

2431 Dual VCA voltage controlled amplifier

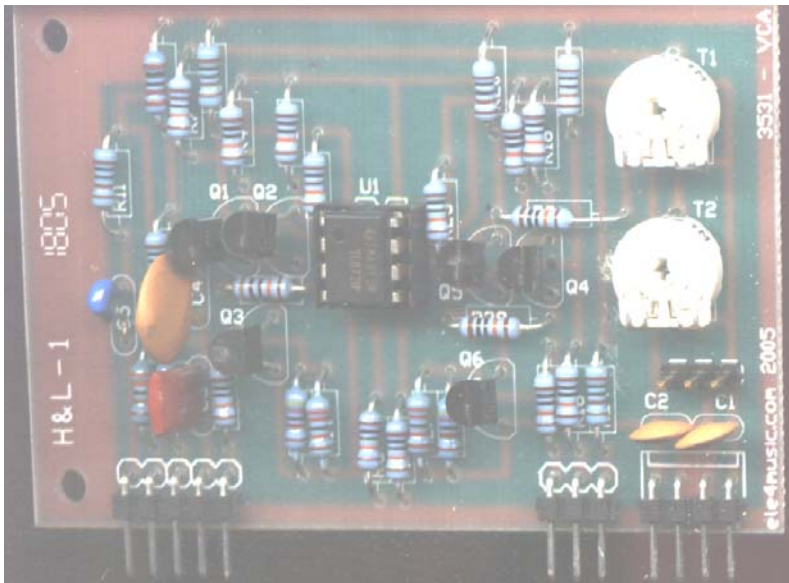
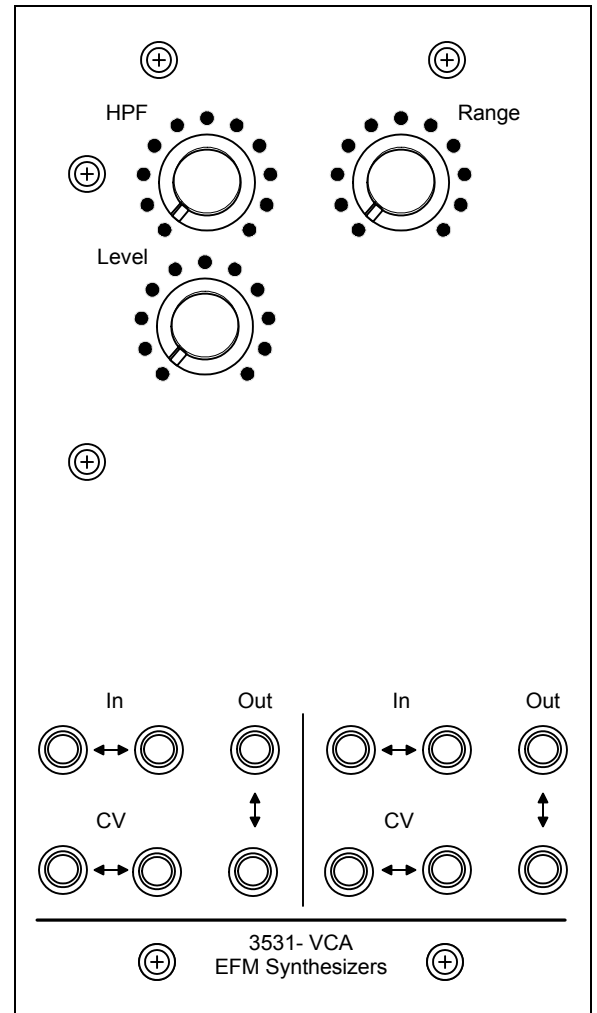
VCA

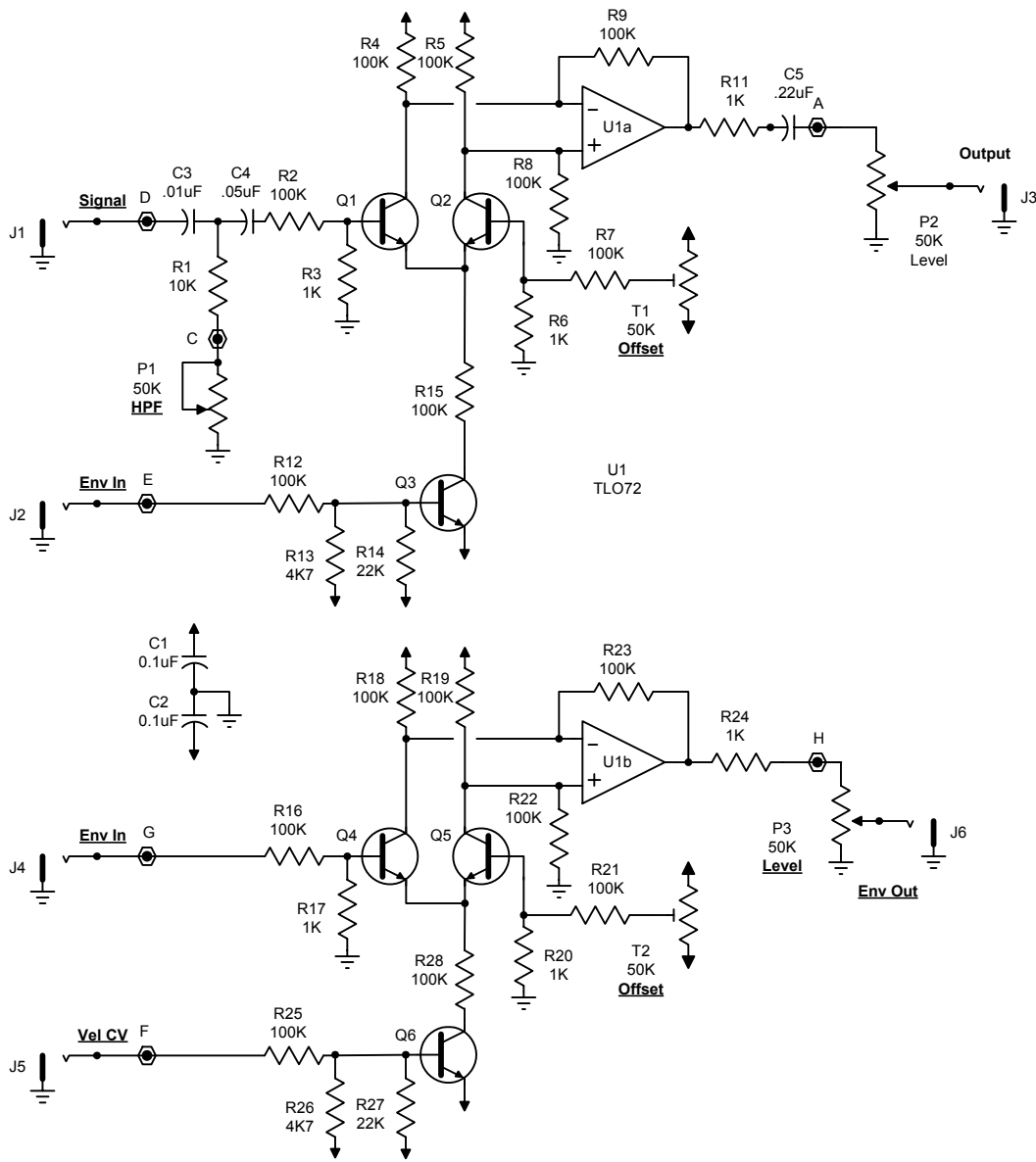
U1a and Q2,Q3 form a VCA that is used to control the amplitude of the LFO. Such as using modulation voltage from a midi to cv converter to control how much LFO is applied to the VCOs.

This clever VCA is based on the Roland System 100 mod amplifier. Also used in one form or another by PAIA, ARP and others.

The amplification produced by the Q2,3 differential pair is proportional to the current supplied by constant-current source Q4. Using a balanced opamp the in-phase collector voltages caused by the gain setting current on R19,20 are and the out-of-phase audio signal is amplified.

T1 is used to zero the VCA output. Eliminating the output offset voltage.





Small Kit

- PCB
- C1,2
- C3
- C4
- C5
- R1
- R2,4,5,7,8,9,12,15,16,18,19,21,22,23,25,28
- R3,6,11,17,20,24
- R10
- R13,26
- R14,27
- Q1,2,3,4,5,6
- U1

- | | |
|---------------|----|
| PC Board | 1 |
| 0.1uF Ceramic | 2 |
| .01uF Ceramic | 1 |
| .05uF Ceramic | 1 |
| .22uF Ceramic | 1 |
| 10K | 1 |
| 100K | 16 |
| 1K | 6 |
| NOT USED | |
| 4.7K | 2 |
| 22K | 2 |
| 2N3904 | 6 |
| TLO72 | 1 |

Full Kit

- | | | |
|----------------------|-------------|----|
| T1,2 | 50K Trimmer | 2 |
| P1,2,3 | 50K Pot | 3 |
| Knob | | 3 |
| Jack | 1/8" | 12 |
| L Bracket w/hardware | | 2 |
| Header | | 1 |
| Panel | | 1 |
| Overlay | | 1 |

