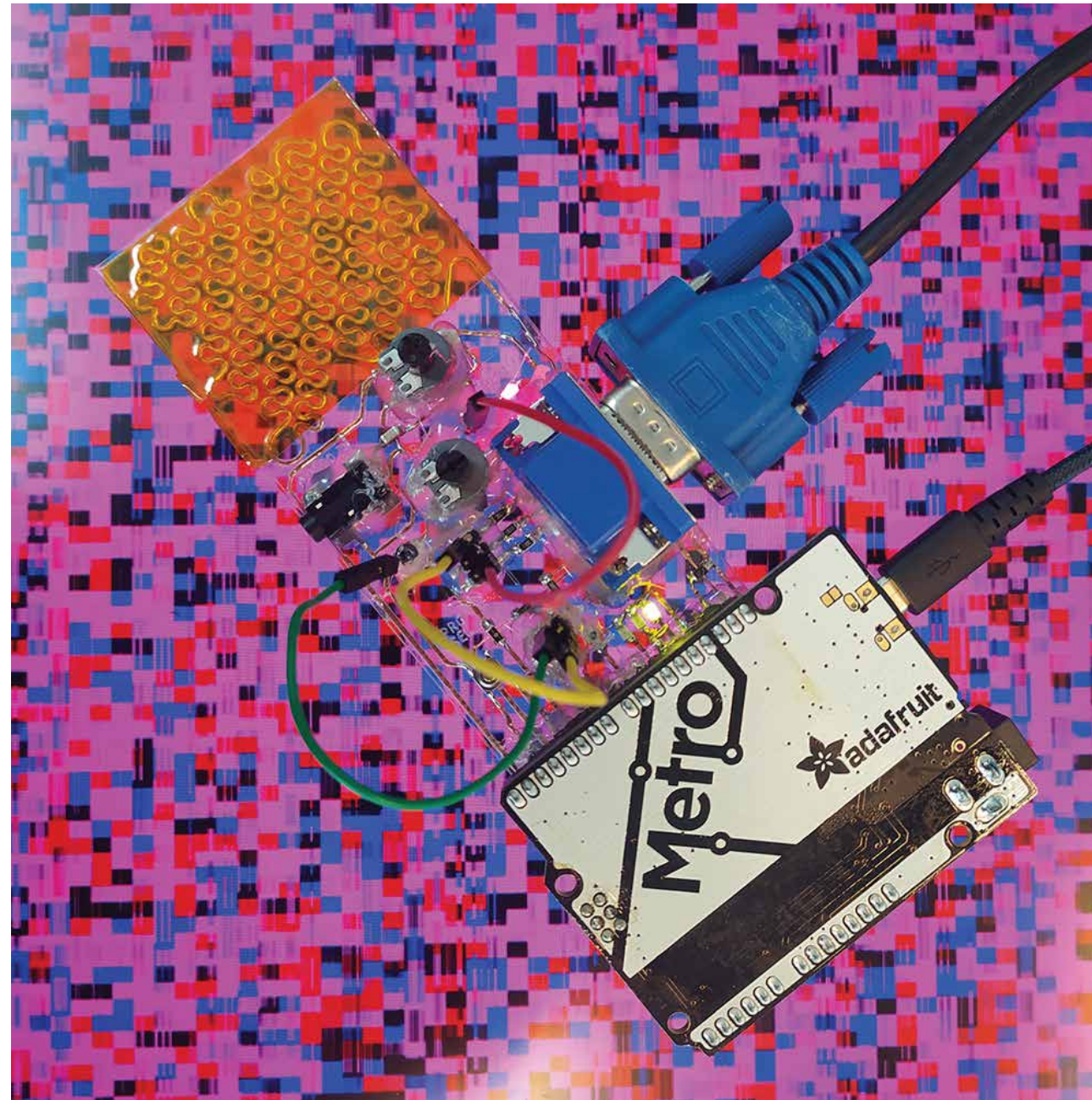
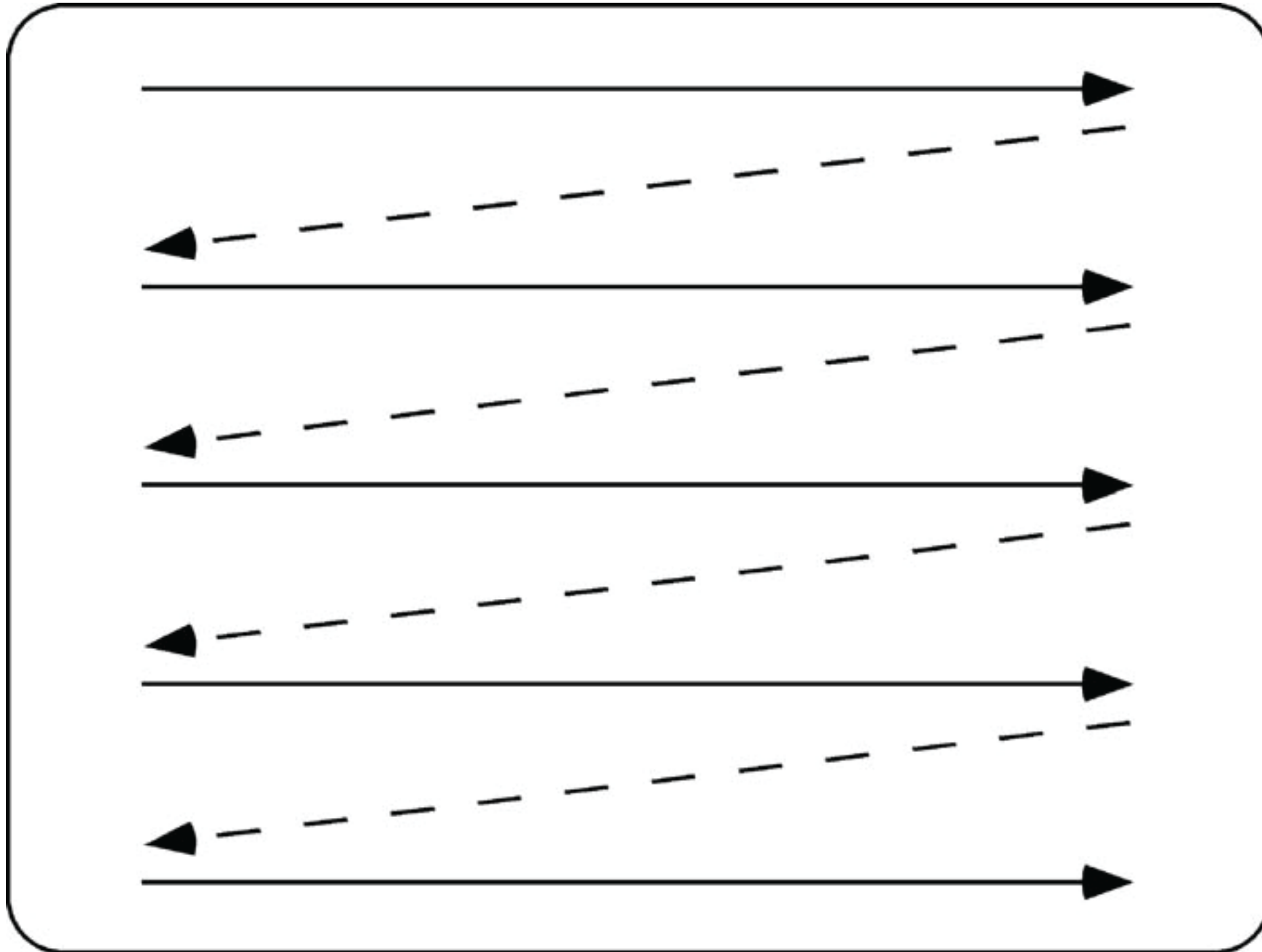


# Video Art Synthesizer Workshop



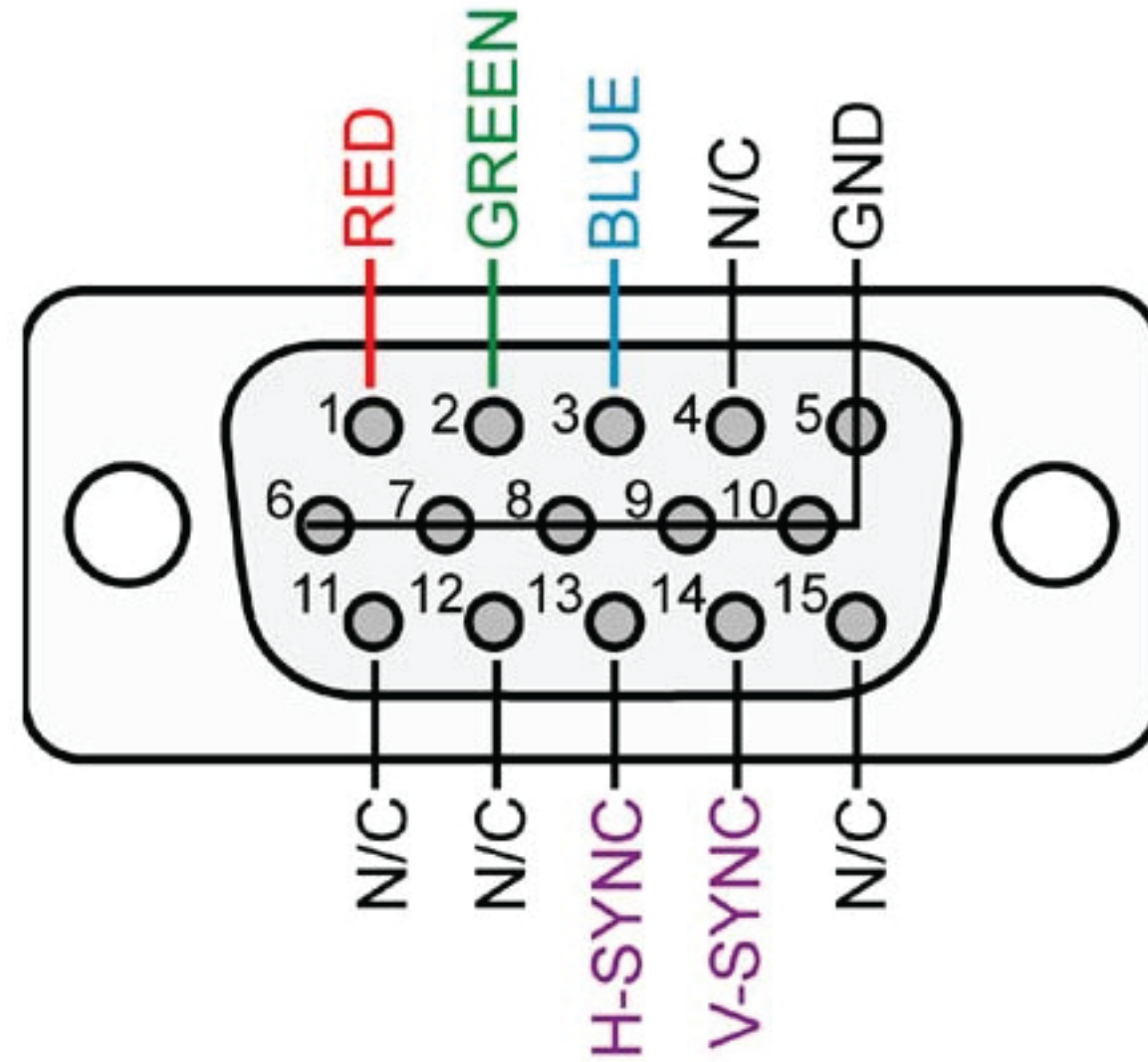
Fablab Digiscope

# Raster Scanning

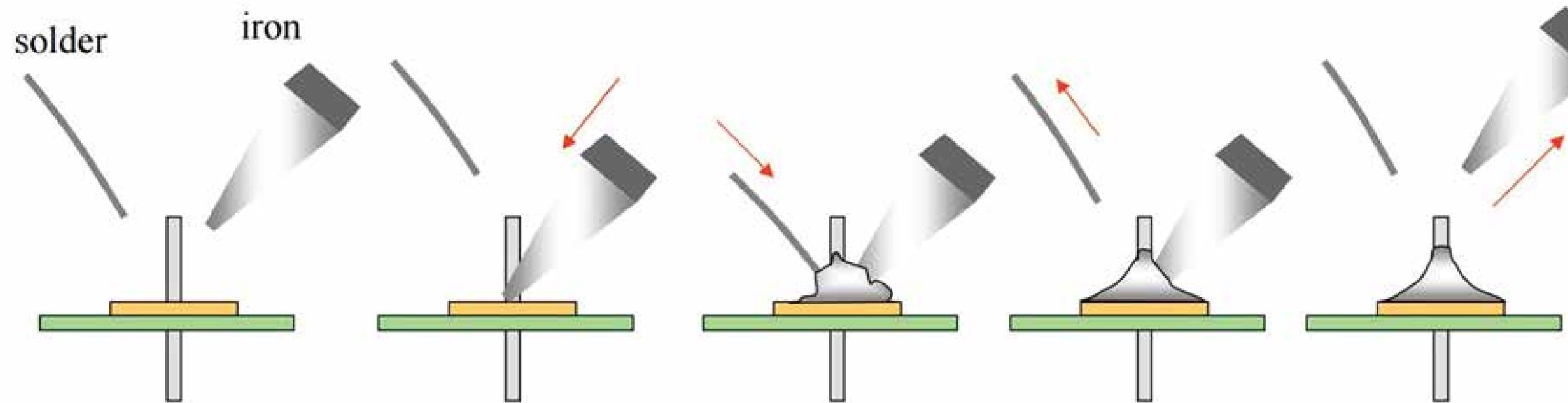


# VGA Pinout

VGA port, view from Wire Side



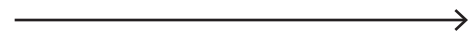
# How to solder



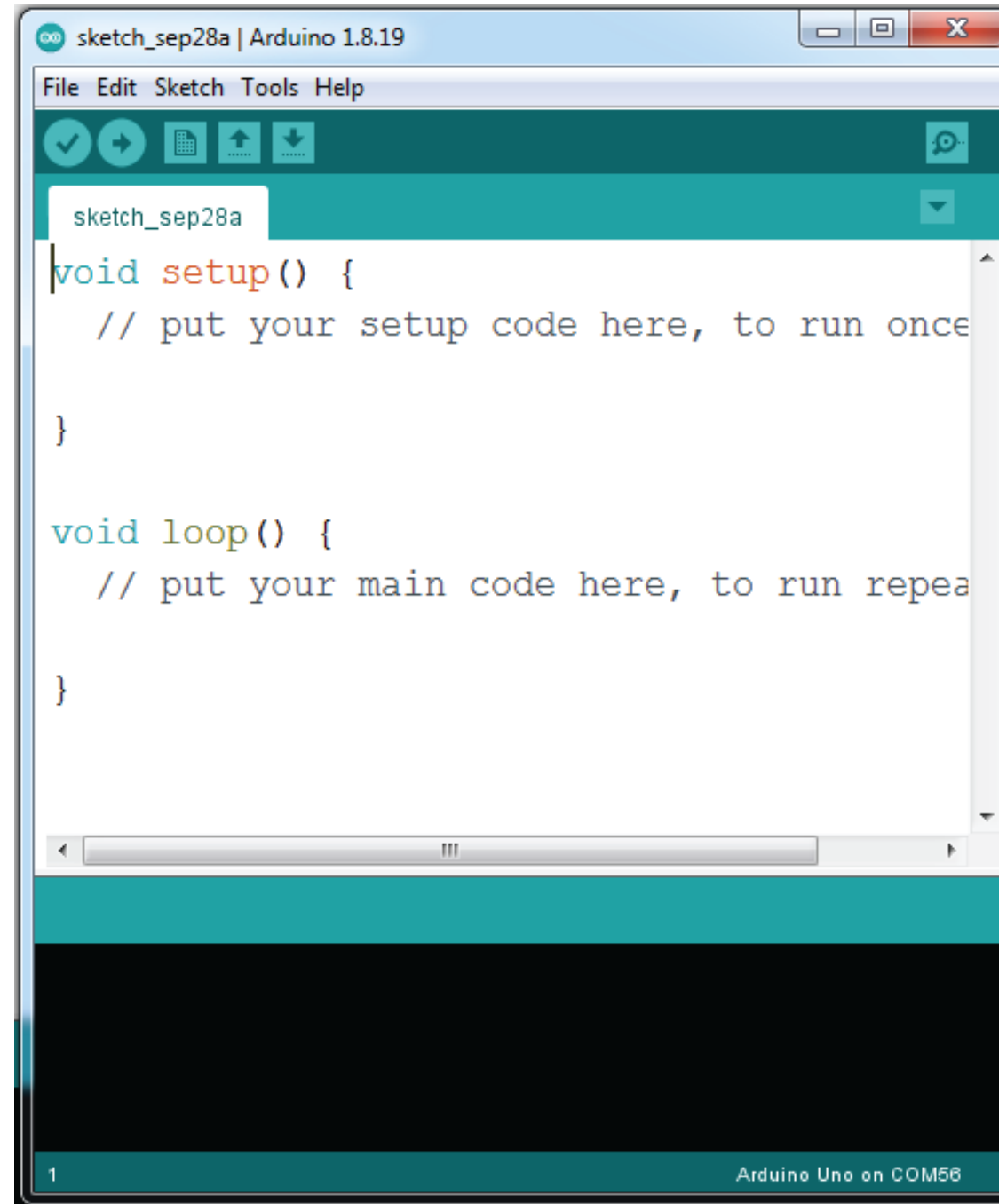
\*Practice first on scraps\*

# Arduino

Setup



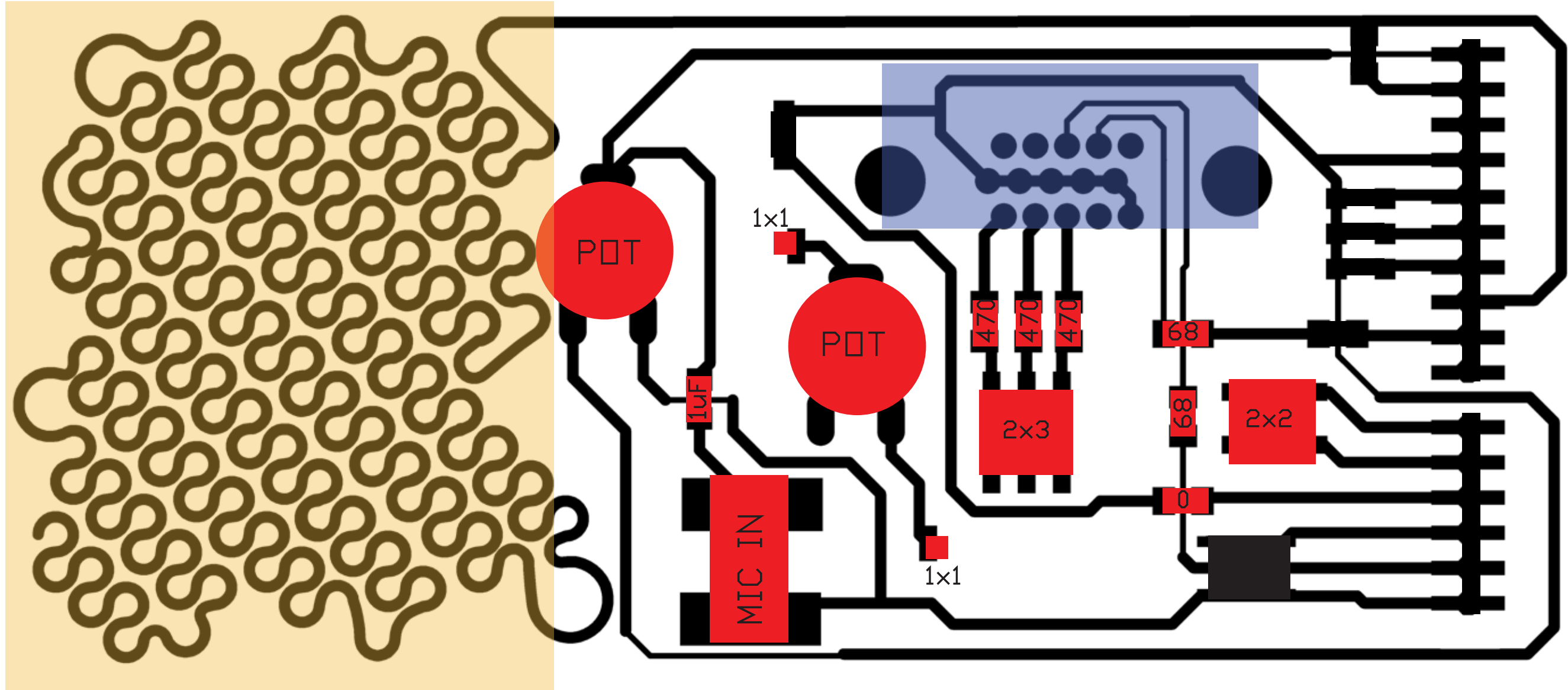
Loop



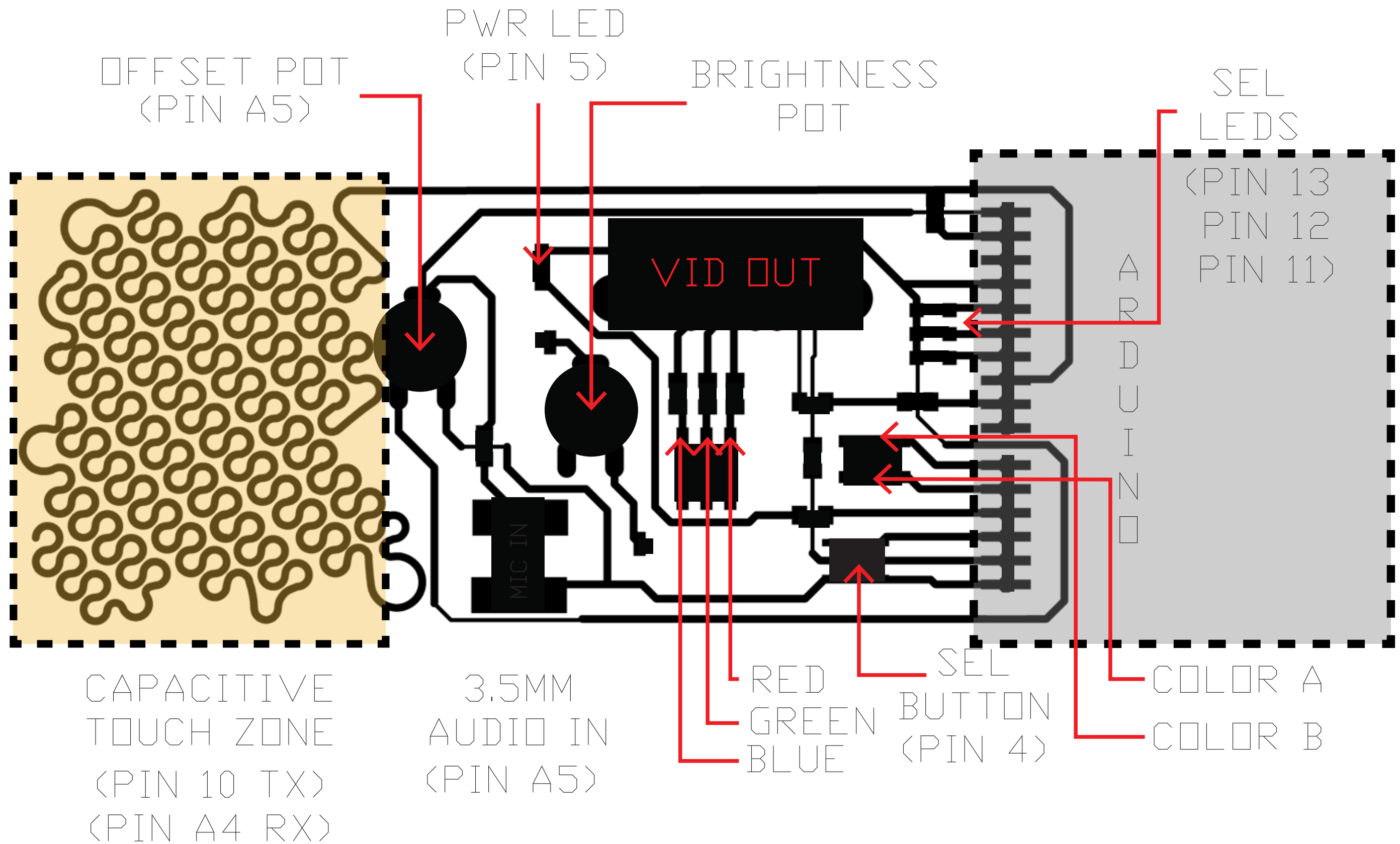


# Things to solder

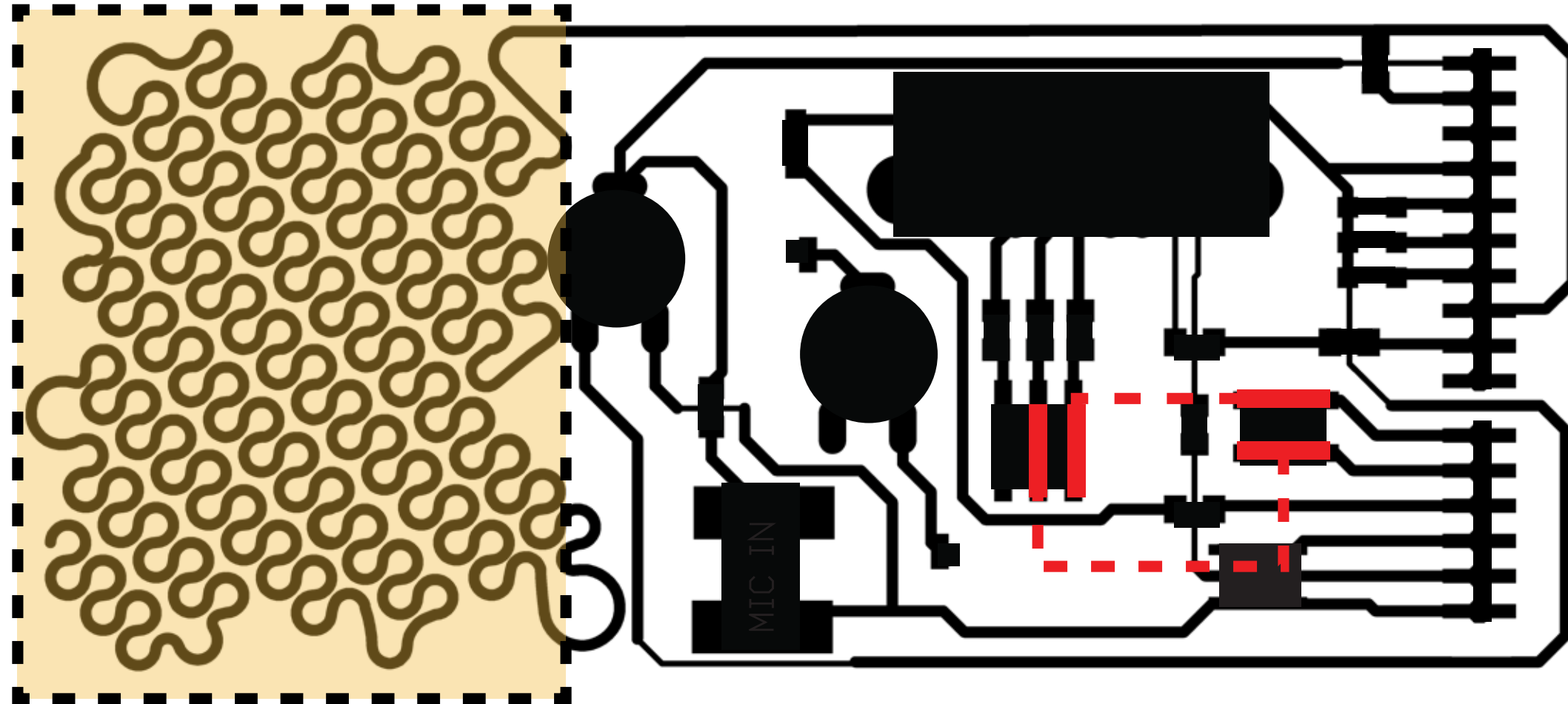
VID OUT



ARDUINO



# How to use the synth



PLUG IN COLORS A/B TO EITHER RED,  
GREEN, BLUE OR THRU BRIGHTNESS POT



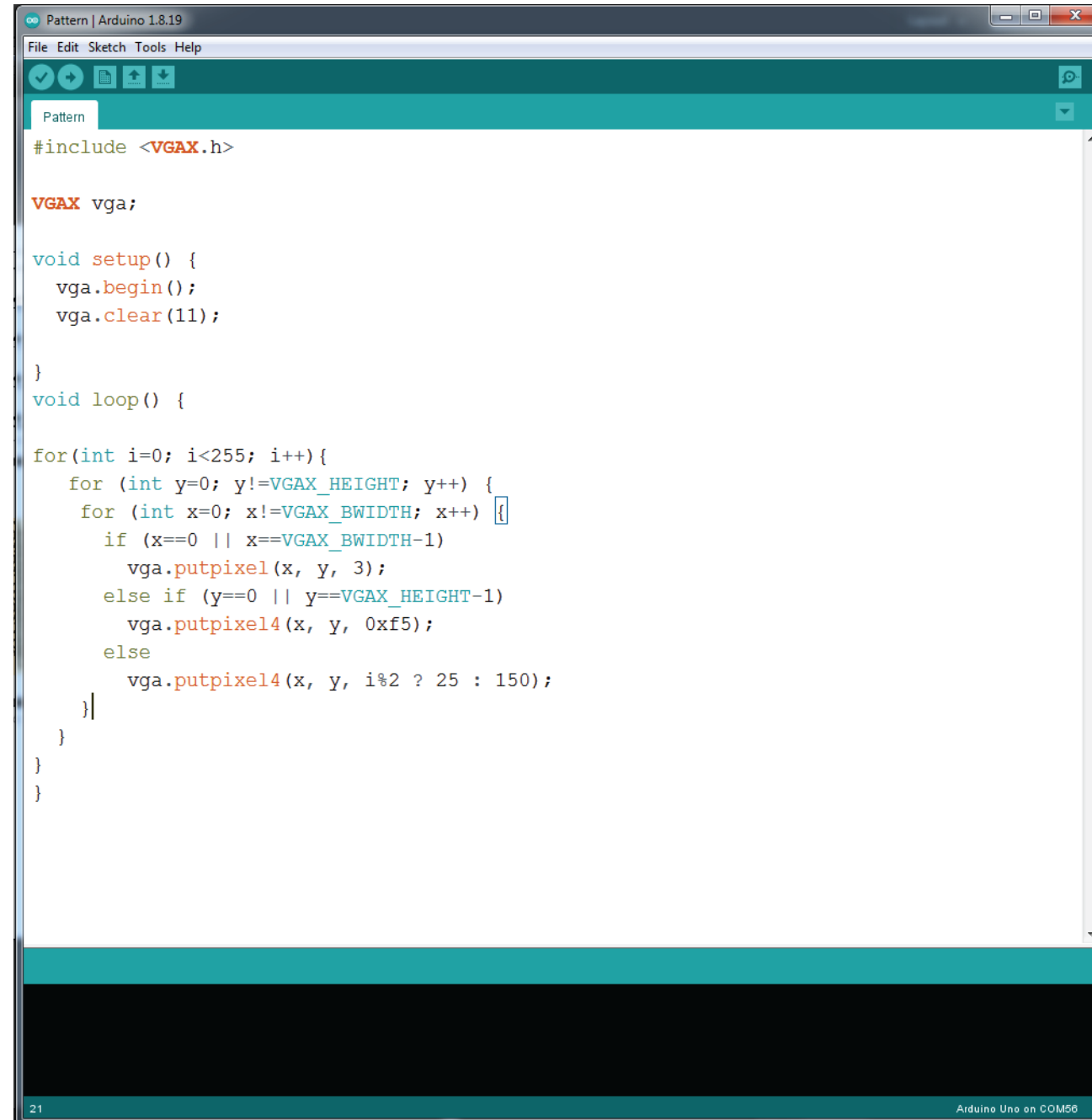
# BYTE BEATS

+ - \* / % MATH OPERATORS

& | ^ << >> BITWISE OPERATORS

> < >= != <= == RELATIONAL OPERATORS

# VGAX PATTERN



```
Pattern | Arduino 1.8.19
File Edit Sketch Tools Help
[Icons]
Pattern
#include <VGAX.h>

VGAX vga;

void setup() {
  vga.begin();
  vga.clear(11);
}

void loop() {

for(int i=0; i<255; i++){
  for (int y=0; y!=VGAX_HEIGHT; y++) {
    for (int x=0; x!=VGAX_BWIDTH; x++) {
      if (x==0 || x==VGAX_BWIDTH-1)
        vga.putpixel(x, y, 3);
      else if (y==0 || y==VGAX_HEIGHT-1)
        vga.putpixel4(x, y, 0xf5);
      else
        vga.putpixel4(x, y, i%2 ? 25 : 150);
    }
  }
}
}
```

21 Arduino Uno on COM56

