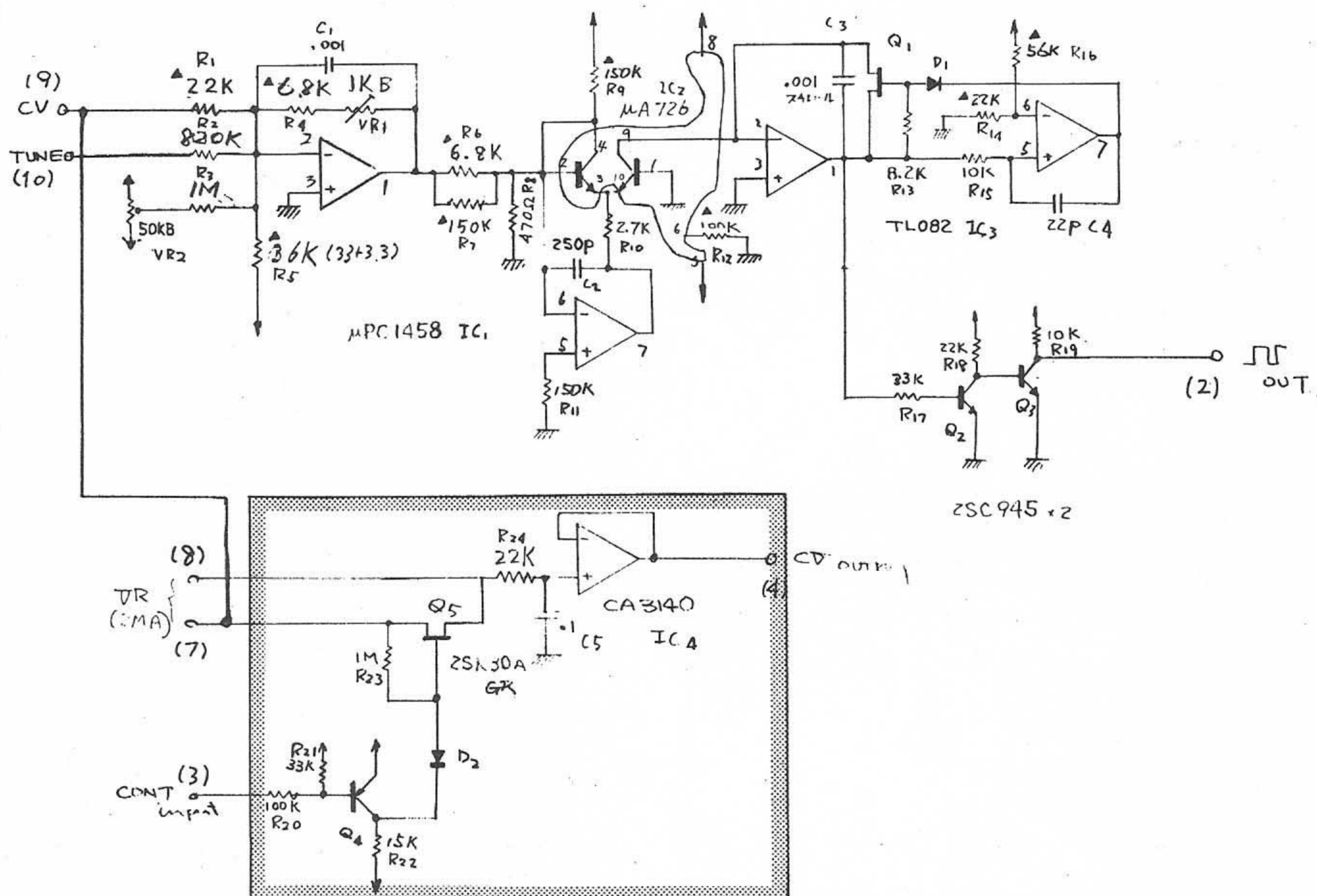


VCO BOARD ON GR-500

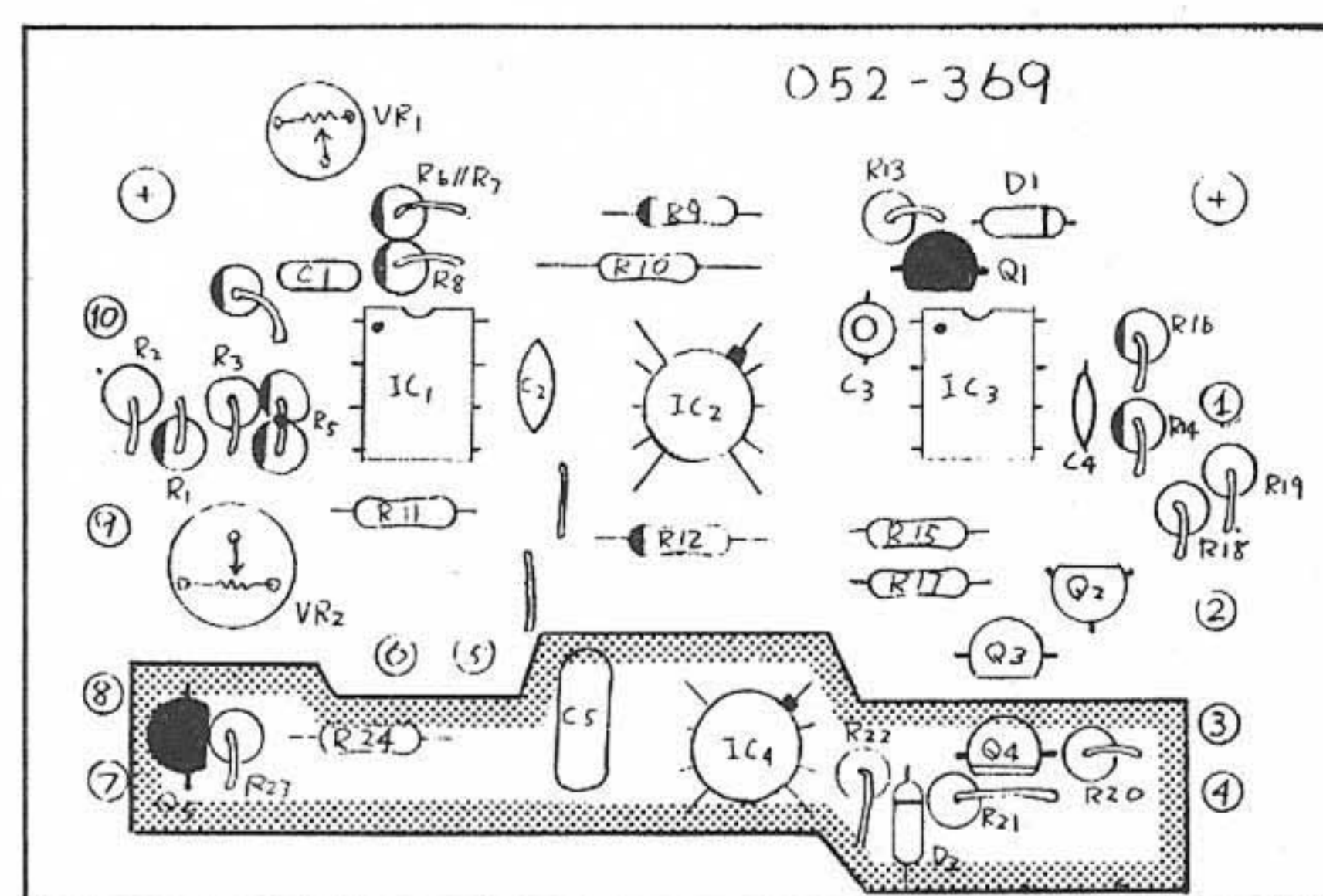


*New products of GR-500 are provided with VCO circuit.

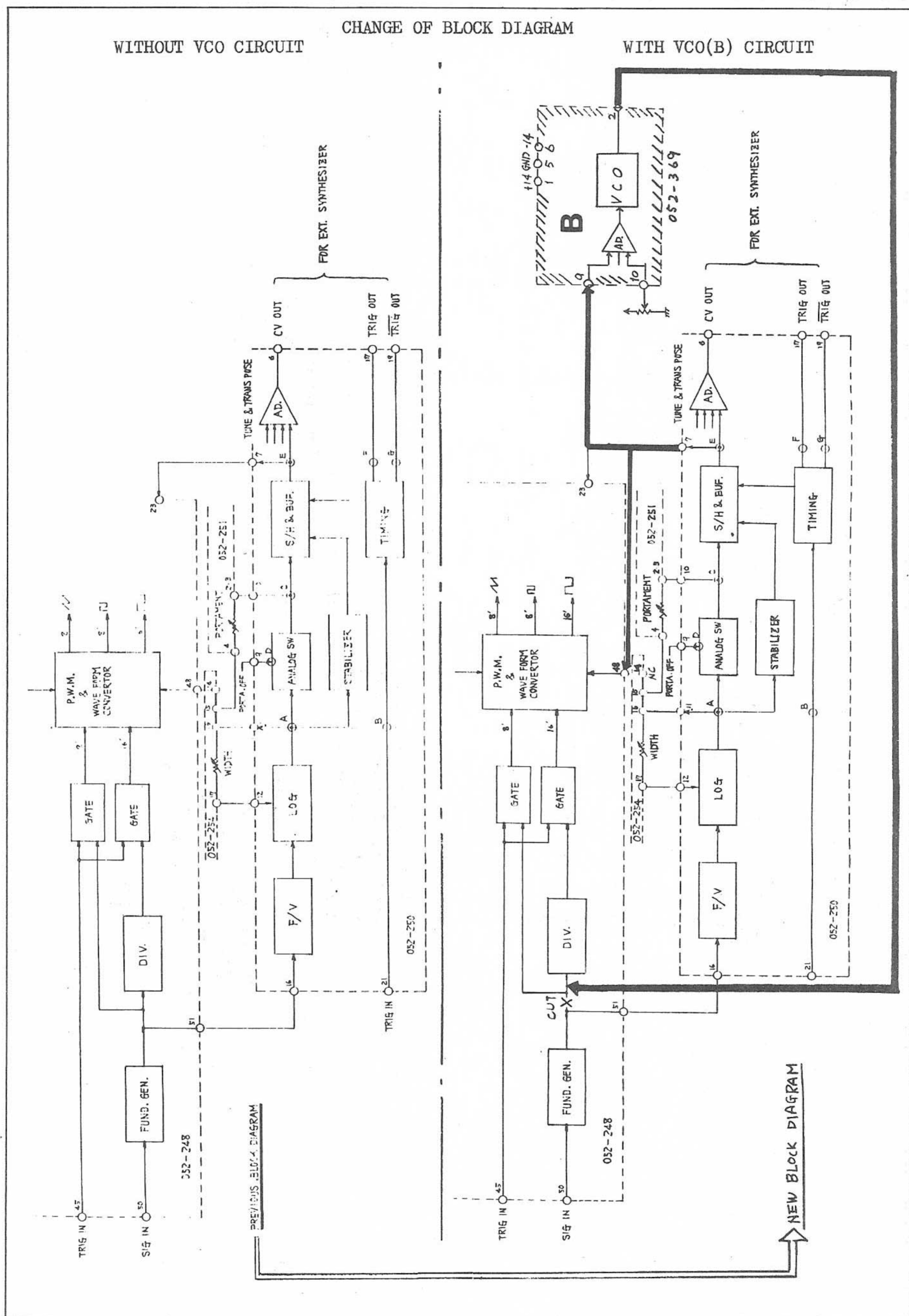
VCO(A) as is shown in the circuit diagram and the pcb drawing.

VCO(B) as is shown in the circuit diagram and the pcb drawing, but not involving the section in the screened area (buffer amp for portamento).

VCO(B) features portamento on solo melody, while VCO(A) fails. The portamento time control is common with that for the external synthesizer section.

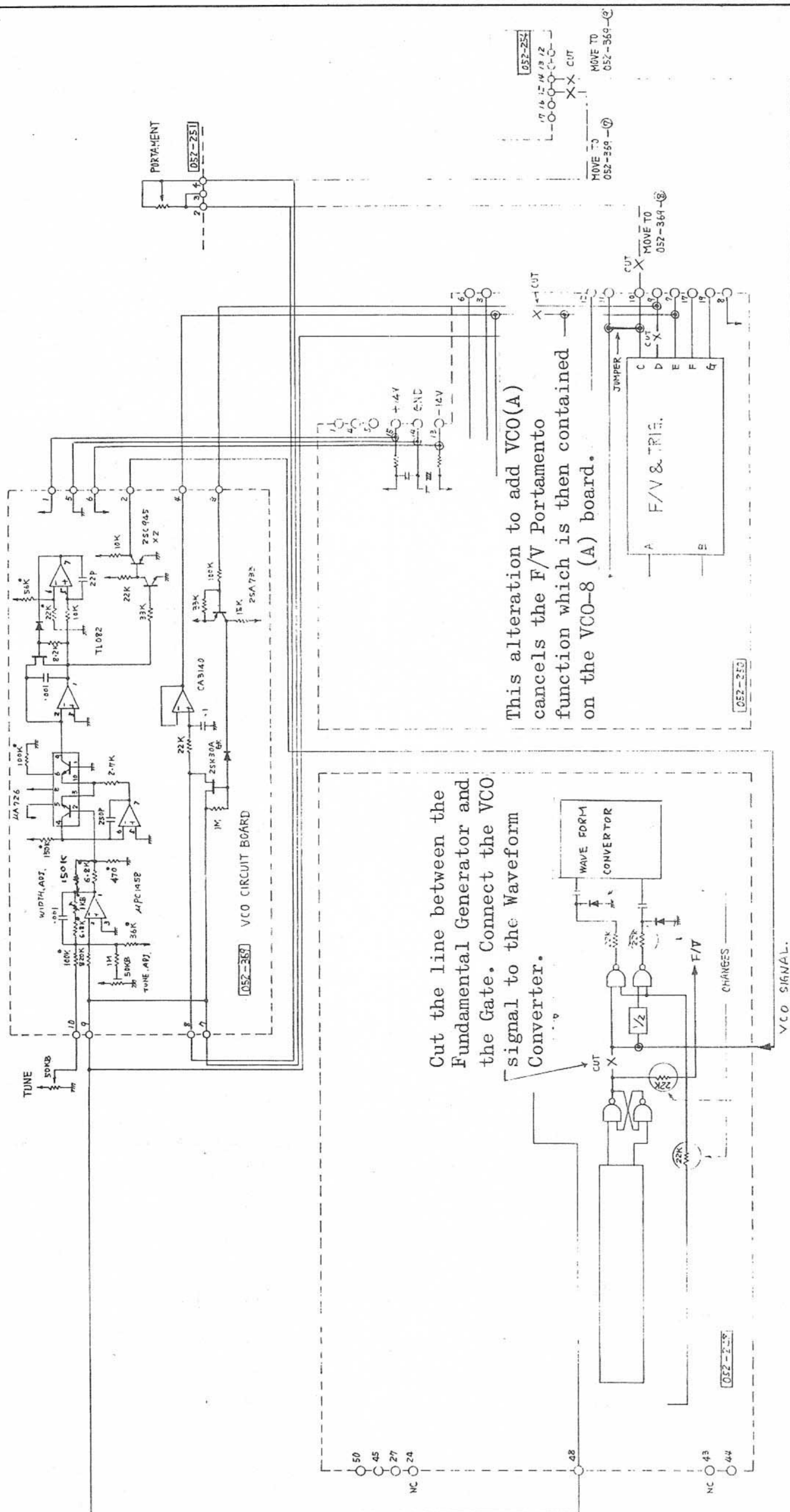


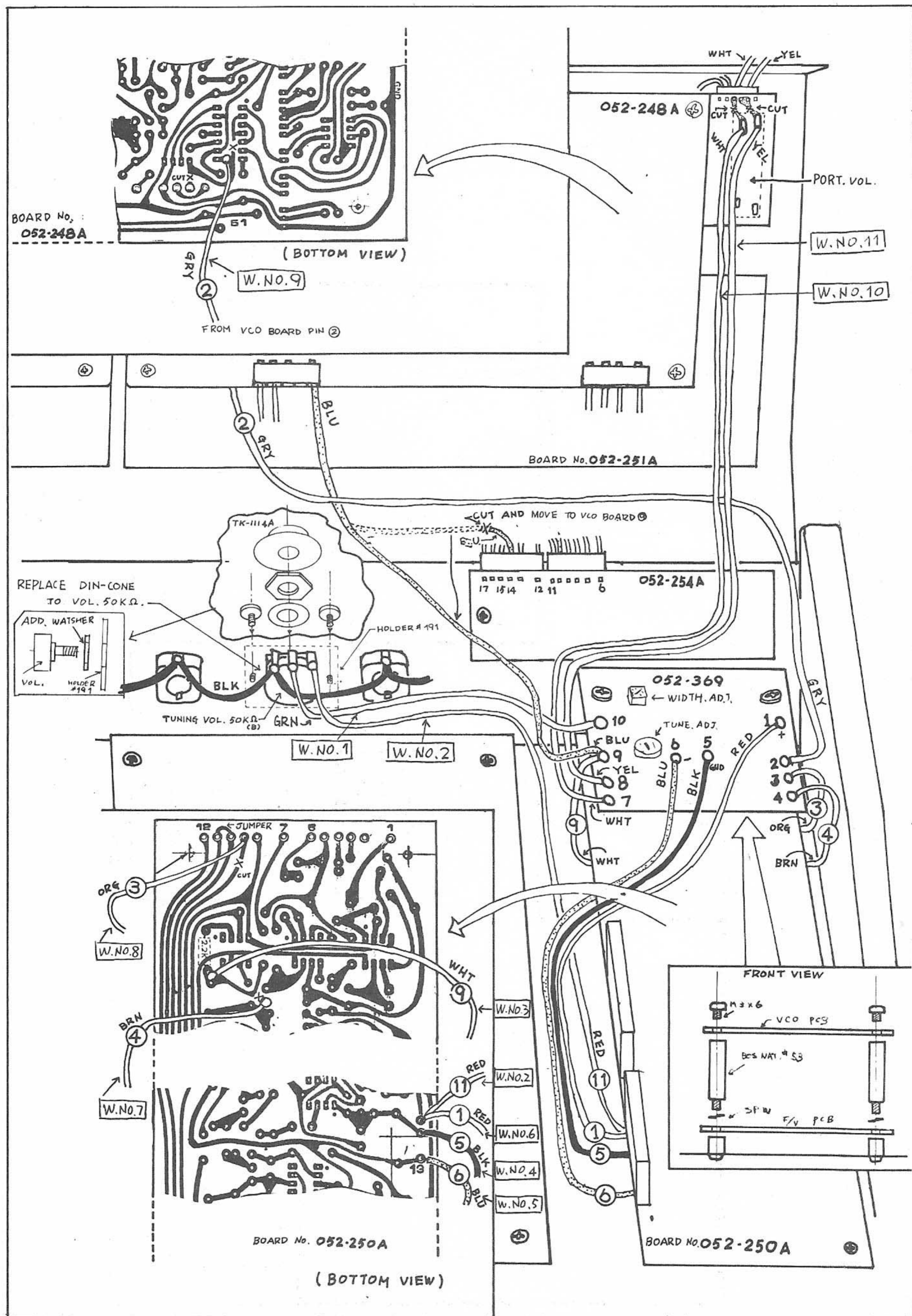
- | | | |
|--------|--------|---------|
| 1/4 MF | 2SA733 | Mylar |
| 1/4 RJ | 2SC945 | Ceramic |
| 1S2473 | 2SK30 | Styrene |

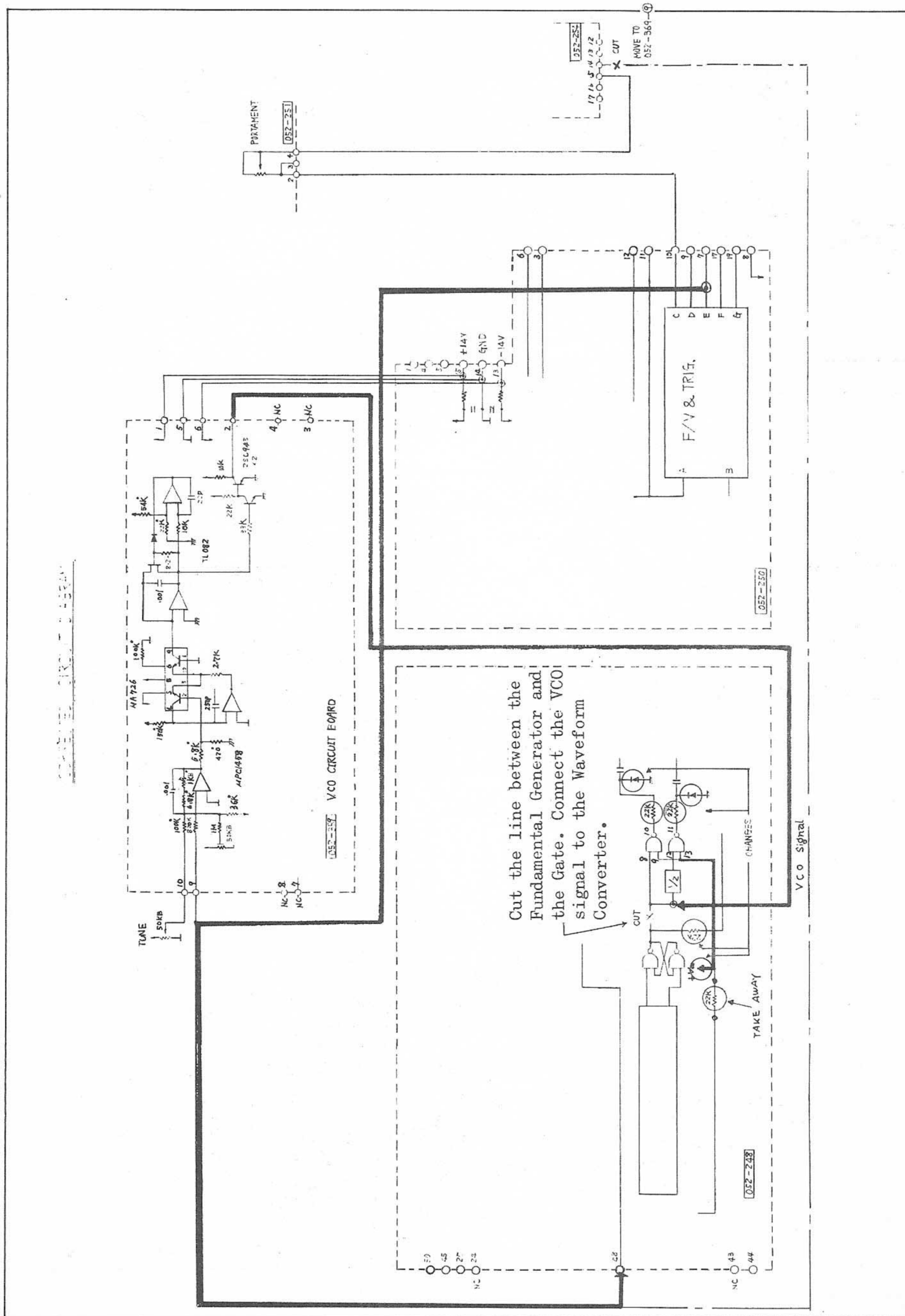


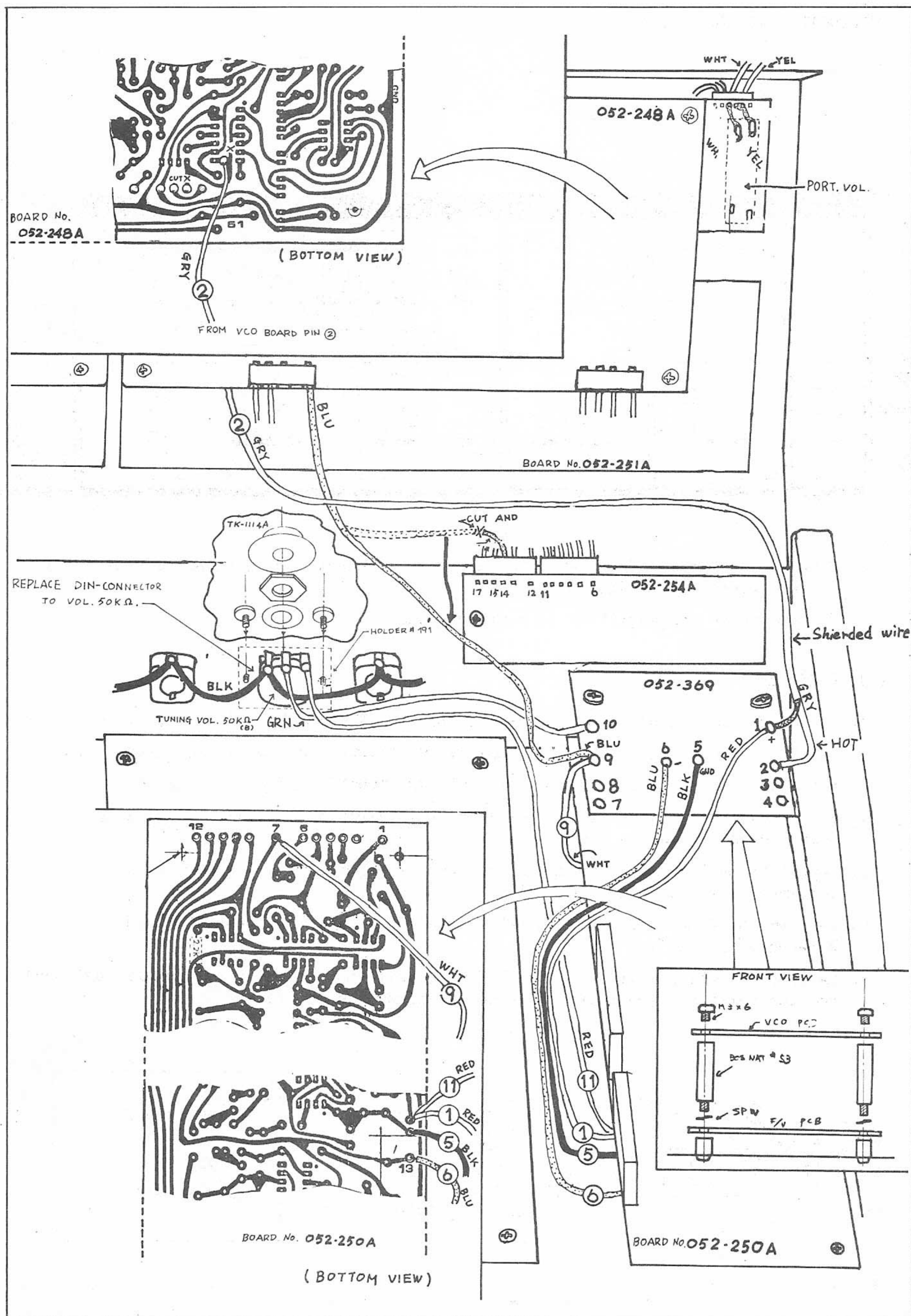
Cut the line between the Fundamental Generator and the Gate. Connect the VCO signal to the Waveform Converter.

This alteration to add VCO(A) cancels the F/V Portamento function which is then contained on the VCO-8 (A) board.





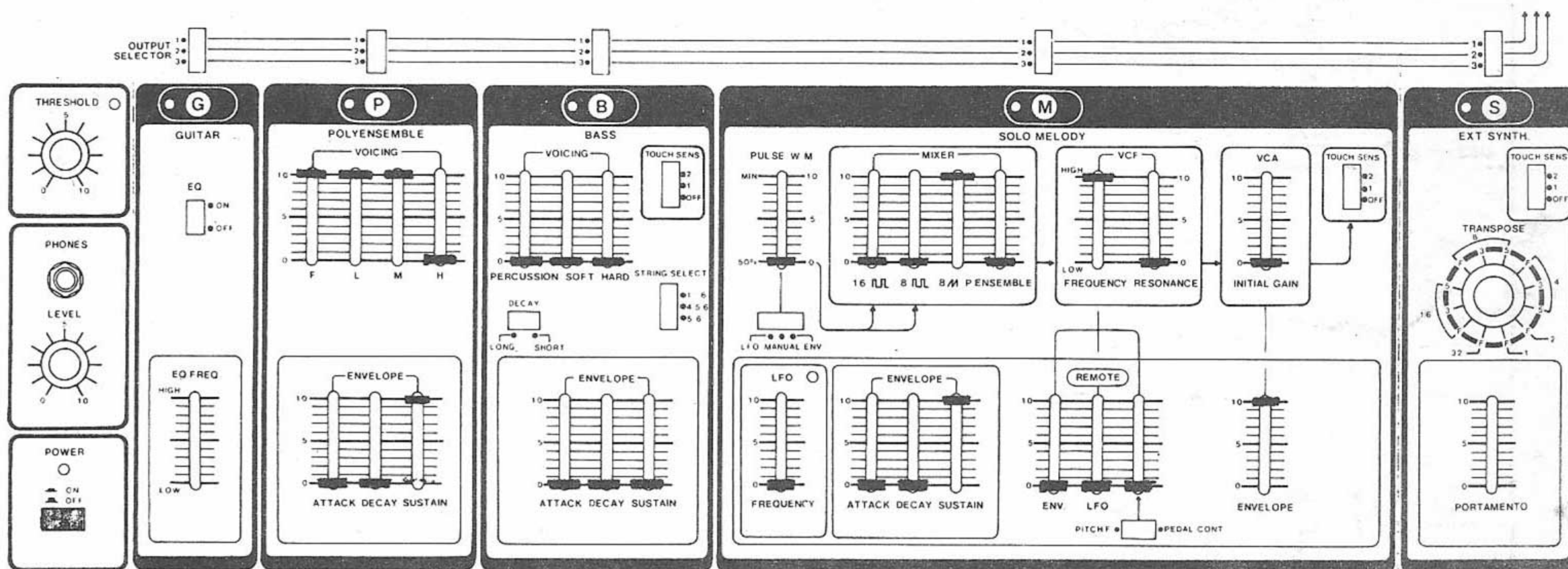




CALIBRATION OF VCO-8 BOARD

(1). Settings

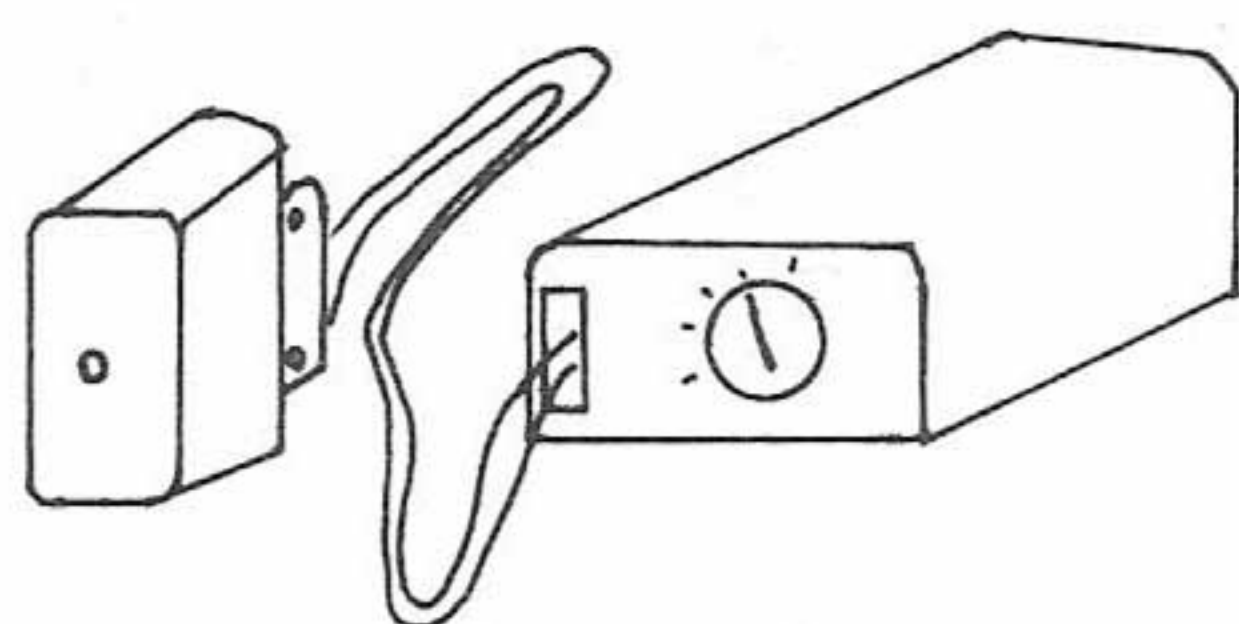
1. Set GR-500 as shown below:



2. Connect the E Scale Oscillator to the Guitar Connector Plug (labeled FROM GUITAR) on rear panel. (See Fig.1.)
3. Use headphones or amplifier to monitor sound.

(2). Calibration

1. Set SOLO MELODY TUNE VR on rear panel and VR2 (TUNING ADJ VR) at center. (See Fig.2.)
2. Set E Scale Oscillator at 4' and adjust VR1 (WIDTH ADJ) to eliminate beat.
3. Set E Scale Oscillator at 2' and adjust VR2 (TUNING ADJ) to eliminate beat.
4. Set E Scale Oscillator at 4' and adjust VR1 (WIDTH ADJ) slightly beyond the point which eliminates beat.
5. Repeat Steps 3 and 4 above until the beat is eliminated at the 4' and 2' settings of the E Scale Oscillator.
6. Perform the same adjustments between 2' and 8'; between 2' and 16'; and between 2' and 16'.
7. Last, check all positions of the E Scale Oscillator selector switch; if the sound remains relatively beat free, the calibration is complete.



2'	-1318.5 Hz
4'	- 659.3 Hz
8'	- 329.8 Hz
16'	- 164.8 Hz
32'	- 82.4 Hz
(Guitar No.6 string, open)	

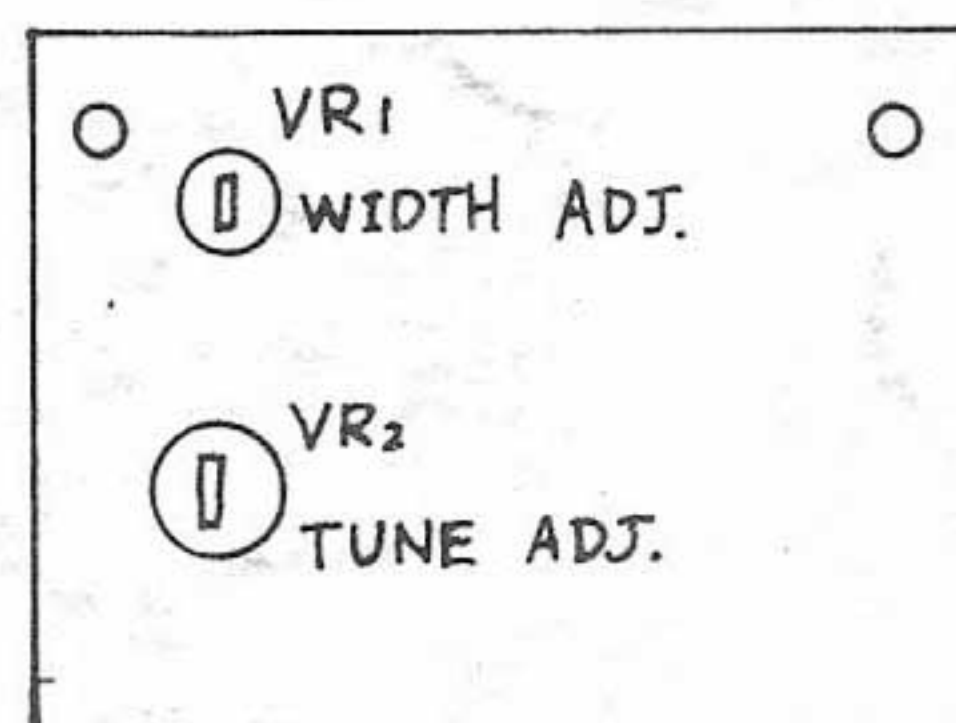


Fig-1 The E Scale Oscillator

Fig-2 VCO PCB