

Modifying Spin Core USB-PTS control Programs for OSX

The following instructions pertain specifically to the program “fs300.c”, but any one of the others can be modified analogously.

This assumes you have Xcode Tools installed on your Mac. This is included in the main installation disk for the operating system in case you don't have it already installed – it can also be downloaded from the Apple web site <http://developer.apple.com>. It is also assumed you are familiar with entering unix commands from the Terminal, and that you are also familiar with unix file permissions.

To use control the USB-PTS in OSX, you first need the OSX library, which can be downloaded from: <http://www.ftdichip.com/Drivers/D2XX.htm>.

On the disk image you downloaded, you will find the library file (libftd2xx.0.1.0.dylib), the main header file (ftd2xx.h), and some examples.

While this is not the only way to use them, one way to make them accessible is to put the library and header files in a directory that is looked in by default during compilation. This would be /usr/lib for the library, and /usr/include for the header files.

- **Library file:** you can either copy libftd2xx.0.1.0.dylib directly to the /usr/lib, or you can copy it to another folder and alias (link) it. To copy it directly, **cp libftd2xx.0.1.0.dylib /usr/lib/libftd2xx.dylib** (note the name change). To alias it from another directory, first create (if not already present) /usr/local/lib, then **cp libftd2xx.0.1.0.dylib /usr/local/lib/libftd2xx.dylib** followed by **ln -s /usr/local/lib/libftd2xx.dylib /usr/lib/libftd2xx.dylib**.
- **Header files:** you actually need two header files from the D2XX distribution, ftd2xx.h and WinTypes.h (which is in the Samples folder). For each one, you can either copy them directly, e.g. , **cp ftd2xx.h /usr/include/ftd2xx.h**, or alias them as above, e.g. first create /usr/local/include, then e.g. **cp ftd2xx.h /usr/local/include/ftd2xx.h** followed by **ln -s /usr/local/include/ftd2xx.h /usr/include/ftd2xx.h**.

Next, you need to edit the source file (e.g fs300.c) very slightly:

- Remove the line “#include <windows.h>”
- Change “#include <FTD2XX.H>” to “#include <ftd2xx.h>”; note that you could also have renamed the header file above.

Now, you just need to compile the program:

```
cc fs300.c -lftd2xx -o fs300
```

That is all that is required – the c program can now be used exactly as shown in the USB-PTS instructions. Note that you don't need to load any USB drivers in OSX.

*Tom Pratum, Department of Chemistry, Western Washington University,
February 15, 2007, partum@chem.wvu.edu*