MUSICBOX.PY

Installing Python 3 and the needed library

(you only need to do this part once It enables you to run Python programs. If you have Python 3, but not the ezdxf library, skip to step 3)

1. Download Python 3 from https://www.python.org/ (not the Windows store) Choose the version that is appropriate for your system

2. Launch(double-click) the executable -- the .exe file (defaults are okay, but choose the option to modify the PATH variable).

3. Open a command window
-on Windows, type **cmd** in the Windows search box
-On Mac OS use finder to start a terminal. Press command+space and type terminal, then press enter.

4. Install the ezdxf library

Now we need to add a library to Python. In your command window, type the following:

python -m pip install ezdxf

You can close your command window now.

Getting *musicbox.py* *(you only need to do this once)*

1. Click the green "CODE" button on https://github.com/obzerving/musicbox

2. Download the .zip file and **unzip** it.

What it does:

This program converts a DXF file of a music box strip to an SVG file suitable for a Cricut Explore Air 2*. It places a leader at the beginning of the strip and, depending on the length of a song, breaks it up into multiple strips. Interlocking tabs are added in the case of multiple strips. It was written to support DXF files created at https://musicboxmaniacs.com/ for a 30-note hand crank music box movement.

*Note: this may work on other cutting machines, but is only tested on a Cricut Explore Air 2 on Windows 10.

Using *musicbox.py*

- **Create or select a song** at https://musicboxmaniacs.com/
- **Export it as a DXF file** in Grand Illusions 30 format (in appropriate key)

A: Open a command window
-on Windows, type **cmd** in the Windows search box
-On Mac OS use finder to start a terminal. Press command+space and type terminal, then press enter.

OR

B: On a Windows OS, you can try just double-clicking the *musicbox.py* file

- **Type:**

python musicbox.py

- **Fill in the fields** in the dialog box that pops up
  - Input file
  - Output file (Include the .svg extension in the file name)
  - Length of Leader (defaults to one inch and applies only to the first strip generated)
  - Maximum Length of First Strip (Takes into account the length of the leader. Defaults to 11.5 inches, but the actual size depends on how you lay it out in Cricut's Design Space)
- **Upload** the output file into Design Space to use.

Note on the output file:

The output SVG file is drawn at 72 dpi (currently compatible with Design Space) and contains one group per strip. Each group has a combined path of the circles (notes) and a polyline representing the outline of the strip. Each strip is 2.75 inches wide and variable in length.