# Simple G-Code Generator

Version 3.6.0

# USER MANUAL

Version 170725

## Content

# Introduction

The purpose of this Python application is to create g-code for cnc milling/routing machines for hobbyist use.

# Copyright



# License



# System requirements

The application was tested with the following systems:

- i7-4712MQ 8GB, Ubuntu Linux 16.04 (precise) 4.4.0-72-generic (64-Bit), Python 2.7.12, LinuxCNC 2.8.0~pre1 Simulation
- Atom330 1GB, LinuxCNC-2.7 wheezy, Python 2.7.12, LinuxCNC 2.7.8

# Installation

Extract the package and move the Folder <SimpleGcodeGenerator> to the destination where you want it.

Make the Python file <SimpleGcodeGenerator_vX.X.X.py> executable.

Edit the paths in the section <LINUXCNC> of the ini-file <sgg.ini>.

Edit the default values in the ini-file <defaults.ini> to your needs.

CXF-Fonts for text engraving

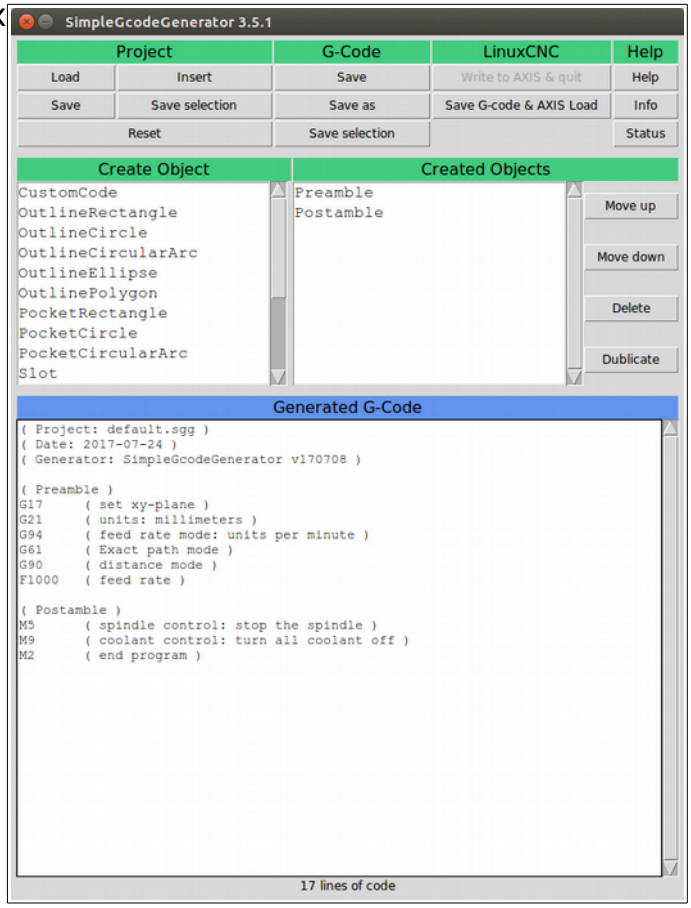
Since I am not sure about the license, I do not provide the fonts which come with the QCAD package.

A package can be downloaded here:
http://forum.librecad.org/attachment/4655223/0/FONTS.zip

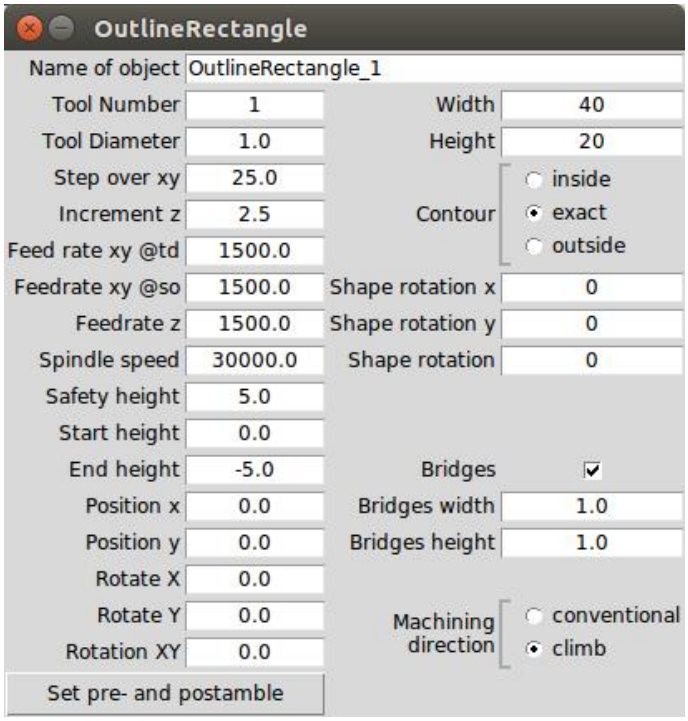
# Quick start guide

- Select „Preamble“ in the listbox <Created Objects>.
- <Double-Left-Click> on „OutlineCircle“ in the listbox <Create Object>

  The parameter edit frame <OutlineRectangle> will show up and the new object will be inserted in the <Created Objects> list after „Preamble“.




- Now the parameters of this object can be edited. The changes take effect almost immediately. UNDO is not possible.
- <Right-Click> on the entry fields of <Tool Number> or <Tool Diameter> will show up the tool selection frame.
- <Right-Click> on the entry fields of <Feed rate xy @td>, <Feed rate xy @so> and <Spindle speed> will show up the feeds and speeds frame.




- <Left-Click> on <Set pre- and postamble> will show up the object specific options for the pre- and postamble.

# Specific default Pre- and Postamble

If you need your own specific pre- and postambles, you have to choices:

- Edit the source code (not recommended)

- Create two ngc-files namend <preamble.ngc> and <postamble.ngc>, placed in the <SimpleGcodeGenerator> folder. They will be loaded at start-up.

# Tables for feeds and speeds

For adding more tables check out the file <Tables.ods> in the folder „data/feedsnspeeds“. Create a new sheet from an existing one and export it as csv.

The programm expects csv-files with semicolon sepertated data and the data beginning with one line of headers after the keyword „Data“ in the line before.

# How to add milling features

To add a feature (eg. Pocket milling) the source files "ncclasses.py" and "guiclasses.py" must be edited.

Find a short howto below. Please contact the author for detailed questions if neccessary.

1. Add the logic

   - Source file: "ncclasses.py"
   - If you want to use all the basic parameters from "class Basedata(object)" copy the class "class TEMPLATE(Basedata, Basemethods)" and mofify to your needs. The available g-code classes are defined in the file "gcode.py".
   - If you do NOT want the basic parameters, copy the class "Custom code"and modify it to your needs.
   - Add the name of the new class to the list "NCCLASSES" at the end of the file.

2. Add the gui

   - Source file: "guiclasses.py"
   - If you want to use all the basic parameters from "class Basedata(object)" copy the class "class TEMPLATE(Basedata, Basemethods)" and mofify to your needs.
   - If you do NOT want the basic parameters, copy the class "Custom code"and modify it to your needs.

- Add the name of the new class to the list "GUICLASSES" at the end of the file.

3. Check implememtation.
   - Start the application.
   - Check if the new class appears in the CreateObject-List.
   - Create a new object with the new class and start bugfixing ;-)
4. Send the new classes to the author if you want.