



Title: IEEE 488 Communications with the National Instruments GPIB Adapter
Products(s): DCX-AT200, DCX-AT100, DCX-PC100, MF310
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Summary

Communicating with a PMC motion controller via an off-the-shelf IEEE 488 interface, such as the National Instruments PCI-GPIB or AT-GPIB, requires that a number of interface options be set correctly for proper operation.

More Information

We recommend you configure your motion controller as a device using National Instruments configuration utility (for DOS use IBCONF, for Windows use IBCONFIG or the Device Template feature of the NI Driver control panel applet). Set up your controller as follows:

Name:	Motion (or name of your choice)
Access Board:	GPIB0 (must match installed GPIB)
Termination -	
Terminate Read on EOS:	No
Set EOI with EOS on Write:	No
8-bit EOS Compare	No
Send EOI at end of Write:	Yes
EOS Byte:	0
GPIB Address -	
Primary:	Must match DCX-MF310 dip switches
Secondary:	None
I/O Timeout:	10 sec
Serial Poll Timeout:	1 sec
Repeat Addressing:	No

To test these settings:

- Run National Instruments IBIC (Interface Bus Interactive Control) program.
- You may optionally issue the command **SET 488.2** at the colon prompt (this step is not required by our motion controllers).
- At the colon prompt type **IBFIND MOTION** (use the same name given in the configuration step above).
- Issue the version command as a test - type **IBWRT "VEr"**. Note that all PMC motion controller command strings should be terminated with a carriage return.
- To read the response from the controller type **IBRD 100**. You may need to issue the command more than once to read the entire response.
- To eliminate extra NULL characters following I/O operations issue the following command: **IBCONFIG 27 1**. This command causes the GPIB controller to automatically issue UNLISTEN / UNTALK commands immediately following I/O operations.