

OctoPrint Guide

20161021

We have the following printers:

- Makergear M2 (8" x 10" x 8") - Octoprint: <http://openlab-3d-01.ece.illinois.edu/>
- Makergear M2 (8" x 10" x 8") - Octoprint: <http://openlab-3d-02.ece.illinois.edu/>
- Makerbot Replicator Z18 (19.4" X 22.2" X 33.9") - Please ask a lab monitor if you wish to use.

To get started on the Makergear printers:

1. Talk to a lab monitor to get trained
2. Bring your own filament (1.75mm, ABS/PLA)
3. Have a G-code file ready
4. Login at OctoPrint using the links provided above and start printing! Refer to the guide below.
Note: You must be connected to the university's wireless network or VPN to control the printers.

The screenshot shows the OctoPrint web interface. On the left sidebar, the 'State' section shows 'Machine State: Operational' (circled in red with a '1' above it). Below this are buttons for 'Print' (circled in red with a '7' above it), 'Pause', and 'Cancel'. The 'Files' section lists several G-code files: 'Base.gcode', 'BaseMount.gcode', 'One_NewLeg.gcode', 'Spher_Joint_2.gcode', and 'Wrist_to_Arm.gcode'. The 'Wrist_to_Arm.gcode' file is selected, and its 'Upload' button is circled in red with a '2' above it. A '3' is placed above the file management icons. At the top of the main panel, the 'Control' and 'GCode Viewer' tabs are circled in red with '6' and '4' above them, respectively. The main panel features a temperature graph with a green octopus watermark. Below the graph is a table with the following data:

	Actual	Target	Offset
Hotend	25.5°C	off °C Set	0 °C Set
Bed	41.5°C	off °C Set	0 °C Set

The 'Target' column for 'Hotend' is circled in red with a '5' above it. A '7' is also present above the 'Print' button in the sidebar.

- 1) Make sure machine state is "Operational".
- 2) Upload your job (must be a G-code file)
- 3) Load your job to the printer
- 4) (Optional) Check your file at the "GCode Viewer" page
- 5) To load your own filament to the printer, set the hotend temperature to 230°C
- 6) Then, at the "Control" page, hit "Extrude"/ "Retract" to load/unload the filament (Hint: you can also monitor your print remotely on this page!)
- 7) Start printing! Wait for at least the first layer of your print to complete before you leave the print alone

Troubleshooting:

Bed not levelled / need to move the motors for some reason?

Go to the "Control" page on OctoPrint:

Temperature Control GCode Viewer Terminal Timelapse

Monitor your print remotely here!

Hint: If you move your mouse over the picture, you enter keyboard control mode.

X/Y Z Tool (E) General

Bed travels forward Bed travels downward

Hotend travels rightward

Load/unload filament

Extrude Retract

Motors off Fan on Fan off

5 mm

Feed rate: 100% Flow rate: 100%

- DO NOT travel the motors past the zero point.
 - Press the home buttons to travel the motors to their zero positions.
- DO NOT extrude/retract filament without heating the hotend

Please search online for troubleshooting guides if you are having problems with M2 print quality.

Forums: <http://forum.makergear.com/viewforum.php?f=7&sid=8039d5f2f3bfc216936762e04087943f>

Wiki: <http://makergear.wikidot.com/m2>