

Klipper Printer Additions 3.0b4 - More Than Just Boring Start-G-Code

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updated 24. 1. 2024 | published 24. 1. 2024

Summary

Multiple/Adaptive Bed Mesh | Smart Heating | + Extra Modules for SV07/Plus and klipperized SV06/Plus.

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The following description is for version 2.7.

In the download section there's also version **3.0 Beta 4**. It has to my knowledge no bugs, so the final will be released soon.

- If you are currently using version **3.0b2**, or any other older version:

 - Re-calibrate for perfect first layers!
 - Use the button “**Calib Z Level Paper Test**”, if applicable for your printer

- Use the button “**Calib Bed Screws**”, if applicable for your printer
- **Delete all bed meshes.**
- In **Adaptive Mesh Mode**, fine-tune your z-level by printing the 100x100 first layer test file in the Troubleshooting folder.
- Should you find an unknown bug please report it, and mention the version you use, thank you.
- If you update from an earlier release, please read the Update Guide for version 3, contained in the download.

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Klipper Printer Additions - More Than Just Boring Start-G-Code

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- **Automates** the whole pre-print procedure. Like a conductor, it gives the right instructions at the right time, so that your print starts faster, and has reproducible first layers.

- **Adaptive Mesh** Mode + Adaptive Purging/Priming.

- **Multiple Mesh** Mode - Speeds of light **faster** than adaptive mesh mode. + Adaptive Purging/Priming.

Meshes are automatically created, saved, and re-used by bed temperature, in fine steps of no more than $\pm 5^{\circ}\text{C}$.

- **Faster Print Start**, by heating smart, and without ouzing - you can print even without rafts.

- **Print Slow In Height**, slows down the print speed on tall prints from where you like, layer for layer, for a seamless optic.

- **Print Pause In Heights**, pauses the print at desired points.

- **Prime lines** that work better than regular prime lines.

- **Prime Spiral** which primes/cleans in 360° , and indicates if your z-level is fine.

- **Easy to use**, by simple buttons, which will show state and infos.

Everything is directly accessible in Mainsail / fluidd.

MESH USE MULTIPLE

MESH USE ADAPTIVE

- **Easy to set up**, by copy & paste. Minimal "invasion" of your printer.cfg (only one text line).

- **Easy to update**, by just uploading new files to the printer via Mainsail / fluidd.

- **Slicer Guides**, without a single step missing, on how to set up your slicer app for Klipper in general, and the Printer Additions: **OrcaSlicer** / **PrusaSlicer** / **Cura**.



- **Guide**, and test-STL-files, on how to fix first layer problems.
- **Guide**, why and how to level a printer which can calibrate the gantry.
- **Modularity!**
- **Extra Printer Modules**, to plug-in additional functionality for specific printers. Currently:

- **Sovol SV06/Plus Features:**

- Reliable probing for bed meshes and the z-level.
- Faster & more reliable Gantry Calibration.
- No error "Move exceeds maximum extrusion".

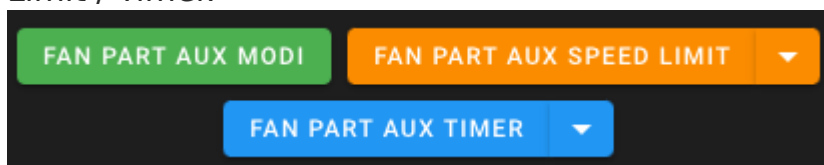
- **Sovol SV07/Plus Features:**

- Reliable probing for bed meshes and the z-level.
- Faster & more reliable Gantry Calibration.
- No error "Move exceeds maximum extrusion".
- Temperatures of the MCU and the Klipper Board in Mainsail /fluidd / printer display.

	Main Control Unit	27.7°C
	Makerbase MKS Pi	63.3°C

- **Sovol SV07/Plus Part Fans:**

- Individual control for each part fan: OFF / DYNAMIC / PERMANENT / Speed Limit / Timer.



- **Sovol SV07/Plus MCU Fan:**

- Enjoy the silence: Temperature controlled, makes your printer a lot quieter.



- **Sovol SV07/Plus Hotend Fan:**

- Enjoy the silence: Temperature controlled, makes your printer even more quieter.



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Support

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If my work supports you, please support me too:

- PayPal: <https://www.paypal.com/paypalme/Morgennebel/>

When you buy something, please use my Referral-Link, at no additional cost:

- AliExpress: https://s.click.aliexpress.com/e/_De0Vu1h
- Amazon: <https://amzn.to/3L35OX2>

Thank you!

Christian

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Features

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(Should you want even more details of the following features, have a look into the Read Me's of the downloaded module)

Pre-Print

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Pre-Print Procedure

- Automated bed-meshes. Available modi:
- Mesh-Multiple: Uses up to 10 saved meshes, for all bed temperatures in 10°C-steps. This mode will save you tons of time.
- Mesh-Adaptive: Creates an adaptive mesh before every print, from 3x3 points up to 5x5 points, depending on model size.
- Faster print-start
- ...by re-using meshes, as described above.
- Faster heating of the bed & nozzle (no unnecessary wait until the temperature has settled to the last degree).
- Minimal to zero filament oozing, because the Nozzle & bed reach their final temperatures at the same time.
- Priming & Cleaning
- Option to let the nozzle & bed move to a position where you can check them and do cleaning.
- Option to print smarter prime lines (better cleaning effect, and easy to remove). They can be printed at the left / right / front, and they are printed outside the normal print area, so they are never in the way of large print models.
- Option to print a prime spiral (360° cleaning). Useful for greasy filaments, and to see what z-level is doing...
- Option to let the nozzle make a Samurai move at the bed's border, to get rid of filament.
- Executes Gantry Calibration and Z-Home where required, for stable z-level / first layers.

End-Print Procedure

- Turns motors, bed and nozzle off, presents the print, and the nozzle drives an extra 60mm up.

Print Modules

#####

Print Slow Down In Height

PRINT SLOW DOWN IN HEIGHT ▼

START_AT_HEIGHT
auto

END_AT_HEIGHT
slicer

END_SPEED_PERCENT
auto

SEND

For tall prints, this linearly slows down the print speed (in any desired range), so that the optical effects are absolute fluid.

DOUBLE CLICK the button to use computed values, based on the model height coming from the slicer-data on print-start.

You can START/STOP, and change any value on the fly during the print. To STOP, enter 0 for the End-Height, or End-Percent.

You may also send the slowdown-data via the CONSOLE or a MACRO with this command:

Print_Slow_In_Height START_AT_HEIGHT=150 END_AT_HEIGHT=250
END_SPEED_PERCENT=50

Print Pause In Heights

PRINT PAUSE IN HEIGHTS ▼

HEIGHT_POINTS_MM
11+22.2

SEND

This will pause the print (the PAUSE macro is called). You may change filament, or insert into you model a magnet, a LED, a weight, or whatever you have in mind.

Enter a list of heights (in mm) where the print shall be paused. The values need no ordering. Separate them by a "+" sign. Example inputs:

20+170.8+230

20

You can CHANGE your input on the fly during the print.

To STOP this function, enter 0.

To START, enter something above 0.

You may also send the data via the CONSOLE or a MACRO with this command:

Print_Pause_In_Heights HEIGHT_POINTS_MM=11.1+40+120

Tool Modules

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Speed Heat Buttons

- Fast heating to various nozzle and/or bed temperatures.

Calibration & Preparation

- Coming soon.

PRINTER Modules

#####

SV07/Plus Support

- Cures most of the SV07's First Layer / Z-Level Problems.
- Faster and more reliable probing, for homing, z-tilt and bed mesh.
- Auxiliary part fan mode control: Dynamic, Permanent, Off. You can also set a Speed Limit, and a cool-down-timer.
- Nozzle part fan mode control: Dynamic, Permanent, Off.
- Noise reduction
- MCU fan: Temperature-controlled with variable speed.
- Hotend fan: Temperature-controlled with variable speed.
- Displays additionally the temperatures of the MCU and the MKS Pi. In Mainsail / fluidd / Printer Display.

SV06/Plus (klipperized) Support

- Faster and much more reliable probing for homing and bed meshes.
- Adds a Gantry-Level method, including a cool Lanz Bulldog simulation, hahaha. ;-)

- Adds a 15-minutes-inactivity safety timeout.

SLICER Module

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OrcaSlicer

- No G2/3/17 errors during the print.
- Print Object Exclusion.

PrusaSlicer

- No M900 errors during the print.

Cura

- Translates g-code M0 to PAUSE.

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Frequently Asked Questions

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•Q: **How do I use the Printer Additions?**

•A: There are different options and functions which are all set / executed via Buttons in Mainsail / fluidd.

I recommend to organize them in Mainsail into Macro-Categories.

There are example pictures, and instructions in the download, how it can look like.

•Q: **I get some error on startup, after installing the Additions.**

•Q: **I don't see any change after installing the Additions.**

•A: When you start your printer you will see in Mainsail / fluidd a message of which module the Printer Additions have loaded.

If not, make sure to follow the installation instructions closely step by step.

```
21:30 Klipper Printer Additions v2.7
```

USING THE KPA BUTTONS

- First click: Shows the Button's Status in the Console.
- Further clicks within 5 seconds: Change Mode, or other Actions.

Module loaded:

Bed Mesh Area

Bed Mesh Multiple

Pre-Print

Pre-Print Prime

Print : Pause In Heights v1.0b1

Print : Slow In Height v1.0b3

Slicer: OrcaSlicer

Tools : Calibration / Preparation 1.0b1

----- PRINTER Modules -----

Sovol SV07 CPU Fans v1.0b3

Sovol SV07 Extra Features

Sovol SV07 Hotend Fan 1.0b2

Sovol SV07 Part Fans

Always only enable PRINTER modules which are for your printer model!

•Q: **It seems my printer's behaviour did not change after installing the Additions?**

- A: Make sure to enable the desired printer module for your printer.
- A: Make sure to NOT enable a printer module which isn't for your printer!

•Q: **After enabling a module it seems nothing changed?**

•A: Most modules have buttons to chose their options. If you're in "Expert" mode in Mainsail, you have to add the new buttons to a macro-group to see them. See the guide "How to organize the buttons".

•Q: **The button names are a bit strange, aren't they?**

•A: They follow a Yoda-kind naming style: Main topic --> Sub Topic --> Action or Option.

This way the buttons sort themself in a logical manner, and it's easy to keep the overview.

It also makes inserting them into categories in Mainsail / fluidd much easier, as there is never the question "Is in the list somewhere some other button that has to do with XYZ?"...

Printer Additions using you will. :-)

•Q: **I do not understand what a button does.**

•A: All Buttons have descriptions when you hoover the mouse over them (only in fluidt). The descriptions are also shown in Mainsail when you organize the macro-buttons.

Since **version 2.5** the buttons also **show their state and/or infos on the first click**. On the **second click** they actually do something.

•Q: **If I click a button to chose an option, do I have to do that before every print?**

•A: No, your choices are instantly saved permanently, also between printer-restarts.

•Q: **The SV07 auxiliary part fan does not run, why?**

•A: By default the auxiliary fan is off. Please use the Macro-Buttons to chose the fan's mode (Dynamic / Permanent / Off).

•A: Make also sure you have enabled the SV07 part fan module.

•Q: I got a shutdown with "**Timer too close**".

•Q: I got a shutdown with some other **MCU error**.

•A: **No**, the Printer Additions are **not responsible**.

On such problems, **shutdown the printer completely**. First shutdown the "Host" (that's the Klipper board), then turn off the power switch to reset the MCU too. Wait 10 seconds, then turn it on again.

Check how much space is left in Mainsail / fluidt, and delete old gcode-files from the printer you no longer need.

•A: Such problems **can also depend on the print model**, the more "complicated" it is (ie printing circles) the more data the Host sends to the MCU per second.

OrcaSlicer has an option to reduce the model's complexity, to reduce the amount of data the MCU get's to process. Your Slicer might have such a function, too.

•Q: **How much RAM do the Printer Additions use?**

•A: Very little, about 10-20MB.

•Q: **How much CPU do the Printer Additions need?**

•A: Almost none. Nothing complicated is executed, and they are mostly active during the pre-print phase. And the amount of commands / data the Printer Additions send is nothing. Especially compared to what the CPU processes during the print.

•Q: **What about the "OrcaSlicer Config Files for SV07"?**

•A: I have separated my OrcaSlicer support for the SV07 from the Klipper Printer Additions. I release them now separately. This is easier to organize, and allows independent releases, without waiting for the one, or the other. Also I renamed them to:

"CV's OrcaSlicer Presets for Sovol SV07"

Download: <https://www.printables.com/model/607280>

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Printer Additions Module List

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- Bed Mesh Multiple
- Bed Mesh Area
- Pre-Print
- Pre-Print Prime Tools
- Print Slow In Height
- Print Pause In Heights
- Speed Heat Buttons
- Slicer OrcaSlicer
- Slicer PrusaSlicer
- Slicer Cura

Additional features for specific Printers:

- Printer: Sovol SV06 Features
- Printer: Sovol SV07 Features
- Printer: Sovol SV07 Part Fans
- Printer: Sovol SV07 Hotend Fan
- Printer: Sovol SV07 CPU Fans

#####

SV07 / SV06 and other Printers

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NEVER ENABLE A PRINTER MODULE WHICH IS NOT FOR YOUR PRINTER MODEL!

- A PRINTER module can contain hardware pin assignments and other stuff that could damage your printer and home, if it's not made for your printer model.
- By default no PRINTER module is enabled.
- The Klipper Printer Additions will work with any Klipper-printer. If the printer has a special property / function (ie special probe handling) it will not taken into account without a proper PRINTER module.

#####

Klipper Printer Addition Changes in Version 2.7

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- **New:** Slicer Module for Cura.
- **Guide** for Cura. Pictured, without a single step missing, on how to set up Cura for Klipper in general, and the Printer Additions.
- **New:** The Prime Spiral is now adaptive (Prime Lines will follow). You can also use the adaptive Prime Spiral in Multiple Mesh mode.

New Module: **Print Slow In Height**

PRINT SLOW IN HEIGHT

START_AT_HEIGHT
auto

END_AT_HEIGHT
slicer

END_SPEED_PERCENT
auto

SEND

For tall prints, this linearly slows down the print speed (in any desired range), so that the optical effects are absolute fluid.

DOUBLE CLICK the button to use computed values, based on the model height coming from the slicer-data on print-start.

You can START/STOP, and change any value on the fly during the print. To STOP, enter 0 for the End-Height, or End-Percent.

You may also send the slowdown-data via the CONSOLE or a MACRO with this command:

```
Print_Slow_In_Height START_AT_HEIGHT=150 END_AT_HEIGHT=250
END_SPEED_PERCENT=50
```

New Module: **Print Pause In Heights**

PRINT PAUSE IN HEIGHTS

HEIGHT_POINTS_MM
11+22.2

SEND

This will pause the print (the PAUSE macro is called). You may change filament, or insert into you model a magnet, a LED, a weight, or whatever you have in mind.

Enter a list of heights (in mm) where the print shall be paused. The values need no ordering. Separate them by a "+" sign. Valid inputs:

20+170.2

20

You can CHANGE your input on the fly during the print.

To STOP this function, enter 0.

To START, enter something above 0.

You may also send the data via the CONSOLE or a MACRO with this command:

Print_Pause_In_Heights HEIGHT_POINTS_MM=11.1+40+120

- **Slicer**

- New Slicer Module for **PrusaSlicer 2.7**: No M900 errors.
- On print-start: Info messages in case of missing slicer-parameters.
- Set up guide: Added the required Slicer settings for the g-code type (Klipper) and the Extruder (relative-mode).
- This release is tested with OrcaSlicer 1.8, PrusaSlicer 2.6 and 2.7.

- **Various**

- Fixed: Two Speed Heat Buttons did not work.
- Fixed: "Unable to parse move G1 X8 Y." (or similar).
- Fixed: Prime Lines: The options left/right did not work.
- Improvements for fast heating (pre-print).
- Changed: The Button "Mesh_Create_All_Multiple" is renamed to "Mesh_Create_All_Temperatures", which makes it more obvious what it does.
- Z_TILT_ADJUST / QUAD_GANTRY_LEVEL is now performed again on Printers that don't have a dedicated PRINTER Feature module. It can be turned ON/OFF with the button "Pre Print Gantry Calibrate".
- Various small improvements, a lot of them.

- **SV06/Plus** Feature Module

- Multiple / Adaptive Mesh: Will now use the probe count defined in the printer.cfg as a maximum probe count, so you can get more than 5 probe counts, if you raise it in the SV06's printer.cfg.
- Gantry Calibration works now on the SV06 Plus.
- Display stuck in startup-animation (same as in SV07 Feature Module, see below):

- **SV07/Plus** Feature Module

- Display stuck in startup-animation: Sometimes the displays of KlipperScreen / SV07 go into an endless startup-animation-loop, while the printer is still normally working via Mainsail. A missing preference of KlipperScreen causes this. This preference item is now created by the Klipper Printer Additions, so the display can exit the loop.

- If the print is cancelled the head drives 60mm up, like on print-end, which makes it easier to remove the build-plate / inspect the nozzle.

- Replaces now Sovol's PAUSE and RESUME Macros.

On PAUSE the print head now just drives up (and higher than before, for easier access to the nozzle), so on RESUME there's no danger to push models with low bed contact area from the bed because of the side-move. Also on RESUME it doesn't spit out filament. That also "helped" the sideways-push to get too early contact with the print. And you have to take care on RESUME anyways that the nozzle is enough loaded, and just a bit retracted, which is better to do manually, thanks to the SV07's extruder wheel.

- Multiple & Adaptive Mesh: Will now use the probe count defined in the printer.cfg as a maximum probe count, so you can get more than 5 probe counts, if you raise it in the SV07's printer.cfg.

- **Sovol SV07, Firmware 1.0.11:** The KPA 2.7 and higher have a bugfix which breaks support for the old SV07 firmware 1.0.11.

I recommend to update the firmware for the bugs that Sovol fixed. If you want to stay at firmware 1.0.11 you need to copy this into your printer.cfg:

[save_variables]

filename: ~/printer_data/config/saved_variables.cfg

- **Sovol SV07/Plus** Part Fan Module
- The nozzle part fan behaved in Permanent mode like in Dynamic mode.
- Fixed: Unknown command:"M106006".
- Option changes come now in effect immediately during a print.

- **Sovol SV07 & Plus** CPU Fan Module v1.0b3

- The console will no longer spit out "Setting back MCU's allowed temp...".
- By the reports, it looks like I was quite too much conservative with the temperature limit.

This release will let spin the MCU fan as follows (simplified):

- Above 32°C, raises the fan speed step by step, as long temperature rises further. So it finds itself the fan speed where the temperature no longer raises.
- Between 30 and 32°C no adjustment is made, to avoid a possible constant up/down adjustment of the fan, which is annoying.
- Below 30°C, lowers the fan speed step by step, if temperature continues to fall.
- Some additional conditions:
- If the fan is on, it's speed is always at least 50%.
- Fan starts/keeps spinning if a motor or heater is on.
- Full fan speed if motor or heater is on, and the temperature is 38°C or above.

So in very hot environments you will not get much advantage, because it just needs more cooling then. But under normal conditions you will get lower fan speed = less noise.

Printer Addition Changes in Version 2.5.1
#####

- As some users had problems to update from earlier versions I've updated / improved every bit of the documentation:
- Made clear how to update the Printer Additions from previous versions.
- Text changes everywhere.
- Additional pictures added.
- Split the long Read me into more documents (Release Notes, General Printer Advice).
- The Setup-Guide contains now a short "Expert"-section, and the improved "Step by step guide for starters"-section.
- Added pictured guides for Mainsail / fluidd on how to organize the macros.
- All documentation is now placed in the top level of the download folder, so it can't be overseen.
- After the pre-print procedure the print head moves fast to the coordinates where the print starts (to prevent ouzing).
New: In case the slicer does not set an initial speed command, the print could start too fast. So the last speed command from the Printer Additions is now 30mm/s speed, which should be fine for all first layers, in case the slicer does not set the initial speed.
- SV07 MCU Fan Module: Fixed a bug where the fan could not be set to Dynamic mode.

Printer Addition Changes in Version 2.5
#####

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Modularity

#####

- The Additions have become a bit more modular, which was necessary for the SV06 / Klipper Screen support.

A Printer module can define IF/HOW it wants to do things like Gantry-Calibrate.

- It is important to understand that a Printer Module may control the hardware, like pin-assignments, and by other means.

Never use a Printer module which is not for your printer model!

- In mind of better modularity I changed all file names. The structure of how things are activated is basically the same:

In the printer.cfg, there's still only one text line necessary. This points now to a "module loader" file:

```
[include printer_additions/___module_loader.cfg]
```

In the "___module_loader.cfg" file you decide which modules you actually want to use.

By default no Printer module is active, but all the other stuff.

- Existing users, please follow the "___How to update the Printer Additions" document in the download.

- For future updates, it will be the same as before - just upload the new files. Another improvement here: Your choices of modules will no longer be overwritten on an update.

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Mesh Module

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- Fixed: Multiple Meshes: A missing mesh was created, but not saved.

- New: Multiple Meshes finally work on the SV07/Plus and KlipperScreen, hooray! I circumvented a bug in the firmware which always loads the "default" mesh.

- New: Option to use an adaptive mesh (code written by ChipCE). The mesh will probe 3x3 points on smaller prints, up to 5x5 on larger prints.

- Removed: The mode "Mesh Use Default" is gone, as this was a workaround for the non-working multiple meshes.

- Removed: The mode "Mesh Use Fresh" is gone since the adaptive mesh does the same thing and saves time creating the mesh for smaller prints.

#####

Pre-Print Module

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- New button "Pre Print Prime Slow" to reduce the speed for the prime line/spiral, necessary to print soft filaments like TPU.

- New button "Pre Print Gantry Calibrate". This should be always ON to ensure a working first layer. If your gantry is mechanical very well leveled, and the bed leveled to the gantry, it may work without calibrating, which saves time on print-start.

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SV07 Fan Modules

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- Enjoy the silence #1: **Hotend fan module**

The hotend fan always runs at 100%, which is overkill since the nozzle can reach 300°C, at which the fan at 100% rpm delivers obviously enough cooling. So at lesser temperatures there's for sure no need to run it at 100%.

Actually I constructed some different hardware mods, and tested them with 40 and 60mm axial fans. The lowest airflow had the super-quiete Noctua-fan, a LOT less than the stock fan. But it was still sufficient for cooling. I tested that (up to 230°C), and had never clogging, or any other problem.

But I wouldn't trust it for high temperatures, and during my testing I found out that the stock fan's noise reduces a lot if it's not running at full speed. So I decided to turn my hardware approaches into a software mod, with the advantage that the stock fan's power is available when printing at high temperatures.

So the hotend fan spins now temperature-controlled with variable speed. Tested on firmware 1.0.17 (SV07) and 1.0.8-07P (SV07 Plus). I don't expect differences for earlier firmware versions since nothing changed regarding the hotend fan.

- Enjoy the silence #2: **MCU fan module**

I found out that the MCU-fan, at 100% speed, holds the MCU temperature at about 30°C. However, running at around 50%, has the same effect. So the MCU fan is now also temperature-controlled with variable speed.

It works a little bit smart, by self-adjusting. If the absolute temperature limit is nearly reached, the fan will always spin at 100%. But since no one knows what the absolute limit is (except Sovol maybe) the module "learns" it from what temperatures are reached, while the fan spins at 100%.

Obviously that temperature must be acceptable, and is then saved in the preferences, as the new limit.

This way the whole temperature-range is shifted up, resulting in lower fan speeds for lower temperatures.

I have additionally a hard limit set. At 35°C the fan will always spin at 100%, no matter what the smart logic says. Also the recorded limit value is reset, so the learning will start over.

The highest temperature I saw so far was 32.68°C. But that might change

in summer, when we have 30°C ambient temperature, or more... So I will probably raise the hard limit a bit more then.

- **Part Fan Module:**

- I changed the term "External" part fan to "Auxiliary" part fan, and to "...AUX..." for the macro-buttons.

- The nozzle part fan has now the same features as the auxiliary part fan (except the cool-down timer, which would make no sense).

- Both fans have their independent mode- and speed limit settings.

- Changed the fan's modi names from "Percent" to "Dynamic", and from "Full" to "Permanent".

- The Fan's Speed Limit settings apply now also to the Permanent-Mode, so during the print the fan(s) can run continuously with any desired speed.

- The button "Fan_Part_External_Timer_3" is replaced by "Fan_Part_Aux_Timer".

It has now two input fields, so you can set the timer duration in seconds, and the fan speed in percent.

To do that, click the arrow on the button. Or just click the whole button and the fan will run for 3 minutes at 50% speed.

- The same macro can be called from the slicer's end-g-code, like this:

Fan_Part_Aux_Timer SECONDS=180 SPEED=50

#####

Buttons

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- The flood of buttons is now extremely reduced.

For example, the SV07 part fan module contained 5 buttons alone to set different fan speed limits. This is now one button. To enter a limit click the arrow on the button. To remove the limit, click the whole button twice.

- Existing users: Please re-add the new buttons into your macro categories of Mainsail / fluidd.

- Other things are now Toggle-Buttons. For example the Prime Line button toggles between Front/Left/Right/Off. Unfortunately it is not possible to let the button show which option is currently active, BUT:

#####

Textual output

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- Buttons now show on the first click their current state in the console.

Depending on how your Dashboard is organized you might not see the Console without scrolling... As an additional incredible clever workaround (tap my shoulder please) the state of the toggle buttons is send as an

error message, so it pops up as a popup banner, always visible.

- On the second click (within a few seconds), a button does something, mostly toggling through the different options they offer.
- If you click the arrow on a button to enter some value, the action is immediately made, without showing the current state before.
- There's more output on print start. For example warnings if the part fan(s) are off, or when they have a speed limit set, which you might have forgotten, and that could ruin your print.
- On Printer/Firmware-Start the Printer Additions show which module are loaded. This is useful to instantly see if the Printer Additions are set up correctly, and which Printer-modules are active (because they are now disabled by default).

#####

Various

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- Fixed some bugs regarding smart heating during the pre-print-phase.
- Many many small improvements, like the print is now properly presented on the SV07 Plus, text output fixes/changes, etc, some other small bug fixes, and code-cleanup.
- Updated/improved all documentation.

#####

Disclaimer

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- Use everything entirely at your own risk.

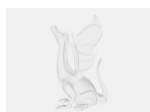
Happy printing!

Christian Vick

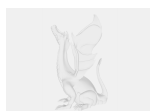
Model files



first-layer-full-220x220-edge-cutstep.stl



first-layer-full-100x100.step



first-layer-full-300x300.step



first-layer-full-220x220.step

Other files



klipper-printer-additions-27.zip

☐ Stable release.



klipper-printer-additions-30b4.zip

☐ Please report bugs if you find something, thank you.

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