

Fig 1. Circuit board parts placement and trace routings. Copper traces on the top of the board are shown in bold outline, useful if you need to trace the circuit though areas covered by ICs or other parts. Traces on the bottom of the board and their connections to components are shown in grey.

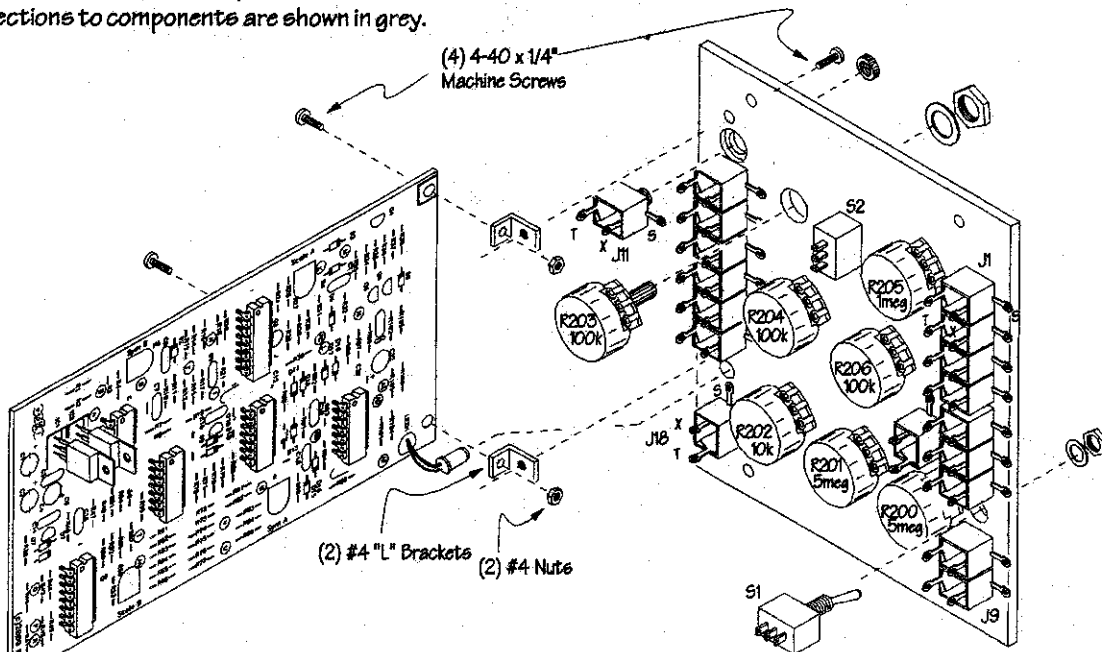


Fig 2. Note the different values of potentiometers R200 - R206. The Front Panel attaches to the circuit board with "L" brackets and #4 hardware. Note that the threaded bracket holes are used to attach the brackets to the panel.

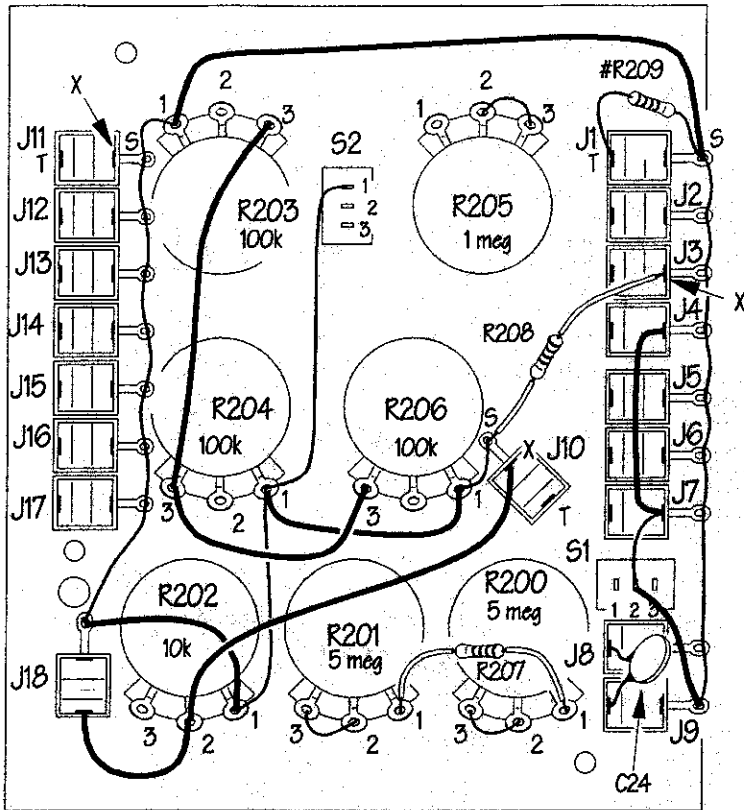
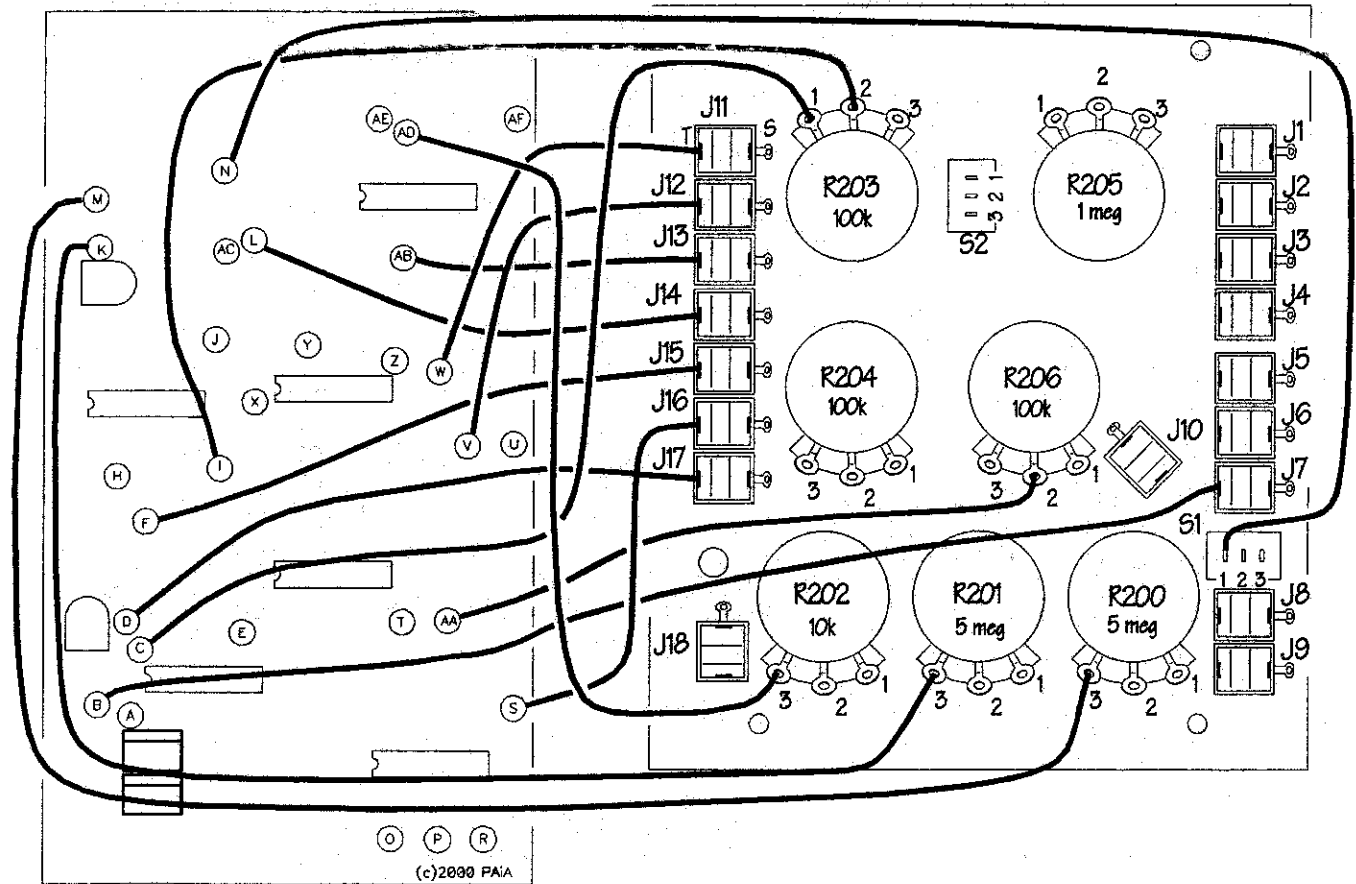


Fig 3 (left). Wiring on the panel uses bare wire and #26 stranded, insulated wire. Connecting to the "S" (Sleeve) lugs of J11-J18 will be easier if done before the potentiometers are mounted. Note the insulation over the leads of R207 and R208. #R209 is 1% tolerance.

Fig 4 (below). #26 insulated, stranded wire is used for the connections between the front panel and circuit board. Previous wiring has been eliminated for clarity.



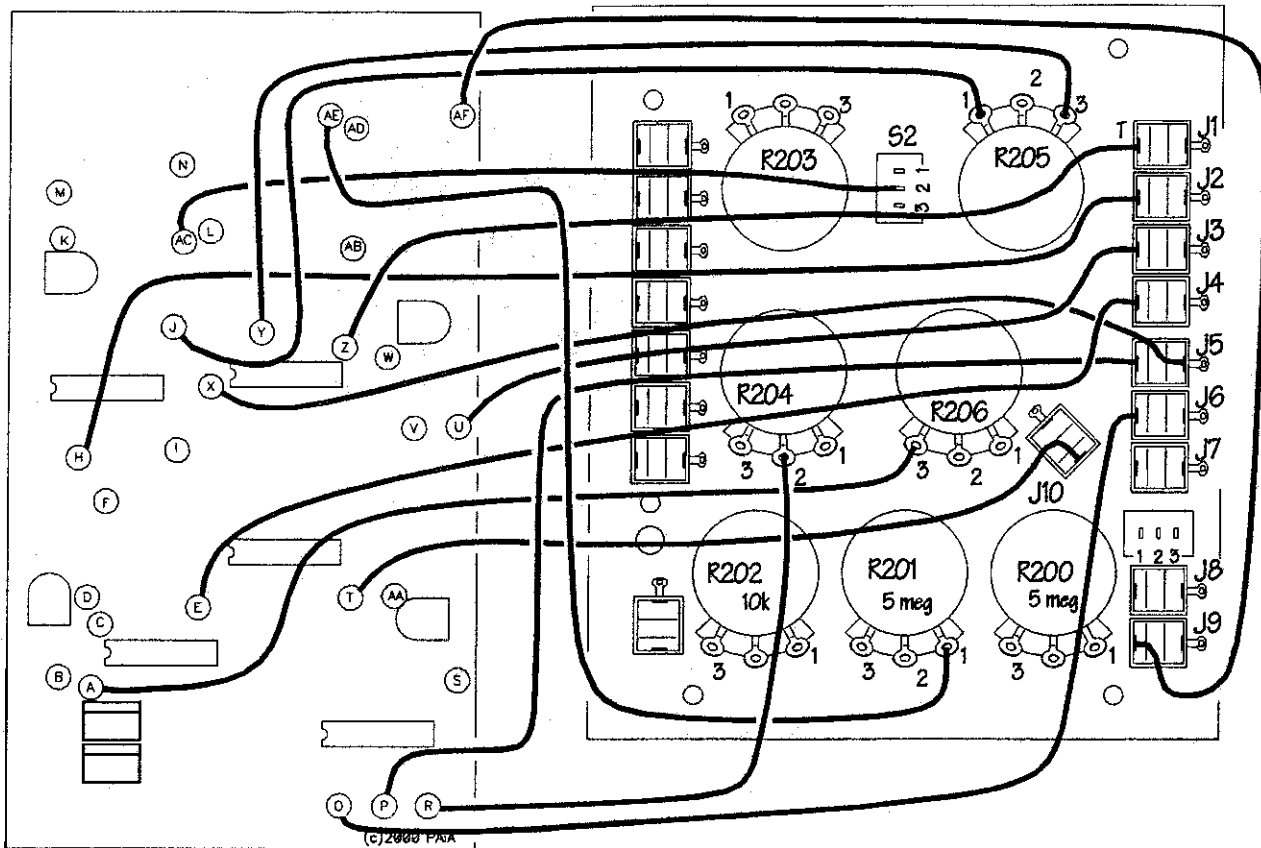


Fig 5. Wiring between panel and circuit board continues with #26 stranded, insulated wire as above. Previous connections omitted for clarity.

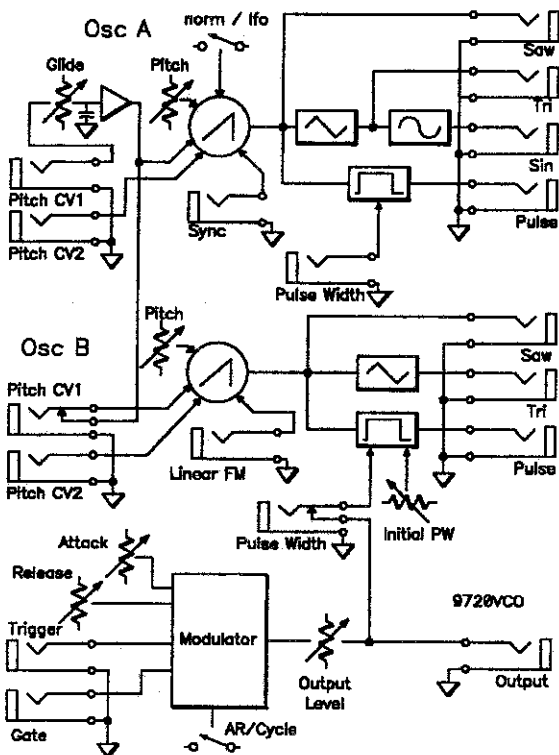
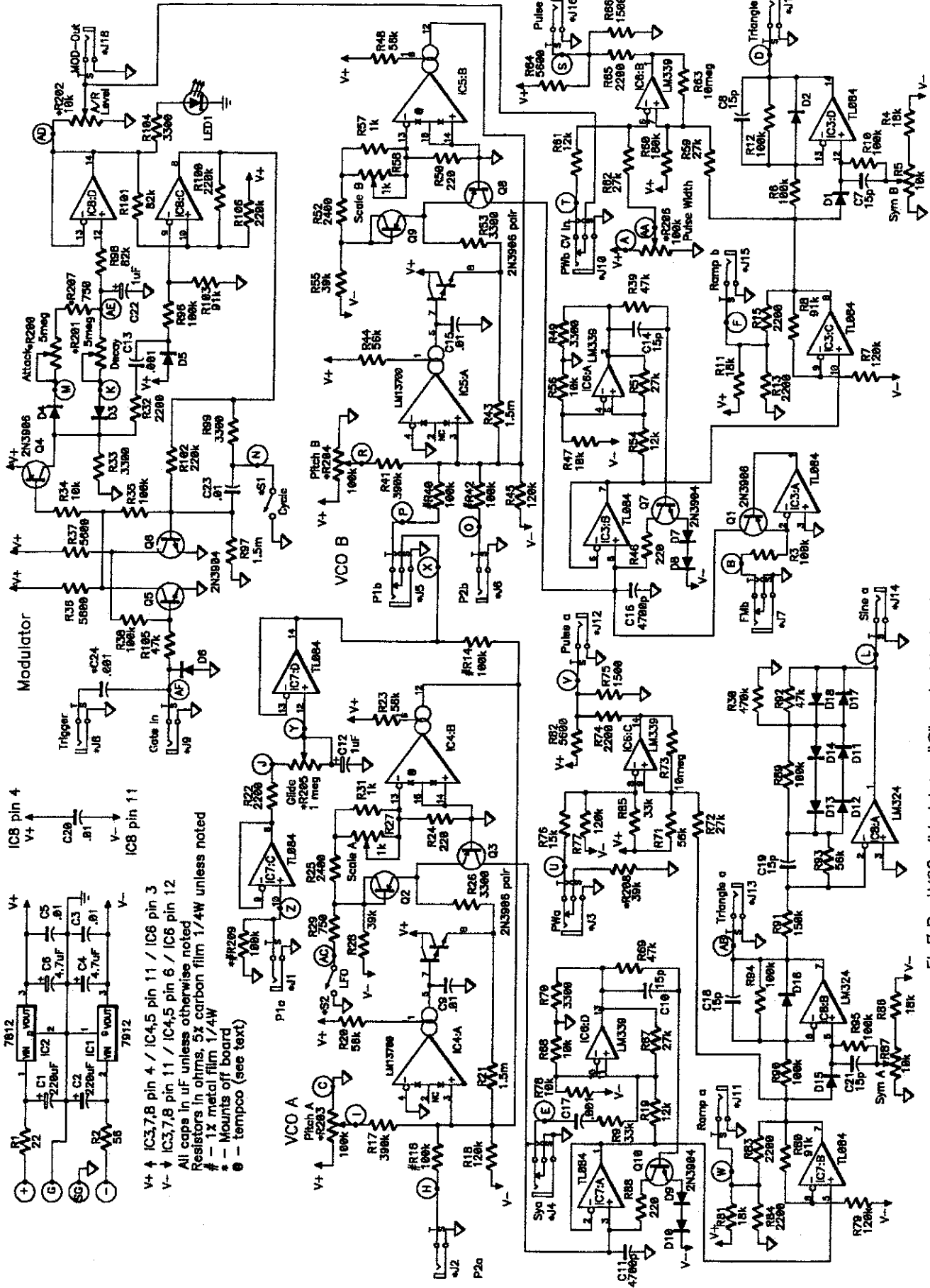


Fig 6. 9720 Dual VCO w/Modulator Block Diagram.



IC8 pin 4
V+
C26 .01
V-
IC8 pin 11
V-
C27 .01
V+

V+
R1 22
C1 2.2uF
IC2
C6 4.7uF
C5 .01
C3 4.7uF
IC1
C4 4.7uF
R2 56
V-
7812
V+
V-
7812

V+ IC3,7,8 pin 4 / IC4,5 pin 11 / IC6 pin 3
V- IC3,7,8 pin 11 / IC4,5 pin 6 / IC6 pin 12
All caps in uF unless otherwise noted
Resistors in ohms, 5% carbon film 1/4W unless noted
- 1% metal film 1/4W
* - Mounts off board
@ - tempco (see text)

Fig 7. Dual VCO w/Modulator. @" marked diodes provide temperature compensation used for pitch control Voltage summation provide temperature compensation.