

KPA - Klipper Printer Additions

More Than Boring Start-G-Code

PRINTER Modules SV06/Plus, SV07 Plus

Printer Modules plug in **additional functionality** / **bug fixes** for specific printers.

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 in the KPA.
- The Klipper Printer Additions should 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. Please contact me if you want to write one.

Sovol SV07/Plus Features Module

- **Cures** most of the SV07's z-level / **First Layer Problems**.
- **More reliable probing**, for homing, z-tilt and bed mesh.

```
13:26 Retries: 3/50 Probed points range: 0.002500 tolerance: 0.002500
13:26 Retries: 2/50 Probed points range: 0.007500 tolerance: 0.002500
13:26 Retries: 1/50 Probed points range: 0.017500 tolerance: 0.002500
13:26 Retries: 0/50 Probed points range: 0.016250 tolerance: 0.002500
13:26 Probe samples exceed tolerance. Retrying...
```

- No error "**Move exceeds maximum extrusion**".
- Displays the **temperatures of the MCU and the MKS Pi**. In Mainsail, fluidt, and the Printer's Display.

Name	State	Current	Target
 Extruder	off	23.3°C	<input type="text" value="0"/> °C ▾
 Heater Bed	off	23.2°C	<input type="text" value="0"/> °C ▾
 Main Control Unit		33.5°C	
 Makerbase MKS Pi		66.9°C	

- **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.
- Replaces Sovol's **PAUSE** and **RESUME** Macros.
On **PAUSE** the print head 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.

- Replaces Sovol's **CANCEL_PRINT** Macro.
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.
- Handles **Filament Change** commands from the Slicer (**M600**).
- Handles the **print head's LED** on print-start / print-end / print-cancel. Fully customizable to whatever behavior you prefer.
- **Protects you** from executing Z-Tilt manually, if printing with Z-Tilt is disabled, to save you from **bad first layers**.
- Adds a 15-minutes-inactivity **safety timeout**, and it respects filament changes.
- **Sovol SV07, Firmware 1.0.11**: The KPA 2.7b1 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 **to the top** of your printer.cfg:

[save_variables]

filename: ~/printer_data/config/saved_variables.cfg

Sovol SV07/Plus Part Fans Module

- **Auxiliary Part Fan** mode control: Dynamic, Permanent, Off (**the modes are in detail explained when you click their buttons**).

You can also set a **Speed Limit**, and a Cool-Down-Timer.

<> SV07 Part Fan Auxiliary ▼

FAN PART AUX MODI

FAN PART AUX SPEED LIMIT ▼

FAN PART AUX TIMER ▼

- **Nozzle Part Fan** mode control: Dynamic, Permanent, Off.

<> SV07 Part Fan ▼

FAN PART NOZZLE MODI

FAN PART NOZZLE SPEED LIMIT ▼

Sovol SV07/Plus CPU & Hotend Fan Modules

- **Noise reduction**

The SV07/Plus is remarkably quieter, especially on prints where you don't need much cooling from the part fans. Also on print-startup / print-end-cooldown, the printer is SO much quieter.

- **MCU Fan:** Temperature-controlled with variable speed.
- **Hotend Fan:** Temperature-controlled with variable speed.

<> SV07 Other Fans 

FAN HOTEND MODI

FAN MCU MODI

Sovol SV06/Plus (klipperized) Features

- **More reliable probing** for homing and bed meshes.
- Custom **Gantry-Level** method, that does not drive brutal into the gantry.
- No error "**Move exceeds maximum extrusion**".
- Improves **PAUSE**, **RESUME** and **CANCEL_PRINT**.
- Handles **Filament Change** commands from the Slicer (**M600**).
- Adds a 15-minutes-inactivity **safety timeout**, and it respects filament changes.
- **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.
- Corrections for printer.cfgs with wrong values.

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- Amazon: <https://amzn.to/3L35OX2>

Thank you!

Christian 😊

Disclaimer

- Use everything entirely at your own risk.