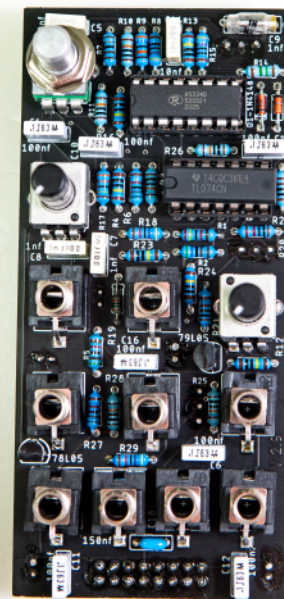


## 3340 VCO V3.0

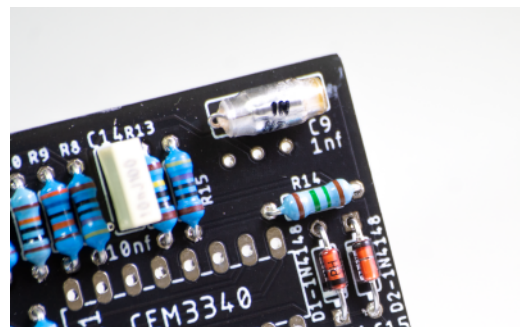
The 3340 VCO is a versatile sound module that can generate a variety of sounds, from edgy squares and ramps to smooth triangles and sines. It offers extensive control over the sound through sync options, frequency modulation, and pulse width modulation.



3340 VCO V2.9

### Timing Capacitor

To ensure precise stability, select a capacitor with low tolerance, such as a silver mica or polystyrene capacitor for C9



## Bom

Qty	Value	Part Number
1		78L05
1		79L05
1	16 Pin IDC Socket	SV1
1	1.5M	R14
1	1.8K	R7
5	100K	R3, R10, R11, R25, R26
7	100nf	C1, C6, C10, C11, C12, C15, C16
2	10K	R20, R21
1	10K / Trimmer	SCALE
2	10nf	C5, C14
5	10uf	C2, C13, C17, C19, C20
1	150nf	C18
2	1K	R22, R31
6	1M	R4, R12, R13, R16, R23, R24
2	1N4148	D1-1N4148, D2-1N4148
2	1nf	C7, C8
1	1nf	C9 / Timin Capacitor
1	20K	R19
1	20K / Trimmer	HIFREQTUNE
2	22uf	C3, C4
1	24K	R1
1	2N3904	T1
1	3.3M	R17
1	360K	R9
2	470R	R8, R15
2	47K	R18, R29
1	5.6K	R2
1	50K / Timmer	PWADJUST
1	51K	R5
3	68K	R6, R27, R30
3	B100K / 9mm Portentiometer	COARSE, FINETUNE, PW
1	CEM3340 or AS3340	IC1
1	TL074	U1
6	PJM398SM / Jack Socket	1V/OCT, HARDSYNC, LINFMIN, PWMIN, SOFTSYNC
4	PJM398SM / Jack Socket	TRI, RAMP, PULSE, SINE

Use capacitors rated 25V or higher.



## Calibration

### Scale and High Frequency Trimmer Calibration

- 1 - Connect a voltage-generator (VC) source, such as a keyboard, to the 1V/octave input of the VCO.
- 2 - Play note C1 (1 volts) on the key- board. Use the Tune and Fine Tune knobs on the VCO to tune it to C1.
- 3 - Press C2 (2 volts) on the key- board. Adjust the scale trimmer on the VCO to tune it to C2.
- 4 - Return to C1 and ensure it is still accurately tuned using the Tune and Fine Tune knobs.
- 5 - Press C2 again and fine-tune it using the scale trimmer on the back.
- 6 - Repeat the process with C1 and C3, ensuring accurate tuning with coarse and fine adjustments.
- 7 - Check the upper octaves for fine-tuning using the scale trimmer.
- 8 - Press C9 (9 volts) on the key- board and adjust the Hi Frequency trimmer to tune the VCO to C9.

### Pulse Width Calibration

The PW adjust trimmer sets the endpoint of the square wave cycle. It should be adjusted to a point just before the wave disappears when the PW pot is turned all the way up.



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