PIEZOCONCEPT

TUTORIAL N° 2

DESCRIPTION OF A LABVIEW VI

PIEZOCONCEPT

15 Rue du Bocage

69008 LYON

France

Before starting straight away with Labview, it is recommended to start with Termite software (See Tutorial N°1) in order to become more familiar with all the serial commands that are offered. Using them in Labview in a second step will be easier.

In order to understand how a Labview VI is structured, the MOVEX VI is a good example to start with.

Under Termite, the communication is a succession of :

- Sending Command (what you send)
- Reading the Buffer (what you receive)

For sending the command, the difference between Termite and Labview is that :

- With Termite, the command will be sent each time you will press the "Enter" key
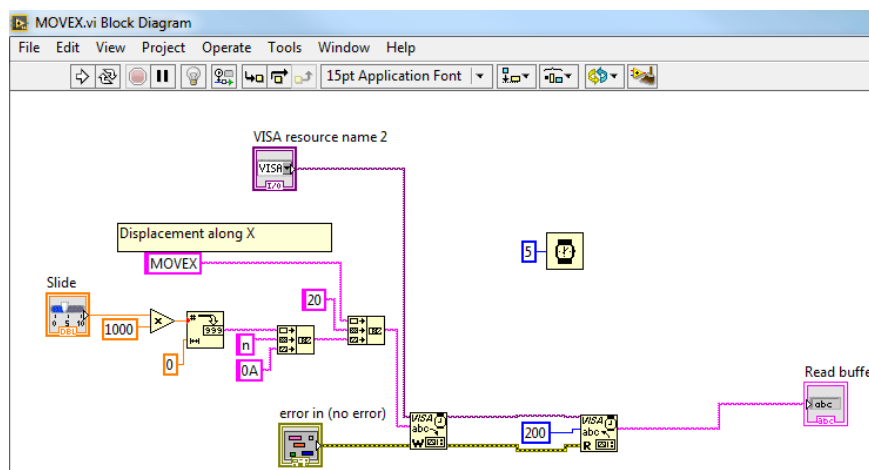- With Labview, you have to use a VISA WRITE :

For reading the buffer, the difference between Termite and Labview is that :

- With Termite you read the buffer automatically (nothing to do)
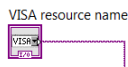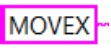- With Labview, you have to use a VISA READ

The MOVEX VI has the following Block Diagram.

It consists of (1) sending the command via a VISA Write (2) Reading the buffer via a VISA Read .Here is a short description of each block.

The VISA resource name [VISA resource name 2] specifies the COM port that should be used (the COM port of your nanopositioner).

The MOVEX [MOVEX] is a string.

The block [Slide 1000 ×] allows to return the multiplication of the inputs. If the slide is at 50, you will get 50X1000 = 50000 at the output.
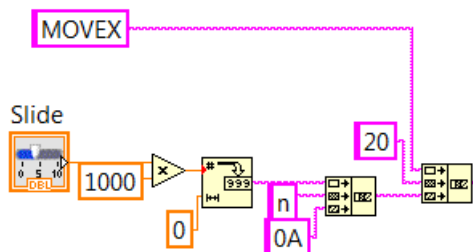
The [#999] allows to converts a number (50000) into a string (50000).

The string [20] is equivalent to a space in Hexadecimal (that you can get by pressing the spacebar button).

The string [n] is a string "n"

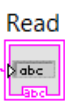The string [0A] is equivalent to a Line Feed (in Hexadecimal)

The block [concatenate] allows to concatenate every string inputs.

That means that you will get a concatenated string made of :

- "MOVEX"
- " "   (that is a Space)
- 50000
- "n"
- Line Feed

The result "MOVEX 50000n" will be sent to the VISA WRITE on the COM PORT defined by the VISA ressource. The result of VISA Read is diplayed in the window of the [Read buffer abc]