TEVO Little Monster – Simplify3D

GAMMA

Heating bed surface

Square to configure in S3D

Bed Radius

Bed Radius

45°

ALPHA

BETA

Origin Offset

Y

X

FRONT
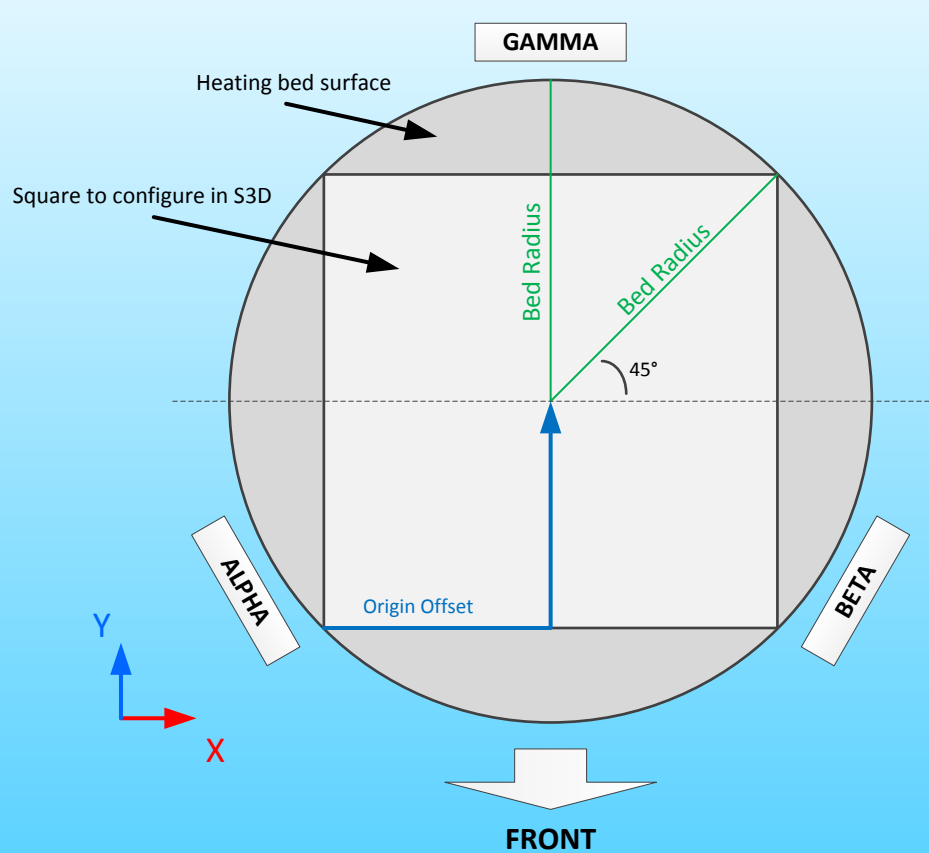
Configuration data

Bed Radius = 175mm
Build Volume :
X-axis
= 2*175*cos(45°)
= 350*0.707
= 247.48
≈ 246 mm

Y-axis
= 2*175*sin(45°)
= 350*0.707
= 247.48
≈ 246 mm

Z-axis
= 510 mm

Origin Offsets :
X-axis = 123 mm
Y-axis = 123 mm
Z-axis = 0 mm

Little Monster Auto-configuration Procedure

Auto-calibration procedure is already implemented in the motherboard and available via the TFT screen. However, here's the GCODE sequence behind that feature.

M280 PS3 ; Set BLTouch to probing position (light on, pin out)
M190 S80 ; Wait until Bed temperature to 80°C
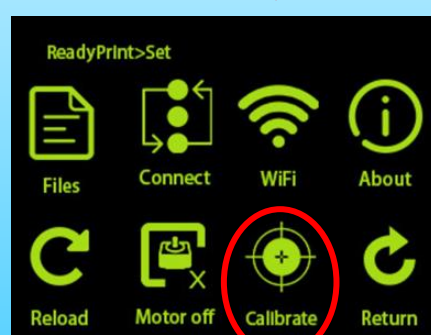**G32** ; Z-Plane probing and calculation
G31 ; Dock Z Probe sled
M374 ; Save Calibration Grid
M500 ; Save firmware
M280 PS7 ; Set BLTouch to idle position (light off, pin in)
G28 ; Homing
M140 S0 ; Set Bed temperature to 0 (actually turn it off)

ReadyPrint

Preheat Move Zero Print
Extrude Fan Set up More

ReadyPrint>Set

Files Connect WiFi About
Reload Motor off Calibrate Return

Little Monster Starting script for Simplify3D

M280 PS3 ; Set BLTouch to probing position (light on, pin out)
G28 ; Homing
G1 Z50 F25000 ;
G30 Z2.0 ; Define offset beween nozzle and BLTouch (*)
M280 PS7 ; Set BLTouch to idle position (light off, pin in)
G1 X0 Y0 Z100 ;
M140 S0 ; Set Bed temperature to 0 (actually turn it off)

(*) G30 Z2.0 indicate BLTouch trigger point is 2mm below nozzle tip. Please adjust this value according to the first layer print result :
- Increase this value will lower nozzle closer to bed. (Example: G30 Z2.0 to G30 Z2.2)
- Decrease this value will lift nozzle away from bed. (Example: G30 Z2.0 to G30 Z1.8)

Little Monster Stopping script for Simplify3D

G92 E0 ; Reset Extruder
G1 E-8.0 F9000 ; Retract filament
M104 F0 ; Set Extruder temperature to 0
G28 ; Home axis (hopefully on top for Delta printer)
M84 ; Disable motors (**)

(**) Ensure all your carriages are tightened enough so the print-head does not fall down once stepper motors are off. Otherwise you will see that head crashing on your prints.
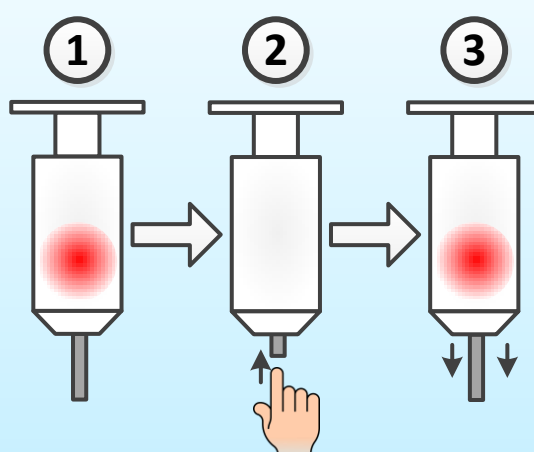

Little Monster - BLTouch commands

Here are simple tests using GCODE commands to diagnose your BLTouch sensor is working properly.

M280 PS3
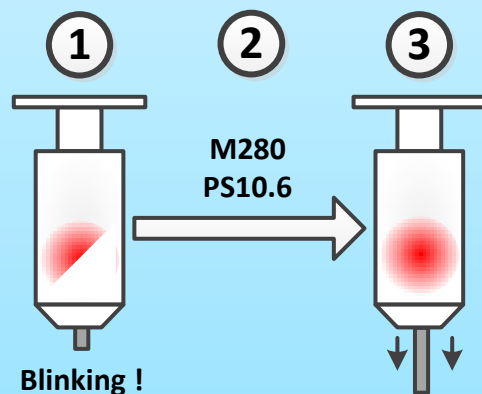Set BLTouch to probing position : light on, pin out (1).

Send that command and use your finger to retract the pin. The sensor should trigger (2). It must come back to its « probing » position at end (3).
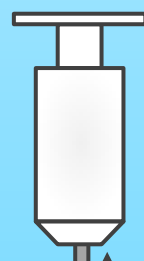
① ② ③

M280 PS10.6
Reset the BLTouch

When your BLTouch is blinking (error detected), you can reset it with 'M280 PS10.6' command. The sensor should then reset with light on and pin out.

① ② ③

M280 PS10.6

Blinking !

M280 PS7
Set BLTouch to idle position : light off, pin retracted.

M280 PS8
SELF TEST.

In self test mode, the sensor launches an endless cycle pin-in pin-out. If you block the pin with your fingers, the BLTouch must pass in Error mode (blinking). You need then to reset it with PS10.6 command.

Cycle