cedargrove_widgets.scale

A CircuitPython DisplayIO.Group class for the dual channel platform dial scale display widget.

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class cedargrove_widgets.scale.Scale(*, num_hands=1, center=(0.5, 0.5), size=0.5, max_scale=100, display_size=(None, None))

A CircuitPython class representing the Scale display widget. The class creates a DisplayIO.Group object consisting of sub-groups for the base, platform, dial, hands, and alarm indicators. Defaults to an object with display center (0.5, 0.5) and relative size of 0.5, specified as normalized display units (not pixels).

Parameters:

- **num_hands** – The integer number of dial pointers.
- **center** – The floating point width and height tuple value representing the center of the Scale specified as normalized display units. Defaults to display width and height (0.5, 0.5).
- **size** – The floating point normalized widget size factor relative to the display's smaller axis. Defaults to 0.5.
- **max_units** – The maximum Scale hashmark integer value. Used for labeling the ten major dial hashmarks. Defaults to 100.
- **display_size** — The host display's integer width and height tuple value specified as pixels. If (None, None) and the host includes a built-in display, the value is (board.DISPLAY.width, board.DISPLAY.height).

Properties

center

A class property that returns a floating point tuple of the widget's center (width, height).

size

A class property that returns a floating point value of the widget size.

display_size

A class property that returns an integer tuple of the display size (width, height).

max_scale

A class property that returns an integer value of the scale's maximum scale value.

hand1

A class property that sets or returns hand1's floating point dial position value.

hand2

A class property that sets or returns hand1's floating point dial position value.

> alarm1

A class property that sets or returns alarm1's floating point dial position value.

> alarm2

A class property that sets or returns alarm1's floating point dial position value.

```
# For host board with integral display (PyPortal, Clue, FunHouse, etc.)

import board
import random

from cedargrove_widgets.scale import Scale

display = board.DISPLAY

# Instantiate the Scale widget with a single pointer hand
# Locate at display center (0.5, 0.5) with size = 0.5 and scale maximum = 100
scale = Scale()

display.show(scale)

while True:
    # Move the hand
    for i in range(0, 100, 1):
        m = i / 100
        scale.hand1 = m
    for i in range(100, 0, -1):
        m = i / 100
        scale.hand1 = m

    # Toss the pointer hand around randomly
    for i in range(0, 100):
        scale.hand1 = random.randrange(0, 100) / 100
```