

...Use your GoPro to make automated Timelapses with your Prusa 3D printer...

Feb. 2021

Hi there!

Thank you for purchasing this product :)!

You are only a few steps away from making awesome 3D printing timelapses with your Prusa and GoPro. So let's get started.

If you have any questions after reading this manual, feel free to contact me. You can reach out to me through the channel you've received or downloaded this manual from.

Enjoy making timelapses with your GoPro :)!

STEP 1: Check what Einsy Enclosure you have on your printer.





*Pictures above are from the official Prusa Website.

MAKE SURE YOUR PRINTER IS POWERED OFF & YOU HAVE REMOVED THE POWER CABLE!!

If you have the regular case (on the left) follow this guide from Prusa: https://manual.prusa3d.com/Guide/1.+Printer+disassembly/586?lang=en

Only preform step 1 to step 6

At step 6 instead of installing the Rasberry Pi, you install the Prusa Trigger board. Continue with STEP 3of this manual.

Do you have the Raspi Prepared case (on the right)? Please follow these instructions: https://manual.prusa3d.com/Guide/Einsy-case+with+the+RPi+preparation/840?lang=en

Only preform step 1 to step 3

At step 3 instead of installing the Rasberry Pi, you install the Prusa Trigger board. Continue with STEP 2 of this manual.

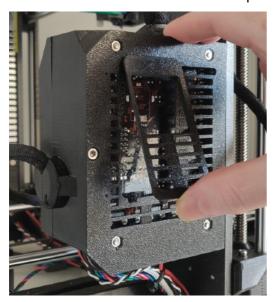
STEP 2: Installing the Trigger board and bracket.

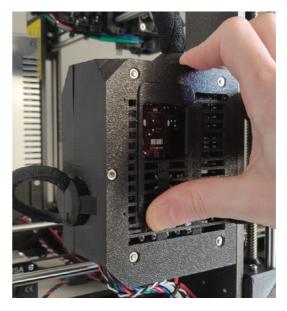
After following the steps of the prusa manual, the Einsy Enclosure should look like this →

If that is true, please continue.
If not, please check the Prusa manual (link above).

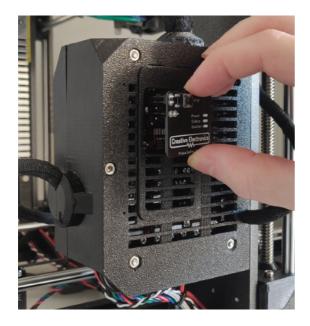


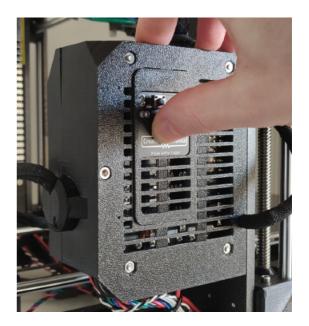
Install the provided bracket as follows:





Install the PCB as follows:





It can take a little fiddling to get the pinheaders aligned with the corresponding holes in the Einsy Board. Don't force it, if it doesn't go in right away, gently move the board around a little. The bracket also has a bit of room/margin to fiddle. Once you feel the pinheaders line up, you can push the board gently into position.



That's it for the hardware part!

You can now power your printer back up and proceed with the next step, the Software part of this manual.

You are almost ready for printing!

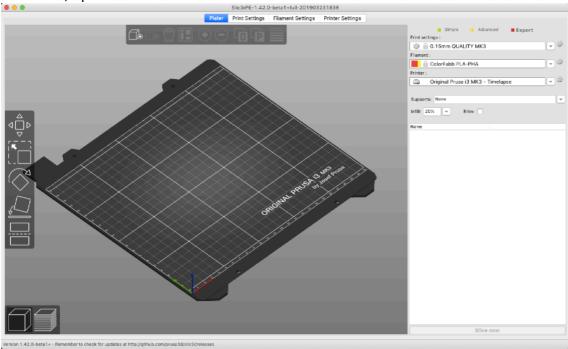
STEP 3: Adjusting Slic3rPE software.

In order to trigger the GoPro at the correct moment we need to tell the Slicer to trigger the camera every layer change. Prusa wrote a tutorial on how to do this with a camera and external trigger. If you are interested, you can read it at:

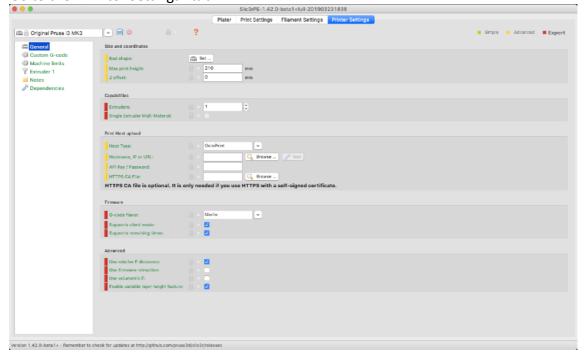
https://www.prusaprinters.org/how-to-create-beautiful-3d-print-timelapse-videos/

For this manual I will break it down to a couple of easy steps.

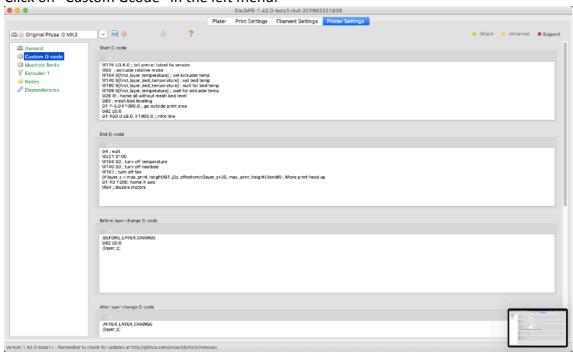
First of all, open the Slic3rPE software.



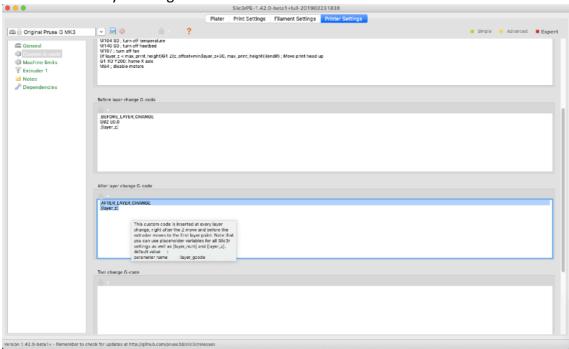
Go to the "Printer Settings" tab.



Click on "Custom Gcode" in the left menu.



Scroll to "After layer change G-Code".



Paste the follow code into the text box (between ;AFTER_LAYER_CHANGE & ;[layer_z])

G1 X5 Y205 F{travel speed*60}; Move away from the print

G4 S0; Wait for move to finish

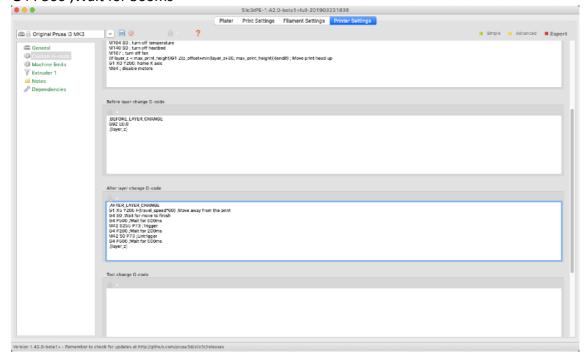
G4 P500 ; Wait for 500ms

M42 S255 P73 ;Trigger

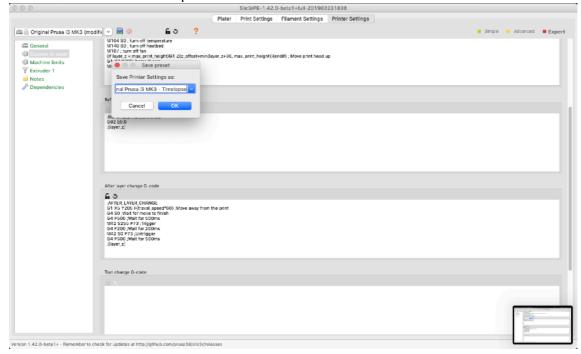
G4 P200 ; Wait for 200ms

M42 S0 P73 ;Untrigger

G4 P500 ; Wait for 500ms



Save your new settings as a new printer profile, so you can easily change between printing with or without the timelapse functions.



When you are done, go back to the "Plater" tab and check if the new profile shows up.

Sic3PE-1.42.0-beta1-full-201903231838

Plater Print Settings Filament Settings Printer Settings @ 0.15mm QUALITY MK3 ○ ColorFabb PLA-PHA Original Prusa i3 MK3 (modified) System presets
System presets
Original Prusa i3 MK3 (modified)
Original Prusa i3 MK3 0.25 nozzle
Original Prusa i3 MK3 0.5 nozzle
User presets
Original Prusa i3 MK3 - Timelapse
Add a new printer

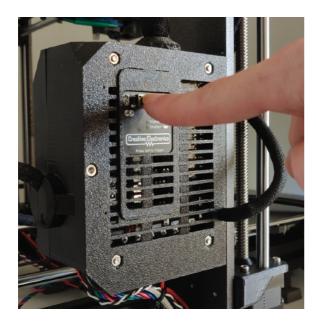
Now it is time for the last step, pairing the GoPro with the Prusa Printer.

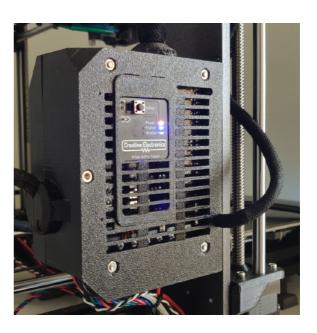
STEP 4: Pairing GoPro to Trigger board.

Make sure the printer is powered on and that Green/Yellow LEDs are ON, on the trigger board. Also check that your GoPro is turned on, as well as it's WIFI function. The Blue LED should be blinking.

Press the Setup Button on the Trigger Board.

The Blue LED should turn ON.





Go to the WIFI settings of your laptop/MacBook/smartphone.

Search for SSID "PrusaTrigger" and connect.

When you are asked for a password, type "WIFIsetup" and press ok/connect.

Once your device is connected to "PrusaTrigger" it will automatically open a configuration popup. This can take a few seconds.

If this doesn't happen, open your web browser and go to 192.168.4.1



Click on "Configure WIFI", a screen with all available SSID's will open up.



Select your GoPro and provide the password, press save when you're done.

The credentials will now be saved on the Trigger board, this can take a couple of seconds. If your credentials are correct, the Blue LED will turn off. If the Blue LED stays on, something went wrong with enter your credentials, please repeat the steps above.



From now on, whenever you turn on the printer and your GoPro, they will automatically pair up. (you can verify by looking at the status LED's on the Trigger board.)

If for any reason you would like the Trigger board to "forget" your GoPro or pair it up with another one, please follow these steps:

First make sure your GoPro is connected (Status LED/Blue is off), press the setup button once. The Status (blue) and Shutter (red) LED should light up for 2 seconds. Your credentials are now erased. The Status LED (blue) will start blinking (searching for your GoPro). You can now start again from STEP 4 of this manual to pair with another GoPro.

LED functions:

Power/Yellow LED: Indicates that the Trigger circuit is properly powered.

Status/Blue LED: Blinking: Searching for GoPro, trying to connect.

ON: Trigger board is in "Setup Mode".

OFF: Connected to GoPro.

• Shutter/Red LED: Blinks once when it triggers the GoPro.