Braille Calculator
3D PRINTING GUIDE

Makers Making Change
A Neil Squire Program

3D Printing Summary

Metrics	3D Printed Braille
Total Print Time (min)	140
Total Number of Components	19
Typical Total Mass (g)	18
Typical Number of Print Setups	19

3D Printing Settings:

Important Notes:

- Ensure all Braille is printed vertically (shown in picture below)
- Print each label individually to eliminate stringing or blobbing in print

Print File Name	Qty	Total Print Time (hr:min)	Mass (g)	Infill (%)	Support (Y/N)	Layer Height/ Nozzle Diameter(mm)	Notes (orientation, special settings, etc)
Nemeth_zero.stl	1	0:07	.5	20	N	0.2/0.4	Print in orientation given in STL.
Nemeth_one.stl	1	0:07	.5	20	N	0.2/0.4	Print in orientation given in STL.
Nemeth_two.stl	1	0:07	.5	20	N	0.2/0.4	Print in orientation given in STL.
Nemeth_three.stl	1	0:07	.5	20	N	0.2/0.4	Print in orientation given in STL.
Nemeth_four.stl	1	0:07	.5	20	N	0.2/0.4	Print in orientation given in STL.
Nemeth_five.stl	1	0:07	.5	20	N	0.2/0.4	Print in orientation given in STL.
Nemeth_six.stl	1	0:07	.5	20	N	0.2/0.4	Print in orientation given in STL.
Nemeth_seven.stl	1	0:07	.5	20	N	0.2/0.4	Print in orientation given in STL.
Nemeth_eight.stl	1	0:07	.5	20	N	0.2/0.4	Print in orientation given in STL.
Nemeth_nine.stl	1	0:07	.5	20	N	0.2/0.4	Print in orientation given in STL.
Nemeth_division_sign.stl	1	0:07	1	20	N	0.2/0.4	Print in orientation given in STL.
Nemeth_minus_sign.stl	1	0:07	1	20	N	0.2/0.4	Print in orientation given in STL.
Nemeth_multiplication_sign.stl	1	0:07	1	20	N	0.2/0.4	Print in orientation given in STL.

Nemeth_plus_sign.stl	1	0:07	1	20	N	0.2/0.4	Print in orientation given in STL.
Nemeth_decimal_point.stl	1	0:07	1	20	N	0.2/0.4	Print in orientation given in STL.
Nemeth_enter.stl	1	0:07	1	20	N	0.2/0.4	Print in orientation given in STL.
Nemeth_ground.stl	1	0:07	1	20	N	0.2/0.4	Print in orientation given in STL.
Nemeth_reset.stl	1	0:07	1	20	N	0.2/0.4	Print in orientation given in STL.
Nemeth_start.stl	1	0:07	1	20	N	0.2/0.4	Print in orientation given in STL.

Post-Processing

- If you notice any blobs on the side of the Braille tiles try using a blade to clean up the prints. Braille is hyper specific so any bumps or abnormalities on the print that could affect readability should be removed.

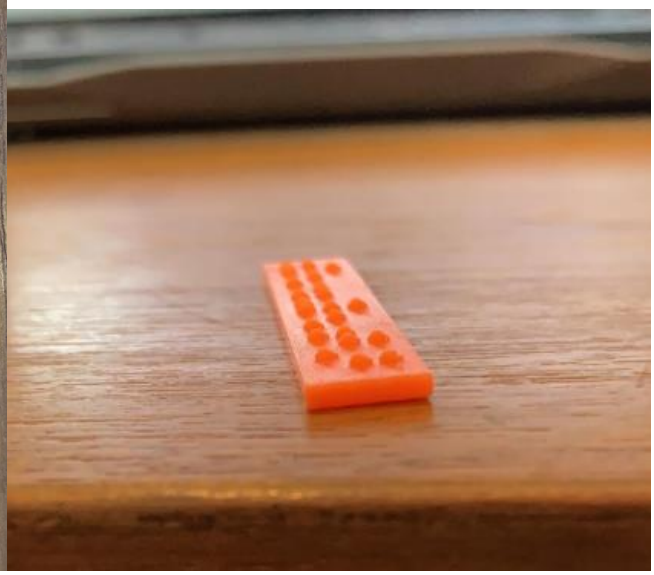
Customization Options

- Braille is standardized so any changes in the model could render the tiles unreadable. Therefore, **do not:**
    - Resize the Braille
    - Alter the model in the slicer
    - Change the Braille dot orientation in any way

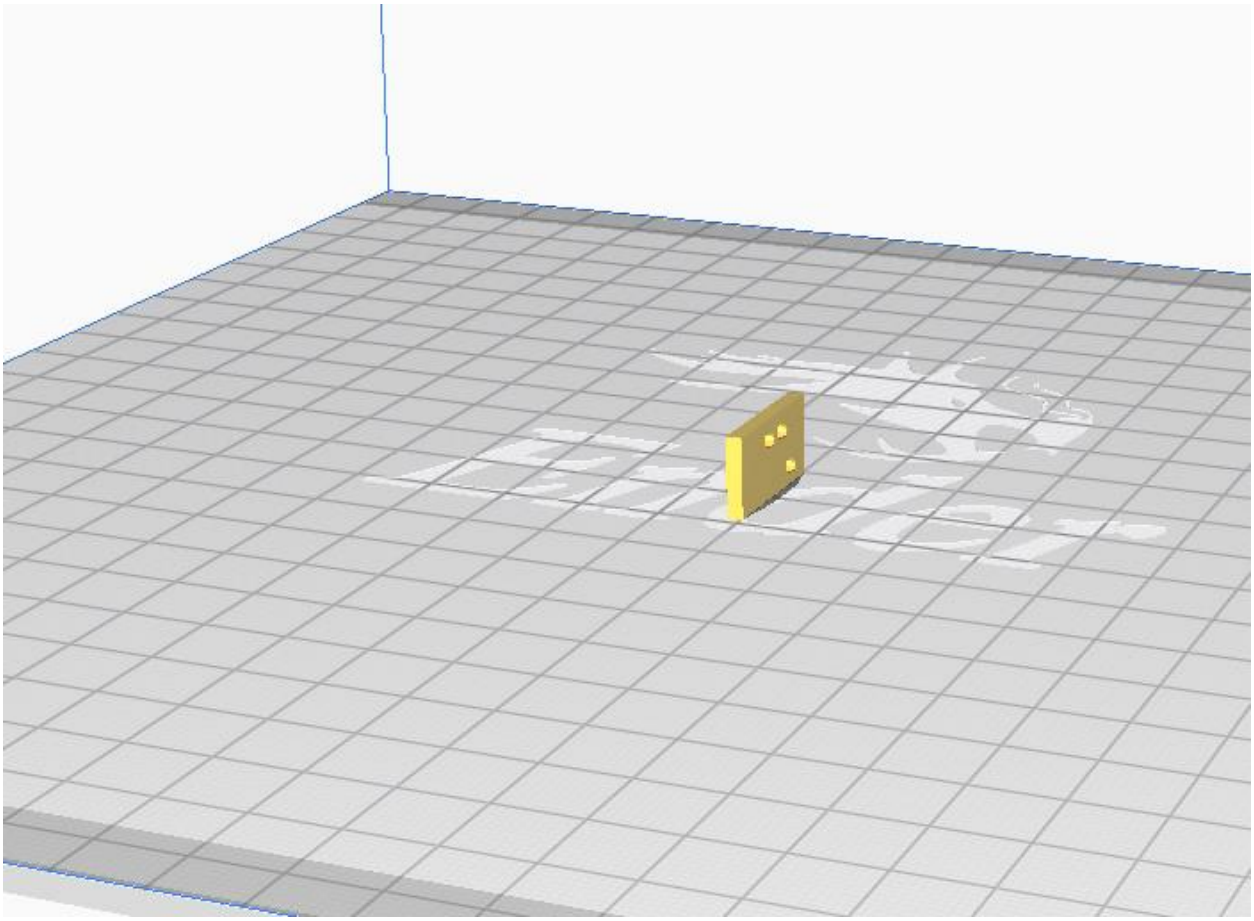
Examples of Quality Prints:

- Below are some photos of acceptable prints and one example of what issues can occur if you print all together

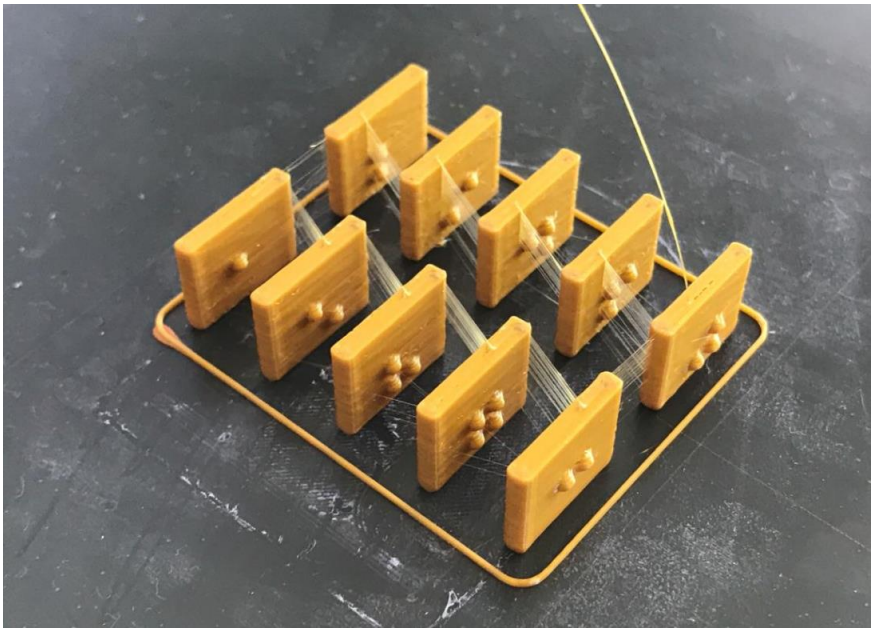
Good Example of Prints Using Above Settings:



Below is how the Braille should be printed:



Example of Stringing When Printed in Groups Rather Than 1 by One:



This can occur when printed in batches. May not occur on all printers and can be a relatively simple clean up. But to avoid this please print one Braille tile at a time