

# MPLAB tips

Debjit Sinha and Robert Dick

Hope you have started playing with the MPLAB software and are not having a hard time getting things started. As pointed out in the class, please get a copy of the QUICK START guide at the following URL (you will also find a link to this information on the course web page):

<http://ww1.microchip.com/downloads/en/DeviceDoc/51281c.pdf>

The document is a very good guide to getting started. Please note that in PAGE 7, you should select the device as PIC16C74A instead of what is mentioned in the guide. At this point you may choose to ignore Chapter 3 if you don't want to delve too deep into the details.

For the PORT simulation part

1. Go to Debugger and select Stimulus (Note that by now you must have selected the Debugger → Select Tool → MPLAB SIM, else other options won't show up).
2. In the Stimulus Window (Pin Stimulus), Add rows for each input stimulus. For Example, if you have 2 inputs (4th bit of PORTA and 2nd bit PORTC) then your stimulus would be selecting PORTA-4 and PORTC-2. In the simulator PORTA is named as RA, so RA4 would be the 4th bit of PORTA. Similarly you would have to choose RC2 for the 2nd bit of PORTC.
3. When you select ADD ROW, leave the TYPE to Async (Asynchronous Input), Set PIN to RA4 (or whatever – You can just type RA4 there, the drop down list doesn't give a good view). The action tab lets you choose a LOGIC value. Please note that the switches are active LOW, that means they correspond to that bit of the PORT being a HIGH when they are NOT pressed, and a LOW when they are pressed.
4. After you set the PORT bit to a value, PRESS the "FIRE" tab to activate it. The value is NOT activated until you press "FIRE".
5. Use the View → Special Fn Registers to keep an eye on how the values change.