DIY Instructions

This document will guide the user through the process of building their own AXIOM module. While this should be a simple and enjoyable process, some prior experience with soldering is highly recommended before starting this project.

Please ensure that steps are followed in the correct order, as failure to do so may cause complications further on in the build.

For help building this module, please email support@scrapcode.co.uk or visit www.facebook.com/scrapcodemodular.

Component Checklist

Please check the following component list before starting assembly. If any components are missing or damaged, please email support@scrapcode.co.uk.

- 1x PCB
- 1x Faceplate (with pre-attached foam tape)
- 1x Display
- 1x ATMEGA328P microprocessor

Installation Bag:

- 4x 6mm screw
- 1x Ribbon cable

Electronic Components Bag:

- 15x Jack socket
- 9x 100K potentiometer
- 5x Red LED
- 1x 16MHz crystal
- 1x Button
- 1x On-Off switch
- 1x On-Off-On switch
- 1x IC socket
- 1x Power header

Mechanical Components Bag:

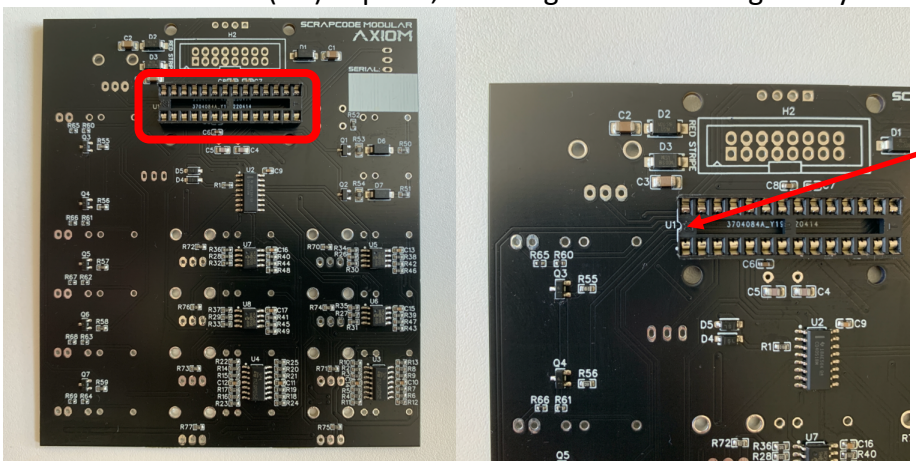
- 8x Trimmer topper
- 1x Plastic knob
- 1x Brass pot adapter
- 10x Silver nut
- 5x Red nut
- 4x 6mm standoff
- 8x 4mm screw

Tools Required

- Soldering iron
- Solder (ideally lead-free)
- Clippers
- Small Phillips screwdriver
- Small flathead screwdriver
- 3.5mm knurled nut driver
- Masking tape
- Eye protection
- Fume extractor

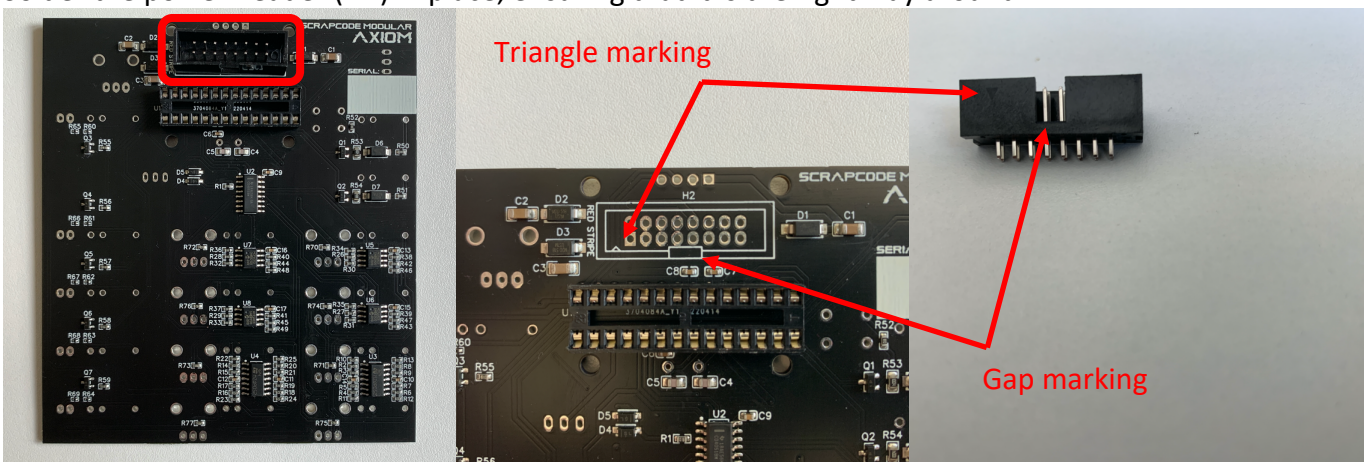
1 – IC Socket

Solder the IC socket (U1) in place, ensuring that it is the right way around.



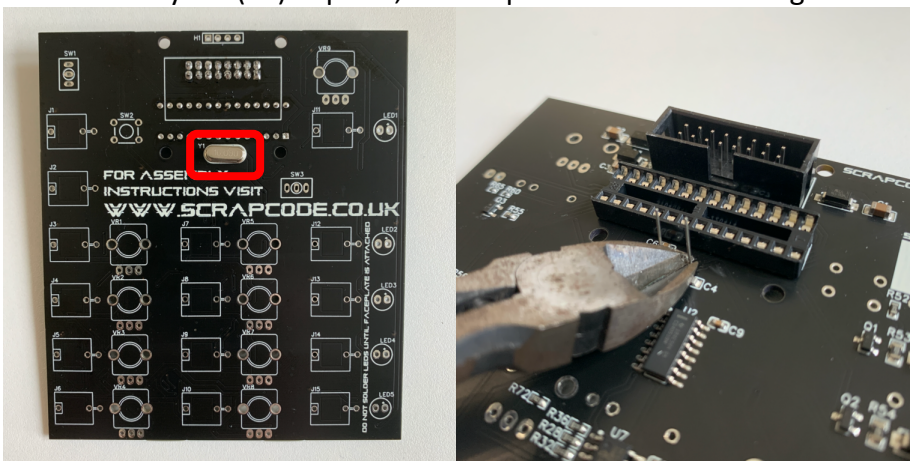
2 – Power Header

Solder the power header (H2) in place, ensuring that it is the right way around.



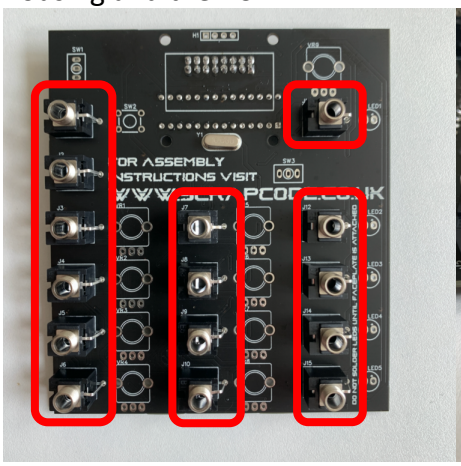
3 – Crystal

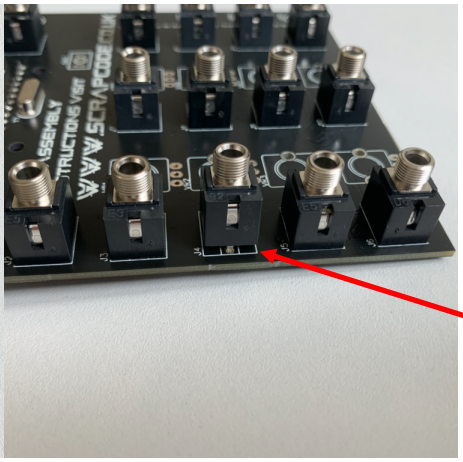
Solder the crystal (Y1) in place, then clip the excess off the legs.



4 – Jacks

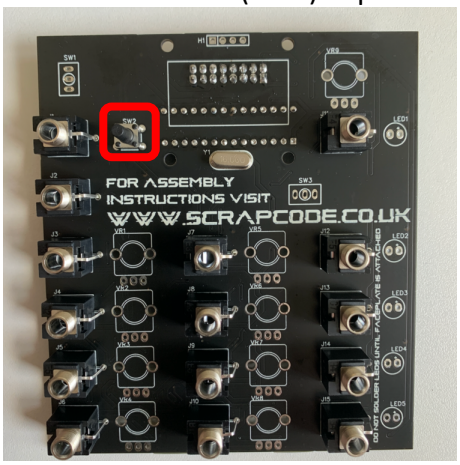
Solder the jacks (J1-15) in place, ensuring that they are mounted flat with no gaps between the plastic housing and the PCB.





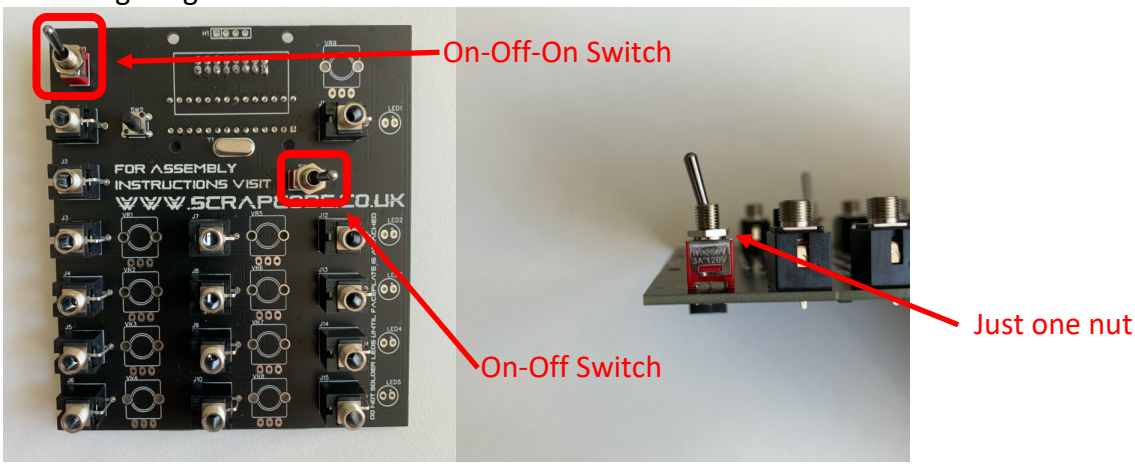
5 – Button

Solder the button (SW2) in place.



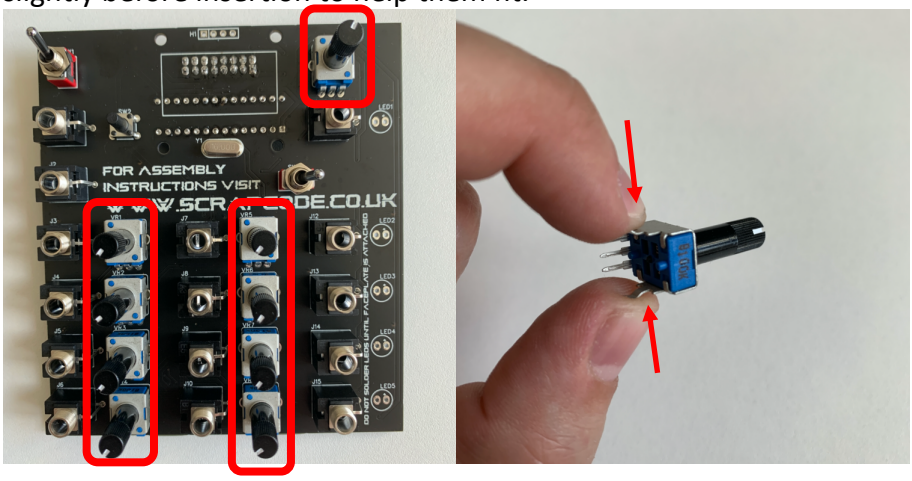
6 – Switches

Solder the two switches (SW1 & SW3) in place, ensuring that the three-position switch is in SW1, the two-position switch is in SW3, and that they are both mounted flat with no gaps between the plastic housing and the PCB. Remove one nut from each jack and place to one side for later use, and ensure that the other nut is finger tight.



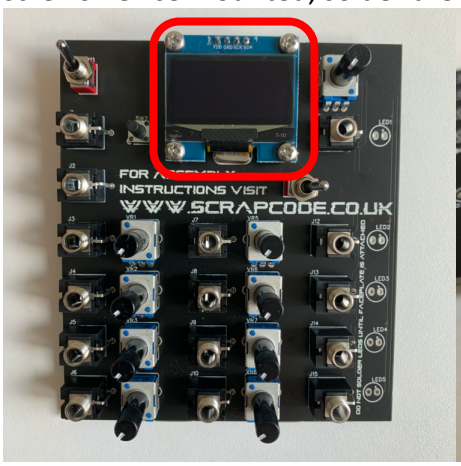
7 – Pots

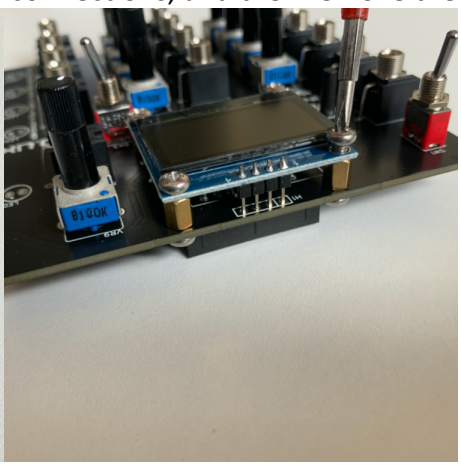
Insert the pots (VR1-9), but **do not solder them** yet. The large edge pins may need to be squeezed inwards slightly before insertion to help them fit.



8 – Display

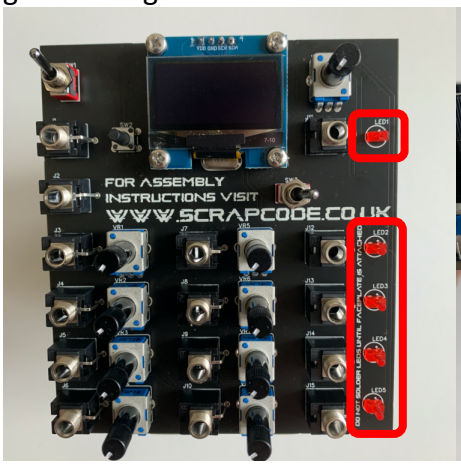
Mount the display (H1) using the 4mm screws and 6mm standoffs, taking care not to overtighten the screws. Once mounted, solder the connections, and then remove the protective film from the screen.

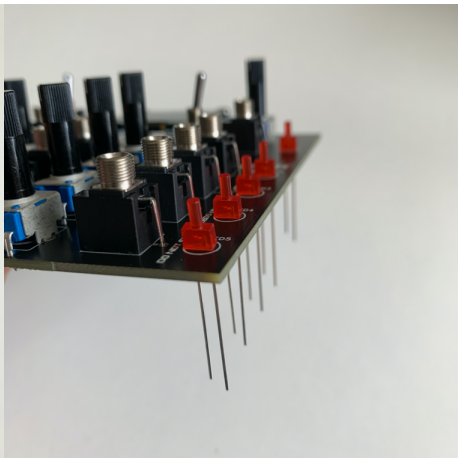




9 – LEDs

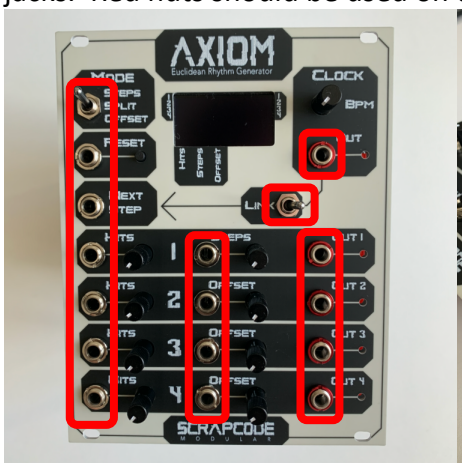
Place the LEDs (LED1-5) in position, but **do not solder them** yet. Make sure that the long leg on each LED goes through the hole labelled "+".

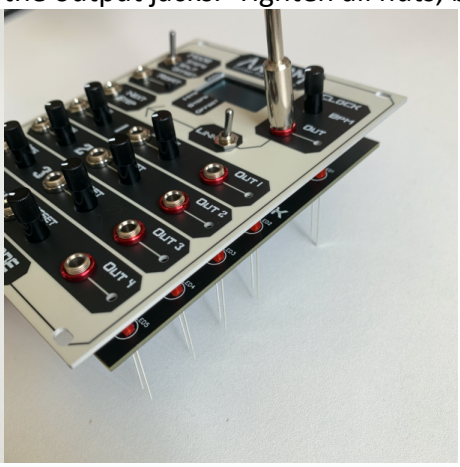




10 – Faceplate

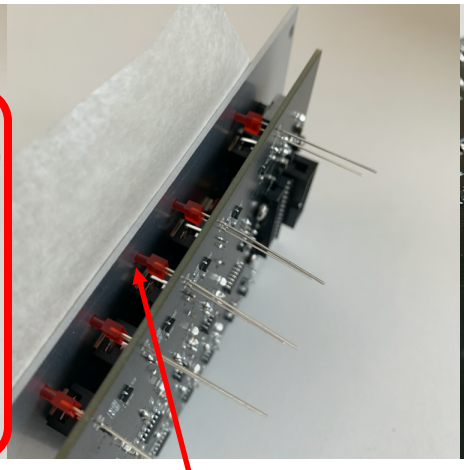
Install the faceplate. SW1 will need to be in its central position, and SW3 may need to be held at its halfway point. Use the hexagonal nuts placed aside earlier on the switches, and the knurled nuts on the jacks. Red nuts should be used on the output jacks. Tighten all nuts, being careful not to over-tighten.

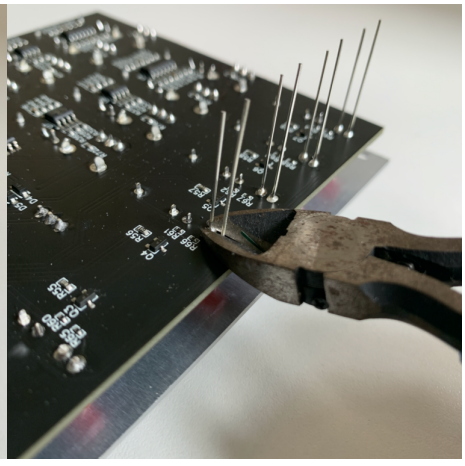




11 – LEDs

Place a piece of masking tape on the front of the module, covering all of the LED holes. Gently press each LED against this tape, and then run a finger over the front of the faceplate to ensure that all LEDs are sitting flush. Solder the LEDs (LED1-5) in place, then clip the excess off the legs and remove the masking tape.

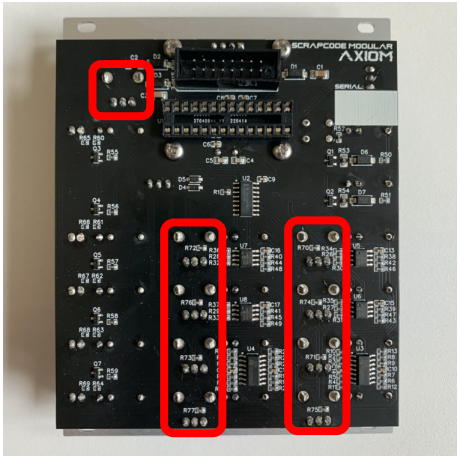




Top of LEDs all sitting flush with faceplate

12 – Pots

Check each pot is correctly lined up with the faceplate and twists easily in its hole. Wiggle any which do not until they are in a better position. Solder them (VR1-9) in place.



13 – Trimmer Toppers

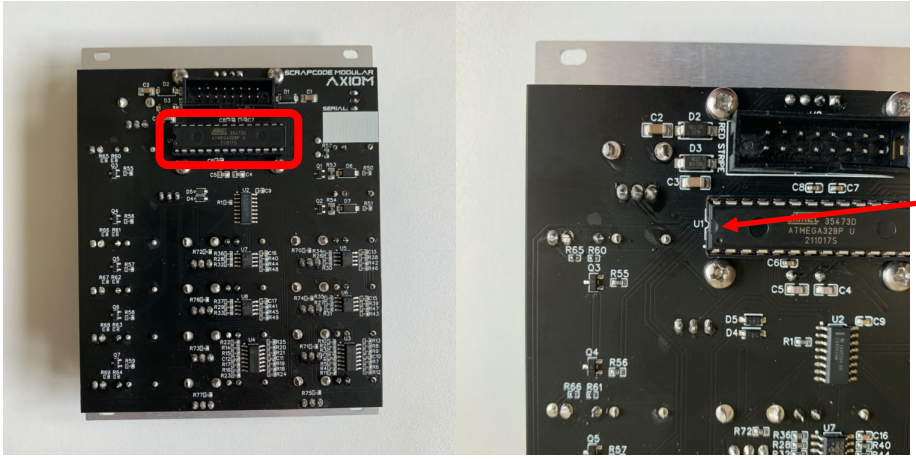
Gently install the trimmer toppers onto the main parameter pots (not the Clock BPM), ensuring that the markings line up with those on the pots.

14 – Plastic Knob

Loosen the screw on the plastic knob, then insert the brass adapter ring. Install the knob on the Clock BPM pot, leaving a small amount of space between the bottom of the knob and the faceplate, and then tighten the screw. Make sure that the marking on the knob lines up with the one on the pot.

15 – Insert Microcontroller

Gently insert the microcontroller chip into the IC socket, ensuring that it is the right way around.



Congratualtions
Your Axiom is now ready to go

Before switching it on, please make sure that it is securely installed in your rack, and that it has been properly connected to a suitable Eurorack power supply.