Gcomp : Gcode composer

Utility to join several figures on the LaserGRBL working area

➢ The utility requires **CygWin** (https://www.cygwin.com)

1) Create your shapes on **LaserGRBL** from image or vector files
2) Save it (File → quick save) as *.nc file

Once you collected a single copy of each wanted shape create your *.cfg text file like the following one

```
# Configuration file for gcomp.awk

Smax 1000 255
OutFile composed4.nc

InputFile txtup.nc
PutAt 75 35 1
PutAt 75 179 1

InputFile txtdown.nc
PutAt 160 35 1
PutAt 160 179 1

InputFile bodup.nc
PutAt 0 0 4
PutAt 0 144 4

InputFile boddown.nc
PutAt 144 0 4
PutAt 144 144 4
```

Smax \<CurrentMaxPower\> \<WantedMaxPower\>

This command allows remapping the power Sxxx tags to a different range.

OutFile \<Filename\>

This command defines the output file name.

InputFile \<Filename\>

This command defines the input file name.

Put \<Xoffset\> \<Yoffset\> \<NumPass\>

This command queues *NumPass* copies of the Input file in the output file, after having modified the Sxxx, Xxxx and Yxxx tags on the basis of the last modifiers.

These commands may be defined in any point of the configuration file. It is read sequentially, so if you change Smax or OutFile after an initial definition, the new values will superseed the previous ones.

Example with the configuration seen before

Input file txtup.nc

```
G0 X0 Y0 F2500
M3 S0
G0 X0.5 Y0.3 S0
G1 X0.6 S452
X0.8 S580
X0.9 S554
…
```

Launch of the utility

```
$ awk -v diag=1 -f gcomp.awk 4.cfg
```

"4.cfg" is the configuration file. You may define a diagnostic level. 0 means no log, 1 means high level events, 2 for all details. Any error is shown independently of the defined diagnostic level.

Output file 4.nc

```
; ---- gcomp: insert txtup.nc at (75,35), scale Smax from 1000 to 255
G0 X75 Y35 F2500
M3 S0
G0 X75.5 Y35.3 S0
G1 X75.6 S115
X75.8 S147
…
```

The **X** and **Y** are modified adding the specified offset indicated in the **Put** command.

The **S** power specified is modified re-mapping the value from the 0-1000 to the 0-255 range.

Results: