PMC Precision MicroControl Corp.

TechNOTE

Title:	Using the Motion Control API with National Instruments LabWindows/CVI
Products(s):	MCAPI
Keywords:	MCAPI, LabWindows/CVI, National Instruments
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Summary
The integrated LabWindows/CVI environment features code generation tools and prototyping utilities for fast and easy C code development. It includes a large set of run-time libraries for instrument control, data acquisition, analysis, and user interface. PMC's Motion Control API (MCAPI) may be used in LabWindows/CVI programs to add support for PMC motion controllers to the application.

More Information
To access MCAPI functions from within a LabWindows/CVI program you need to add the MCAPI LIB files (MCAPI32.LIB & MCDLG32.LIB) to the LabWindows/CVI project and you need to include the MCAPI header files (MCAPI.H & MCDLG.H) in your LabWindows/CVI source files.

The standard LIB files that ship with the MCAPI are compatible with LabWindows/CVI and may be used without modification. Include the MCAPI LIB files in your LabWindows/CVI project by clicking **Add Files to Project: Library (*.lib)** from the **Edit** menu item in the project window, navigate to the folder with the MCAPI sample code (typically C:\Program Files\Motion Control\Motion Control API\Sources), and select the files MCAPI32.LIB and MCDLG32.LIB.

In versions of the MCAPI prior to 3.4.0, the MCAPI header files rely on the standard Windows header files for some of type definitions they need. Beginning with version 3.4.0 the header files supply the definitions automatically if the Windows headers are not being use (as is the case when programming with LabWindows\CVI). In pre-3.4.0 versions of the MCAPI you must add the following code to top of the MCAPI.H header file to make the needed type definitions available:

```
#ifndef WORD
typedef unsigned short WORD;
#endif

#ifndef WINAPI
#define WINAPI __stdcall
#endif

#ifndef CHAR
typedef char CHAR;
typedef CHAR *LPSTR;
typedef const CHAR *LPCSTR;
#endif
```