Build documentation for:

ROLAND 100M

140 ADSR

Layout and documentation by

FREQUENCY CENTRAL

This module is based on the Roland 100M 140 module ADSR.

Quite forgiving in terms of the transistors. I use BC547 NPN and BC557 PNP.

Pads included for either 9mm or 16mm pots.

Roland used (weird) 'D' taper pots for Attack, Decay and Release. Log will work just fine. Hell, even Lin will work, though will be a little more sensitive.

What's changed:

- Trigger input not included
- Additional status LED
- Slow/Fast Capacitor switch

Colour coding:

Red traces: +12v
Brown traces: Ground
Green traces: -12v
Grey pads: Inputs/Outputs
Blue pads: Slow/Fast Capacitor switch, see below

This revision of the PCB includes extra pads for adding an optional slow/fast capacitor switch. Make C1 the fast cap, make C4 the slow cap. Connect the three blue pads to a SPDT toggle.

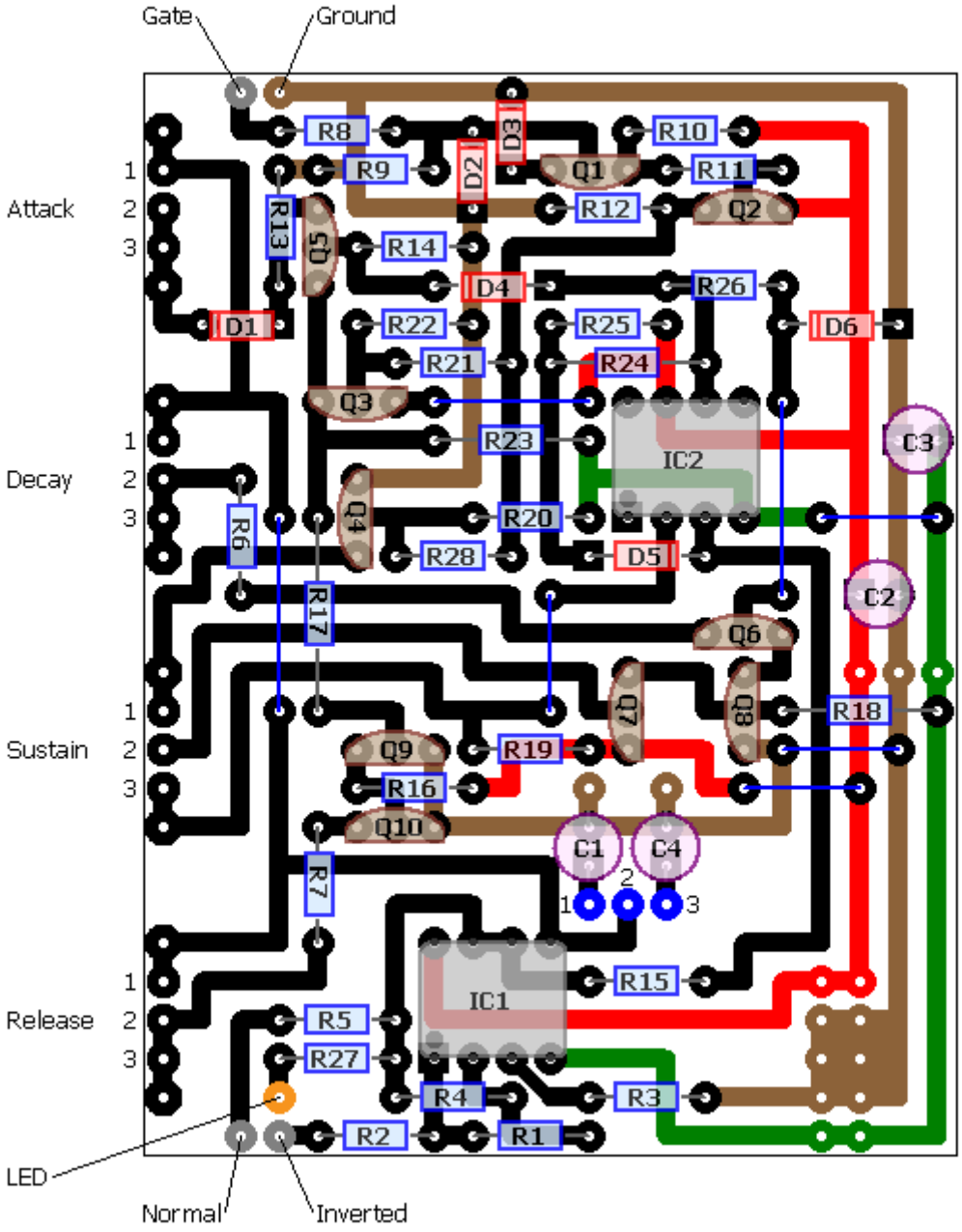
Extra brown (ground) pads have been included by C1 and C4 should you wish to use tantalum caps for timing instead of electrolytic.

IMPORTANT! If you do not want to include a slow/fast switch, don't install C4. You will also need to add a jumper between blue pad 1 and blue pad 2.

It's really worth experimenting with the values of the timing cap(s) – maybe socket them and mix and match until you're happy!

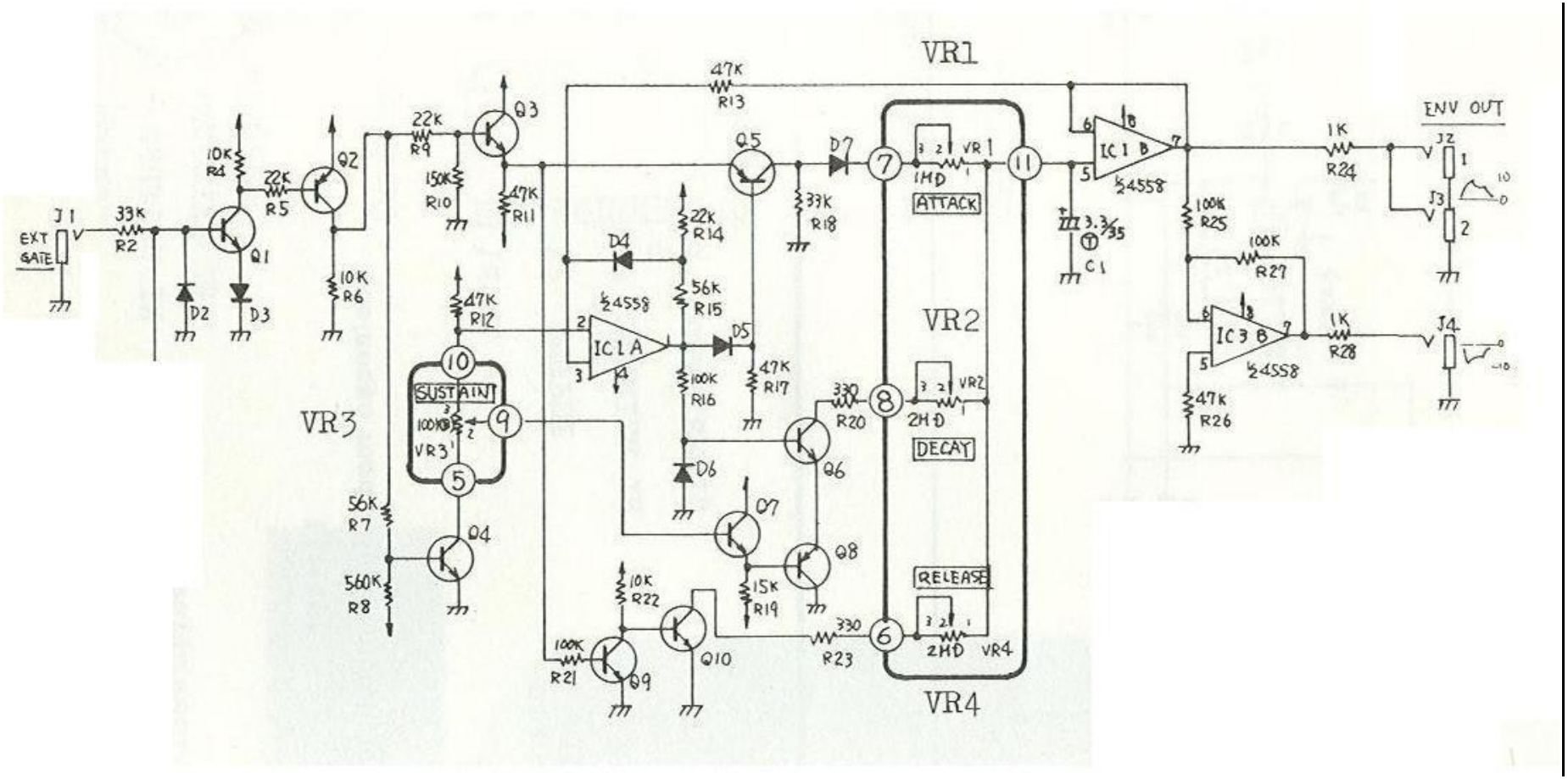
Roland 100m 140 Envelope Generator

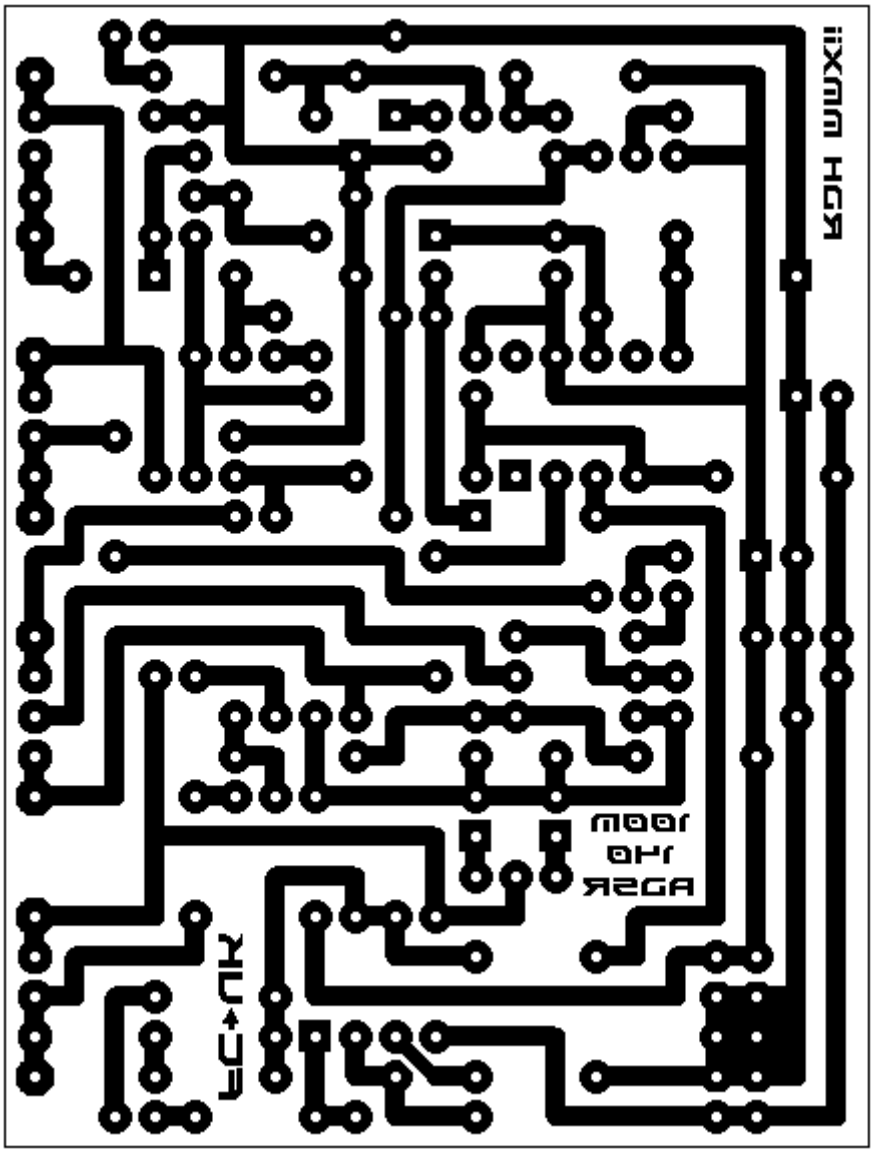
Layout by frequencycentral



R1: 100K R2: 1K R3: 47K R4: 100K R5: 1K R6: 330R R7: 47K R8: 33K R9: 22K R10: 10K R11: 22K R12: 10K R13: 33K R14: 47K R15: 47K R16: 10K R17: 100K R18: 15K R19: 47K R20: 560K R21: 22K R22: 150K R23: 47K R24: 56K R25: 22K R26: 100K R27: 2.2K (LED resistor) R28: 56K	C1: 1uF (timing cap) C2: 47uF C3: 47uF C4: 10uF (timing cap) Roland used tantalum for C1. That some expensive shit! It's fine to use electrolytic if you're strapped for cash.	IC1: 4558 or similar IC2: LF351 or similar Transistor numbers match the Roland schematic: Q1: BC547 NPN Q2: BC557 PNP Q3: BC547 NPN Q4: BC547 NPN Q5: BC557 PNP Q6: BC547 NPN Q7: BC547 NPN Q8: BC557 PNP Q9: BC547 NPN Q10: BC547 NPN D1: 1n4148 D2: 1n4148 D3: 1n4148 D4: 1n4148 D5: 1n4148 D6: 1n4148	P1: 500k Log P2: 1M Log P3: 100K Lin P4: 1M Log **Jumpers: Five (7)***

*** Don't forget the five (7) jumpers!!**


VR1
47K
R13
ENV OUT
J1
EXT
GATE
33K
R2
10K
R4
22K
R5
Q1
Q2
D2
D3
10K
R6
22K
R9
150K
R10
Q3
47K
R11
Q5
D7
33K
R18
1MD
ATTACK
VR1
IC 1 B
½4558
3.3/35
C1
100K
R25
100K
R27
IC 3 B
½4558
47K
R26
1K
R24
1K
R28
J2
J3
J4
D4
22K
R14
56K
R15
47K
R12
IC 1 A
½4558
D5
100K
R16
47K
R17
VR2
330
R20
2MD
DECAY
VR2
Q6
D6
Q7
Q8
15K
R19
VR3
SUSTAIN
100KB
VR3
56K
R7
560K
R8
Q4
10K
R22
100K
R21
Q9
Q10
330
R23
RELEASE
2MD
VR4
VR4



PCBs available from me!

£12 GBP (including shipping) Paypal GIFT to:

rickholt22@hotmail.com