Welcome to my first newsletter for 2024

Well 2023 went out with yet another episode of vertigo which was the most violent to date.
Using my usual head manoeuvres to resolve the condition was not having the usual result so after quite a few recommendations I tried the Epley manoeuvre which does come with certain warnings about its execution at home.
Unfortunately this exacerbated the condition and I had to go back to my usual routine for nearly two weeks before the condition finally cleared.
I'm now free of this debilitating condition and also embarking on a 5 month weight loss plan which I hope will also address some of my breathlessness. I have 15lbs to loose for my 75th birthday.
I'll publish my progress as a way to shame me into keeping on track! **Month1 weight loss 4.2lbs**

My Review of the FeiyuTech Scorp Mini 2 Gimbal which supports Panasonic Bridge Cameras

I was fortunate to be asked again by FeiyuTech to review one of their latest 3 axis gimbals – the Scorp Mini 2.
Now I did review the original Scorp Mini which was released as a Kickstarter project and I was not that impressed at the time as it did not connect with the Panasonic bridge cameras without hacking the USB-C to 2.5mm TRRS cable supplied with it.
It also had terrible adjustment slides for balancing the cameras which made it a long winded operation every time you needed to use it.
The IOS app that added some functionality also had several "bugs" which prevented getting the full benefit from the the gimbal.

Panasonic FZ300/330 on the Gimbal

Panasonic FZ1000 on the Gimbal

The new gimbal has now addressed most of my concerns about the balancing and connectivity issues with the original gimbal.

The Shutter release button on the gimbal can now start and stop video recording in the video mode or can provide half press focus and full press release in stills mode.

Providing that the lens hoods are removed and the cameras are used at minimum focal length settings I was able to get both cameras balanced and stable operations on this gimbal.

Once mounted the full suite of applications was available through the app or direct from the gimbal itself.

Design

The FeiyuTech Scorp Mini 2 sets itself apart from other gimbals with its dual-grip design.
While it can be used single handed it really shines when used with both hands giving full control and a better user experience.
The grips fit perfectly in the hands. Featuring a new joystick, record and menu buttons all conveniently placed within easy reach.
The gimbal's design allows for easy transition between different devices, making it effortless to switch from a smartphone to a mirrorless or action camera. The overall lightweight design and perfect grip add to the comfort and ease of use.

Balancing the Gimbal

One of the key aspects of using a gimbal is achieving proper balance.
The Scorp Mini 2 makes balancing a smartphone a simple matter of just sliding the phone mount into place and ensure it locks securely. The axis can then be unlocked and balanced.
The goal is to keep the smartphone or camera in position without any tilting. The autotune feature helps in calibrating the motors, ensuring optimal performance.

Menu and Navigation

The menu interface of the Scorp Mini 2 is user-friendly and easy to navigate.
Located in the top left corner, it allows for menu customisation and motor calibration.
The top right section provides control over the overall speed of the gimbal.
Keeping it at a slower speed often yields smoother shots.
The bottom left corner offers various modes, including pan, tilt, follow, locked, fpv, and ffw modes.
Each mode serves a different purpose, catering to a wide range of shooting scenarios.
The bottom right section grants access to additional features such as time-lapse, 360° spin shot, portrait mode, and track video. The wheel at the front of the gimbal can also be customised to perform different functions.

Image Stabilisation Performance

The success of any gimbal lies in its ability to deliver steady footage. The Scorp Mini 2 excels in this aspect, providing impressive stabilisation for various mounted devices.
Whether it's an iPhone 15 Pro, Samsung S23 Ultra, or a Canon M50 with a 18-55mm lens, the results are consistently smooth and jitter-free. The gimbal's lightweight design and advanced stabilisation algorithms contribute to the excellent stabilisation performance.
It is worth mentioning that also doing the "ninja walk" technique, which involves bending the knees, helps minimise up and down movement, further enhancing stability.
Overall the Scorp Mini 2 looks to be a reliable tool for capturing professional-grade footage.

AI Features and Tracking

One of the headline features of the Scorp Mini 2 is its built-in AI capabilities.
With the ability to face track subjects, this gimbal offers convenience and versatility.
By simply activating the tracking feature with a hand gesture, the gimbal will follow the subject's movement. This is particularly useful for vlogging or capturing dynamic shots where the subject is constantly moving. The gimbal also allows for real-time recording control, enabling hands-free operation. Additionally, the AI features include time-lapse, panoramic shots, and various shooting modes. These features enhance creativity and simplify the shooting process.

Product features

Payload 1.2kg. High compatibility with Sony α7, Canon EOS, GoPro, and other manufacturers.
Full compatibility listing
1.3-inch touch screen for detailed parameter settings
Built-in AI tracking module, automatically follows and shoots using only gimbal function.

The "Magic wheel" that expands the shooting functions, such as changing the focus while shooting (if the camera supports this) and operating the gimbal up, down, left and right.
Up to 10 hours of continuous operation for shooting all day long.
Battery capacity:2500mAh
Charging time: 2 hours (18W rapid charging)
Possible operating temperature: -10℃～45℃
Axis movable range: Tilt axis 318°/roll axis 320°/pan axis 360° (no limit)
Axis operable range: Tilt axis +137° to -60°/Roll axis +40° to -40°/Pan axis 360° (no limit)
Supported follow modes: PF, PTF, FPV, FFW and lock.

GoPro Hero 9 Black Action Camera mounted on gimbal

Connectivity
The gimbal can control mounted cameras through one of three ways: Direct USB-C control, USB-C adaptor cable or by Bluetooth depending upon the camera.
The USB-C adaptor cable only supports start-stop video recording whilst the camera is in the video mode or to control the shutter release in photo mode.
This is the same for most Bluetooth devices like the GoPro Hero 5 onwards.
With USB direct control, depending upon the camera type it may be possible to control focus, aperture, shutter speed or ISO.

Until the 19th April 2024 FeiyuTech have offered a 10% discount on this gimbal if you use "Graham" in the checkout stage to apply the discount : https://store.feiyu-tech.com/en-gb/products/feiyu-scorp-mini-2?variant=47434861838611

I will do another video covering the detailed setup of the FZ300/330 and the FZ1000/10002 showing the initial balance positions for the camera and gimbal arm adjustment and show how to use the Feiyu On app to use object tracking when using the smartphone mounted on the gimbal rather than the AI face tracking as then it can be used for any moving object, or animal.

A note about the camera compatibility chart: it does not list any of the Panasonic bridge cameras but I have tested them for balance and connectivity and they do work and it is the same for some of the M4/3 cameras with the 2.5mm TRRS remote socket. I'll test these soon.

The New Google Image Editor

Last year Google updated its photos app with new tools, some of which are AI based.
I don't normally use this editor however as I have been using my Samsung Galaxy 23 Ultra more and more it is far more convenient to gain access to the images captured by having the facility to upload from the smartphone directly to Google Photos where I can edit them. It's not as fast or convenient as Apples air drop facility across my Apple IOS devices but is more convenient than connecting the smartphone via USB to my iMac for editing.
The editor now has features that you can use for basic edits but doesn't have things like layers and masks but not everyone wants these for everyday edits. It does lack features like sharpening and adding text but once the file is in the computer it can be edited with tools which support those functions.

Important: Some tools are only available for Google One members.
To use these tools, check that your device has 4 GB RAM and that your browser is updated to the latest version.

Click Brightness to adjust the overall lightness or darkness.
Click Contrast to adjust the difference in tones.
Click White point to adjust the brightest value.
Click Black point to adjust the darkest value.
Click Highlights to adjust the detail in the brightest areas.
Click Shadows to adjust the detail in the darkest areas.
Click Saturation to adjust the intensity of colours.
Click Warmth to adjust the colour temperature.
Click Tint to adjust the hue.
Click Skin tone to adjust the saturation of the skin-coloured tones.
Click Blue tone to adjust the saturation of the blue tones, like sky or water.
Click Pop to adjust the local contrast of edges.
Click Vignette to reduce the brightness around the edges of the photo.
Click HDR effect to enhance brightness and contrast across the image for a more balanced photo.

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To add a pre-built filter:
At the top, click Edit and then Filters Photo filters.
Select a filter.
To change the strength of the filter on the photo, move the dial.
When you finish, click Save.
To undo a filter, click None.

The filters option with strength slider at the bottom of the image

A couple of new features which I like are:

Suggested edits—Upon opening the editor, you'll be presented with automatically selected editing functions that can transform your image with a single click. Probably the most useful of these is the "Enhance" button.

*The "Suggested Edit" options when opening an image*

Expanded aspect ratio options—Crop and rotate your photos in a selection of different aspect ratios, including a new 5:4 option.

Note that, while these changes bring an improved editing experience to all Google Photos users, several of the more powerful features, such as HDR editing, Portrait mode and Colour Pop remain locked away from non-subscribers of Google 1 (or Google Pixel phone users). Google 1 also adds additional store and here in the UK 100GB will cost £1.59 per month

 Non-paying users are able to see a preview of each effect but won't be able to save their changes without upgrading.

Editing Video on Google Photos

Since loading Google photos on my IOS Apple iPhone 15 Pro Max I have now access to a very quick way of trimming video clips captured with the camera prior to uploading to my main computer for final editing. For basic edits like trimming start and end points it is very simple and if you are just using the clips for your own playback or social media the editing tools like brightness, contrast white point etc are available. Capturing a still frame is also a useful addition here.
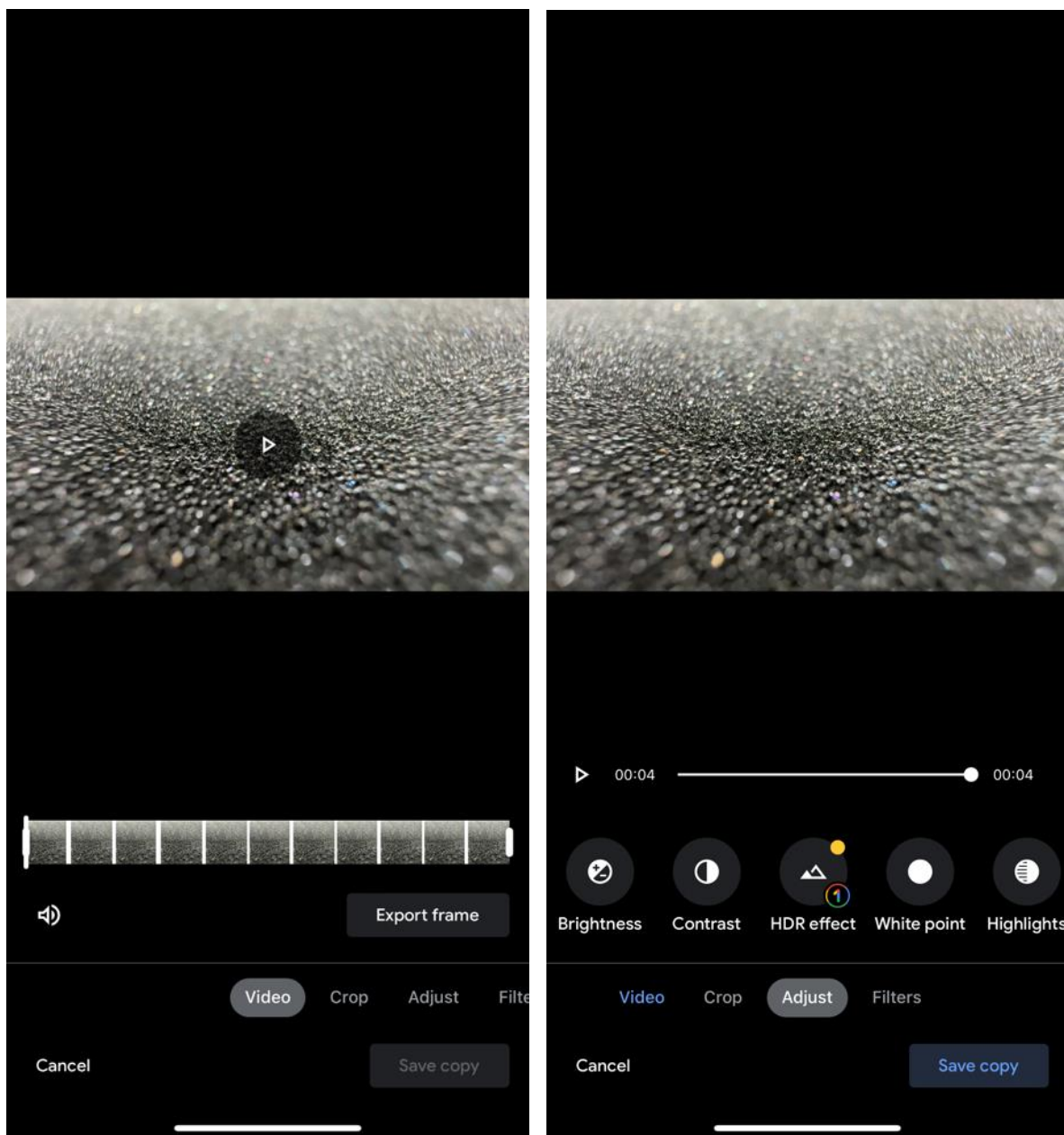
Trimming video clips, cropping and colour correction are possible with Google photos app on IOS or Android devices

The only negative about this app is the lack of ability to flip an image either vertically or horizontally. This is an important tool for any images captured in selfie mode. I contacted Google support to ask for it to be considered for the next revision. They seemed positive about the idea.

OK you can set the camera app to flip all selfie images however those that are not flipped will need to be loaded into another editor which does have this.

It is a mystery why they removed this facility yet at the later update they added distortion correction for things like wide angle shots with converging verticals.

Hopefully there will be enough feedback that they should reconsider adding this back to the editing/crop feature.

If you have the app loaded on your smartphone then additional editing tools are available (they are not available on the web based app on your computer), in the "tools" option, such as Magic eraser and background blur.

By using the magic eraser (almost a content aware fill) the metal drain cover in the top image was removed.

Slight imperfections in the process can show in this very quick and simple method even though it is being heavily advertised with the new Google Pixel 8 phone it will appeal to some users I guess.

This smartphone has no less than 5 cameras:

Main camera	200MP, f/1.7, 1/1.3 inches, 0.6μm pixels
Ultrawide camera	12MP, f/2.2, 1/2.55 inches, 1.4μm pixels
Telephoto camera #1	10MP, 3x optical zoom, f/2.4, 1/3.52 inches, 1.12μm pixels
Telephoto camera #2	10MP, 10x optical zoom, f/4.9, 1/3.52 inches, 1.12μm pixels
Selfie camera	12MP, f/2.2
Video recording	8K at 30fps, 4K at 60fps, 1080p at 240fps, 720p at 960fps

The Samsung Galaxy S23 Ultra has one of the most impressive camera setups on any recent smartphone. Amongst the top features is the main camera that can take images at up to 200MP resolution. However since shooting in 12MP (and 50MP) is also available, you have a surprising amount of choice. So how are you meant to use these different camera modes?

After trying out all three of these photos modes, I would say the 200MP setting on the Galaxy S23 Ultra is a real niche feature. While it offers nine times as much detail as the default 12MP photos, it's less practical to use most of the time, *and even when it is a viable option, 200MP won't always produce a better-looking photo.*

However, there's still a point to the 200MP photo mode. You just have to be judicious about how and where you use it. And hopefully my experiences below will help you understand where the strengths and weaknesses of the Galaxy S23 Ultra's signature feature lie.

By default, the Galaxy S23 Ultra main camera captures photos at 12MP, rather than at the full 200MP. It manages this by what is referred to as "pixel-binning" that is combining 16 pixels together into a single virtual super-pixel. In theory, this approach offers other photo quality benefits, too, such as better colours and brightness since each super-pixel can capture more light information than a normal one. It also captures more dynamic range.

This is the same approach that the 50MP mode uses too, except this bundles groups of four pixels together instead of 16.

Looking at the size of the images taken, a 12MP image on the Galaxy S23 Ultra, can take up to around 2 to 4MB of space.

A 200MP image usually takes in at least 30MB, with some of my test shots closer to 40MB of space.

So taking photos at the S23 Ultra's full potential means you'll fill up the on-board storage up to ten times as quickly.

A slight crop from a 200MP image taken with the x1 F1.7 Lens 23mm EFL

A slight crop from a 50M image taken with the x1 F1.7 lens 23mm EFL

The 200MP image has more detail and has 3x more storage need. The 50M image looks to have more contrast and the black background has a slight magenta cast.

A slight crop from a 12M image taken with the x3 F2.4lens 69mm EFL

Crop from 50M image compared to 12M image from x1 lens

Crop from 200M image compared to 50M image from x1 lens

The 200M image, for me, has the most pleasing tone without being overly contrasty as in the 50M image and the 12M image is more pleasing than the 50M image which exhibits a magenta shift as well.

The last image is a crop from the 200M image compared to the 12M image

In the comparison from the x1 lens with the 200M setting with the 12M setting it looks like, in the test, the contrast increases as the pixels are combined. So for a x7 less of a file size 3.4MB to 22.41MB.
I think that I would rather have the option for the ability to crop more at a later time with the 200M image.

In the doll images, again using the x1 lens, it is apparent that there is a noticeable colour shift when the image is down sampled from 200M to 50M to 12M.
Also the contrast increases as the down sampling increases.
The two, side by side images, of the doll at 200M versus 12M the 12M looks sharper because of the increased contrast however the colour is more natural. The 200M image is slightly warm.
All the images are significant crops from the original image which was almost full length.

Here is a very nice example of x3 in Portrait mode from a 12M image capture

Unretouched out of camera x3 lens in portrait mode

Upgrade to Samsung Galaxy S24 Ultra

No sooner had I wrote the section on the S23 Ultra the offers started circulating for the new S24 Ultra. As early adopters the doubling of internal memory, generous trade in discount and the free smart watch offer was enough to tempt me to trade in the S23 Ultra.

There were several considerations that swayed my decision as well.
The x10 zoom was probably too much for everyday photography and coupled with only a 12M sensor behind it meant that any crops of the image would result in much lower resolutions.

Second the new screen with higher brightness for use outdoors in sunlight coupled with a lower reflectance was going to be a benefit.
The new x5 lens supported by a 50M sensor would allow for some decent crops if needed for closer views.
At the normal size of image there would be more detail available.

Whilst the physical appearance of the smartphone with a flatter screen and titanium surround would make for better viewing.
Here's my first impressions of the camera performance.

Outward appearance very little has changed in this upgrade

Looking at the lens line up.

Main camera	200MP, f/1.7, 1/1.3 inches, 0.6μm pixels
Ultrawide camera	12MP, f/2.2, 1/2.55 inches, 1.4μm pixels
Telephoto camera #1	10MP, 3x optical zoom, f/2.4, 1/3.52 inches, 1.12μm pixels
Telephoto camera #2	50MP, 5x optical zoom, f/3.4, 1/3.52 inches, 0.7 μm pixels
Selfie camera	12MP, f/2.2
Video recording	8K at 30fps, 4K at 120fps, 1080p at 240fps

Whilst the iPhone 15 has a brighter F2.8 but smaller sensor it will be good test to see which performs the better!

An image captured with the new x5 optical lens at 50MP

A sample image using the x5 lens in Portrait mode 12M

A sample from x3 optical lens 12M

Crop from 200MP x1 lens

It will be an interesting test between the iPhone 15 Pro Max and the Galaxy S24 Ultra. My prediction is that the Video quality from the iPhone will be better as I can utilise the Black Magic Cinema camera app to squeeze the last bit out of it. I'm not sure what the native camera app will deliver with the 4K upgrade to 60fps. As they say … watch this space.

Portraits in Full Sun?

Not really advised as this can cause very unflattering images due to the high contrast and the ability to show every pore and wrinkle!

Here's what afternoon direct sunlight looks like.

But if you get a simple white nylon diffuser and place it between the sun and you model (I also use it for my wildflower photography to reduce the harsh shadows spoiling the delicate colours of the plants) you will get much softer lighting and more flattering lighting

To fire the shutter on the Lumix FZ80/82 for that shot I used the Panasonic Imaging app in remote control mode.

With Diffuser

The image with the diffuser showing much softer light with less harsh lighting on the hair and fabric and much smoother shadow roll off on the cheeks.

Incidentally I think this shows the potential of the FZ80/82 given reasonable light, low ISO and a suitable shutter speed to avoid camera shake/subject motion blur.

Bluetooth Latency Explained

From a comment on one of my recent videos a comment was made asking why Bluetooth microphones could not be connected to bridge cameras or mirrorless cameras directly rather than the 2.4GHz wireless microphones we commonly use.

The problem is the propagation latency of this system which makes the out of synchronisation of audio and video noticeable.

If we consider a typical Bluetooth application of earbuds or headphones this might help.

Bluetooth latency refers to the delay between the time audio is sent from a source device (like your phone or computer) and the time it's received and played back on your Bluetooth headphones. This delay can be caused by a number of factors, including:

1. The Bluetooth codec: Different codecs compress and transmit audio data in different ways, and some have higher latency than others. For example, the SBC codec, which is widely used in Bluetooth devices, has a latency of around 200 milliseconds. Newer codecs like aptX Low Latency and LDAC can achieve latencies as low as 40 milliseconds.
2. The Bluetooth version: Older Bluetooth versions, such as Bluetooth 2.0 and 3.0, have higher latency than newer versions, such as Bluetooth 5.0 and 5.2.
3. The distance between the devices: The further apart your devices are, the longer the signal has to travel, which can increase latency (but only by micro seconds).

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4. Interference: Interference from other wireless devices, such as Wi-Fi routers mobile phones and microwave ovens can also increase latency as the system may have to keep changing channels in order to maintain the communication

The degree to which you notice Bluetooth latency depends on a few factors, including:

1. The type of activity you're doing: If you're watching a video with people talking or playing a game, even a small amount of latency can be noticeable and distracting. However, if you're just listening to music, you may not even notice it.
2. Your sensitivity to latency: Some people are more sensitive to latency than others. If you're a musician or gamer, you're more likely to be bothered by it.
3. The quality of your Bluetooth headphones: Some headphones with the latest aptX codec are far better than others.

About a year ago I did a review of the Hohem BT01 Bluetooth mic just to see what the latency was on that for use with smartphones.
https://www.youtube.com/watch?v=C5zrRtBUwiY

Using A Smart Plug To Extend Lithium Ion Battery Life

It's easy to forget that lithium ion batteries do not like to be kept on a "float charge" once they have reached full charge.
The anodes of the cells become damaged and over a period of time this decreases the effectiveness of the cell and shorten its lifespan.
Some experts also recommend only charging to 85% rather than fully charging the battery to increase lifespan.
A smart plug gives you several ways to prevent overcharging of your devices by switching off the supply to the wall charger through which you are charging your devices.

To do this you can program the smart plug to automatically turn off after a set number of hours after it switches on.

A typical smart plug

So your set up for the smart plug would be to set an everyday on time at say 05:00 and then set an everyday off time at 08:00 (these start and end times will depend upon the charge rate of the charging device and the capacity of the battery in the device – adjust these to give a realistic charge)

Plug your device into the charger as usual and then let the smart plug switch on to begin charging at your set time and then it will switch off at the end time you have set.
If you have multiple devices that you regularly charge then plug a short extension trailing socket into the smart plug and your chargers into the trailing socket.
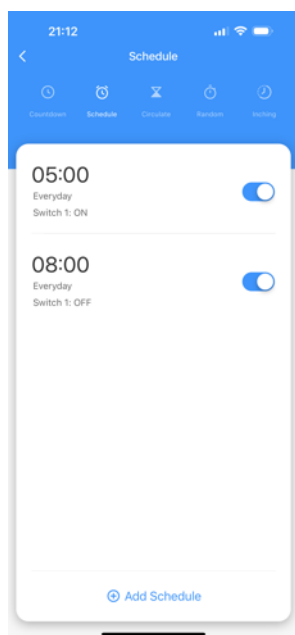
The schedule set up through a smartphone app   *the smart plug and charger in use*

Well that is it for this newsletter, thank you to those who help by using my affiliate links on Amazon to purchase your products – it really does help to fund the website and domain name registration etc.

My Photography book should be completed by the next newsletter, just indexing it.

Until the next one, hopefully early/mid-March thanks for reading

Graham