

README DOCUMENT

For 32Bit Experimenter XBEE Demos

Note all DEMO1 and DEMO 2 code is under Apache License as follows:

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Instruction for use

As a last minute change, and in difference to the Nuts and Volts Dec 2012 article, rather than using MPLAB 8.xx, the demos were re-created using MPLAB X and XC32 and using PICKIT3 for debugger/programmer. This was done to facilitate the use of object libraries for the base code. There are two projects Demo1 and Demo2 as described in the Dec 2012 article. As you open the projects under MPLABX you should see only two files MAIN.C under source files and XBEE_Library.X.a under library files. The use of library files eliminates the need to include a large collection of reference and source files and should project viewing and code reuse a lot easier.

As Microchip is moving to this new environment it is imperative that you as an avid experimenter also move to and adopt this new paradigm. Microchip offers lots of useful on line tolls to get familiar with this environment.

You will need to install the new Microchip tool suite in order to use these demos. Here is how:

Steps to install MPLAB and Compiler

Before you can use MPLAB X IDE you must do the following:

- Install JRE (Java Runtime Environment) and MPLAB X IDE
- Install USB Device Drivers (For Microstick II)
- Connect to a Target (Using Microstick II)
- Install the Language Tools
- Install chapter 1 demo code
- Launch the IDE

We will cover each step here.

1. Install MPLAB X IDE and JRE (Java Runtime Environment) on PC

- You can find MPLAB X here:
<http://www.microchip.com/pagehandler/en-us/family/mplabx/>
- Click MPLAB X Free Download button.
- The Microstick II, our programmer/debugger, is designed run with MPLAB X version 1.00 or later. Make sure the MPLAB X is version is at least 1.00
- The install is very straight forward. Follow the prompts, restart your PC then proceed.
- MPLAB X does require your PC to have Java Runtime Environment (JRE). Ensure you have the correct JRE for your version of MPLAB X IDE by consulting the “Readme for MPLAB X IDE” accessed from the Release Notes on the Start page. Read the following sections and print them out if you need to perform the actions specified in them. Close MPLAB X IDE until the required steps are performed and then re-launch
- You should end up with MPLAB installed on your hard drive under C:/Programs/Microchip/MPLAB directories
- You should also end up with an MPLAB X short cut icon on your desktop.

2. Install the Microchip XC32-Compiler on PC

- You can find it here or access it directly from the start page by selecting “download compilers and assemblers”.
- [“http://www.microchip.com/pagehandler/en_us/promo/mplabxc/](http://www.microchip.com/pagehandler/en_us/promo/mplabxc/)



Download Compilers and Assemblers

- The install is very straight forward. Follow the prompts. Click downloads and then select XC32 for Windows
- Download the compiler code into any convenient directory on your PC and double click to install.
- After install you should end up with the XC32 Compiler installed on your hard drive under C:\Program Files (x86)\Microchip\xc32\v1.00(or later)
- If you navigate to the you should see the following folder set

New folder				
Name	Date modified	Type	Size	
 bin	6/7/2012 9:59 PM	File folder		
 doc	6/7/2012 9:58 PM	File folder		
 examples	6/7/2012 9:57 PM	File folder		
 lib	6/7/2012 9:58 PM	File folder		
 pic32-libs	6/7/2012 9:58 PM	File folder		
 pic32mx	6/7/2012 9:57 PM	File folder		
 MPLAB_XC32_Compiler_License	1/10/2012 3:20 PM	Text Document	19 KB	
 Uninstall MPLAB XC32 C Compiler	6/7/2012 9:59 PM	Shortcut	2 KB	
 Uninstall-xc32-v1.00.dat	6/7/2012 10:00 PM	DAT File	41 KB	
 Uninstall-xc32-v1.00	6/7/2012 10:00 PM	Application	3,769 KB	

Figure 1: MPLAB C32 Directory