “pod” was the green structure in the top field.

The next shot was using the drone in the “follow me” mode to capture the scale of the standing stones on Machrie moor.

Machrie moor and the standing stones “selfie” drone shot

Why Do My Bridge Camera Images Not Look the Way That I Expect Them to Look

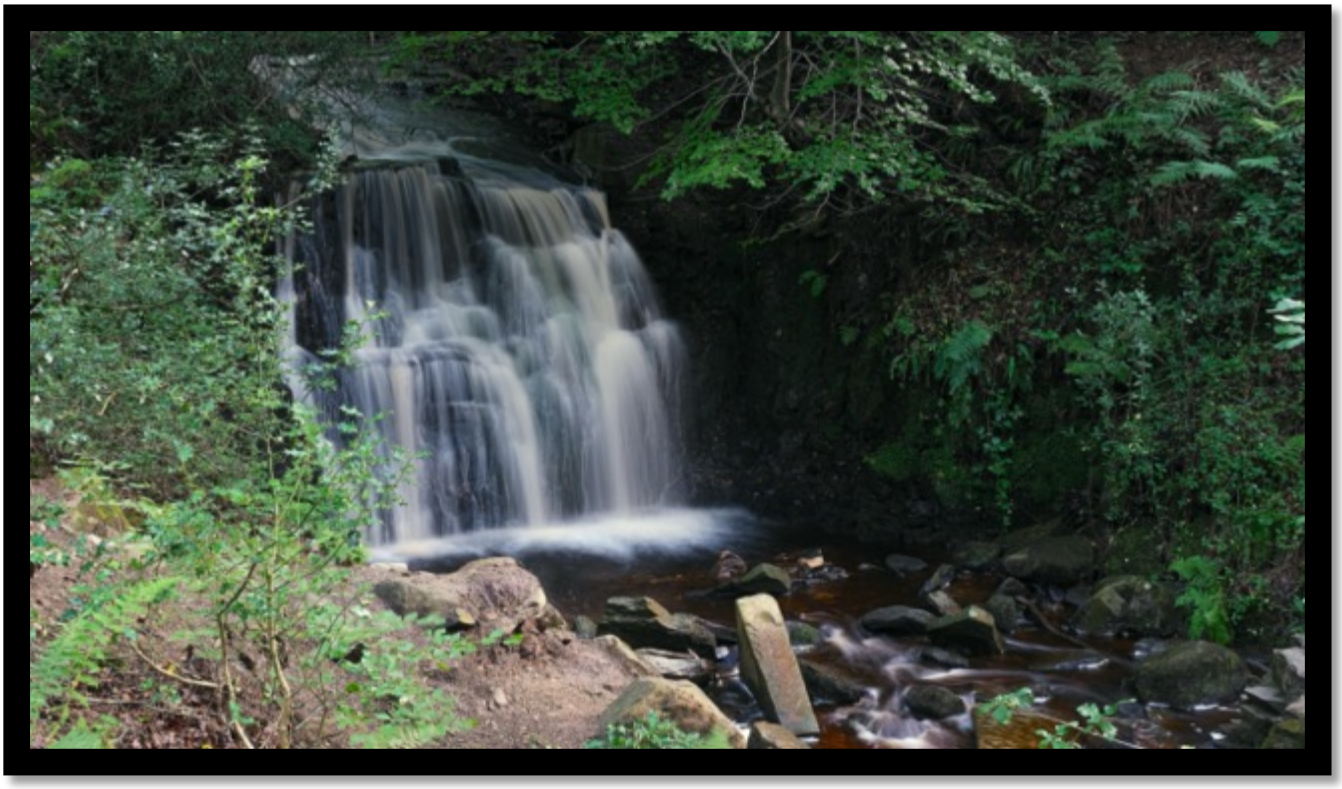
You know I get a “lot” of emails asking for help in getting better images from users of Panasonic bridge cameras.
The majority are from the FZ80/82 users but the FZ300/330 also features in many requests.

When I get these requests I usually ask the user to send an unedited image, preferably from the SD card, so that I can see the camera EXIF data.
This gives me a good insight into how the camera was set up and used and is invaluable when trying to diagnose any problems.

Image from the FZ80/82 … showing the EXIF data available to aid in diagnosis

I prefer the camera image as most image editing programs either strip out this EXIF file or change the contents if you have edited the image.

Unexpected image quality can manifest from a whole variety of reasons.
When you are a new user of bridge cameras and just beginning your photographic learning journey you probably scour the internet for tutorials (that’s how you found me – right?) and try to read up as much as you can to the point of saturation.
It’s very easy, in these initial days, to make some wrong assumptions and this progresses to making camera settings choices which will promote poor images.
Let me give you an example.
Say you wanted to photograph a beautiful waterfall that you know about and wanted to capture that silk like appearance of the water as it cascades over the rocks.
You may want to see the trails of bubbles and leaves as they move through quieter areas of the stream that flows away from the waterfall.
So you research “how to capture silky slowing water” and the results will almost always advise you to use long shutter speeds or ½ second to a few seconds depending upon the ambient light levels.
You head off out to the location and begin to set up for your dream shot.



You will probably have recognised that the fact that as you need a specific camera shutter speed of say ½ second that this is best achieved using the “S” shutter priority mode.
So you dial in ½ second and capture your first shot.
Now even with a wide angle setting and the great optical image stabilisation that is now built into bridge cameras it is more than likely that the image shows significant blur due to camera shake.
So you employ your tripod, or rest the camera on your camera bag, set up the two second timer and take another shot.
This time it is sharp but the waterfall is totally white – it’s “blown out” and there is no detail in it at all!
You probably didn’t notice that as you half depressed the shutter button that the shutter speed/aperture combination was flashed in in red.
This indicates that the camera is unable to adjust the aperture and/or ISO to get the exposure correct.
In all but the very odd occasion, in even very overcast conditions, exposures of ½ second or longer will result in the camera not being able to give the correct exposure.
So in these situations it is almost imperative to use a neutral density filter over the lens to reduce the amount of light entering the camera.
It is likely that you will need something like a 3 stop filter (ND3 with 8 times light reduction) in overcast light to maybe a 6 stop (ND6 with 64 times light reduction) filter in bright sunlight. You could purchase single value filters or one of the better “variable ND” filters which allow you to select values from 2 times to 400 times light reduction.

What we have learned here is that we must understand exposure and how the camera is able to adjust itself (using the automatic iA mode or one of the semi-automatic mode P, A or S) under all lighting situations.

You probably came across the infamous “Exposure Triangle” during your quest for knowledge and indeed I use this in my camera tutorials.
However it is now generally accepted that this model is really only relevant to film cameras and not digital cameras. Let me explain why.

When we used emulsion based film the “sensitivity” of the film emulsion was controlled by the size of the silver halide grains. A larger grain exposed a larger surface area to capture photons thus allowing the film to be used in lower light levels. A smaller, finer, grain structure exposed a smaller surface area requiring more photos to achieve the same exposure. Of course the finer grains allowed a much higher resolution to be achieved. As the emulsion speed was fixed at manufacture the film could only be exposed correctly if we considered the “film speed” in the exposure equation.
Typically fine grain black and white films had a ISO of 100 and faster films ISO 400. Colour films ranged from ISO 100 to ISO 1000.
In our transition to digital photography and with the digital cameras offering a sensitivity adjustment by varying the gain of the pre-digitising (analogue to digital convertor or ADC) we now refer to as the ISO value.
The sensor does not change its sensitivity to light, we are merely amplifying the signal (and noise) from the photosites (pixels) on the chip.
Thus it became fashionable to add this dimension to the exposure controls of Aperture and Shutter speeds. ISO only indirectly affects exposure as changing its value necessitates a corresponding change in either the aperture value or shutter speed. Exposure is basically the amount of light passing through the lens and the time that this light is allowed to happen.
We should consider the ISO to be fixed at the base (or native) sensor sensitivity normally ISO 100/125 or ISO 200 depending upon the sensor type.
Increasing ISO merely allows us to use lower light levels, shorter shutter speeds or smaller apertures.
In an ideal world we would keep the ISO at its lowest (native value) and adjust the aperture or shutter speed to achieve the correct exposure.
This of course could require the use of some mechanical stabilisation, such as a tripod, to achieve these exposures. If we use higher ISO values (such as IS0 1320 with the FZ80/82 image below) we will see noticeable softening and image noise especially in out of camera JPEG images due to the way noise reduction operates. We are between a “rock and a hard place” here as we need a fast shutter speed to suppress subject motion blur and we are stuck with the smaller aperture of the longer zoom setting.

The original out of camera 1/400, F5.9 ISO 1320 at 1200mm EFL on FZ80/82

We can do a little post processing to attempt to clean up the noise and sharpen the resulting image.

A little bit of extra brightness, sharpening plus some noise reduction added to improve the image.

Another area of confusion for new photographers is the concept of depth of field.

When you read books and magazines the usual statement is that a large aperture, such as F2.8, gives a very shallow depth of field.

Now depth of field, or DOF, is the zone of “acceptable” sharpness from the foreground to the background of the image.

So when you want to get a lovely out of focus background for your image you just select f2.8 right?

Well here’s a shot with the FZ300/330 at f2.8

As you can see from the image the background is not really out of focus.
Compare this to the next shot, taken again with the FZ300/330 at F2.8

Here you can see the background is beautifully out of focus.
So what's the difference and what can we take from this?
Well the DOF isn't just based upon the aperture setting alone. Both the lens Focal length and the distance from the camera to the subject and the subject to the background also need to be taken into consideration when we want to create an out of focus background for our image.
In the first, wide angle shot at 25mm EFL, the camera was 30cms, 12 inches, away from the model and you can see that the effect of using a wide angle lens gives us a huge DOF. It only really starts to throe the background out of focus when you get really close, 2-3cms, away from the subject.
In most cases this is only an appropriate method for plant or insect photography.
In my second shot I took the photo at a distance of 2 metre, 6ft 6inches, with the camera zoomed all the way out to the full x24 zoom or 600mm EFL. With this setting the DOF becomes a matter of just a few cms. In this image it was just enough to get the head of the model in focus.

One thing that we must take into our consideration when using the smaller sensor cameras like the 1-2/3 inch of the FZ200-FZ300/330 is the "crop factor" This is the ratio of the sensor diagonal compared to that of the diagonal of a full frame 35mm negative.
In this case it turns out to be a factor of 5.7!
Because of the optics we need to understand that the equivalent aperture of a full frame camera would have the same dept of field if it was set 5.7 stops smaller than the same aperture of the FZ200-FZ300/330. That is to say at the same focal length setting the full frame camera would need to be set at F14 to give the same depth of field in the image.
So you can see we have a huge advantage (to some genres of photography) in having such a deep DOF even at our largest apertures. Real estate photographers love this as they can shoot hand held and get good, bright images without resorting to additional lighting.
So for portraits use the longer focal lengths, keep 2-3 metres away from the subject and have the subject as far from the background as you can to create very good blurred backgrounds in your images.

PRODUCT REVIEW SECTION

GIM 19 inch LED Ring Light

Click for link to the YouTube Review Video.

Ring lights are normally used by make-up artists and hair tutorial content creators.
However in this review I look at how the light can be used as a very useful product lighting fixture. Continuously adjustable from warm white (3200K to a cool white (6400K) and from 0 to 100% brightness giving around 1000Lux at 1 metre distance. The light stand for this light is superb and is like a traditional tripod construction unlike the traditional metal leg fold out variety. It can extend to well over 2 metre height (6foot 6inch). Powered from a 24v mains power brick delivering some 3A. To keep the light flicker free it looks to use pulse width modulation at a very high frequency. Complete with a good range of accessories to mount either a smartphone, tablet or DSLR/compact system camera into the light ring and a very convenient carry/storage bag. Colour rendering is excellent and a very useful addition to any studio lighting set up.
I also did a follow up video on how to use it.

Comica V30 Lite and V30 Pro Microphone Reviews and Comparison

[Click for link to the YouTube Review Video.]

The Comica V30 Lite microphone has been designed for use with cameras with the 3.5mm TRS stereo input socket and smartphone using the 3.5mm TRRS input.
This can be direct on older models or via an adaptor for later IOS or Android phones. This is a short shotgun mic with a super cardioid pick up pattern.
This has good forward capture and rejection of sounds to the side and rear.
The built in shock mount helps to isolate any vibrations from camera handling.
The supplied foam windshield is good for suppressing explosive pops from voice however is not very good at reducing wind noise outdoors. For this reason a fur windshield (dead cat) is preferable.
The switch facility and fixed wiring from camera to smartphone is a great idea saving one extra connection point and allows very quick change over rather than swapping cables as with some devices.
It is longer than most "on camera" mics but this is due to the construction to achieve the sound rejection at the sides of the microphone.
The shorter mics tend to have a more omnidirectional pick up pattern.

[Click for link to the V30 Pro Review and Test Video on YouTube]

The Comica V30 Pro is a powered microphone (uses 2 AA batteries) and is supplied with a “dead cat” windshield. It does not have the switch ability for smartphone/camera.
You would need the TRS to TRRS adaptor to use it with a smartphone.
In this video I test the V30 pro against the V30 lite and the Rode Videomic.

The KIMAFUN Two Transmitter Paired to One Receiver Review

Link to Review Video On YouTube

The latest addition to the Kimafun UHF wireless microphone sets.
This set allows you to pair two transmitters to one receiver this allowing a two person interview to be carried out very easily without additional mic mixers or splitter cables.
The users can choose between using a headband mic or a lavalier mic depending upon the situation.
Independent microphone levels can be set using the sensitivity controls on each transmitter unit.
The unit can be used with DSLT/Mirrorless/CSC's with TRS inputs or smartphones using the TRRS adaptor.
For laptops without audio input there is a USB audio adaptor supplied.
Realistically the range is about 20 metres indoors or 39 metres outdoor, line of sight.
The transmitters and receiver pair within 1 second of powering on and provide an indication of doing so.
Excellent construction and attention to detail.

Pixel Voical Air Wireless Microphone System Review

[Link to YouTube Video Review]

A review of the Voical Air UHF wireless microphone system for smartphones and cameras.
With an attractive price point and a feature rich specification how does this mic perform in real world tests?
You can't but help compare and contrast this to the Rode wireless go system.
The Rode is more than a third more expensive and doesn't feature either a lavaliere mic or any carry case.
This video will explore the unit, its performance and audio comparison tests.
In summary the range doesn't appear to be anywhere near the claimed 70 metres (210 feet) even in direct line of sight outdoors.
I would say the maximum safe working distance would be 20 metres but this would be adequate for most users of this kind of system.
I think that there is a lot of "signal processing" to reduce noise and interference.
The audio monitor output is crisp and clear whereas the recorded audio sounds to be clipped and the start of each sentence seems overly compressed.
I couldn't find a way to alter the compression or other signal processing that was going on.
The overall build quality and presentation of the unit is excellent however I feel this is let down by the poorer audio output compared to other budget wireless mic systems.

Saramonic Microphone Adapter 3.5mm Male TRS to Apple MFi Certified Male Lightning Adapter Cable

If you use your iPhone for blogging or capturing video with better audio using an external microphone such as the Rode video micro then normally you would need to adapt the Rode 3.5mm TRS plug to a 3.5mm TRRS and then plug this adaptor into the apple to 3.5mm TRRS audio adaptor.

Now Saramonic have introduced a 3.5mm male to lightning cable which includes the necessary high quality DAC in the plug the SR-C2000.
This means that you can plug the 3.5mm plug directly into the Rode microphone output socket.
This reduces the number of electrical connections and limits the possibility of noise connection
The audio quality, as we have become to expect from Saramonic, is excellent and passes all the frequency range captured by the Rode microphone.
It could be used with microphone with fixed 3.5mm TRS male plugs using 3.5mm female to female inline connector.
It works with iPhone X, XR, XS, and XS Max, the iPhone 8 and 8 Plus, and the iPhone 7 and 7 Plus. It also works with iPads, iPods, and other models with Apple's Lightning Connector.

They have also introduced the SR-C2002 Microphone Adapter 3.5mm Female TRRS to Male Lightning Adapter Cable although this only replaces the iPhone regular adaptor.

Panasonic FZ1000 Mk2 Versus Fuji X-T4

Quite a while ago now I was asked how the image quality of the FZ1000 mk2 compared with a larger type 1 inch sensor camera, like the one found in the FZ1000 mk1 and mk2.
Now it is generally accepted that larger sensor cameras produce better images in low light conditions, have shallower depth of field at wider apertures and have better dynamic range. But is this ALWAYS the case? There are small sensors with larger pixels than those found on full frame cameras so how is it that they don't perform as well in low light? Well part of the answer lies in amount of the "total light gathered" by the area of the sensor.
A small sensor, even with large pixels doesn't capture the same total light as a APS-C or Full frame sensor with 32 or 50 Megapixels.
If you look at some of the early sensors with only 3.5M pixels and compare them to later 16M sensors the amount of noise in the 3.5M sensor is far more than the smaller pixels in the 16M sensor of the same area. A lot has to do with the fabrication of the actual silicon chip. The use of back side illumination, better micro lenses and the change from CCD to CMOS has all helped along the way.
So the challenge was to do a comparison test between the APS-C sensor of the Fuji X-T4 and the 1 inch sensor of the FZ1000 mk2 (which is the same as the FZ1000 mk1)

In my video, hopefully finished next week, you will see that in a lot of situations it is really difficult to distinguish between the two cameras.
So this leads me to ask the question about the “usability” of the two cameras. To go from the 25mm to 400mm and back takes seconds with a bridge camera like the FZ1000 but to do the same with the Fuji X-T4 necessitates a change of lenses.
This can add about 45 seconds per change once you factor in having to detach lens caps and re-install on the other lens etc.

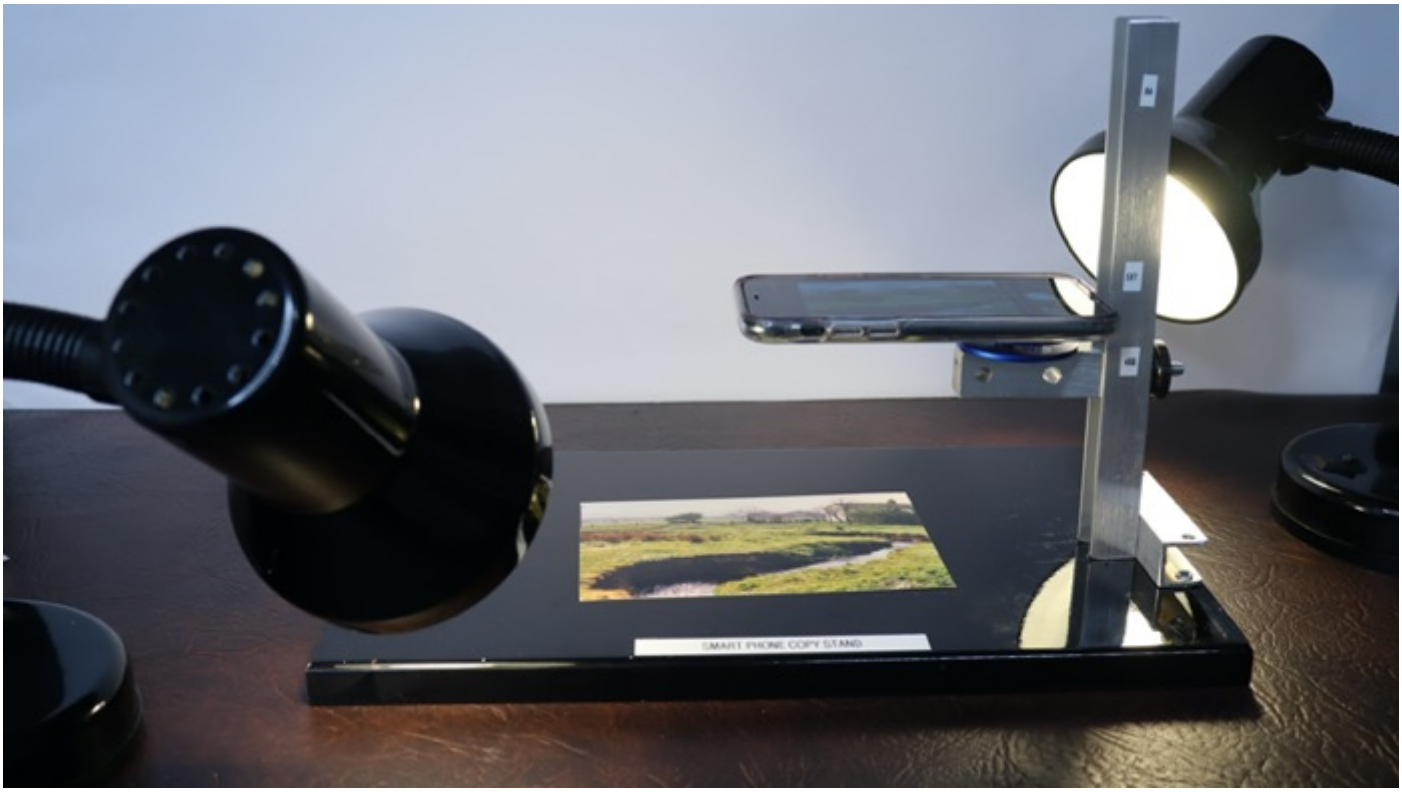
Adding a Flat Screen Monitor To Android/IOS Smartphones/Laptops & External Camera Monitor

I wanted a portable external monitor for use with my two smartphones. These are the Huawei P20 pro with USB-C connectivity and the iPhone 11. Having a display that will fit in my briefcase or messenger bag is a big boom.

I found this Elecrow monitor on Amazon which seemed to fit the need. Amazon UK Link
With the following specifications:
15.6-inch Portable Monitor
HD 1080P resolution (1920 x 1080) and IPS wide-angle.
HDMI and USB C interfaces. If your device does not have these two interfaces, you need to buy an adapter such as USB to HDMI/USB C to VGA/Lightning to HDMI adapter.
Just One Cable Connection for both Power and Data Transfer
A single USB Type C cable connects your laptop/game consoles/smartphone to the display so that no additional media cables and no power supply are required.

I only need carry a small USB-C power bank to power the display and the lightning to HDMI adaptor for the iPhone.
The display can actually run directly from the Huawei smartphone just using the supplied USB-C to USB-C cable as the smartphone can deliver both power and data. The iPhone needs the additional power input to one of the USB-C ports of the display
The Huawei uses USB-C so I can use the EMUI interface to display a complete windows like desktop environment to show the phone apps. Connecting a small bluetooth keyboard expands the complete functionality of the setup.
The display is very easy to setup and the custom controls allow you to set up the display to exactly how you need it either for viewing movies or using it for text display etc.
I like the semi matt screen as this does help to reduce screen reflections and theIPS screen is fantastic as it allows viewing from many different angles without the usual colour distortions of TFT panels.
The 1920x1080p capability adds great resolution enabling me to easily edit my video and photos from the smartphone directly. The 3.5mm earphone socket on the display is useful when I want to watch videos without disturbing other people. The internal speakers are adequate for personal listening.
In summary this is perhaps one of the most useful external displays that I had bought enabling me to expand my editing and writing whilst out and about.

Current Projects & Work In Progress



You may have seen my reviews of the IMStick magnetic mount for smartphones.
I have made another development using this device for quickly copying either photographs or illustrations from magazines etc.
The vertical support is a piece of aluminium channel and into it I filed down some aluminium bar so it was a sliding fit. By carefully measuring the height of the smartphone from the baseboard to get a perfect fit for 4x6 inch, 5x7 inch and A4 sized images I made holes so that the smartphone could be quickly set to the desired height.
By using two table lamps with daylight LED bulbs set to 30 degrees to reduce reflections and with a darkened room it was very easy to quickly copy pictures.
I have now found an easier way to make the column and adjustments and will be working on that soon.

One of the images copied using the set up

Well that's it for this new, larger format, newsletter with coloured pages to separate topics.
Once I have finished a few more product reviews, that I have been sent products for, I will be back to producing some updated tutorials covering the FZ300/330 and the FZ 1000 cameras.

Please let me know what you think about the new format and the proposed direction of the YouTube channel.

Until the next issue, stay safe, stay well.

Graham