HowTo use our 3D Printer

3D Printer Status: **WORKING** if you have troubles please write a request (following the report guideline) to simon.haller@uibk.ac.at.

Material

At the moment only use ABS (green, red, white, blue, orange).

Do not use PLA (black) or Ninja Flexible Material … for those materials we have to wait for a firmware upgrade (14.07.2014).

Known Issues

none

Solved Issues

Date	Description	Solution
23.07.2014	Still jumy X Axis	Got Cables from Support (hafners-buero.com), Replaced them.
16.07.2014	Still jumy X Axis	Requested new Cables from Support
15.07.2014	Joggy Movement of motors	Strengthend X Axis belt. Resolderd X Axis Connectors
15.07.2014	SD Card Slot does not hold Card	Fixed Slot (push sd card softly in - do not use any tape around an SD Card)
14.07.2014	Broken Fan	Replaced Fan
14.07.2014	Jumpy Stepper Motors	Used WD40 as lubrication
05.06.2014	Greasy Kapton Band	Replaced Band

Updates

Date	Description
14.07.2014	Firmware update to 7.5

Creating a 3D Object

Choose a CAD or 3D Software which can handle stl files (examples: MeshLab, Blender, Bricscad, QCad, FreeCAD, VariCad, Open CASCADE, Cycas CityEngine, BRL-Cad, Draftsight, LibreCAD, …)

Create your 3D model and save it as STL file.

You can also have a look at the makerbot `thingiverse` library - where you can find free (gpl licensed) 3D models ready for printing: http://www.thingiverse.com/

If you want to share your CAD models with the group (or if it is more often used) add your STL file(s) to following repository:

```
ssh://iis.uibk.ac.at/projects/git/CAD-models
```

Makerware and 3D Print Files

To create 3D print files you have to use the original Replicator 2x software: makerware (Download: Makerware)

1. start Makerware
2. **SELECT CORRECT 3D Printer**
3. MakerBots → Type of Makerbot → The Replicator 2x

Import your STL file in Makerware and use the following settings as default for print-file export (object without quotes refers to the imported stl file; “Object” refers to the menu point):

1. move object to platform (select object → selct “Move” → “On Platform”)
2. place object a bit to the front
3. select object → “Object” → select Extruder “left”
4. select “Make”
5. Export for “The Replicator 2X”
6. Select Left: “Makerbot ABS”
7. Resolution: Standard
8. Raft: “Left Extruder”
9. Supports (only if you have overhanging parts in you object): “Left Extruder”
10. Quality
    1. Infill: betweeen 10% - 40% depending on how stable your object should be
    2. Number of Shells: 2
    3. Layer Height: 0.15mm
11. Temperatur:
    1. Extruders: 233
    2. select “Heat Build Plate”
    3. Build Plate: 116
12. Speed:
    1. Speed while extruding: 70mm/s
    2. Speed while traveling: 150mm/s

Save the x3g file on a FAT formated SD-Card. The SD card used with your MakerBot Replicator x2 must be formatted FAT16 with a maximum capacity of 2GB. Put the SD-Card into the printer and select your file to print.