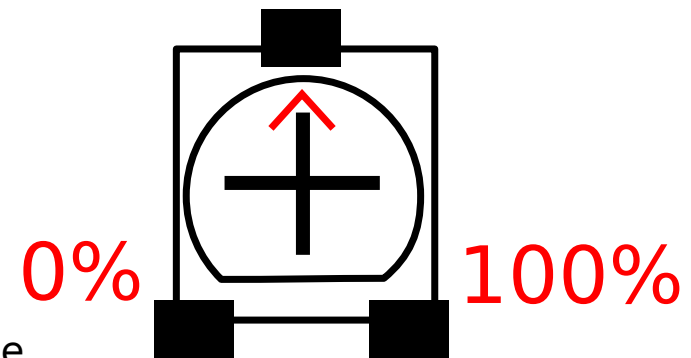


The POTs circled in green control the amount of current used to hold the stepper motors in place. Too much current will cause excess heat in the motors and stepper drivers. Too little current will cause the laser head to skip when changing direction or accelerating.

The POTs are adjusted as part of final testing so should not need to be altered unless you are seeing issues with heat, skipped steps or power supply overloading.



Adjustment procedure, to be performed for each axis independently:

- 1) Use a small screwdriver to carefully adjust the POT. Set it to ~25%.
- 2) With the machine off, move the head to the center. Power on the machine and check that the axis homes. At a low setting the head may just buzz and stay in position. Increase the POT slightly and repeat until it homes.
- 4) Use the joystick to move the head into the center.
- 5) Try to move the head by hand. Increase the POT value until the head resists being moved by a medium force.
- 6) Raster an image at 20,000mm/min and verify that the head does not skip (indicated by misaligned rasters).
- 7) Check the temperature of the stepper motors and stepper driver heatsinks and reduce the POT if they run hot. They should all be cold / warm to the touch. Never too hot to touch (e.g. above ~50 degrees C).

Note for purple stepper drivers only:

These are scaled differently so the valid setting will be between 1% and 20%. The control POT is also reversed with 0% and 100% swapped compared to the above diagram.