Application Note

Chroma Instrument Drivers for NI LabVIEW Development System Installation Guide

All LabVIEW Drivers

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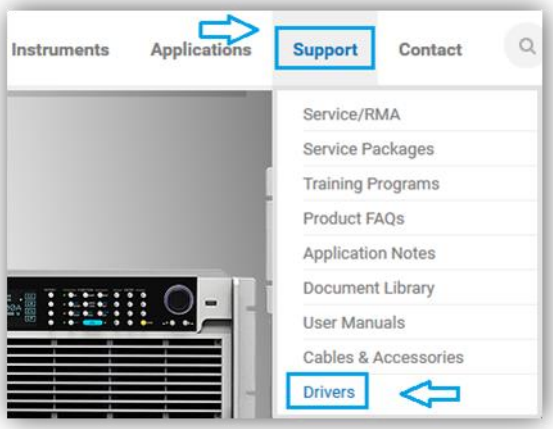
Chroma Systems Solutions, Inc.

Chroma Instrument Drivers for NI LabVIEW Development System
Title: Installation Guide
Product: All LabVIEW Drivers

This document will guide you through the steps for downloading and installing Chroma Instrument Drivers for use with the National Instruments LabVIEW Development System on a Windows Operating System.

NOTE: *For illustrating this guide with an example, the following steps are listed for downloading and installing the National Instruments LabVIEW Instrument Driver IVI Type for the* ***Chroma 61500/61600 Series Programmable AC Power Sources***.

1. Go to the website **http://www.chromausa.com/**, click on the "***Support***" context menu at the top of the website and click on the "***Drivers***" option.

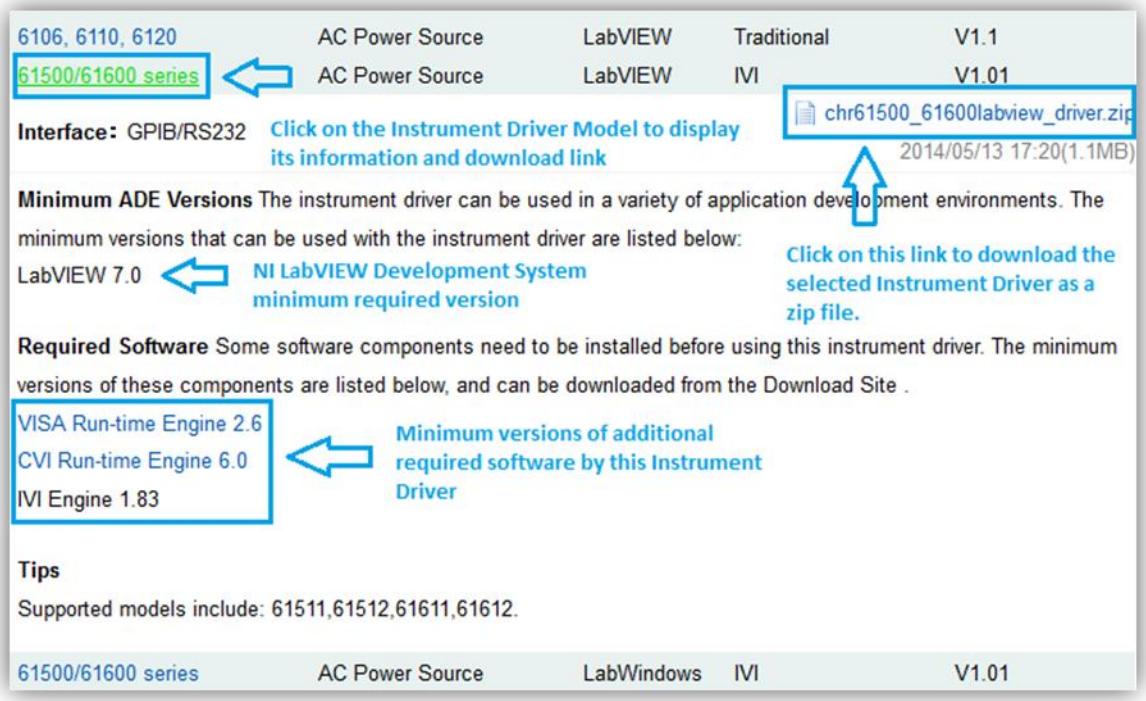


2. Search for the instrument driver(s) required from the list of all available Instrument Drivers and click on its model to display the information of the instrument driver selected. To download the selected driver, click on the link of the instrument driver name that is located at the right side.

   Instrument Drivers for a particular Chroma Instrument Series may be available either for LabVIEW, LabWindows or both Development Environments, and their type may be IVI or Traditional. For this guide will use Instrument Drivers for LabVIEW Development System.

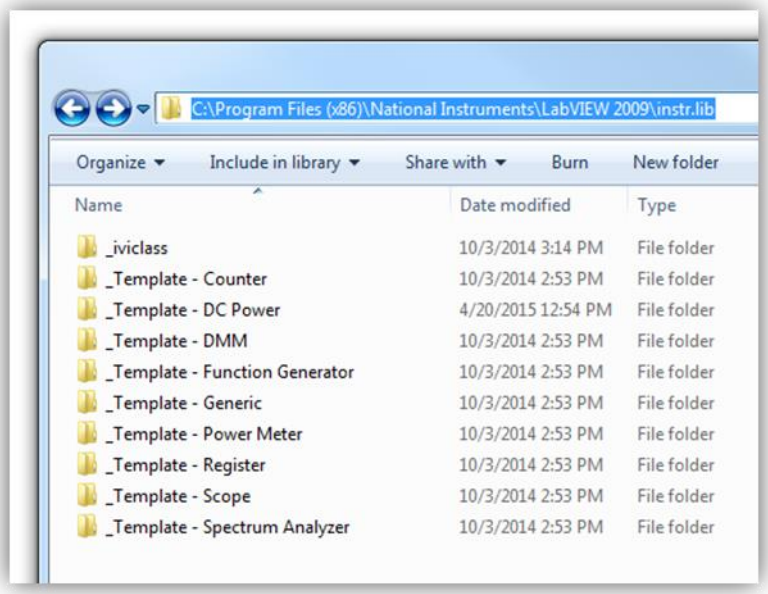
   The information displayed for each instrument driver may contain:
   - The supported Interfaces by the selected Instrument Driver (*can be GPIB, RS232, USB, ETHERNET*)
   - Minimum version of the LabVIEW Development System supported by the Instrument Driver
   - Minimum versions of additional required software by the selected Instrument Driver, which may be as follows:
     - NI VISA Run-Time Engine
     - NI CVI Run-Time Engine
     - IVI Compliance Package

NOTE: This additional software has to be installed before use of the Instrument Driver(s) selected for proper functionality. *This software packages can be downloaded from the National Instruments website www.ni.com (a login account may be required for downloading software from the NI website).*

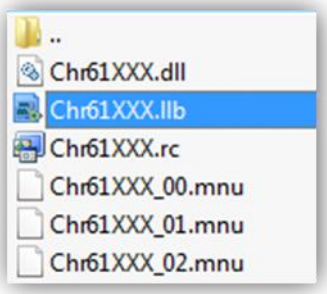


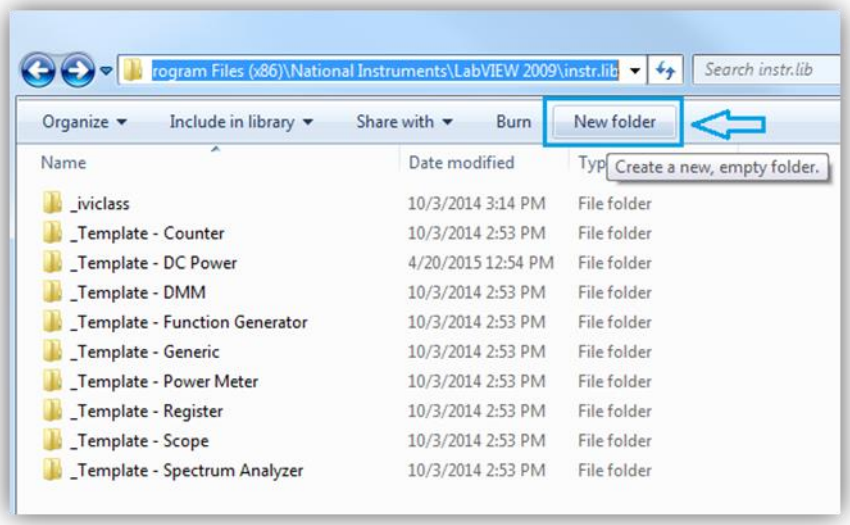
3. Locate and open the Program Files directory of the National Instruments LabVIEW Development System that will be used for development. It may be located at one of the following paths depending on the Operating System version (32-bit or 64-bit), after that, open the "***instr.lib***" folder:

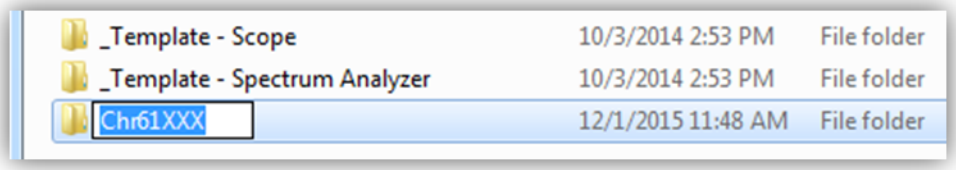
   "***C:\Program Files\National Instruments\LabVIEW 20xx\instr.lib***"
   Or "***C:\Program Files (x86)\National Instruments\LabVIEW 20xx\instr.lib***"



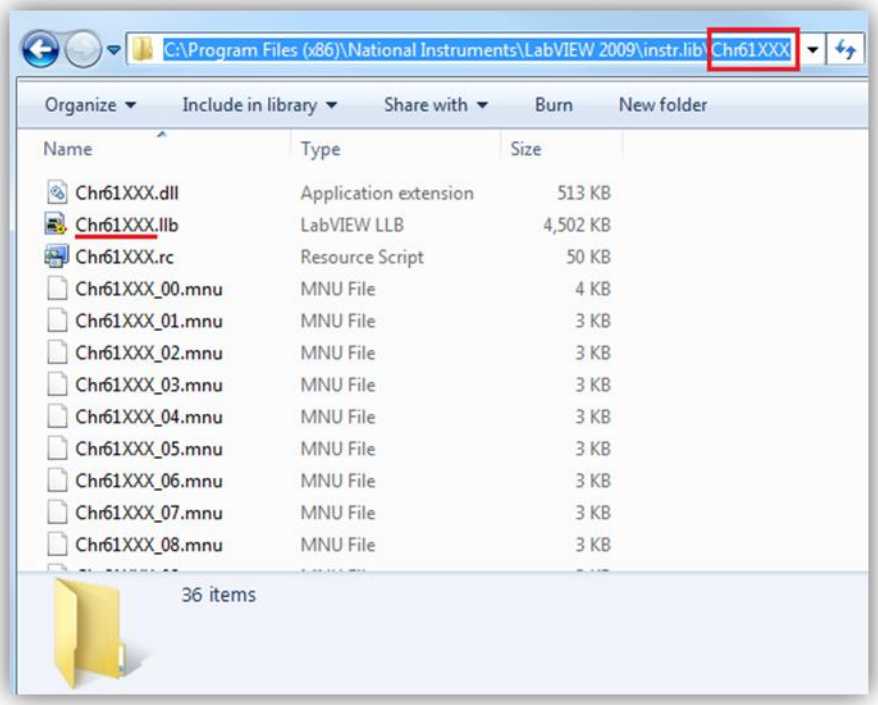
4. Once the Instrument driver has been downloaded, open the zip file and find the LabVIEW Library file (.llb). After that, **create a new folder with the same name as the name of this library file .llb in the "instr.lib" folder** opened in the previous step by either clicking on "*New folder*" button or right-click on the folder content and select "*New* > *Folder*" in context menu.







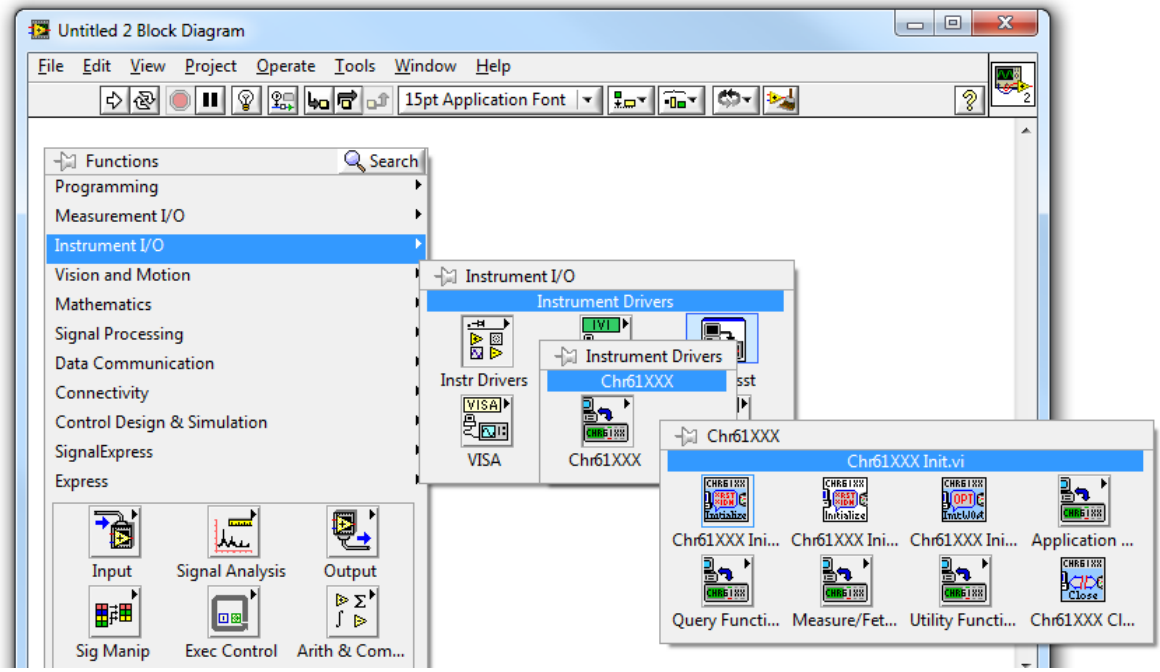
5. Extract all files that are along with the library file .llb from the Instrument Driver compressed file to the created folder in previous step. Be sure not to have files inside another folder to avoid loading errors.
   The result will be like:



6. To finish the installation of the instrument driver, restart the NI LabVIEW Development System if it is open.

Chroma Instrument Driver Quick Use Example

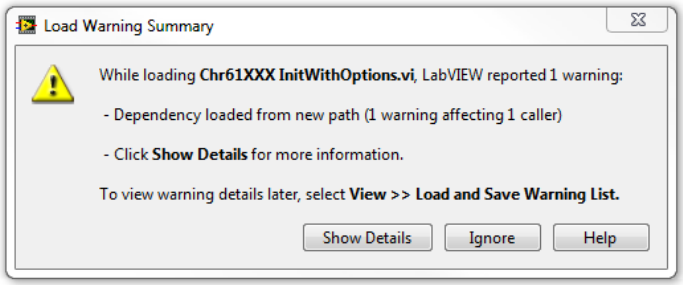
1. **Open the NI LabVIEW Development System** that will be used for developing the application that will use this instrument driver.
2. **Open a Blank VI, an empty Project or an already created project that will work on.** For this example, a Blank VI will be created.
3. Go to the "**Block Diagram**" window. If it is not displayed, click on "*Window > Show Block Diagram*" menu at the Front Panel Window.
4. **Right-click on the Block Diagram white area** to display the Context Menu. Select "**Instrument I/O > Instr Drivers**" and select the Instrument driver to display its VIs as show in picture as follows:



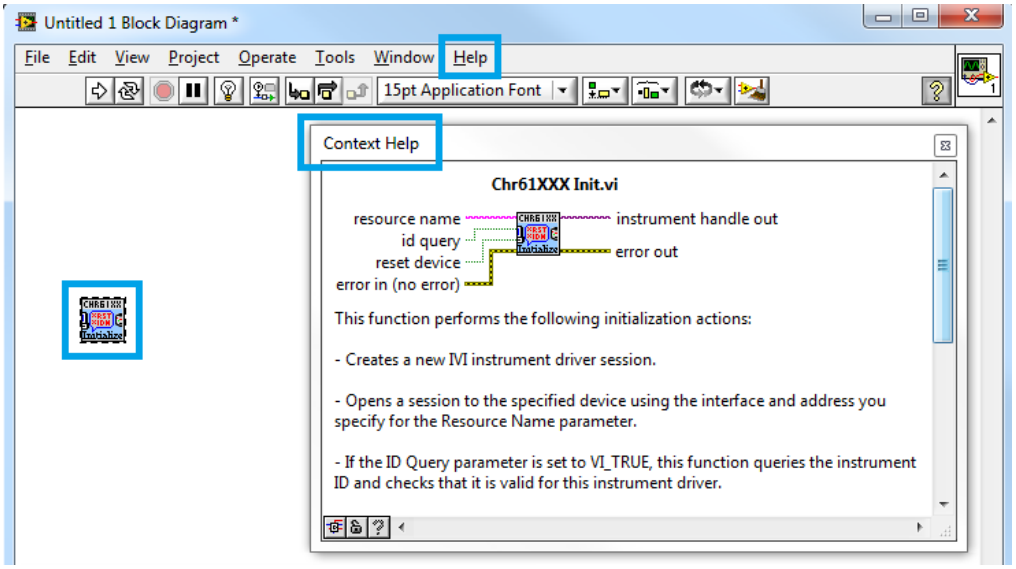
NOTE: *If the instrument driver that was installed is not displayed, restart LabVIEW. If problem persists, double check the installation procedure described in this document previously and the Instrument Driver requirements.*

5. **Select the appropriate VIs that do the required tasks/functions by the instrument(s)** like setting Voltage, Current, outputting power, acquiring measurements, etc. For more information about using Chroma Instruments to perform tests please refer to their User's Manuals.

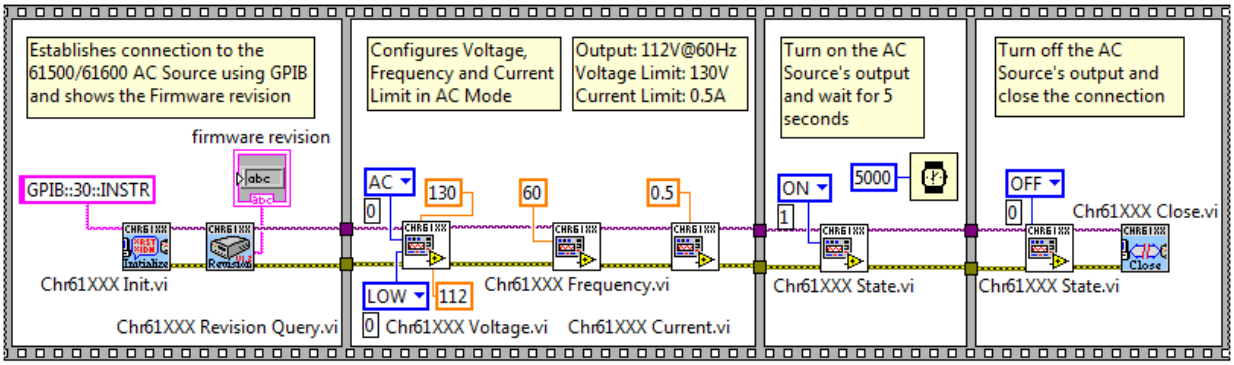
   NOTE: In case a "**Load Warning Summary**" message shows up while loading a VI indicating the dependency has loaded from new path", click on "**Ignore**" button (it only shows the VI path has changed and does not affect its functionality).



6. Most of the Chroma Instrument Drivers for LabVIEW contain useful information about the use of their VIs, which may be displayed in the “Context Help” when a VI is selected. To display the “Context Help” window click on “**Help > Show Context Help**” menu.



The following basic example in picture uses the VIs of the 61500/61600 AC Source Instrument IVI Type Driver to establish connection through GPIB using the address number 30:



For more information about IVI Instrument Driver Technology, its benefits and use, please visit the following links at the National Instruments website: https://www.ni.com/ivi/benefits.htm and http://www.ni.com/white-paper/2804/en/.