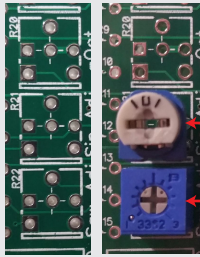


# Mattson VCO 2 DIY Board assembly

Page 3

7



Bourns  
3306 F

3362 F, U, P

## A word about the trim pot pads

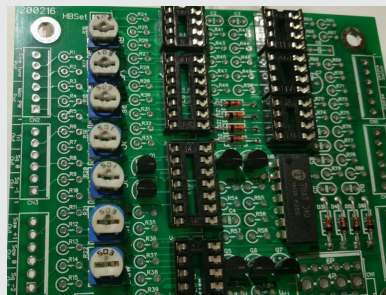
The trim pot pads each contain six pads. Only three will be used for each trim pot.

The pads were designed to accept either Bourns 3306 F series trim pots or Bourns 3362 F, U and P series trim pots.

Each have different pinout patterns. But, will fit properly within the trim pot outline. Just make sure that pin 1 is on the left as shown.

Note that the pin 1 pads are square.

8



## Trim pots (single turn)

Insert Trim pots **R16-R22**. Verify the proper value of each before installing. Ensure that the trim pot Pin 1 is inserted into one of the square pads and that the trim pot is installed within the square component outline.

**R16, 17- 10K (code 103)**

**R18, 21, 22 - 50K (code 503)**

**R19, 20 - 500 (code 501)**

**Do not install multi-turn trim pot R23 at this time.**

Once all of the above listed trim pots are placed in the proper locations in the proper orientation, solder them to the board.

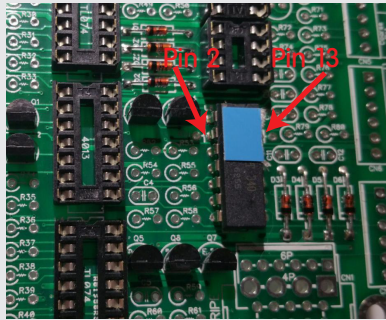
Clip the excess leads.

9

## Initial trim pot settings

Center all of the trim pot settings. Set R18, Pset, CCW to around the 10:00 position. That should do it.

10

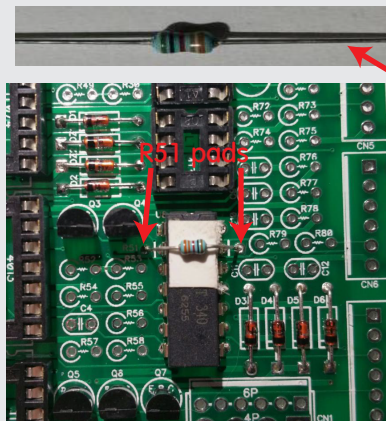


## Thermal tape

Locate the **small square of thermal tape**. Peel one side and stick it on to U8, The THAT 340P14 that was installed earlier. The piece shown was too large. Trim it with a pair of scissors. It needs to go by the notch between the two pins second down from the end. (Pin 2 and 13)

If thermal tape isn't available, a small dab of thermal compound will be fine.

11



## R51 Tempco

Locate **R51**. It's a small, bluish, 1/8W crappy 1K resistor.

It's crappy because it changes its resistance based on how hot or cold it is.

This is awesome. because we can use that property to counter the effects of changing temperatures. like in an oscillator whose pitch drifts with temperature changes....

Peel the remaining side off the thermal tape to expose the thermal compound.

Right **next to pins 2 and 13 on U8**, there is a pad next to each. Looking by pin 2, you'll see the screen marking for R51.

Place the R51 leads across U8 pins 2 and 13 into the R51 pads. Then, push R51 onto the top of U8 onto the thermal tape.

Pull the leads tight into the pads keeping R51 centered on U8. The less lead exposed, the better. R51 has to be touching the top of U8 and the thermal tape.

Solder and clip the leads.