

Feiyu Tech Vlog Pocket Gimbal

Earlier in July I was approached by Feiyu Tech to review a new product, the Vlog Pocket Gimbal, ahead of its official launch on the 15th July 2019.

I used to do quite a few product reviews, particularly on Amazon, but about 2 years ago I stopped doing them as they didn't fit with my YouTube channel content.

When I received the advanced product details for this new product I was interested in trying out this gimbal as its design looked to allow the fitting of an external microphone without fouling the gimbal mount.



The Vlog pocket gimbal in the energised position and folded up.

As you can see from the image above it uses a folded design, hence its “pocket” designation.

It is supplied with a folding tripod mount to allow the gimbal to be used on any flat surface for simple presentations etc.

It can be used with any basic smartphone camera app however Feiyu Tech have the Feiyu-On app which allows the gimbal to be controlled over a Bluetooth connection from either an IOS or Android system smartphone.

Using the app allows the gimbal to start and stop video recordings or activate the shutter with stills photography.

What is probably unique with this gimbal is the fact that the attached smartphone doesn't need balancing, however making a rough central balance point reduces the motor loading and improves battery life.



Holding the gimbal with an attached iPhone X

The gimbal has two basic operation modes. Panning follow me and Locked modes. In the panning follow me mode the rotation (vertical Z axis) of the gimbal shaft causes the gimbal head to follow this rotation thus allowing the operator to pan around the scene being captured.

The other two axis are locked and both the side to side and up and down rotation of the shaft do not affect the position of the smartphone.

In the locked mode all the three axis are free to rotate without altering the position of the smartphone.

The modes are selected by pressing the upper button on the shaft. A single short press changes the mode and the state is indicated by the blue LED adjacent to this button.

A solid blue light indicating the locked mode a flashing LED indicating the panning follow me mode.

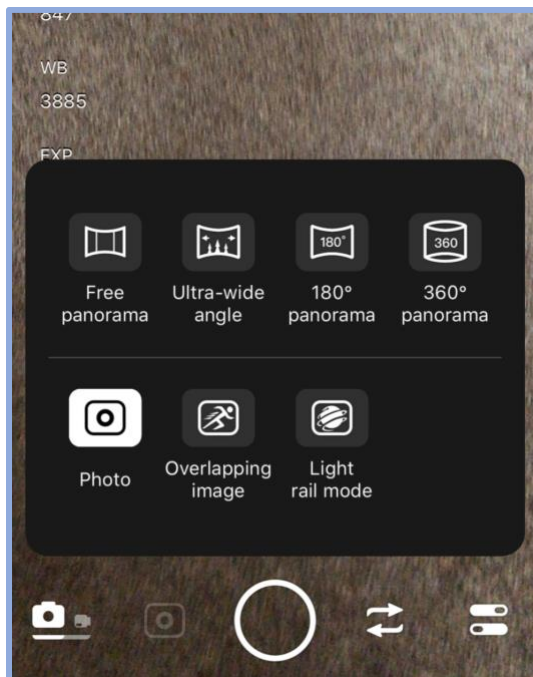
On the rear of the shaft is a button – the trigger button. This button when pressed allows the operator to move the vertical angle of the smartphone.

When the button is released it locks the position of the smartphone.

Thus the camera can be pointed down, or up, on a subject rather than just straight ahead.



The Feiyu-On app extends the scope of the gimbal to other operating modes such as ultra-wide angle which builds up an image from a matrix of 9 images.



It can also be used for automatic panorama image of 180 and 360 degrees. However I found that because of the physical restraints of the gimbal mount the 360 degree mode actually only produced a sweep of about 270 degrees.

The overlapping mode allows two images to be superimposed upon each other and the light trails mode allows the gimbal to be moved and creating horizontal streaks of colour. In use I found that the untextured handle of the unit was a little too slippery for me – especially when trying to operate the mode or shutter button.

I added a little extra textured rubber grip on the front and rear of the unit to improve this. Without the small tripod attached and folded up I also found that the handle was a little too short for me – and I have small hands.

With the extra 3 inch of extension provided by the tripod I found the grip was better. I would have preferred the operating buttons to be placed side by side instead of above each other as I found that flexing the index finger to operate either button was a little awkward.

The trigger button at the rear of the button again needed a different grip position to operate it from the mode/shutter button. All of this led to some frustrating operation at times.

When reviewing video captured with the iPhone X in a panning mode it was evident that the stabilisation of the horizontal movement was causing some jerkiness of the captured video. This is obviously a failing of the iPhone and no way to disable the panning mode stabilisation as you can with traditional video/hybrid cameras.

With other smartphones which have the ability to disable the OIS then this should provide better stabilised video.

The mode button when double clicked rotates the gimbal head into the portrait mode. When doubled clicked again it returns to the landscape mode.



However I found that when doing so the camera never returned to the true level position.

The gimbal can also be inverted for low angle shooting.

The Gimbal is available in Black or Pink at £99 in the UK.

For a more in-depth review I've added one to my Photoblog site [Review](#)
I've also done a YouTube review here

The Feiyu Tech website [Gimbal](#)

Slide (Transparency) and Negative Copying/Conversion

If you have 35mm transparencies or colour negative film and would like to turn these into digital images then the following process may help you to achieve this.



In this set up I used my Canon EOS M50 with the 18-55mm kit lens set to its maximum zoom of 55mm. Attached to the lens is a Raynox 250 lens although a #4 close up lens will probably work OK.

The slides and negatives are held flat by placing them in inexpensive carriers that I found on Amazon. They were intended as replacement carriers for popular flatbed scanners.

The ones that I purchased came as a set [link to Amazon UK](#) for £9.99

Negatives and Transparency Copying



For the light source I used a LED light with a piece of 6mm translucent Perspex to act as the diffuser.

You could use an iPad or laptop screen if you use a program to create just a white background (some test screens are available which do this or use an app with a plain background like notepad).

The camera is held on a tripod and the face of the lens must be parallel to the copying plane.

I used a three way bubble level of the diffuser to set it level and then transferred it to the camera to set that level in the two planes.

I performed a manual white balance at this point however you can use AWB but the results may depend on the light source used.

With the lens and supplementary lens combination I was able to achieve an image with just a little of the carrier mount showing. This is easy to remove in post editing by suitable cropping.

For transparencies there is little editing required.

Using Aperture priority to set the lens to F5.6 to give a little more depth of field to accommodate any slight bowing of the slide/negative and the two second timer it is easy to capture the first image and then slide the carrier to the next image etc.

The transparency image before editing



The image after cropping and editing



When copying colour negative there is, of course, the issue of the orange printing mask and the colour reversal that is needed to present the negative as a positive image.



I used Photoshop to invert the colours and then Auto Tone and then saturation/hue to complete the edit. I then cloned out dust spots etc on the image.

A Car Jump Starter with Additional Uses for Photographers and USB-C explained

In the past I have done several reviews of jump start units aimed at the owners of cars and trucks and each one I have modified to add extra functionality so that they were more useful to me than just sitting in the glovebox of my car just in case I ever needed to jump start my car because of a flat battery.

In truth the number of occasions where I have needed to use the devices has been down to my own errors.

Either I had been editing images in the car with the air conditioning fan running for extended periods of time or I had left the interior lights on or I had the mains power inverter running to power my laptop.

All of these instances occurred whilst I was on holiday on the isle of Arran and were totally avoidable.

So why the attraction of another jump starter/power bank?

Well I'm finding that as a lot of my camera batteries are beginning to age so the total capacity of each of them has started to diminish. When shooting video, for example, the need for filming over at least 30 minutes is now beginning to catch me out with batteries which deplete in this time, particularly when using the Canon M50 in the 4K video mode. I have several USB powered lithium-ion chargers so I can quickly top up a battery during a lunch stop, for example, and I have dummy batteries and voltage step up converters to enable me to use power banks to power the camera when filming for long periods. However USB-C is fast becoming the new standard for both charging and powering devices.

Particularly the new PD (power delivery) types where the host charger can adjust the output voltage/current to the maximum value needed by the connected peripheral. This new PD system has the potential to allow things like smartphones to be charged at the fastest (and safest) possible way.

If we take a look at the history of USB charging it is easy to see why there is so much confusion and mis-matched charger/peripherals.

So the original USB 2.0 specification allows the charging of devices with 5V and up to a maximum of 0.5A (500ma). With this 2.5W (volts x amps) only supply it meant that as new smartphones came out with ever increasing power needs to run not only the high speed processors but HD displays and larger capacity batteries charging times could be very long. To overcome this issue a new standard of USB 3.1 was introduced which provisioned 0.9A (900mA) at 5v (4.5W). This was still too low to enable quick charging of these power hungry smartphones so an intermediary protocol was developed with was listed as the USB BC 1.2.

This protocol was used for charging cables specifically and not used with the universal charge/sync cables. This was because the two data pins in the USB plug were shorted together. The chargers were designed to detect this and the charger would allow 5volts at 1.5A to be used to charge these smartphones.

As batteries increased in capacity charge times became too long so again a new standard, the USB-C standard was introduced which allowed 5volts up to 3A (15W) to be used to

charge these new smartphones. USB 3.X ports were designated having a blue insert in the socket to distinguish them from USB 2.0.

Before looking at the Power Delivery specification, there's a little confusion to be cleared up with the latest USB Type-C standard. Even though new phones sporting Power Delivery have a Type-C port, the two aren't the same when it comes to charging power.

USB Type-C ports can be configured in fast charging modes at either 1.5 or 3.0 A for more power when connected to other Type-C devices or chargers. USB Power Delivery is a separate specification that can work across USB 2.0 and 3.0 ports and cables, but you'll still need a USB Type-C port as well due to the communication pins used by this standard. In addition to faster charging, this USB PD standard enables both host and peripheral devices to provide power.

You could use your phone to power a hard drive over the same port used for charging, for example. To figure out how much power to transfer to any device, the source and host need to be able to communicate their requirements. This is done by sending small packets of data between the host and source across the USB communication (CC) lines, although this is complicated somewhat by the potential for dual roles for charging and data sources. With this new standard it is possible to get power distribution of up to 20v 5A (100W) with the use of compliant cables.



On some chargers you may even see the USB-C QC (quick charge) ports alongside a USB-C PD (power delivery) type port

To enable PD protocols both the host and peripheral must support the PD USB-C sockets. When connected with male to male cables the communication can occur between the two devices and the correct voltage and currents set up.

It is possible to connect two USB-C PD phones together to share the charge on the devices. With correct cabling an Android PD socket smartphone can charge a lightning IOS device!



USB-C to USB-C (PD) connected smartphone and power bank showing the Quick Charging has been selected.



Similarly if a USB-C device is connected to a USB-3.0 QC (quick charge) port again the smartphone will negotiate quick charging.

At the moment, USB Power Delivery is a bonus luxury rather than a major shift in charging capabilities. Smartphones aren't going to use the very high power charging modes, and so far it's not used to charge phones any faster than other standards. It also adds additional complexities to the USB circuitry and development costs, yet USB Type-C's 15 watt capabilities alone are enough to charge up a typical smartphone battery considerably in just 30 minutes.

Smartphones don't need to deploy Power Delivery mode to charge any quicker, but support for universal USB fast charging makes this a nice future-proofed option to have.

So what about the new car jump starter?



The two USB 3.0 QC ports on the unit each up to 3A

Well this 20,000mAH unit supports the 2 USB 3.0 QC ports and one USB-C PD in/out socket. It also supports the 12v 10A output port which can be used with the cigar lighter accessory socket to power other devices such as tyre inflators and power inverters.



I have done a full reviews of the jump starter and its additional uses on YouTube [link to video](#)

USB Confused.com



With many versions of USB plugs from Type A, Type B, Mini, Micro, micro B superspeed and Type C it's very confusing with what connects to what!

This USB protocol has undergone so many iterations since the first introduction of version 1.0 in 1996 that even some of the conventional naming standard had to be renamed twice!

USB 3.0 (5Gbit/s) was renamed twice. The current name being USB 3.2 Gen 1.

USB 3.1(10 Gbit/s) was renamed to USB 3.2 Gen 2 with the introduction of the 20 Gbit/s USB 3.2 which is named USB 3.2 Gen 2 x 2!

And now scheduled to be released later this year is USB 4.0 with a 40 Gbit/s throughput based on the Thunderbolt specification!

USB was introduced to allow users to connect peripheral devices to host devices, like computers, without any intervention.

The Host and peripheral device would communicate with each other to establish first of all what the device was (such as printer, scanner audio device etc.,) and then the host would provide the correct data communication associated drivers for this product.

USB is a serial data protocol and can support 127 devices on one bus. The host has to continually poll, and service, all the connected devices on the same hub.

So if you have two peripherals with high data transfer needs it's worth ensuring that they are different HUBs, Some PC's and laptops have USB ports designed for this utilising two (or more) USB controllers on the motherboard.

Two high data rate peripherals on the same hub can result in lower data throughputs than separating them onto different controllers.

Windows device manager is a great tool to explore which peripheral is connected to which controller. On an iMAC the system information app shows the USB devices connected.

The world of USB looks fairly easy to the end user however for the developer of peripherals that is a whole new story as there is so much to consider during the implementation of the device software as there are such things as legacy device support to implement if they want their products to work across all USB ports!

Some cameras are now equipped with USB micro B superspeed connectors which allow faster data transfer and the ability to charge the battery within the camera (if implemented in the camera).

This connector is a far more physically robust connection compared to micro USB.

The Panasonic G9 is an example of this implementation.

Some of the later action cameras, like the DJI action camera, support the 20 pin USB-C type connectors which allow for faster data transfer and the possibility of adding extra peripherals such as microphones to the camera.

It's a very, very, confusing situation and I too get confused at times especially with USB 3 QC and USB-C PD devices which can be cross-connected to one another.

New Mobile Template for the www.grahamhoughton.com website

I was totally unaware, until it was pointed out to me, that the default template from JIMDO that I use to create my Photoblog website used fonts and colour schemes that were almost unreadable.

Since I do all my development on a laptop or PC screen I don't normally see the mobile view. So I've changed the colour scheme of the mobile part of the photoblog to make it more easily read.

I hope you like the change.



The new screen theme colours.