

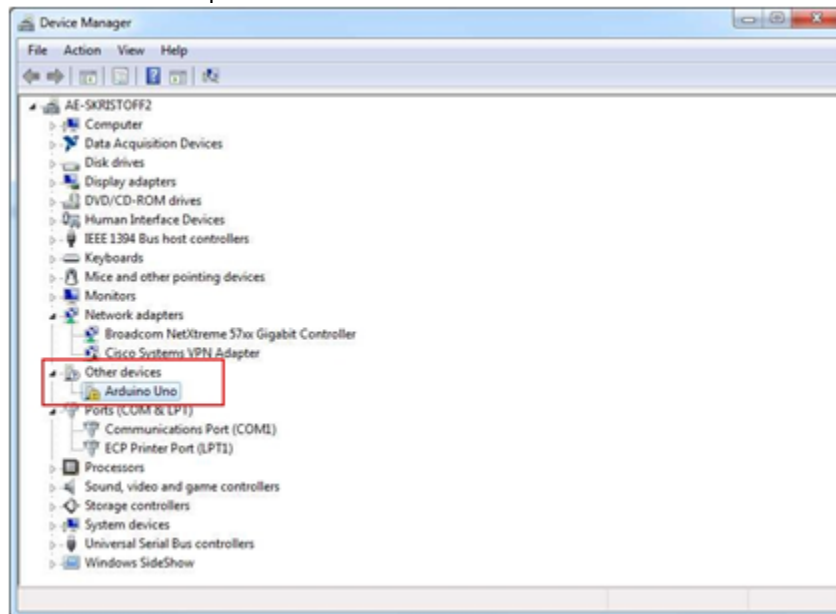
January 23, 2013

Configuring Arduino and Labview for P13061

Periodontal Test System

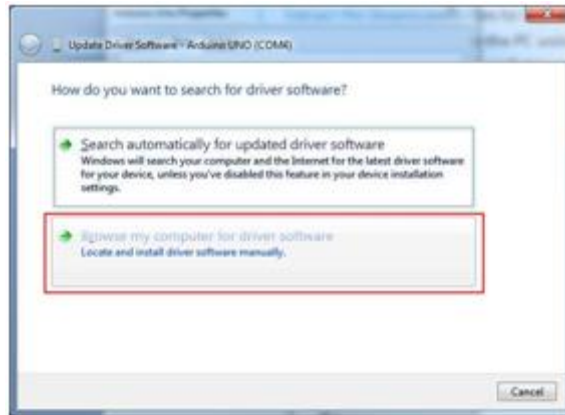
Samuel Remp

- 1.) Install Labview 2011 and newer
- 2.) Install NI-VISA Drivers
 - a. <http://joule.ni.com/nidu/cds/view/p/id/2251/lang/en>
- 3.) Install JKI VI Package Manager (VIPM) Community Edition (Free)
 - a. <http://www.jki.net/vipm>
- 4.) Install the LabVIEW Interface for Aduino Toolkit using VIPM
 - a. Launch VIPM
 - b. Locate LabVIEW Interface for Arduino in the list of packages and click the Install & Upgrade Packages button.
 - c. Click Continue and then Finish
 - d. The Interface for Arduino is now installed in LabVIEW
- 5.) Connect Arduino to PC
 - a. Download the latest version of the Arduino IDE
 - i. <http://arduino.cc/en/Main/Software>
 - b. Extract files to C:\Program Files
 - c. Attach Arduino via USB
 - d. Windows will attempt to install drivers for the Arduino but will not be able to find the correct drivers.



- e. Click the **Driver** tab on the Arduino Uno properties window, then click **Update Driver...**





- f. Choose **Browse my computer for driver software**.
- g. Browse to `C:\Program Files\Arduino-xxxx\drivers`.
- h. Click **Next**.
- i. Click **Close**.



- j. The Arduino Uno should now be listed under *Ports(COM&LPT)* in the Windows Device Manager.
 - i. NOTE: If using Windows 8 the driver may not work, at time of writing this it did not. I was able to get around it by going online and searching for a work-around. There may be a permanent fix in the near future.

- 6.) Load the Arduino/LabVIEW interface to your Arduino board via arduino.exe
 - a. Launch Arduino.exe
 - i. Click file -> Open -> C:\Program Files (x86)\National Instruments\LabVIEW 2011\vi.lib\LabVIEW Interface for Arduino\Firmware\LIFA_Base -> open LVIFA_BASE.pde
 - b. Choose Tools>>Board>>Arduino XXX
 - c. Choose Tools>>Serial>>COMX (the port you are connected to)
 - i. You can determine your COM port by looking at device manager.
 - d. Click the Upload button.
 - e. Should report "Done Uploading" when successful, Arduino is ready to talk to LabVIEW
 - i. (Pictures and detailed steps for this at <http://digital.ni.com/public.nsf/allkb/8C07747189606D148625789C005C2DD6?OpenDocument>)
- 7.) Arduino is now ready to interface with LabVIEW
- 8.) Download Source Code from EDGE/SVN

For End User Use you will not need full version of LabVIEW because you will not be developing, you will only need the LabVIEW runtime environment which is free and the VISA drivers and Runtime executable for the program.