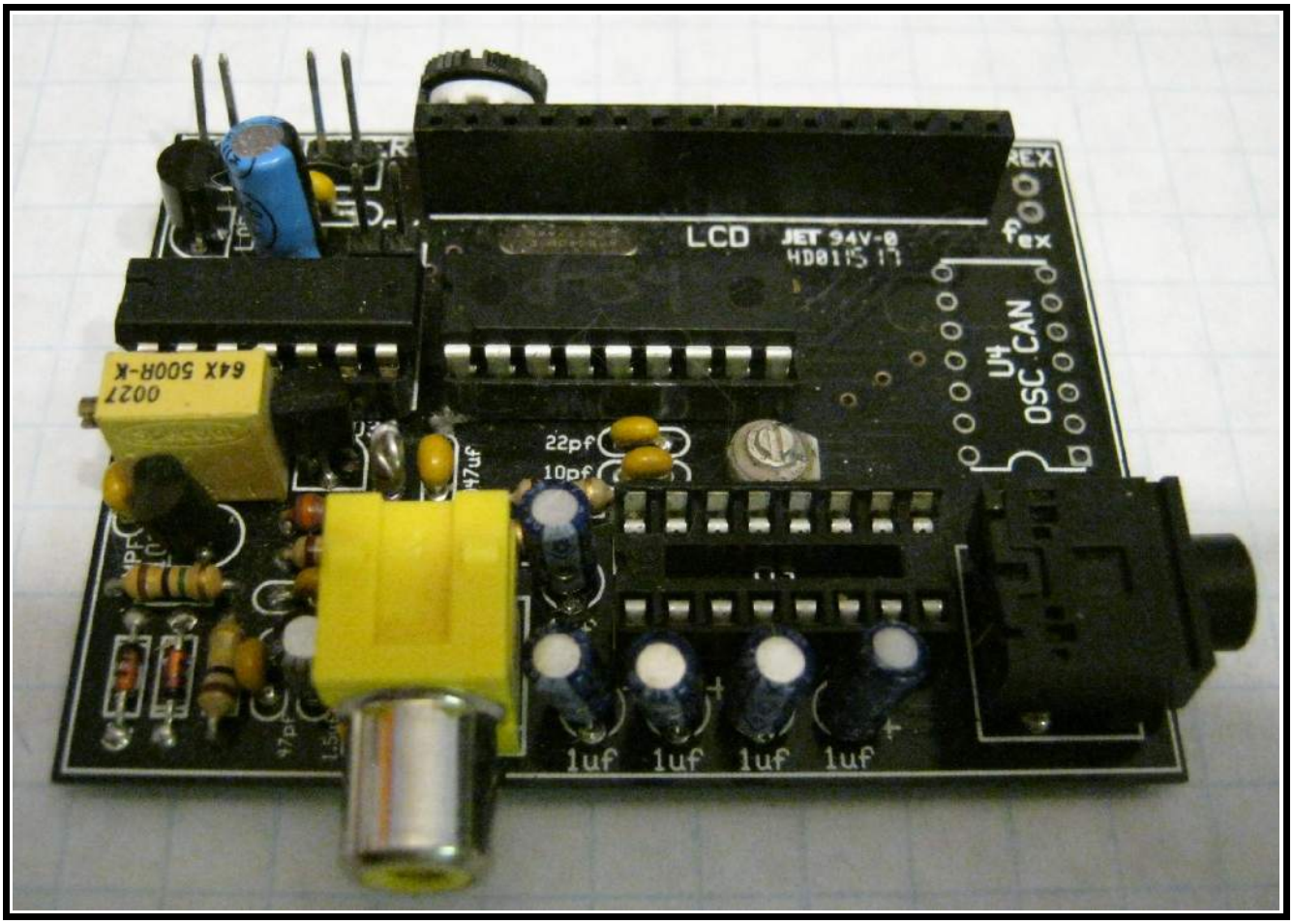
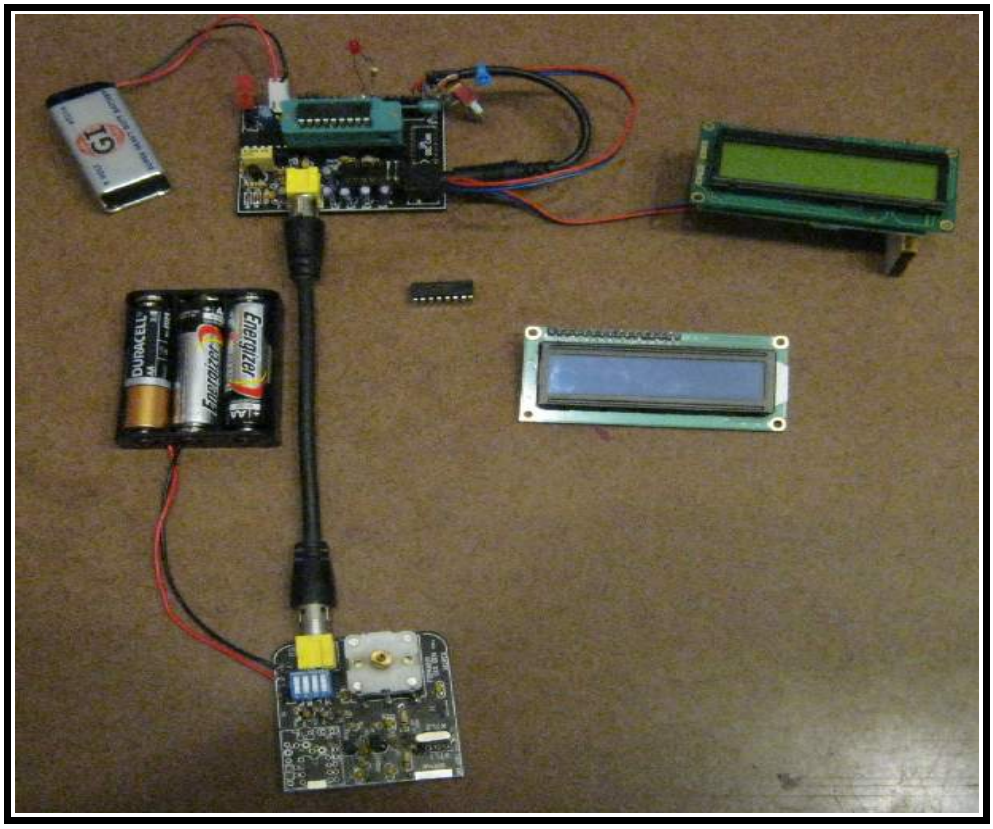


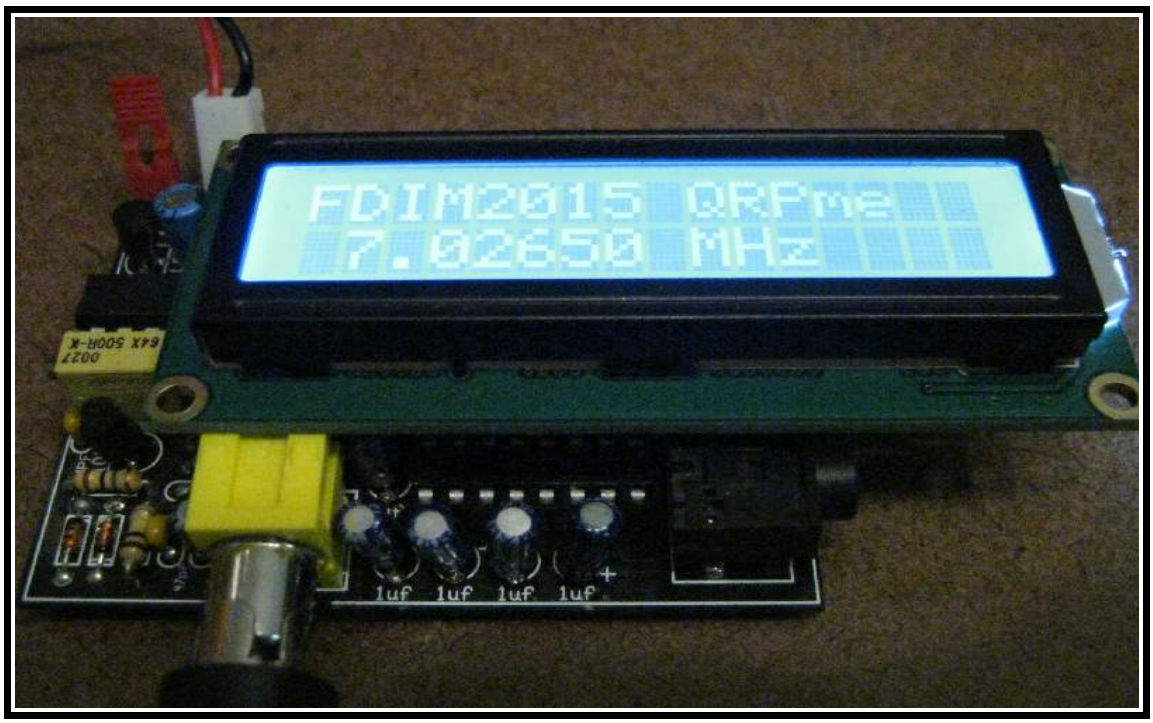
A COMPLETE ASSEMBLED FDIM2015 BUILDATHON FREQUENCY COUNTER BOARD FROM QRPme WAITING FOR CONFIGURATION MODS FOR THE DISPLAY.



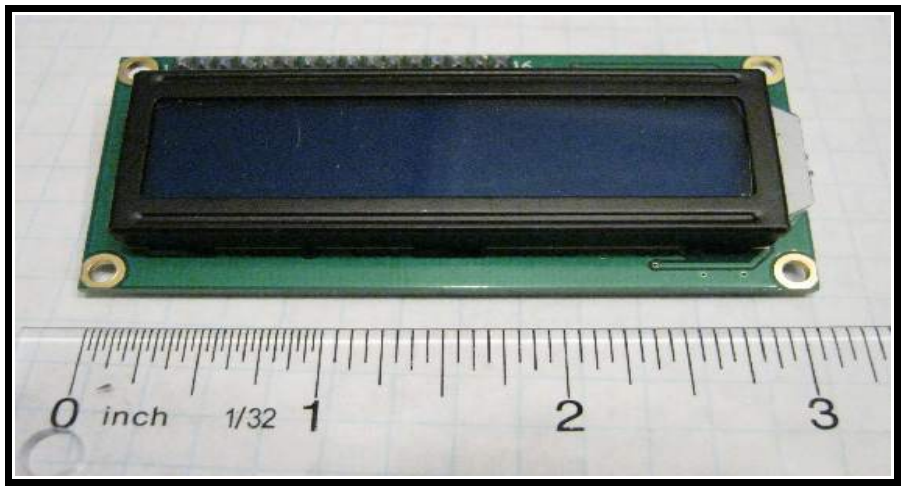
READY FOR TESTING WITH BUILDER SUPPLIED OUTPUT DEVICES…
I USED A WHITE ON BLACK PARALLEL LCD FROM SPARKFUN
SEE: https://www.sparkfun.com/products/709
DATASHEET:
https://www.sparkfun.com/datasheets/LCD/GDM1602K-Extended.pdf

FOR A SERIAL BACKPACK LCD, I USED A SERIAL LCD MODULE FROM SEETRON (SCOTT EDWARDS ELECTRONICS) ATTACHED TO AN LCD MODULE PURCHASED ELSEWHERE.
SEE:http://www.seetron.com/bpk000.html

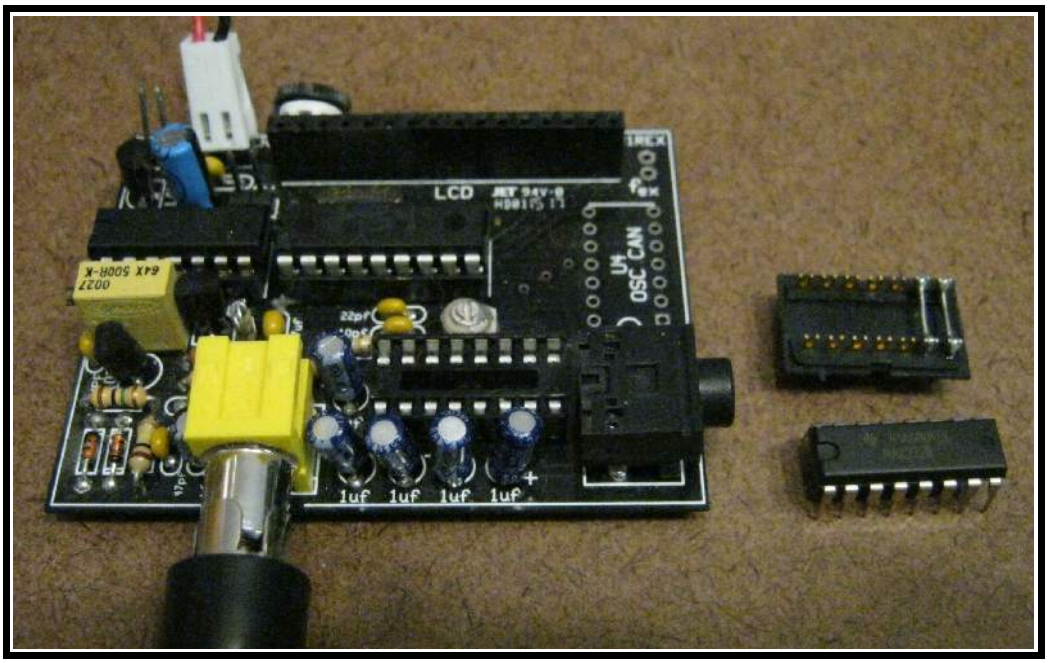
A SIMILAR COMPLETE SERIAL BACKPACK VERSION LCD IS ALSO AVAILABLE FROM SPARKFUN
SEE:https://www.sparkfun.com/products/9393



SIMPLY PLUG IN A COMPATIBLE LCD SCREEN AND THE MICRO WILL AUTOMATICALLY SWITCH TO LCD MODE.



A COMPATIBLE LCD SCREEN IS ABOUT 3" LONG AND USES THE KS0066U OR EQUIVILENT CONTROLLER. IT HAS A 16 PIN INLINE MALE HEADER FOR PLUGGING INTO THE PCB. I USE A GDM1602K LCD MODULE FROM SPARKFUN.

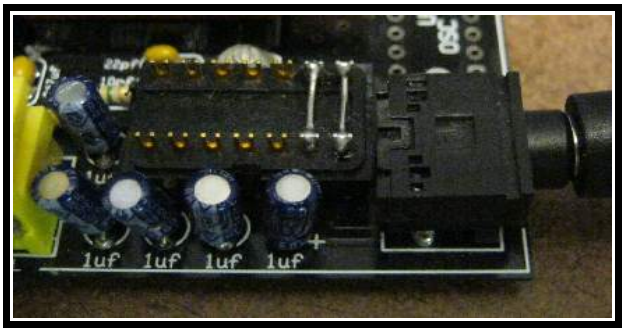


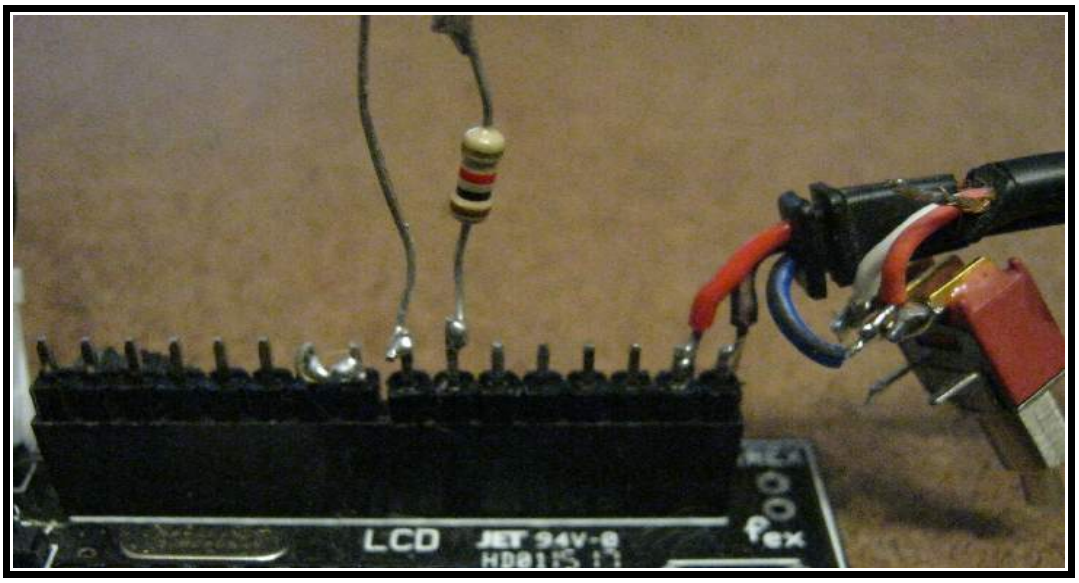
USING THE FREQUENCY COUNTER MODULE IN THE SERIAL OUTPUT MODE REQUIRES A FEW MODS:

1: RS232 OR TTL OUTPUT.

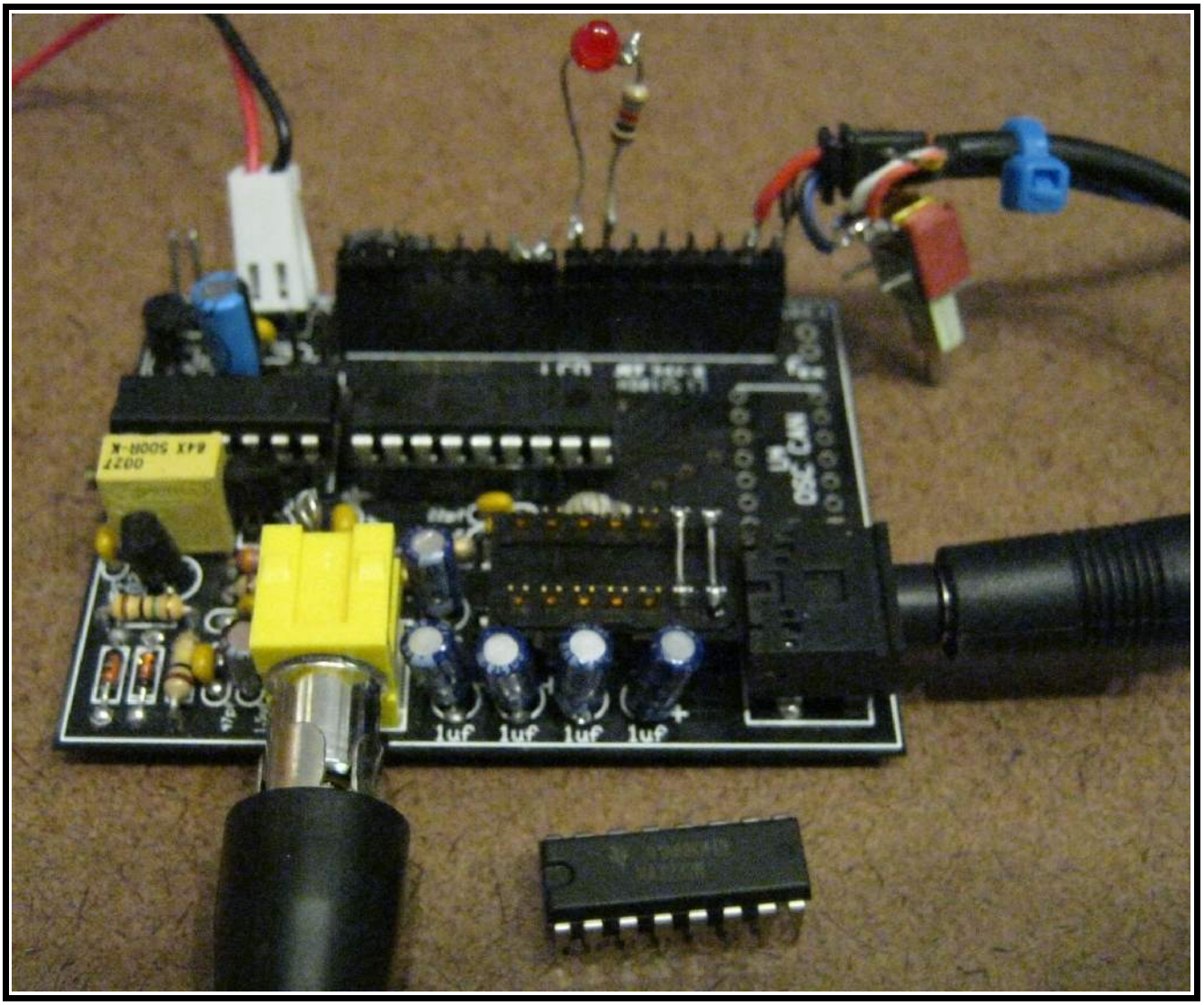
FOR RS232 OUTPUT INSERT A MAX232 CHIP INTO THE SOCKET. THE MAX232 CHIP CONVERTS TTL OUTPUT FROM THE MICRO TO EIA LEVELS FOR TRUE RS232.

FOR TTL OUTPUT, INSERT A PLUG WITH JUMPERS TO OUTPUT THE TTL SIGNALS DIRECTLY TO THE CONNECTOR.



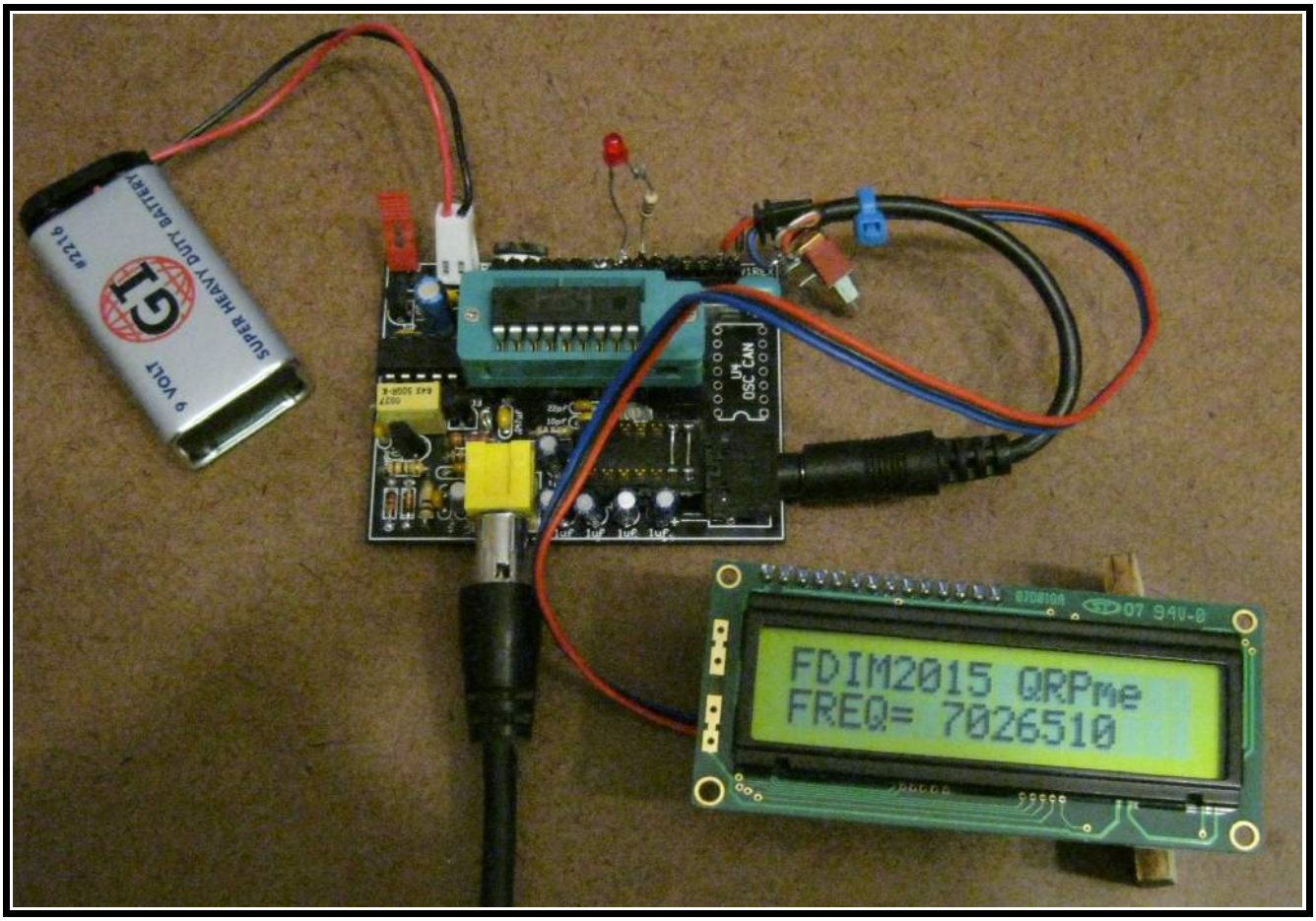


2. INSERT A 8-PIN MALE MOLEX HEADER INTO THE LEFTMOST 8 PINS OF THE LCD HEADER SOCKET. SOLDER A SHORT ACROSS THE RIGHTMOST PINS OF THE MAKE HEADER. THE SHORT IS WHAT TELLS THE MICRO THAT YOU WANT IT TO OPERATE IN THE SERIAL OUTPUT MODE.
3. THE 8-PIN MALE MOLEX HEADER ON THE RIGHT 8 PINS IS TOTALLY OPTIONAL. IN THIS CASE, I ADDED A RESISTOR AND LED ACROSS THE LEFTMOST 2 PINS. THE LED INDICATES MICRO ACTIVITY. IT BLINKS JUST BEFORE EACH FREQUENCY UPDATE. THE RED & BLACK WIRES ON THE RIGHTMOST 2 PINS SEND 5 VOLTS OUT TO THE LCD MODULE FOR THE BACKLIGHT.



FOR A SERIAL BACKPACK LCD, THE MAX232 CHIP IS NOT NEEDED AS 5 VOLT LOGIC SIGNALS ARE ALL THAT IS REQUIRED BY THE MICRO CONTAINED WITHIN THE BACKPACK DEVICE.

THE SMALL TOGGLE SWITCH IN THE SERIAL I/O LINE FOR DEBUGGING PURPOSES. IT IS NOT REQUIRED.



SO HERE IS A COMPLETE SERIAL OUTPUT SETUP SENDING THE FREQUENCY DATA OUT TO A SCOTT EDWARDS SERIAL BACKPACK LCD MODULE.

REPLACING THE SHORTING JUMPERS WITH THE MAX232 CHIP WOULD SEND EIA-RS232 SIGNAL LEVELS FOR CONNECTING TO LAPTOPs, COMPUTERS, PRINTERS ETC.