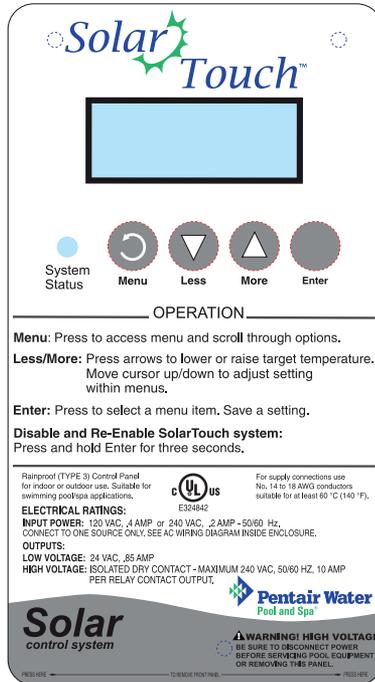


SolarTouch™ Pool and Spa Controller Firmware Upgrade Kit User's Guide



**IMPORTANT SAFETY INSTRUCTIONS
READ AND FOLLOW ALL INSTRUCTIONS
SAVE THESE INSTRUCTIONS**

Kit contents

The following items are included in the Kit P/N 521606

- PICKit™ 3 programmer
- CD-ROM
- Installation Guide (this manual)

System requirements

- Windows® 7 and Windows Vista
- Windows® XP (with Service pack 3)

Technical Support

Sanford, North Carolina (8 AM to 5 PM)

Moorpark, California (8 AM to 5 PM)

Phone: (800) 831-7133

Fax: (800) 284-4151

Related manuals

SolarTouch Manual (P/N 521591)

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P/N 521609 - Rev A - 2/13/12

SolarTouch™ Controller Firmware Update Instructions

SolarTouch™ firmware updates are performed using the PICkit™ 3 in-circuit programmer connected to a USB port on a computer running Microsoft® Windows® operating system.

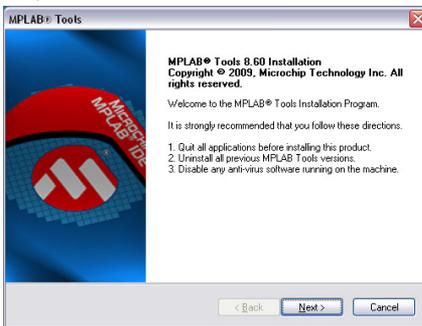
IMPORTANT: Do not plug in PROGRAMMER until after software is installed.

Note: Be sure that you have administration rights on your PC before starting the installation.

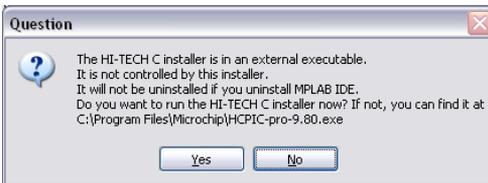
Read Setup Instructions Before Starting

1. Install the MPLAB® integrated development development environment (“IDE”) software onto your PC as follows:

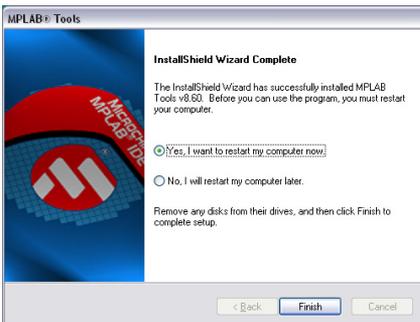
Insert the Installation CD into your CD-ROM. The installation wizard should be displayed. If necessary, navigate to **[D:]** where **D:** is your drive letter **D:\MPLAB_IDE_v8.60*\setup.exe** and click on the exe file to start the Setup Wizard and follow the on-screen Setup Wizard instructions. *Note: * v8.60 or the software version shipped with the programmer.*



- Click NEXT to start the software installation.



- Click NO to continue



- Click FINISH to reboot computer

Continue to the next page.

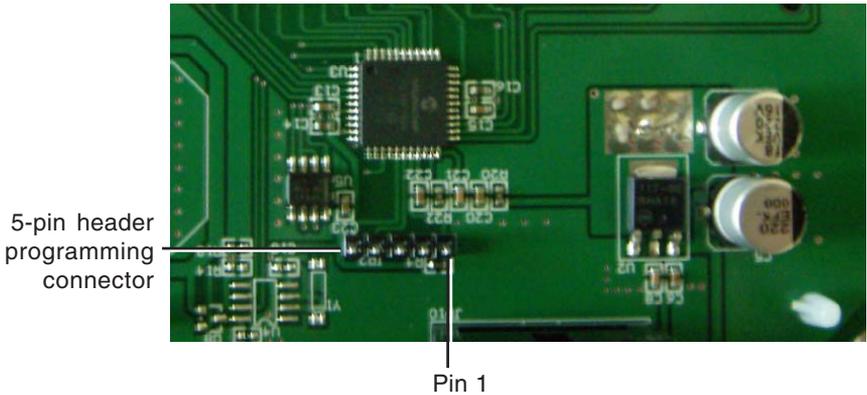
2. Connect the **USB cable (provided)** to the programmer and to a **USB port on the PC**. *Note: If a USB hub is being used, the hub must be powered with its own power supply.*



3. Continue with “**Connect Programmer to SolarTouch Control Panel.**”

Connect Programmer to SolarTouch Control Panel

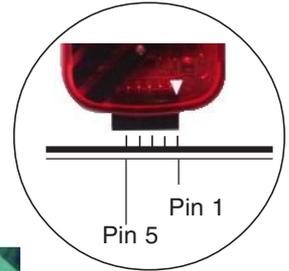
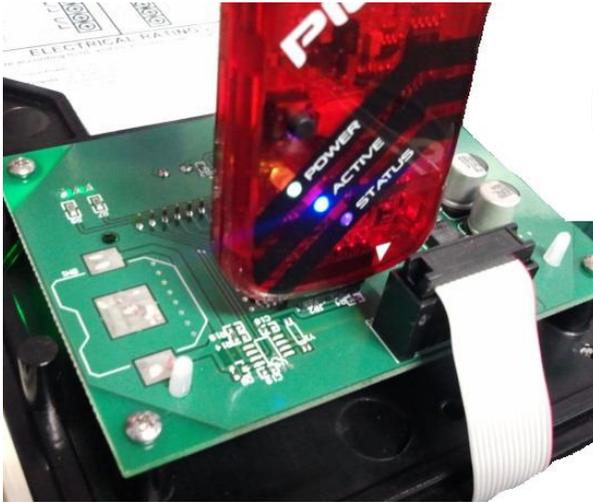
1. Open the front cover of the controller. Remove the three (3) screws securing the control panel. Flip the control panel up to access the control panel circuit board. *Note: Be careful not to stretch the ribbon cable connecting the control panel to the main circuit board.*
2. Locate the 5-pin header programming connector JP2 on the control panel circuit board. **Note where pin 1 is located.**



SolarTouch Control Panel Circuit Board

3. With the front (LEDs) of the PICKit 3 programmer facing you, connect the programmer (pin 1 on right side) onto the 5-pin connector (pin 1 on right side) on the control panel circuit board as shown on next page.





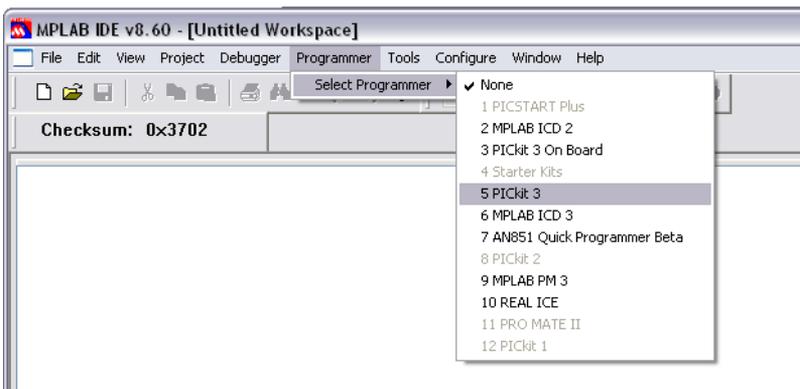
Note: Be sure to align Pin 1 on the programmer and Pin 1 on the SolarTouch circuit board

PICKit 3 programmer plugged into SolarTouch circuit board.

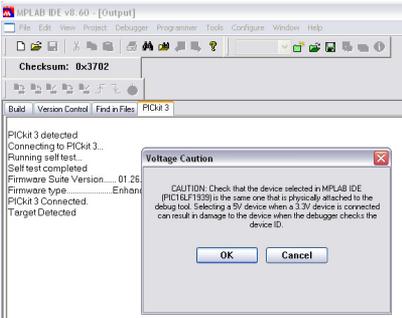
4. **Switch ON power to the SolarTouch controller.**
5. *Next, load the MPLAB IDE software.*

Open the MPLAB IDE Software

1. Place your SolarTouch firmware .hex file on your desktop (for easy access).
2. Start the MPLAB IDE software:
Go to **Start > All Programs > Microchip > MPLAB IDE v8.xx > MPLAB IDE**
3. From the MPLAB IDE main screen, select the PICKit 3 programmer from the programmer pull down menu:
Go to **Programmer > Select Programmer > PICKit 3**

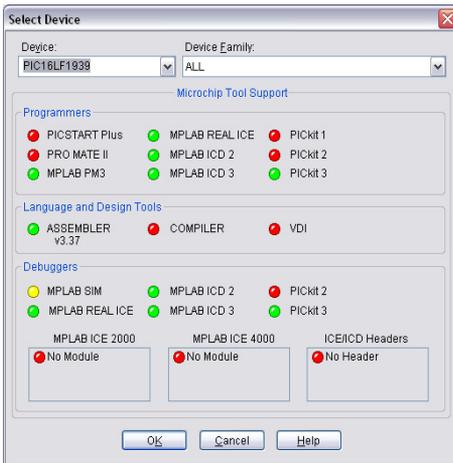


Load the Software (Continued)

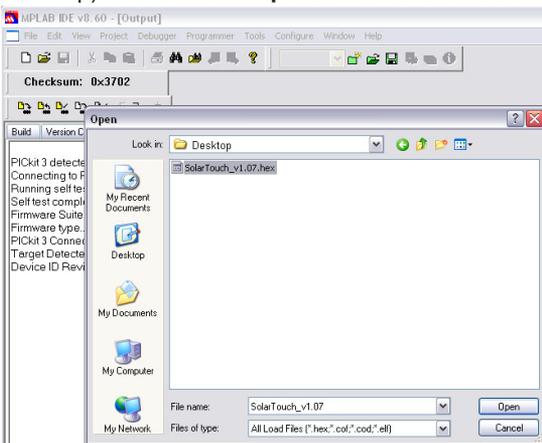


- Click OK to continue.

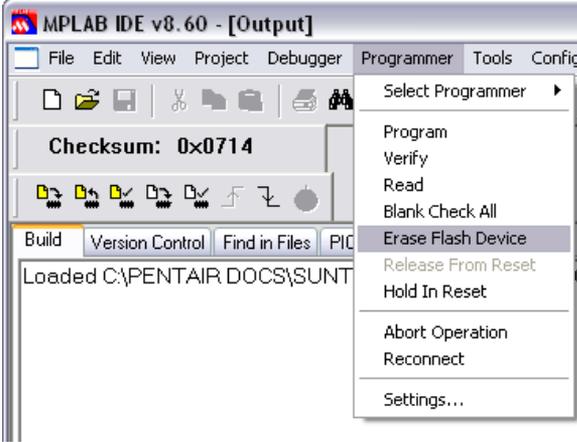
- Next, from the Device pull-down menu select the “Device Type.” Go to **Configure > Select Device...** (Select **PIC16F1939** from the list) and click **OK**.



- Next, load the SolarTouch firmware program file (located on your desktop). Go to **File > Import - Select SolarTouch .hex** file. Click **“Open.”**

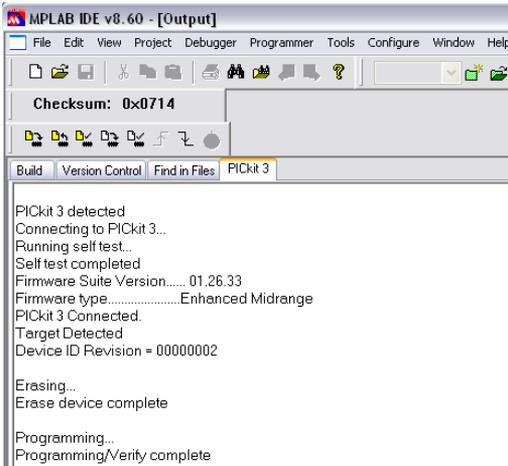


6. Now you are ready to start programming. Go to **Programmer > Erase Flash Device**. When complete the screen displays “Erase Device Complete”



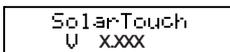
7. Next, go to **Programmer > Program**.

When the firmware update has been completed, the screen displays “Programming/Verify Complete.”



8. Disconnect the PICKit 3 from the SolarTouch board.

The updated program should already be running. Reinstall the SolarTouch control in the enclosure and secure the control panel with the three (3) screws. To verify the new firmware version, reset power on the SolarTouch controller. The firmware version is only displayed immediately after reset.





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