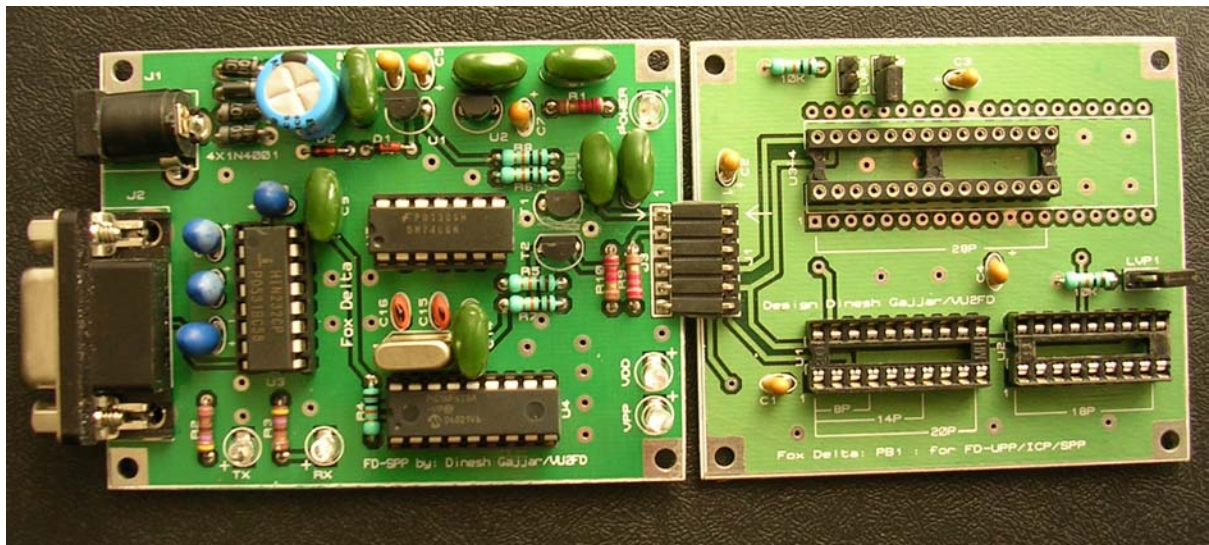
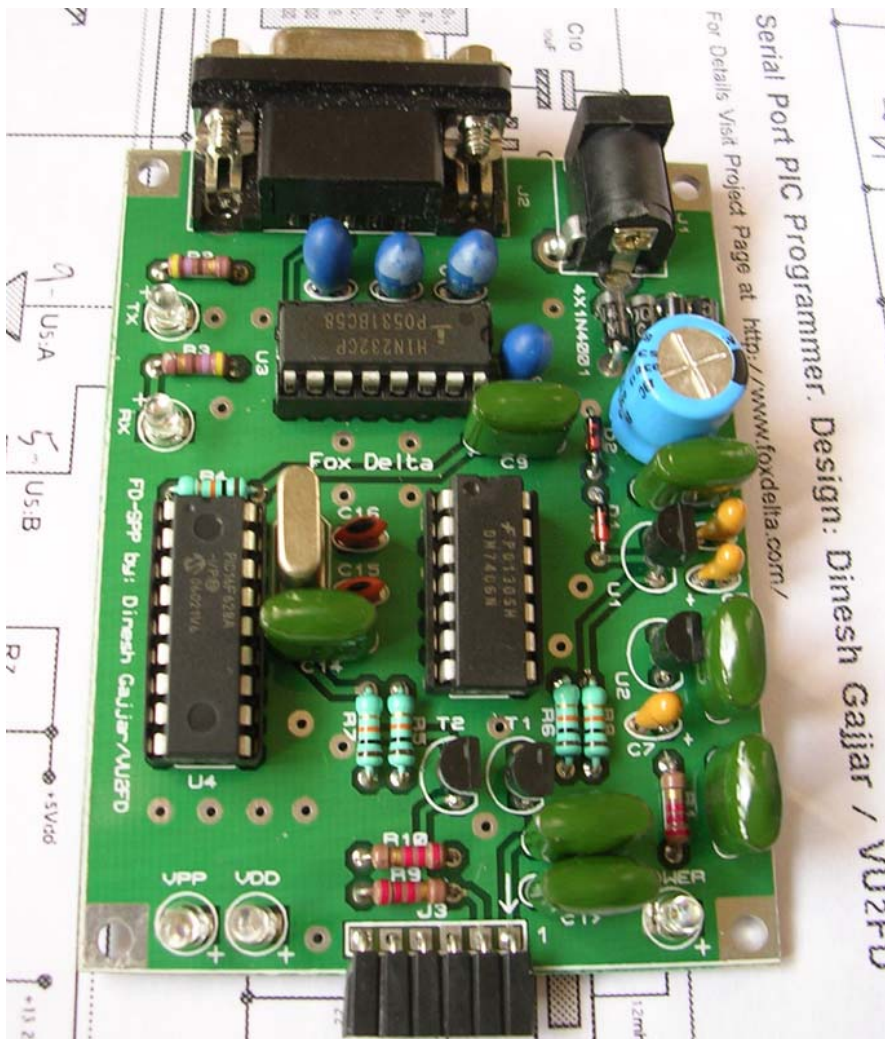


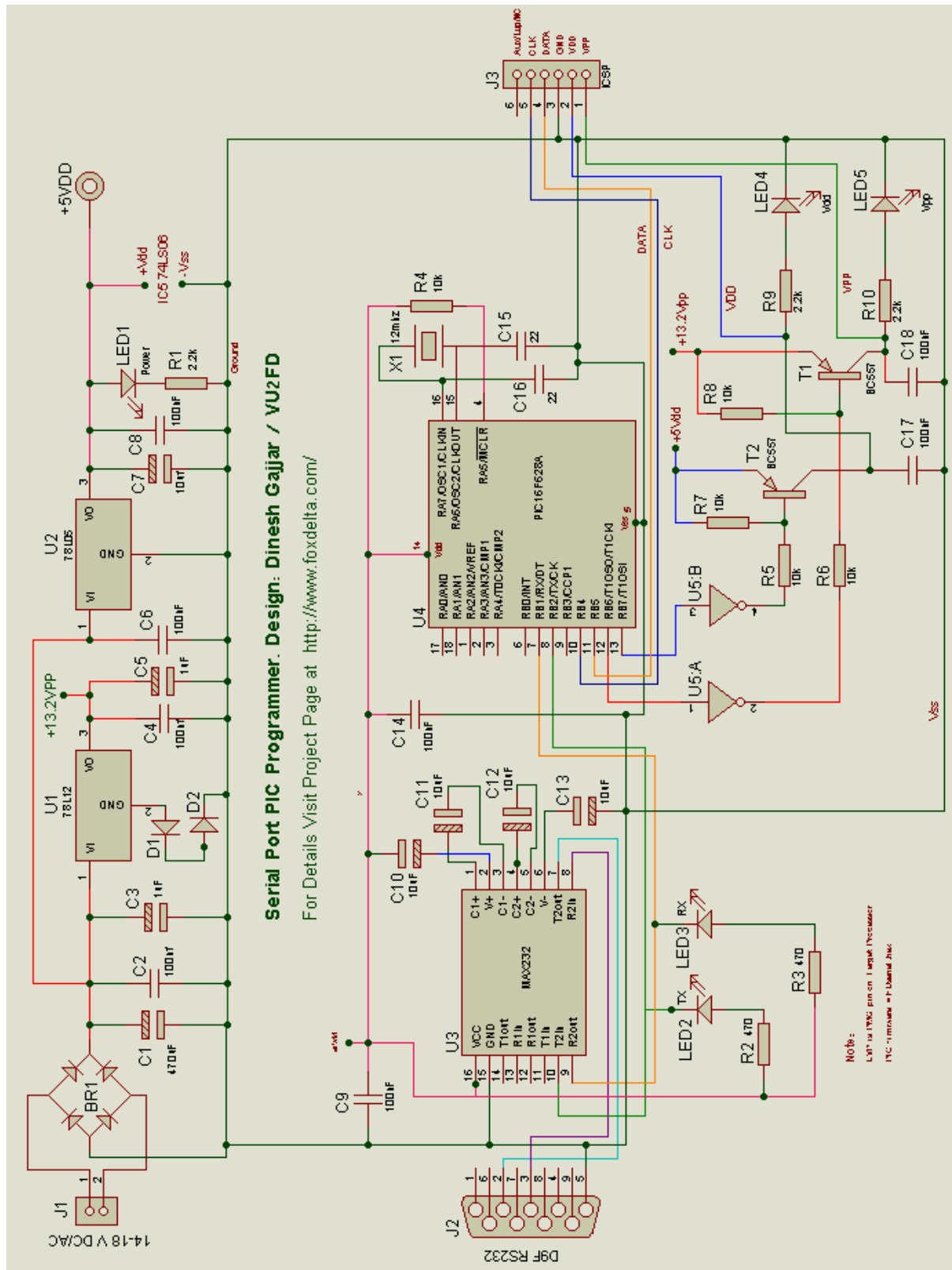
FD-SPP Professional Serial PIC Programmer & Programming adaptor board:



View from the 6PIN Female Header:



Schematic of the Serial Port PIC Programmer:



Hardware Details:

As detailed in above schematic, a true Rs232 interface is provided by using a MAX232 type Chip. Two LEDs indicate RXD & TXD line status.

Programming firmware is contained in PIC16F628A, which recognizes PC software instructions & generates clock, data, Vdd & Vpp outputs for target chip placed in the programming socket.

Two more LEDs indicate Vdd, Vpp activity and Power indication.

Programmer requires +5V for Vdd & +13.2V for Vpp. This is achieved by using two pieces of 3 terminal regulators (TO92) and associated components.

Project was built on 6cm x 10cm PTH Double Sided PCB & results were very encouraging. The best part being that, now we are in a position to make a serial port PIC programmer with whatsoever type of PICs in our stock & any crystals from 8 to 20MHz.

Kit assembly:

All components are properly marked on PCB silk without any errors. It should take less than 30 minutes to assemble this kit for anyone with average kit assembly knowledge. No specialized training or ability is required.

Orientations of Tantalum capacitors need to be observed strictly, any mistakes and you will regret for it. Double Sided PCBs are not good if you try to remove components soldered wrongly.

Once all components soldered, apply DC/AC supply with at least 14V and check voltages at IC sockets.

Check 5 VDC at following pins:

Pin 4 & 14 of Processor 16F628A

IC5 pin 14 of IC 74LS06

Pin 16 of Max232

13.2VDC should be present at R8 (left hand side of register)

Upon power up, Power LED will light, indicating presence of supply on board.

RX/TX LEDs will only blink when data is received or transmitted to COM port.

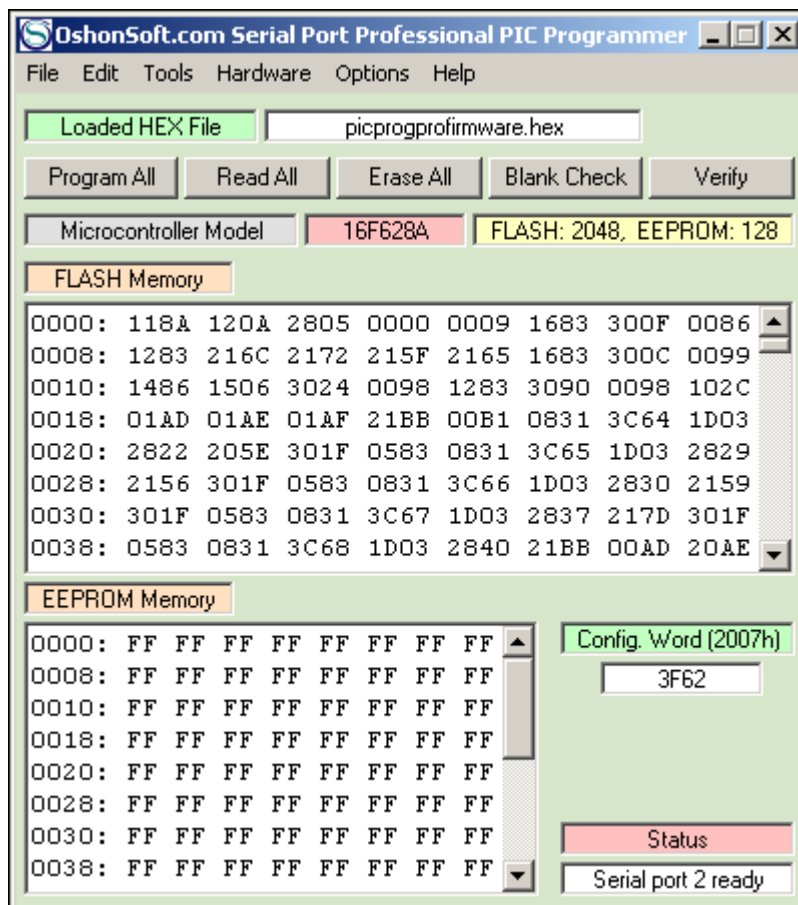
VDD & VPP LEDs are under firmware control & will light only when program is trying to read, write or erase the Target PIC in the adaptor board.

Software:

One of the free windows software for this style of programmer may be found & downloaded from the Website: [Oshonsoft](http://www.oshonsoft.com).

Download the “Serial Port Professional PIC Programmer” software. Unzip & install it on your PC.

When program is running, window’s screen would look like this:



Download free Serial Port Programming Software for Windows:

<http://www.oshonsoft.com/picprogproserial.zip>

Programming your own PIC 16F628A firmware:

You will require a PIC Programmer to write firmware in to PIC16F628A.

Buying a PIC Programmer to build a PIC Programmer, is the most stupid situation for anyone!!

To avoid above frustration, you may buy PCB + PIC16F628A pre-programmed as offered on the project page. If this is the case, you may also ask for which type of PIC Micro you intend to use (16F628A, 628, 627 or 627A) & what freq crystal you have in stock.

I hope this project would be useful to many

Dinesh Gajjar/VU2FD