

CK1703 PICALL PIC PROGRAMMER

This is a kit of parts to use the PICALL software of Bojan Dobaj to program all 8, 18, 28 & 40 pin DIP parallel and serial programmed PIC's. Parallel programmed PIC's are the 16C5X series. The PICALL 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 PICALL software from:

<http://www.picallw.com/>

The software as downloaded is **fully functional**. Registration to use the software has already been paid in the kit buying price.

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

PIC12C5XX	PIC16C67X	PIC12CE67X
PIC14000	PIC16C61	PIC16C715
PIC16C62	PIC16C62A	PIC16CR62
PIC16C63	PIC16C64	PIC16C64A
PIC16CR64	PIC16C65	PIC16C65A
PIC16C66	PIC16C67	PIC16C620
PIC16C621	PIC16C622	PIC16C710
PIC16C71	PIC16C711	PIC16C72
PIC16C73	PIC16C73A	PIC16C74
PIC16C74A	PIC16C74B	PIC16C76
PIC16C77	PIC16F83	PIC16CR83
PIC16C84	PIC16F84	PIC16CR84
PIC16C923	PIC16C924	PIC16C642
PIC16C662	PIC16C87X	PIC16C5X

New PIC's can be added as they are released by entering them in the **device.ini** file of the software. The software will show you where to place your PIC chip on the board for programming. The hardware & power need to be connected for this to happen.

Schematic. Download the schematic for the PICALL hardware from the website above. (Note: use the pdf schematic from within the latest software & hardware file. The schematic on the website itself may be an out-of-date version.) There are two changes we have made:

- R7/680E should be labelled R7/680R
- for C4 ecap we have used 470uF/35V

Construction. There are 20 links to add to the board. **Note:** R8 is now 10K, **NOT** 2K2 as marked on the overlay. Use cut pieces from the resistor legs & the tinned copper wire supplied. We have supplied 8 & 40 pin IC sockets for programming. However, for maximum flexibility in programming you will need to buy your own 40 pin **wide-slot** ZIF (3M, Aries) socket. (These sockets are cheaper in the USA than in Asia where this kit is packed since they are made in north America.) You will need to connect the programmer to the parallel port of a PC using a straight-through male/female cable from the on-board 25 pin PCB-mounted subd connector.

COMPONENTS

Resistors 5%, 1/4W:		
820R grey red brown	R7	1
1K2 brown red red	R9	1
2K2 red red red	R3	1
4K7 yellow violet red	R1 R4 R5	3
10K brown black orange	R8	1
120K brown red yellow	R2 R6	2
Programmed firmware		
78L05	IC3	1
78L08	IC1	1
	IC2	1
1N4148	D1 D2 D3	3
Tinned copper wire for links		6"
4.00mhz crystal 49/US	X1	1
10n mylar capacitor	C3	1
22pF ceramic	C5 C6	2
100nF 104 monoblok	C1 2	2
470uF/35V ecap	C4	1
28 pin 0.3" skinny, IC socket		1
40 pin IC socket		1
BC557	T1 T2	2
BC547	T3 T4	2
Bridge rectifier WO2	BRECT	1
5mm red LED	D4 D5	2
5mm green LED	D6	1
25 pin male R/A subd connector 1		
DC power jack 2.5mm		1
Kit 117 PCB		1

To program the 64 pin PIC's - 16C92x & 17Cxxx - you will need to buy an adaptor from Microchip or make your own. Only 5 lines need to be taken from the 40 pin socket to the adaptor card - MCLR/Vpp, Vdd, Vss, RB7 & RB6.
