

# How to do DJI FPV Goggles Video Out via USB-C for Free

11th May 2021



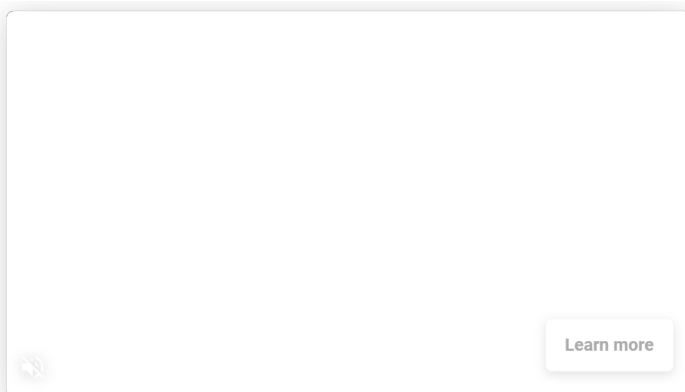
Normally you'd have to buy a \$750 DJI Smart Controller to get live video output from the DJI FPV Goggles (if you are using Air Units and Caddx Vista). However the community finally made it work without the expensive Smart Controller!

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**How to Choose FPV Drone Motors**  
Let's dive into the fascinating world of FPV drone motors! In this guide, we will explore the various factors that influence motor choice, including size, KV, and efficiency. We will also provide a comprehensive list of recommended motors for different drone models and flight styles. By the end of this guide, you will be able to confidently select the best motors for your FPV drone, ensuring a smooth and enjoyable flying experience.



**How to Fix FPV Drone Flips Over Taking Off Issues – The Ultimate Troubleshooting Guide**

Have you ever completed a new FPV drone build, only to find it flipping over during takeoff? This is a common issue that can be frustrating. In this guide, we will explore the various causes of this problem, including incorrect motor timing, improper servo calibration, and faulty ESCs. We will provide a step-by-step troubleshooting process to help you identify the root cause of the issue and implement the necessary fixes. By the end of this guide, you will be able to confidently take off your FPV drone without any flips or crashes.



**A Comprehensive Guide to FPV Drone Frames**

If you're into building FPV drones, then choosing the right frame is a critical decision. In this guide, we will explore the various factors that influence frame choice, including size, weight, and material. We will also provide a comprehensive list of recommended frames for different drone models and flight styles. By the end of this guide, you will be able to confidently select the right frame for your FPV drone, ensuring a smooth and enjoyable flying experience.

**Adjusting Throttle Curve in Betaflight and EdgeTX: Tips for Smoother Throttle Control**

It works on both V1 and V2 DJI FPV Goggles. This project is open source, requires no extra hardware and it's still work in progress.

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2. Does it work on Phones?
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## DJI Goggles 2

The newer DJI Goggles 2 video out works differently than the FPV Goggles V1 and V2 we are going to cover in this post. You can find out more in this guide: <https://oscarliang.com/dji-o3-air-unit-fpv-goggles-2/#Video-Output>

## Does it work on Phones?

Yes, it works on PC (Windows, Linux and MacOS), as well as smartphones. There is an Android APP available on Play Store, unfortunately it won't work on iOS (iPhone) according to the devs.

You will need a data-capable USB-C cable:

- USB-C to USB-C cable (Android phone)
  - Banggood: <https://oscarliang.com/product-p3s9>
  - Amazon: <https://amzn.to/3wk76mH>
- USB-C to USB cable (PC)
  - Amazon: <https://amzn.to/3wbESdJ>



## DVR Won't Work



Having precise control over your throttle is crucial for ...



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Bang



When video is being streamed out of the USB-C connection from the DJI FPV Goggles to a computer or smartphone, the DVR will stop working. The SD Card icon actually disappears from the screen when video out is operating.

So only one device at a time can see the video stream – either the DVR or the USB-C connection.

The same happens when video out is streamed to the DJI Smart Controller, so it's not a quirk of this particular video-out hack and happens even when using the official DJI hardware.

## Video Out on Android

Download Android APP, DigiView by D3VL: <https://play.google.com/store/apps/details?id=com.fpvout.digiview>

If you don't have Google Play, you can download and install the APK: <https://github.com/fpvout/DigiView-Android/releases>

Power on your DJI goggles and quad.

Turn off Auto Thermal Management in the goggle's menu under Device (Low Power Mode).

Note: Even if you get “Air Unit overheating, land promptly” warning, it usually goes away a few seconds after taking off because of the cooling from airflow. But if you worry about overheating you don't have to disable low power mode, just arm before connecting the USB cable to your phone.

Then connect DJI goggles to your phone with a USB-C to USB-C data cable. You should be prompted if you want your phone to handle the DJI Goggles, select OK.

Be careful to not overheat the VISTA / Air Unit when you're testing on the bench. If it overheats, the feed will just go black, and potentially damage the VISTA as well. Run a small fan over it for cooling.

NOTE: Looks like V2 Goggles might need an OTG adapter (on the phone side) to work since they can also function as a USB Host device so just using a USB-C to USB-C cable will usually make most the phone charge off of goggles but not be able to stream. I am using V1 goggles so unable to verify. Keep this in mind if it's not working for you.

## Video Out on PC

Here are instructions on how to get video out working on PC.

- Download and extract the zip file: <http://b3yond.d3vl.com/DJIVideoOut.zip>
- Turn on DJI goggles and connect USB-C (use a data cable)
- Run the “Install Drivers.exe” file
- In Options, click “List Devices”, Select “Bulk interface” in the drop down list
- Click “Replace Driver” (or Install Driver) and wait
- Close program and run “Run VOC.cmd” in the same directory
- If you have a hybrid laptop (dedicated gpu) choose the hybrid gfx cmd
- Turn on drone
- Done!

If you're testing this on your desk and it's not working, the drone either needs to be armed first, or you need to turn off Auto Thermal Management in the goggle's menu under Device.

If you see LIBUSB\_ERROR\_NOT\_FOUND error, the driver is probably not installed properly, try to run the above steps again.

Be careful to not overheat the VISTA / Air Unit when you're testing on the bench. If it overheats, the feed will just go black, and potentially damage the VISTA as well. Run a small fan over it for cooling.



It works on Windows, as well as Linux & macOS, but you'll need to install ffmpeg & nodejs yourself. Just follow the instructions on the GitHub: <https://github.com/fpv-wtf/voc-poc>

BEGINNERS

DJI

previous post

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next post

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## 35 COMMENTS

ANONYMOUS1433434

REPLY

🕒 14th April 2023 - 7:34 pm

Does this work on goggles 2 or goggles 2 integra? Is there a new app?

OSCAR

REPLY

🕒 14th April 2023 - 8:04 pm

No, the Goggles 2 only works with DJI's own fly app: <https://oscarliang.com/dji-o3-air-unit-fpv-goggles-2/#Video-Output>

ALBERTO

REPLY

🕒 6th April 2023 - 9:50 pm

Thank you very much Oscar for the content, i am wondering... Is there any solution to connect the DJI FPV Goggles v2 (the big one, not the new) with the ipad pro or the iphone using another app ?? or do we still need the DJI Smart Controller to get live video output from the DJI FPV Goggles ??

DAN

REPLY



been wondering this too! I hear yes using the DJI app but i've tried with no success on a new ipad air

**JAMES**

REPLY

🕒 6th March 2023 - 3:03 pm

What's the added latency like of running it into a PC or phone?

I'm debating which headset to buy. HDMI out is usefully because then I can sit inside the warm car or house but have the receiver outside.

**OSCAR**

REPLY

🕒 6th March 2023 - 5:20 pm

For spectating it's ok, but it would be too much for flying, I don't recommend it.

**UPZ LAUTSPEAKER**

REPLY

🕒 5th September 2022 - 8:57 am

Tried all of them. ATM the best versions are the DJI RC Pro Controller with FPV Live function/app and widefpv (in low latency mode) which is also perfect for streaming. Sadly it doesnt work with macbooks with m1 (video shuts down after a few seconds).

Does anybody now if the RM330 RC Controller work with the DJI FPV Goggles V1&V2 (not AVATA) like the RC Pro Controller with FPV Live App which can be bought in a set: "DJI Mavic Mini 3 Pro Set mit DisplayController RM330" ???

**CUP**

REPLY

🕒 12th August 2022 - 10:14 am

Agust 2022, when usb plugged in, the sd card dvr on the goggles still not working?

**KEN LAROCK**

REPLY

🕒 17th February 2022 - 1:47 am

Thank you so very much Oscar! I'm very late to the game on this but it works great on my PC! It's not working with my Android yet but I will keep trying. Is there a way to get this feed onto social media platforms such as Facebook and YouTube for livestreaming? Thanks all!!!

**OSCAR**

REPLY

🕒 17th February 2022 - 11:09 pm

You can probably use OBS to stream the feed (screen) to social media, youtube has loads of tutorials :)

**SERGE**

REPLY

🕒 8th January 2022 - 8:43 pm

I can confirm you will need a OTG cable to make this work. For most people, simply plugging the phone into the dji goggles will make the phone think it's the host device not a slave device. The OTG cable makes the phone think it needs to be the slave so the goggles can be the host. I

bought a USB C to USB adapter type C OTG cable(USB C Male to USB 3.0 A Female connector).  
Hope that helps someone!



**WILLYSFPV**

REPLY

🕒 26th August 2021 - 11:58 pm

Thanks for the info I am wondering will digiview work on an android tablet?

**OSCAR**

REPLY

🕒 27th August 2021 - 12:51 am

yes

**TOOKS**

REPLY

🕒 9th August 2021 - 12:43 am

Works great on dell i7 laptop.Latency is 2.5 secs or so in either of the 3 modes..low latency maybe 2 sec.

Thats fine because it will be for spectator/s.Give them an idea of what things look like flying around.

I dont think they will know the lattency much because of there perspective and not really knowing where the quad is and what it is actually doing in realtime.

**ADRIAN**

REPLY

🕒 10th July 2021 - 6:55 pm

all works but I see only: I am waiting for Video. Any Ideas?

**OSCAR**

REPLY

🕒 10th July 2021 - 7:55 pm

Power on the quad and DJI goggles first, wait until you get an image, then open the app before connecting the USB cable?

**ADRIAN**

REPLY

🕒 11th July 2021 - 10:15 am

Of course. First Info: Connect Goggles – I do it – then next Info: Waiting for Video. I open the App before connecting usb. Drone is of courst on and I see Video in goggles. And whenn I disconnect the usb cabel I see info: Goggles Disconnected. What I am doing wrong?

**ADRIAN**

REPLY

🕒 11th July 2021 - 10:33 am

ok I have 1 frame. and nothing more. any ideas?

**LUIS**

REPLY

🕒 21st June 2021 - 5:16 am



I got a 6ft usb-c to usb-c Anker cable and it won't work on my V1 goggles. This was working with a 3ft Usb-A to usb-c cable with OTG adapter on the phone side but I thought I'd get a longer cable and ditch the adapter... no luck.

Oscar, you have this working on v1 goggles with usbc to usbc cable without OTG adapter?

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**SKIP**

REPLY

🕒 2nd April 2023 - 7:47 pm

Anker cables are charging cables. You have to use a OTG adapter and a data cable to stream over Digiview when using Goggles V2

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**CHRIS**

REPLY

🕒 19th June 2021 - 12:05 pm

Great job guys, Hack the OSD next, so we can have full OSD, please.

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**DAMING**

REPLY

🕒 17th June 2021 - 8:37 pm

Thanks for the post. I bought a K10 android tablet just for this, but it didn't work... there is no prompt after I connect everything. I used a type c to micro cable. Does anyone have the same issue? Thanks!

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**OSCAR**

REPLY

🕒 17th June 2021 - 9:13 pm

You have the V2 goggles?

Try use an OTG adapter (on the phone side) to work since they can also function as a USB Host device so just using a USB-C to USB-C cable will usually make most the phone charge off of goggles but not be able to stream.

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**SCOTT**

REPLY

🕒 4th October 2021 - 3:33 pm

Oscar, I have to thank you, man – It seemed like I had everything right, but no video. This post saved me. When you spend hours on something and someone gives you that missing piece of the puzzle, it's so gratifying. Thanks for all you do for us!

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**BIN**

REPLY

🕒 30th May 2021 - 10:04 pm

AWESOME!!! Thanks Oscar!

I get heachaches from the DJI Goggles and actually bought the V2 googles based on Joshua Bardwell's review stating that V2 would allow video out – which was false. (What a piss-off!)

I sold the V2 goggles and was about to buy the Smart Controller when I saw this news.

Cheers!

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**SHILO**

REPLY

🕒 24th May 2021 - 6:36 am

Any chance this allows video input over usb c?



**OSCAR**

REPLY

🕒 24th May 2021 - 12:35 pm

No, only output.

**BABIPSYLON**

REPLY

🕒 23rd May 2021 - 12:03 pm

What the recommended data speed for the usb-c cable?

**MATT BALDER**

REPLY

🕒 10th June 2021 - 6:23 pm

I'm also trying to find the recommended data speed. My phone and tablet that I'd like to use for this have USB Micro B (2.0) inputs on them. I did try a USB-C to USB Micro B cable I have from my Insta360 OneX kit and was able to see the DJI goggles video output but it was a jumpy video (Was also delayed but I understand that this is normal). I'm searching now to see if USB Micro B (2.0) is even sufficient for the type of data transfer speeds required for this application. I did try switching to 25mbps mode in the goggles and saw a small improvement but still jumpy.

**MATT BALDER**

REPLY

🕒 10th June 2021 - 7:11 pm

I am going to try using a USB-C to USB-A 2.0 cable that I have with a Micro USB B + USB C to USB 2.0 Female Adapter Cable on the end to allow me to connect to either Micro USB B devices or USB C devices.

According to this website USB 2.0 can have a max data transfer speed of 480 Mbps so should work fine for this. [tripplite.com/products/usb-connectivity-types-standards](https://tripplite.com/products/usb-connectivity-types-standards)

The adapter I'm going to test:

[amazon.com/gp/product/B01N1RHJC0/ref=ppx\\_yo\\_dt\\_b\\_asin\\_title\\_o00\\_s00?ie=UTF8&psc=1](https://amazon.com/gp/product/B01N1RHJC0/ref=ppx_yo_dt_b_asin_title_o00_s00?ie=UTF8&psc=1)

**VINCENT LUBLINK**

REPLY

🕒 22nd May 2021 - 12:36 pm

what app on the iphone do i open to see the video?

**OSCAR**

REPLY

🕒 22nd May 2021 - 2:02 pm

doesn't work on iPhone

**VANN**

REPLY

🕒 16th May 2021 - 4:53 pm

Downloaded everything correctly and went fine.

The problem is when I Run VOC the black screen pops on and then off immediately



and get the no live feed. I re- installed everything and the same issue came up.  
Any Ideas this early in the game?



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**JOHN DANIELS**

REPLY

🕒 16th May 2021 - 1:18 am

Brilliant thanks

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**LUKE P STEPNIOWSKI**

REPLY

🕒 12th May 2021 - 6:33 am

This really is excellent news as one of the few bummer of the DJi FPV goggles is the lack of a reasonable spectator display. The solution is simply just a simple toggle sent to the googles via USB which dumps the video in a standard manner via USB-C. It will be trivial to create an Android App to facilitate with most of the work being UI and error handling.  
Very exciting!

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