Repetier-Firmware configuration tool for version 0.92.9 version

Available tools

Note: FFF printing gets included as soon as you define extruders!

- [x] Support laser cutter/engraver (SUPPORT_LASER)
- [ ] Support cnc mill (SUPPORT_CNC)

Default printer mode
DEFAULT_PRINTER_MODE: Fused Filament Fabrication

Laser

If the firmware is in laser mode, it can control a laser output to cut or engrave materials. Please use this feature only if you know about safety and required protection. Lasers are dangerous and can hurt or make you blind!!!

The default laser driver only supports laser on and off. Here you control the eíntensity with your feedrate. For exchangeable diode lasers this is normally enough. If you need more control you can set the intensity in a range 0-255 with a custom extension to the driver. See driver.h and comments on how to extend the functions non invasive with our event system.

If you have a laser - powder system you will like your E override. If moves contain a increasing extruder position it will laser that move. With this trick you can use existing fdm slicers to laser the output. Laser width is extrusion width.

Other tools may use M3 and M5 to enable/disable laser. Here G1/G2/G3 moves have laser enabled and G0 moves have it disables.

In any case, laser only enables while moving. At the end of a move it gets automatically disabled.

Laser enable pin
LASER_PIN: Digital pin 4

☐ High signal enables printer (LASER_ON_HIGH)

Fused Filament Fabrication

Stabilize temperature corridor
TEMP_HYSTERESIS

0 [°C, 0 = disabled]

If enabled, the temperature must be for watchperiod seconds inside a +/- corridor of the target range, before it is finished.

Temperature control range
PID_CONTROL_RANGE

20 [°C]

Range where the selected heat manager controls output. Ouside this range extruder/bed are heated with full power.

Skip extruder temp. wait if within
SKIP_M109_IF_WITHIN

2 [°C]

Calling M109 (set bed temp and wait) will finish immediately, if the bed has already a temperature that close to target temperature.

Enable extruder cooler at
EXTRUDER_FAN_COOL_TEMP

50 [°C]

Enables the extruder cooler if extruder temp is warmer or value is higher then this value.

Minimum extruder temperature
MIN_EXTRUDER_TEMP

180 [°C]

Ignores extruder moves, if extruder is cooler then this value.

Maximum extruder temperature
MAXTEMP

295 [°C]

Maximum temperature you can define. Larger values get reduced to this value.

Minimum defect temperature
MIN_DEFECT_TEMPERATURE

-1 [°C]

Temperatures below this lets the firmware assume, that the thermistor is defect.

Maximum defect temperature
MAX_DEFECT_TEMPERATURE

299 [°C]

Temperatures higher this lets the firmware assume, that the thermistor is defect.

Maximum extrusion length
EXTRUDE_MAXLENGTH

160 [mm filament going in]

When you try to extruder more then this in one move, the extrusion gets ignored. Protects for wrong defined extrusion commands, e.g. if you stopped printing and did not reset extrusion position to 0.

Decouple hold variance
DECOUPLING_TEST_MAX_HOLD_VARIANCE

20 [°C]

Firmware tests for decoupled sensor - heater. When target temperature is reached, the temperature may only swing this amount or it will mark your combination as decoupled. If you get false alarams after reaching target temperature, increase this value.

Decouple min temp. rise
DECOUPLING_TEST_MIN_TEMP_RISE

1 [°C]

On heatup, we expect at least this temperature rise after the time period set in the extruder. If your measurement is stable, 1 is the value you want.

Heater PWM speed
HEATER_PWM_SPEED

15Hz, 256 values ▾

Extruder XY Switch Speed
EXTRUDER_SWITCH_XY_SPEED

100 [°C]

This speed is used when you switch between extruders to set new position.

- [ ] Scale PID values to max. PID. Can give better temp. results if max. PID is low. (SCALE_PID_TO_MAX)
- [ ] Disable extruder stepper when unsued (DISABLE_E)
- [x] Enable heated bed support (HAVE_HEATED_BED)
- [ ] Enable PDM for heaters (instead of PWM) (PDM_FOR_EXTRUDER)

- [ ] Enable PDM for fans (instead of PWM) (PDM_FOR_COOLER)
- [ ] Mixing Extruder (1 Nozzle/heater + 2 or more filament feeder) (MIXING_EXTRUDER)
- [ ] Kill/reset firmware on defect sensor. (KILL_IF_SENSOR_DEFECT)
- [ ] Extruders share same heater from extruder 0 definition (SHARED_EXTRUDER_HEATER)

Heated bed

Max. bed temperature	130	[°C]
Skip temp. wait if within	3	[°C]
Temperature sensor	100k Epcos B57560G0107F000	
Temperature sensor pin	Temp 1 normally used for heated bed	
Heater pin	Heater 1 normally used for heated bed	
Temperature manager	Bang bang - switches simple on/off	
Max PWM value	255	[0-255] Determines maximum power for heater.
Decouple test period	300	[s] > Maximum time required to rise temperature by DECOUPLING_TEST_MIN_TEMP_RISE = 1. If rising is slower, heaters will be disabled for safety.

Extruder

+Add extruder | Remove last extruder

Extruder 0

Extruder stepper Extruder 0

- [x] Invert motor direction
- [ ] Invert enable signal
- [ ] Enable motor mirroring

Offset X	0	[mm]
Offset Y	0	[mm]
Offset Z	0	[mm]
Start speed	20	[mm/s]
Maximum speed	50	[mm]
Resolution	305	[steps per mm]
Acceleration	5000	[mm/s^2]

Temperature sensor 100k Epcos B57560G0107F000

Temperature sensor pin Temp 0 normally used for extruder 0

Heater pin Heater 0 normally used for extruder 0

Temperature manager	Dead time control - easy to understand, stable	
Max PWM value	255	[0-255] Determines maximum power for heater.
Decouple test period	12	[s] > Maximum time required to rise temperature by DECOUPLING_TEST_MIN_TEMP_RISE = 1. If rising is slower, heaters will be disabled for safety.
Power when on	230	[0-255] Increase when target temperature can not be reached.
Dead time lag	7	[seconds] Time between heater on and temperature rise.
Extruder cooler pin	Digital pin 5	The extruder cooler is not the fan cooling your print! It cools only the extruder for a smaller transition zone.
Cooler PWM speed	255	[0-255]
Wait retract distance	0	[mm] Distance to retract during heat up.
Jam detection pin	Disabled / No pin assigned	

☐ Enable pullup resisitor for jam pin

Temperature Tables

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