



Gimbal Converter for DJI Mini 2



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Summary

Allows you to use your DJI Mini 2 as a 4K 3-axis stabilised gimbal camera

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[stabilizer](#) [steadicam](#)

Gimbal Convertor for DJI Mini 2

Converts your drone into a 4K hand held stabilizer.

This project came about as I needed 4K footage with a camera on a Steadicam which is heavy, cumbersome and requires a LOT of practice. The alternative was an electronic 3 axis gimbal which is out of my budget range and I already had the Mini 2 drone so...

There are two main units – the Converter which supports the controller and drone and the phone clamp which enables the user to shoot at eye-level or swung down to shoot at low level.

You'll need a large printer for the Converter to accommodate the handles but it was necessary to print in one for strength (peace of mind when a £500 drone hangs in the balance).

Both versions require supports that cover the wide slot on top of the Converter and another that extends up under the Converter's extended front arm clip.

The phone clamp requires an 80mm M6 threaded bolt (I buy threaded bars in 1 m lengths) and 2 M6 nuts. You'll also need 2 rubber bands (I used the ends of balloons – they've good tension and seemingly last ages).

PLEASE NOTE: If you undertake this project I bear no responsibility for damage to your drone, yourself, your property or anything else. Having said that the Converter is strong but is still plastic so should be treated with care. Always endeavour to hold the Converter with both handles.

All the controls should be accessible when the drone, controller and phone are attached and in use including the left-front camera gimbal rotator wheel.

I recommend you clip the drone onto the Converter before sliding on the controller. There's an arrow beneath the Converter indicating which direction the camera should be pointing if it isn't obvious. The clips underneath the Converter are tricky to slip over the drone's upper legs so take when attaching and removing the drone. This is intentional to minimize movement and vibration. Slide the DJI controller into the Converter from the back until the Converter's front arm clips over the front of the controller. Finally extend the clamp and lock in your phone.

Obviously, the drone's motors must not be activated which the drone is mounted in the Converter and the arms must be folded. A large rubber band can be used to lightly keep the props under the drone from swinging about. The upper props can be slid into the gap between the top of the drone and the Controller.

TO DISASSEMBLE

Remove the phone.

Remove the phone clamp from the controller.

Gently pull the clip at the front and slide the controller back until free.

The easiest way to unclip the drone from the Converter is to fold down one of the drone's bottom rotor arms before gently pressing the side clip upwards till it clicks free. Counter-pressure can be applied with your other hand to the opposite clip but make sure you don't put excessive pressure on the drone or its rotor arms and be wary of the fragile props.

THE PHONE CLAMP

Print 2 of the phone_stand_knob pieces.

They can all be printed on one plate. No supports.

Assembly of the phone clamp should be fairly obvious. Use superglue (CA) or 2-part epoxy to attach the 2 main_clamp_hinges to the base, sandwiching the 2 hinge_plugs to locate them.

Tap M6 nuts into the 2 knob parts.

Use superglue (CA) to glue the slide part into the slot in the main_clamp.

Screw the bar into one of the knobs with a little superglue on the end of the threads and run the 8mm M6 threaded bar through the aligned hinges and screw on the second knob to tension the angle of the phone.

Slide the assembled main_clamp/slide through the top clamp and stretch the rubber bands around the hooks on either side.

There you go.

If you want to play with this thing and don't have a printer with a big enough bed the converter.stl should fit but it doesn't have the handles which is a little more awkward in use at eye level but of course works exactly the same.

THE STAND

I printed all of the stand pieces on one plate. No supports. Print them flat.

Print 2 of the stand_side pieces.

Assembly is pretty obvious. The stand_backl fits on the end prongs of the side pieces and the taller stand_front slots into the sides. The extended fronts of the side pieces prevent the whole thing from toppling due to the weight of the over-hanging controller and phone. Of course you can just rest the folded drone itself on the stand. Without this, placing the Converter on the ground could result in damage to the drone's camera.

I used PLA with 10% infill and 0.3mm layer height for all parts with no supports for the clamp but with supports covering the control button slot on the Converter and a tall support under the part that clips over the front of the DJI controller.

If you've any problems, queries, comments put them on the Comments section here or email me at paul020559@gmail.com

Regards, Paul.

Model files



converter_w_handles.stl



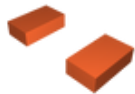
converter.stl



phone_clamp_knob.stl



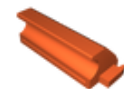
phone_clamp_slide.stl



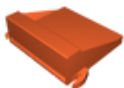
phone_clamp_hinge_plugs.stl



phone_clamp_base.stl



phone_clamp_main_clamp.stl



phone_clamp_top_clamp.stl



phone_clamp_main_clamp_hinges.stl



stand_side.stl



stand_front.stl



stand_back.stl

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