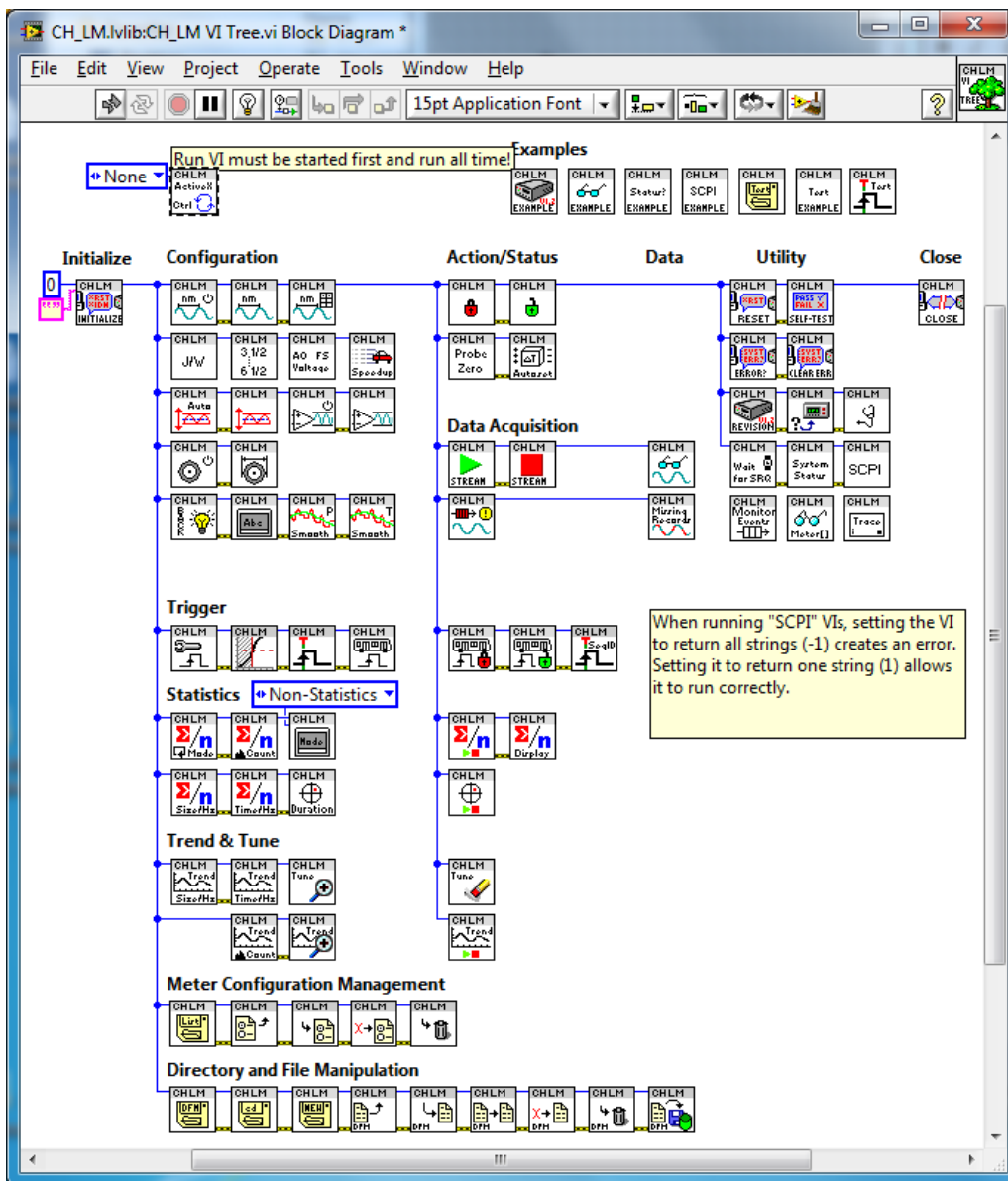


Getting Started Guide - LabVIEW drivers for the LabMax meters

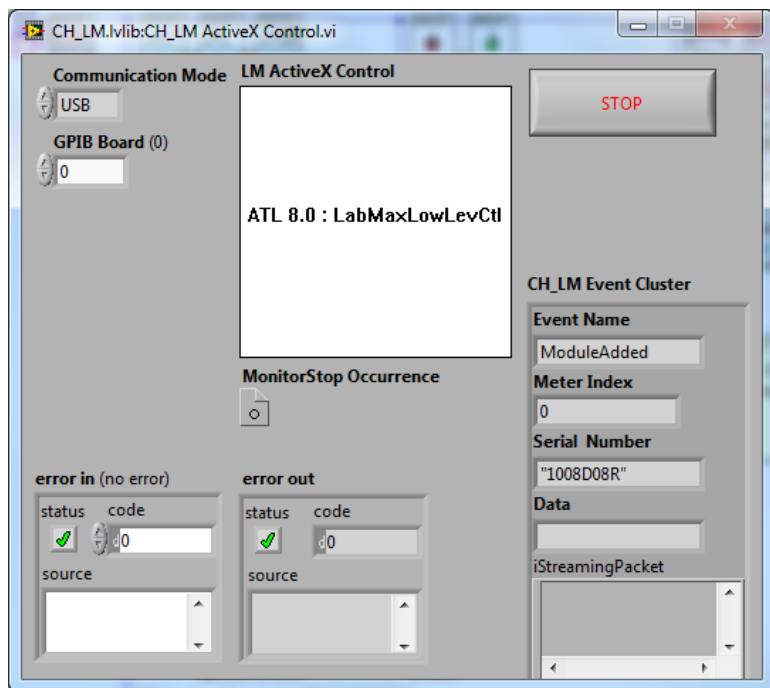
LabVIEW can be used to communicate with the LabMax meters through the RS232 or USB interfaces as well as the optional GPIB port if the GPIB model is being used. So any of those interface modes can be incorporated into a LabVIEW program. We supply LabVIEW drivers for these meters that are included on the installation CD that comes with the meter. If you don't have the installation CD that came with the meter, you can download the software installation and LabVIEW drivers off our website from the following page...

<http://www.coherent.com/Products/index.cfm?1937/Laser-Measurement-Support>

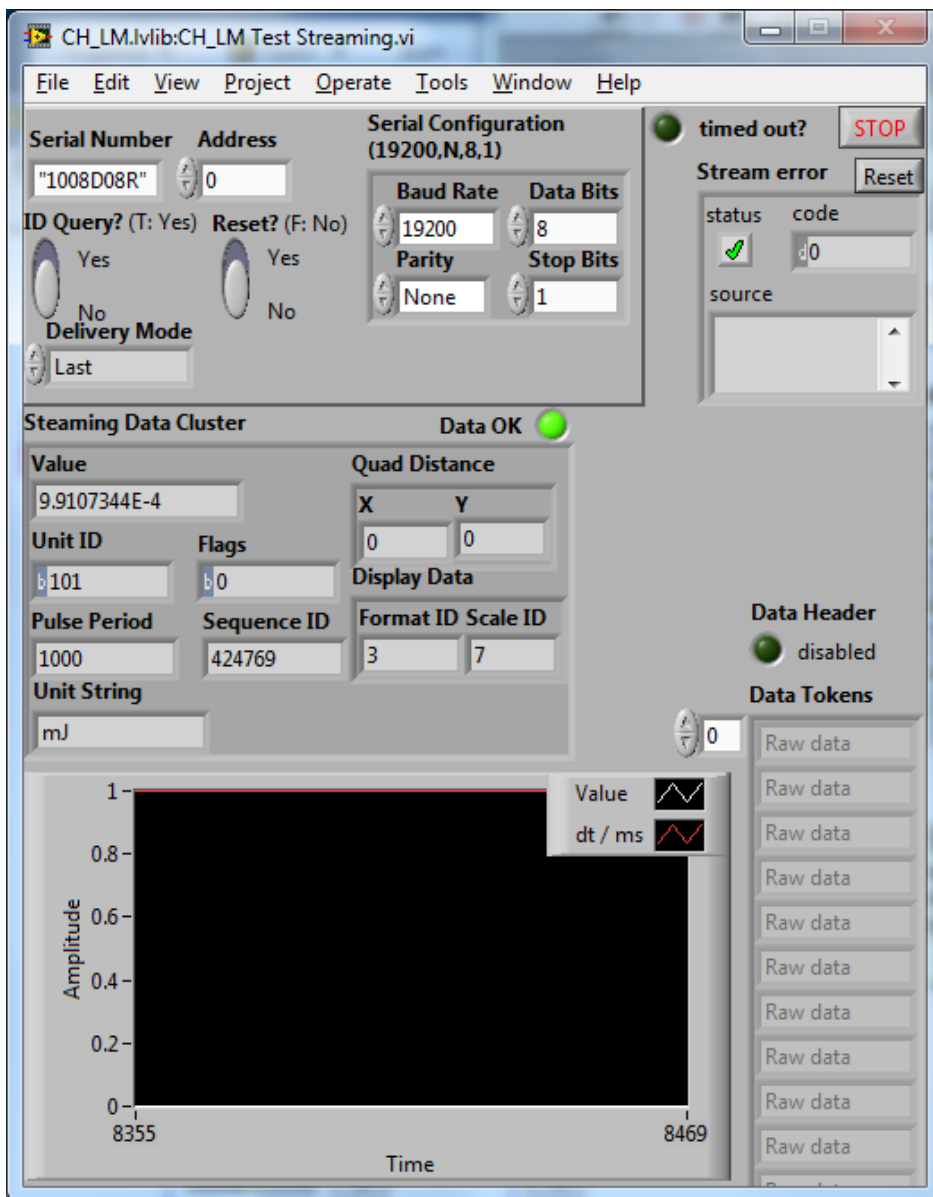
Inside the LabMax LabVIEW folder you can select between a set of drivers for LabVIEW versions 7.1 or 8.2. If you have any version of LabVIEW newer than 8.2, then you'll want to use the 8.2 folder. From there, you will want to go into the "CH_LM" folder. Inside this folder, there is a VI called "CH_LM VI Tree.vi". This "VI Tree" is typically a good place to start since it lays out the most commonly used VIs for this meter. An image of the VI Tree is shown below.



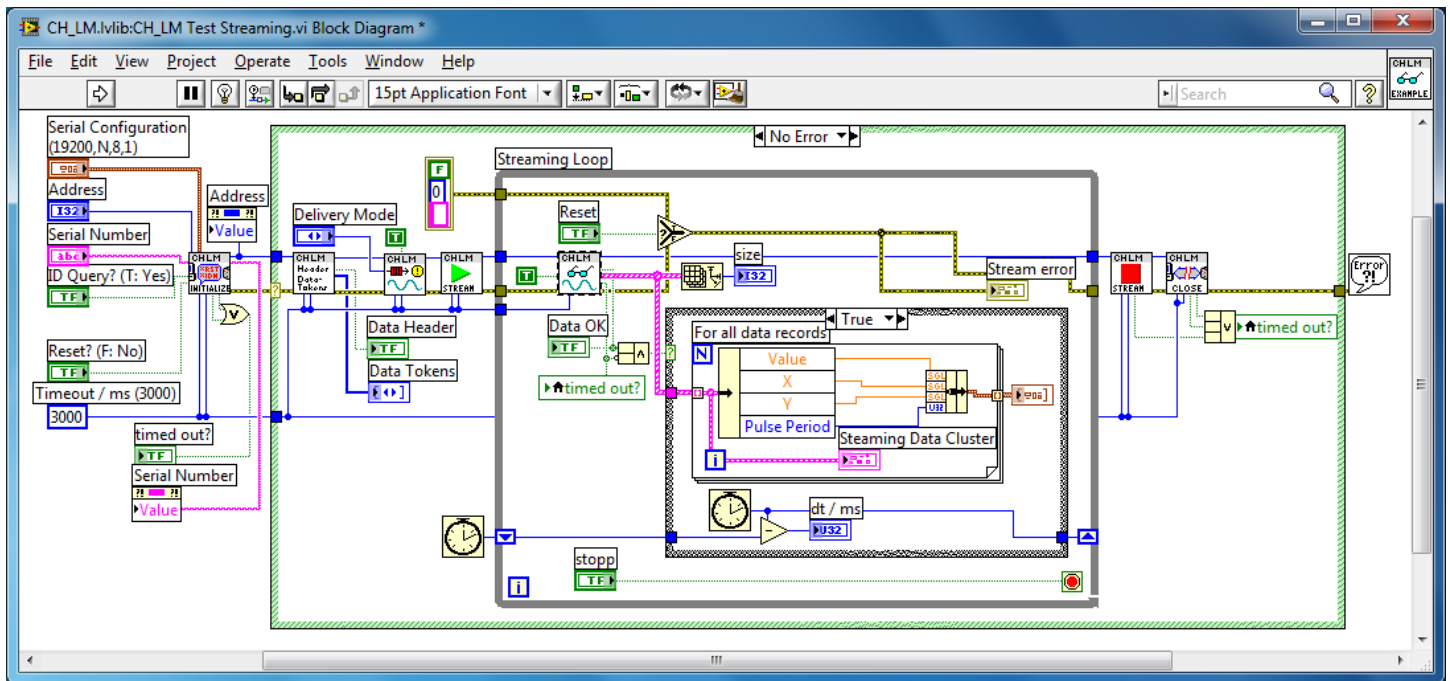
From this VI Tree, the first VI to notice is the "ActiveX Control" VI at the top left corner. This VI is needed to establish a connection with the meter either through the USB, RS232, or GPIB ports on the LabMax. From this VI, you'll just need to select the type of communication mode being used and then press the "run" button. If using the USB communication mode, the serial number of the meter should automatically populate into the VI when it is run, like what is shown in the image below. If using the RS232 or GPIB connections, the serial number will populate after assigning the meter's address, as shown in the next step.



After successfully connecting through the ActiveX Control VI, another good VI to start with is the "Test Streaming" VI to collect data from the meter. If you are using the USB port on the LabMax and only have one meter connected to the computer, you'll want to enter an address of "0" at the top of this VI. If additional meters are connected through USB, the address can be incremented for each meter being used. If connecting to the meter through the RS232 port, then the COM port being used on the computer will need to be set for this address. (For example, COM port 3 would have an address of "3" in this VI.) You do not have to enter the serial number of the meter as this will be automatically populated when the VI establishes a connection with the meter. As long as the meter is currently collecting readings, this VI will continue to stream data out of the meter. If the data collection by the meter stops, then this VI will time out. So it is important to make sure the meter is actually collecting live data when trying to run this VI. It will return an error message if no data is being collected by the LabMax. The ActiveX Control VI will need to remain running at all times in order to maintain a connection with the meter. The image below shows a successful connection using a meter connected through the USB port.



This Test Streaming VI is a good example to look through because it takes some of the other commonly used VIs that are included in the VI Tree and connects them together in a sequence that makes data collection from the meter possible. This uses some of the required VIs for data collection, like the “Initialize” VI, the “Measurement Delivery Mode” VI, the “Measurement Fetch Data” VI, and others that are typically needed to collect data from the meter into LabVIEW. An image of the block diagram for the Test Streaming VI is shown below.



There are many other VIs that can be run from the VI Tree to control and collect data from the LabMax. As long as the ActiveX Control VI is running and has established a connection with the meter, then any of the other VIs from the VI Tree should work as well.