

FUZE BASIC

senseHAT Series Worksheet: **1** "Making sense of the senseHAT"

Right, time to play with the **senseHAT**.

Before we begin please make sure a **senseHAT** is connected to your **FUZE** and that you booted (switched on) with the HAT attached otherwise it's not likely to be recognised.

Start **FUZE BASIC** immediate mode. If you are in the Editor, click the **NEW** icon and then **F2** to return to immediate mode.

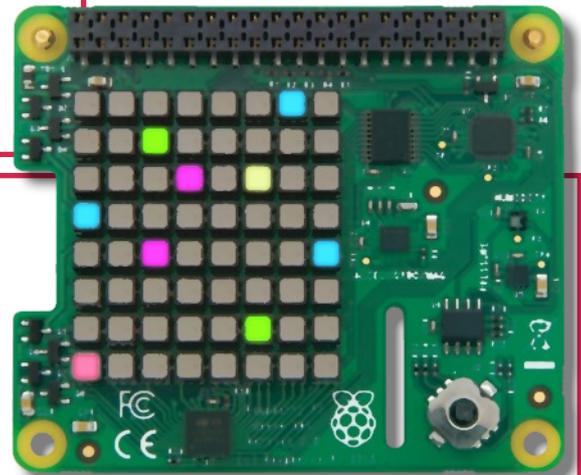
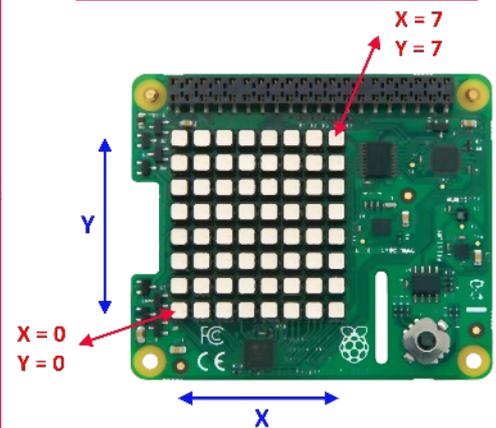
Now type;

SENSEPLOT (0,0) and press Enter

This will switch on the bottom left LED. The RGB matrix has 8 x 8 positions accessed using 0 to 7. Remember computers generally start counting from 0 not 1.

Try turning on a few more. You can enter the command **SENSECLS** to reset the display at any time.

```
**** FUZE BASIC V3.5 ****
16.2GB RAM SYSTEM  11.9GB FREE
READY.
Immediate mode
```



Clear the display (**SENSECLS**) and now enter;

SENSECOLOUR = **RASPBERRY** and press Enter

and then plot a few more LEDs changing the colour as you go.

SENSEPLOT (2,3) try different numbers

SENSECOLOUR = a different colour and press Enter

SENSEPLOT (4,6) try different numbers

SENSECOLOUR = a different colour and press Enter

SENSEPLOT (5,5) try different numbers

There are around thirty named colours in FUZE BASIC so go wild, or if you like things a bit more flexible you can use;

SENSERGBCOLOUR (r, g, b) (r, g & b are values between 0 and 255)

With **r**, **g** and **b** set to '0, 0, 0' this is the equivalent of black or in this case zero light. With '255, 0, 0' then it is pure red or use '255, 0, 128' and you'll get a nice dark pink.

Now you've got the basics why not try a few more commands;

SENSELINE (x1, y1, x2, y2) (draw a line from coordinates **x1**, **y1** to coordinates **x2**, **y2**.)

SENSERECT (x, y, width, height, fill) (draw a rectangle coordinates **x**, **y** with the specified **width** and **height**. the **fill** variable can be either 0 (just an outline) or 1 (filled in).

Note: **SENSERGBCOLOUR** (r, g, b) also determines the colour of **SENSELINE** and **SENSERECT**.