Original Prusa i3 MK2 Multi Material Quick guide 1.1

Quick steps to get it printing

1. Assemble the upgrade according to
http://manual.prusa3d.com/c/Original_Prusa_i3_MK2_to_Multi_Material_upgrade

2. Upgrade firmware to 3.0.12 or the latest from www.prusa3d.com/drivers

3. Install 1.7.8 drivers or the latest with Prusa3D Slic3r MK2 Multi Material and Multi Material postprocessor from www.prusa3d.com/drivers

4. Load filament. See the section in Q&A.

5. Copy to SD card and run V2MM Calibration from our drivers package (from Sample objects folder)

7. Copy to SD card and print some sample gcodes from our driver package.

That's it :-)

Q&A content:

How do I load filament?
How can I prepare custom gcodes?
What materials are supported?
What filaments should i use?
How big is the smart wipe tower?
How to use Color Print with Multi Material?
Troubleshooting

Q&A

How do I load filament?

Always check filament before the print for potential damage, cut off all of the damaged part to be sure that filament can pass extruder pulleys and cooling tubes properly. Pay special attention to this after every aborted print.

Loading filament now has slightly changed behaviour compared to regular MK2 and always load/unload it from menu.

First phase of automatic loading is slow feed (In this phase you just push the filament to the entry hole of the extruder and as soon as you feel that the extruder grabs it, press the knob).

Second phase is fast feed (This phase just loads the filament to the cooling tube and prepare it for the operation).

How can I prepare custom gcodes?

Please see our guides at http://manual.prusa3d.com/c/Creating_models

What materials are supported?

Currently only PLA, ABS, FLEX and PVA/BVOH are supported in MultiMaterial mode. We're testing and preparing settings for more. Combinations of different temperature materials are possible, hotend can change temperature during the printing of Smart Wipe Tower.

Additional print settings and materials can be used on the Multi Material in single extruder mode. Just install normal MK2 from Drivers package and select Multi Material Single Mode from printer options. This will allow you to use Variable Layer Height and 100 um and lower layer heights. The printer is as capable as regular MK2/MK2S in this mode so it can print flexible materials etc without problems.

What filaments should i use?

Some filament are harder to print than others. If you are having troubles, try different brand or color. From our experience chalky feeling filaments with mineral filler are not as aesthetically pleasing. Same applies on MK2, but effect is multiplied with multi material upgrade. Smooth and shiny looking filaments will produce the best results.

For some filaments or color combinations (such as black color together with white color) additional wipe area might be needed. That can be set up in Multi Material Post Processor in Advanced Settings. Default value work with most materials and color combinations.

How big is the smart wipe tower?

Wipe tower is always 60 mm wide and contain between one and three 15 mm slots based on the model you are printing. If you only two materials are printed at one layer, one slot is used. Each additional material will add one slot and increase the size by another 15 mm. One slots takes approximately 1 minute per layer.

In some prints, multiple materials during single layer are used later, but print starts with only one. In this case the smart wipe tower is still being printed with number of slots from the most complex part of the model. However, before those slots are actually used, they are printed with sparse infill to save material. When slots are not needed anymore later in the print, the number is automatically reduced. This is the reason it is called "smart".
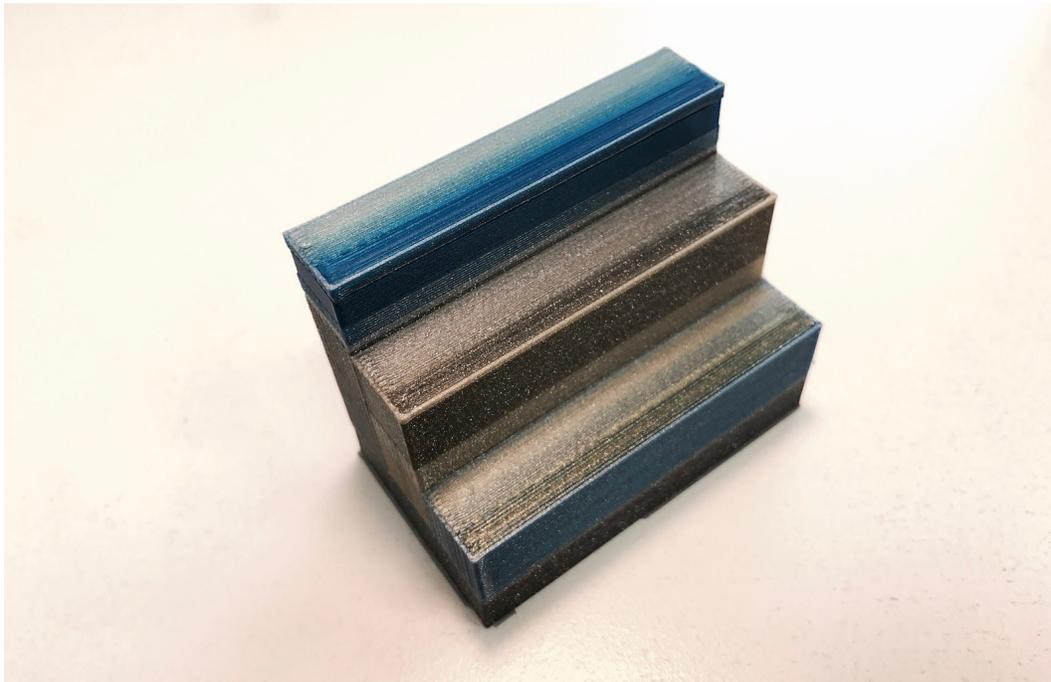
Smart wipe tower prevents the need to use any sort of ooze shields as in traditional multi extruder systems! The size also remains constant, no matter how many copies of the objects you print or how big the object is.
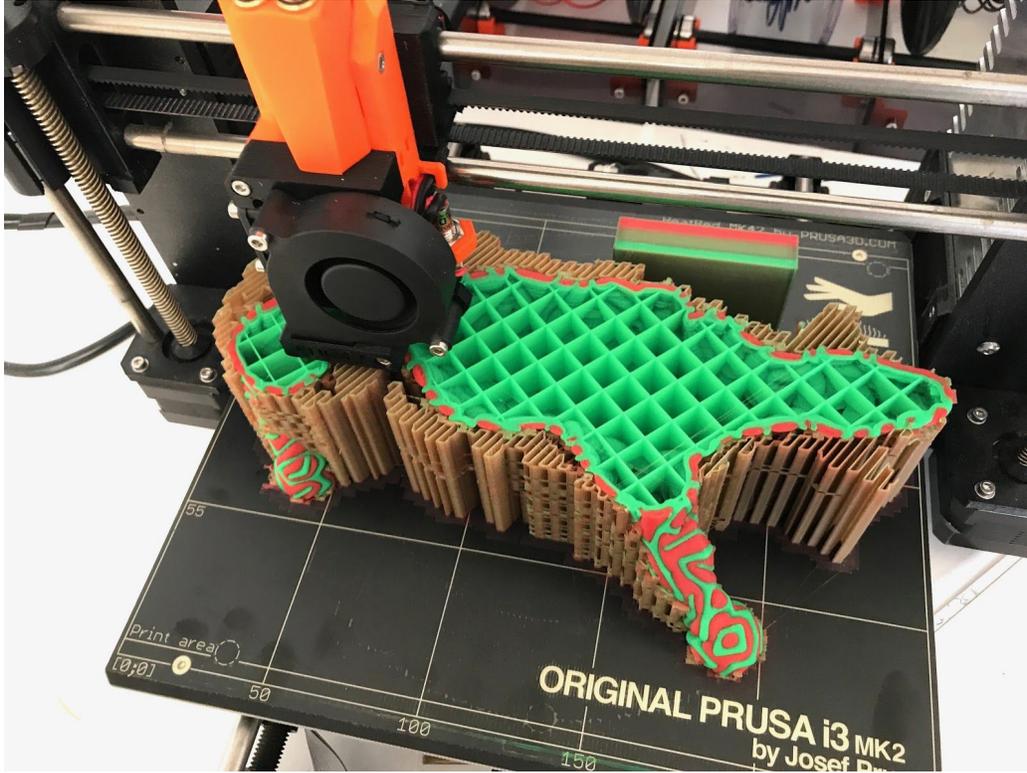
We suggest to print more copies of the same object, if printing small parts.

How to use Color Print with Multi Material?
Slice the object as you are used to in Multi Material Slic3r. You need to use the extruder 1. Load the gcode into http://www.prusaprinters.org/color-print/ and select Multi Material.

You can add color changes as you are used to, but you will be able to select to which extruder printer will switch.
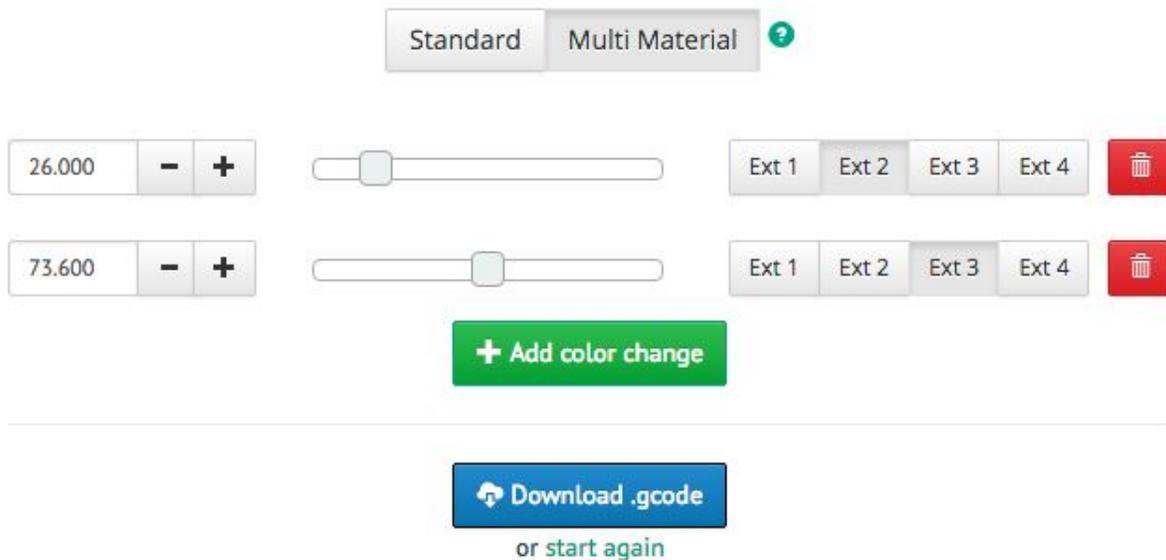
After downloading the .gcode, you need to use Multi Material Post Processor app.

Please note, this works only for one type of material.

Something not working?

Please look into our troubleshooting section at http://manual.prusa3d.com/c/Troubleshooting or or contact our support at info@prusa3d.com