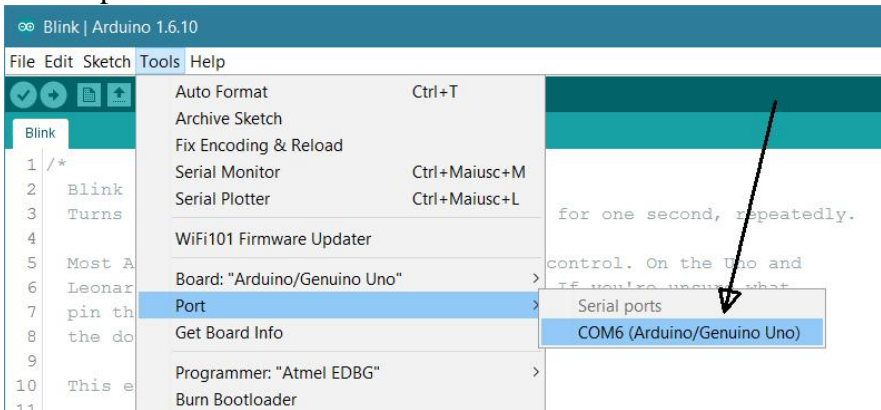
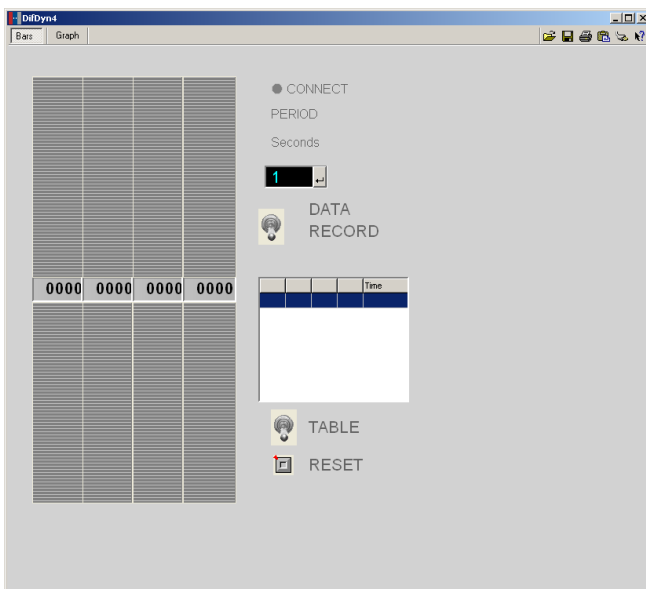



Installation of Program

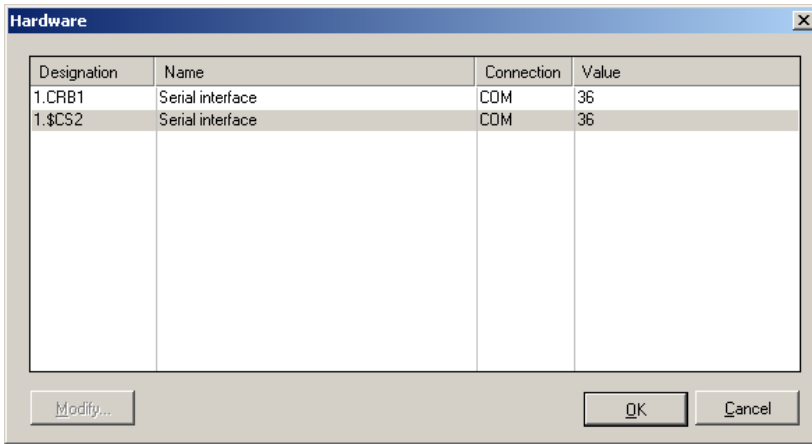
1. You have to set up Arduino IDE before programming device. The type of driver depends of the USB chip on arduino nano (uno).
2. Connect device to usb port of computer.
3. Launch Arduino IDE
4. You can see the com port address (You may have Arduino/Genuino Nano on picture), please remember the Com Port Address



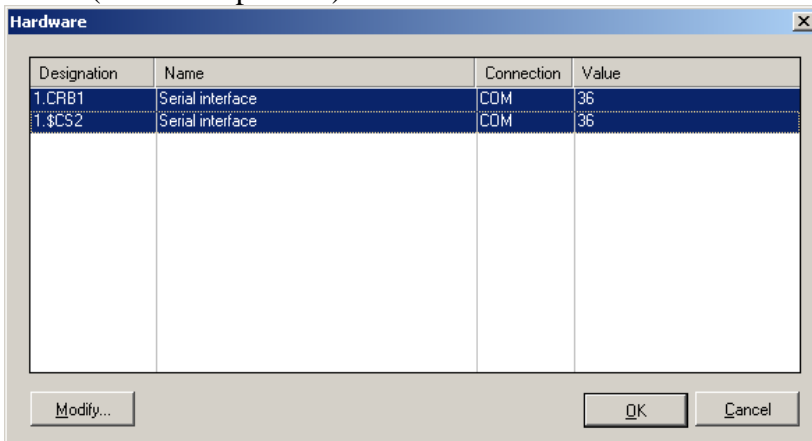
5. Load code for Arduino to IDE
6. Download code to device
7. You can close Arduino IDE now
8. If you have Windows 8 or later, launch the program in Windows 7 compatible mode.
9. The device must be connected before You launch the program.
10. Launch the DiffDyn4.exe file. You can see the Bars screen



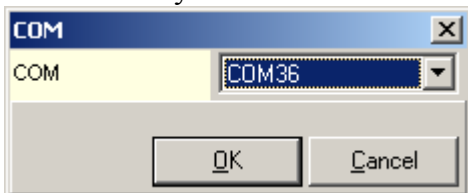
11. You have to set up Com Port Address, it is the same as in the Arduino IDE setup p.4.
Press the  icon on the right upper corner. You can see the menu "Hardware" for Com Port Address selection



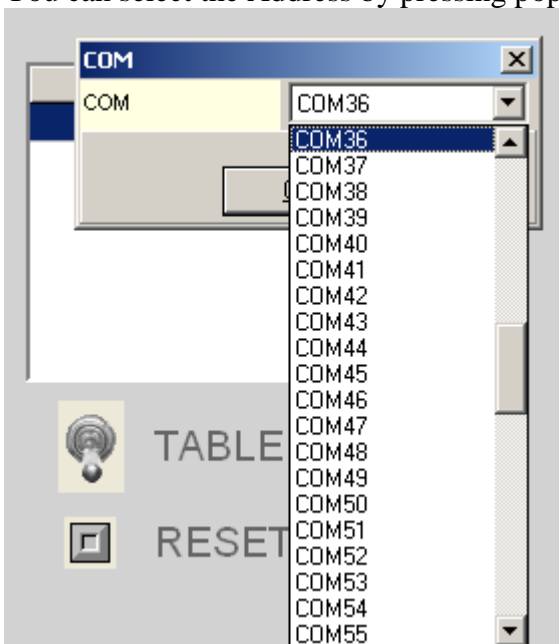
Select (with Shift pressed) all the items



Press “Modify” to select the Address



You can select the Address by pressing pop-up right to “COMxx”



Select the Address from p.4, press OK and OK in “Hardware” menu to return to main Bar window.

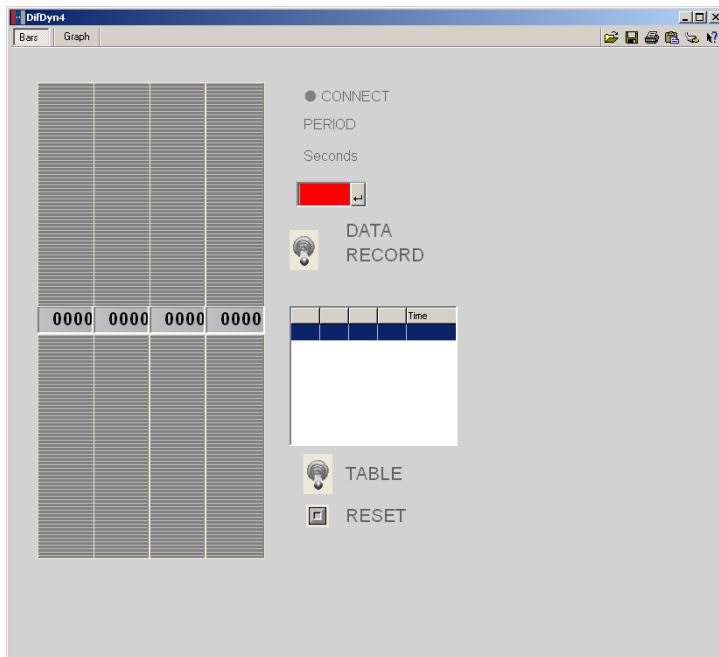
12. If the connection is established, the green led CONNECT must blink twice a second. If You press the sensors the bars go up or down depending of press direction.



13. Please launch the program only after the physical connection of device with computer by USB cable, and disconnect the USB only after the program is terminated by means of Alt-F4 or by pressing the x.

Work with the Program

1. Connect the device to USB connector.
2. After 10 seconds launch the DiffDyn4.exe file or corresponding icone. It takes some times about 5-20 seconds.
3. You see the main panel



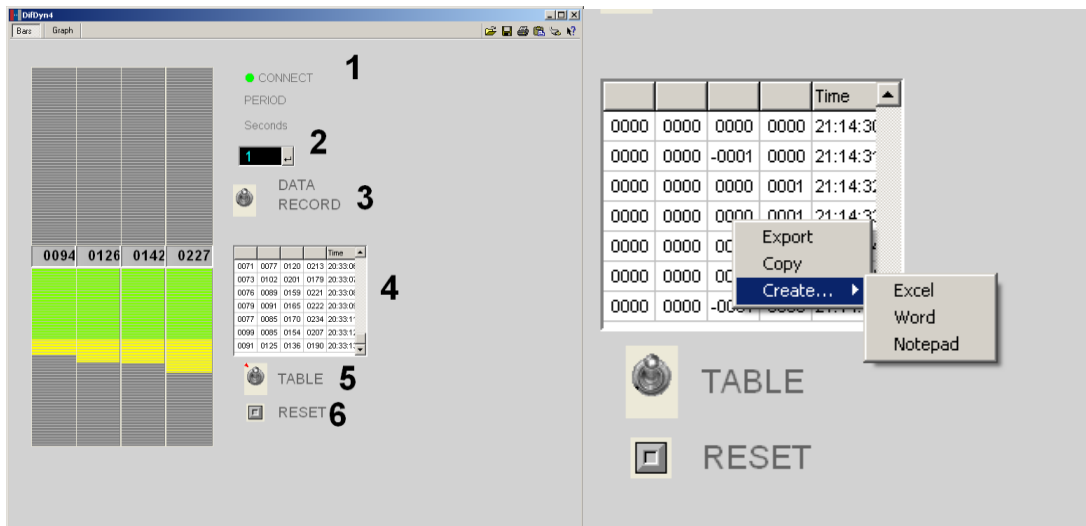
You are ready to see the reaction of device on push / pull forces. The indicator bars show the forces in logarithmic scale. The indicated value of force is in grams. You can calibrate the sensors by pressing “reset” button on the right.

4. You can save the data on a text file. You can select the time frame (2) in the range 0.1-100 seconds, turn ON or OFF (switch 3) the recording of data. The Data files are stored in Data directory with names yFingersxxxx, with xxx- sequential number. The data format is

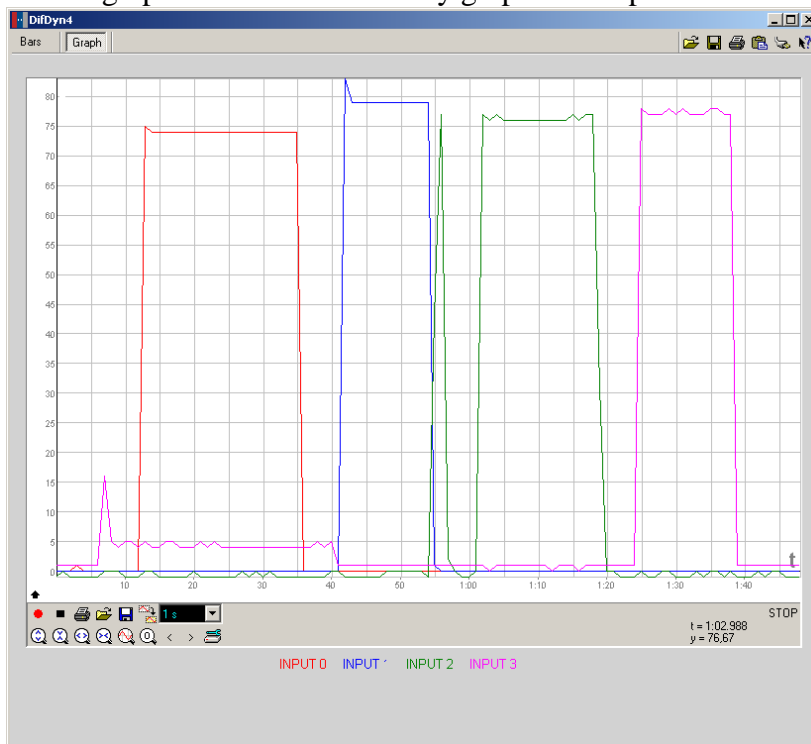
```
00012; 00096; 00091; 00000;21:03:02;06.08.2017
00120; 00153; 00292; 00321;21:03:04;06.08.2017
00087; 00078; 00071; 00187;21:03:05;06.08.2017
00071; 00095; 00096; 00262;21:03:06;06.08.2017
00205; 00305; 00282; 00200;21:03:07;06.08.2017
00125; 00187; 00162; 00233;21:03:08;06.08.2017
00170; 00122; 00080; 00388;21:03:09;06.08.2017
```

The Data- sensor 0 data;sensor 1 data; sensor 2 data; sensor 3 data; time; date.

5. You can save the data in table with time frame (2), the table cells contain the 4 sensor data, time and data. The switch (5) switches ON and OFF the table update. To transfer the data to computer You have to press right mouse button, select “Create” and destination – Excel, Word or Notepad format file. You have to be the program installed to save the data in program format. For example, If You want to open data in excel file the Exel program must be installed on Your computer. The RESET (6) button delete all the table content.



6. You can view and save You data in graphic format. Press the Graph tab, You see the graph window. It is already graph on the picture.



When You start the recording, the limits are selected automatically. You can take, save, load, scale the data. The control icons are:



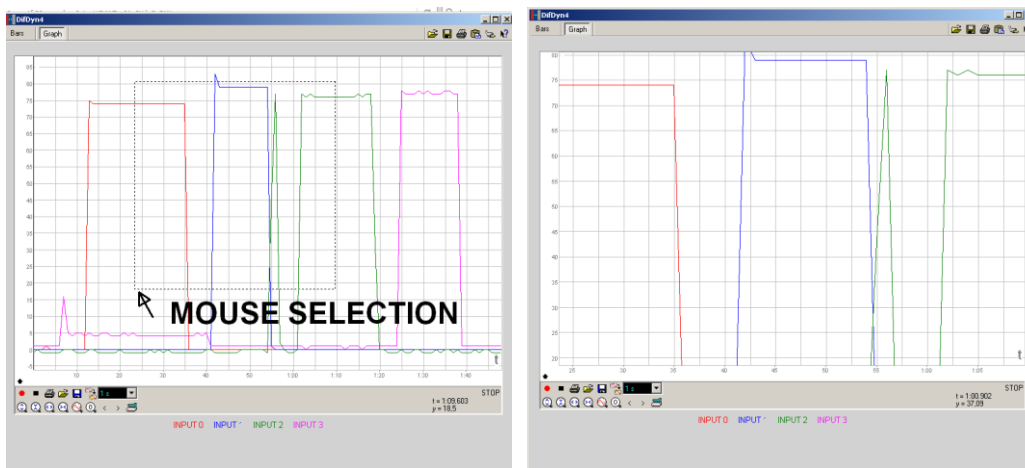
- 1 – Close this menu
- 2 – (Red Circle) – Begin new graph, old graph will be erased.
- 3 – Stop the Record. Not Pause, Stop.
- 4 – Print the graph on printer
- 5 – Open the graphical file
- 6 – Save the graphical file (as a text with data)
8. – Time frame selector



Control of data display (low line)

- 1 – scale X increase
- 2 - scale X decrease
- 4 – scale Y increase
- 2 - scale Y decrease
- 5 – automatic scale
- 6 – display the region about zero
- 7 – left
- 8 - right
- 9 – parameter selection

7. You can select the region on graph to show it on display



That's All. Take a care of Youself.