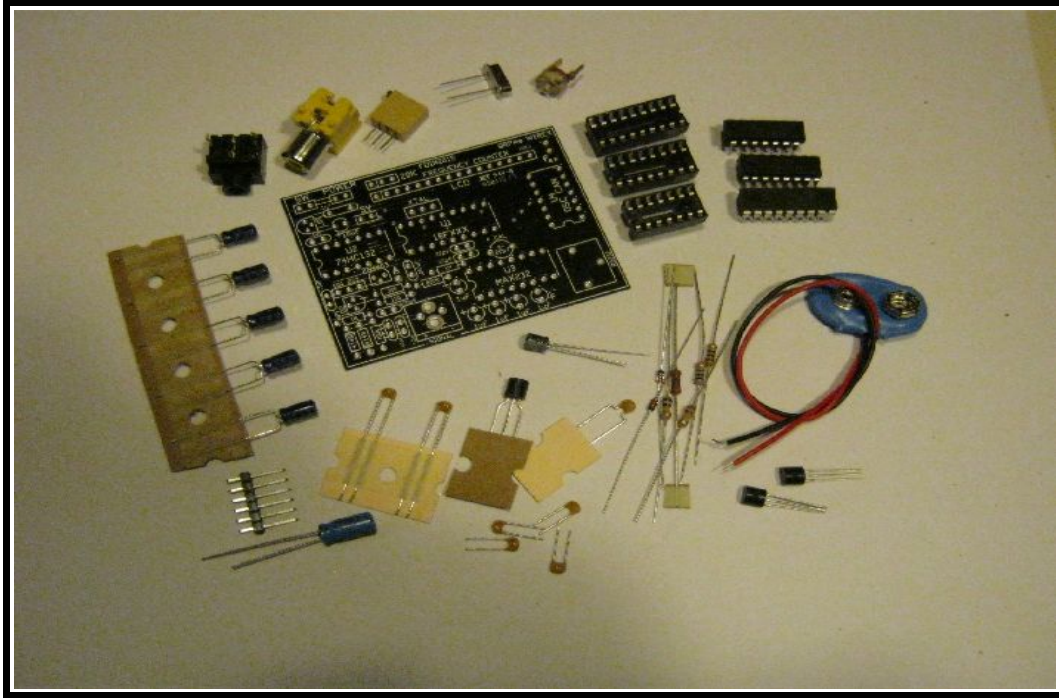


FDIM 2015 BUILDATHON FREQUENCY COUNTER KIT



Install the 3 IC sockets:

1 - 14 pin

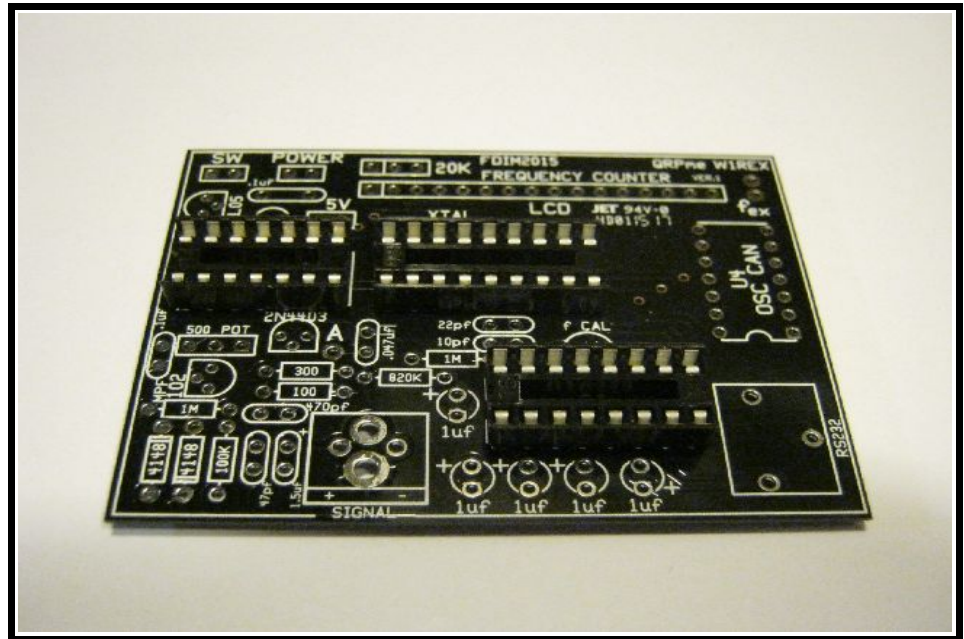
@HC132

1 - 16 pin

@ MAX232

1 - 18 pin

@16FXXX



Now solder in the lay flat resistors:

1 @ 100K (BRN-BLK-YEL)

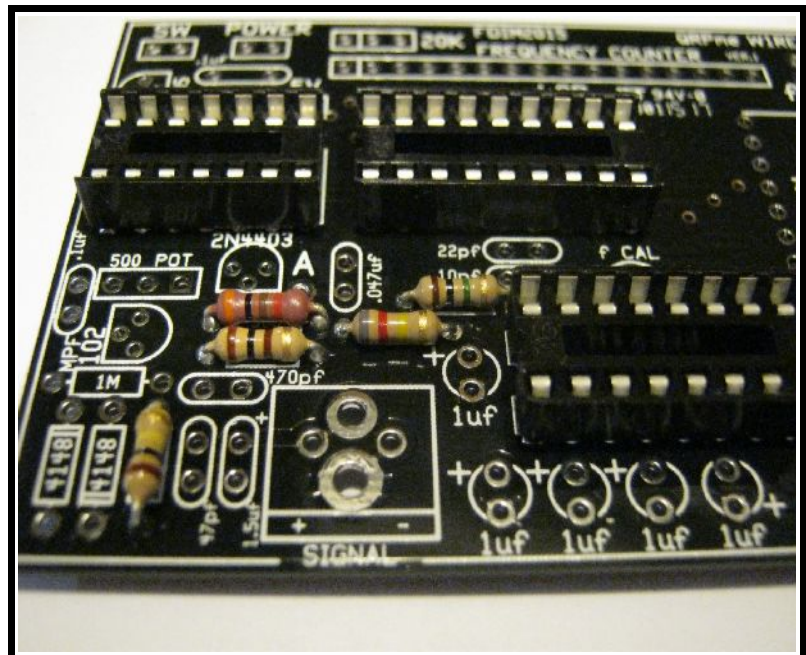
1 @ 100 (BRN-BLK-BRN)

2 @ 1M (BRN-BLK-GRN)

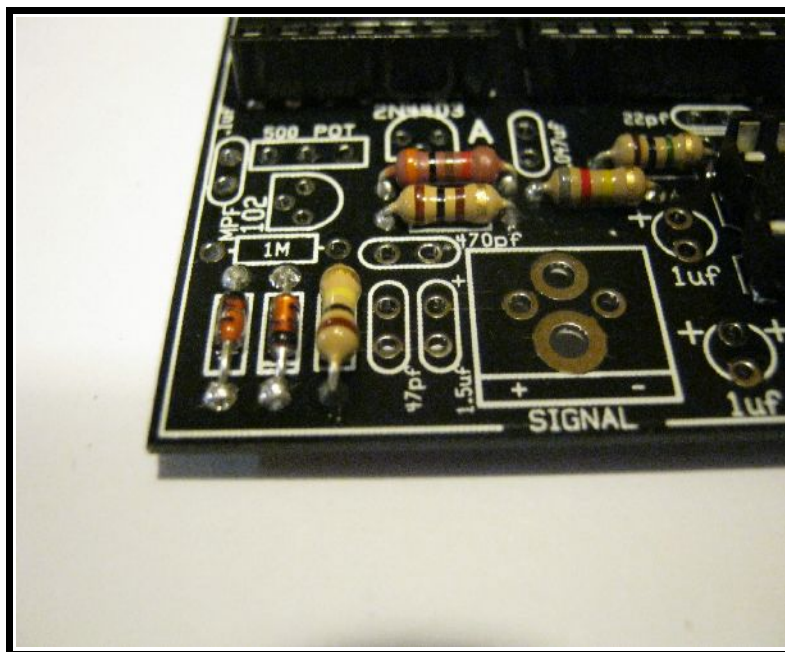
1 @ 820K (GRY-RED-YEL)

1 @ 300

(ORG-BLK-VIO-RED)



Two 1N4148 diodes go in now....



Now solder in the monolithic caps:

47pf (470)

.047uf (473)

22pf (220)

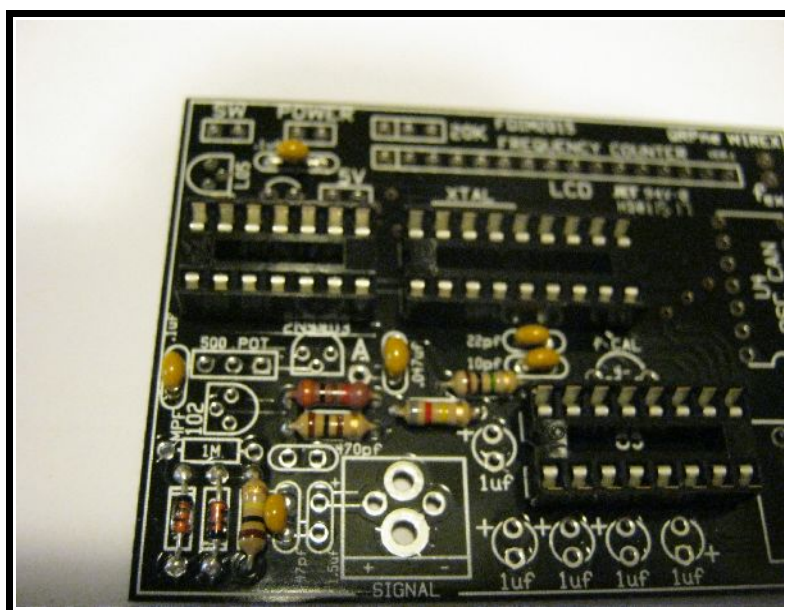
10pf (100)

.1uf (104)

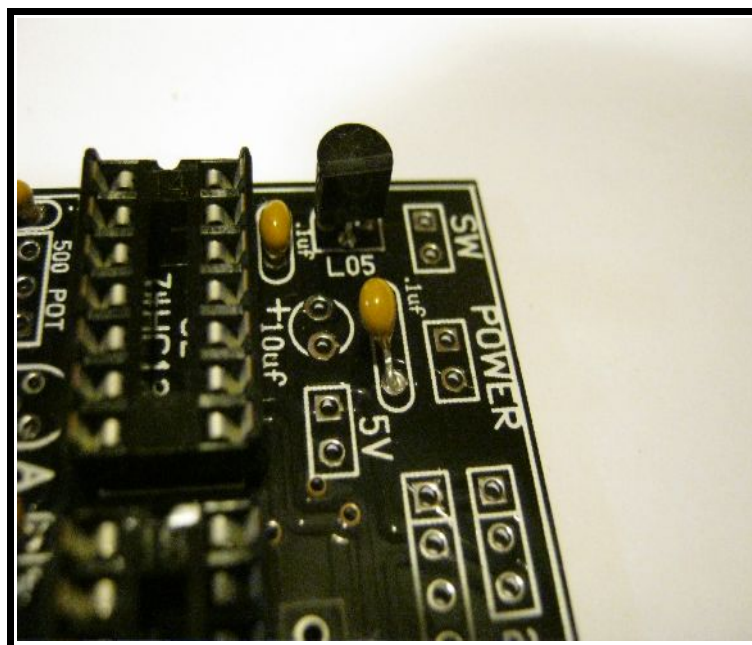
2 with .1" spacing

1 with .2" spacing

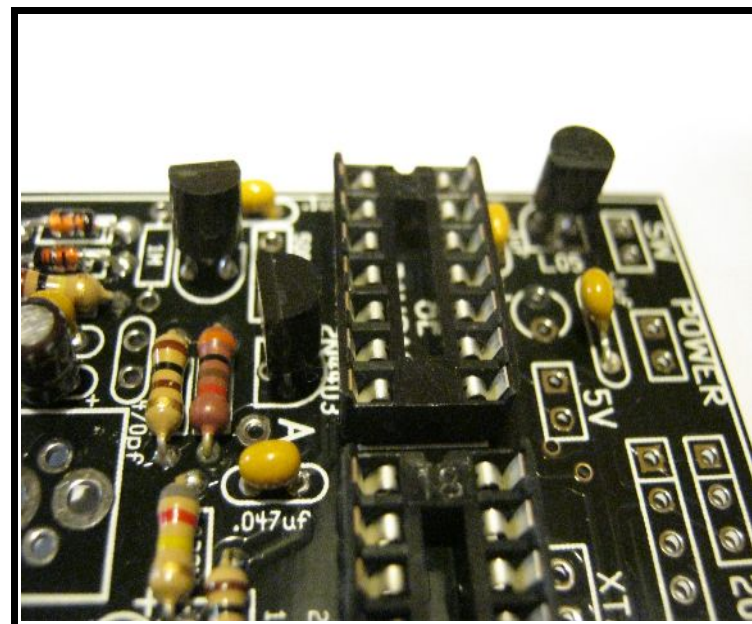
470pf (471)



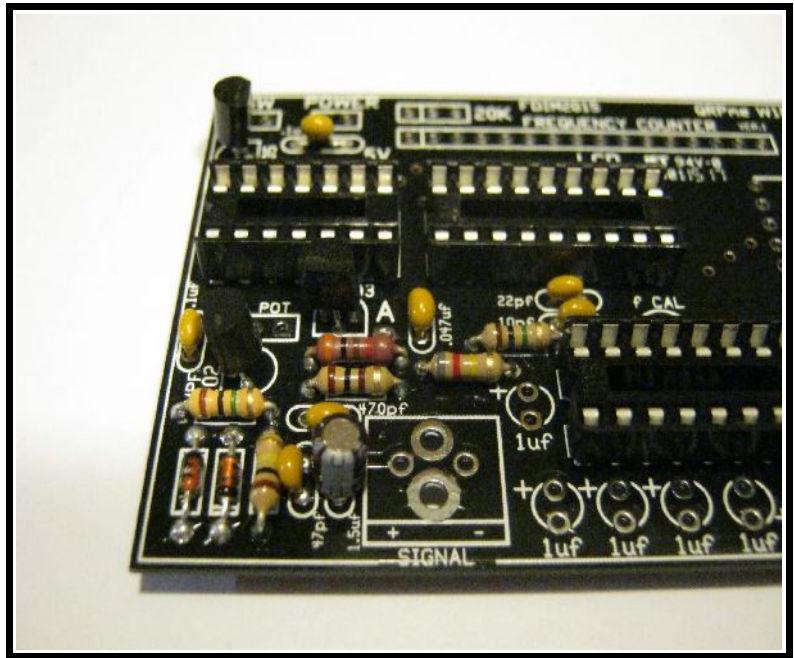
LM78L05 5 volt IC
regulator goes into location
L05



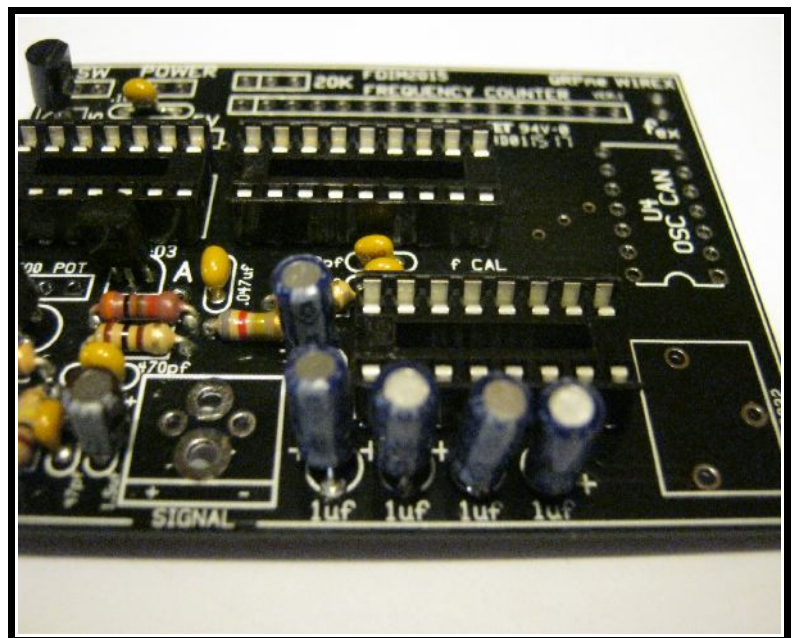
Two transistors:
MPF102
2N4403



1.5uf installs next to the signal input connector. Make sure that you get the proper polarity.



Four 1uf aluminum electrolytic caps are now installed around the MAX232 chip. The polarities change around the 5 caps. Make sure that you get the in right...

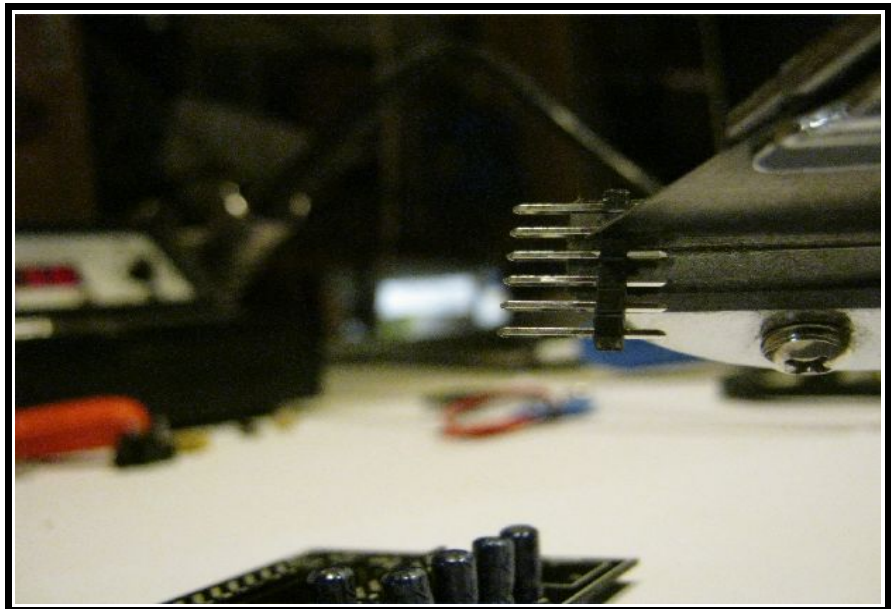
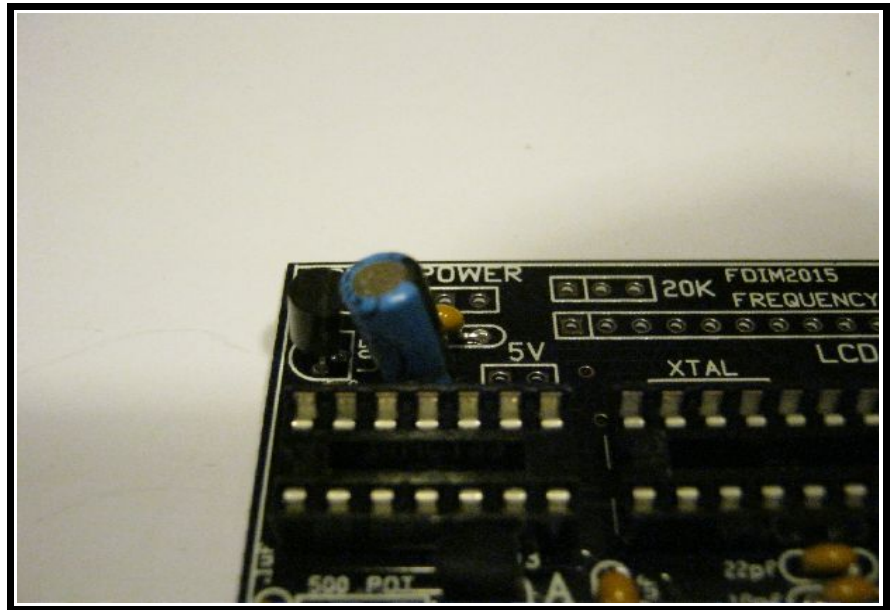


A 10uf aluminum electrolytic cap installs next to the voltage regulator.

Cut the 6 pin male header into 3 2 pin headers.

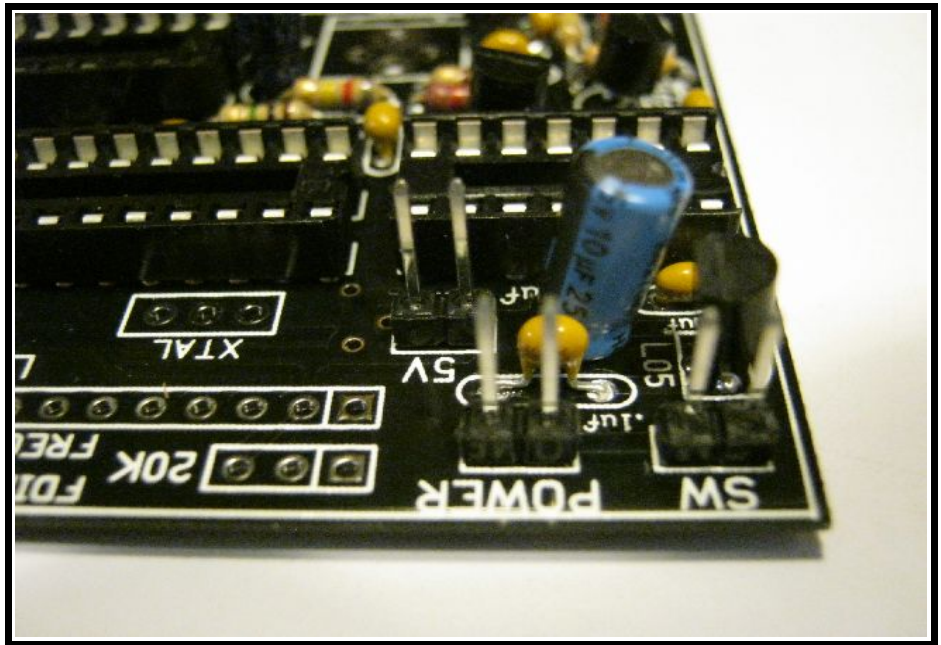
BE VERY CAREFULL USING THESE CUTTERS! They can just as easily chop **YOUR ENTIRE FINGER** off **SUPER CLEAN**, square and with very little deformation! Also, move them at a

careful deliberate pace as you can see that the pointy tip of the cutter has **NO** guard. I've used these cutters for several years and have only stabbed my finger holding a part once! That pointy part is **VERY POINTY** a **VERY SHARP** and can make a pretty nasty incision into your finger tip **VERY** quickly! Use **SLOW, DELIBERATE, CAREFUL MOTION** when approaching your tiny hard electronic part held in you big fleshy soft fingers!!



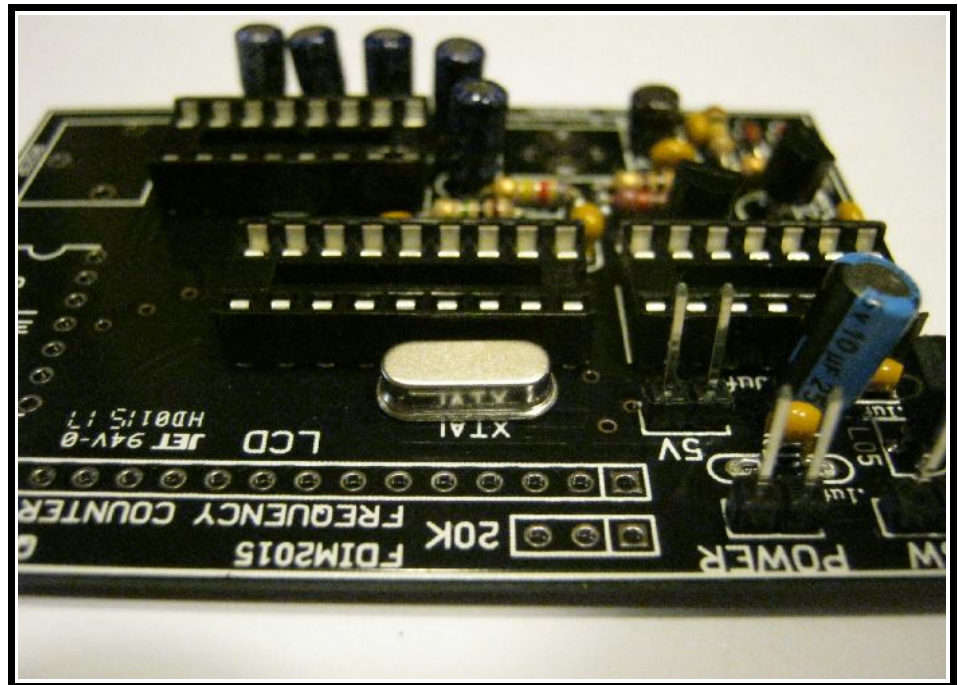
Install them at:
POWER
SWitch
5V

You can 'borrow'
the jumper from
the SIGNAL
GENERATOR kit to

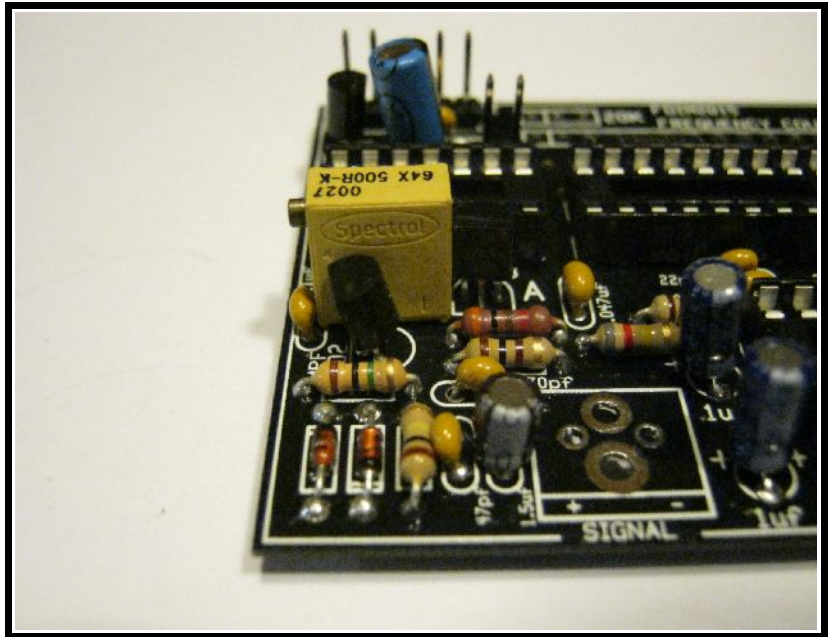


use as a holder or foot when soldering in these headers. I usually hold a single pin with my finger tip and then solder the OTHER pin. When that pin is cool, you solder the pin that I was holding...

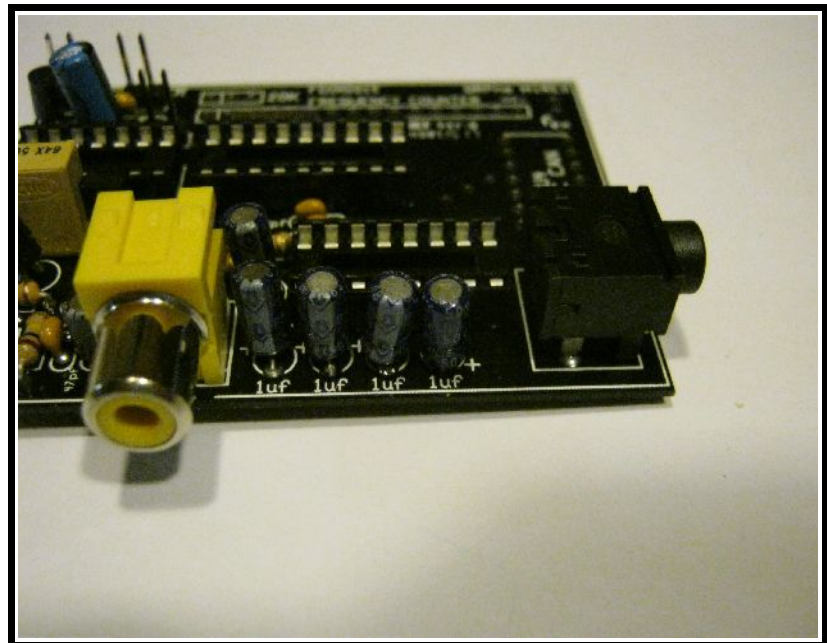
4.0 Mhz crystal is
next...



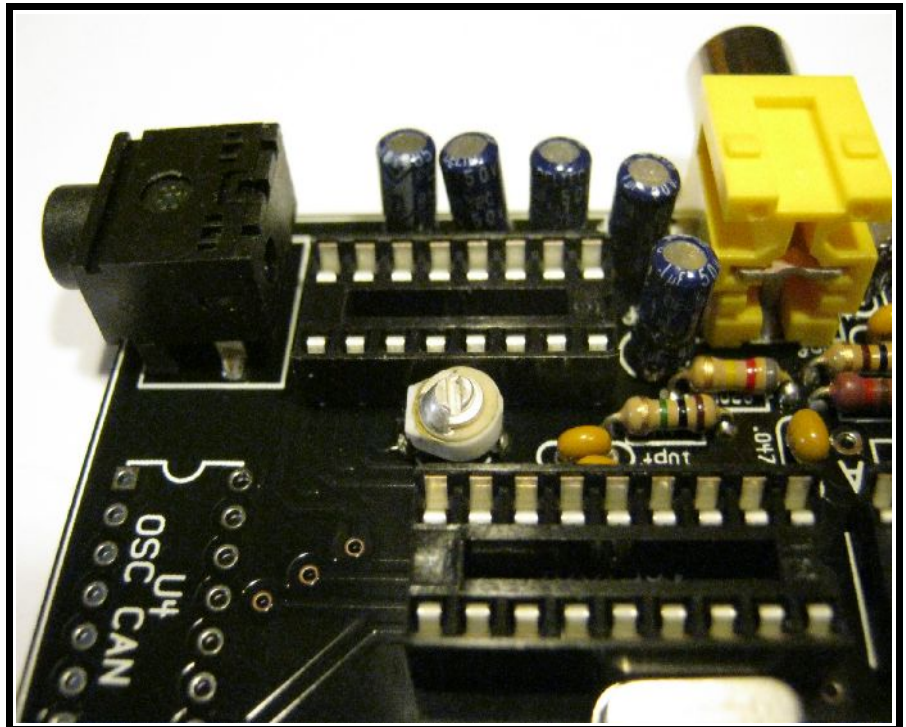
How about the 500 ohm pot?



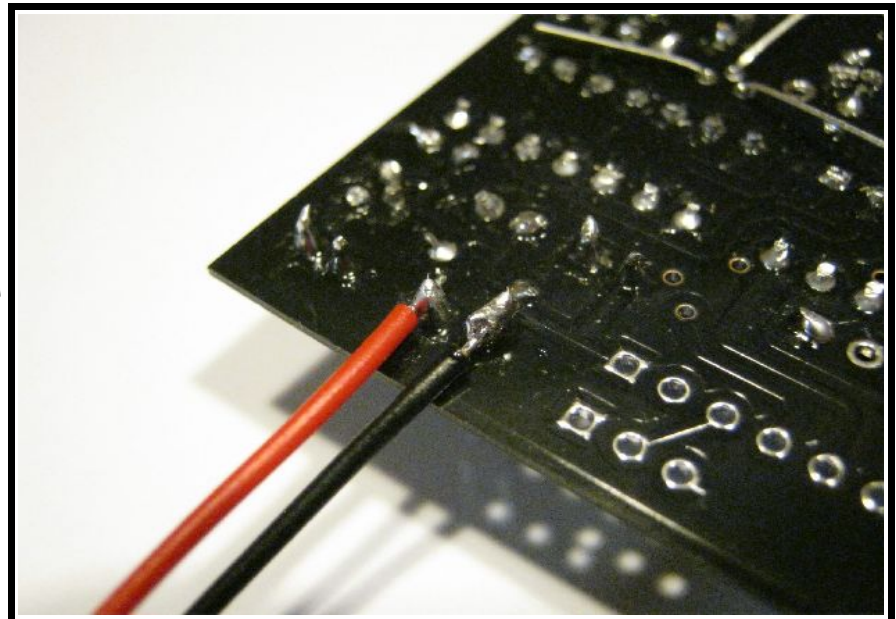
Now add the yellow RCA (cut off those 2 tiny feet before mounting) and the stereo jack used as an RS232 output connector.

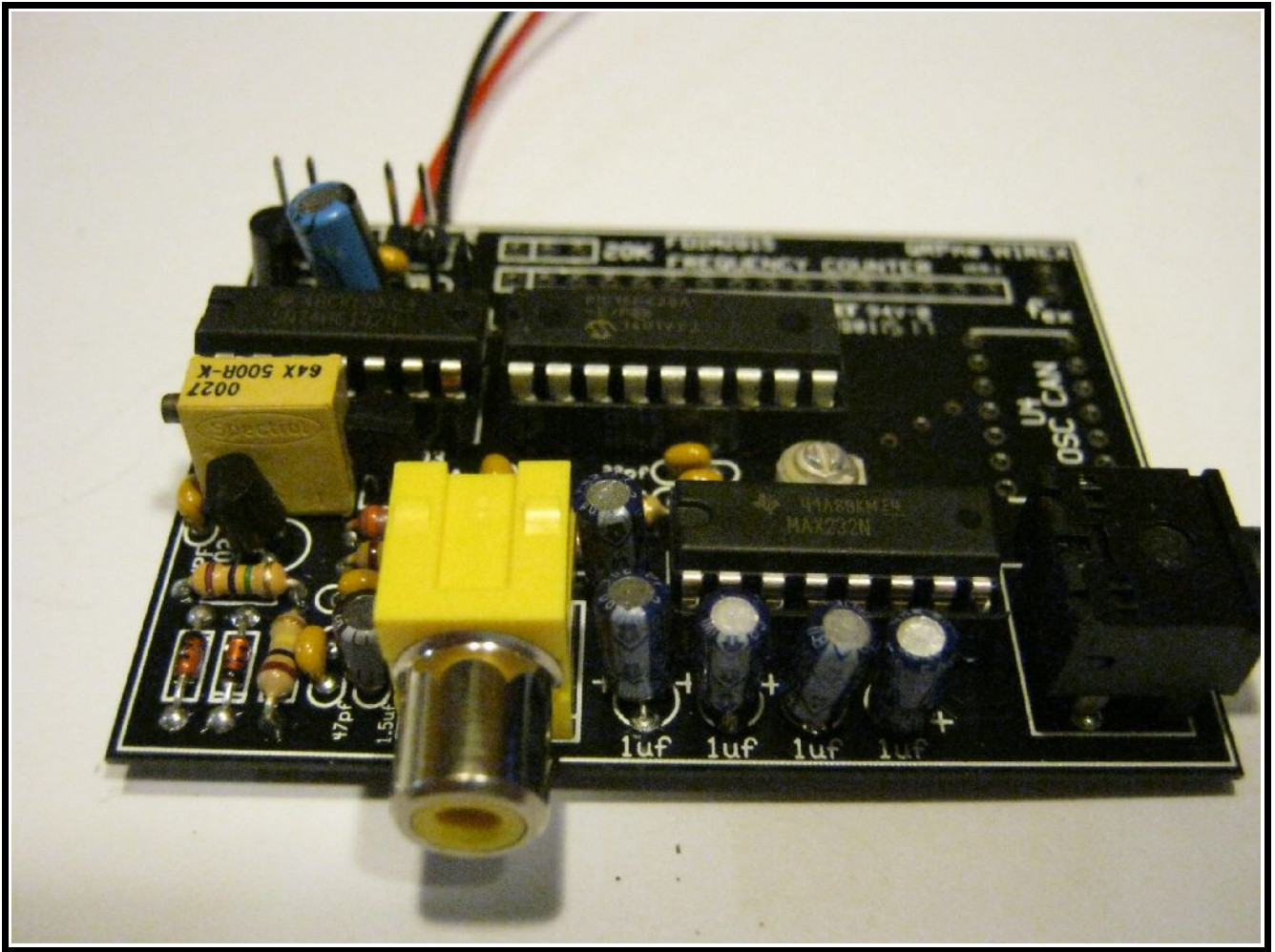


The tiny trimmer cap goes in now.



Solder the 9 volt battery snap leads to the POWER pads on the underside of the board....unless you can find the proper terminals in the fleamarket. Pay close attention as to which pad is positive voltage.....





Your FREQUENCY COUNTER KIT is ready to adjust, test, adjust and count.

5/11/2015 W1REX