SMART3D

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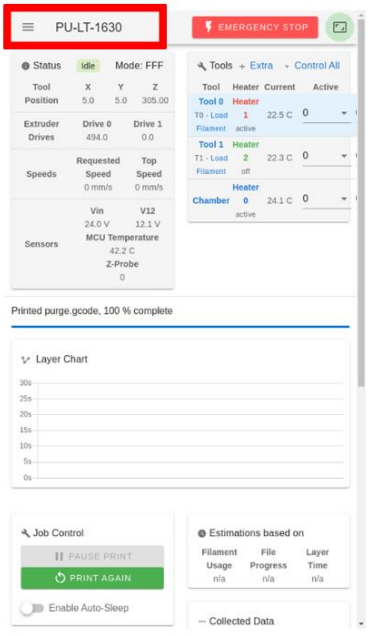
Z offset calibration

Note: this procedure has to be done with the front door always close.

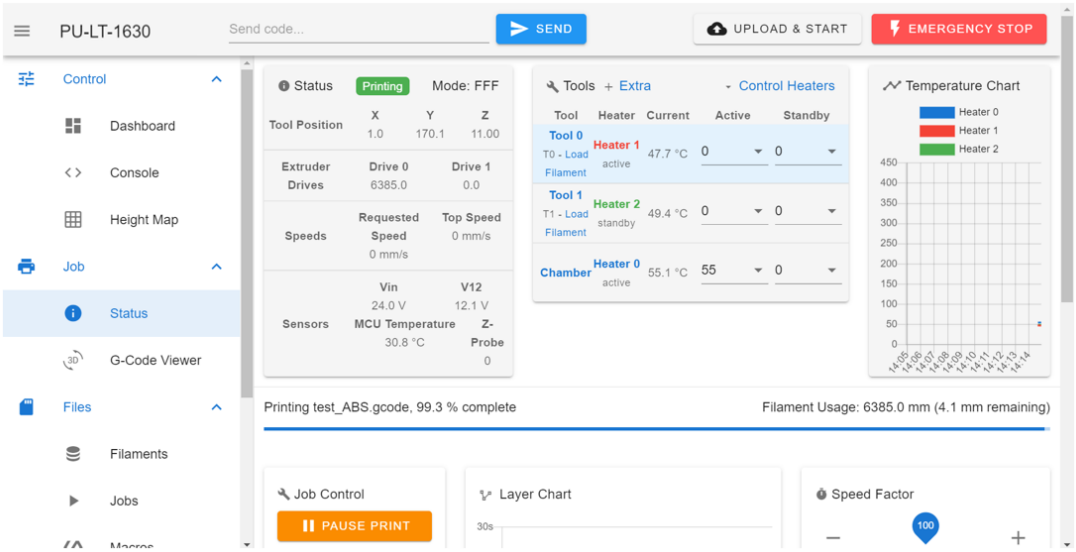
It is recommended to make this procedure using a computer.
To operate your Macro PU from your computer or smartphone, please open a web browser, such as Chrome, and in the navigation bar type the following link:

PU-LT-[Unit Serial Number].local/

The Unit serial number is included on the model identification tag located on the rear panel of the unit next to the power socket and on your Macro PU touchscreen.



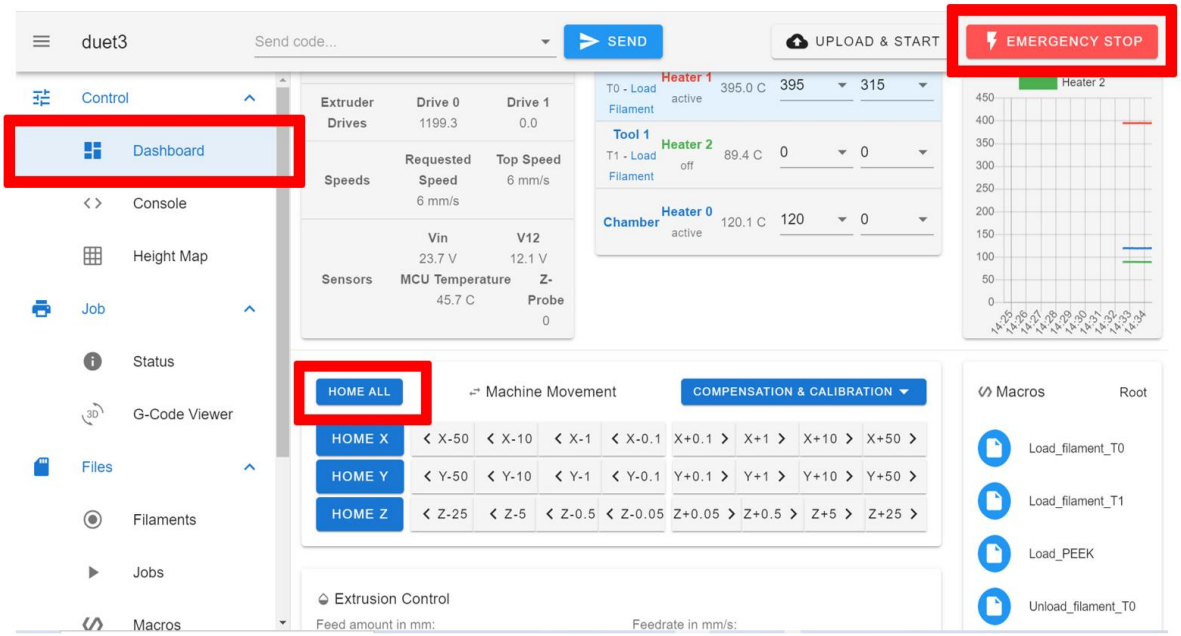
Once you have opened the address link, you will access the command screen of your Macro PU via your computer.



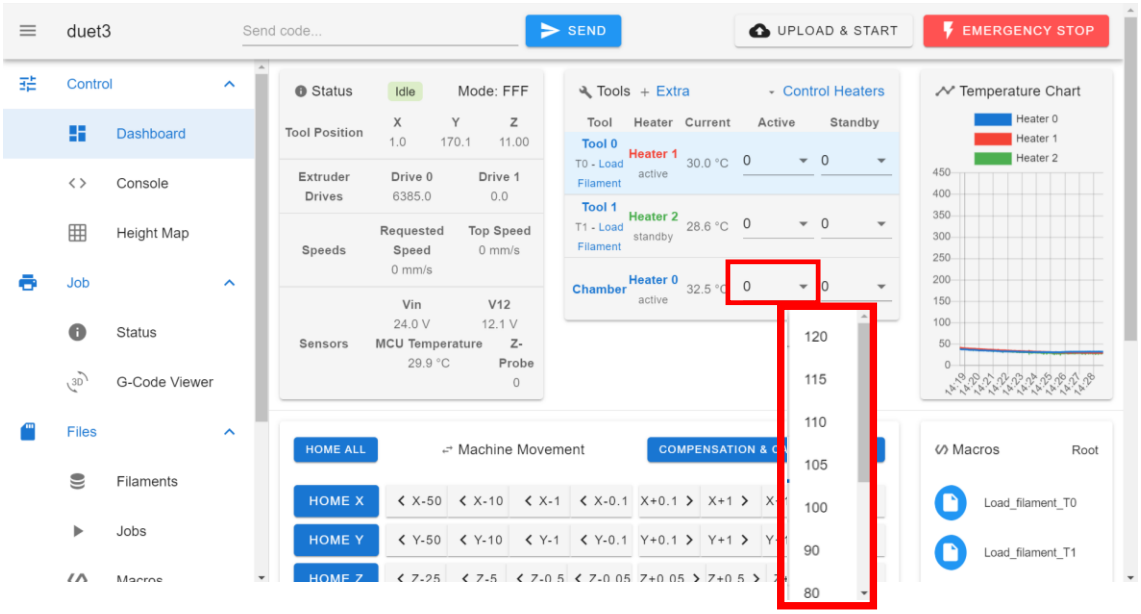
For doing the calibration of the Z offset follow this instructions;

NOTE: Before starting the calibration process, please clean the nozzle and the build plate from any debris, check that the building platform is in place, and that the build plate is well calibrated by following the corresponding procedure.

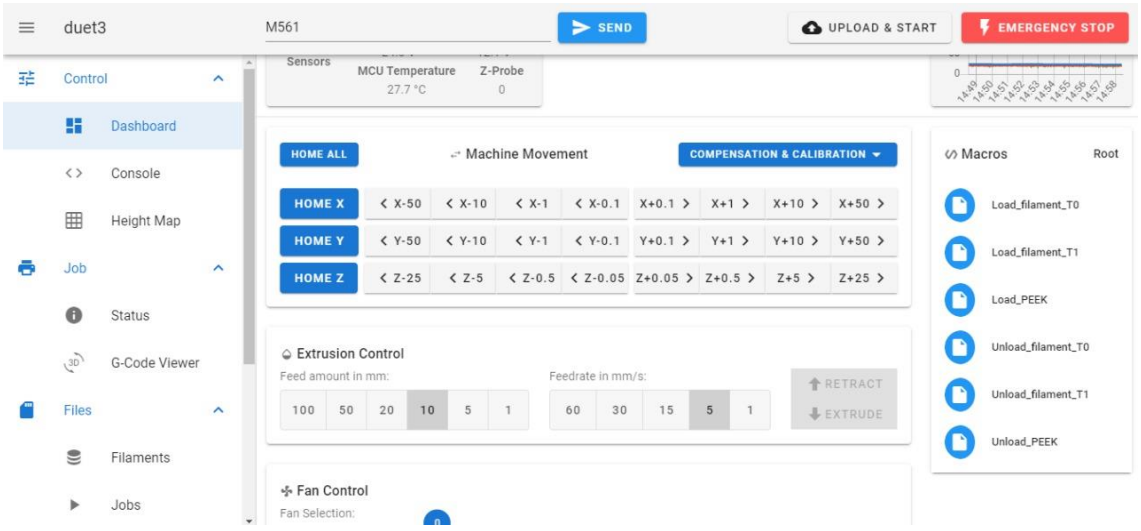
1. Press the **Dashboard** button situated on the left side of your screen and then press **HOME ALL**. The Macro PU will sense Y axis, X axis and finally Z axis. Wait until the procedure finishes. The nozzle will rest in the left rear corner of the build plate.



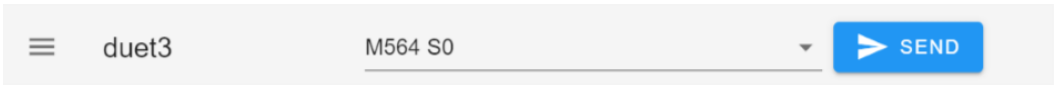
2. Start heating the Chamber about 100 degrees, by pressing the arrow button as shown.



3. Once the temperature has been reached, to disable the bed compensation type the command **M561** in the upper command bar and press **SEND.**

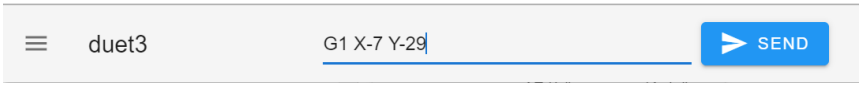


4. Type the following command **M564 S0,** so the Unit allow you to move further Z0.

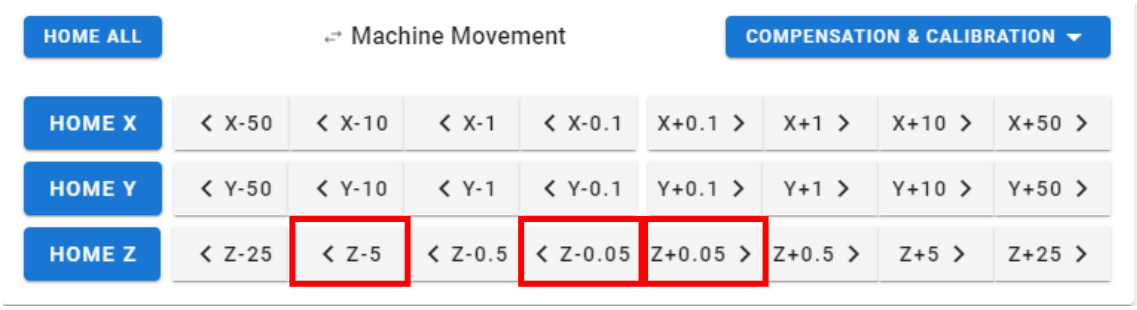


5. To pass to relative motion, write on the command bar **G91.**

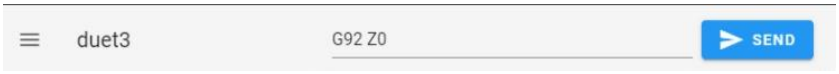
6. Now move the hotend 7mm left and 29mm forward, by typing the command **G1 X-7 Y-29.**



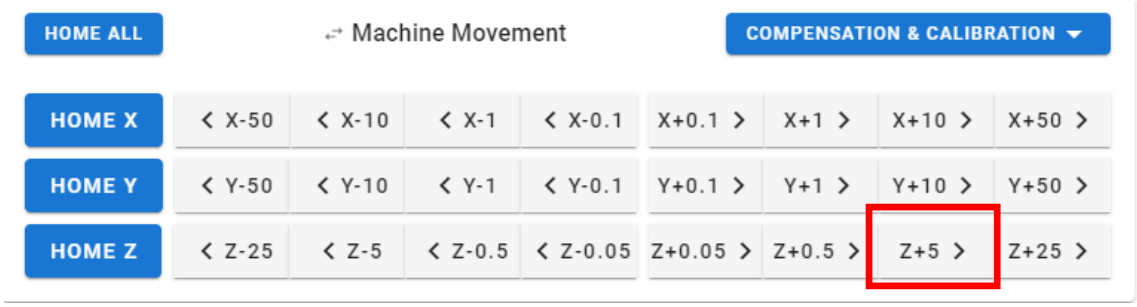
7. Rise the build plate by pressing the button **Z-5** once, and **Z-0.05** till you see that the nozzle touch the build. Press Z+0.05 tow times for giving an offset of 0,1mm between the nozzle and the build plate.
   Press **Z+0.05** to lower the build plate if you need.
   Note: remember to move slowly up and down, so the nozzle doesn't crash violently with the build plate.



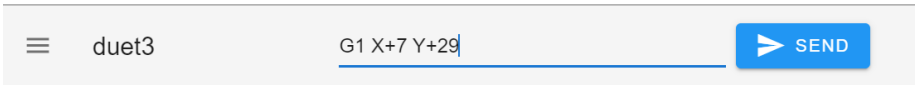
8. Once your nozzle is touching the build plate, we are going to make an artificial home Z by typing the command **G92 Z0** in the upper command bar and pressing **SEND.** The Macro PU will think that at this point is the Z0.



9. Lower the build plate by pressing the button **Z+5** or by typing the command **G1 Z5** in the upper command bar and pressing **SEND.**



10. Now move the hotend 7mm right and 29mm backwards, by typing the command **G1 X+7 Y+29.**

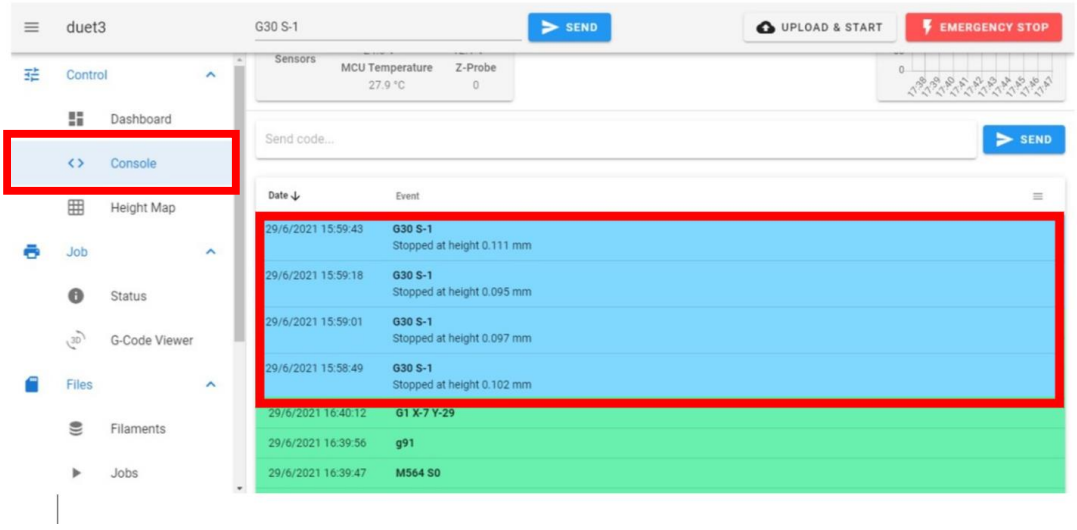


11. Now, make the inductive sensor to sense its position relative to the build plate by typing the command **G30 S-1**

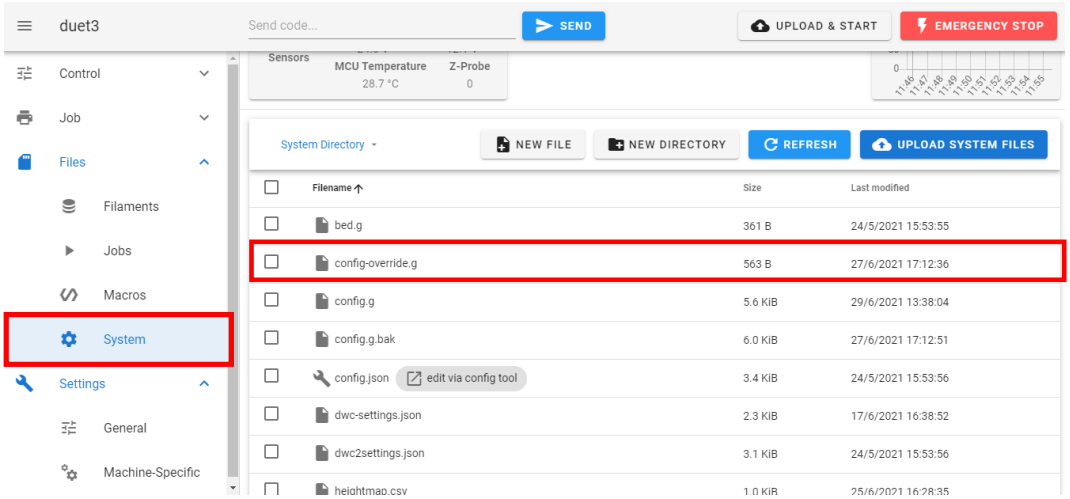
12. Lower the build plate by pressing the button **Z+5**

13. Repeat the last two steps 4 more times.

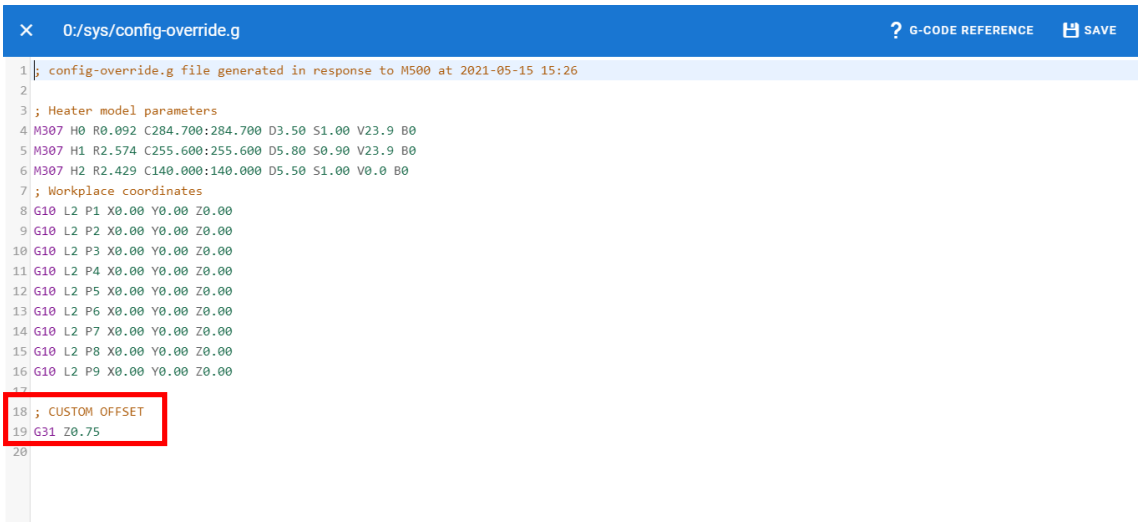
14. The sensed data, that the inductor has measure will be displayed in Console, take an average of this collected data



Go to **System** and find the file call **config-overryde.g**, open it by making double click on it.



Replace the custom Z offset by the average you have take, and press **save**.



15. To finish this procedure, restart the printer.

Nota: To pass again to absolute values type the command G90 in the upper command bar and press SEND.