

## SIGNALVIEW INSTALLATION

- 1) Select a PC with Windows 98, 2000 or XP, preferably with >256MB of RAM and >1 GHz CPU.
- 2) Begin with a fresh restart of the Computer or manually close all applications. This is not critical for the installation, but more important for the performance of the SignalVIEW software since it may require the majority of the PC's CPU time to operate.
- 3) Double click "setup.exe" in the "SignalVIEW and LabVIEW Runtime Engine Installer" folder to install the SignalVIEW and the National Instruments LabVIEW Run Time engine. This enables the PC to run the SignalVIEW executable.

## CONNECTIONS FROM CABLE TO DEVICE

On the cable connector, you will find a labeling diagram indicating the color of the serial connection wires.

- 1) Connect the cable's ground wire to the device's ground (pin 1).
- 2) If you are using the SQ-USB2-TTL cable (not the SQ-RS232-TTL cable), you may source 5.0V from the V+ wire directly. In this case, connect the V+ wire to the Vcc pin on the device (pin 5). If your cable does not have a wire marked V+, then you must instead connect an external power supply of 3.7V to 5.8V to the power and ground pins of the device. In this case, be sure to connect ground from the power supply to the device as well to the ground of the serial communication cable.
- 3) Connect the Tx wire from the cable to the Tx pin on the device (pin 2).
- 4) Connect the Rx wire from the cable to the Tx pin on the device (pin 3).
- 5) Connect other pins as necessary to V+ or GND to select various options for your device such as baud rate or output mode.

## SERIAL OR USB CABLE INSTALLATION

- 1) If you are using the SQ-RS232-TTL cable, simply plug it into a working COM port on your computer.
- 2) If you are using the SQ-USB2-TTL cable, you must install the SQ-USB2-TTL drivers.
  - a. After you plug the SQ-USB2-TTL cable into your computer, direct the "Found New Hardware Wizard" to the location where you have downloaded and extracted the SQ-USB2-TTL drivers. These drivers are included in all installation Zip files and are also available as a separate download. Two separate iterations of the Hardware Wizard are necessary to install both components of the driver, one for the Virtual COM Port and one for the USB Root Hub Controller. The Virtual COM port operates exactly like a normal RS232 COM port, but across the USB bus.
  - b. It will be necessary for you to find out the number the Virtual COM Port installation process chose for your computer. You can find the information about this by going to Control Panel→System→Hardware (tab)→Device Manager→Ports. Verify that a new port (i.e. Port 3, 4, 5 etc.) has been added and note its number for future use.

## SOFTWARE SETUP:

- 1) Once the SignalVIEW installation is complete, you can open "SignalVIEW.exe" from the Start menu or from the Programs/SignalVIEW directory.

- 2) Connect the SQ-RS232-TTL or SQ-USB-TTL cable.
- 3) Select the correct COM port used by the host PC within the “Communication” tab of SignalVIEW. If you are using the SQ-RS232-TTL cable, this is generally Port 1 on laptops, and 1 or 2 on desktops. If you are using the SQ-USB2-TTL cable, this may be Port 3, 4, 5 etc.
- 4) Follow the instructions seen on the top of the “Sampling and Logging” tab of SignalVIEW to view data from the device in real time.

## TROUBLE SHOOTING:

### No data seen on the screen:

- 1) Verify that you have selected the correct COM port for your PC. You can find information about this by going to Control Panel→System→Hardware (tab)→Device Manager→go down to Ports and verify that (a) your COM port is visible and (b) that it is numbered as expected.
- 2) Check to make sure the application is running. This will be indicated by the Green indicator box being illuminated to the right of the Run button.
- 3) Check that the SQ-RS232-TTL or SQ-USB-TTL cable is securely plugged in to the PC and that no connections are being shorted out against metal.
- 4) Try pressing “Stop”, wait for the Green indicator box to turn grey, and then press “Run” again.
- 5) Under the Performance tab, turn on the “Performance graphs” using the toggle switch.

### *Are the displays scrolling along or are they stopped?*

- a. **If stopped** (i.e. Performance displays are on, but not scrolling)
  - i. Check the cables.
  - ii. Restart the computer and try again.
  - iii. If using the SQ-RS232-TTL cable, try another computer or COM port
  - iv. If using the SQ-RS232-TTL cable, check that the COM port is actually working by doing a Loopback Test as follows:
    1. Open HyperTerminal (Start>Accessories>Hyper Terminal)
    2. Select the appropriate COM port, Baud = 115,200, Flow control = Off, No parity.
    3. Find a standard serial cable and connect the RX and TX (pin 2 and 3) with a wire across the female side and plug the male side into the Host PC’s COM port.

4. Select Call > call from the Hyper Terminal menu.
  5. Type a character on the Hyper Terminal screen. If the character is not displayed when you type, then (1) the wrong COM port is selected; (2) the COM port is not working; or (3) pin 2 and 3 on the serial cable haven't been connected together correctly.
- b. **If not stopped** (i.e. Performance displays are scrolling):
- i. Check if the "Checksum match?" and the "Valid data?" indicator lights are green on the "Performance" tab. If they are not green, contact SignalQuest for more assistance.

### Slow or latent display on the screen:

If the PC is slow or has insufficient memory, or if many application are also running concurrently, the screen update may be slow or jerky. To see how well the PC is processing the data go to the Performance tab in SignalVIEW and turn on the "Performance graphs" using the toggle switch.

- a. If the Backlog display is growing, this means the PC can't keep up with the data coming into SignalVIEW from the device. You will need to lower the sample rate or switch to a higher performance machine or close background applications that are slowing down the CPU.
- b. If the Backlog is very large but not growing, it probably means that the device was sending data to the serial buffer while SignalVIEW wasn't running. This can occur if you the cable is disconnected before the Stop command was sent from SignalVIEW. Restart the program and the backlog will clear back down to near 0.
- c. If the Cycle time is jumping around, or the Backlog is growing, make sure that all applications (even ones that automatically start up when the PC boots) are shut down. Windows has a tendency to run a great deal of unnecessary applications in the background that can take CPU time and hence cause the Cycle time and the Backlog to vary. If the Backlog generally clears back to near 0 after a short time, then there is no problem. No data is being lost even if the Cycle time and Backlog are fluctuating.

## CHANGES HISTORY

### Rev 3.4C → Rev 3.4D

- 1) Improved handling of different serial ports
- 2) Enabled changing port number without exiting and restarting SignalVIEW

### Rev 3.4D → Rev 3.4E

- 1) Cosmetic changes + added 3 display windows for simultaneous use.

### Rev 3.4E → Rev 3.5

- 1) Cosmetic changes + make stopping and starting more robust



## **FURTHER INFORMATION**

For technical assistance, pricing, delivery, and ordering information, please contact SignalQuest at (603) 338-6266. For updates on this and other documents, visit our website at: [www.signalquest.com](http://www.signalquest.com)

## **NOTICE**

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