

Z-Probe Offset

2021-11-27

| GCode | Description |
|-------|---|
| M851 | Set Z-probe offset to 0. |
| Z0 | |
| M500 | Save all configurable settings to EEPROM. |
| M501 | Load all saved settings from EEPROM. |
| M503 | Print all runtime-configurable settings to the host console. |
| G28 | Auto home. |
| G1 | Move to Z0. |
| F60 | |
| Z0 | |
| M211 | Unlock software endstops to enable movement below Z0. |
| S0 | |
| M109 | Set nozzle temperature to 220 °C. |
| S190 | |
| G1 | Move extruder to Z-0.2. Adjust the value in the previous step until you can just barely move a piece of |
| F60 | paper placed between the nozzle and print bed. Subtract another 0.1 from this value. This will be your |
| Z-0.2 | new Z-probe offset value. |
| M851 | Set Z-probe offset to -2.2. This value should be whatever you measured in the previous step. |
| Z-2.2 | |
| M211 | Lock software endstops to prevent movement below Z0. |
| S0 | |
| M500 | Save all configurable settings to EEPROM. |
| M501 | Load all saved settings from EEPROM. |
| M503 | Print all runtime-configurable settings to the host console. |
| G28 | Auto home. |
| G1 | Move to Z0 to confirm. |
| F60 | |
| Z0 | |
| M109 | Set nozzle temperature to 0 °C. |
| S0 | |

start.gcode

```
; Set Heat Bed temperature
M140 S{material_bed_temperature_layer_0}

; Set Extruder temperature
M104 S{material_print_temperature_layer_0}

; Home all axes
G28

; Level bed
G29
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; Reset Extruder
G92 E0

; Move to start position
G1 X0.1 Y20 Z0.3 F5000.0

; Wait for Heat Bed temperature
M190 S{material_bed_temperature_layer_0}

; Wait for Extruder temperature
M109 S{material_print_temperature_layer_0}

; Draw the first line
G1 X5.5 Y200.0 Z0.3 F1500.0 E15

; Move to side a little
G1 X5.9 Y200.0 Z0.3 F5000.0

; Draw the second line
G1 X5.9 Y20 Z0.3 F1500.0 E30

; Reset Extruder
G92 E0

; Move Z Axis up little to prevent scratching of Heat Bed
G1 Z2.0 F3000

end.gcode

; Relative positioning
G91

; Retract
G1 E-2 F2700

; Retract and raise Z
G1 E-2 Z0.2 F2400

; Wipe out
G1 X5 Y5 F3000

; Raise Z more
G1 Z10

; Absolute positionning
G90

; Present
G1 X0 Y{machine_depth}

; Turn-off fan
M106 S0

; Turn-off hotend
M104 S0

; Turn-off bed

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M140 S0

; Disable all steppers but Z
M84 X Y E