LabVIEW Add On for Open Windows Oscilloscopes Ver 1.0

This document includes the installer for the LabVIEW Add On for Open Windows Oscilloscopes Ver 1.0 and installation instructions. The software is a Palette of LabVIEW VIs, Example Programs (VIs), and stand-alone executables. It can be used directly on a Tektronix TK TDS 5000, 6000, or 7000 family Open Windows Oscilloscope or on a PC externally connected to one of these scopes. (A later release will include software for the TK TDS 8000 family of Open Windows Oscilloscopes.)

VERY IMPORTANT: Read the installation instructions below before installing this software.

Table of Contents:
- Installation Instruction Highlights
- Step-by-Step Instructions
- Installation Summary Flowcharts
- Zip file containing the installation Files
- Software / Hardware Requirements Summary

Installation Instruction Highlights

Installation Instructions
LabVIEW Add-On for Open Windows Oscilloscopes Ver 1.0

Release 1.0, Document: installation.htm, Date: 8/11/2002

Install and remove the software components in the order described in these instructions. If you do not follow the suggested order, some components may not install or uninstall properly.

It is strongly suggested that you print and read these instructions before installing any new National Instruments software on your scope. Please visit http://www.ni.com/tek for the latest information regarding installation and other support-related issues specific to working with LabVIEW on an Open Windows Oscilloscope.

These instructions apply to installation of the LabVIEW Scope Add On Ver 1.0 and associated software directly on a 5000, 6000, and 7000 family member Tektronix Open Windows Oscilloscope or on a stand-alone PC connected to one of these scopes.

If you are reinstalling the software and want to restore your scope to factory defaults, install the software from this CD after you have installed the other software from the Installation CDs that were supplied with your scope. Look for Tektronix Installation CDs marked Operating System Restore, Product Software, and/or Optional Applications.

If you are installing a purchased version of LabVIEW on a 5000 family scope, please check the version information for the TekScope application. (TekScope is the default application that runs when you boot the scope. Check version information by choosing Help > About from the menu.) If you are running version 1.0.7 or earlier of TekScope, do not overwrite the pre-installed GPIB driver that ships with your Oscilloscope. The LabVIEW installers that were current at the time of this release (LabVIEW Ver 6.1) will overwrite this driver if you run them using the default installation settings. As explained in Step 5 below, you should run the LabVIEW installer with a custom setting and uncheck the NI-GPIB installer from the feature tree.

To help you understand the purpose of each software component, refer to the software glossary, found at the end of this document.

http://zone.ni.com/devzone/conceptds.nsf/webmain/3FD62AB1A34F855C86256C2500013CE... 2/13/03
If you run into problems during installation or usage, refer to the Frequently Asked Questions document that is included on this CD. The document name is "FAQ.htm".

Refer to the Step-by-Step Installation Instructions section below for detailed instructions. Several flow charts follow the step-by-step instructions and summarize the installation procedures for selected configurations.

**Step-by-Step Instructions**

1. Ensure that the TekScope Software Application is installed on your oscilloscope. If this application has not been installed, please install it by following the installation instructions supplied by Tektronix.
   
   - TekScope comes pre-installed on your oscilloscope and is, by default, the software application that initially runs when the scope boots.
   - When you boot your scope, the TekScope application occupies the entire screen of your oscilloscope, entirely hiding the standard windows desktop. You can minimize the TekScope application by pressing the <Ctrl-M> keys or selecting File>>Minimize. (The File>>Minimize option is available when the scope is in menu, not Buttons, mode.)

2. If any version of the VXIplug&play instrument driver is installed, uninstall it now.
   
   - Uninstall the VXIplug&play instrument driver through the Add/Remove Programs utility from the standard Windows Control Panel. The entry in the Add/Remove Programs utility should be “tktds5k Instrument Driver”, “tktds6k Instrument Driver”, or “tktds7k Instrument Driver”. If the entry that you expect does not appear in this list, you can activate the uninstallation application through the standard Windows start menu. Look for an appropriate entry within the start menu path: "Start >> Programs >> VXIPNP"
   - Scopes that ship after late 2002 will include a pre-installed version of the VXIplug&play Instrument driver.

3. If any version of the LabVIEW Scope Add-On software is installed, uninstall it now.
   
   - Uninstall the LabVIEW Scope Add-On Software through the Add/Remove Programs utility from the standard Windows Control Panel. Its entry in the Add/Remove Programs utility is "LabVIEW Tektronix Toolset Ver 1.0"
   - Scopes that ship after late 2002 will include a pre-installed version of the LabVIEW Scope Add-On software.

4. If a version of LabVIEW is already installed on your scope, uninstall it now.
   
   - Uninstall the LabVIEW through the Add/Remove Programs utility from the standard Windows Control Panel. From the uninstallation utility that appears, select “Remove All Components”.
   - Scopes that ship after late 2002 will include a pre-installed version of the LabVIEW 6i evaluation edition.
   - Be sure to back up any personal files that you have stored within the LabVIEW directory structure.

5. Install the version of LabVIEW that you intend to use with your scope.
   
   - Before installing LabVIEW, you should stop the TekScope application and some other associated applications. (When you do so, these components will be available to you again after you reboot the scope.) To stop the TekScope application on a 5000 family scope, you can choose File >> Exit from the TekScope menu. To stop the TekScope application on a 6000 or 7000 family scope, hit Ctrl - Alt - Delete and click the "End Task" button for the following tasks: "TekScope" and "Windows Scope Services". (For older firmware revisions of the TDS 7000 family scopes, the "TekScope" task was called "TDS7000:].
   - This CD includes an image of the installer for the Evaluation Edition of LabVIEW 6i. You can install the LabVIEW Evaluation Edition directly from this image by running the setup.exe file from the \LVEval601 folder.
   - If you are installing a licensed (purchased) copy of LabVIEW, the following guidelines apply:
   - You can install from the standard LabVIEW installation CDs. The LabVIEW Scope Add-On supports Ver 6.0.2 (or higher) of the full or pro editions of LabVIEW. It also supports the Evaluation Edition of LabVIEW mentioned above.
   - For LabVIEW Version 6.0, after running its installation, update it to Ver 6.0.2. You can download the 6.0.2 updater from the National Instruments website.
   - If you are installing a purchased version of LabVIEW on a 5000 family scope, please check the version information for the TekScope application before running the LabVIEW installer. (TekScope is the default application that runs when you boot the scope. Check version information by choosing Help >> About from the menu.) If you are running version 1.0.7 or earlier of TekScope, do not overwrite the pre-installed GPIB driver that ships with your Oscilloscope. This issue is not a concern for 5000 family scopes running newer release of the TekScope software. Tektronix 5000 family oscilloscopes that are running Version 1.0.7 of the TekScope application include a Tektronix specific version of NI-GPIB, one that should not be replaced with the general-
purpose version from the LabVIEW installation disks. (This does not apply to installation on a stand-alone PCs or scopes from other families.) To make sure that the GPIB driver does not install, choose "Custom" when given the option between "Complete" and "Custom" from the LabVIEW installer. When you select custom, you will be presented with a graphical Feature Tree. From the feature tree, click on the drive icon for the NI-GPIB component and choose "Remove this Feature", so that it will not be installed. As shown in the illustration below, when you uncheck the NI-GPIB component, the check will be replaced by an "X". All of the other default settings are OK.

6. Optionally install NI-VISA.

- Refer to the FAQ.htm document from this CD for information about VISA requirements. Also, you can visit http://www.ni.com/visa for the latest installation and support related to NI-VISA.
- This CD includes the installer for the version of NI-VISA (Ver 2.6.1) that was current at the time of this release. You can install this version by invoking "setup.exe" from the \NIVISA261 directory on this CD. If you installed a Full or Professional edition of LabVIEW in step 5 above, the default installation included NI-VISA. Unless you performed a custom installation for LabVIEW Full or Professional, then NI-VISA will already be installed.
- When the VISA installation completes, you will be prompted to reboot the oscilloscope. Upon reboot, if you are working with a 5000 family scope, you may be prompted with a Diagnostic Utility dialog box as shown in the following illustration. Click OK on this dialog box and reboot the scope.
7. Install the VXI plug&play Instrument Driver that is appropriate for your scope.

- To install these drivers, run the setup.exe file from the subdirectory in the \VXIPnPInstDr directory that corresponds to the model of scope.
- This CD includes the instrument drivers that were current at the time of this release. The VXI plug&play drivers are supplied, maintained, and supported by Tektronix.
- There are separate installers for the 5000, 6000, and 7000 families of Open Windows Oscilloscopes. Install the driver or drivers for the scopes that you will control using LabVIEW.
- The instrument drivers can be used for remote operation of a scope, through, for instance, a PC connected to a scope through a GPIB interface. For remote control, you should install the instrument drivers appropriate for the controlled scope on the controlling PC. Note though that when you install the LabVIEW Scope Add-On installer (the component installed in the next step), the default settings for the installer will have it install components for the 5000, 6000, and 7000 families of scopes. As such, unless you intend to change the default installer settings (by choosing a Custom install in the next step), you should install the instrument drivers for all three of these scope lines.
- The VXI plug&play instrument drivers that were current at the time of this release will install a LabVIEW component only if the driver is installed after you have installed LabVIEW.

8. Install the LabVIEW Add-On for Open Windows Oscilloscopes.

- To install this software, run the setup.exe file from \LVScopeAddOn directory.
- The LabVIEW Add-On for Open Windows Oscilloscopes will install on to Ver 6.0.2 or higher of the Full or Pro versions of LabVIEW. It will also install on to the Evaluation Edition of LabVIEW 6i.
- The LabVIEW Scope Add-On installer runs several checks on the target machine when it is first run. These checks determine what components will be installed if you choose a default installation. The checks run by the installer include:
  - Scope family (if the installation target is an oscilloscope) as 5000, 6000, or 7000
  - Presence of LabVIEW and (if an installation is detected) the version number and edition
- You can override the defaults by choosing custom the custom option from one of the opening dialogs presented by the installer. Doing so is useful if you are installing the software on a non-scope PC and intend to control the scope remotely. By choosing a custom install action, you can choose which sets of examples and which palette items to install.
- If you are installing the LabVIEW Add-On for Open Windows Oscilloscopes on a stand-alone PC, the default settings for the installer will have it install the components for the 5000, 6000, and 7000 scope families. As such, please choose the custom option to set the installer to add files for the scope families that correspond to the instrument drivers that you installed in step 7.

Installation Summary Flowcharts

Summary Flow Chart for installation on a scope with pre-installed versions of LabVIEW and other National Instruments Software

http://zone.ni.com/devzone/conceptnd.nsf/webmain/3FD62AB1A34F855C86256C2500013CE... 2/13/03
Installation Summary for re-imaging scope to factory shipping state

Uninstall any VXIplug&play Instrument Drivers

Uninstall any copy of the LabVIEW Add-On Software

Uninstall any copy of LabVIEW

Install updated copy of LabVIEW

If you are installing a non-evaluation version of LabVIEW on a scope, do not install the GPIB driver.
Re-image hard drive (follow Tektronix instructions).

Install TekScope (follow Tektronix instructions).

Install LabVIEW.

If you just installed the Evaluation Version of LabVIEW, install NI VISA

Install the appropriate VXIplug&play instrument driver(s)

Install the LabVIEW Scope Add-On

If you are installing a non-evaluation version of LabVIEW on a scope, do not install the GPIB driver.

Installation of the LabVIEW Add-On to a PC (externally connected to a scope)
The attached file includes the installer for the LabVIEW Add-On for Open Windows Oscilloscopes Ver 1.0. Use a zip utility such as winzip or powerarchiver to unzip the contents of this file to an empty directory.

IMPORTANT: Read the installation instructions above before running the installer.

LVScopeAddOn.zip

Software / Hardware Requirements Summary

Required Software

- LabVIEW Ver 6.0 or higher, Eval, Full, or Pro edition
- Tektronix-supplied VXIplugN instrument drivers for the scope or scopes that you intend to use with this software (locate the latest version of these drivers on the Instrument driver network, elsewhere on this web site.)
- NI-VISA Ver 2.5 or higher
Required Hardware

- A Tektronix Open Windows Oscilloscope from the TK TDS 5000, 6000, or 7000 family (8000 family support coming soon)
- A PC connected to a Tektronix Open Windows Oscilloscope through a VISA-compatible interface such as GPIB or Ethernet. Your PC should meet the minimum OS and hardware requirements for running National Instruments LabVIEW.

See the National Instruments LabVIEW website for information about PC system requirements.

See the National Instruments Instrument Driver network to download the latest VXIPnP drivers for your Open Windows Oscilloscope.

Download the latest version of NI VISA. See the National Instruments VISA portal for more information.

See Also:
National Instruments LabVIEW
National Instruments Instrument Driver Network
National Instruments NI-VISA portal

Related Links:
National Instruments / Tektronix Collaboration Starting Point