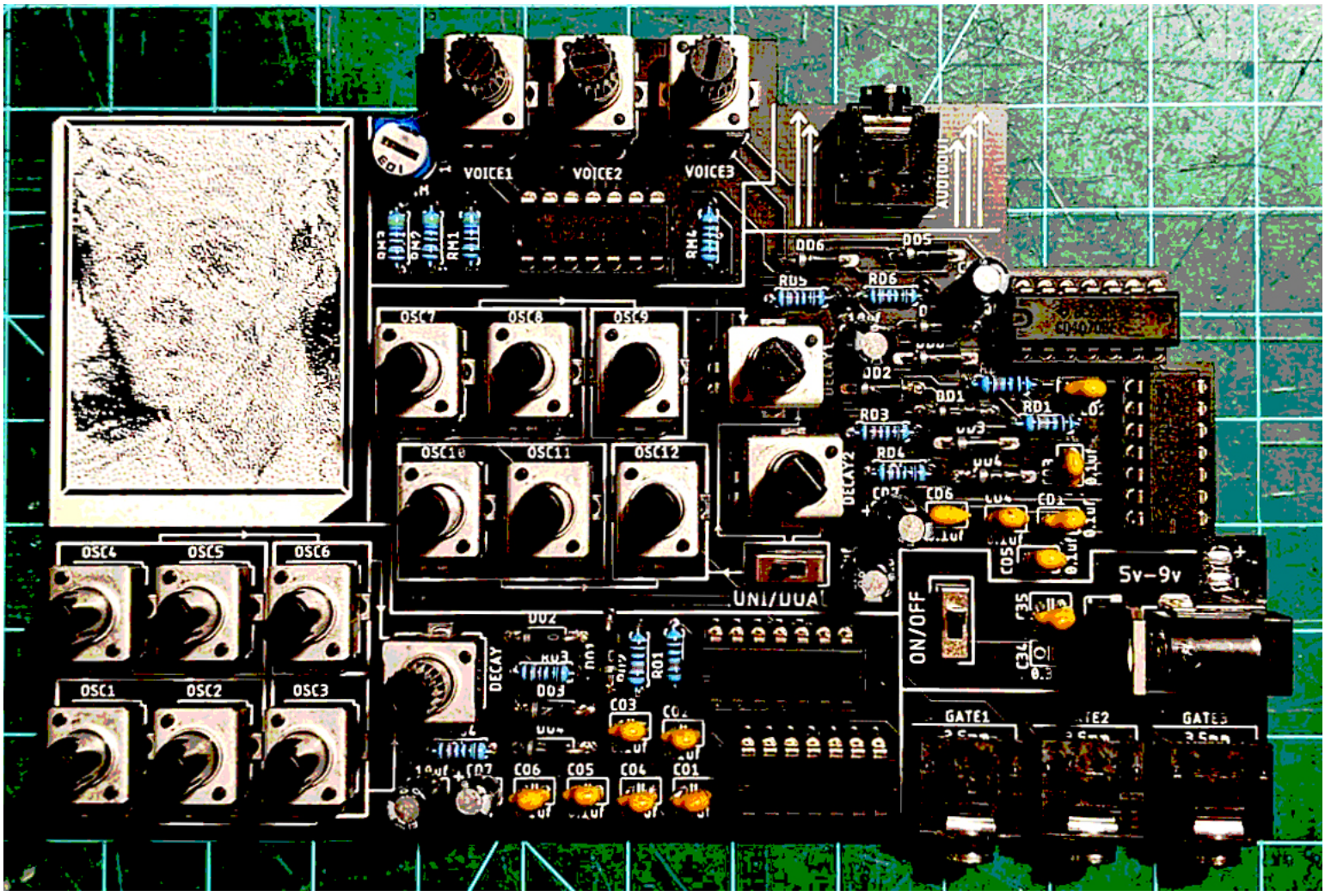
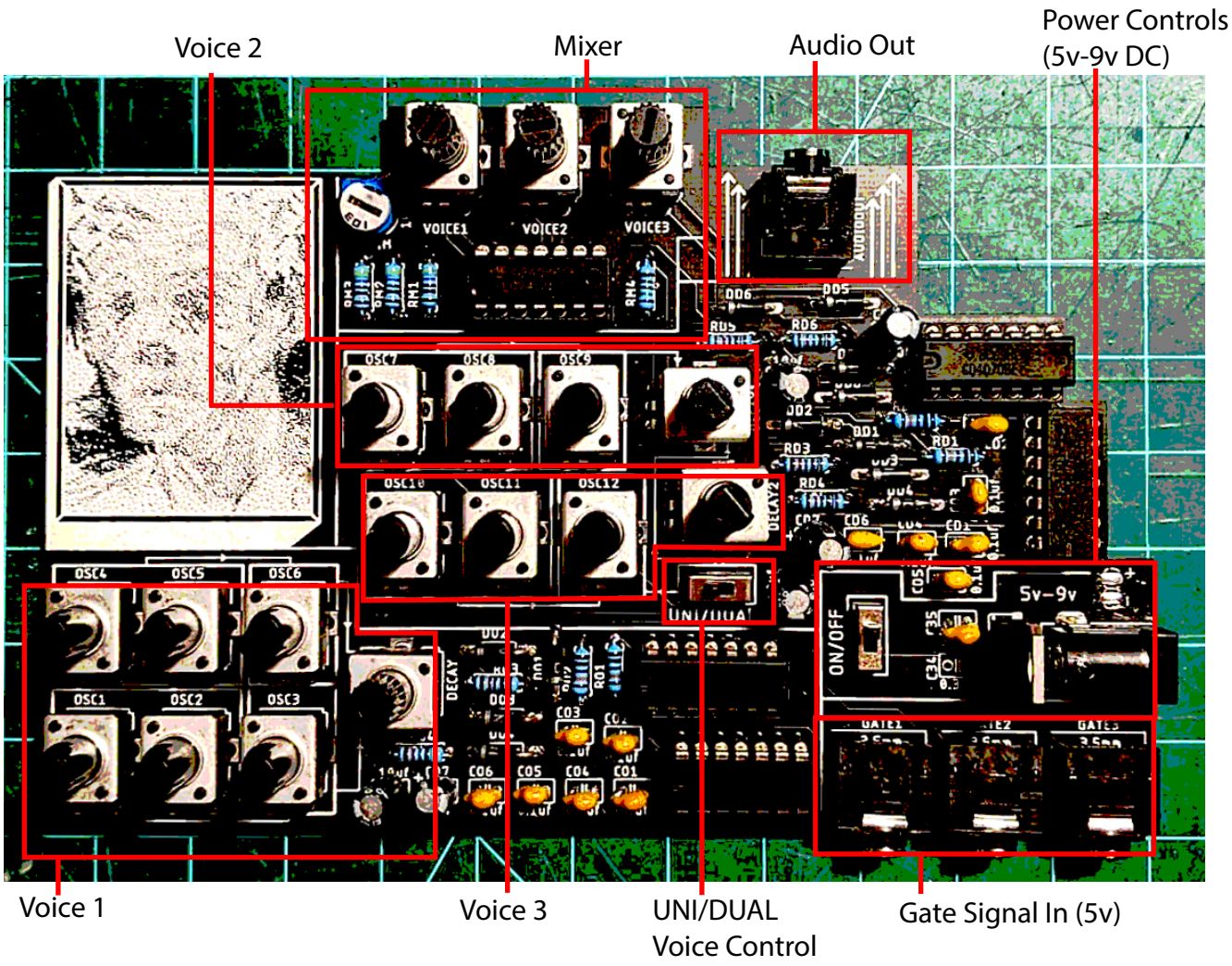
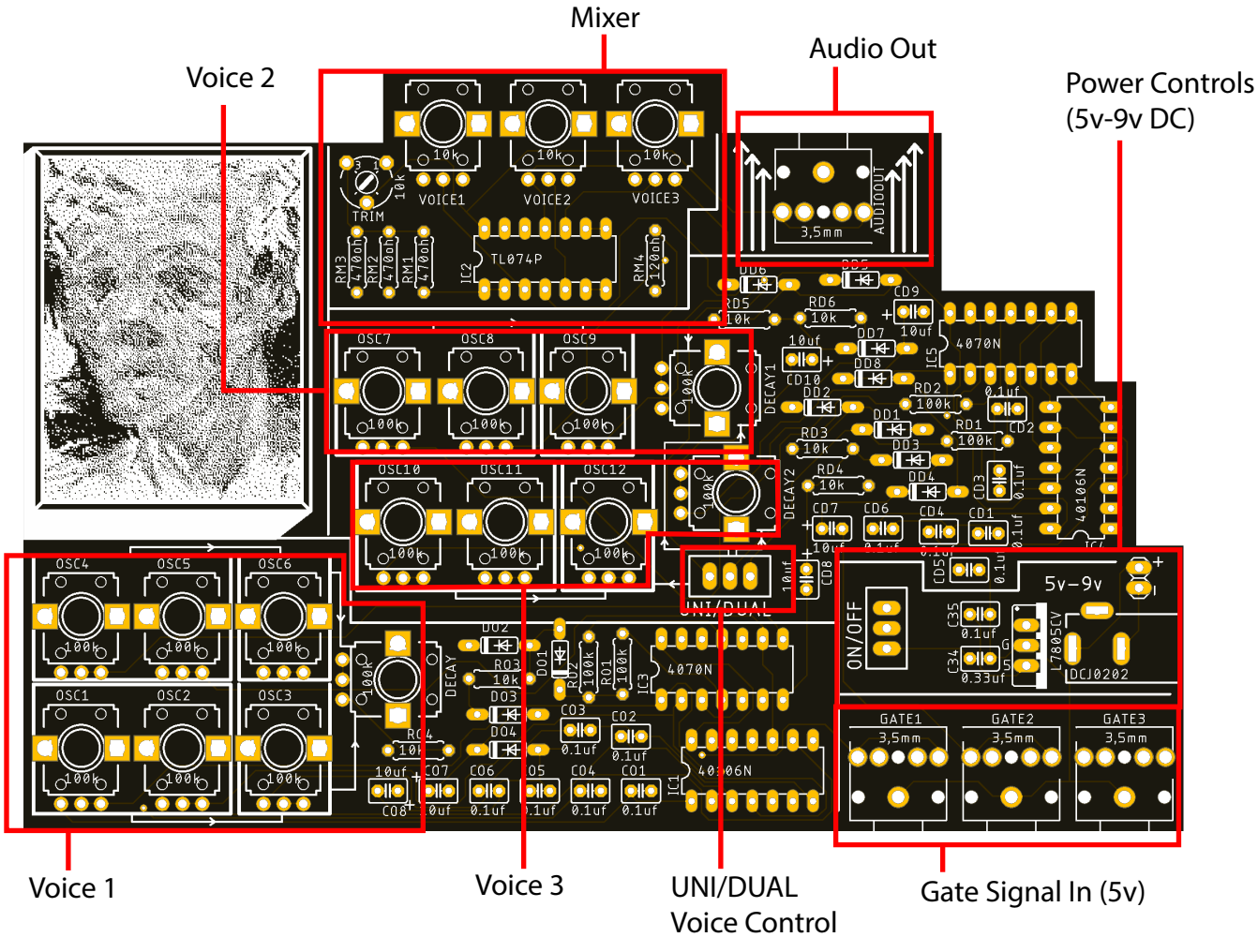
Deep Water Tanker v3

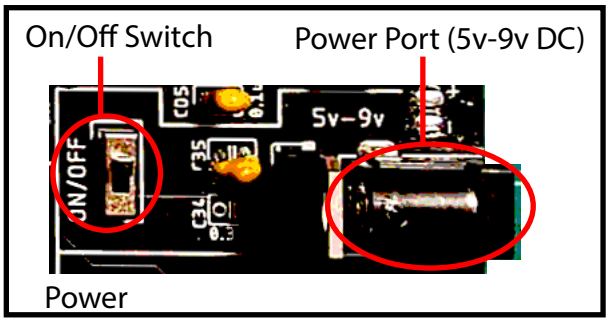
Brian Oakes, 2019

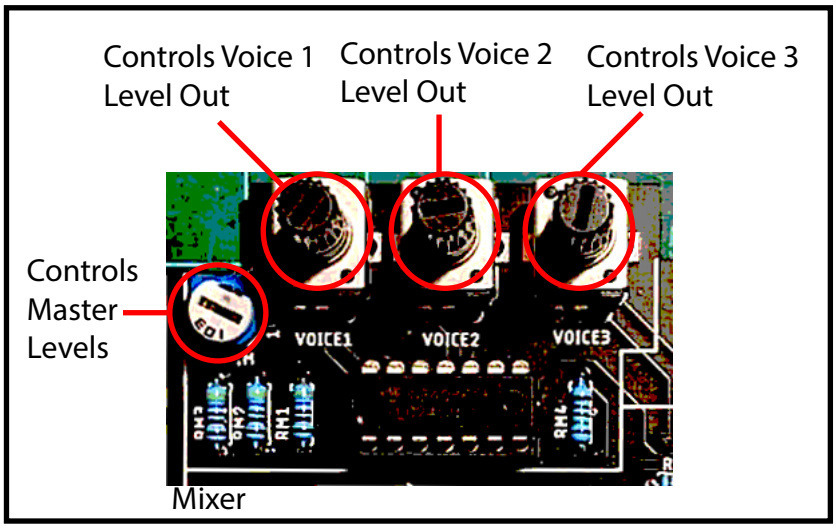
Instructions and Diagrams

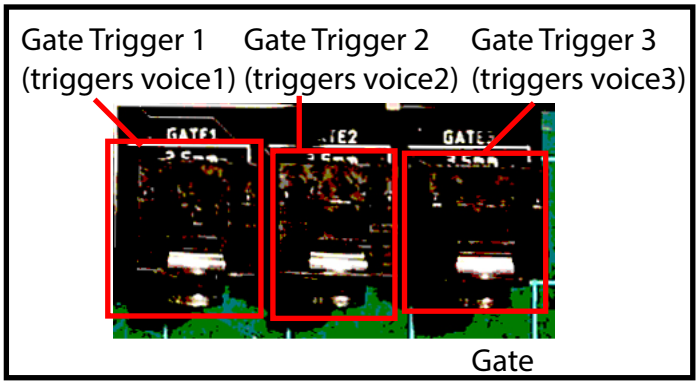



Voice 2
Mixer
Audio Out
Power Controls
(5v-9v DC)
VOICE1
VOICE2
VOICE3
OSC7
OSC8
OSC9
OSC10
OSC11
OSC12
OSC4
OSC5
OSC6
OSC1
OSC2
OSC3
DECAY
DECAY2
UNI/DUAL
ON/OFF
5v-9v
GATE1
GATE2
GATE3
Voice 1
Voice 3
UNI/DUAL
Voice Control
Gate Signal In (5v)


Mixer
Voice 2
Audio Out
Power Controls
(5v-9v DC)
VOICE1
VOICE2
VOICE3
TRIM
TL074P
AUDIOOUT
3,5mm
OSC7
OSC8
OSC9
OSC10
OSC11
OSC12
OSC4
OSC5
OSC6
OSC1
OSC2
OSC3
DECAY
DECAY1
DECAY2
4070N
40106N
ON/OFF
5v-9v
L7805CV
DCJ0202
GATE1
GATE2
GATE3
Voice 1
Voice 3
UNI/DUAL
Voice Control
Gate Signal In (5v)







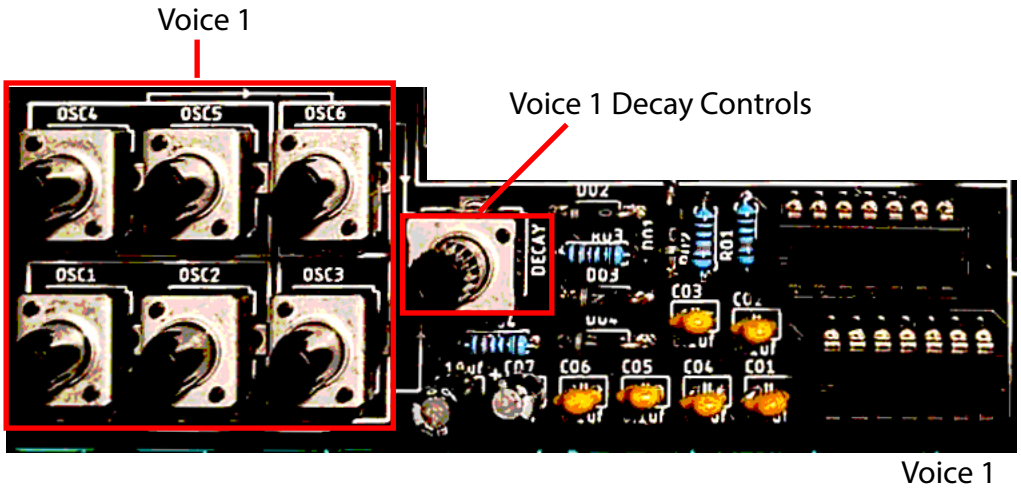
-Oscilators are modulated together using a simple XOR Logic Chip

-Voice 1 is made up of 6 oscilators collectively

-Voice 2 and 3 are made up of 3 voices if the device is in "UNI" Mode

-Each knob marked "OSC#" adjusts 1 oscilator.

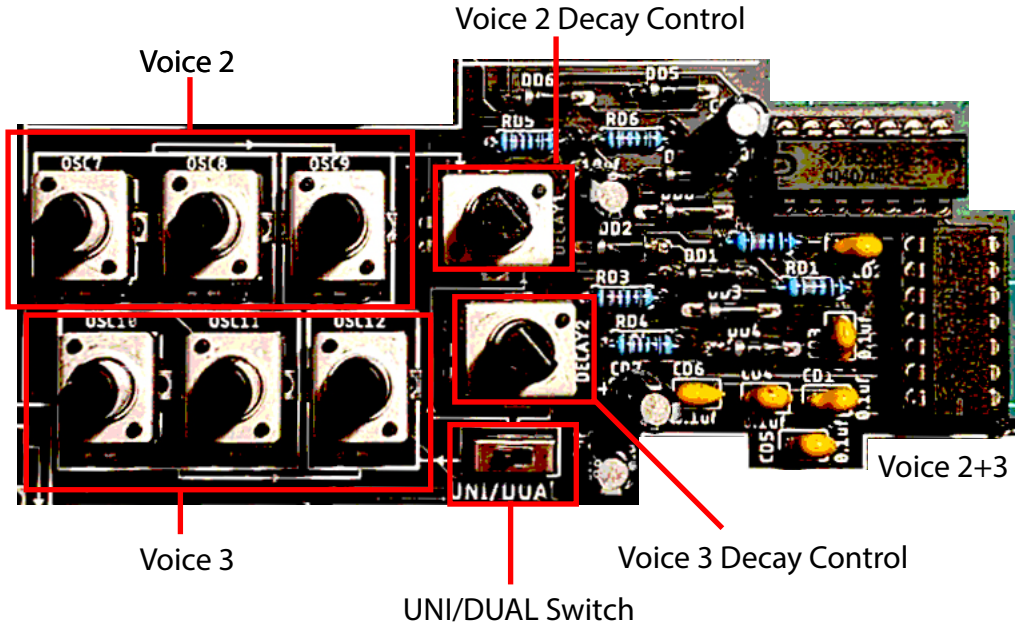
-Each knob marked "Decay" adjusts sound length for that collective voice

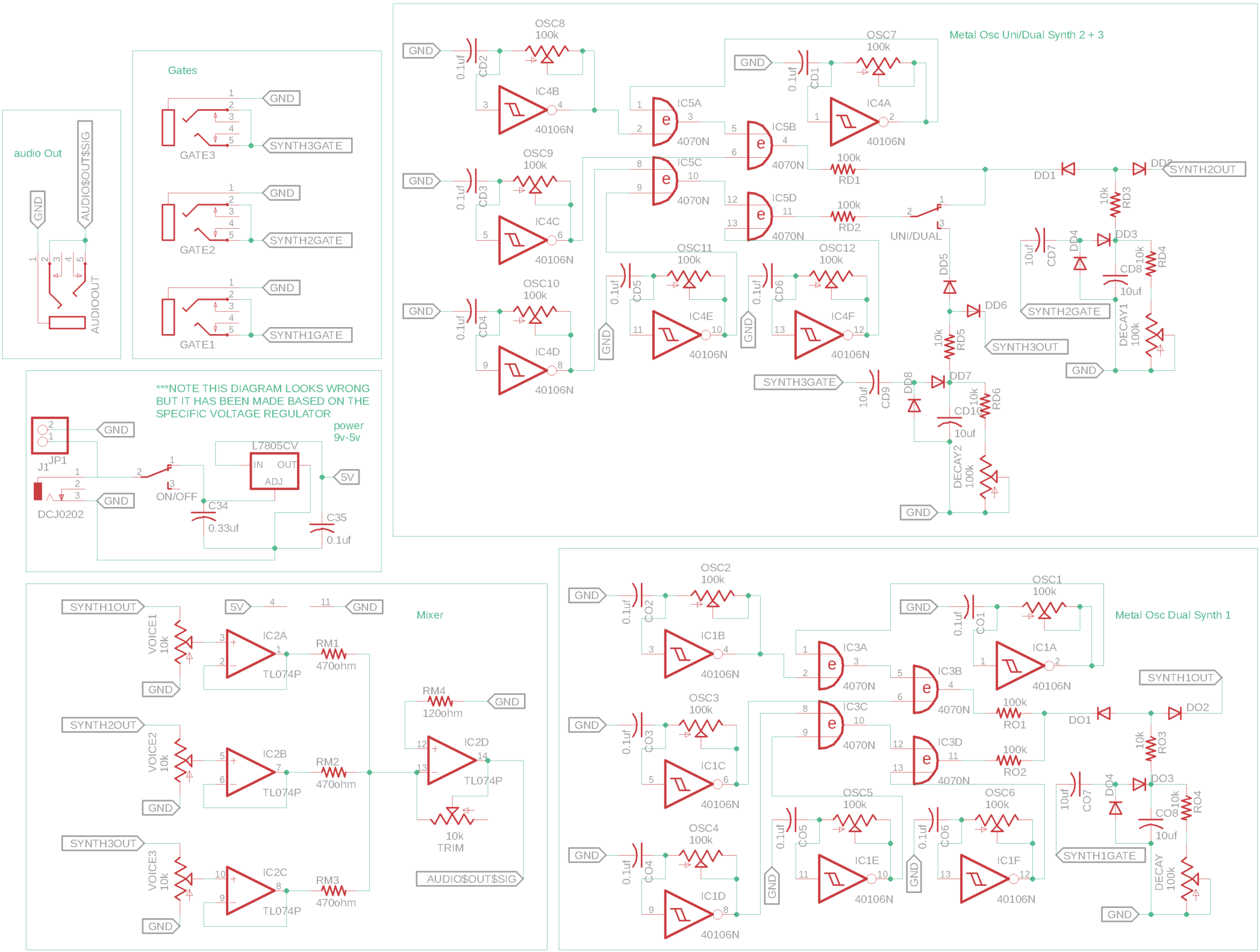


UNI/DUAL Switch:

Selecting "DUAL" -> Voice 2+3 are seperate voices each made up of 3 oscilators with seperate decay controls and seperate Gate Triggers.

Selecting "UNI" -> Voice 2+3 are combined. This creates 1 voice made up of 6 oscilators. This collective voice uses Voice 2 Decay controls and is controled by Gate Trigger 2. It is ported out "Voice 2" on the mixer.




audio Out
GND
AUDIOOUTSIG
AUDIOOUT
Gates
GATE3
SYNTH3GATE
GATE2
SYNTH2GATE
GATE1
SYNTH1GATE
***NOTE THIS DIAGRAM LOOKS WRONG
BUT IT HAS BEEN MADE BASED ON THE
SPECIFIC VOLTAGE REGULATOR
power
9v-5v
JP1
J1
DCJ0202
ON/OFF
L7805CV
IN
OUT
ADJ
5V
C34
0.33uf
C35
0.1uf
Mixer
SYNTH1OUT
SYNTH2OUT
SYNTH3OUT
VOICE1
VOICE2
VOICE3
10k
IC2A
IC2B
IC2C
TL074P
RM1
RM2
RM3
470ohm
RM4
120ohm
IC2D
10k
TRIM
AUDIOOUTSIG
Metal Osc Uni/Dual Synth 2 + 3
OSC8
OSC9
OSC10
OSC11
OSC12
100k
0.1uf
IC4B
IC4C
IC4D
IC5A
IC5B
IC5C
IC5D
IC4E
IC4F
40106N
4070N
OSC7
IC4A
RD1
RD2
UNI/DUAL
DD1
DD2
DD3
DD4
DD5
DD6
DD7
DD8
SYNTH2OUT
SYNTH3OUT
SYNTH2GATE
SYNTH3GATE
DECAY1
DECAY2
RD3
RD4
RD5
RD6
CD7
CD8
CD9
CD10
Metal Osc Dual Synth 1
OSC1
OSC2
OSC3
OSC4
OSC5
OSC6
IC1A
IC1B
IC1C
IC1D
IC1E
IC1F
IC3A
IC3B
IC3C
IC3D
RO1
RO2
RO3
RO4
DO1
DO2
DO3
DO4
CO7
CO8
SYNTH1OUT
SYNTH1GATE
DECAY