**TechNOTE**

Title:	Accessing Analog Input Channels from LabVIEW
Products(s):	DCX-AT200, DCX-PC100, DC2-PC, MC500, Motion VI Library
Keywords:	Analog Input, LabVIEW, VI
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Summary

The Motion VI Library (version 1.1 or higher) includes support for PMC Motion Controller Analog I/O channels (both the built-in motherboard channels and MC500 expansion module channels are supported).

More Information

This LabVIEW sample, Analog-o-matic, demonstrates how to use VIs from the MOTION VI Library to read values from the analog input channels on a DCX-AT, DCX-PC, or DC2-PC motion controller. The resulting VI has four analog displays – one for each of the built-in 8-bit analog input channels. These displays show raw encoder counts (0 to 255) and are updated 10 times a second. A front panel power switch allows the user to terminate the sample in an orderly way.
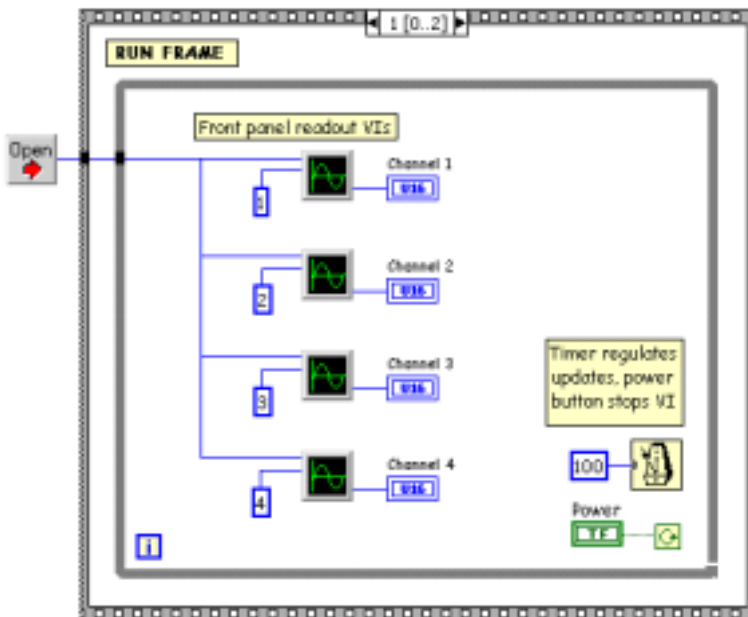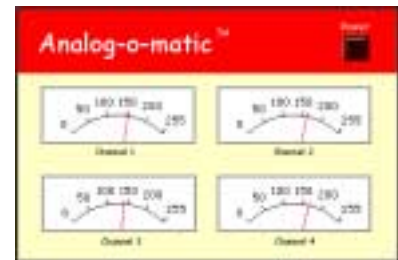
The main body of the Analog-o-matic uses a frame control to create 3 sequential frames of execution. When Analog-o-matic starts the MCOpen VI is called to obtain a handle to the motion controller. The first frame ensures that the front panel power switch is in the "On" position (so the sample will run). In the second or "Run" frame (shown in the diagram to the left) a while loop encloses four copies of the MCGetAnalog VI – one for each channel. The loop uses a timer to regulate the speed of the loop. The loop executes until the user presses the front panel power button. The final frame calls the MCClose VI to close the motion controller and terminates the sample.

Source code for Analog-o-matic is available from: http://www.pmccorp.com. Look in the Support area for the Motion VI Library.