



Fox Delta

Amateur Radio Projects & Kits

FD- Parallel - ICP

Technical Details & Assembly Note: Parallel Port PIC Programmer with ICP

ICP PIC Programmer Details:

In addition to Simple Parallel port PIC Programmer detailed elsewhere on this site, I wanted a Parallel port PIC Programmer with ICP output socket. This project came to my mind from a concept by OziPic'er.

This programmer is built for Free Windows Software called [WinPicProg](#) developed by [Nigel Goodwin](#) and uses a 74HC14 instead of 74LS05 used on other parallel port programmer project. Although not mentioned in Oshonsoft pages, this programmer worked well with Oshonsoft parallel software with PB1 as an adaptor Board.

Programmer PCB is double sided PTH board, 6CM X 8CM and has a 6 Pin Female ICP output connector with pin connections exactly same as PICKIT2 of Microchip.

An adaptor containing 8, 14, 18, 20, 28 & 40 Pin Sockets is available to use with this ICP Programmer.

It should be noted that even though, all kind of PIC Micro Controllers may be accepted by Adaptor board, only those supported by software might be programmed.

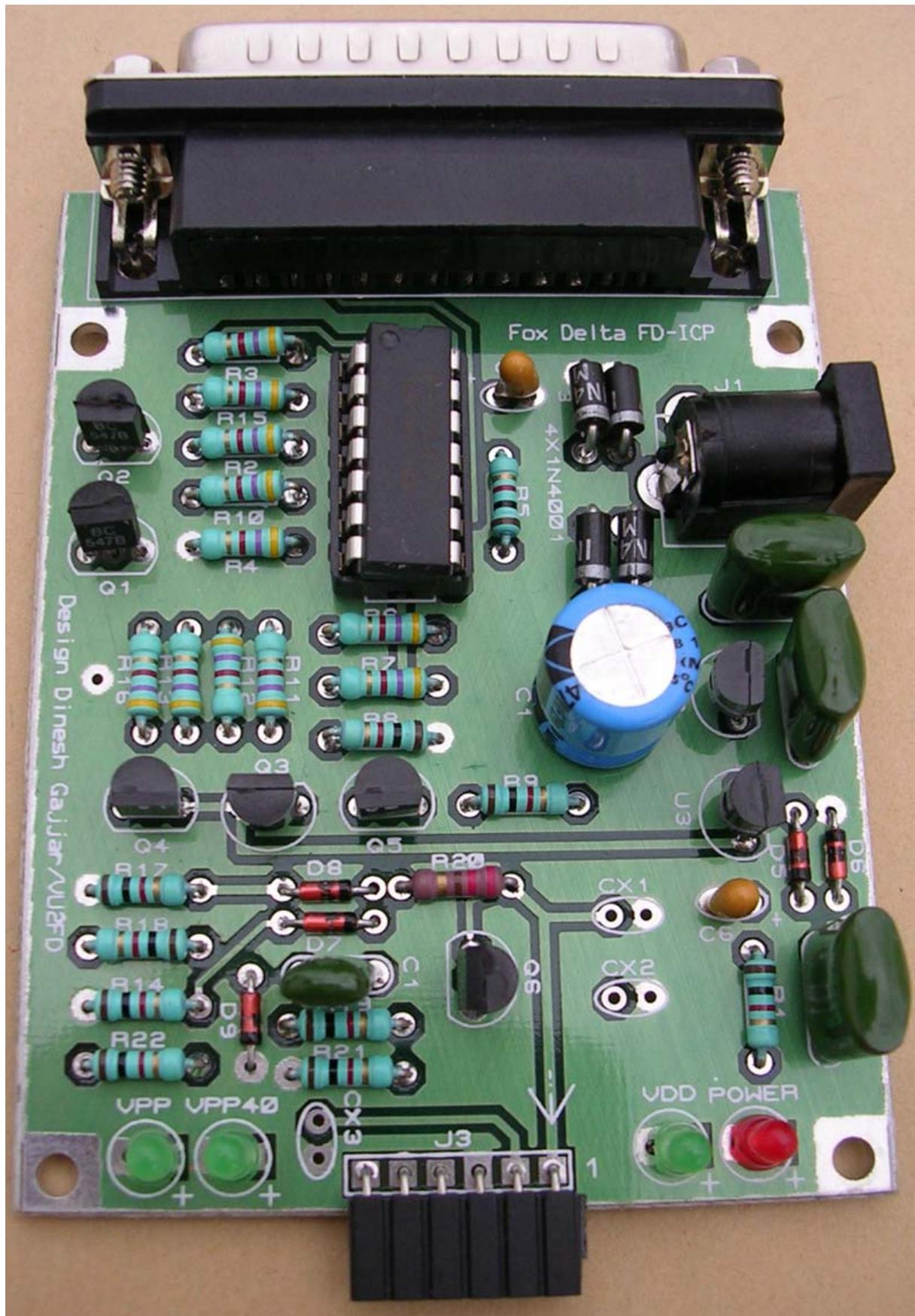
Hardware:

You require a 12-18V AC or 14-18VDC power supply. When connected, an LED labeled, as "Power" will light. Indicates that 13.2V is now available on board. This is Vpp supply used for programming.

Run WINPICProg software on your PC to check out if rest of the hardware is functioning well. Vdd LED will light when Vdd check box is ticked on software window. Similarly, Vpp lights may be tested by selecting appropriate devices.

Although, Vpp & Vpp2 are generated separately by software, they are combined within the hardware to produce a single Vpp for ICP connector. Q6 is used for Vpp reset.

Picture of the Fully Assembled Parallel Port ICP PIC Programmer:

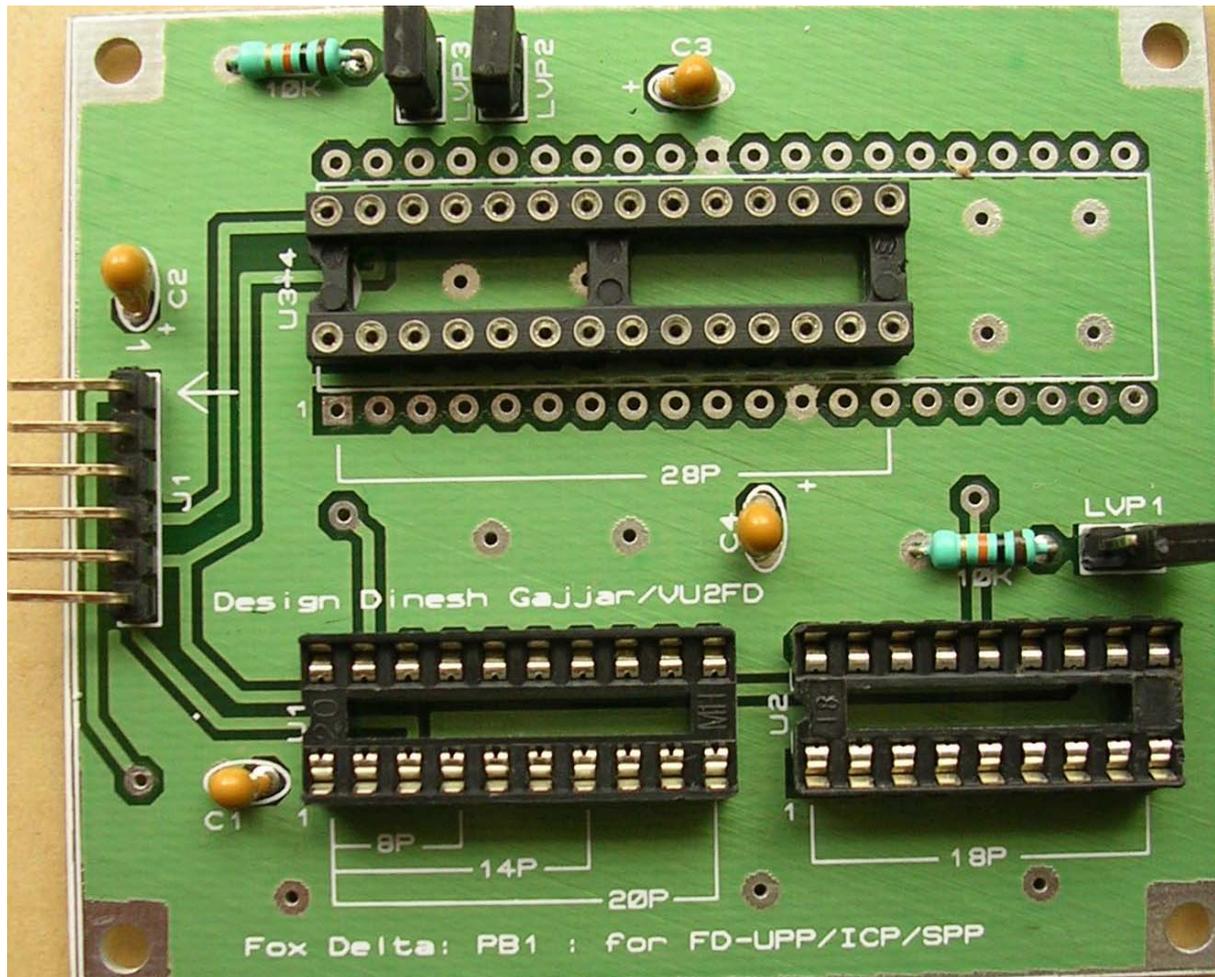


Adaptor Board:

This board is required if you wish to program PIC Micro Processors not fitted in circuits already.

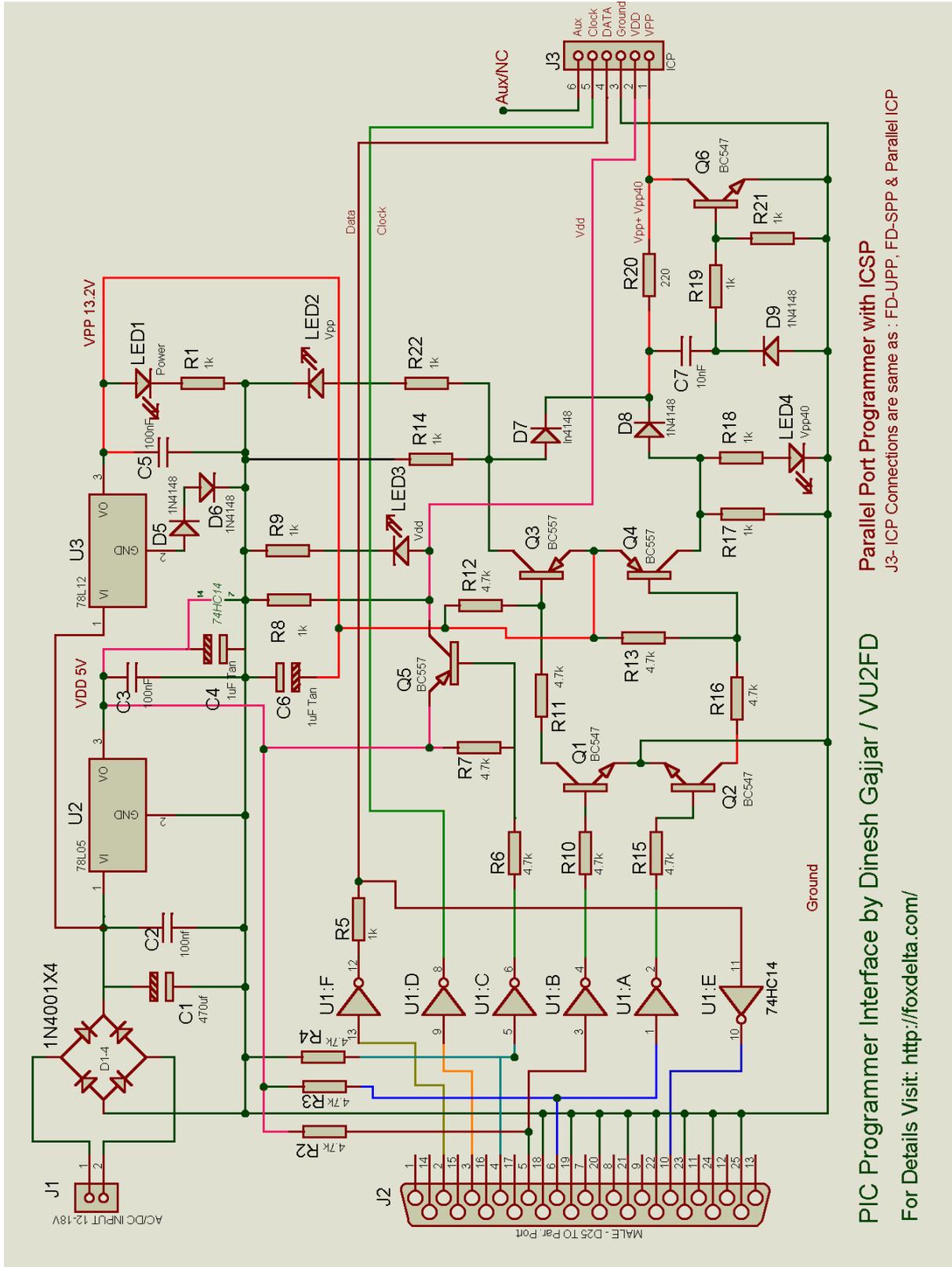
On this board we have different sockets to accommodate various types of PICs.

Picture of the Programming Adaptor suitable for above programmer:



Both, the programmer & Programming Adaptor boards are Double Sided PTH, green masked quality boards.

Schematic of the Parallel Port ICP PIC Programmer:



PIC Programmer Interface by Dinesh Gajjar / VU2FD

Parallel Port Programmer with ICSP
 J3 - ICP Connections are same as : FD-UJP, FD-SPP & Parallel ICP

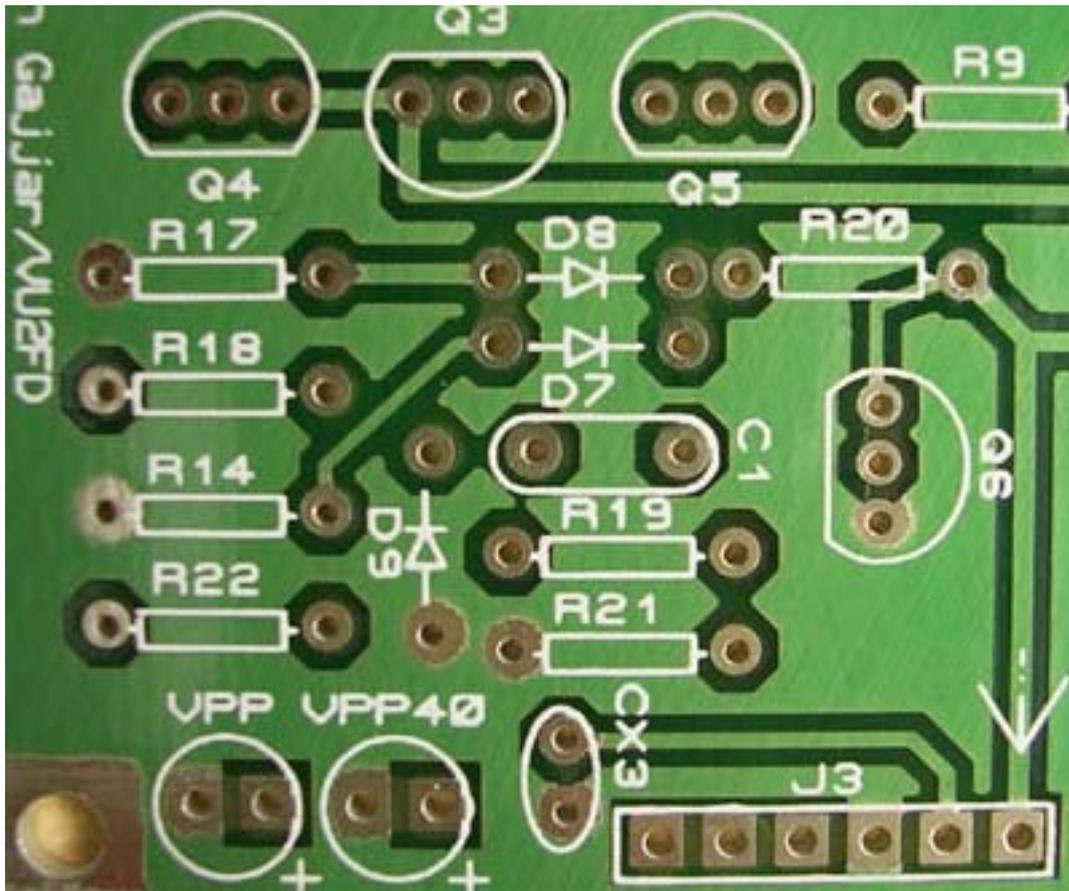
For Details Visit: <http://foxdelta.com/>

Assembly Note:

Assembly is straightforward. Not much of a discussion required. If you can read the schematic, you can build this programmer within 15-20 minutes. All parts are supplied packed in a separate plastic bags & clearly labeled.

Most silk markings on PCB are correct except that C1 is indicated twice. Actual C1 in schematic is a 470uf Electro. Second C1 error printed is between D7 & R19, which is C7 in the schematic, a value of 10nf.

Picture of the Silk Print Error Component: C1 pictured below is C7 in schematic



Programmer was tested with Oshonsoft Parallel port program & worked fine. Few 16F628As were programmed in no time.

I hope this kit will be useful to many hobbyists.

Dinesh Gajjar/VU2FD

For more details on this project, visit <http://www.foxdelta.com/>