

Instructions



TLASWDOWN Software Installation Instructions

This document applies to TLA System Software
version 5.1.

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TLASWDOWN Instructions

The TLASWDOWN software upgrade kit provides instructions and software to upgrade your Tektronix logic analyzer to TLA application software, version 5.1. It also supports the upgrade to Pattern Generator application software Version 1.8 for those instruments with TLA7PG2 Pattern Generator modules. These instructions only apply to instruments with TLA Application Software V4.0 or higher.

The TLA Application Software V5.1 and higher will only run on TLA instruments with Windows XP Professional or Windows 2000 Professional operating systems purchased from Tektronix. The software will also run on a PC with Microsoft Windows XP Professional or Windows 2000 Professional operating systems.

Contact your nearest Tektronix, Inc. Service Center or Tektronix Factory Service for installation assistance.

Instruments

TLA7012 Portable Mainframe	All serial numbers
TLA7016 Benchtop Mainframe	All serial numbers
TLA7PC1 Benchtop Controller	All serial numbers
TLA5000 Series Logic Analyzers	All serial numbers
TLA5000B Series Logic Analyzers	All serial numbers
TLA715 Portable Mainframe	All serial numbers
TLA721 Benchtop Mainframe	All serial numbers

NOTE. Unless otherwise noted all references to TLA5000 Series Logic Analyzers apply to both TLA5000B and TLA5000 instruments.

TLA System and PC Requirements

- Minimum 10 GB hard drive, 500 MB free space
- 256 MB RAM minimum, 512 MB recommended

Minimum Tool and Equipment List

No special tools are required to install this software.

TLA Upgrade Instructions Overview

The basic upgrade procedure is to manually remove the older software, update the drivers, and reinstall the new software. The upgrade steps are listed in this document.

While performing the upgrade procedures, keep the following items in mind:

- Throughout this procedure you will see the term “log on as Administrator.” The instrument is set up to automatically log on as Administrator (with no password) so you may not see the log in prompt. If the network setups have been changed on your instrument, make sure that you log on as Administrator or as a user who has administrator privileges. Failure to do so can prevent the software upgrade from completing successfully.
- After logging on as administrator, quit any applications.
- If your instrument does not display the file extensions, you need to change your folder options to display the file extensions. (From the Control Panel, double-click Folder Options, select the View tab, and then deselect the “Hide file extensions for known file types” selection.)
- Use the Windows Add or Remove Programs Control Panel utility to remove existing software.
- You will be asked to restart Windows after you install each software package. If you do not restart Windows when prompted your software may not install properly and can cause unpredictable behavior.
- If Windows does not restart normally, press and hold the On/Standby button for five or six seconds to force a shutdown.

Remove the Old Software

Complete the following steps to remove old software from your logic analyzer. Skip any steps that mention software that isn't installed on your logic analyzer.

NOTE. Refer to the release notes for a list of software version numbers to determine which software you may need to upgrade. The release notes are located on the Tektronix Web Site where you downloaded this package.

1. If you have not already done so, power on the logic analyzer and log on as Administrator.
2. Exit the TLA application.
3. Open the Control Panel.

4. Double-click the Add or Remove Programs icon.
5. For the following software, select the software, click the Change/Remove button, and follow the on-screen instructions:
 - Tektronix Pattern Generator
 - Tektronix TLA Application
6. Windows will uninstall the selected application. If any messages appear asking you for permission to remove unused shared files or any read-only files, select **Yes to All**.
7. After the software has been successfully removed, restart Windows.

Update the TLA Drivers (Required for TLA Application Software V4.4 or Earlier)

Complete the following steps to remove the old PCI-VXI Bridge driver and install the new one required by the TLA. Skip this section if your TLA Application Software is V5.0 or higher.

1. After rebooting the instrument, open the Windows Control Panel.
2. Open the Device Manager in the Hardware page of the System Properties dialog box.
3. Select **PCI-VXI Bridge** from the PciVxi listing.
4. Right-click to uninstall the device and then confirm that you want to delete the device.
5. Restart the instrument.

After restarting, the instrument detects a new device and displays a dialog box.
6. Click **Cancel** to exit the dialog box.
7. Open the Device Manager in the Hardware page of the System Properties dialog box.
8. Under the PciVxi listing, Right-click **Other PCI Bridge Device** and select **Properties**.
9. Select the Driver page and click **Update Driver**.

The Upgrade Device Driver Wizard displays.
10. Click **Next**.

11. In the Install Hardware Device Drivers page, select **Search for a suitable driver for my device (recommended)** and then click **Next**.
12. In the Locate Drive Files page, select **Specify a location** and click **Next**.
13. Click Browse and go to the directory that contains the new pci2tla.inf driver file. (C:\TLA_V51_DOWN\PCI-TLA_Bridge_V51\PCI2TLA.INF).
14. Select the pci2tla.inf driver and then click **Open**.
15. Click **OK** to install the driver.
16. In the Driver Files Search Results page, make sure that **Install one of the other drivers** checkbox is selected and then click **Next**.
17. Select the **PCI to TLA Bridge** driver and then click **Next**.
18. Click **Finish** to complete the installation.

Install the TLA Software

The TLA software uses a wizard to install the following software applications (if they are not already installed) for your instrument:

- TLA Application
 - Pattern Generator Application
 - Microsoft's .NET Framework
 - OpenChoice TekVisa
 - TPI Client
 - PPI Client
1. Log on as Administrator.
 2. Browse to the C:\TLA_V51_DOWN folder and double-click **TLA_V51.exe**.
 3. Follow any on-screen instructions. If you are asked for permission to overwrite any read-only files, select **Yes to All**.
 4. After the software has been successfully installed, restart Windows.

Upgrade the Firmware

The firmware upgrade procedures depend on your logic analyzer.

TLA7000 Series Mainframes

Complete the following steps to upgrade the TLA7000 series mainframe firmware (Refer to *TLA700 Series Logic Analyzers and Modules* on page 6 to upgrade module firmware):



CAUTION. *You MUST perform these steps to ensure that your Mainframe firmware has been upgraded. Failure to do so will result in the instrument not functioning properly and the instrument may need to be repaired at the factory.*

1. Log on as Administrator.
2. Exit the logic analyzer application.
3. Click Start → All Programs → Tektronix Logic Analyzer → TLA Firmware Loader.
4. Select your instrument from the Firmware Loader - Connection dialog box and click **Connect**.
5. Click **Load** in the *upper* portion of the Load Firmware dialog box to identify or to load mainframe firmware.
6. Compare the version numbers in the two columns. If the **Running** version does not match the **Required** version, you *MUST* upgrade the firmware.
7. In the Frame column, click the **Mainframe** name that corresponds to the firmware that requires upgrading and then click **Update Firmware**.
8. The next dialog box will have the correct .upd file selected in the file name box. Click **Open**.
9. When the next window appears, click **Start Flash Operation**. The operation may take several minutes.
10. Follow the remaining on-screen instructions.
11. Repeat the above steps for each mainframe firmware that is out of date.

TLA5000 Series Logic Analyzers

1. Log on to the instrument as Administrator.
2. Exit the logic analyzer application.
3. Click Start → Programs → Tektronix Logic Analyzer → TLA Firmware Loader.
4. Select your instrument from the Firmware Loader - Connection dialog box and click Connect.
5. You may see a pop-up window reminding you to cycle the power on the instrument after completing the upgrade operation. Click Yes to continue.
6. Select the product from the Supported list box near the top of the window.
7. Select Load Firmware from the Execute menu.
8. If you have a TLA5000 Series Logic Analyzer click the TLA520x.lod file.
9. Click Open. You will be asked to confirm your action; click Yes when prompted.
10. Exit the firmware loader program and power down the logic analyzer. You must power down the logic analyzer to allow the TLA application to start up properly.

TLA700 Series Logic Analyzers and Modules

If you need to upgrade the firmware on your logic analyzer modules, a startup message appears telling you that you need to upgrade.

1. Note the modules that require new firmware.

NOTE. Older logic analyzer modules (TLA7Lx, TLA7Mx, TLA7Nx, TLA7PX or TLA7Qx), TLA7Dx or TLA7Ex DSO modules, and TLA7PG2 Pattern Generator modules require you to install a flash jumper on the rear of the module before you can update the firmware. Refer to firmware upgrade procedures in either the TLA7000 Series Logic Analyzer Installation Manual or the TLA700 Series Logic Analyzer Installation Manual for instructions on removing modules from the mainframes and installing the flash jumpers.

2. Exit the TLA application.
3. Click Start → Programs → Tektronix Logic Analyzer → TLA Firmware Loader.
4. Select your instrument from the Firmware Loader - Connection dialog box and click Connect.

5. Select the modules that you want to update from the list of modules in the Supported list box near the top of the window. This selects the modules for the upgrade. If you are upgrading more than one module at a time, note the slot location of the module in the selection box.
6. Select Load Firmware from the Execute menu.
7. Click the proper .lod file for the selected module; refer to Table 1 if necessary.

NOTE. Be sure to select the proper .lod file for each module. Note the slot number in the title bar so that you select the correct module for the .lod file.

Table 1: TLA firmware files

Module type	.lod file
TLA7NAx logic analyzer modules	TLA7NAX.lod
TLA7Axx logic analyzer modules	TLA7AXX.lod
TLA7Nx, TLA7Px, TLA7Qx logic analyzer modules	TLA7NPQ.lod
TLA7Lx and TLA7Mx logic analyzer modules	TLA7LM.lod
TLA7Dx and TLA7Ex DSO modules	FirmwareDSO.lod
TLA7PG2 Pattern Generator modules ¹	tla7pg2.lod

¹ The .lod files for the pattern generator modules are located in the C:\Program Files\Tektronix Pattern Generator\Firmware folder. All other files are located in the C:\Program files\TLA 700\Firmware folder.

8. Click OK. When prompted to confirm your action; click Yes.

NOTE. The program will not allow you to load firmware to an incompatible module. For example, the program will not load DSO firmware to a logic analyzer module.

The program will load the firmware for each module one at a time.

9. When the upgrade is complete, exit the program.

Verify Proper Operation

After you have installed all of the latest software and upgraded the module firmware, you are ready to verify operation.

1. Power on the logic analyzer and log on as Administrator.
2. Verify that the diagnostics pass (if any diagnostics fail, the Power-on Diagnostics dialog box automatically displays in the System window).
3. Verify that all installed modules appear in the System window.
4. If you have a TLA7000 series or TLA700 series instrument with any missing modules in the System window, verify the status of the modules by doing the following steps:
 - a. Select System Properties in the System menu.
 - b. Click the Modules tab.
 - c. Note the information under the Messages column for any installed modules. If any modules indicate invalid or similar messages, you must update the firmware for those modules..
 - d. If any of the modules indicate that the flash jumper is installed, power down the logic analyzer, remove the module, and then remove the jumper from the rear of the module. Reinstall the module in the instrument and try again.

Calibrate the Logic Analyzer and DSO Modules

After verifying proper operation calibrate the logic analyzer and DSO modules if they are installed in your instrument

1. Allow the instrument to warm up for at least 30 minutes before continuing.
2. In the System window, select Calibration and Diagnostics from the System menu.
3. Click the Self Calibration tab.
4. Select all of the modules in the dialog box and click Run.

NOTE. *The calibration process may take several minutes for each module.*

5. Verify that the Status column for each module changes to Calibrated.
6. After all of the modules have been calibrated close the dialog box and power down the instrument.

Installing the TLA Application Software on a PC

You can install the TLA application software on a PC for the following purposes:

- To run the TLA application software in the Offline mode (similar to TLAVu in earlier software versions).
- To control a logic analyzer with the same TLA application software version over a network.

Install the TLA Application Software

Browse to the C:\TLA_V51_DOWN folder and run the TLA_V51.exe program. Follow the on-screen instructions.

If you have an older version of the software on the hard disk, the installation program will detect it and ask if you want to remove it. Follow the on-screen instructions to remove the software, answering “Yes” to any prompts. Restart the instrument when prompted and run the Setup.exe program again.

Start the TLA Application

Start the software by double-clicking on the TLA Application icon on the PC. The TLA Connection dialog box displays.

1. Select the instrument in the TLA Connection dialog box and then click **Connect**. If your instrument is connected to a network, you can connect to any unused instrument on your network.
2. Click **Offline** to start an offline version of the TLA application software. The TLA Offline software allows you to run the TLA application without connecting to an instrument. You can analyze previously acquired data from a logic analyzer, create or modify reference memories, or perform system tests without being connected to an instrument.

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