BASICS OF INSTRUMENTATION
LABVIEW EXERCISES

As a reference, download the *LabVIEW Fundamentals* manual from the National Instruments website
`http://www.ni.com/pdf/manuals/374029a.pdf`.
Additionally, the best guide is always the LabVIEW help. Try Ctrl+?

Microdrive control

Read from the position sensor. Take a look at the *General I2C Read.vi* example that you can find in the *Basic.llb* file in the website: notice how simple it is, there are only a couple of vi's that actually do something with the sensor, all the rest are details. Run it once with the following parameters:
device reference in: the only one available; address: 40; clock rate: 250; number of bytes to read: 5; eeprom starting address: 0; number of address bytes: 1.
Look at the 5 bytes you just read and try to make some sense of them using the NSE-5310 datasheet, pages 12-13. For instance, display the sensor temperature in degrees Celsius.
Like you did in the wave file exercise, make a copy of the example vi and try to simplify it by removing anything which is not necessary. E.g. you can replace *NI-845x I2C Write Read.vi* with *NI-845x I2C Read.vi*. Enclose the Read vi into a while loop for continuous reading. Now display in human-readable form the information included in the first 2 bytes. For the linear position value you'll have to stitch together bits from both bytes. Use a sub-vi for all the bit juggling. See how the values change when you move a magnet near the sensor.