# Model 333 Single Channel USB Data System Quick Start Tutorial May 2013

Every SRI Gas Chromatograph is equipped with the PeakSimple Data system. Since January of 2008, all new SRI GCs use a USB cable to connect the GC to the Windows computer. GCs manufactured prior to January 2008 may be equipped with either USB or serial cable data acquisition hardware.

Serial cable
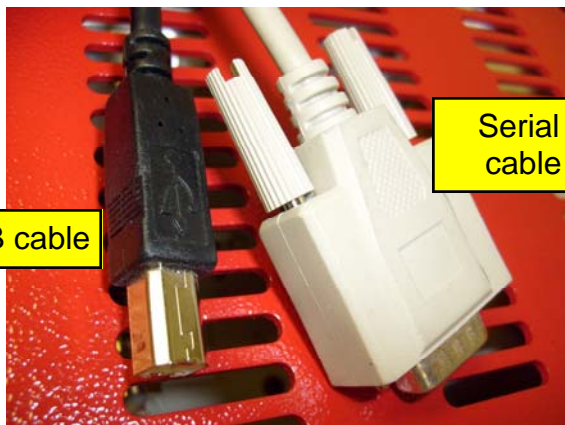
USB cable

If your GC is equipped with the USB cable hardware you will see a USB jack located on the right side of the GC.

There are two possible types of USB hardware:
1) The multi-channel 302 board which has a 4 digit device ID# between 5000 and 9999. This number is printed on the GC immediately below the USB jack. USB device ID#s below 5580 will not work with 64 bit operating systems. An upgrade is available for about US$ 100 to fix this.
2) The single channel 333 board which has a 3 or 4digit device ID# between 100 and 4999 printed below the USB jack. Device ID#s below 1144 will not work with 64 bit operating systems. An upgrade is available for about US$ 100 to fix this.

If you have the single channel 333 board hardware then continue with this quick start. If your GC is equipped with the multi-channel 302 board then switch to the 302 quick start tutorial available at www.srigc.com, or as a pdf in your PeakSimple folder.
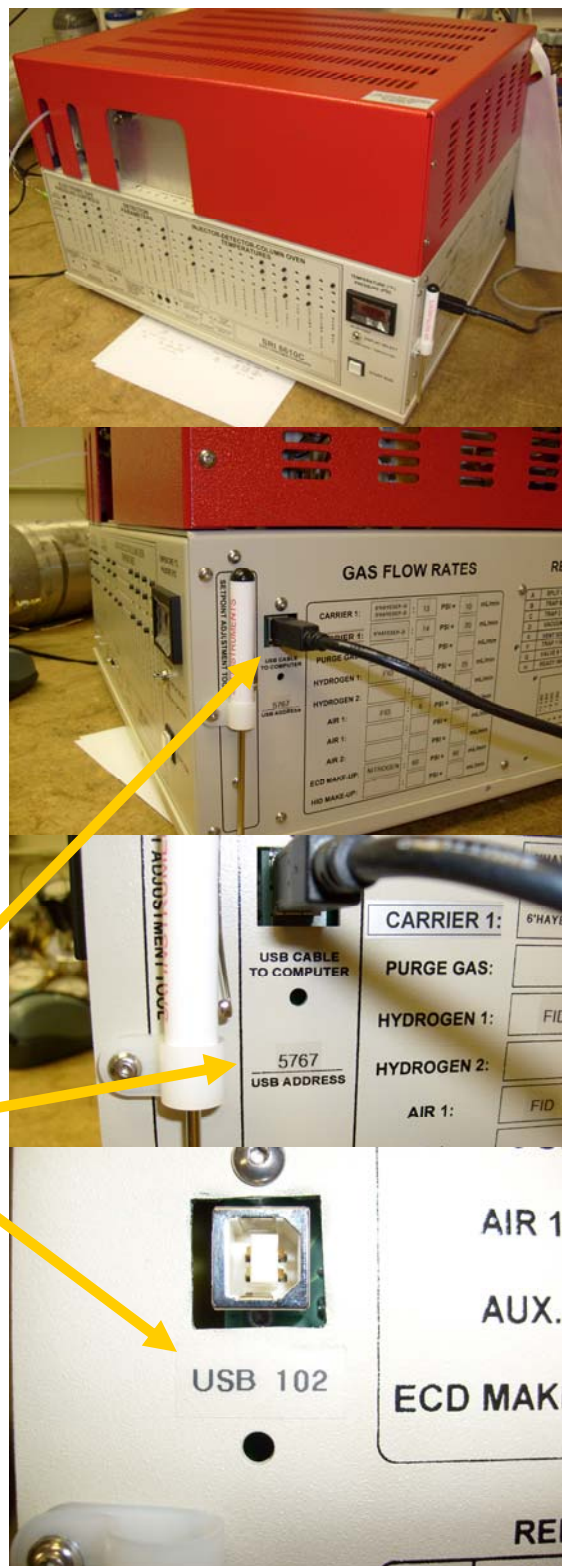
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Since the advent of Windows 7 and Windows 8 operating systems you have to select between a 32bit version, or a 64bit version of PeakSimple. On the SRI website (and on the PeakSimple CD) you will see two versions listed.

Windows 7 and 8 come in both 32 and 64 bit types. To determine whether your computer is a 32 or 64 bit system, click the Windows Start button, then click Computer, then system properties (at the top of that screen).

The screen shown at right displays the operating system type.

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The Model 333 (when not already installed in a GC) comes with a two meter USB cable, 15 volt DC power supply (may be either 120 or 220 volt) and a PeakSimple software disk. PeakSimple software may also be downloaded from www.srigc.com. Its a good idea to check the website in case a more recent software version has been released.

If the 333 is installed in a SRI GC or HPLC, then the 15volt power supply is not supplied (since the board is connected within the GC). Also, if the 333 is installed in an SRI GC or HPLC then all of the hardware connections will have been made already, you just have to install the software.

Plug the power supply into the 333 box and then into the mains wall socket. Plug the USB cable into the 333 box.

Wait until PeakSimple software is already installed before plugging the USB cable into your computer.

Install PeakSimple software from the CD disk or from the file downloaded from SRI's website.
Browse to the CD or to the downloaded file on your hard-drive (C:\ ) and select.
The file's name will be setup426 if it is version 4.26 of PeakSimple, otherwise it will be named after the latest version of the software. PeakSimple is updated every few months, usually to add a new feature.

Install PeakSimple in the suggested folder (C:\peak426) unless you have a very good reason to choose another.
Using the typical folder name helps simplify the tech support process.
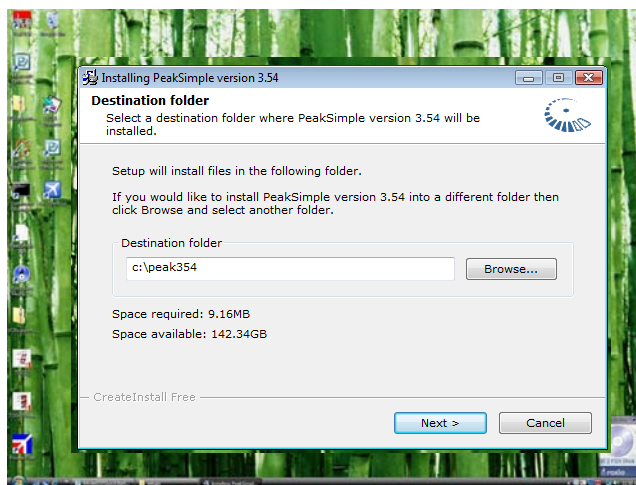
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When you click "Next" the PeakSimple software will be installed and you will see the screen to the right.
Click "Finish"

Now connect the USB cable to your computer. *For XP or Vista 32bit systems the driver must be manually loaded.*

A hardware "Wizard" will appear to help you install the USB driver. The example shown is for a Vista operating system. For XP computers the "wizard" screens will be slightly different.

Follow the screens as shown. Its important to force Windows to look in the PeakSimple folder on your C: drive, not the CD. ***Don't let Windows search for the driver on the Internet.***

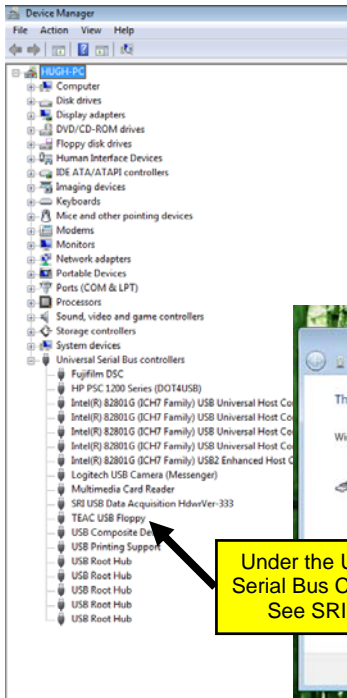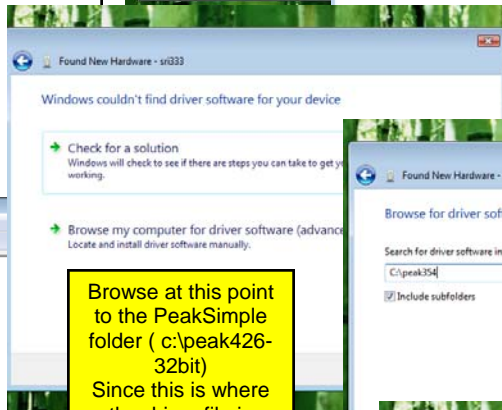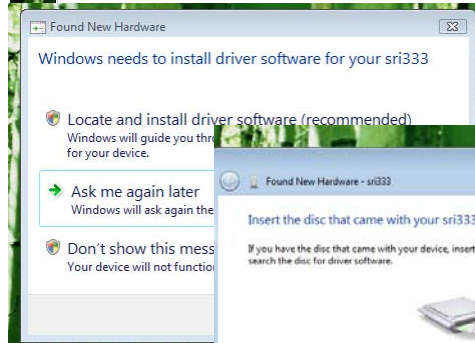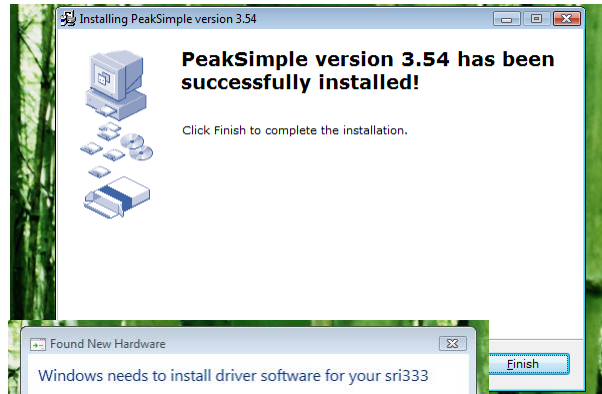At the end of the process You can verify that the driver was installed by looking at the "Device Manager" screen in the "Control Panel"
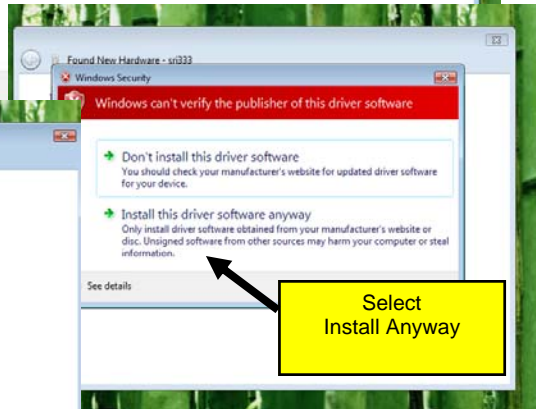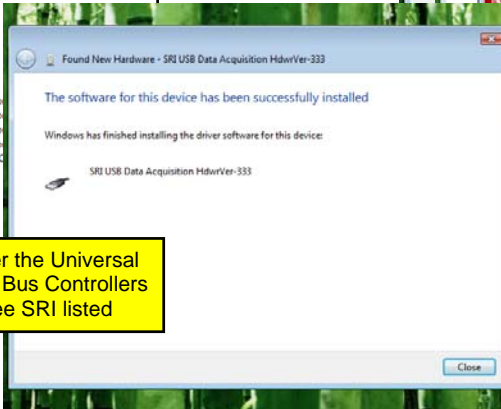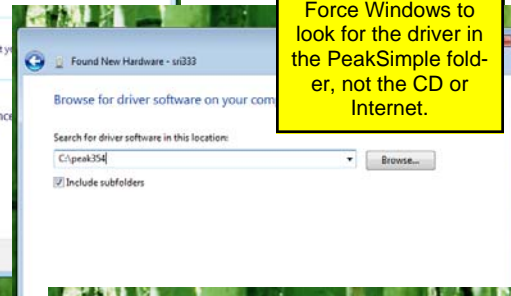
Installing PeakSimple version 3.54

PeakSimple version 3.54 has been successfully installed!

Click Finish to complete the installation.

Finish

Found New Hardware

Windows needs to install driver software for your sri333

Locate and install driver software (recommended)
Windows will guide you through for your device.

Ask me again later
Windows will ask again the

Don't show this mess
Your device will not functio

Found New Hardware - sri333

Insert the disc that came with your sri333

If you have the disc that came with your device, insert it now. Windows will automatically search the disc for driver software.

Show me other options.

Found New Hardware - sri333

Windows couldn't find driver software for your device

Check for a solution
Windows will check to see if there are steps you can take to get your working.

Browse my computer for driver software (advance
Locate and install driver software manually.

Found New Hardware - sri333

Browse for driver software on your com

Search for driver software in this location:

C:\peak354

☑ Include subfolders

Browse...

> Force Windows to look for the driver in the PeakSimple folder, not the CD or Internet.

> Browse at this point to the PeakSimple folder (c:\peak426-32bit)
> Since this is where the driver file is

Device Manager

File Action View Help

- HUGH-PC
  - Computer
  - Disk drives
  - Display adapters
  - DVD/CD-ROM drives
  - Floppy disk drives
  - Human Interface Devices
  - IDE ATA/ATAPI controllers
  - Imaging devices
  - Keyboards
  - Mice and other pointing devices
  - Modems
  - Monitors
  - Network adapters
  - Portable Devices
  - Ports (COM & LPT)
  - Processors
  - Sound, video and game controllers
  - Storage controllers
  - System devices
  - Universal Serial Bus controllers
    - Fujifilm DSC
    - HP PSC 1200 Series (DOT4USB)
    - Intel(R) 82801G (ICH7 Family) USB Universal Host Co...
    - Intel(R) 82801G (ICH7 Family) USB Universal Host Co...
    - Intel(R) 82801G (ICH7 Family) USB Universal Host Co...
    - Intel(R) 82801G (ICH7 Family) USB Universal Host Co...
    - Intel(R) 82801G (ICH7 Family) USB2 Enhanced Host C...
    - Logitech USB Camera (Messenger)
    - Multimedia Card Reader
    - SRI USB Data Acquisition HdwrVer-333
    - TEAC USB Floppy
    - USB Composite De...
    - USB Printing Support
    - USB Root Hub
    - USB Root Hub
    - USB Root Hub
    - USB Root Hub
    - USB Root Hub

> Under the Universal Serial Bus Controllers See SRI listed

Found New Hardware - SRI USB Data Acquisition HdwrVer-333

The software for this device has been successfully installed

Windows has finished installing the driver software for this device:

SRI USB Data Acquisition HdwrVer-333

Close

Windows Security

⊗ Windows can't verify the publisher of this driver software

→ Don't install this driver software
You should check your manufacturer's website for updated driver software for your device.

→ Install this driver software anyway
Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or steal information.

See details

> Select Install Anyway

For Windows 7 or Windows 8 64bit operating systems, the driver should load automatically if the computer is connected to the Internet when the USB cable is first plugged in. If not (or if it's a 32bit version of Win7/8), you will have to load the driver manually.
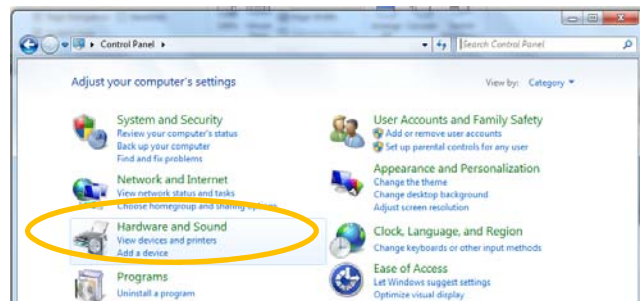
Click the Windows start button
Click Devices and Printers
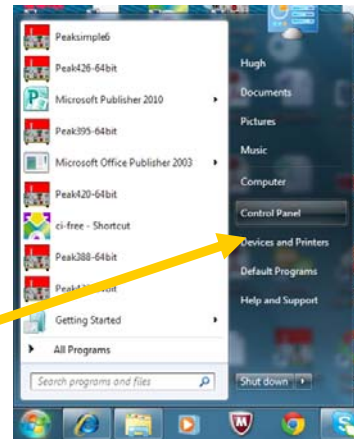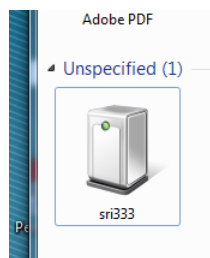
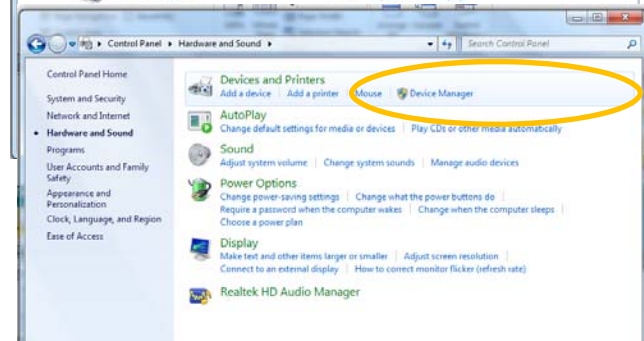If the Icon for PeakSimple has a yellow exclamation mark then the driver was not properly installed. If the icon looks like the one at right the driver has been installed correctly.
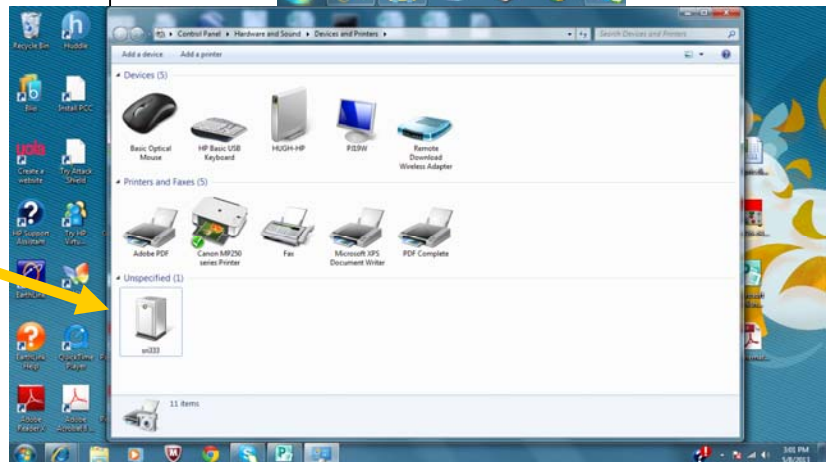
To manually install the driver:
Click the Windows start button
Click "Control Panel"
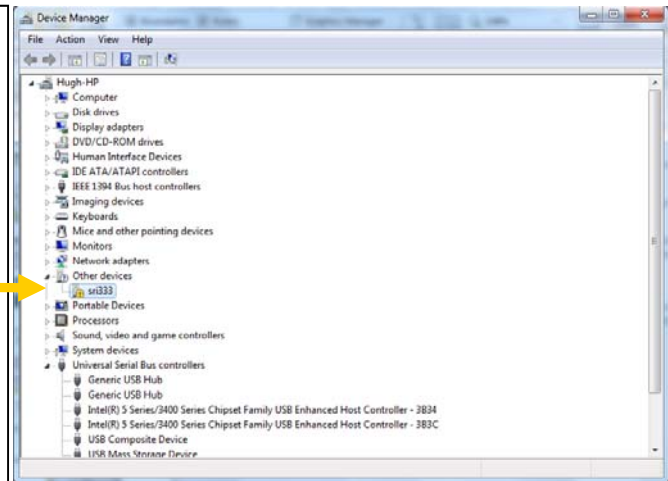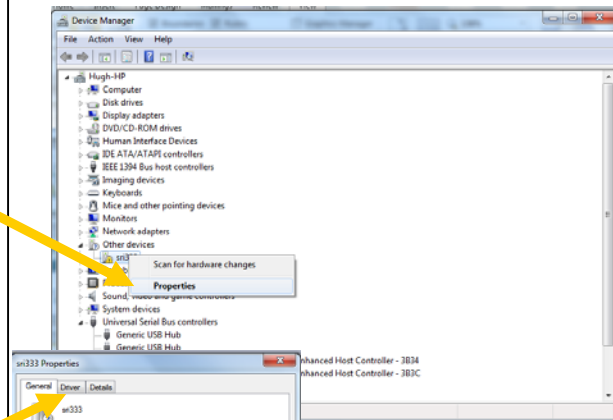
Then click "Hardware and Sound"
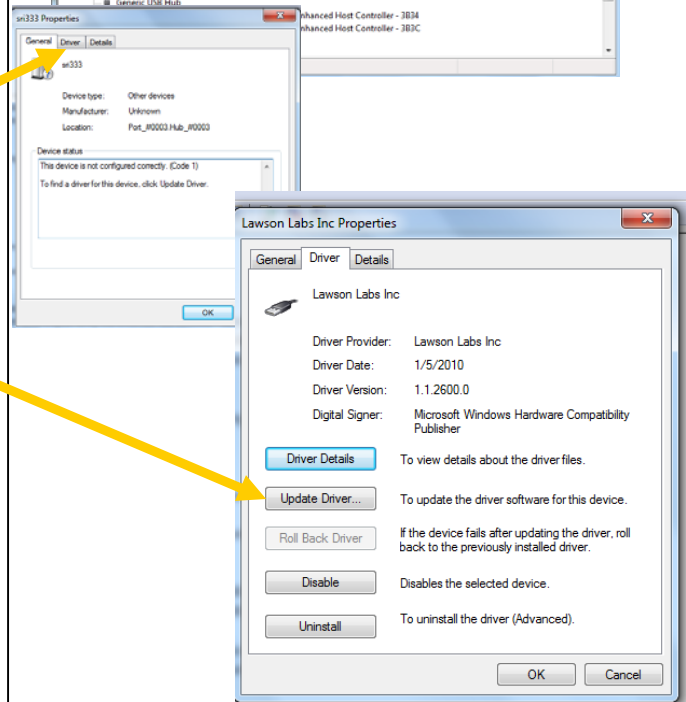
Click Device Manager

If the driver was installed incorrectly, you will see the sri333 driver listed in the wrong place (under Other Devices) and with a yellow mark.

Right click on sri333 and then click Properties.

Click the Driver tab at the top and then Update Driver.

Do not search the Internet. Click "Browse my computer"

Use the Browse button to select the PeakSimple folder on the C:drive. Here it is shown to be Peak426-64bit.

The driver is located in the PeakSimple folder on the C: drive. It is not located on the CD.

Do not browse any deeper than the folder. It is not necessary to find the actual driver file, just the folder it is located in.
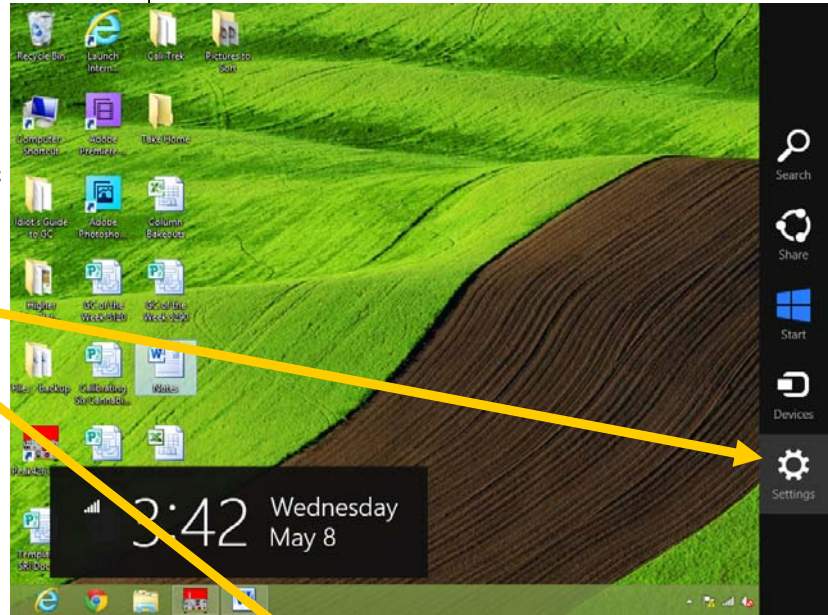
If the driver installation is successful, then you will see the Lawson Labs Inc. message under the USB section of the Device Manager screen.
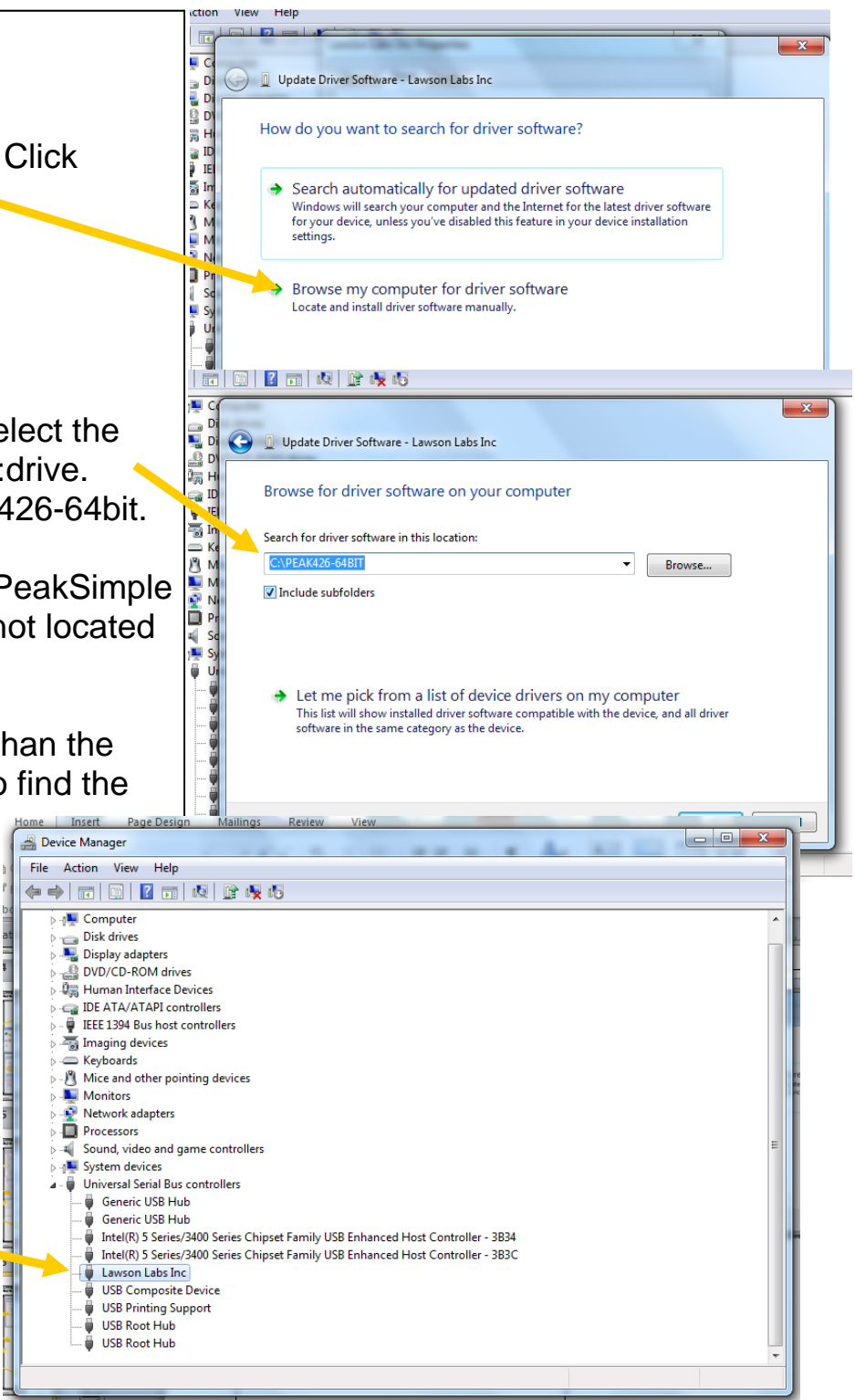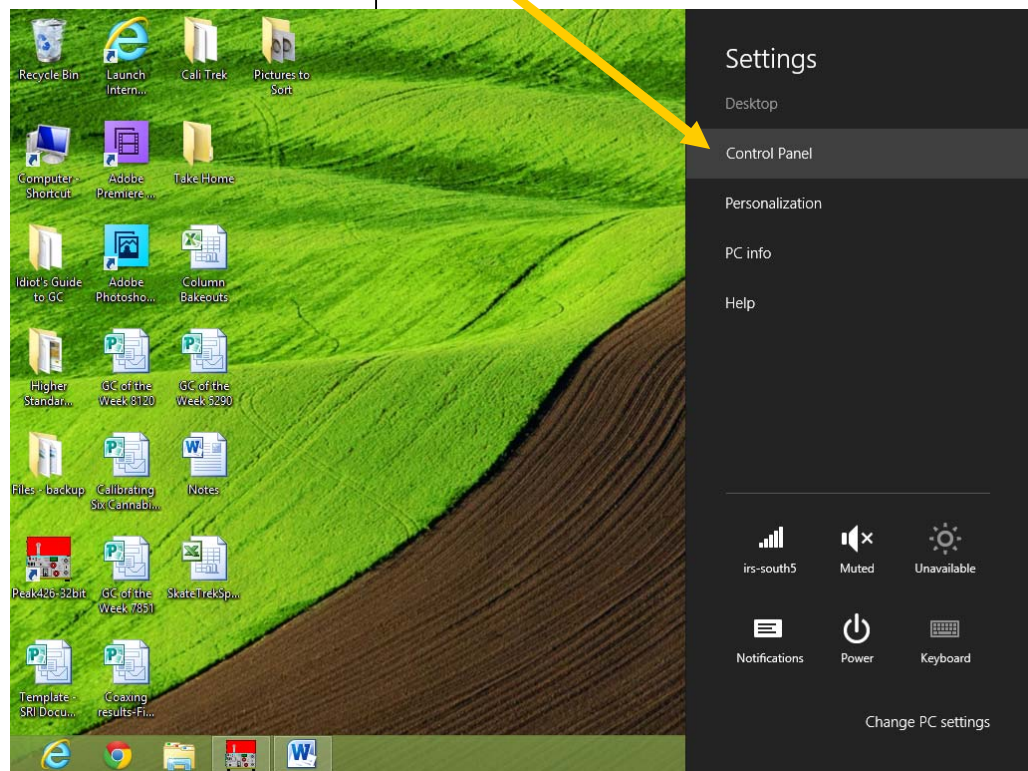
To verify that the drivers have been installed on **Windows 8 computers** move the mouse cursor to the lower-right side of the screen to access the Start menu. Select the "Settings" button and open up the "Control Panel" from there.

From the Control Panel, the process is the same as it would be for Windows 7.

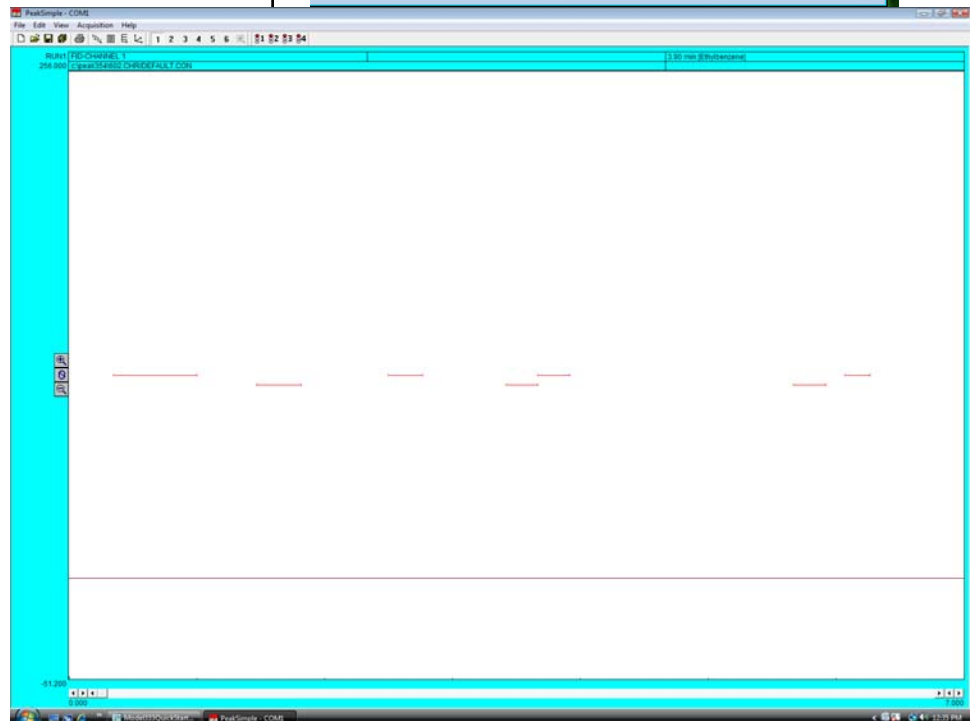**Now that the driver has been installed:**

Click on the PeakSimple icon (which will be somewhere on the Windows Desktop screen) to launch PeakSimple.

This warning will appear (on 32 bit systems), but click "Run " anyway.

You can un-check this box to avoid this message in the future.
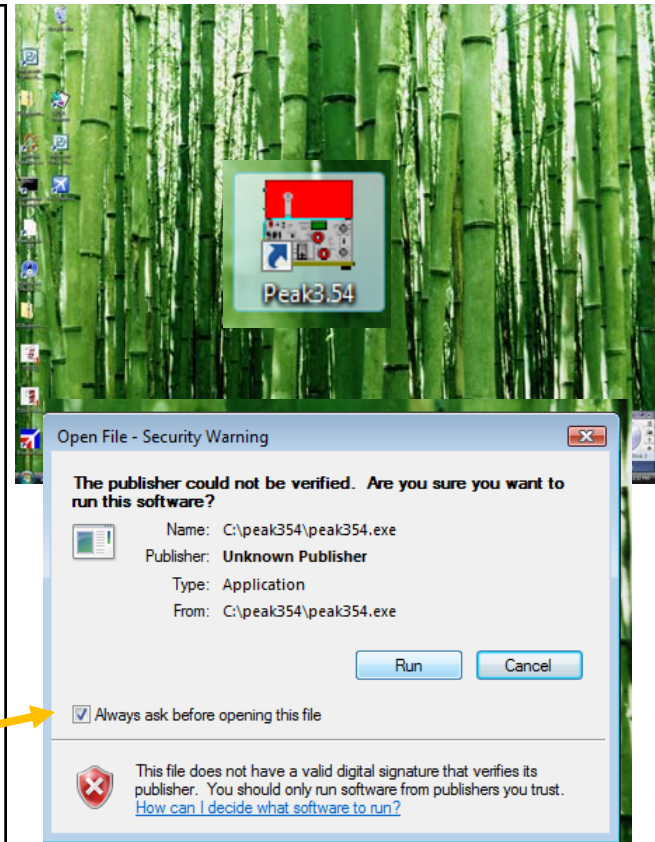
The PeakSimple screen will look like this.

Use your mouse to click on "Edit" and then "Overall…"

In the "Overall… " screen enter the "Board Type" (333) and then the "USB device number".

The USB device number is a unique number which identifies this particular 333 board. Because each 333 board has a unique number you can operate several of them independently on one single computer . The USB device number is printed on the back of the 333 box and also on the USB controller chip on the 333 board. On a GC or HPLC, the device I.D.# is printed next to the USB jack on the side on the instrument.

When you click "OK" you will see a box on the top left of the screen which displays the calibration conversation PeakSimple has with the Model 333 board.
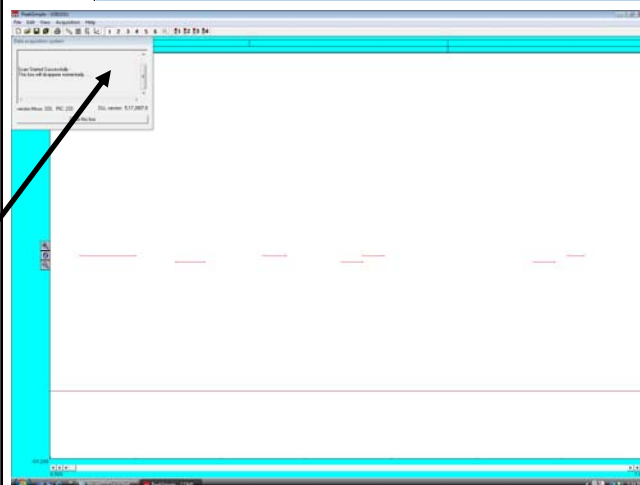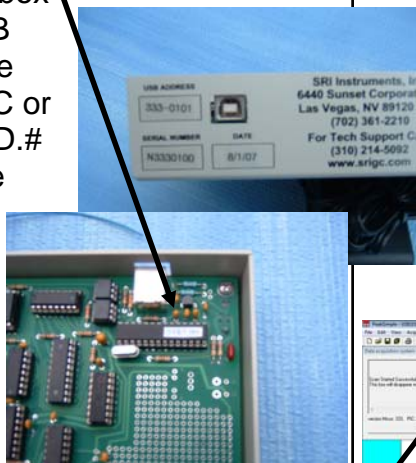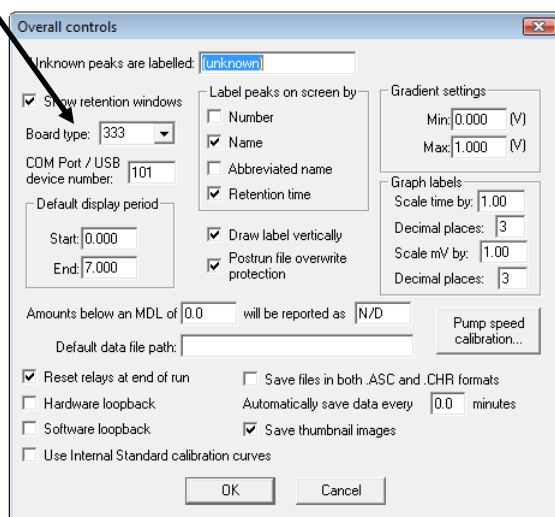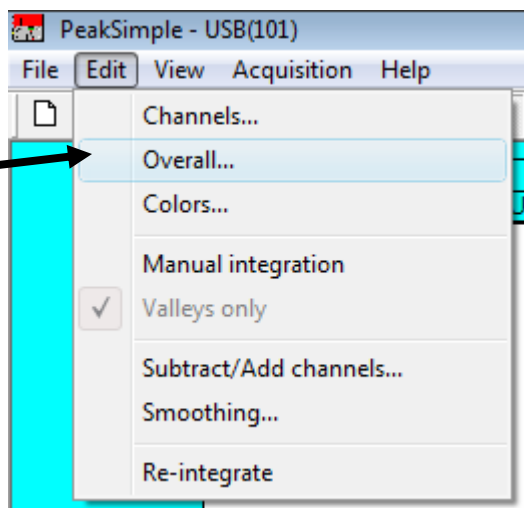
Use your mouse to click on "Edit" and then "Channels" or just click on the "Channels Icon" which looks like the numbers 1,2,3,4.

In the "Channels" screen verify that the "Active" checkbox for channel 1 is checked.

Then click "OK" to get back to the main screen.

If PeakSimple has successfully established communication with the 333 board, then the word " STAND BY" will appear on the top right of the screen with the detector signal value (in millivolts mV) just to the right. In the example to the right the signal is 212.693 millivolts. This number will change slightly every second because of the system noise.

Click "File" and then "Save All" or just click the icon which looks like a stack of floppy disks to save everything you have entered so far. If you forget to do this you will have to repeat some of the information you have entered like the USB device ID.# next time you launch PeakSimple. Click Save All anytime you make changes to ensure PeakSimple remembers your changes.
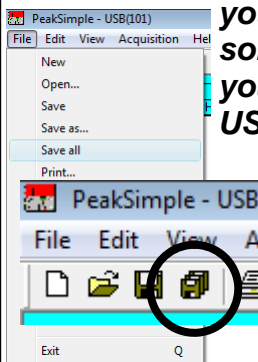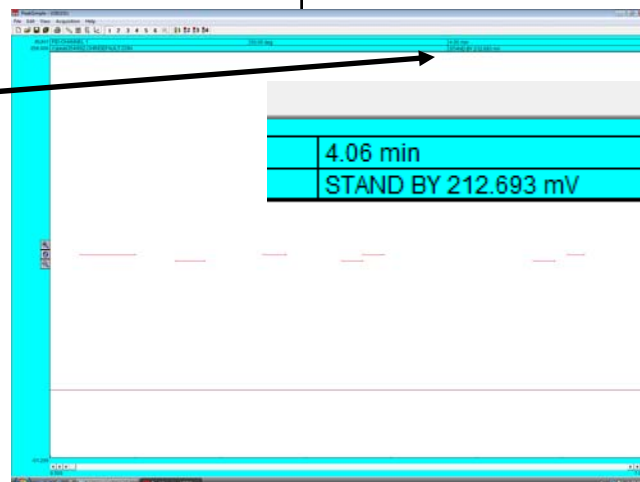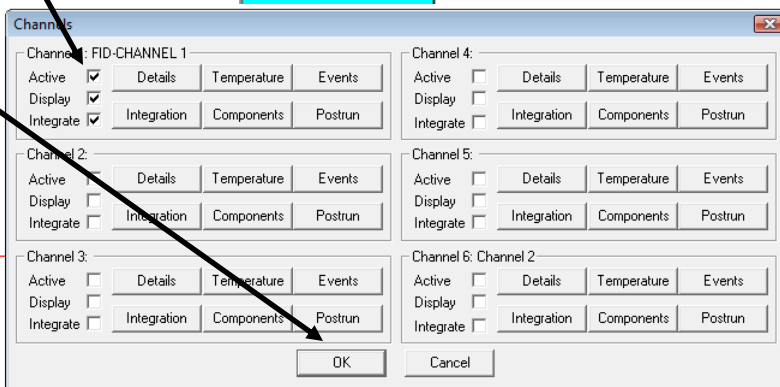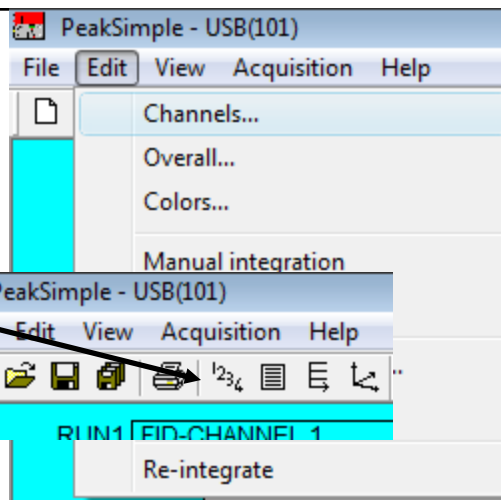
If your 333 is installed in a SRI GC, then all the wire connections will have been made already at the factory.

Connect the detector signal to the 333 board using the terminals labeled In+ and In-. Choose the "Integrator", "Computer" or "Chart Recorder" output from your system. On attenuation 1, the " Chart Recorder" output is the same as the " Integrator" or "Computer" output.

Connect the "Remote Start" output from your instrument to the "RS" (remote start) and GD (ground) terminals on the 333 board. **This step is OPTIONAL, you do not have to use the Remote Start feature..**

Connect the TTL (relay) outputs to your system. For example if you wanted to actuate a Valco valve on your GC you could use the TTL outputs to trigger the valve. In the photo above right, TTL (relay) outputs C and F have the yellow and blue wires connected to them.
This step is also OPTIONAL, you do not have to use the TTL (relay) outputs..
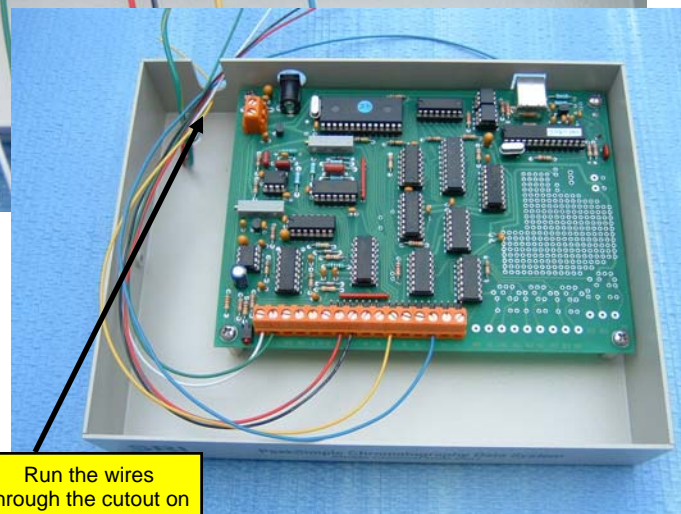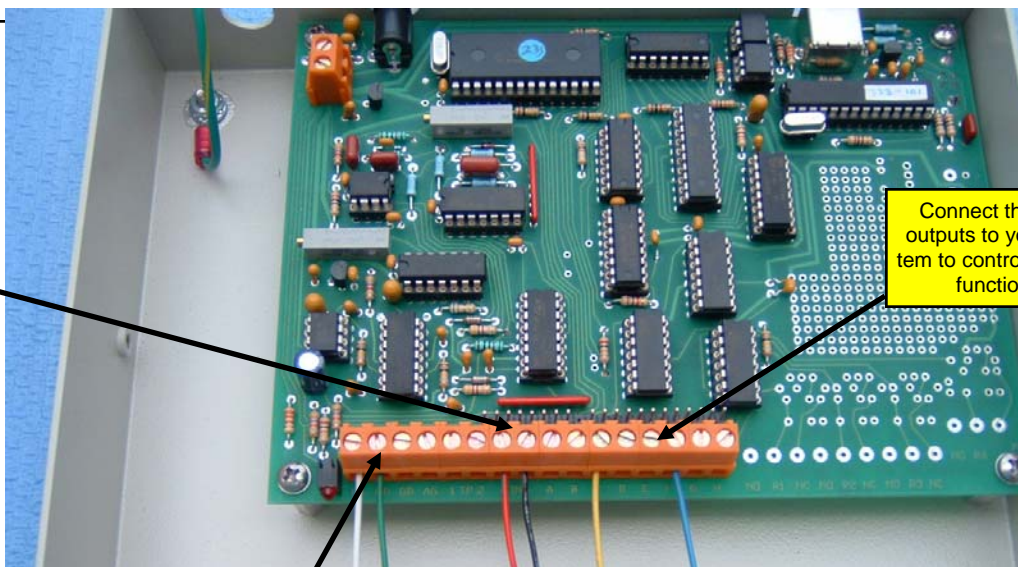
Connect the TTL outputs to your system to control various functions

Run the wires through the cutout on the rear of the box,

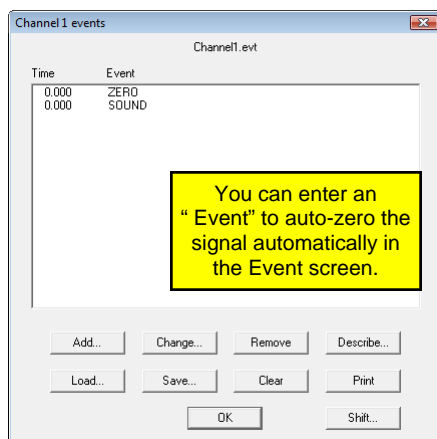Press the "Spacebar" on your computer's keyboard to start the Run. (there are several ways to start the run including a "Remote Start"). The word
" Stand By " will change to "Running" and the data line will be drawn on the strip-chart area of the main screen.

0.05 min
RUNNING 0.808 mV

The horizontal lines in the middle of the screen are the "Retention Windows" which is how the peaks are identified
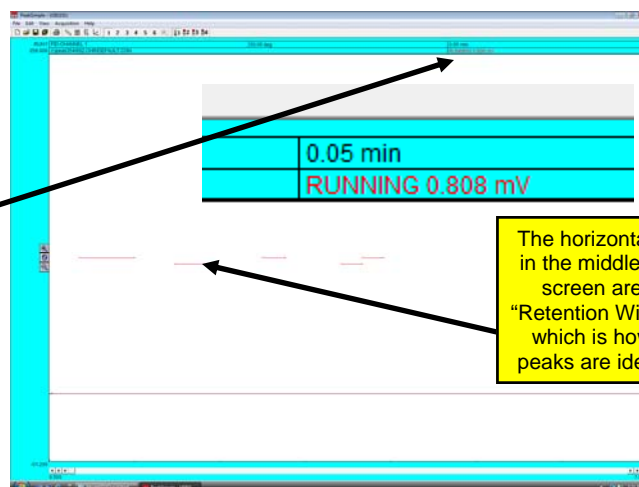
Click the Auto-Zero button to bring the signal down to 0.00 millivolts (there are several ways to auto-zero the signal including an "Event" in the Event Table which auto-zeros the signal automatically at the beginning of the Run).

Channel 1 events

Channel1.evt

Time	Event
0.000	ZERO
0.000	SOUND

You can enter an " Event" to auto-zero the signal automatically in the Event screen.

Add... Change... Remove Describe...
Load... Save... Clear Print
OK Shift...

Auto-Zero button

The + and- buttons control the y-axis display limits

Channel 1 details

Description: FID-CHANNEL 1   End time: 7.000 min

Sample rate
○ 1 Hz
○ 2 Hz
○ 5 Hz
○ 10 Hz
○ 20 Hz
○ 50 Hz

Default display limits
Max: 256.000 mV
Min: -51.200 mV

☑ Remote start

Timebase
● 1
○ 2
○ 3
○ 4

Control by
● Temperature
○ Pressure
○ Gradient

☐ Subtract baseline in channel: 1
☐ Overlay data in channel: 1
Relative retention shifts are based at: 0.000 min
Unretained solute time: 0.000 min
☐ Reverse polarity   ☐ Absorbance mode
Multiply norm area % results by 1.0000

Datalogger mode
☐ On
Offset: 0.000
Gain: 1.000
Decimal places: -1
(-1 for autoranging)

OK   Cancel

The " Run " will end at the time specified in the Channel Details screen
unless you end it earlier by depressing the " End " key on the keyboard.

For more information download the PeakSimple tutorials on www.srigc.com or call SRI Tech Support at 310-214-5092