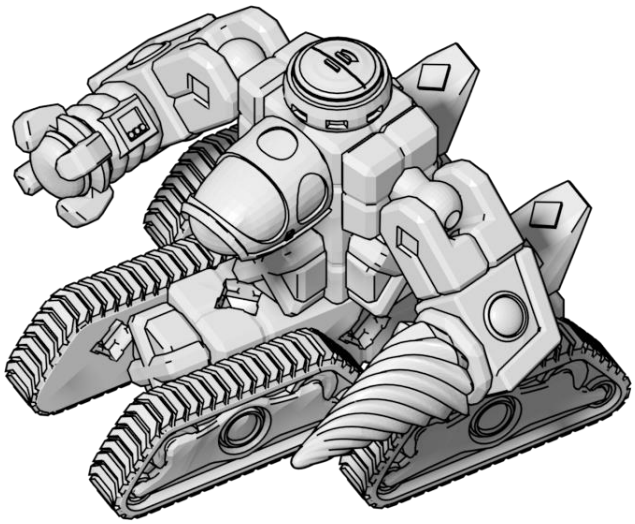
PrintABlok.com

Not recommended for children under 3

Adult supervision is suggested for young children

Thank you for supporting PrintABlok!

PrintABlok are interlocking building toys created by the 3D Printing Professor, designed to work well on home 3D Printers. PrintABloks can be built in all 6 directions, allowing for gravity defying building unlike any other building block out there.



WHAT PRINT SETTINGS DO I USE?

When 3D printing PrintABloks, most default settings will work fine, but to improve strength and layer adhesion it is recommended to increase shells (or outline) to 3 or 4. Smaller layers will also improve the overhangs.

Print without supports.

TEST PRINT

Before you go off printing whole plates of PrintABlok sets it's recommended you test your prints first.

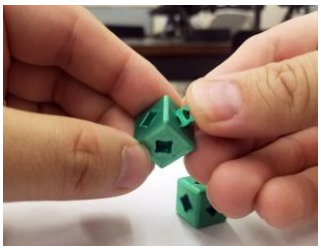
Start with **P101_Printablok-Base_Small_Plate_stl,** then test the connection. If they snap together easily, then you're good to go. If not, you may need to calibrate your 3D print settings. See the "Calibrating your Printer" section of this document.

PLATES OR PARTS?

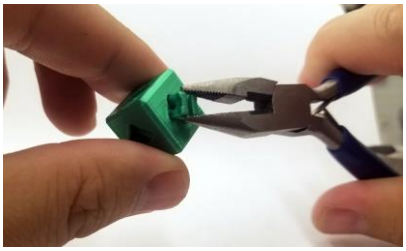
PrintABlok sets are organized in small plated projects with multiple parts per plate that should fit on all 3D printers. These can allow you, with a few prints, to get enough bloks to play with quickly. If an individual part fails, or you have an idea that needs just one more of a certain type of blok, then go into the parts directory and search for the individual parts you need. An STL visualizer like the Marlin 3D Printer Tools can help:

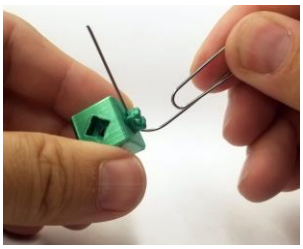
- https://marlin3dprintertool.se/stl-thumbnail/
- https://github.com/unlimitedbacon/stl-thumb/releases

BASIC BLOK SKILLS



Turn a connector piece so it will fit into the hole in a blok, and press it in with another blok until they click together. It should hold fast until you give it a little pull to separate them. The connector can be left in the blocks, but if you need to remove them, having tools on hand, like pliers or a bent paperclip inserted into the hole in the connector, can help.





Calibrating your Printer

PrintABloks are designed to work without needing a well calibrated 3D printer. However, like all 3D prints, calibration can improve the results, especially for PrintABloks with articulation.

If you're ready to take your PrintABloks to the next level, here are a few tips and settings to check:

- Ensure your bed is level and close, but not too close, to the nozzle. The first layer should stick well, but be visible and not just a smear on your build plate.
- Be sure your layers are adhering well. Printing it a few degrees hotter can sometimes help.
- Calibrate your flow rate:
    - Print a 20mm calibration cube with no infill, no top layers, 1 shell, and 100 flow rate
    - Use calipers to measure the wall
    - Your expected measurement should be the same as your nozzle diameter (generally 0.4mm)
    - Divide the measured wall thickness by the expected wall thickness, then multiply by 100 to get your new flow rate

    - Use that flow rate whenever printing with the measured filament for best results
- Adjust the XY Compensation or Horizontal Compensation. A very small negative value (like -0.1mm) can often be the difference between too tight and a perfect fit
    - If your slicer doesn't have any way to adjust horizontal compensation, it may be that it will always print things a little too big. Adjusting flow rate or exploring new slicers can help
- Calibrate your printer's movement steps.
- If calibrating your movement steps isn't an option, you can alternately calculate a scale correction:
    - With the flow rate calibrated, print a 20mm calibration cube with standard settings
    - Use calipers to measure the dimensions of the cube
    - Divide the measured dimensions by 20 and multiply by 100 to get the scale factor
    - Scale the models in your slicer by that scale factor

You can find out more about settings for 3D printing here:
https://www.youtube.com/watch?v=GUz4YCnuNOQ

CONTACT

If you have any problems or ideas you'd like to share, you can contact me on email, twitter, or on Discord at:

joe@3dpprofessor.com

twitter.com/3dpprofessor

https://discord.gg/UNyUcSN

Happy Printing!