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# **Scroll pHAT Documentation**

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Welcome to the Scroll pHAT documentation. This page will guide you through the methods available in the Scroll pHAT python library.

The Scroll pHAT provides a matrix of 55 white LED pixels that is ideal for writing messages, showing graphs, and drawing pictures. Use it to output your IP address, show CPU usage, or just play pong!

- Learn more about Scroll pHAT: <https://shop.pimoroni.com/products/scroll-phat>
- Contribute examples & fixes: <https://github.com/pimoroni/scroll-phat>



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## Set A Single Pixel In Buffer

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Scroll pHAT uses white LEDs which can be either on or off.

When you set a pixel it will not immediately display on Scroll pHAT, you must call `scrollphat.update()`.

`scrollphat.set_pixel(x, y, value)`

Turn a specific pixel on or off

### Parameters

- **x** – The horizontal position of the pixel
- **y** – The vertical position of the pixel: 0 to 4
- **value** – On/Off state: True/False





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### Set All Pixels In Buffer

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`scrollphat.set_pixels(handler, auto_update=False)`

Use a pixel shader function to set 11x5 pixels

Useful for displaying patterns and animations, or the result of simple functions. For example:

```
scrollphat.set_pixels(lambda x, y: (x + y) % 2, True)
```

Will display a check pattern.

#### Parameters

- **handler** – A function which accepts an x and y position, and returns True or False
- **auto\_update** – Whether to update Scroll pHAT after setting all pixels (default False)



## CHAPTER 3

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### Write A Text String

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`scrollphat.write_string(chars, x=0)`

Write a text string to the buffer

#### Parameters

- **chars** – Text string to write
- **x** – Left offset in pixels



## CHAPTER 4

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### Display Buffer

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All of your changes to Scroll pHAT are stored in a Python buffer. To display them on Scroll pHAT you must call `scrollphat.update()`.

`scrollphat.update()`

Update Scroll pHAT with the current buffer



## CHAPTER 5

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### Clear Buffer

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```
scrollphat.clear_buffer()
```

Clear just the buffer, do not update Scroll pHAT





## CHAPTER 6

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### Clear Buffer And Display

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```
scrollphat.clear()
```

Clear the buffer, and then update Scroll pHAT



## CHAPTER 7

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### Set The Brightness

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`scrollphat.set_brightness(brightness)`

Set the brightness of Scroll pHAT

**Parameters** **brightness** – Brightness value: 0 to 255



## CHAPTER 8

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### Scroll The Buffer

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`scrollphat.scroll (delta=1)`

Scroll the offset

Scroll pHAT displays an 11 column wide window into the buffer, which starts at the left offset.

**Parameters** **delta** – Amount to scroll (default 1)



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### Scroll To A Position

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`scrollphat.scroll_to(pos=0)`

Set the internal offset to a specific position

**Parameters** **pos** – Position to set





## CHAPTER 10

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### Rotate The Display

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`scrollphat.set_rotate(value)`

Set the rotation of Scroll pHAT

**Parameters** **value** – Rotate 180 degrees: True/False



## CHAPTER 11

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### Constants

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```
ROTATE_OFF = False
```

```
ROTATE_180 = True
```