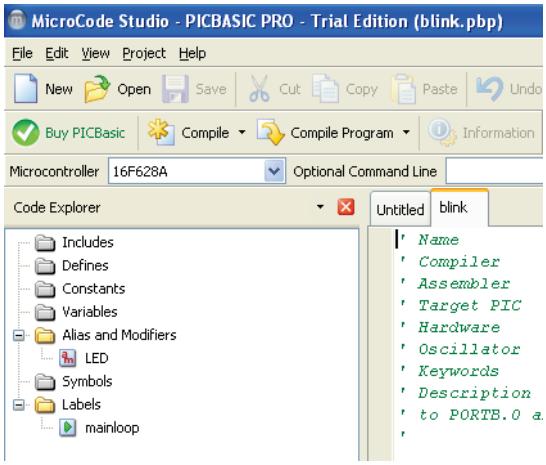
microEngineering Labs, Inc.

PICBASIC PRO Compiler (PBP) QuickStart

PBP is designed to be used in conjunction with an Integrated Development Environment (IDE). The IDE is the program where you edit programs and control operations. The IDE will call PBP as needed to convert files.

PBP can be used with just about any IDE or code editor, but we recommend the included MicroCode Studio to get started. This IDE was developed by a company called Mecanique. Mecanique also offers an enhanced version of the IDE called MicroCode Studio Plus.

After PBP and MicroCode Studio are installed, launch MicroCode Studio to begin. MicroCode may be launched from the start menu (All Programs > MicroCode Studio (MCSX)) or from the icon that is created on the Windows desktop.



MicroCode should automatically open an appropriate example program called "blink.pbp". To compile the program, simple click the toolbar button labeled "Compile". You will see a dialog pop up during the assembly process and the results of the compilation will be shown in the pane near the bottom of the MicroCode window.

The compile process creates a file with a .hex extension. (Since our example is named "blink.pbp", the generated file is named "blink.hex".) This HEX file is automatically saved in the same folder where the program file is location. In the case of our sample, this is the folder within the PBP installation called "EXAMPLES".

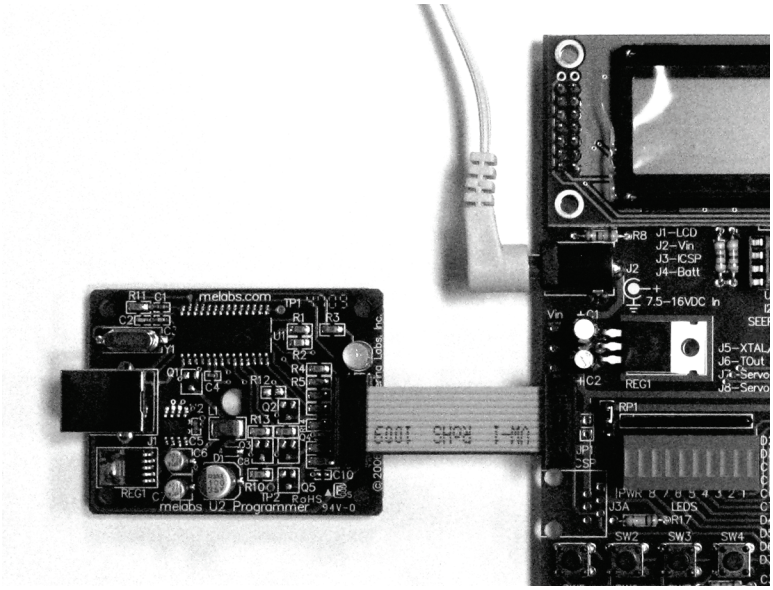
The hex file is then "burned" into the microcontroller using a device programmer (sold separately).

Most engineering professionals will find the PBP compile process familiar and intuitive. PBP, however, is commonly used by hobbyists to bridge the gap between experimenter kits and real development tools. For these users, we'll throw in a few more notes.

PBP does not control the hardware directly with a "Run" or "Play" control. The generated hex file is intended to run on a stand-alone microcontroller.

The HEX file holds the machine language that the microcontroller needs in order to run. A device programmer is usually needed to "burn" the HEX code into the chip. After compilation, the microcontroller must be programmed. After programming, it starts and runs without intervention.

The common practice is to use the melabs U2 programmer to program the microcontroller "in-circuit". The programmer connects to the development board while programming the device. It can be left connected when the device runs, or disconnected after programming.



For owners of the Experimenter Edition, support is available through our community forum at http://support.melabs.com.

Owners of the premium Silver and Gold Editions may also find support in the forum, but they also have the option of emailing or calling melabs support directly:

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