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COMPANY OF AMERICA

UC601 CPU PROGRAMMING INSTRUCTIONS

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UC601 CPU PROGRAMMING INSTRUCTIONS

Programmer Assembly

Locate the USB battery, PicKit3, USB cable, and the RJ-11 to ICSP Adapter. Insure that the USB battery is sufficiently charged to complete this programming procedure.
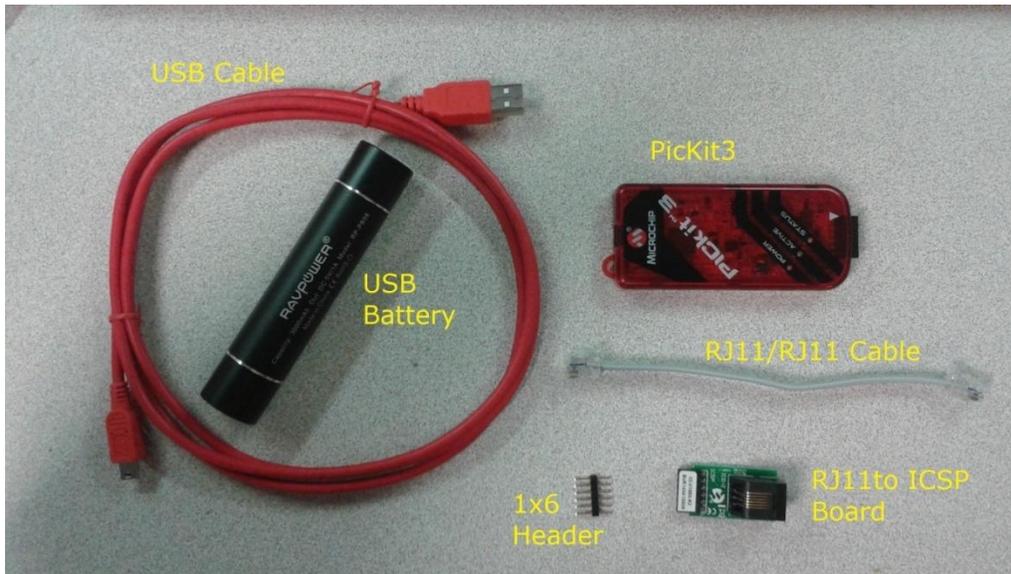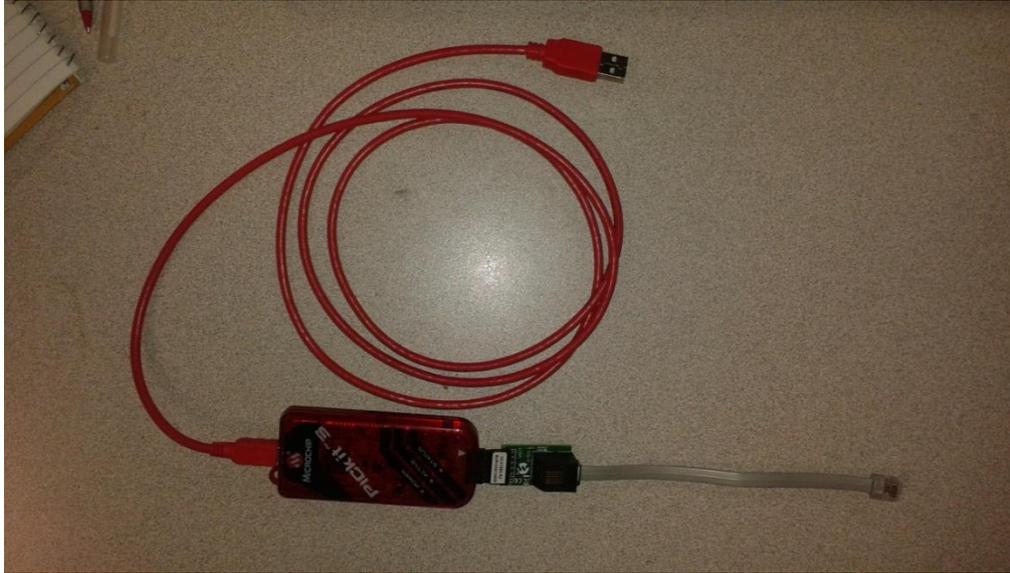

Connect the 1x6 header to the RJ11 to ICSP board. Connect the RJ11 cable to the RJ11 to ICSP board.

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Connect the PicKit3 to the USB cable and to the RJ-11 to ICSP Adapter.

Installing with the PICkit 3 Programmer Application (If Not Installed)

Operating System Support List

This tool has been tested under the following operating systems. It is expected to work properly on any x86 machine with Microsoft's .NET 2.0 framework installed.

Windows XP 32-bit
Windows 7 32- and 64-bit.

To install the Application, unzip the contents of the zip file: <PICkit_3_Programmer_1_0_Setup_A.zip> into a temporary directory.

Next run the install.exe and follow the installation wizard.

A CPU board specific programming file will have already been sent/emailed to you. Save this programming file to a location on this computer that will be easy to locate.
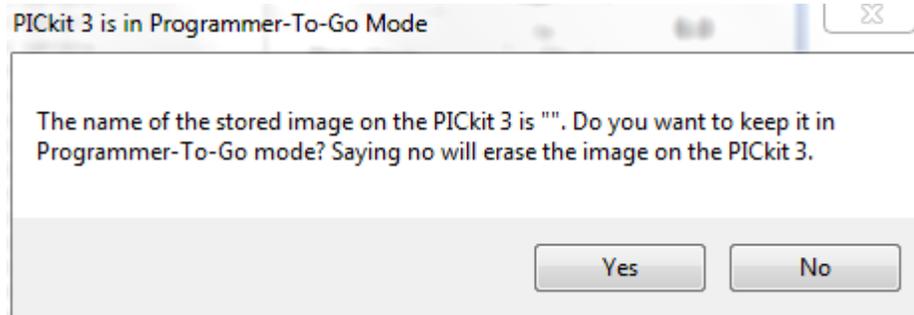
UC601 CPU PROGRAMMING INSTRUCTIONS

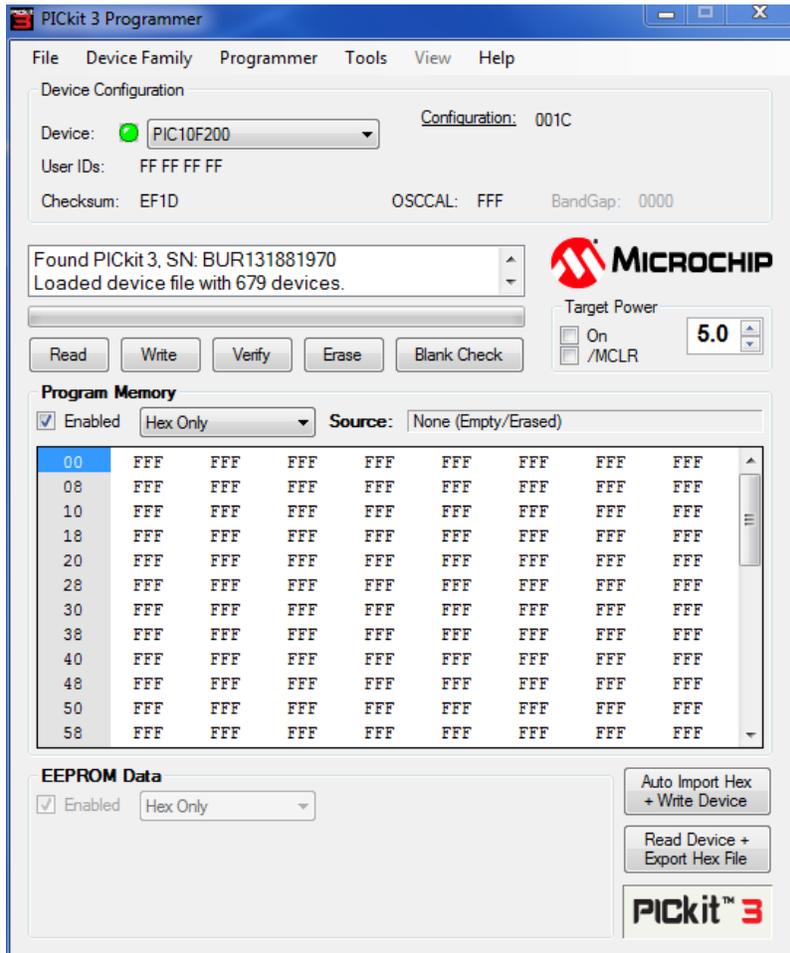## Programming (Loading) the PICkit 3 Programmer

Plug the USB cable into any open USB port on the Windows computer.

Open/Run the PICkit 3 application.

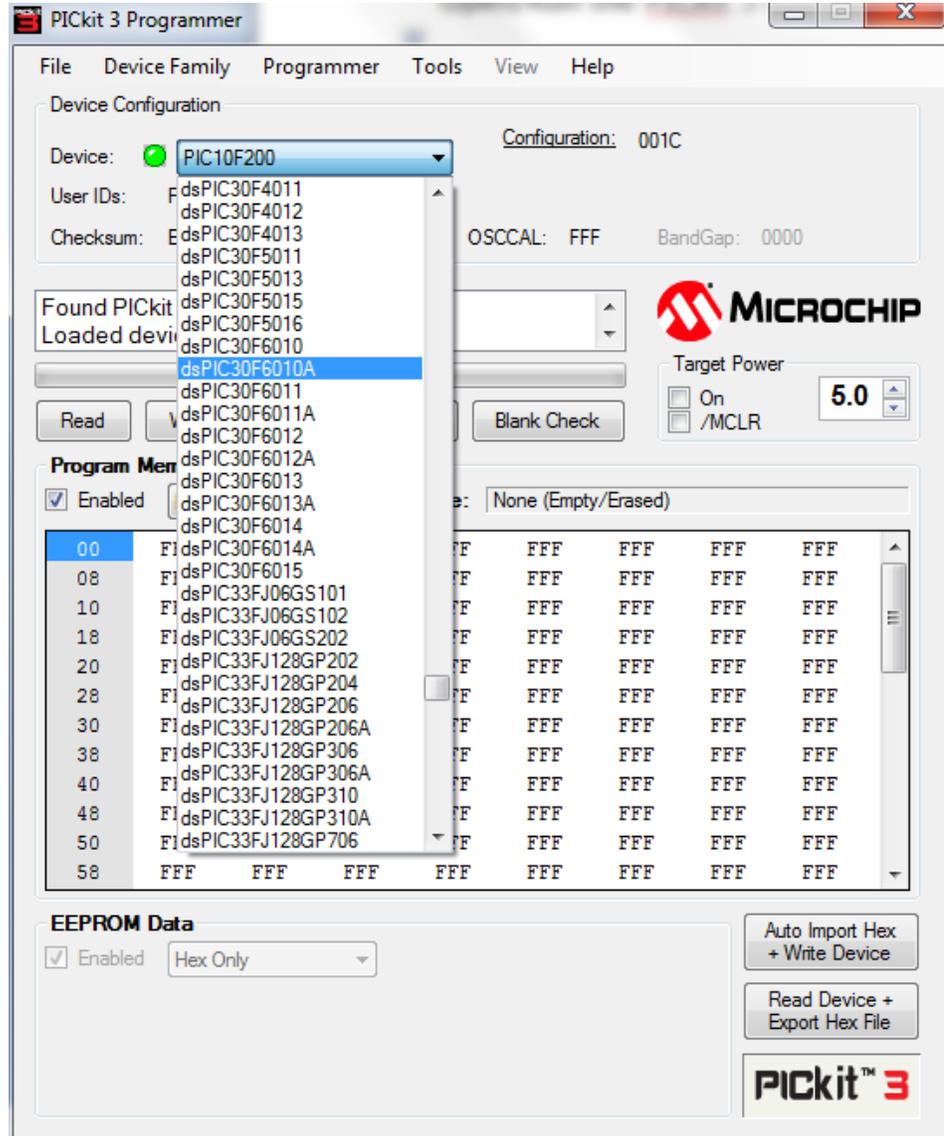If the window, shown at right, appears, select the "No" button and continue on with the procedure.

Initial PICkit3 application window.

Select the "dsPIC30F6010A" as the device to be programmed in the drop down box.

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Select the "Read" button to read data from the programmer.

If the window, shown at right, appears, select the "OK" button. Wait for the download to complete and then continue on with the procedure.

Firmware update needed

⚠ New firmware must be downloaded for PICkit 3 to work with the part selected. Click 'OK' to continue.

OK   Cancel

Select "Import Hex" from the File menu.

PICkit 3 Programmer

File   Device Family   Programmer   Tools   View   Help

Import Hex   Ctrl+I
Export Hex   Ctrl+E
Import Device File
Exit   Ctrl+Q

Configuration: C100 803F 87B3 310F
330F 0007 C003

BandGap: 0000

Found PICkit 3, SN: BUR131881970
Loaded device file with 679 devices.

MICROCHIP

Target Power
☐ On   5.0
☐ /MCLR

Read   Write   Verify   Erase   Blank Check

Program Memory
☑ Enabled   Hex Only   Source: None (Empty/Erased)

00000	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF
00010	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF
00020	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF
00030	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF
00040	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF
00050	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF
00060	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF
00070	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF
00080	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF
00090	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF
000A0	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF
000B0	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF

EEPROM Data
☑ Enabled   Hex Only

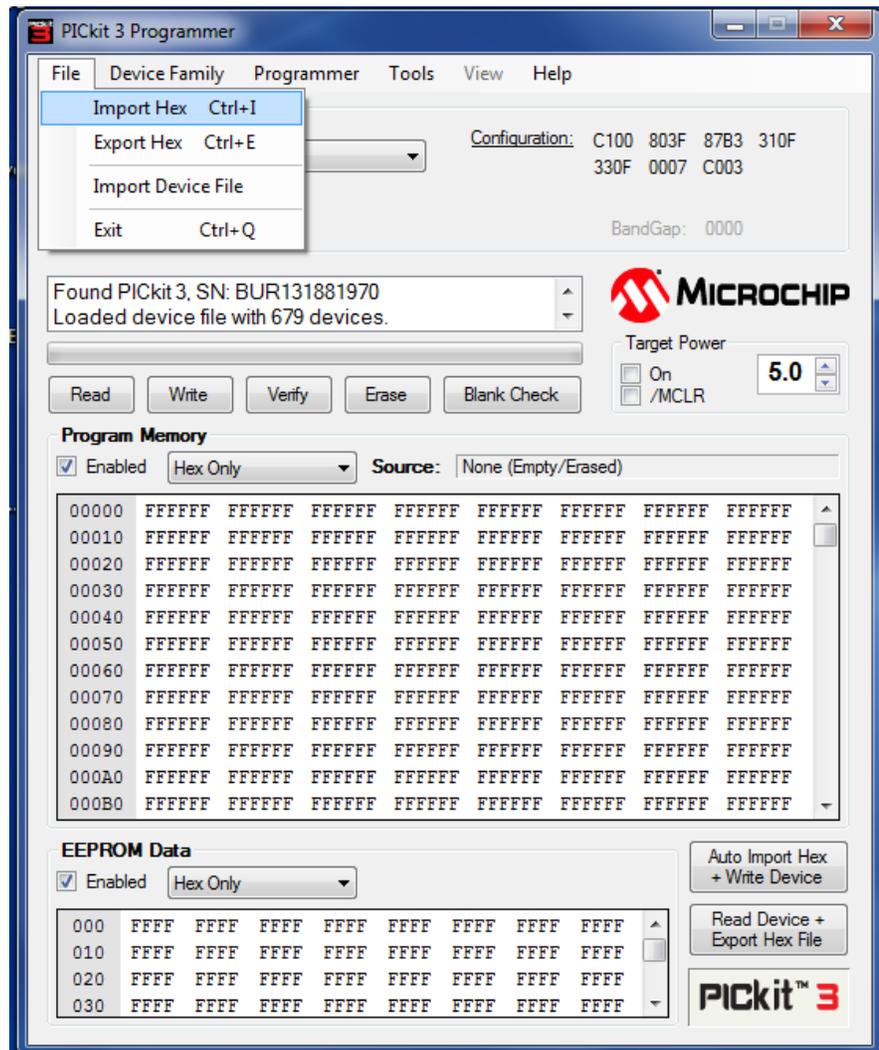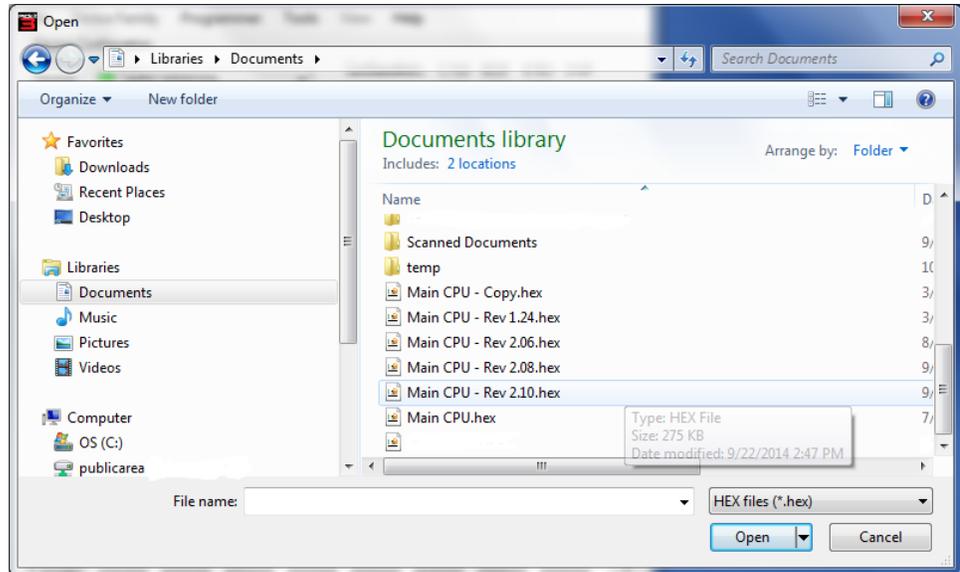| 000 | FFFF | FFFF | FFFF | FFFF | FFFF | FFFF | FFFF | FFFF |
010	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF
020	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF
030	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF

Auto Import Hex
+ Write Device

Read Device +
Export Hex File

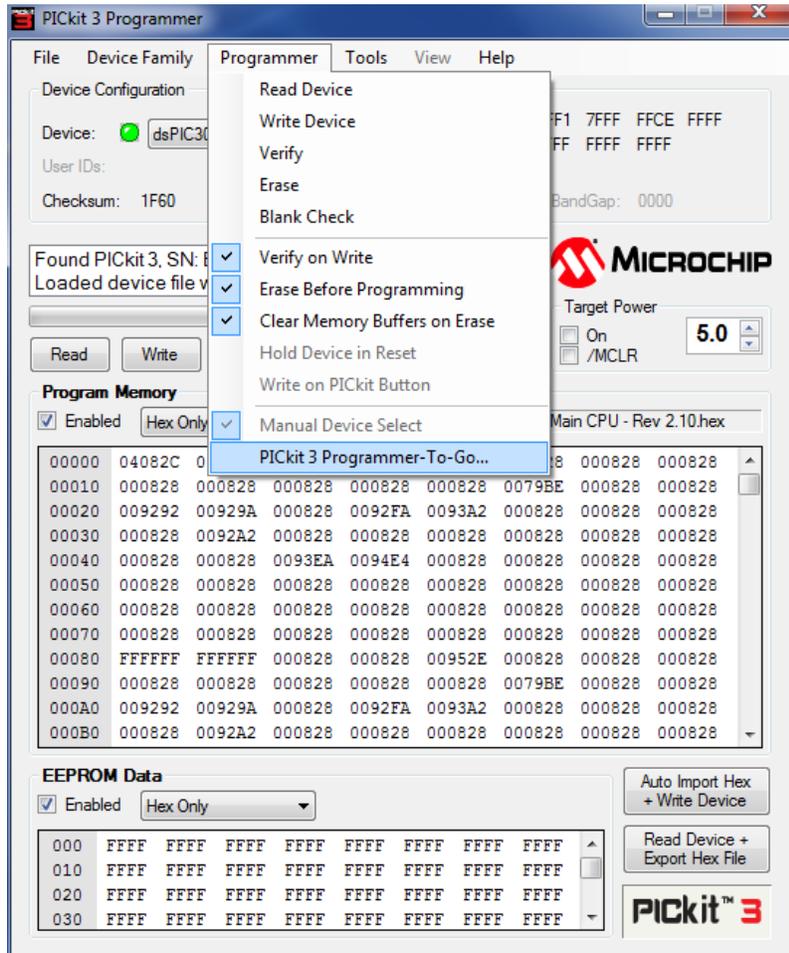**PICkit 3**

Select the desired programming file for the CPU that has previously been sent/emailed to you.

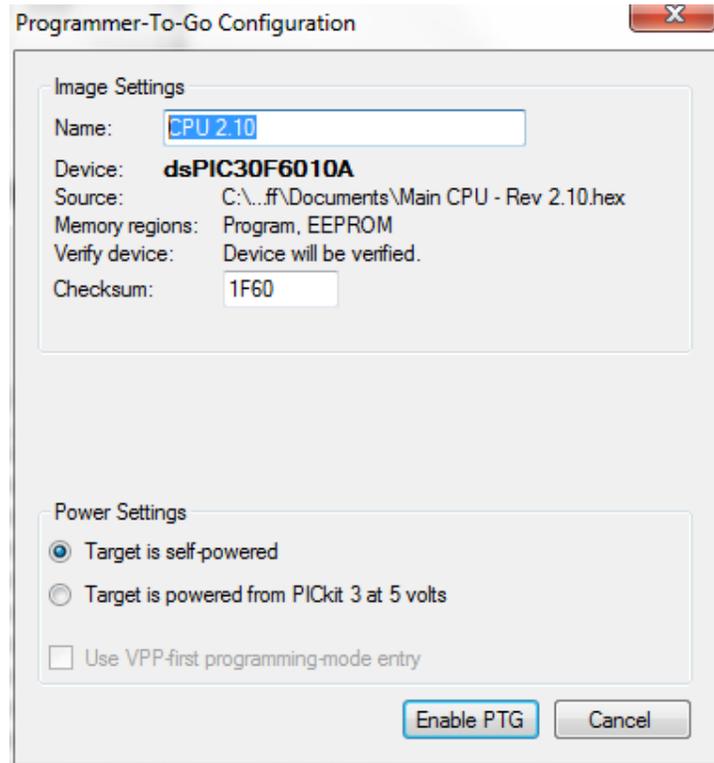Select "PICkit 3 Programmer-To-Go…" from the Programmer menu.

Enter a descriptive name for the file that will be programmed into the CPU board. E.g. if the filename is "Main CPU - Rev 2.10.hex" Enter "CPU 2.10"

Next, select the "Enable PTG" button to program (load) the programmer.

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The programmer has been successfully programmed (loaded) when "Programmer-to-go setup complete." is displayed in status box of the PICkit 3 window.
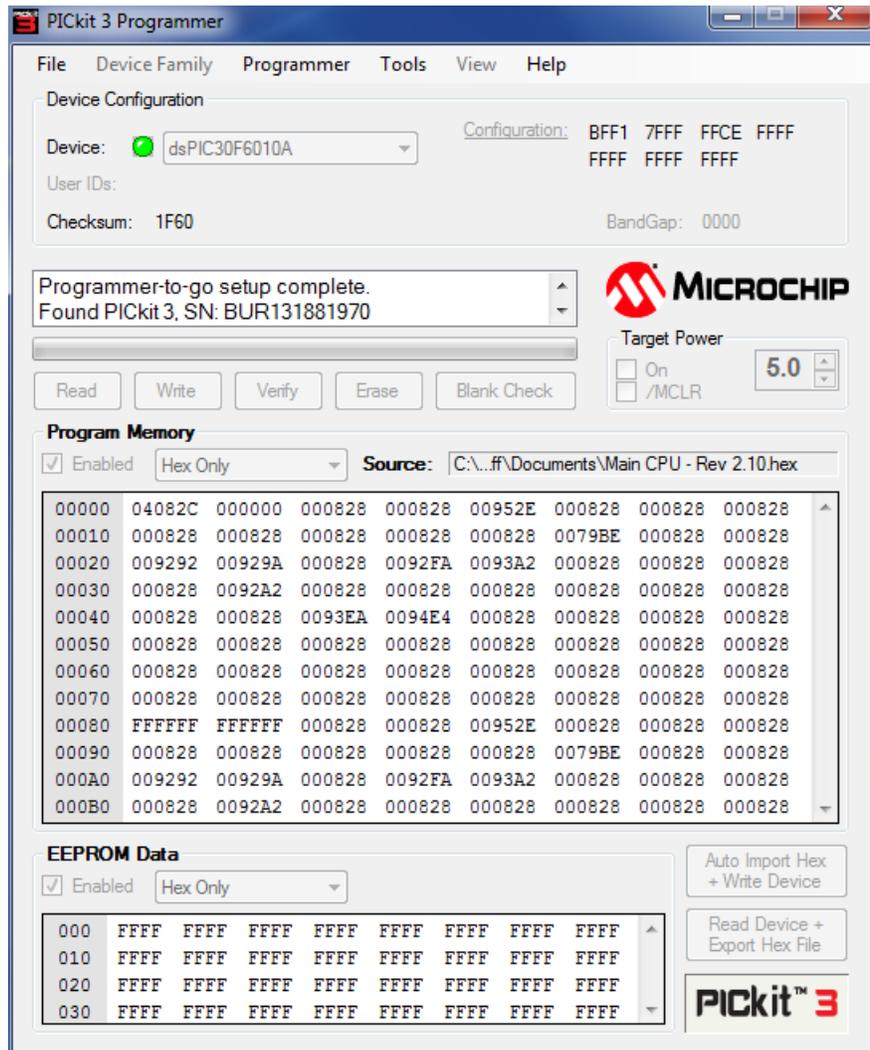
Shut down / close the PICkit 3 application.

Remove the USB cable from the computer.

Programming the CPU Board

This following procedure assumes that the PicKit3 has been previously loaded with the required firmware for the UC601 CPU board.

Plug the USB battery into the USB cable.

Initially the LEDs on the PicKit3 will be illuminated as follows:

- The "Status" LED will be illuminated red.
- The blue "Active" LED will be blinking.
- The green "Power" LED will be on and will remain on for the remainder of this procedure.
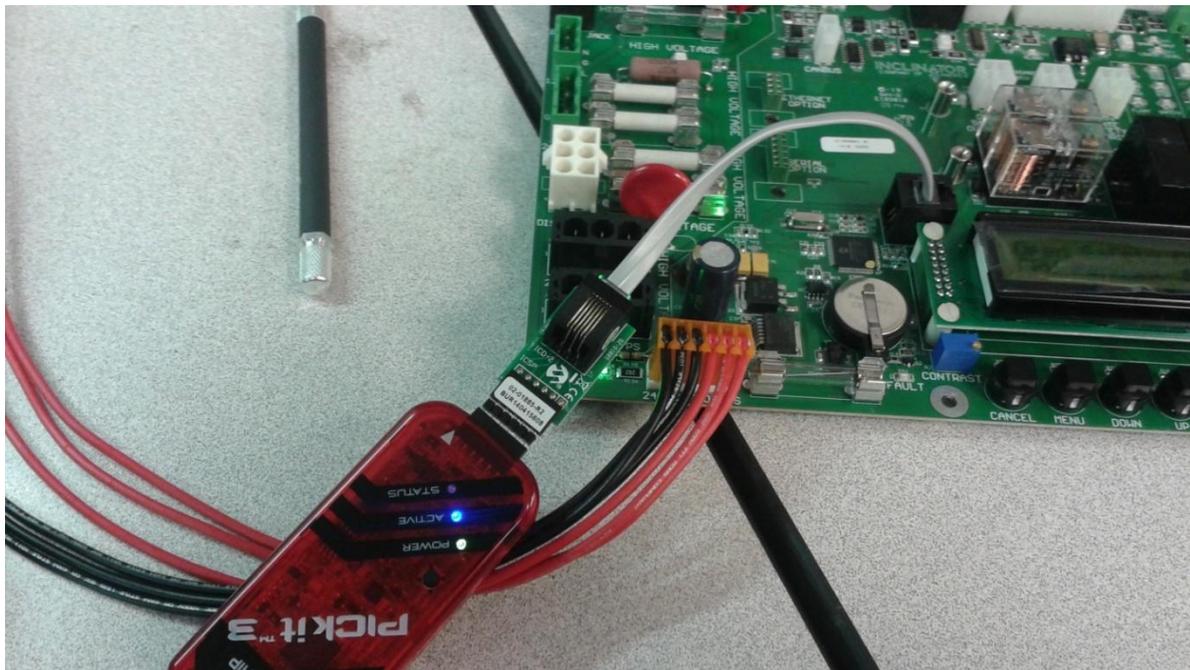

After a few seconds to as much as twenty seconds, the "Status" LED will be off and the blue "Active" led will be blinking. The Pickit3 is now ready to program the device.

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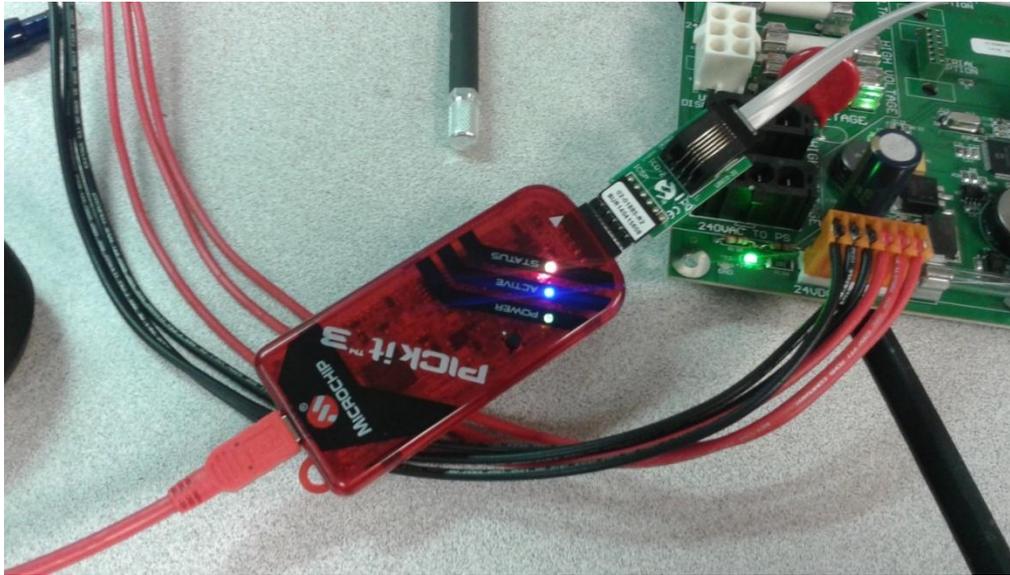Turn on system power so that the CPU board is powered up.

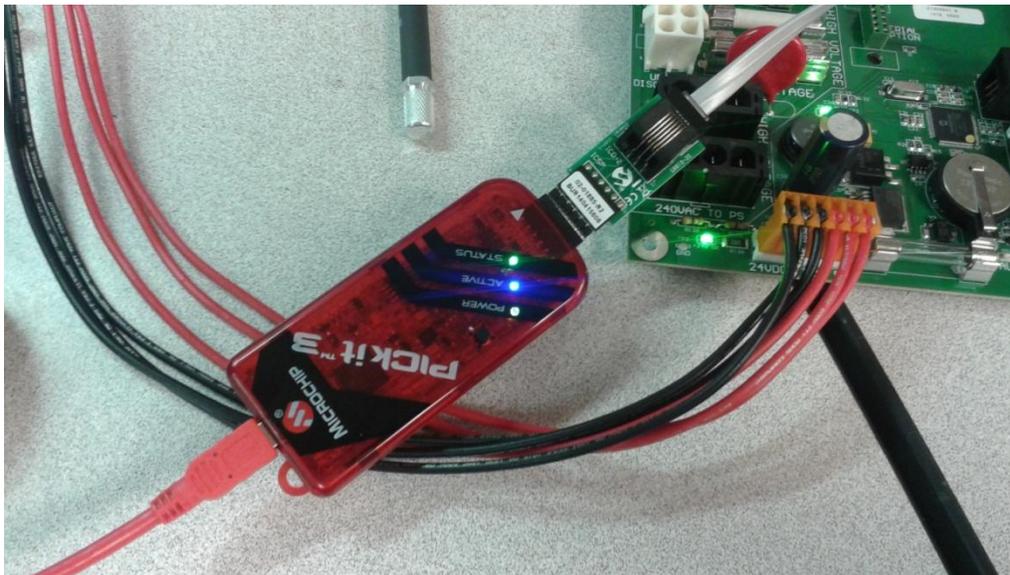Plug the RJ11 connector into the programming connector on CPU board.

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Press the button on the PicKit3 to begin programming. The "Status" LED will alternately be illuminated red and green (or orange) while the CPU board is being programmed.

If the "Status" LED is not illuminated as indicated above, press the button again.

Programming of the CPU board is complete when the "Status" LED is illuminated green and the blue "Active" LED is blinking.

Turn off system power, remove the RJ11 cable from the programming connector.

Turn on system power and confirm that the LCD indicates the expected version of the CPU firmware.