KIT 119. SERIAL 8 & 18 PIN PIC PROGRAMMER

This is a kit of parts to use the P16PRO software of Bojan Dobaj to program all 8 & 18 pin DIP serial PIC's - see listing below. To program 28 & 40 pin serial PICs use Kit 96. Parallel programmed PIC's - 16C5X - are not supported by this programmer. (See Kit 117, PICALL, to program these parallel programmed PICs.) The P16PRO software will work under DOS, W3.1 or W95.

Do not confuse these programming methods with the serial port and parallel ports of a PC. A serial programmed PIC refers to the programming algorithm by which data enters the PIC. In this method the data bits are entered serially onto 1 pin (like a shift register) and the 13V programming voltage is toggled onto a programming pin to latch and burn the word (12 or 14 bits.) In the parallel programming method the whole word (12 or 14 bits) is presented on the PICs 8-pin port B and 4-pin port A simultaneously then the programming voltage is toggled. Timing is critical. On-board firmware is usually, but not always (see design by David Tait), needed to do this.

You must download the latest version of the P16PRO software from:

www.geocities.com/SiliconValley/Peaks/9620/

It will last for a 21 day trial period before it needs to be registered ($US20).

These are the PIC's that this kit will program:

PIC12C5XX	PIC16C67X	PIC12CE67X
PIC16C61	PIC16C715	PIC16C67
PIC16C620	PIC16C621	PIC16C62
PIC16C710	PIC16C71	PIC16C711
PIC16F83	PIC16CR83	PIC16C84P
PIC16F84	PIC16CR84	PIC16C642
PIC16C711		

New PIC's can be added by entering them in the **device.ini** file of the software.

Schematic. You may download the schematic for the 8/18 pin hardware version from the website. There are several changes we have made:
- R9/680E should be labelled R9/680R
- for C3 we have used 470uF/35V

Construction. There are 5 links to add to the board. We have supplied 8 & 18 pin IC sockets. However, for maximum flexibility in programming you may wish to supply your own 18 pin ZIF socket. Use the 14 pin IC socket to mount the 7406. You will need to connect the programmer to the parallel port of a PC using a straight through cable from the on-board 25 pin PCB-mounted subd connector.

COMPONENTS

Resistors 5% carbon, 1/4W:

680R blue grey brown	R9	1
1K brown black red	R1	1
4K7 yellow violet red	R2 3 4 5	4
10K brown black orange	R6 7 8	3
SN74LS05/7406/LS06 inverter	IC3	1
78L05	IC1	1
78L08	IC2	1
100nF 104 monoblok	C1 2	2
330pF ceramic	C4	1
470uF/35V ecap	C3	1
8 pin IC socket		1
14 pin IC socket		1
18 pin IC socket		1
BC557	T1 2	2
Bridge rectifier WO2		1
5mm red LED	L1	1
5mm green LED	L2	1
25 pin male R/A subd connector		1
power jack		1
Kit 119 PCB		1

Hardware Description. This can be found on the websites given above. It is best to use a SN7406 or SN74LS06 high current, high voltage, inverter buffer.

To register your software ($US20) so you can use it permanently read the **register.txt** file which comes with the software. Or you can register at Don McKenzie's web site at

http://dontronics.com

Don also has a comprehensive list of PIC-related websites on his Links pages.

Another good PIC website is Microchip Net resources at

www.geocities.com/SiliconValley/Way/5807

For any questions regarding this kit email me, Peter Crowcroft at

peter@kitsrus.com

- - - - - - - - - - - - - - -