Build Your Own MPLAB Compatible In-Circuit-Debugger (ICD 2) and In-Circuit Serial Programmer (ICSP) for less than Rs.1000.00! (US$ 10)

MPLAB ICD 2 is a low cost *In-Circuit-Debugger (ICD 2)* and *In-Circuit-Serial-Programmer (ICSP).* MPLAB ICD-2 can be used as an evaluation, debugging and programming of most of the Microchip Microcontroller and dsPIC devices.

MPLAB ICD2 offers these features:

- Real Time and single-step code execution
- Break points, Register and Variable Watch/Modify
- In-Circuit-Debugging
- Target VDD Monitor. (For simplicity not included in the project, but you can incorporate with few components)
- Diagnostic LEDs. (Not included, can be connected with three LED's and three resistors)
- MPLAB IDE Interface
- RS-232 Serial Interface to a Host PC. (USB version also available, if you interested please drop me an Email for schematics and documents)

Due to simplicity following features were omitted from the original Microchip ICD 2

- The target (the PIC you want to debug) and the ICD have to be powered with same voltage (+5V).
- The target power can't be switch on/off by the ICD. (can be implemented)
- No Blinking LED's.
- No USB Support.

This project not required a PCB, Soldering the components to a **Drilled Hole Board** should be good enough. Additionally you require an additional Wall Power Adapter (Power pack) required. (Set the Voltage to 12V). All the components are available in Kandy, Sri Lanka.

For further information please refer MPLAB ICD 2 user manual, or drop me an Email.
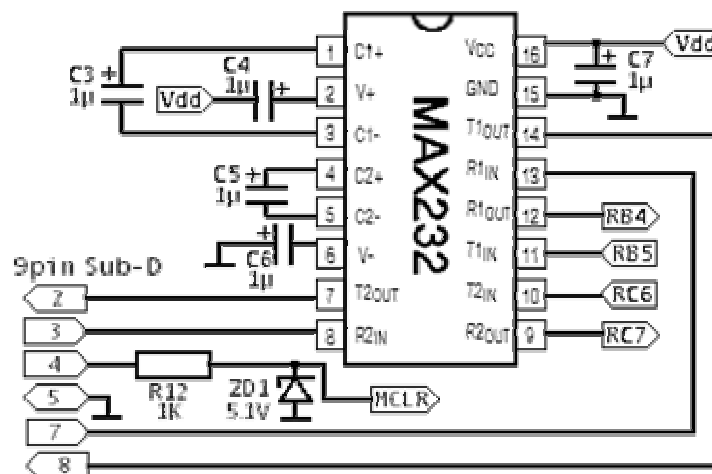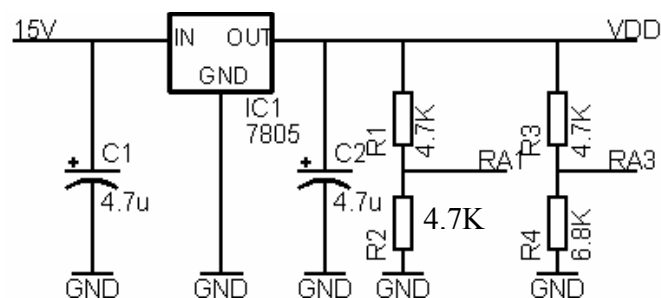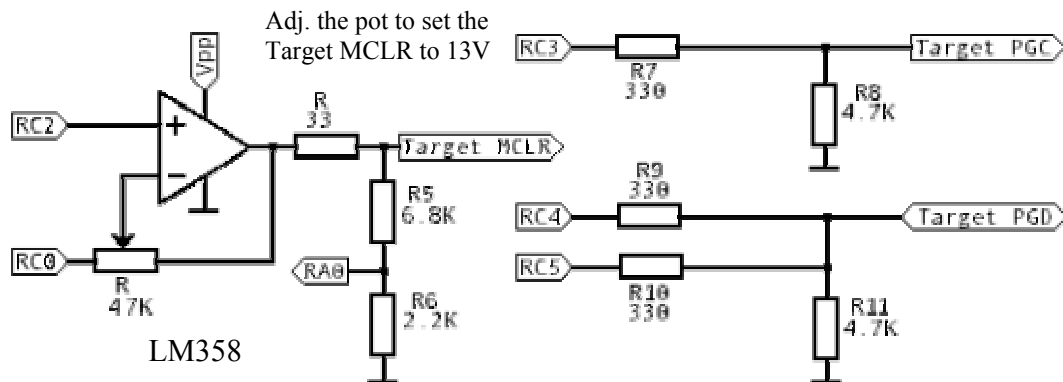
Drop me an Email to get the Firmware which required for ICD 2 processor (PIC16F877A). You may program the firmware using any PIC16F877A compatible programmer. (Ex: IC-Prog with JDM Programmer).

Once everything completed you have to download the Operating System using MPLAB to the ICD2. Operating system is in MPLAB's ICD2 folder. Select Programmer or Debugger as ICD 2 in MPLAB. Click Programmer / Debugger - > Download ICD2 Operating system-> and then open "ICD04020606.hex"
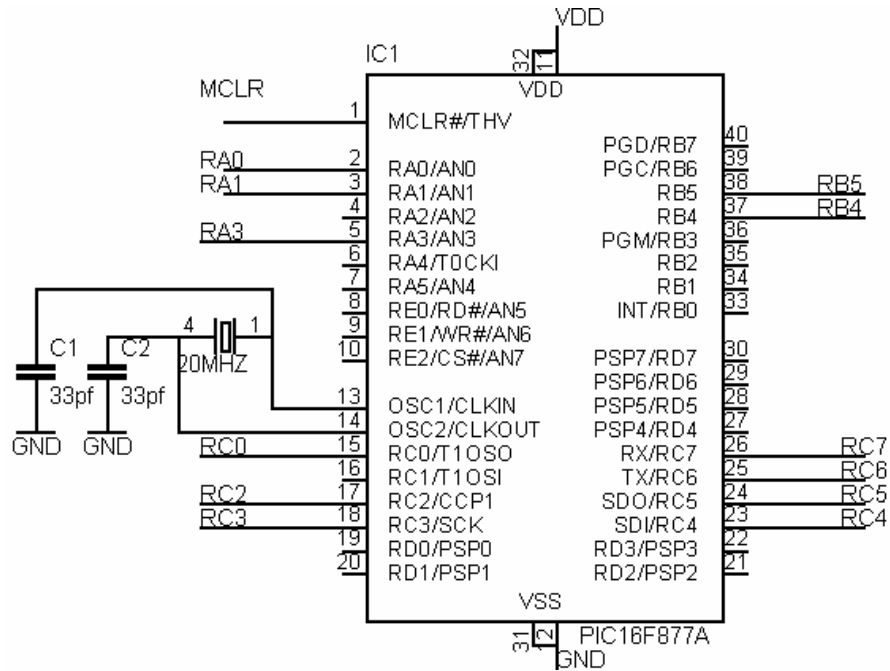
In-Circuit-Debugger 2

Run the MPLAB ICD 2 setup wizard and select RS232 interface with 57600 Baud Rate. Now ICD 2 is ready for debugging and programming for your target device. You have to set the correct *Configuration Bits* in MPLAB for correct operation. This document and the Eagle CADSOFT PCB are available by Email.

Schematics

In-Circuit-Debugger 2

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