Command line arguments

Introduction

If the program is executed with `-h` or `--help` option, the following quick help will be displayed:

```
Usage:
  SVGGenerator.exe [OPTION...]

  -j, --json-file arg           Path to the project JSON file
  -o, --output-directory arg    Directory to store the output
  -q, --kerf-width arg          Laser kerf in mm (default: 0)
  -m, --material-thickness arg  Material thickness in mm (default: 0)
  -b, --box-height-3d arg       Box height in 3D in mm (default: 0)
  -t, --text                    Enable text output of components (default:
                                true)
  -f, --font-size arg           Default font size of component text in px
                                (default: 8)
  -c, --components              Enable component output (default: true)
  -l, --outline                 Enable side outline output (default: true)
  -r, --recess                  Enable recess output for components
  -n, --recess-lines-per-mm arg
                                Recess lines per mm (default: 1)
  -v, --vectorize               Vectorize output (default: true)
  -e, --separate-files          Separate all outputs to their files for
                                easier engraving and cutting
  -k, --keep-files              Keep non-vectorized files
  -z, --outer-sizing            Box sizes are for outside borders (inner
                                area will be smaller)
      --finger-joint            Add finger joints (box joints) to all 6 sides
                                so panels can be assembled without glue.
                                When enabled all 6 sides default on; use
                                --no-finger-<side> to disable a specific side
      --finger-size arg         Finger width in mm (0 = material thickness)
                                (default: 0)
```

```
      --finger-count arg        Number of fingers on an edge (0 = automatic
                                from finger size) (default: 0)
      --finger-clearance arg    Extra clearance added to finger slots in mm
                                (default: 0)
      --no-finger-top           Disable finger joints on the Top panel
      --no-finger-bottom        Disable finger joints on the Bottom panel
      --no-finger-front         Disable finger joints on the Front panel
      --no-finger-back          Disable finger joints on the Back panel
      --no-finger-left          Disable finger joints on the Left panel
      --no-finger-right         Disable finger joints on the Right panel
  -p, --screw-size-top arg      Screw diameter top in mm (default: 0)
  -w, --screw-size-bottom arg   Screw diameter bottom in mm (default: 0)
  -d, --screw-head-diameter arg
                                Screw head diameter in mm (default: 0)
  -x, --screw-extra-margin arg  Screw extra margin in mm (default: 0)
  -s, --simulate                Simulate, do not write any files
  -i, --inkscape-path arg       Inkscape command (default:
                                C:\\Progra~1\\Inkscape\\bin\\inkscape.com)
  -h, --help                    Show this help and quit
```

Both short and long versions of the arguments can be used.

The arguments `--json-file`, `--output-directory`, `--material-thickness`, and `--box-height-3d` are mandatory. The last two arguments can also be given in the JSON file. If both JSON and the command-line has these arguments, the command line values will be used. Other arguments have default values as mentioned above. To set an argument to false, use the long version and assign the value `false`. For example, to disable text output, use `--text=false`. Similarly, for activation od options, which are disabled by default, only use the argument. For example, to enable simulation, use either `-s` or `--simulate`. Argument values can be provided with a space or an equal sign if long versions are used. For instance, both `--json-file test.json` and `--json-file=test.json` are valid usage. For short versions, only space allowed, e.g., `-b 30`.

`--json-file`

A valid path to JSON file to be used as input. Can be a relative path (starting from the working directory) or an absolute path. You can use online visual box designer, JSON Creator or refer to MIDILLI JSON Definition document if you need help.

`--output-directory`

The directory to write the output files to. Using `.` (dot) will use the current working directory. The final files will be written into a new folder having the name of the `--json-file`.

`--kerf-width`

If your laser cutting software does not automatically compensate for the laser kerf (the material removed by the laser beam width), you can manually set the kerf value in the settings. This allows you to adjust your design dimensions so that the final cut parts have accurate sizes, ensuring a precise fit and clean finish.

Read this page to learn more about the effect of this parameter.

Default: 0 mm (no compensation)

`--material-thickness`

This value is used to determine the dimensions of the left, right, front, and bottom sides (if enabled) based on whether the `--outer-sizing` parameter is active. See *Coordinate system and effects of sizing parameters* for more info. The value is in millimeters (mm).

This value is mandatory.
It can be given in the JSON (under Generic, as value "`material_thickness`") as well as in the command line. Command line will override the value if provided.

`--box-height-3d`

The height of the box in millimeters (mm). If `--outer-sizing` is used, this will be the outer height of the box. Otherwise, it is the inner height of the box.

This value is mandatory.
It can be given in the JSON (under Generic, as value "`box_height_3d`") as well as in the command line. Command line will override the value if provided.

`--text`

Enables the text output of the components if they have a *call_name* property. `--font-size` argument specifies the size of the text. The rotation follows the *rotation* property of the component. Text rotates only for 0 90 180 270 degrees. Otherwise 0 (zero) is assumed.

Default: true

`--font-size`

Specifies the font size if the `--text` output is enabled. The value is in pixels (px). This value is used, if `silkscreen_font_size` property is not set in the JSON.

Default: 8 px

`--components`

Enables the component output to cut circles and/or rectangular shapes through the `--material-thickness`.

Default: true

`--outline`

Enables the side outline output which draws the sizes of the sides with the given dimensions based on the `--outer-sizing` property.

Default: true

`--recess`

Enables the recess output of the components. Recesses take the sizing from *visible_diameter* (priority) or *visible_width* and *visible_height* properties. Recesses may be helpful to have slightly lowered shapes to e.g., stabilize or limit the movement of button caps. This value does not change the behavior of the screw head recess (See `--screw-head-height`).

Default: false (do not create recesses for components)

`--recess-lines-per-mm`

If `--recess` is used, this argument specifies how many lines per millimeter (mm) should be drawn to create the recesses. This is important to set if the default value is not enough for the laser to create the recess.

This value is used both for `--recess` and `--screw-head-height` arguments.

Default: 1 line per mm

`--vectorize`

Vectorizes the SVG files using Inkscape (needs to be installed separately) in case the laser software is not capable of vectorizing the SVG files. Vectorizing files may take time for each side depending on the number of components on that side.

Default: true

`--separate-files`

Creates separate SVG files for each enabled output, by splitting them into different layers: `--components`, `--outline`, `--text`, `--recess`, `--screws-*` (for top and/or bottom), and `--screw-head-diameter` (screw head recesses for top and/or bottom). This is useful in case the laser software does not allow selections to specify different engraving/cutting settings. Each file will only contain the relevant layer.

Default: false, one file for each side, all layers merged.

`--keep-files`

Does not delete non-vectorized SVG files if `--vectorize` is enabled. An SVG editor can be used to view or modify the output.

Default: false, delete non-vectorized files if vectorization is successful.

`--outer-sizing`

If used, the sizes defined in the JSON file as well as the `--material-thickness` and `--box-height-3d` arguments will be used to create the outer volume with the given dimensions. Otherwise, these values will be used to create the inner volume with the given dimensions.

The value can be given in the JSON (under Generic, as value "`outer_sizing`") as well as in the command line. Command line will override the value if provided.

Default: false, use inner dimensions.

`--screw-size-top`

Screw hole diameter to be drawn as hole in millimeters (mm) on the top side of the box..

Default: 0 mm, no screws.



Brown: Screw diameter (or screw size)

`--screw-size-bottom`

Screw hole diameter to be drawn as hole in millimeters (mm) on the bottom side of the box.

Default: 0 mm, no screws.



Brown: Screw diameter (or screw size)

`--screw-head-diameter`

If the screws must be counterbore/recessed, any value given in millimeters (mm) (preferably greater than `--screw-size-top` or `--screw-size-bottom`) will create a circular shape to bury the head.

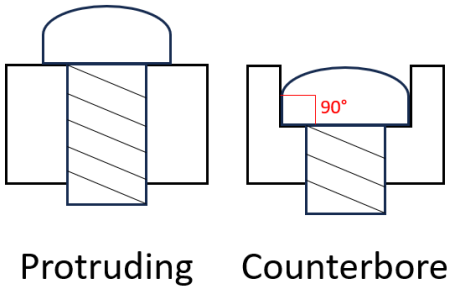
Default: 0 mm, protruding screw head.



Red: Screw head diameter

Note: Using recess for screws on bottom side requires manual flipping of the surface. `--separate-files` option may help you to achieve this.

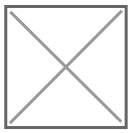
The images below show how `--screw-head-diameter` and `--screw-head-height` affect the creation of screw head related recesses.



`--screw-extra-margin`

By default, screws are added at the four corners of the top and/or bottom side of the box, leaving a margin of `--material-thickness` from the sides. If an additional margin is desired, any value given in millimeters (mm) will increase this gap.

Default: 0 mm, no additional margin.


Green: Screw extra margin

`--simulate`

If used, simulates the settings, without writing to actual files.

Default: false, write to actual files.

`--inkscape-path`

Path to Inkscape binary which is used when `--vectorize` is enabled (default).

Default: C:\Progra~1\Inkscape\bin\inkscape.com (on Windows), or Inkscape (on macOS), or inkscape (on Linux).

`--finger-joint`

Enables finger joints (box joints) on all 6 sides of the box so panels can be assembled without glue. By default, all 6 sides are enabled. To disable finger joints on specific sides, use the `--no-finger-<side>` arguments.

Default: false, no finger joints.

`--finger-size`

The width of each finger in millimeters (mm). If set to 0, the `--material-thickness` value will be used as the finger width.

Default: 0 mm (uses material thickness).

`--finger-count`

The number of fingers on an edge. If set to 0, the number of fingers will be calculated automatically based on the `--finger-size` value and the panel dimensions.

Default: 0 (automatic).

`--finger-clearance`

Extra clearance added to finger slots in millimeters (mm) to ensure smooth assembly.

Default: 0 mm.

`--no-finger-*`

Disable finger joints per side.

When `--finger-joint` is enabled, all 6 sides have finger joints by default. Use the following arguments to disable finger joints on specific sides:

- `--no-finger-top` — Disables finger joints on the Top panel
- `--no-finger-bottom` — Disables finger joints on the Bottom panel
- `--no-finger-front` — Disables finger joints on the Front panel
- `--no-finger-back` — Disables finger joints on the Back panel
- `--no-finger-left` — Disables finger joints on the Left panel
- `--no-finger-right` — Disables finger joints on the Right panel

`--help`

Shows the quick help with the list of arguments and their short descriptions.

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