ETCH sAo SKETCH - OLED VERSION

DISPLAY SAO PORT **ACCELEROMETER ANALOG KNOBS** VIN = 3.3V for full range potentiometer travel. R35080 R1 50 R2 4K7 80 4K7 10K Measured: 1.4V SAO_conn_SFH11-NBPC-D03-ST-BK LIS3DHTR SDA SDA POT2R ADC1 GPI01 SCL VDD_IO 15 NC ADC2 RV2 14 NC VDD R_POT_5K R_POT_5K SCL/SPC ADC3 GND GND 11 SDA/SDI/SDO INT1 10 SDO/SA0 RES 9 cs INT2 GPI02 JP1 & JP2 OLED_128×128 SCL Measured: 0.9V **Power Select** GPI01 2 _____ JP3 SAO GPIO 1 & 2 Analog or Interrupt

SAO PORT (6-pin, 2x3, 0.1 inch spacing, male pins)
https://hackaday.io/project/175182-simple-add-ons-sao
Adam Tech BHR-06-VUA male, polarized header
https://www.digikey.com/en/products/detail/adam-tech/BHR-06-VUA/10414837

OLED DISPLAY (Address 0x3C, 128 x 128 pixel, 1.5 inch, 16 shade grayscale, SSD1327 controller) https://learn.adafruit.com/adafruit-grayscale-1-5-128x128-oled-display Optional address 0x3D selectable by moving resistor in upper left on the back of the blue OLED board.

ACCELEROMETER (Address 0x19, STM LIS3DHTR, 3-axis) https://learn.sparkfun.com/tutorials/lis3dh-hookup-guide/all CS is high for I2C mode.

ADC theoretical input range is 0.8 to 1.6 V (aka 1.2 +/- .4)

ADC 1 and 2 used for potentiometers. ADC3 for internal temperature.

Optional address 0x18 if R3 (SAO high) is moved to R4 position (SAO low).

OPTIONAL JP3 & JP4 CONFIG
Solder pads 1-2 to connect accelerometer inerrupt output pins to SAO GPIO 1&2.

Solder pads 2-3 to connect analog potentiometer outputs to SAO GPIO 1&2

POTENTIOMETERS/ANALOG KNOBS (Accessed through accelerometer) Left pot connected to accelerometer input ADC1. Right pot connected to accelerometer input ADC2.

GND

All non-polarized capacitors are X7R or X5R ceramic unless otherwise noted.

https://hackaday.io/project/197581-etch-sao-sketch

GPI02

Concept and design by Andy Geppert @ www.Machineldeas.com

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