cedargrove_waveviz

A CircuitPython class to create a positionable ***displayio.TileGridGroup*** object from a ***synthio.ReadableBuffer*** wave table. The class inherits all properties of a TileGrid object including ***bitmap***, ***pixel_shader***, ***x***, ***y***, and provides the bitmap properties of ***width***, ***height***.
https://github.com/CedarGroveStudios/CircuitPython_WaveViz

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Implementation Notes - Software and Dependencies:

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

class cedargrove_wavebuilder.WaveViz(**, wave_table, x, y, width,height, plot_color=0x00FF00, grid_color=0x808080, back_color=None, auto_scale=True*)

Create a positionable ***displayio.TileGrid*** object from a ***synthio.ReadableBuffer*** wave table.

Parameters:

- **wave_table** – The ***synthio*** waveform object of type 'h' (signed 16-bit). No default.
- ***x*** — The tile grid's x-axis coordinate value. No default.
- ***y*** — The tile grid's y-axis coordinate value. No default.
- ***width*** — The tile grid's width in pixels. No default.
- ***height*** — The tile grid's 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).
- **auto_scale** — Automatically adjust resultant plot to the wave table's full-scale value. Defaults to True (auto scale enabled).

wave_table(new_wave_table)

The ***synthio*** waveform object. Read/write.

width

The tile grid's width in pixels. Read-only.

height

The tile grid's height in pixels. Read-only.

auto_scale(new_auto_scale)

Automatically scale the plot. When False, the scale is set by a 15-bit signed integer maximum value of 32767. When True, the scale automatically adjusts to the wave table's maximum value. Read/write.

max_result

The full-scale value of the plotted image (from ***wave_table***). Read-only.