

## cedargrove\_waveviz

A CircuitPython class to create a positionable **displayio.Group** graphics widget from a **synthio** wave table.  
[https://github.com/CedarGroveStudios/CircuitPython\\_WaveViz](https://github.com/CedarGroveStudios/CircuitPython_WaveViz)

- Author(s): JG for Cedar Grove Maker Studios

## Implementation Notes

### Software and Dependencies:

- Adafruit CircuitPython firmware for the supported boards: <https://circuitpython.org/downloads>

```
class cedargrove_wavebuilder.WaveViz(*, wave_table, , origin, size, plot_color=0x00FF00, grid_color=0x808080,
back_color=None, scale=1)
```

The WaveBuilder class creates a **displayio.Group** graphics widget and source bitmap from a **synthio** waveform table. The widget size, position, and colors are selected when instantiated. The input waveform table is a **synthio.ReadableBuffer** of type 'h' (signed 16 bit). The class automatically scales the waveform to the specific widget size.

#### Parameters:

- **wave\_table** – The **synthio** waveform object of type 'h' (signed 16-bit). No default.
- **origin** – The group's origin coordinate integer tuple value (x, y). The origin is the top left corner of the resultant group. No default.
- **size** – The group size integer tuple value (width, height) in pixels. No default.
- **plot\_color** – The waveform trace 24-bit integer RGB color value. Defaults to 0x00FF00 (green).
- **grid\_color** – The perimeter grid 24-bit integer RGB color value. Defaults to 0x808080 (gray).
- **back\_color** – The grid background 24-bit integer RGB color value. Defaults to None (transparent).
- **scale** – The **displayio.Group** scale factor integer value. Defaults to 1.

#### bitmap

The resultant image bitmap object. Read-only.