

# Erica Synths Polivoks VCO Bill of Materials

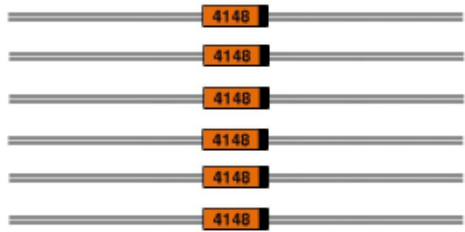
Assembly guide can be found here: [github.com/erica-synths/diy-eurorack](https://github.com/erica-synths/diy-eurorack)

Page 1 of 6

## LOGIC BOARD

### DIODES

1N4148: VD7, VD8, VD11, VD13-VD15



Total: 6

### INTEGRATED CIRCUITS & SOCKETS

8 Pin Dip Socket: DA4



TL072



14 Pin Dip Socket: DA1-DA3



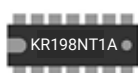
TL074



14 Pin Dip Socket: DA5



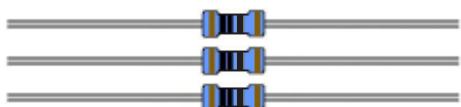
KR198NT1A



Total: 10

### RESISTORS (1/4 Watt, 1%)- All Stand-Up

100Ω: R35, R39, R44



### RESISTORS (1/4 Watt, 1%)- All Stand-Up

910Ω: R37



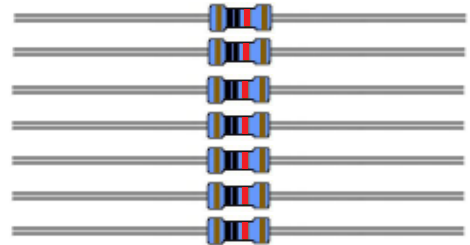
1k: R36



6.19k: R42, R74, R75



10k: R1-R5, R32, R58



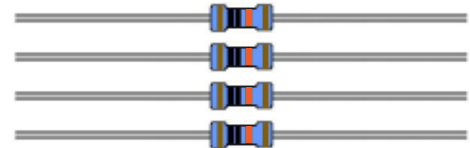
33k: R31, R94



39k: R66



100k: R27-R30



120k: R92



470k: R93



Total: 24

# Erica Synths Polivoks VCO Bill of Materials

## LOGIC BOARD

### RESISTORS (1/4 Watt, 5%)- All Stand-Up

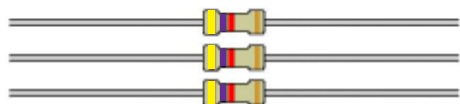
270Ω: R23



470Ω: R43



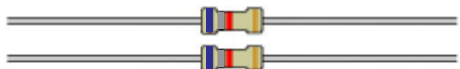
4.7k: R72, R81, R84



5.6k: R69



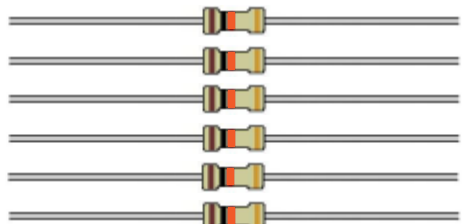
6.8k: R47, R51



8.2k: R38



10k: R18, R34, R40, R54, R55, R83



18k: R77



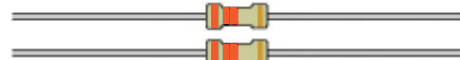
20k: R19, R68



22k: R56, R73



33k: R64, R67

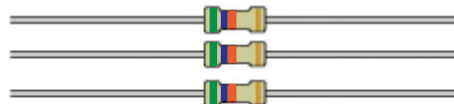


### RESISTORS (1/4 Watt, 5%)- All Stand-Up

47k: R59



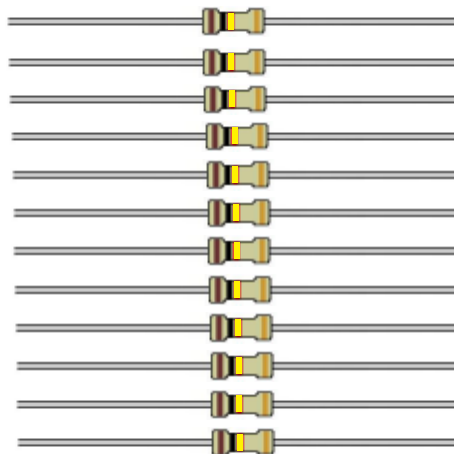
56k: R12, R25, R57



75k: R53



100k: R20, R22, R41, R46, R60, R61, R63, R65, R70, R76, R82, R85



200k: R95



360k: R26



10M: R87



Total: 42

# Erica Synths Polivoks VCO Bill of Materials

## LOGIC BOARD

### CAPACITORS

5.6nF Film: C23



47pF Ceramic: C21



100pF Ceramic: C17



330pF Ceramic: C19



2.2nF Ceramic: C18



2.7nF Ceramic: C15



10nF Ceramic: C32, C35



47nF Ceramic: C16



0.1µF Ceramic: C7-C14



10µF Non- Polarized Electrolytic: C2, C26-C28



22µF Electrolytic: C20



47µF Electrolytic: C29



Total: 23

### TRANSISTORS

2N3904: VT1, VT3, VT4, VT6



2N3906: VT2, VT5



Total: 6

### POTENTIOMETERS

1k Single Turn Trim Pot: R45, R50



100k Single Turn Trim Pot: R21



10k Multi Turn Trim Pot: R7



Total: 4

### CONNECTORS

1x8 Long Pin Header: XP2-XP5



Total: 4

### SWITCHES

CK1049 Rotary Switch : SW1



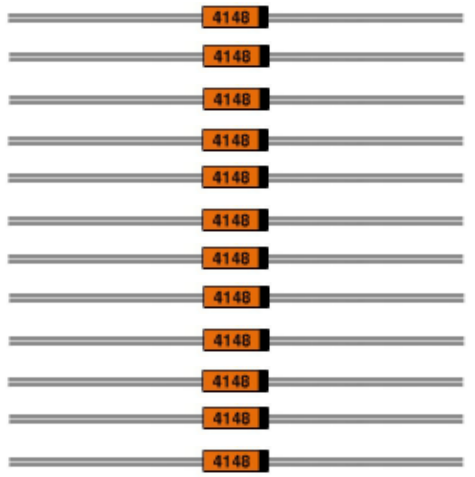
Total: 1 \*See end of Visual BOM for orientation

# Erica Synths Polivoks VCO Bill of Materials

## CONTROL BOARD

### DIODES

1N4148: VD3-VD6, VD9, VD10, VD16-VD21



1N4001 or 1N4002: VD1, VD2



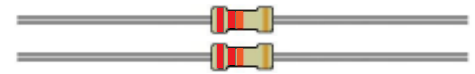
Total: 14

### RESISTORS (1/4 Watt, 5%)

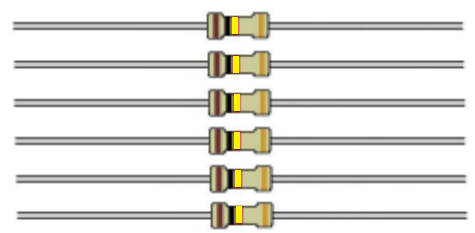
10k: R11, R16, R49, R71, R89



22k: R86, R90



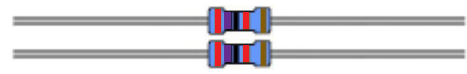
100k: R9, R10, R48, R96-R98



Total: 18

### RESISTORS (1/4 Watt, 1%)

27k: R13, R15



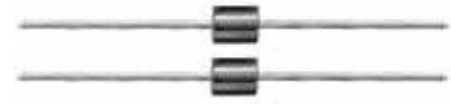
150k: R6



Total: 3

### INDUCTORS

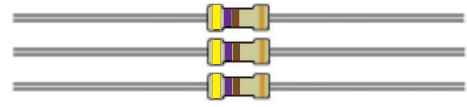
Ferrite Bead: L1, L2



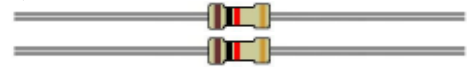
Total: 2

### RESISTORS (1/4 Watt, 5%)

470Ω: R78-R80



1k: R88, R91



### FUSES

400mA Resettable Fuse: VR1, VR2



Total: 2

# Erica Synths Polivoks VCO Bill of Materials

## CONTROL BOARD

### CAPACITORS

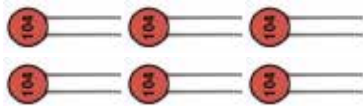
47pF Ceramic: C1



10nF Ceramic: C30



0.1µF Ceramic: C5, C6, C22, C25, C31, C34



10µF Electrolytic: C33, C36



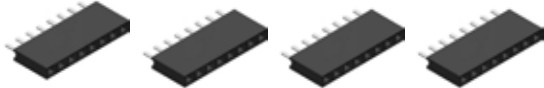
47µF Electrolytic: C3, C4



Total: 12

### CONNECTORS

1x8 Pin Socket: XS8-XS11



10 Pin Header: XP1



Total: 5

### VOLTAGE REGULATORS

LM337L: DA6



LM317L: DA7



Total: 2

### JACKS

3.5mm Mono Jacks: XS1-XS7



Total: 7

### POTENTIOMETERS

1k Multi Turn Trim Pot: R33



B10k Vertical Mount: R14, R62



B100k Vertical Mount: R8



Total: 4

### OTHER

#### HARDWARE

2.5mm Screws



3mm Screws



Total: 8

# Erica Synths Polivoks VCO Bill of Materials

## OTHER

### KNOBS

19mm Small Black Knob

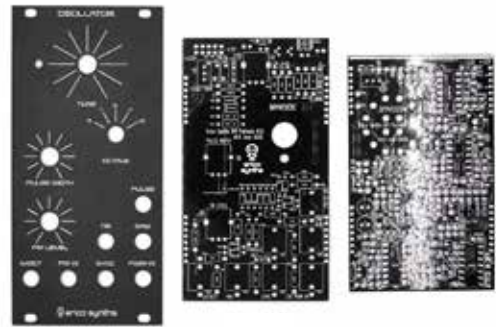


28mm Large Black Knob



Total: 4

### PCB & PANEL



Total: 3

### POWER CABLES

10 to 16 Pin Power Cable



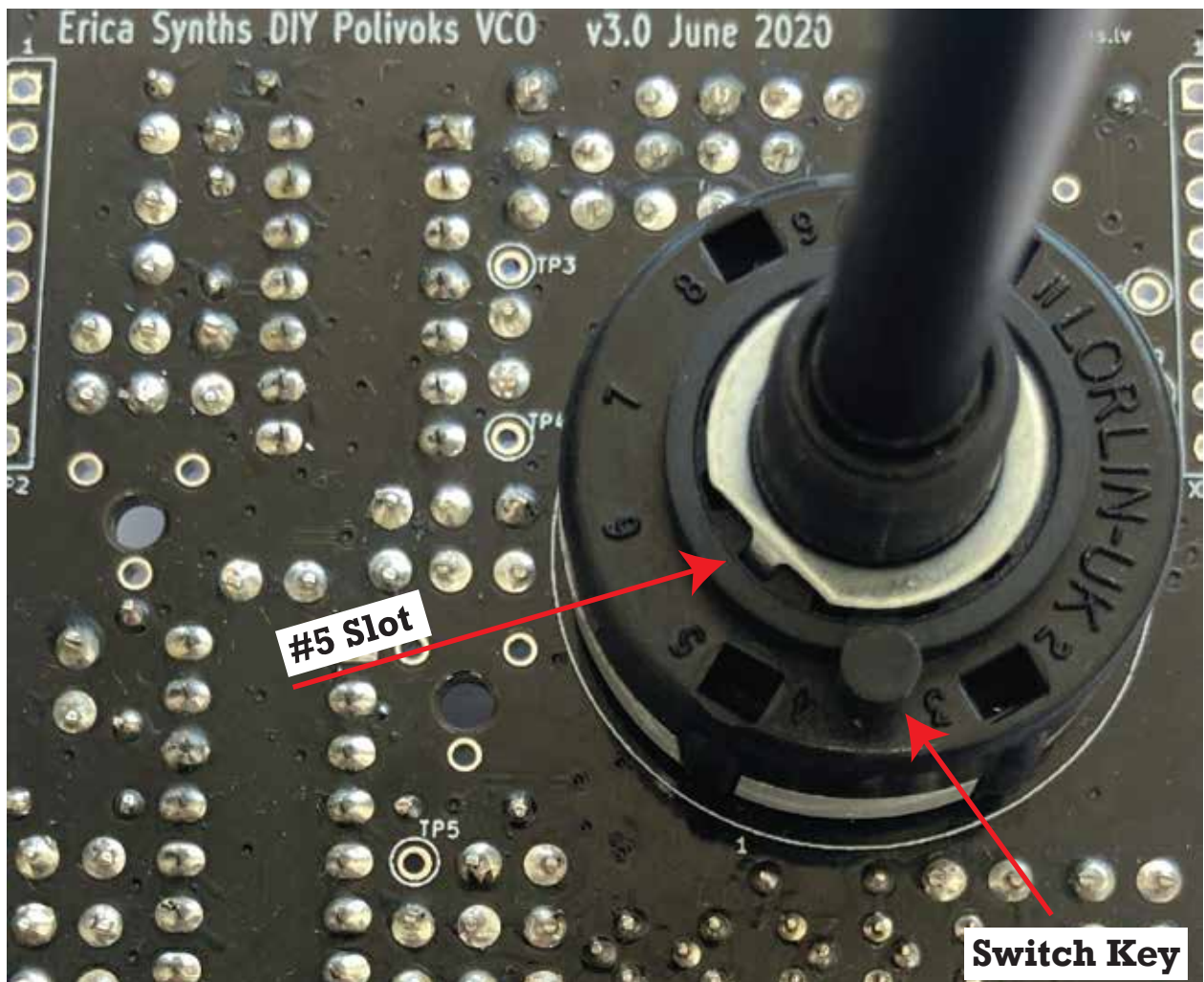
Total: 1

# Addendum to Erica Synths Assembly Instructions

1. Remove the nut, lock washer, and keyed washer.
2. Turn switch fully counter clockwise.
3. Place keyed washer on the switch where the key is in slot 5.

Switch is ready to be mounted

**\*Do NOT use the lock washer\***



# Additional Trimmer Information

Some of the trimmers are not explained in the Erica Synths calibration instructions (found in the Erica Synths Github at the end of the assembly guide). They are all optional:

## R21: Internal Tune Trimmer

Matches the tuning of two Erica Synths VCOs so that they play the same note when the Tune knob is in the same orientation on both VCOs. First, follow the tuning instruction for both VCOs. Then set the Tune knob to 12:00 on both VCOs and adjust R21 on one VCO so that both modules play the same note.

## R45: Temperature Compensation

The exponential converter of the VCO is built around the KR198NT1A chip, which is a matched transistor array. The original Polivoks oscillator didn't have a temperature compensation circuit and a tempco resistor, so instead one of the transistors inside the chip was used to heat the chip from the inside. This was an attempt to maintain a constant temperature in order to avoid frequency drift, but in reality, it didn't work as well as expected. We recommend not adjusting this trimmer.

## R50: High Frequency Scale Adjustment

After following the calibration instructions, you may notice some tuning deviations in higher frequencies; adjust R50 to compensate for this.