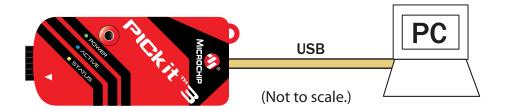
USING PICKIT SIN-CIRCUIT DEBUGGER

Install the Latest Software

Install the MPLAB® IDE software onto your PC using the MPLAB IDE CD-ROM or download the software from the MPLAB IDE page of the Microchip web site (www.microchip.com/MPLAB). Check the latest Release Notes for additional information.

(2) **Configure PC USB Communications**

Connect the PICkit[™] 3 development programmer/debugger to a PC USB port via a USB cable. PICkit 3 uses the standard HID USB Windows® driver. Note: If a USB hub is used, the hub must be powered with its own power supply.



Build Your Project $(\mathbf{3})$

- 1. Launch MPLAB IDE.
- 2. Load your project or use the Project Wizard to create a new one.
- 4. Build your project based on your configurations and options.
- 5. Select the PICkit 3 as either a debugger (<u>Debugger>Select Tool>PICkit 3</u>) or as a programmer (Programmer>Select Programmer>PICkit 3).

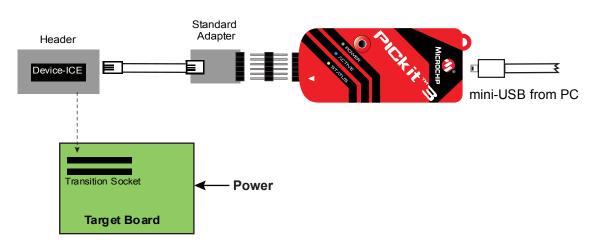
Connect to Target and Power (4)

- 1. Attach the PICkit 3 to the PC using the USB cable, if not already.
- 2. Attach the communications cable between the debugger and target board. 3. Connect power to the target board.

Typical Debugger System – Device With On-Board ICE Circuitry:



Alternate Debugger System – ICE Device:



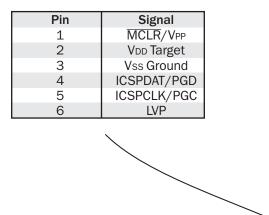
5 Program and Debug

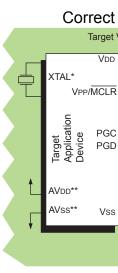
1. Program your device.

2. As a programmer, PICkit 3 will automatically run your code. As a debugger, you can run, halt, single step and set breakpoints in your code.

Note: For information on Reserved Resouces used by the debugger, see the PICkit 3 on-line help.

Target Connector Pinout

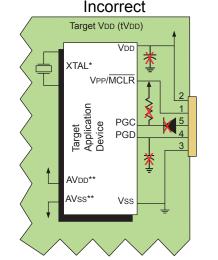




Target Application PC Board

*Target device must be running with an oscillator for the debugger to function as a debugger. **If the device has AVDD and AVss lines, they must be connected for the debugger to operate.

Target Circuit Design Precautions



target PIC[®] MCU.

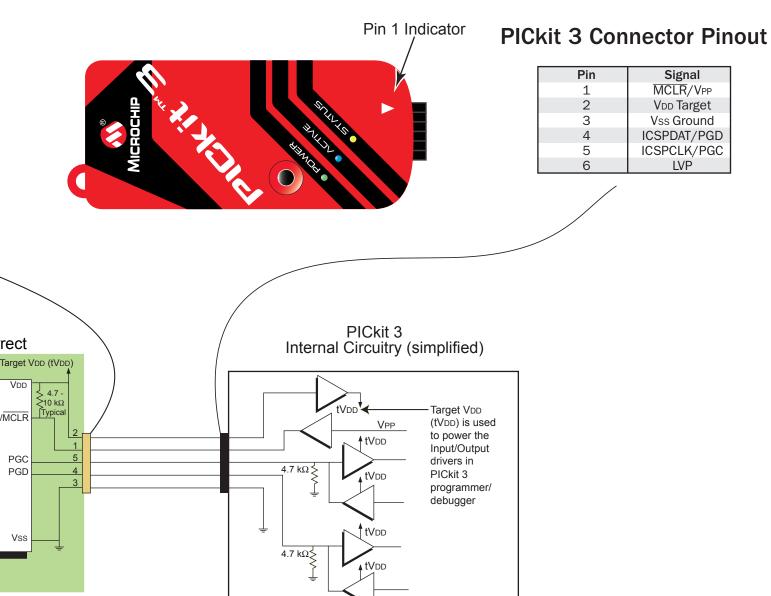
Target Application PC Board

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ADDITIONAL INFORMATION

Circuitry and Connector Pinouts



- Do not use mulitplexing on PGC/PGD they are dedicated for communications to PICkit 3.
- **Do not use pull-ups on PGC/PGD** they will divide the voltage levels since these lines have 4.7 k Ω pull-down
- resistors in PICkit 3. Do not use capacitors on PGC/PGD – they will prevent
- fast transitions on data and clock lines during programming and debug communications.
- Do not use capacitors on MCLR they will prevent fast transitions of VPP.
- Do not use diodes on PGC/PGD they will prevent bidirectional communication between PICkit 3 and the

Recommended Settings

COMPONENT	SETTING
Oscillator	OSC bits set properly
	・ Running
Power	Supplied by target
WDT	Disabled (device dependent)
Code Protect	Disabled
Table Read Protect	Disabled
LVP	Disabled
BOD	VDD > BOD VDD min
JTAG	Disabled
AVDD and AVss	Must be connected
PGCx/PGDx	Proper channel selected, if
	applicable
Programming	VDD voltage levels meet
	programming specs

Note: See the PICkit 3 User's Guide for more component and setting information.

