PICQUICK

Development programmer
for Microchip PIC® microcontrollers
and Microchip serial EEPROM memories

User's Manual

ASIX®

PICQUICK

PICQUICK is a device designated for programming of PIC microcontrollers and serial EEPROM memories manufactured by Microchip. Software for 95/98/ME/2K/XP is available. Recent list of supported parts and possible changes to this manual can be found at www.pic-tools.com.

Technical specification

Connects to PC using standard parallel port (LPT)
Dimensions: 80 x 160 x 18 mm
Operation temperature range: 5 to 50°C
Operation relative humidity: max. 90 %

Package contents

Programmer module
In-Circuit Serial Programming (ICSP) cable
Programmer to PC cable
Installation CD-ROM with software and documentation
Quick start guide

Hardware installation

Turn off the computer. Connect the SubD 25 connector to its parallel port. Connect SubD 9 connector to the programmer. Connect the power supply. Power is indicated by a green LED. Turn the computer back on.

Software installation

Insert the installation CD-ROM ASIX. If the inital screen is not displayed automatically, open `Index.htm` or `ReadMeFirst!.rtf` file located in the CD-ROM root directory manually and follow the instructions. New updates are available for free at www.pic-tools.com.

Hardware operation

Turn off both the computer and programmer any time you are about to connect or disconnect the programmer.

All parts in DIP package with up to 40 pins except PIC14000 can be programmed directly. When inserting part to be programmed into ZIF socket pin 1 of the part must always match pin 1 of the socket (pin 1 of the socket is located by the socket lever).

PIC14000 in DIP package and all parts in non-DIP packages may be programmed using an adaptor. Appropriate adaptor is to be inserted to the programmer with its pin 1 matching pin 1 of the ZIF socket.

Do not handle the part when it is being programmed or read! Operation in progress is indicated by yellow LED.

The programmer is equipped with overcurrent protection. If the current from power supply or programming voltage source exceeds 100 mA the part is disconnected in

a few microseconds. This feature significantly decreases probability of possible damage to the part when handled incorrectly (e.g. wrong part is selected or the part is inserted incorrectly). Please note, that in ICSP mode is this overcurrent protection limited!

ICSP programming

Using ICSP (In-Circuit Serial Programming) it is possible to program the part directly in the target circuitry. The application must meet following conditions (see fig.1):

1. -MCLR/VPP pin of the microcontroller must be isolated from reset circuitry (e.g. by a resistor). During the programming +13 V is applied to this pin and rising edge of this signal must not be affected by the application circuitry.

2. RB6 and RB7 pins must be disconnected from the application circuitry during the programming (e.g. may be used as inputs).

Fig.1 ICSP connection to application
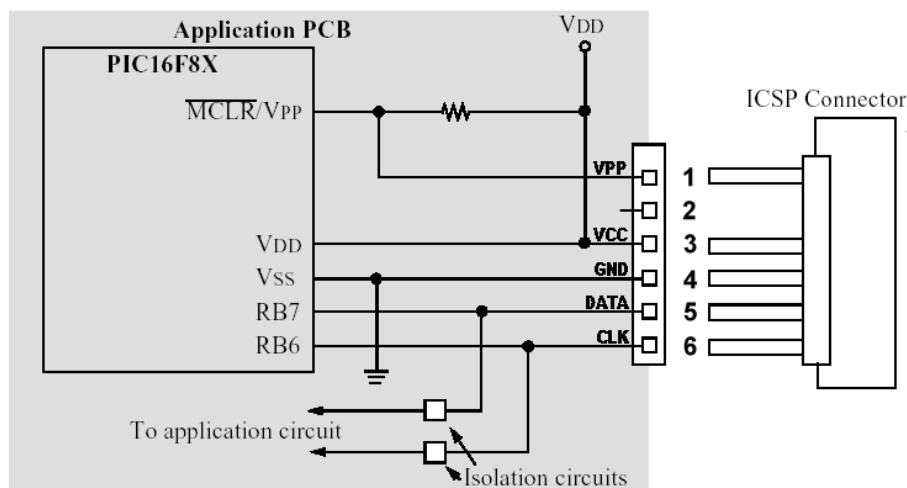
The part to be programmed connects to ICSP connector of the programmer using a cable according to following chart:

Pin Number	Signal Name	ICSP Connector
1	-MCLR	VPP
2	-	*unused (key)*
3	VCC	VCC
4	GND	GND
5	RB7	DATA
6	RB6	CLK

Further, it must be ensured that there is log.0 on the „Low Voltage Programming" pin. Placement of this pin for particular device:

Device	LVP pin
PIC16F62x	RB4
PIC16F87x	RB3
PIC18Fxxx	RB5

Blocking capacitor between VCC and GND should not exceed 100 µF. Power consumption of application circuitry connected to VCC should not exceed 10 mA during the programming. -MCLR pin must not be connected directly to VCC (it may

be connected through resistor of 10 kΩ), the application circuitry must be tolerant to +13 V supplied to -MCLR. More information is available in the help of the UP software.

Further information

[1] http://www.pic-tools.com

[2] http://www.microchip.com

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