

Controlling Softmark's USB kits using LabVIEW

(for example, USB I/O Card, USB Stepper Motor Controller, USB Relay Card and USB Voltmeter)

We have developed a USB.OCX, provided as a development kit, to control Softmark's USB modules from your own application. Currently, we support LabVIEW. In this case, using LabVIEW graphical programming, you don't need to write any line of code to control Softmark's USB modules. This USB.OCX supports most of our USB modules.

This document will illustrate the following LabVIEW programming:

- Setting an LED ON and OFF (for instance using the USB I/O Card)
- Driving a stepper motor forward and in reverse (using the USB Stepper Motor Controller)
- Reading voltage from a channel using the USB 4 Channel Voltmeter
- Setting 4 relays ON and OFF on the USB Relay Card

You can control most of our USB modules in similar ways.

- **Setting the D3 LED to go ON and OFF every 1 sec using the USB I/O Card**

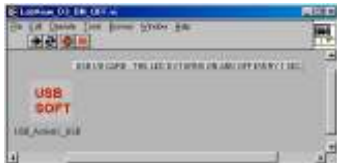


Figure 1. Main vi form.

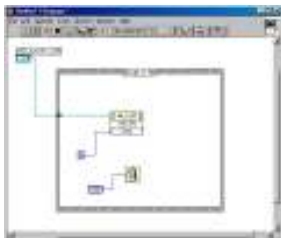


Figure 2. LED D3 is set to go OFF for 1 second. This figure shows the diagram form.

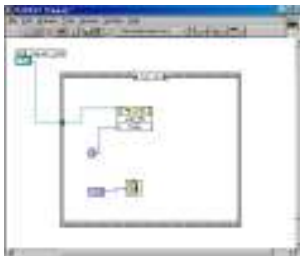


Figure 3. LED D3 is set to go ON for 1 second.

If you run the vi form, LED D3 will be ON for 1 second, then OFF for another 1 second, and so on.

- **Driving a stepper motor forward and in reverse**



Figure 4. Main vi form.

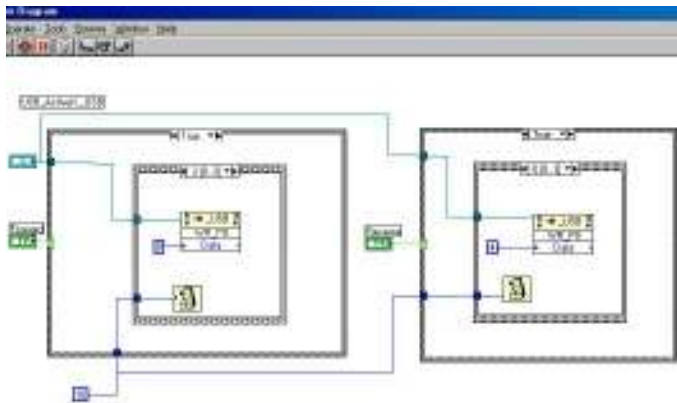


Figure 5. The diagram form shows how it's done.

- **Reading voltage from a channel using the USB 4 Channel Voltmeter**



Figure 6. Main vi form. The USB.OCX will return Volts from Channel 1 to the gauge.

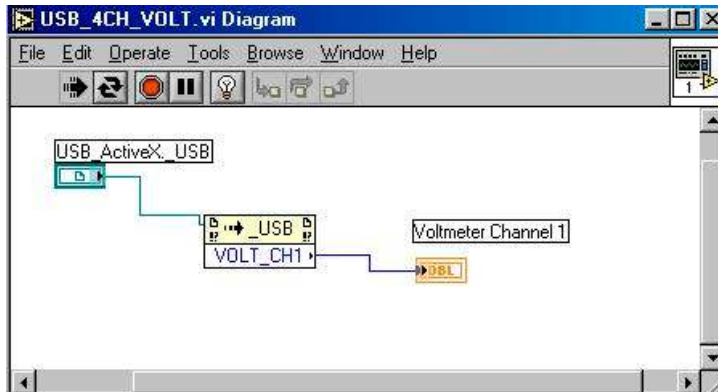


Figure 7. This is what the diagram form should look like after connection. The connection will be similar if you want to get values from channel 2, 3, or 4.

You can control the USB Volt/Current Meter in similar ways.

- **Setting 4 relays ON and OFF on the USB Relay Card**



Figure 8. Main vi form. With the USB.OCX, you can control 4 relays on the USB Relay Card.

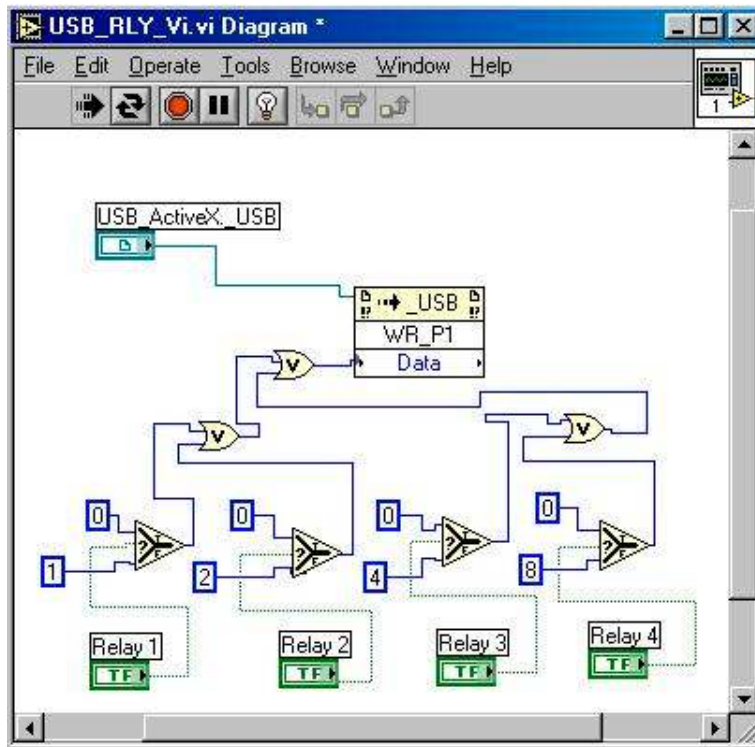


Figure 9. The diagram form shows how it's done.

Note: The above are simply illustrations to guide you in your LabVIEW development.

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