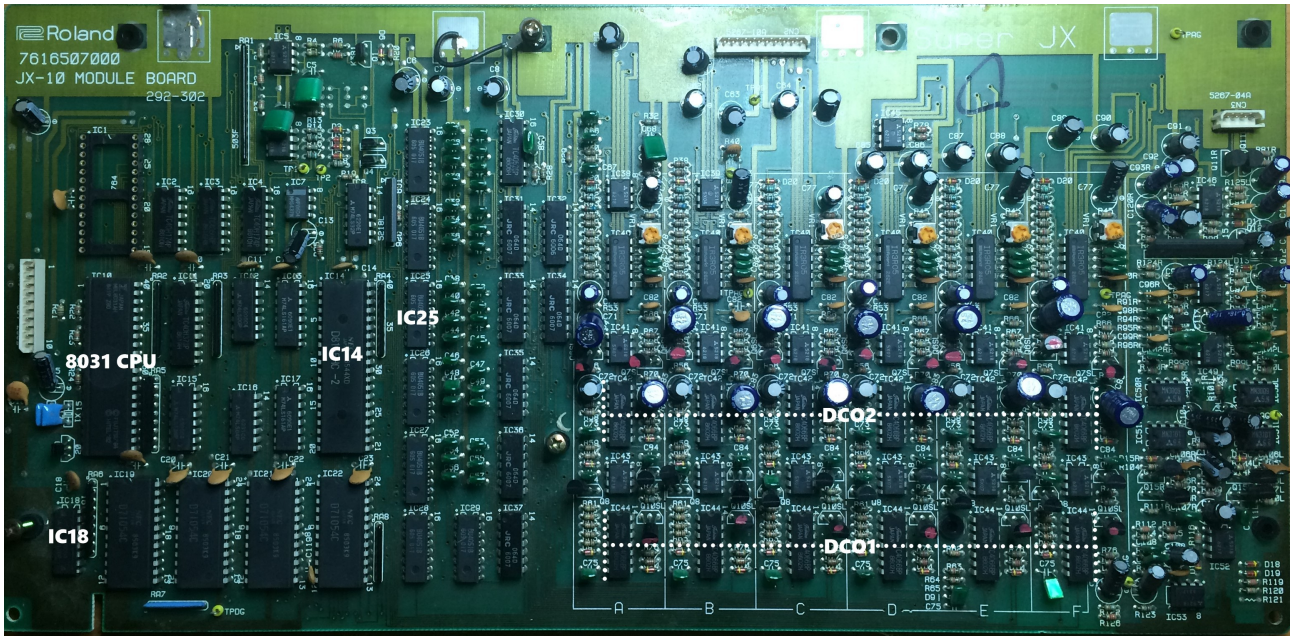# JX PWM BASIC WIRING GUIDE V1.0

Welcome to the draft version which is intended as a "get you going" whilst the main documentation is being prepared by Serge..

First an easy locator picture for the chips we are concerned with on the JX10 soundboard.......
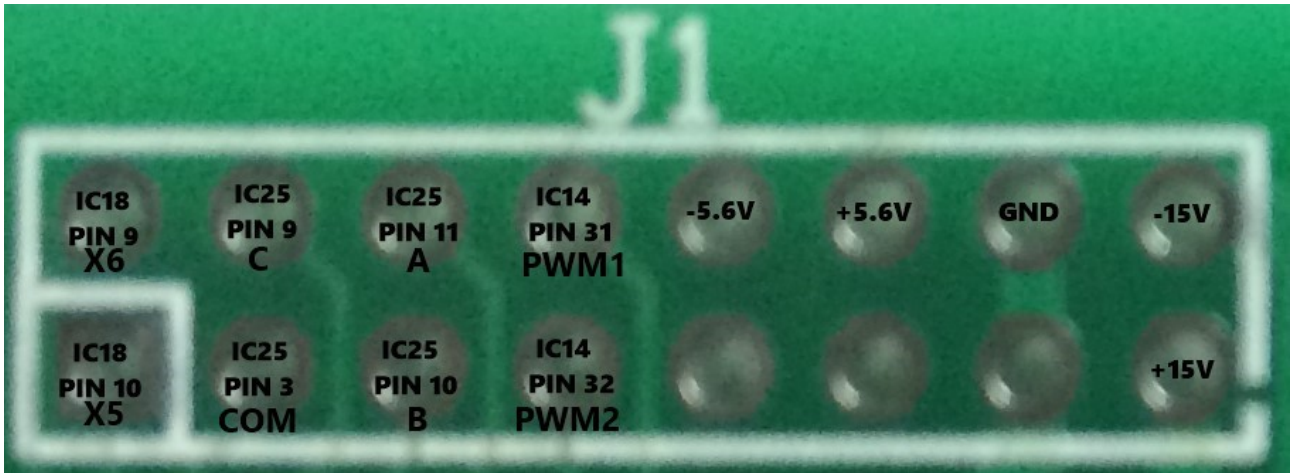

8031 CPU to be replaced with 80C320 CPU
IC18 provides the 4051 select signals (X5/X6)
IC14 provides the PWM1 and PWM2 select signals
IC25 provides the 4051 COM and A/B/C signals

All the IC`s under the dotted line in the DCO1 section are numbered as IC44 and are referred to as IC44 A, IC44 B etc up to IC44 F as indicated by the screen printed A-F at the bottom of the soundboard, likewise all the IC`s in the DCO2 section are numbered as IC42 and follow the A-F pattern.
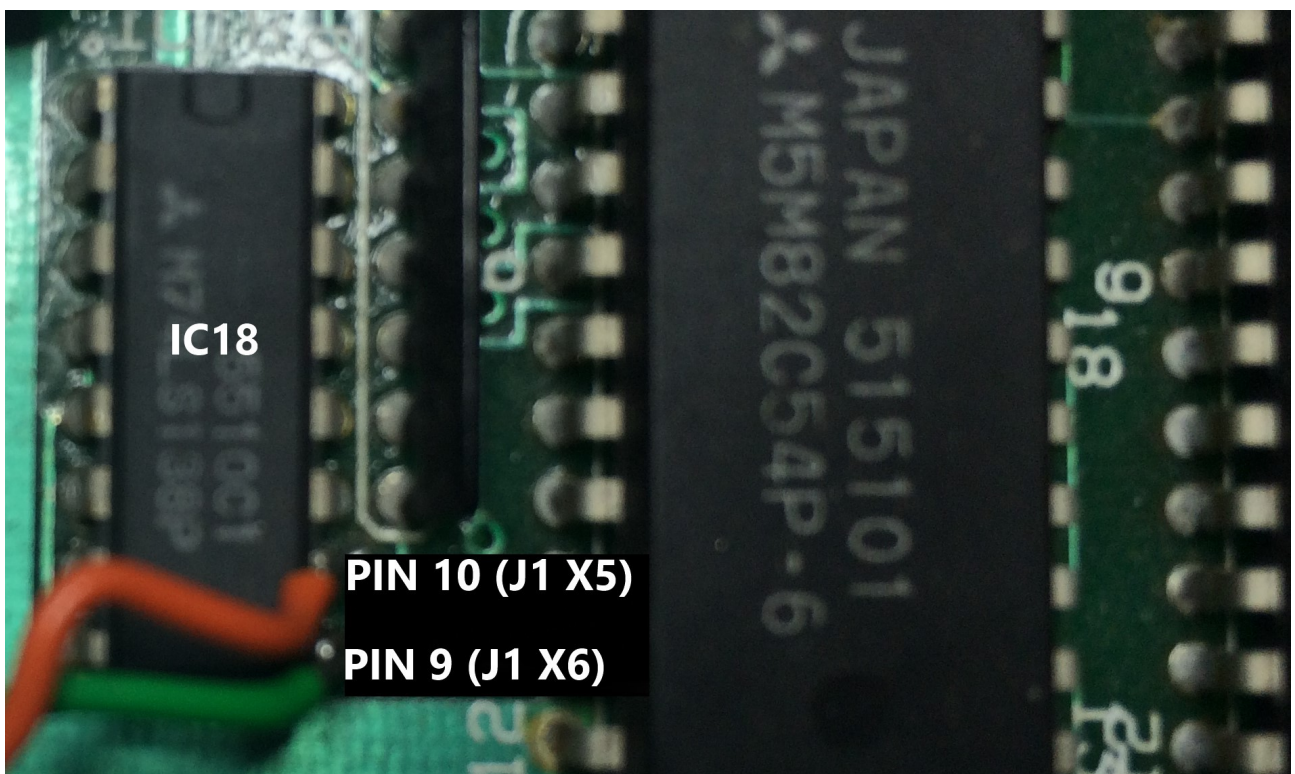
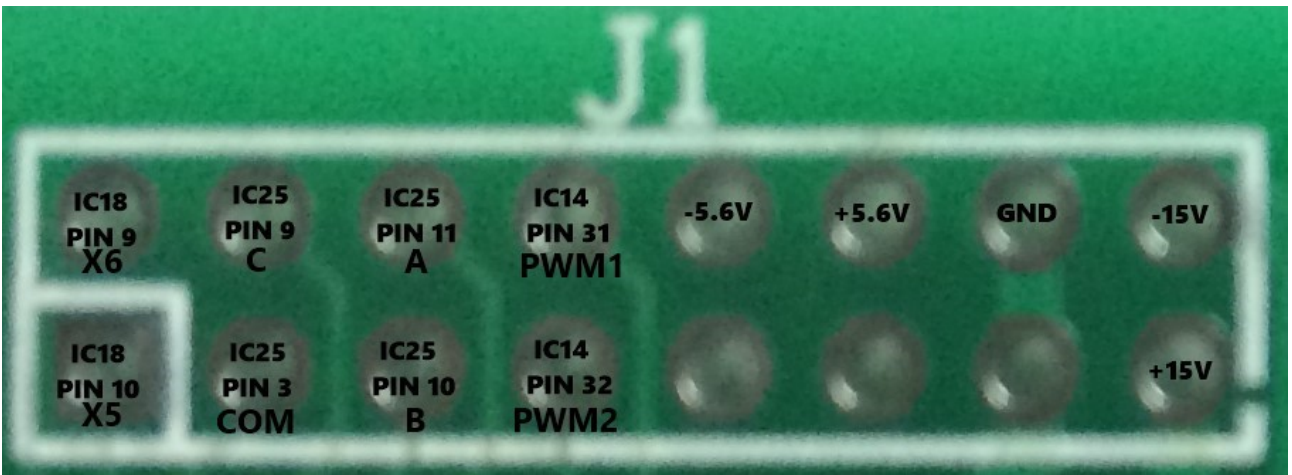Each pair of IC42 and IC44 make up one voice of the JX/MKS synthesizer.

J1 header

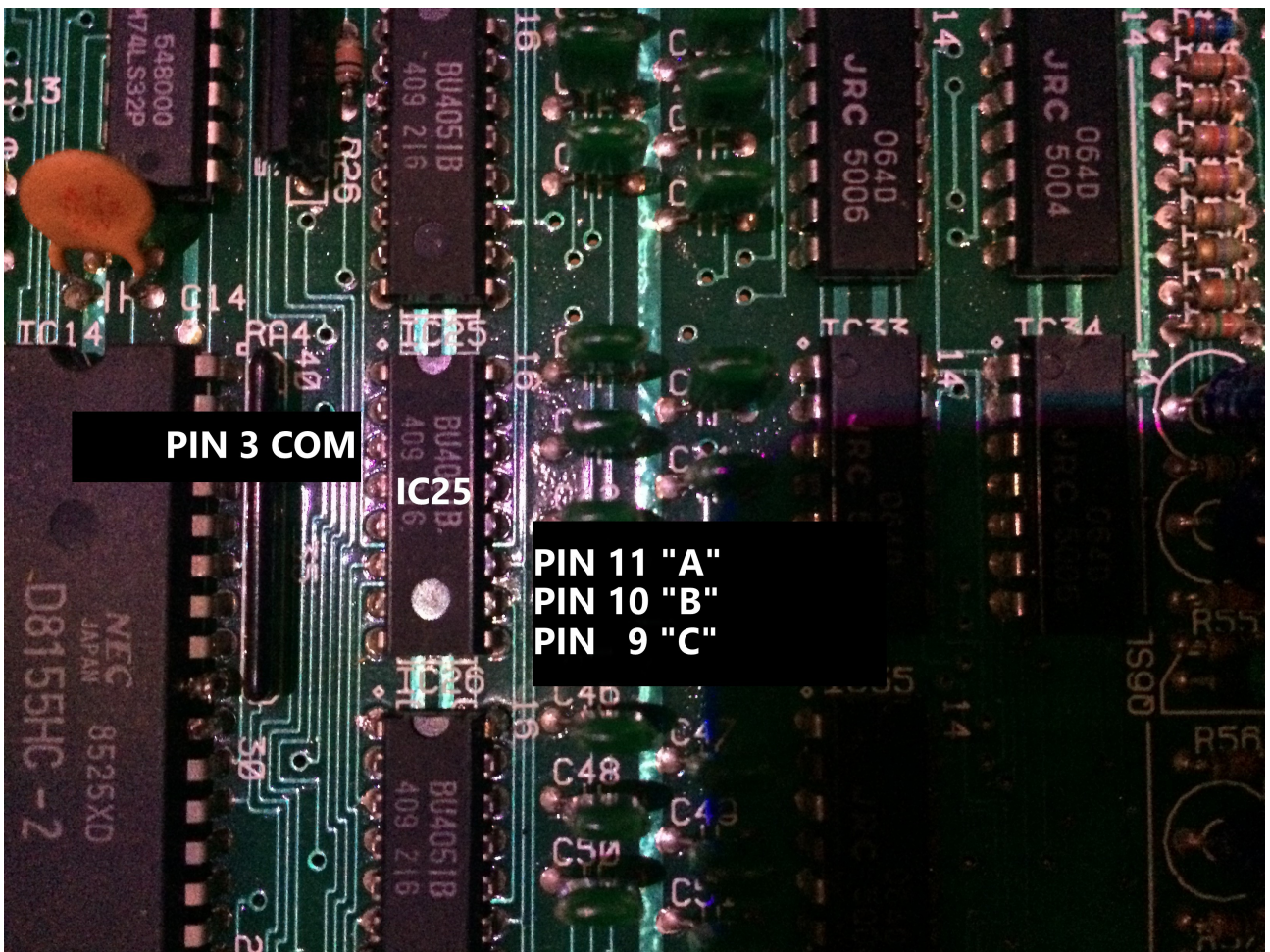| IC18 PIN 9 X6 | IC25 PIN 9 C | IC25 PIN 11 A | IC14 PIN 31 PWM1 | -5.6V | +5.6V | GND | -15V |
| IC18 PIN 10 X5 | IC25 PIN 3 COM | IC25 PIN 10 B | IC14 PIN 32 PWM2 | | | | +15V |

The J1 Header on the PWM board takes in the control signals and power from the soundboard

Starting from the left connect IC18

J1

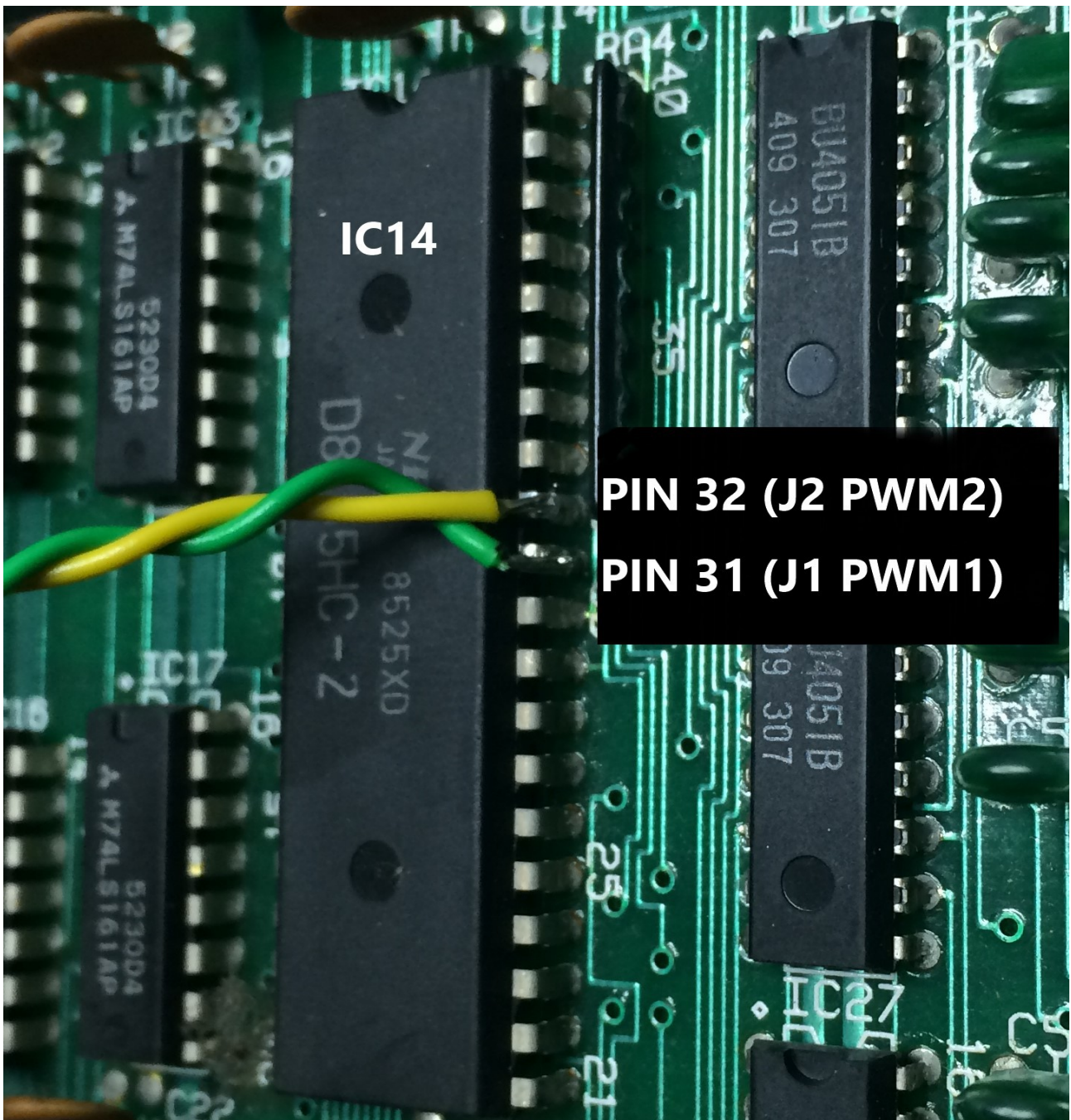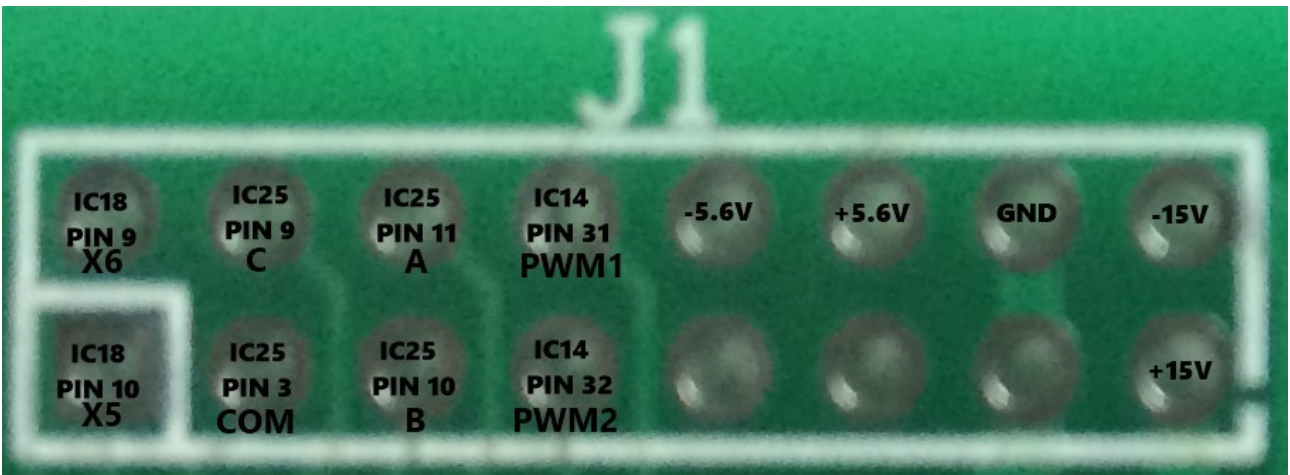| IC18 PIN 9 X6 | IC25 PIN 9 C | IC25 PIN 11 A | IC14 PIN 31 PWM1 | -5.6V | +5.6V | GND | -15V |
| IC18 PIN 10 X5 | IC25 PIN 3 COM | IC25 PIN 10 B | IC14 PIN 32 PWM2 | | | | +15V |

Next IC25

PIN 3 COM

IC25

PIN 11 "A"
PIN 10 "B"
PIN 9 "C"

Now IC14

IC14

PIN 32 (J2 PWM2)

PIN 31 (J1 PWM1)

J1 connector pinout:

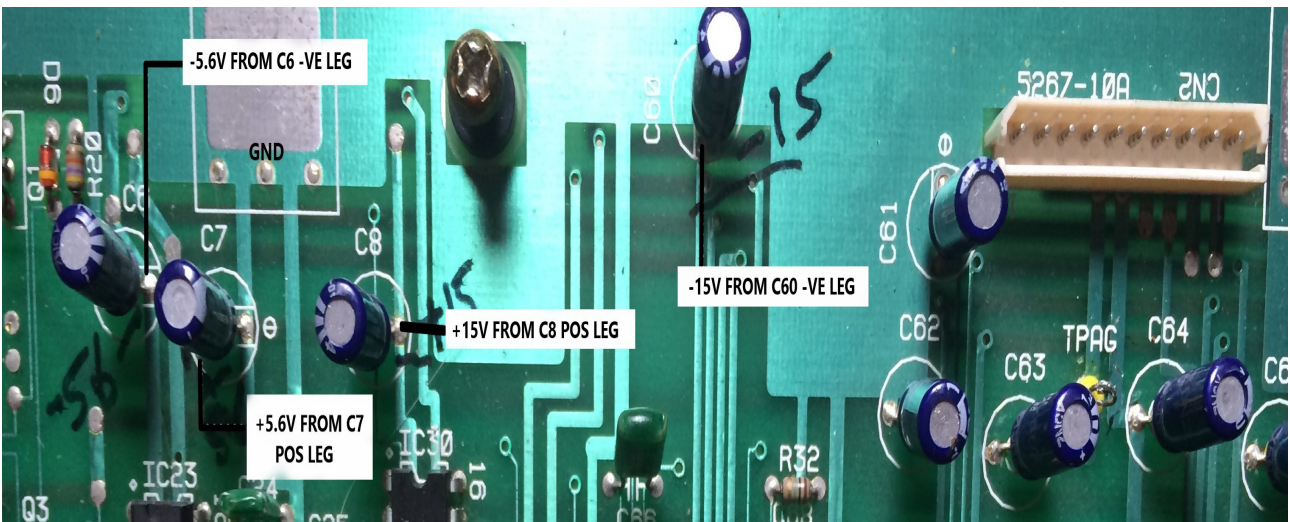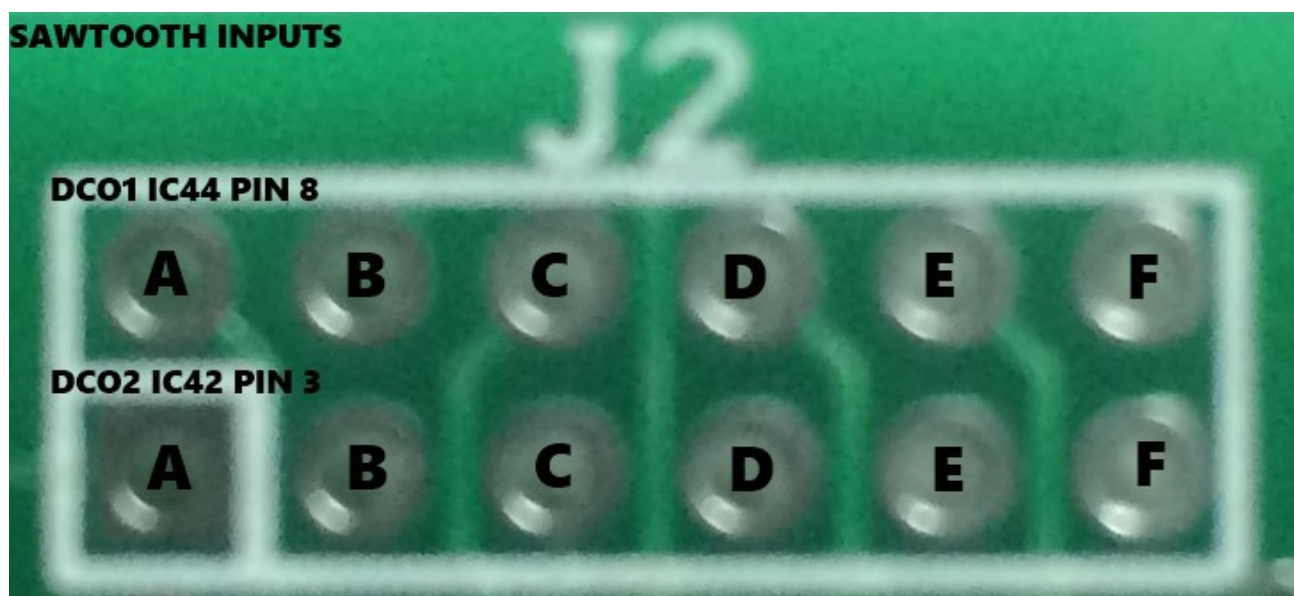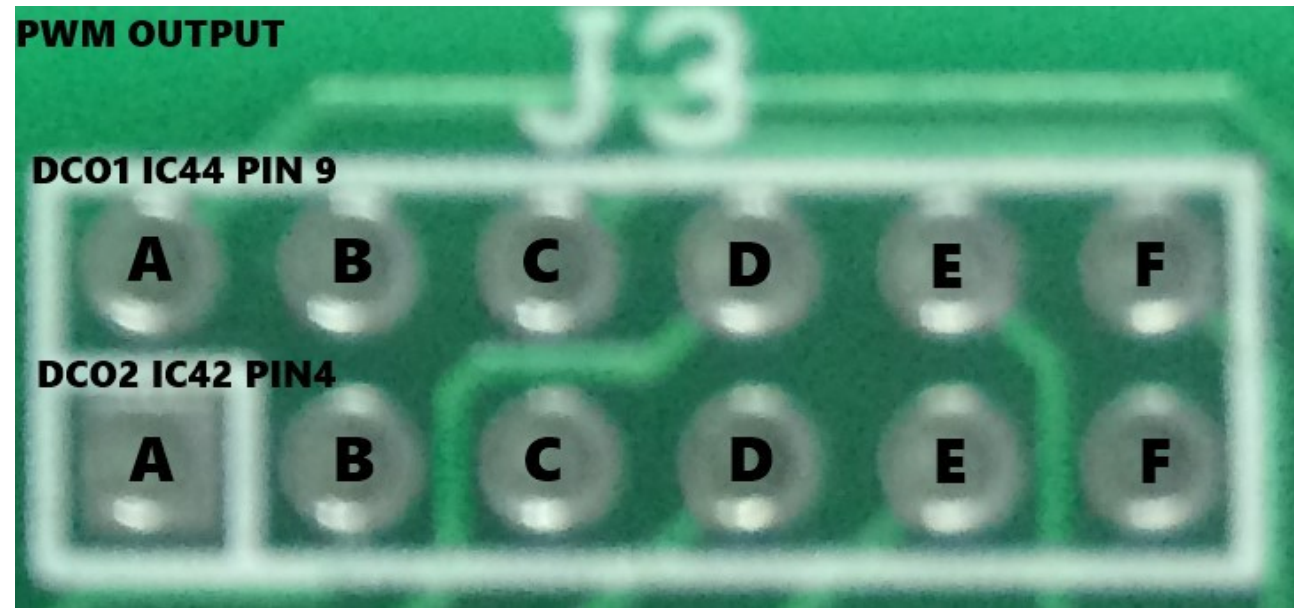| IC18 PIN 9 X6 | IC25 PIN 9 C | IC25 PIN 11 A | IC14 PIN 31 PWM1 | -5.6V | +5.6V | GND | -15V |
| IC18 PIN 10 X5 | IC25 PIN 3 COM | IC25 PIN 10 B | IC14 PIN 32 PWM2 | | | | +15V |
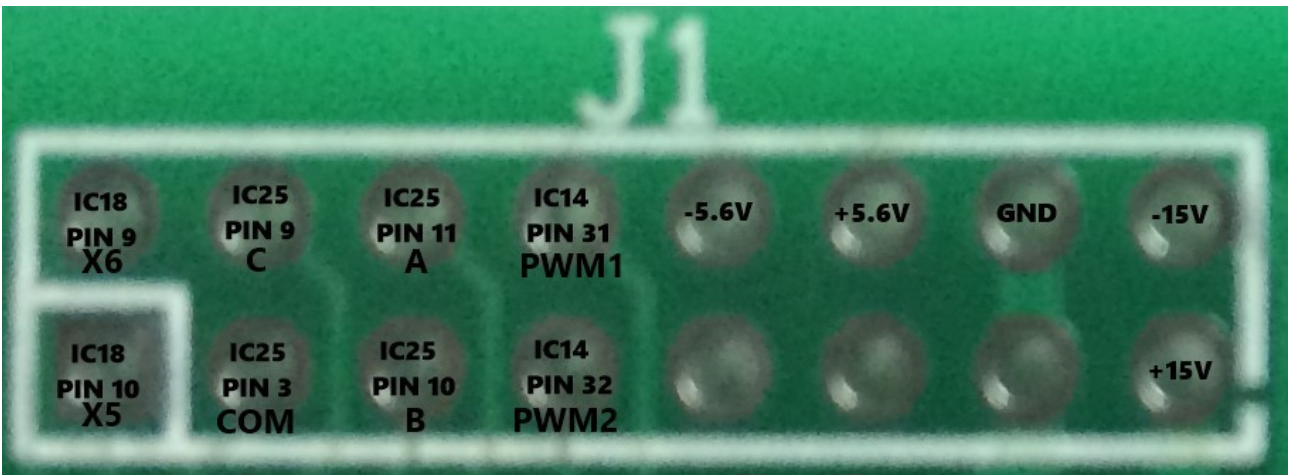
And finally some power..and please note that only one connection is required to each of the +/- 5.6V pins and the GND pin.

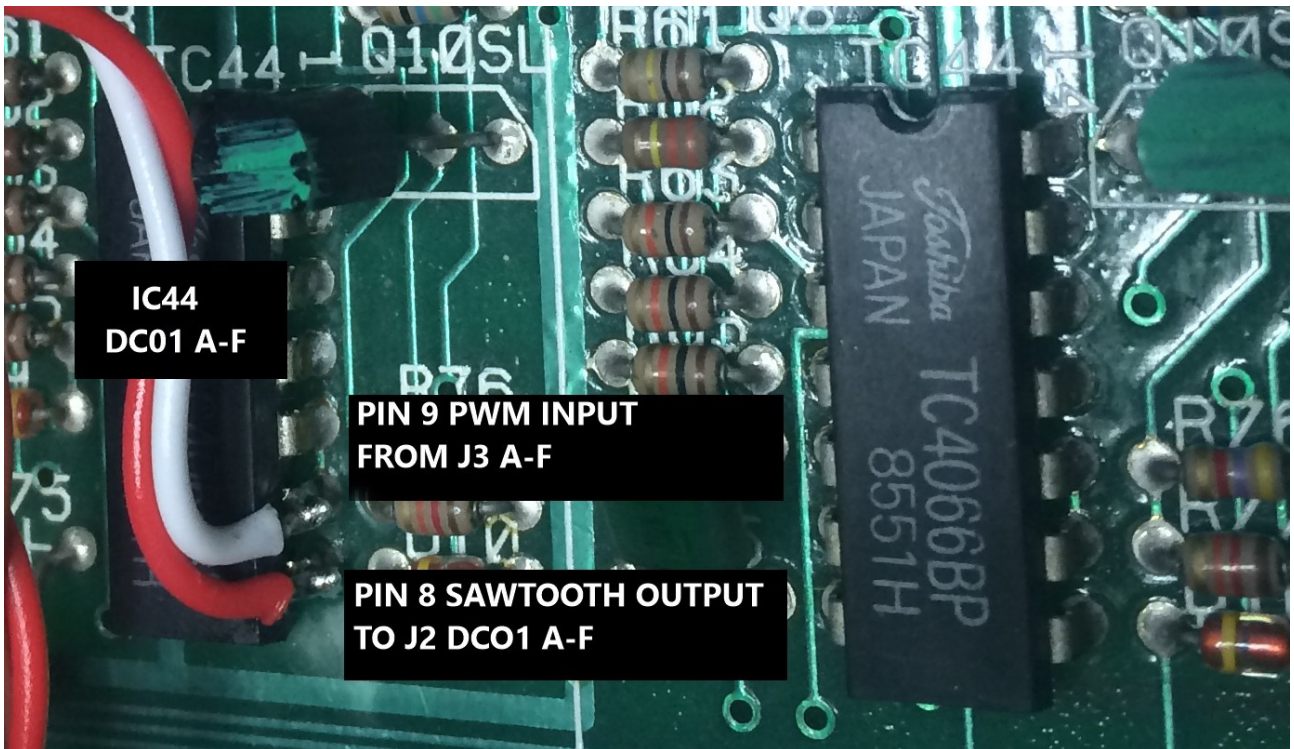J2 takes in the Sawtooth waveform from the JX.......

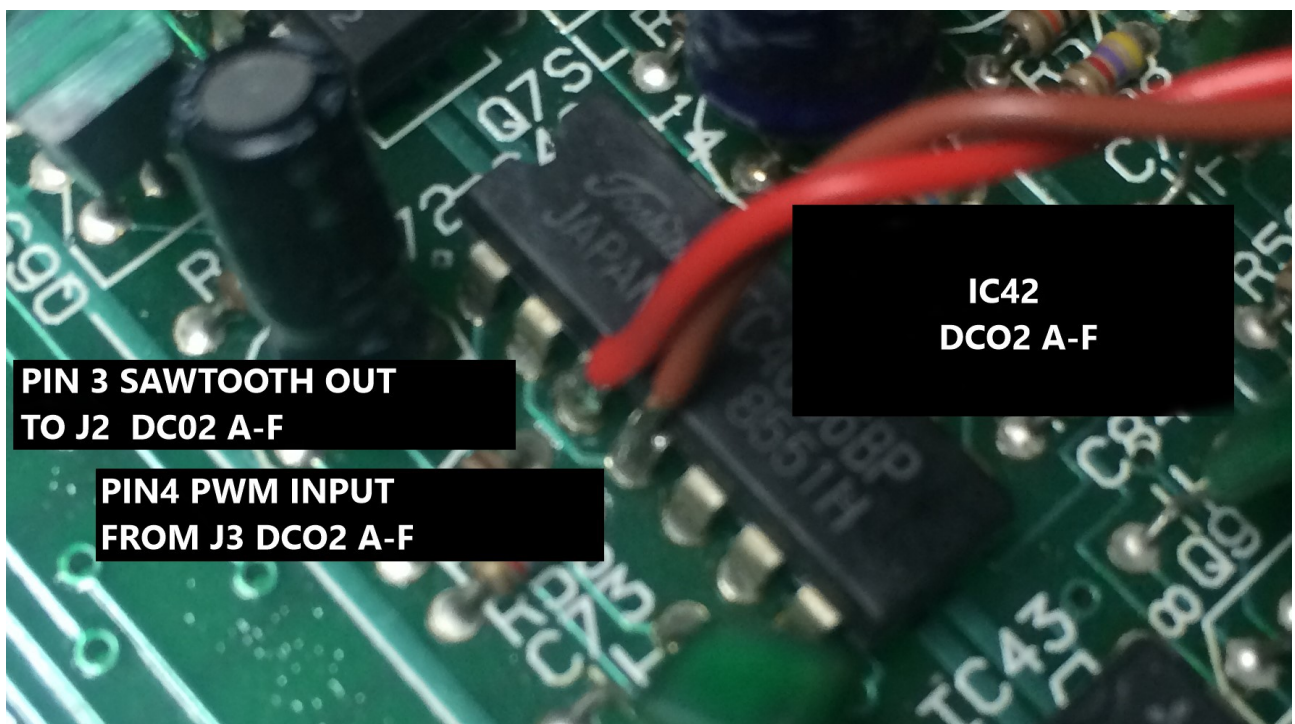**SAWTOOTH INPUTS**

J2

DCO1 IC44 PIN 8

A   B   C   D   E   F

DCO2 IC42 PIN 3

A   B   C   D   E   F

...And J3 sends the PWM waveform back

PWM OUTPUT

J3

DCO1 IC44 PIN 9

A   B   C   D   E   F

DCO2 IC42 PIN4

A   B   C   D   E   F

Each set of DCO1/DCO2 wiring is identical A-F so here is DCO1....

IC44
DC01 A-F

PIN 9 PWM INPUT
FROM J3 A-F

PIN 8 SAWTOOTH OUTPUT
TO J2 DCO1 A-F

...And DCO2.

PIN 3 SAWTOOTH OUT
TO J2 DC02 A-F

PIN4 PWM INPUT
FROM J3 DCO2 A-F

IC42
DCO2 A-F

So the end product looks something like this...