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## SinusGen

SinusGen generates and writes sinus data as bytes into a binary file. If values are greater than 256, two files are written. As of now, this is a commandline-tool. This might change in the future. It runs on 64 bit versions of Linux, MacOS, Windows and other systems supported by Python.

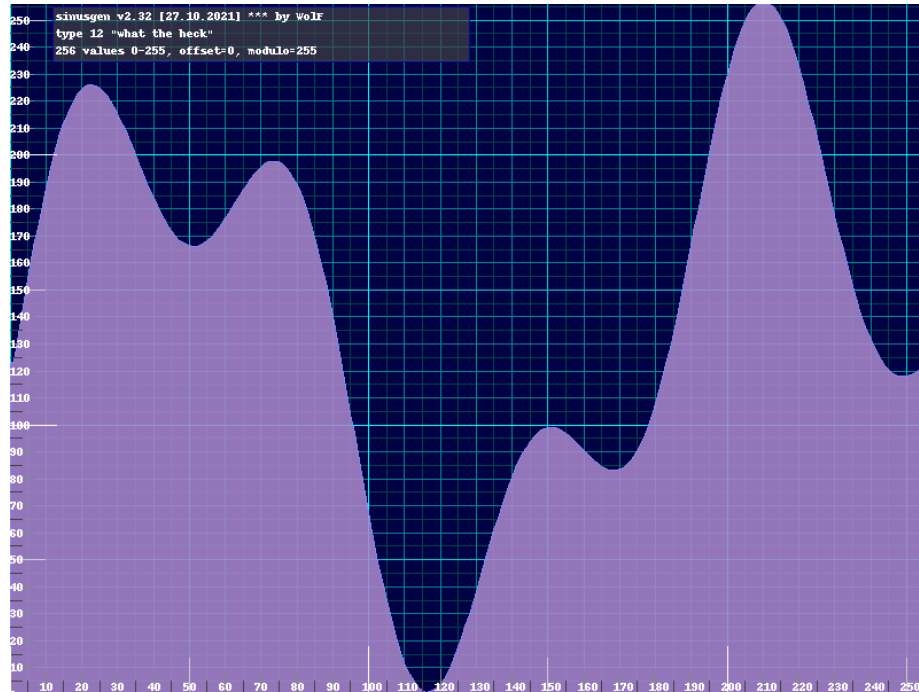


Figure 1: screenshot

## Why SinusGen?

reason	description
open source	easy to modify and to improve, any useful contribution is highly welcome
portable	available on Linux, MacOS, Windows and any other system supported by Python3
easy to use	simple .json config file or commandline parameters

reason	description
eyecandy	optional graphical preview of the data

## Usage

sinusgen v2.32 [27.10.2021] \*\*\* by fieserWolf

```
usage: sinusgen.py [-h] [-cfg CONFIG_FILE] [-show] [-list] [-output OUTPUT_FILE] [-min MINIMUM_VALUE]
                  [-type TYPE] [-invert] [-offset OFFSET] [-mod MODULO]
```

This program writes sinus data as bytes into a binary file. If values are greater than 256,

optional arguments:

```
-h, --help            show this help message and exit
-cfg CONFIG_FILE      configuration in .json format
-show                show preview
-list                list all available sinus types and exit
-output OUTPUT_FILE   name of binary output file without its suffix
-min MINIMUM_VALUE    minimum value (0-65535)
-max MAXIMUM_VALUE    maximum value (0-65535)
-steps STEPS          amount of bytes to generate, values below 5 cause an error with some
-type TYPE            sinus type, see output of --list
-invert              invert values
-offset OFFSET        step offset, where to begin
-mod MODULO           modulo value
```

Note: All values of a config-file can be overwritten by commandline parameters.

Examples:

```
./sinusgen.py -cfg sinus1.json -show
./sinusgen.py -output datafile -min 0 -max 255 -steps 256 -type 1 -invert -offset 20 -mod 256
./sinusgen.py -cfg sinus1.json -max 255 -type 10 -show
```

## Available sinus types

```
0 : "full sinus"
1 : "half sinus"
2 : "shot"
3 : "boobs"
4 : "small hill, big hill"
5 : "high valleys"
6 : "three hills"
7 : "three irregulars"
```

```
8 : "four brothers"
9 : "wave shot"
10 : "zig zag"
11 : "double trouble"
12 : "what the heck"
13 : "landscape"
14 : "two hills"
15 : "whatever"
16 : "the famous Mr Ed"
17 : "curly"
18 : "Oh dear..."
19 : "When will it end?"
20 : "ice cream"
21 : "good grief..."
22 : "nonsense"
23 : "windy"
24 : "one more to go"
25 : "Thanks God it's over."
```

## example.json

```
{
  "output": "sinus1",
  "min": 0,
  "max": 255,
  "steps": 256,
  "type" : 12,
  "invert" : 0,
  "offset" : 0,
  "mod" : 0,
  "comment" : "steps-values below 5 cause an error with some sinus-types"
}
```

## Author

- fieserWolf/Abyss-Connection - *code* - <https://github.com/fieserWolf> <https://csdb.dk/scener/?id=3623>

## Getting Started

sinusgen comes in two flavors:

- standalone executable for 64-bit systems Linux, MacOS/Darwin will follow and Windows will follow (see releases)
- Python3 script

### Run the standalone executable

Just download your bundle at releases and enjoy. Keep in mind that only 64bit systems are supported as I could not find a 32bit system to generate the bundle.

#### Note for Windows users

If some antivirus scanner puts sinusgen into quarantine because it suspects a trojan or virus, simply put it out there again. It isn't harmful, I used PyInstaller to bundle the standalone executable for you. Unfortunately, the PyInstaller bootloader triggers a false alarm on some systems. I even tried my best and re-compiled the PyInstaller bootloader so that this should not happen anymore. Keep your fingers crossed ;)

#### Note for MacOS users

Your system might complain that the code is not signed by a certificated developer. Well, I am not, so I signed the program on my own.

"sinusgen" can't be opened because it is from an unidentified developer.

You need to right-click or Control-click the app and select "Open".

### Run the Python3 script directly

Download *sinusgen.py* and, optionally as an example, *sinus1.json* into the same folder on your computer.

```
python3 sinusgen.py
```

#### Prerequisites

At least this is needed to run the script directly:

- python 3
- argparse
- python "The Python Imaging Library" (PIL)

Normally, you would use pip like this:

```
pip3 install argparse pillow
```

On my Debian GNU/Linux machine I use apt-get to install everything needed:

```
apt-get update  
apt-get install python3 python3-argh python3-pil
```

# Changelog

## Future plans

- maybe: implement full GUI

Any help and support in any form is highly appreciated.

If you have a feature request, a bug report or if you want to offer help, please, contact me:

<http://csdb.dk/scener/?id=3623> or [wolf@abyss-connection.de](mailto:wolf@abyss-connection.de)

## Changes in 2.32

- proper commandline support
- bugfixes

## Changes in 2.0

- complete rewrite in python

## Changes in 1.0

- initial release in freepascal



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