

TLA5KUP

Logic Analyzer Field Upgrade Kit

Instructions

This document applies to TLA System Software Version 5.6

Warning

These servicing instructions are for use by qualified personnel only. To avoid personal injury, do not perform any servicing unless you are qualified to do so. Refer to all safety summaries prior to performing service.

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Tektronix

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- In North America, call 1-800-833-9200.
- Worldwide, visit www.tektronix.com to find contacts in your area.

Warranty 6

Tektronix warrants that the parts and modules (“parts”) that it manufactures and sells will be free from defects in materials and workmanship for a period of three (3) months from the date of shipment. If any such part proves defective during this warranty period, Tektronix, at its option, either will repair the defective part without charge, or will provide a replacement in exchange for the defective part. Parts and modules used by Tektronix for warranty work may be new or reconditioned to like new performance. All replaced parts and modules become the property of Tektronix.

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Warranty 9(b)

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In order to obtain service under this warranty, Customer must notify Tektronix of the defect before the expiration of the warranty period. If Tektronix is unable to provide a replacement that is free from defects in materials and workmanship within a reasonable time thereafter, Customer may terminate the license for this software product and return this software product and any associated materials for credit or refund.

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Service Safety Summary

Only qualified personnel should perform service procedures. Read this *Service Safety Summary* and the *General Safety Summary* before performing any service procedures. The *General Safety Summary* can be found in the *Tektronix Logic Analyzer Family Product Safety & Compliance Instructions* (Tektronix part number 071-2591-xx).

Do Not Service Alone. Do not perform internal service or adjustments of this product unless another person capable of rendering first aid and resuscitation is present.

Disconnect Power. To avoid electric shock, switch off the instrument power, then disconnect the power cord from the mains power.

Use Care When Servicing With Power On. Dangerous voltages or currents may exist in this product. Disconnect power, remove battery (if applicable), and disconnect test leads before removing protective panels, soldering, or replacing components.

To avoid electric shock, do not touch exposed connections.

Preface

This manual contains specific information about the TLA5KUP logic analyzer field upgrades. The logic analyzer field upgrades consist of software and hardware options for the TLA5000B and TLA5000 Series logic analyzers.

Products Eligible for TLA5KUP Upgrades

Table i lists all of the TLA5000B and TLA5000 Series logic analyzers eligible for upgrades via the TLA5KUP field upgrade kits. The table tells you if your logic analyzer is eligible for an upgrade. If it is, choose one of the possible upgrade paths. (See Table ii.)

Table i: TLA5000B and TLA5000 Series logic analyzers eligible for upgrades

Configuration	Operating system	TLA application software
TLA5000B	Microsoft Windows XP Professional	Version 5.6
		Version 5.1 SP1
TLA5000	Microsoft Windows XP Professional	Version 5.6
		Version 5.1 SP1
		Version 5.1
		Version 5.0
TLA5000	Microsoft Windows 2000 Professional ¹	Version 4.4
		Version 4.3

¹ TLA Application Software Version 5.6 is not supported on instruments with Windows 2000, nor is an upgrade to Windows XP available.

The TLA5KUP upgrade kits are designed for "One TLA5KUP upgrade kit per TLA5000B or TLA5000 mainframe." If you want to upgrade multiple mainframes, you must order one TLA5KUP upgrade kit with the appropriate options for each mainframe.

The latest TLA Application Software has been tested and can be installed and will be supported by Tektronix only on the Tektronix-supplied version of Windows XP.

Table ii: TLA5KUP Logic Analyzer Field Upgrade Matrix

New capability desired	Current configuration	Please order
Add New Software Features Add new functionality to existing logic analyzers by upgrading to the TLA Application Software V5.6; requires Windows XP. ²	TLA5000B, TLA SW V5.1 SP1	TLA5KUP Option 46
	TLA5000, TLA SW V5.1 or V5.0	TLA5KUP Option 46
Add more DRAM Increase controller memory from 512 MB to 1 GB.	TLA5000B, TLA SW V5.6	TLA5KUP Option 11
	TLA5000B, TLA SW V5.1 SP1	TLA5KUP Options 11 and 46
	TLA5000, TLA SW V5.0 or V5.1	TLA5KUP Options 10 and 46
	TLA5000, TLA SW V4.4 or V4.3 with Windows 2000 ²	TLA5KUP Option 10
Add DVD-ROM/CD-RW Drive Add DVD-ROM/CD-RW Drive to back up or transfer user and data files. TLA5KUP Option 20 is only needed for TLA5000 instruments with serial numbers B010000 to B029999.	TLA5000B, TLA SW V5.6	-
	TLA5000B, TLA SW V5.1 SP1	TLA5KUP Option 46
	TLA5000, TLA SW V5.0 or V5.1	TLA5KUP Options 20 and 46
	TLA5000, TLA SW V4.4 or V4.3 ²	TLA5KUP Option 20
Add New iView External Oscilloscope Capability Add capability to view data from Tektronix oscilloscopes correlated directly on the logic analyzer ¹ . Requires latest TLA Application Software and Windows XP. TLA5000 mainframe memory requirements: 512 MByte recommended.	TLA5000B, TLA SW V5.6	TLA5KUP Option 15
	TLA5000B, TLA SW V5.1 SP1	TLA5KUP Options 15 and 46
	TLA5000, TLA SW V5.0 or V5.1	TLA5KUP Options 15 and 46
	TLA5000, TLA SW V4.4 or V4.3 ²	TLA5KUP Option 15
Upgrade Logic Analyzer Record Length Enhance your current logic analyzer by increasing state speed or record length. Run the PowerFlex Utility to inform you what upgrades are available. Instructions to obtain an upgrade are provided.	TLA5000B, TLA SW V5.6 or V5.1 SP1	Run the PowerFlex Utility software located on the instrument and then purchase the appropriate PowerFlex kit.
Add Cart:	Any TLA5000 mainframe	Choice of either K4000 or LACART
Add Rackmount Kit	Any TLA5000 mainframe	016-1790-04 (Same as used with TDS6000 and TDS7000 instruments)
Add Wheeled Transport Case	Any TLA5000 mainframe	016-1522-xx

¹ For a list of supported Tektronix oscilloscopes, please visit our Web site at www.tektronix.com/la.

² TLA Application Software Version 5.6 is not supported on instruments with Windows 2000, nor is an upgrade to Windows XP available.

Service and Upgrade Notes

To prevent personal injury or damage to the instrument, consider the following requirements before attempting service:

- Read the *General Safety Summary* and *Service Safety Summary* found in the *Tektronix Logic Analyzer Family Product Safety & Compliance Instructions* (Tektronix part number 071-2591-xx).
- Only qualified service personnel should perform the procedures in this manual.

Be sure to follow all warnings, cautions and notes.

Adjustment and Certification Interval

Generally, you should perform the adjustments and performance verification procedures described in the *TLA5000 Logic Analyzer Series Service Manual* (Tektronix part number, 071-1305-xx) once per year, or following repairs that may affect adjustment or calibration.

Service Offerings

Tektronix provides service to cover repair under warranty as well as other services that are designed to meet your specific service needs.

Whether providing warranty repair service or any of the other services listed below, Tektronix service technicians are equipped to service your logic analyzer. Services are provided at Tektronix Services Centers.

Warranty Repair Service

The warranty for this product is located behind the title page in this manual. Tektronix technicians provide warranty service at most Tektronix service locations worldwide. The Tektronix product catalog lists all service locations worldwide, or you can visit us on our *Customer Services World Center* Web site at:

Tektronix.com/Measurement/Service

Calibration and Repair Service

In addition to warranty repair, Tektronix Service offers calibration and other services which provide solutions to your service needs and quality standards compliance requirements.

The following services can be tailored to fit your requirements for calibration and/or repair of your logic analyzer.

Service Options. Tektronix service options can be selected at the time you purchase your instrument. You select these options to provide the services that best meet your service needs.

Service Agreements. If service options are not added to the instrument purchase, then service agreements are available on an annual basis to provide calibration services or post-warranty repair coverage. Service agreements may be customized to meet special turn-around time and/or on-site requirements.

Service on Demand. Tektronix offers calibration and repair services on a "per-incident" basis that is available with standard prices.

Self Service. Tektronix supports repair to the replaceable-part level by providing for circuit board exchange.

Use this service to reduce down-time for repair by exchanging circuit boards for remanufactured ones. Tektronix ships updated and tested exchange boards. Each board comes with a 90-day service warranty.

For More Information. Contact your local Tektronix service center or sales engineer for more information on any of the Calibration and Repair Services just described.

TLA5KUP Option 10: Memory Upgrade Installation

TLA5KUP option 10 provides the capability of upgrading the memory on your TLA5000 Series logic analyzer to 1 GB.

NOTE. *These instructions only apply to TLA5000 Series logic analyzers. To upgrade the memory on the TLA5000B Series logic analyzers, please order TLA5KUP option 11.*

Instruments

Instruments	Serial number range
TLA5000 Series Logic Analyzers	All Serial Numbers

Parts List

Table 1: TLA5KUP Option 10 parts list

Quantity	Part number	Description
1 ea	156-9442-xx	512 MB DIMM
1 ea	N/A	TLA5KUP kit label

Minimum Tool and Equipment List

Table 2: Tools required for installing upgrade

Item no.	Name	Description	General Tool number
1	Screwdriver handle	Accepts TORX-driver bits	620-440
2	T-15 TORX tip	Used for removing most the instrument's screws. TORX-driver bit for T-15 size screw heads	640-247

Installation Prerequisites

These instructions assume that you are familiar with servicing the instrument. If you need further details for disassembling or reassembling the instrument, refer to the *TLA5000 Logic Analyzer Series Service Manual (071-1305-xx)*. You may also contact your nearest Tektronix, Inc., Service Center or Tektronix Factory Service Center for installation assistance.

Be sure to observe the following precautions to avoid damaging the logic analyzer while preparing to service it.



CAUTION. *Many components within the instrument are susceptible to static-discharge damage.*

Service only in a static-free environment. Observe standard handling precautions for static-sensitive devices.

Always wear a grounded wrist strap, grounded foot strap, and static-resistant apparel while installing this kit.

Do not handle static-sensitive components on boards.

Transport and store static-sensitive boards in their original containers or on conductive foam. Label any package that contains static-sensitive assemblies.

Do not allow anything capable of holding or generating a static charge on the work surface.

Avoid handling boards in areas that have a floor or work surface cover that is capable of generating a static charge.



WARNING. *Dangerous voltages may be present. Before performing any procedure in this subsection, disconnect the power cord from the line voltage source. Failure to do so could cause serious injury or death.*

Remove the Accessories Pouch

Remove the accessories pouch to access the covers on the instrument.

1. Turn the logic analyzer off.
2. Remove the power cord and all probes.
3. Open the pouch and locate the two snaps on the inside front side of the pouch.
4. Gently pull on each of the two tabs to unsnap the front of the pouch.
5. At the rear of the instrument, peel off the Velcro that holds the pouch to the instrument.
6. Set the pouch aside.
7. To reinstall the pouch, perform these steps in reverse order. Tighten the T-15 TORX-drive screws to 8-in lbs.

Remove the Trim and Covers

Remove the trim and covers. (See Figure 1 on page 4.)

1. Remove the top cover trim.
 - a. Remove the two T-15 TORX-drive screws that secure the top cover trim to the instrument.
 - b. Remove the snap studs from the top cover.
 - c. Slide the trim panel toward the rear of the instrument allowing the tabs to clear the cover openings, then pull out to remove the panel from the instrument (you may need to loosen the two top black feet on the back of the instrument if the cover does not come off easily).
2. Remove the right side trim.

NOTE. *When you remove the CD Drive trim, notice the notches in the trim that provide the clearance for the chassis screws located under the trim. When you replace the trim, make sure that you orient the trim with the notches in the correct location. Otherwise the trim may not fit properly.*

- a. Remove the Drive trim by inserting a flat blade screwdriver in the bottom slot of the trim and gently prying the trim piece out of the side panel. Pull the trim up and out from the instrument.
- b. Remove the two T-15 TORX-drive screws that secure the right side trim to the bottom of the instrument.
- c. Slide the trim panel toward the rear of the instrument allowing the tabs to clear the cover openings, then pull the panel from the instrument.

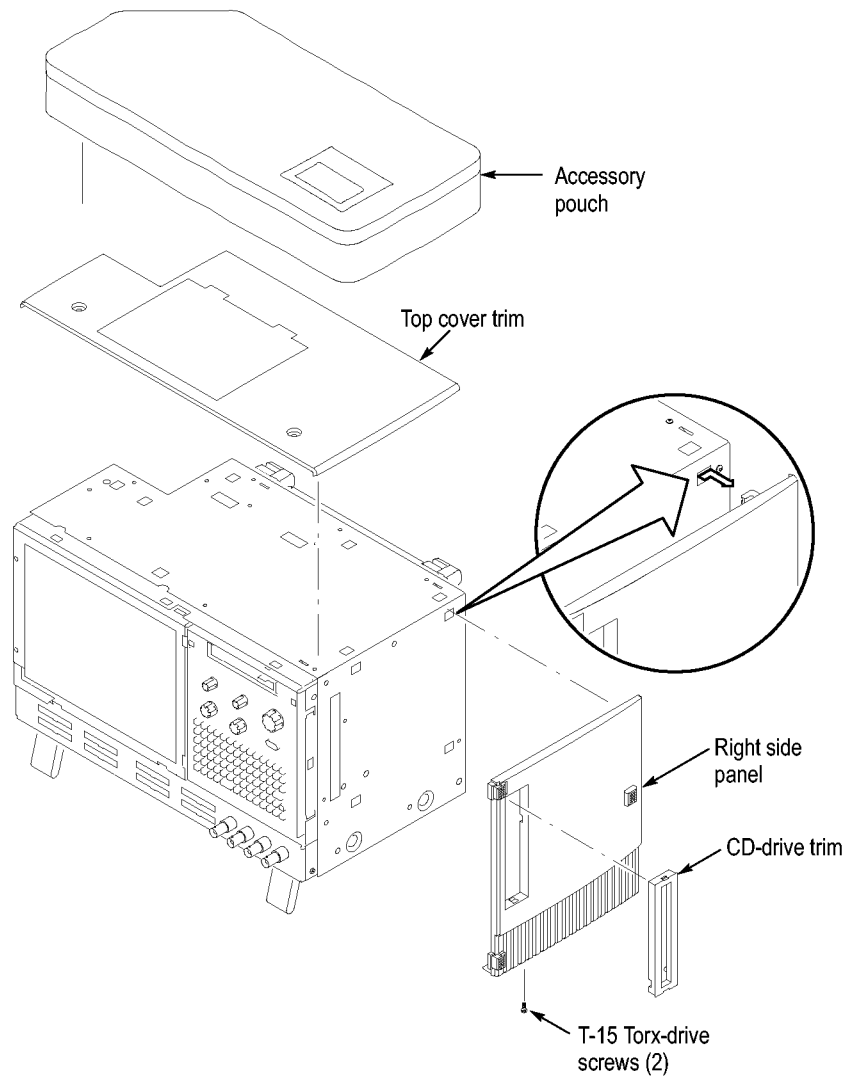


Figure 1: Trim and covers

Remove the Right-Side Cover

Remove the right-side cover to access most of the internal components of the instrument. (See Figure 2.)

NOTE. All mounting screw holes are indicated by a star etched around the mounting hole.

1. Remove the 15 T-15 TORX-drive screws that secure the cover to the top and right sides of the chassis.
2. Remove the cover.

CAUTION. The covers can damage internal cables if they get tangled during removal or installation. Take care not to bind or snag the covers on the cables as you remove or install.

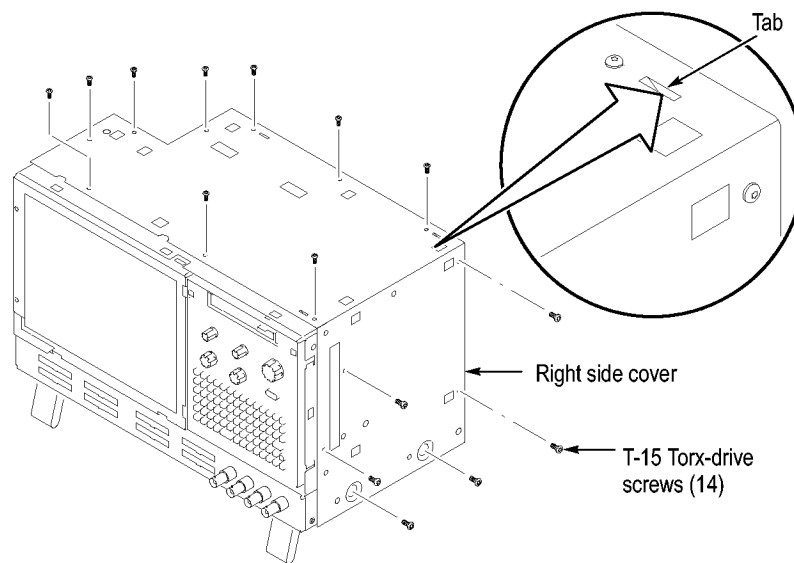


Figure 2: Right-side cover removal

Adding Memory

The memory sockets are located on the processor board mounted to the back panel. (See Figure 3.)

1. Install the memory module as follows:
 - a. For TLA5000 instruments with serial numbers B010000 to B019999, install the memory module in the single, spare socket.
 - b. For TLA5000 instruments with serial numbers B020000 or higher, install the memory module in one of the spare sockets. For optimum performance, leave one socket empty between the original and new DIMMs (the correct socket for the new memory module is labeled Channel B DIMM 0).

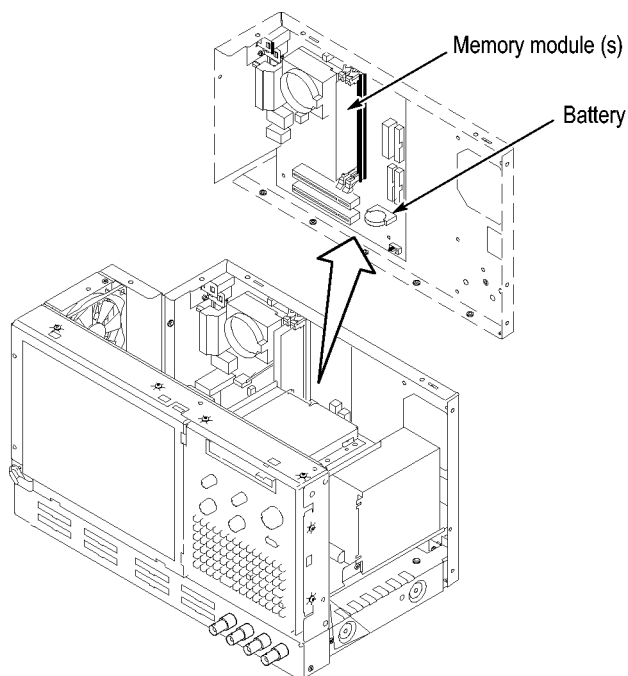


Figure 3: Memory module and battery location

2. Reinstall the trim, covers, and the accessories pouch.

Verifying Operation

To verify the proper operation of the logic analyzer, follow these steps:

1. Plug the power cord in and turn the logic analyzer on.
2. Verify that the instrument passes all power-up diagnostics.
3. Exit all applications and close any open windows.
4. Click Start in the Windows tool bar.
5. Select Programs from the Start menu.
6. Select the CheckIt Utilities application from the Programs menu.
7. Run the appropriate verification tests from the application.
8. Turn the logic analyzer off, and then on again before running any application software including the TLA application software.

Attach the Upgrade Kit Label to the Instrument

After completing all the previous steps, you need to install the upgrade kit label on the instrument to indicate that the kit is installed.

Locate the big label on the rear of the instrument, and then attach the TLA5KUP kit label. (See Figure 4.)

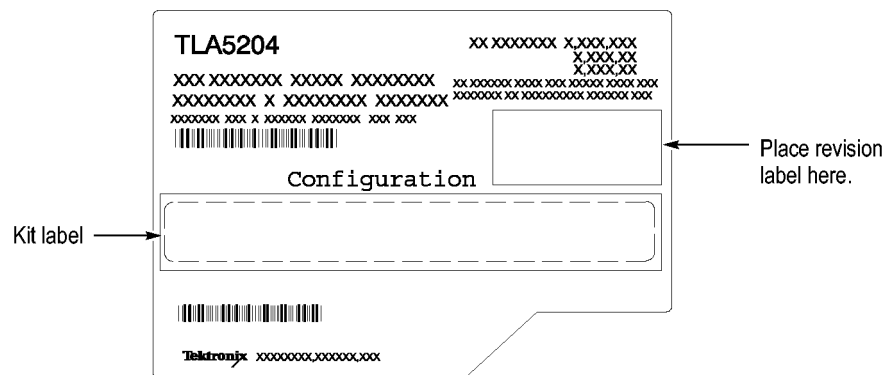


Figure 4: Kit label locations

TLA5KUP Option 11: Memory Upgrade Installation

TLA5KUP option 11 provides the capability of upgrading the memory on your TLA5000B Series logic analyzer to 1 GB.

NOTE. *These instructions only apply to TLA5000B Series logic analyzers. To upgrade the memory on the TLA5000 Series logic analyzers, please order TLA5KUP option 10.*

Instruments

Instruments	Serial number range
TLA5000B Series Logic Analyzers	All Serial Numbers

Parts List

Table 3: TLA5KUP Option 11 parts list

Quantity	Part number	Description
1 ea	167-0428-xx	512 MB DIMM
1 ea	N/A	TLA5KUP kit label

Minimum Tool and Equipment List

Table 4: Tools required for installing upgrade

Item no.	Name	Description	General Tool number
1	Screwdriver handle	Accepts TORX-driver bits	620-440
2	T-15 TORX tip	Used for removing most the instrument's screws. TORX-driver bit for T-15 size screw heads	640-247

Installation Prerequisites

These instructions assume that you are familiar with servicing the instrument. If you need further details for disassembling or reassembling the instrument, refer to the *TLA5000 Logic Analyzer Series Service Manual (071-1305-xx)*. You may also contact your nearest Tektronix, Inc., Service Center or Tektronix Factory Service Center for installation assistance.

Be sure to observe the following precautions to avoid damaging the logic analyzer while preparing to service it.



CAUTION. *Many components within the instrument are susceptible to static-discharge damage.*

Service only in a static-free environment. Observe standard handling precautions for static-sensitive devices.

Always wear a grounded wrist strap, grounded foot strap, and static-resistant apparel while installing this kit.

Do not handle static-sensitive components on boards.

Transport and store static-sensitive boards in their original containers or on conductive foam. Label any package that contains static-sensitive assemblies.

Do not allow anything capable of holding or generating a static charge on the work surface.

Avoid handling boards in areas that have a floor or work surface cover that is capable of generating a static charge.



WARNING. *Dangerous voltages may be present. Before performing any procedure in this subsection, disconnect the power cord from the line voltage source. Failure to do so could cause serious injury or death.*

Remove the Accessories Pouch

Remove the accessories pouch to access the covers on the instrument.

1. Turn the logic analyzer off.
2. Remove the power cord and all probes.
3. Open the pouch and locate the two snaps on the inside front side of the pouch.
4. Gently pull on each of the two tabs to unsnap the front of the pouch.
5. At the rear of the instrument, peel off the Velcro that holds the pouch to the instrument.
6. Set the pouch aside.
7. To reinstall the pouch, perform these steps in reverse order. Tighten the T-15 TORX-drive screws to 8-in lbs.

Remove the Trim and Covers

Remove the trim and covers. (See Figure 5 on page 12.)

1. Remove the top cover trim.
 - a. Remove the two T-15 TORX-drive screws that secure the top cover trim to the instrument.
 - b. Remove the snap studs from the top cover.
 - c. Slide the trim panel toward the rear of the instrument allowing the tabs to clear the cover openings, then pull out to remove the panel from the instrument (you may need to loosen the two top black feet on the back of the instrument if the cover does not come off easily).
2. Remove the right side trim.

NOTE. *When you remove the CD Drive trim, notice the notches in the trim that provide the clearance for the chassis screws located under the trim. When you replace the trim, make sure that you orient the trim with the notches in the correct location. Otherwise the trim may not fit properly.*

- a. Remove the Drive trim by inserting a flat blade screwdriver in the bottom slot of the trim and gently prying the trim piece out of the side panel. Pull the trim up and out from the instrument.
- b. Remove the two T-15 TORX-drive screws that secure the right side trim to the bottom of the instrument.
- c. Slide the trim panel toward the rear of the instrument allowing the tabs to clear the cover openings, then pull the panel from the instrument.

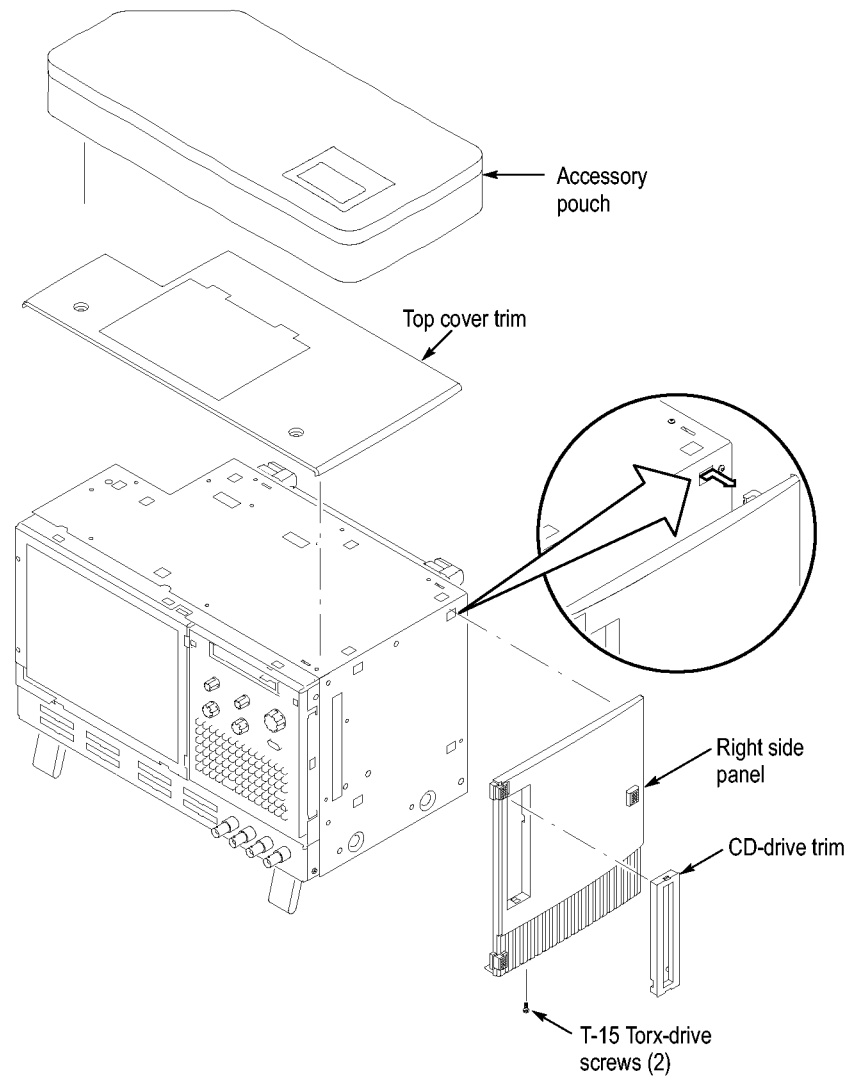


Figure 5: Trim and covers

Remove the Right-Side Cover

Remove the right-side cover to access most of the internal components of the instrument. (See Figure 6.)

NOTE. All mounting screw holes are indicated by a star etched around the mounting hole.

1. Remove the 15 T-15 TORX-drive screws that secure the cover to the top and right sides of the chassis.
2. Remove the cover.



CAUTION. Take care not to bind or snag the covers on the internal cabling as you remove or install.

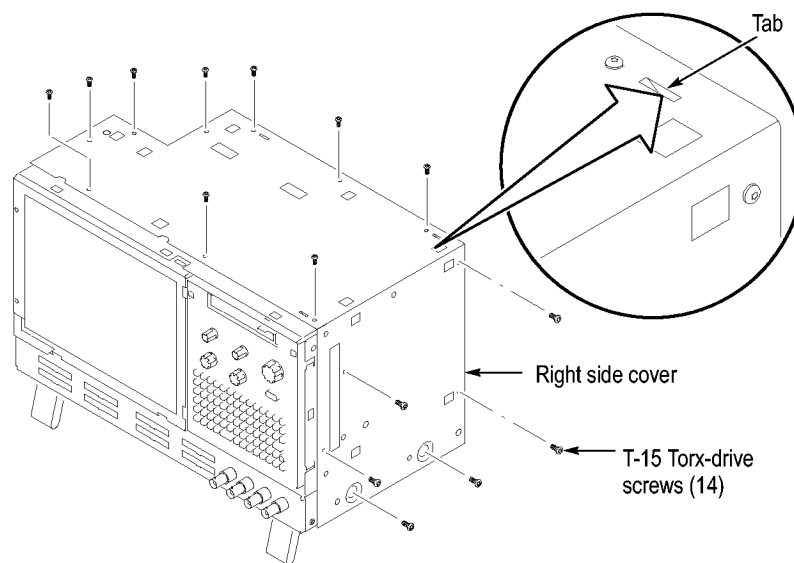


Figure 6: Right-side cover removal

Adding Memory

The memory sockets are located on the processor board mounted to the back panel. (See Figure 7.)

1. Install the memory module in one of the spare sockets. For optimum performance, leave one socket empty between the original and new DIMMs (the correct socket for the new memory module is labeled Channel B DIMM 0).

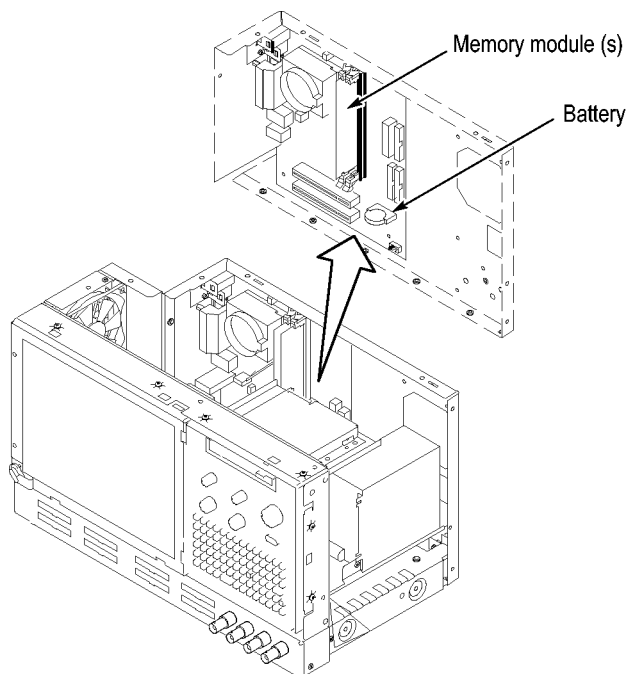


Figure 7: Memory module and battery location

2. Reinstall the trim, covers, and the accessories pouch.

Verifying Operation

To verify the proper operation of the logic analyzer, follow these steps:

1. Plug the power cord in and turn the logic analyzer on.
2. Verify that the instrument passes all power-up diagnostics.
3. Exit all applications and close any open windows.
4. Click Start in the Windows tool bar.
5. Select Programs from the Start menu.
6. Select the CheckIt Utilities application from the Programs menu.
7. Run the appropriate verification tests from the application.
8. Turn the logic analyzer off, and then on again before running any application software including the TLA application software.

Attach the Upgrade Kit Label to the Instrument

After completing all the previous steps, you need to install the upgrade kit label on the instrument to indicate that the kit is installed.

Locate the big label on the rear of the instrument, and then attach the TLA5KUP kit label. (See Figure 8.)

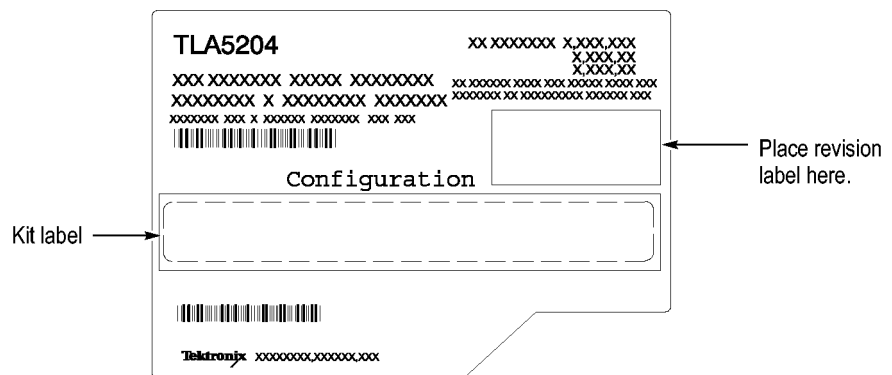


Figure 8: Kit label locations

TLA5KUP Option 15: iView External Oscilloscope Cable Installation

TLA5KUP option 15 provides the capability of connecting your logic analyzer to an external Tektronix oscilloscope through the iView cable.

Instruments

Instruments	Serial number range
TLA5000 Series Logic Analyzers	All Serial Numbers
TLA5000B Series Logic Analyzers	All Serial Numbers

Minimum Tool and Equipment List

No special tools or equipment are required.

Parts List

Table 5: TLA7KUP Option 15 parts list

Quantity	Part number	Description
1 ea	012-1614-xx	iView external oscilloscope cable kit
1 ea	N/A	TLA5KUP kit label

Installation Prerequisite

Although iView will operate on TLA Instruments with Windows 2000, Tektronix recommends the latest TLA Application Software with Windows XP, and 512 MB minimum mainframe memory. Also requires the latest version of the NI-488.2 software available on the TLA Application software CD; refer to the release notes on the CD for software version history.

Installation Instructions

Online installation instructions are provided within the TLA application through a wizard. After powering on the instrument, select Add iView External Scope from the System menu and follow the online instructions.

Attach the Upgrade Kit Label to the Instrument

After completing the previous steps, you need to install the upgrade kit label on the instrument to indicate that the kit is installed.

Locate the big label on the rear of the instrument, and then attach the TLA5KUP kit label. (See Figure 9.)

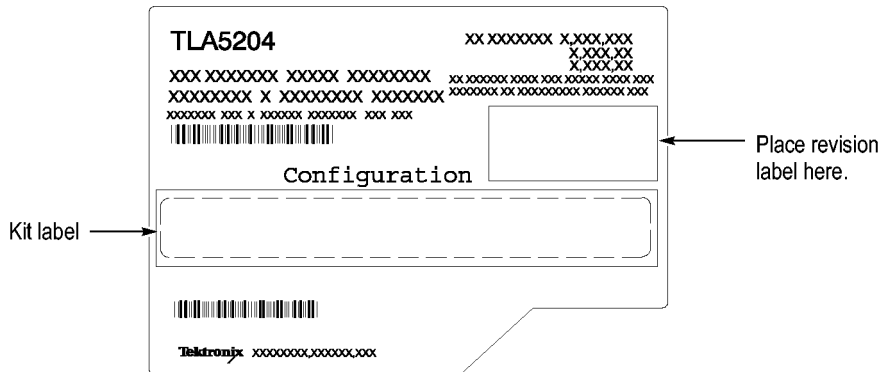


Figure 9: Kit label locations

TLA5KUP Option 20: CD-RW/DVD-ROM Drive Upgrade

TLA5KUP Option 20 replaces the CD-RW drive with a CD-RW/DVD-ROM drive for your TLA5000 Series logic analyzer. This option does not include any software media and license. Please order TLA5KUP Option 46 to get the latest software to support your new drive.

NOTE. *TLA Application Software Version 5.6 is not supported on instruments with Windows 2000.*

Instruments

Instruments	Serial number range
TLA5000 Series Logic Analyzers	B010000 to B029999

Parts List

Table 6: TLA5KUP Option 20 parts list

Quantity	Part number	Description
1 ea	119-7196-xx	CD-RW/DVD-ROM disk drive
1 ea	N/A	TLA5KUP kit label

Minimum Tool and Equipment List

Table 7: Tools required for installing upgrade

Item no.	Name	Description	General Tool number
1	Screwdriver handle	Accepts TORX-driver bits	620-440
2	T-15 TORX tip	Used for removing most the instrument's screws. TORX-driver bit for T-15 size screw heads	640-247
3	#1 Phillips screwdriver	Screwdriver for removing Phillips screws, CD-ROM Drive.	Standard tool

Preparation

Be sure to observe the following precautions to avoid damaging the logic analyzer while preparing to service it. Contact your nearest Tektronix, Inc., Service Center or Tektronix Factory Service Center for installation assistance.



CAUTION. *Many components within the instrument are susceptible to static-discharge damage.*

Service only in a static-free environment. Observe standard handling precautions for static-sensitive devices.

Always wear a grounded wrist strap, grounded foot strap, and static-resistant apparel while installing this kit.

Do not handle static-sensitive components on boards.

Transport and store static-sensitive boards in their original containers or on conductive foam. Label any package that contains static-sensitive assemblies.

Do not allow anything capable of holding or generating a static charge on the work surface.

Avoid handling boards in areas that have a floor or work surface cover that is capable of generating a static charge.



WARNING. *Dangerous voltages may be present. Before performing any procedure in this subsection, disconnect the power cord from the line voltage source. Failure to do so could cause serious injury or death.*

Remove the Accessories Pouch

Remove the accessories pouch to access the covers on the instrument.

1. Turn the logic analyzer off.
2. Remove the power cord and all probes.
3. Open the pouch and locate the two snaps on the inside front side of the pouch.
4. Gently pull on each of the two tabs to unsnap the front of the pouch.
5. At the rear of the instrument, peel off the Velcro that holds the pouch to the instrument.
6. Set the pouch aside.
7. To reinstall the pouch, perform these steps in reverse order. Tighten the T-15 TORX-drive screws to 8-in lbs.

Remove the Trim and Covers

Remove the trim and covers by following this procedure. (See Figure 10 on page 22.)

1. Remove the top cover trim.
 - a. Remove the two T-15 TORX-drive screws that secure the top cover trim to the instrument.
 - b. Remove the snap studs from the top cover.
 - c. Slide the trim panel toward the rear of the instrument allowing the tabs to clear the cover openings, then pull out to remove the panel from the instrument (you may need to loosen the two top black feet on the back of the instrument if the cover does not come off easily).
2. Remove the right side trim.

NOTE. *When you remove the CD Drive trim, notice the notches in the trim that provide the clearance for the chassis screws located under the trim. When you replace the trim, make sure that you orient the trim with the notches in the correct location. Otherwise the trim may not fit properly.*

- a. Remove the Drive trim by inserting a flat blade screwdriver in the bottom slot of the trim and gently prying the trim piece out of the side panel. Pull the trim up and out from the instrument.
- b. Remove the two T-15 TORX-drive screws that secure the right side trim to the bottom of the instrument.

- c. Slide the trim panel toward the rear of the instrument allowing the tabs to clear the cover openings, then pull the panel from the instrument.

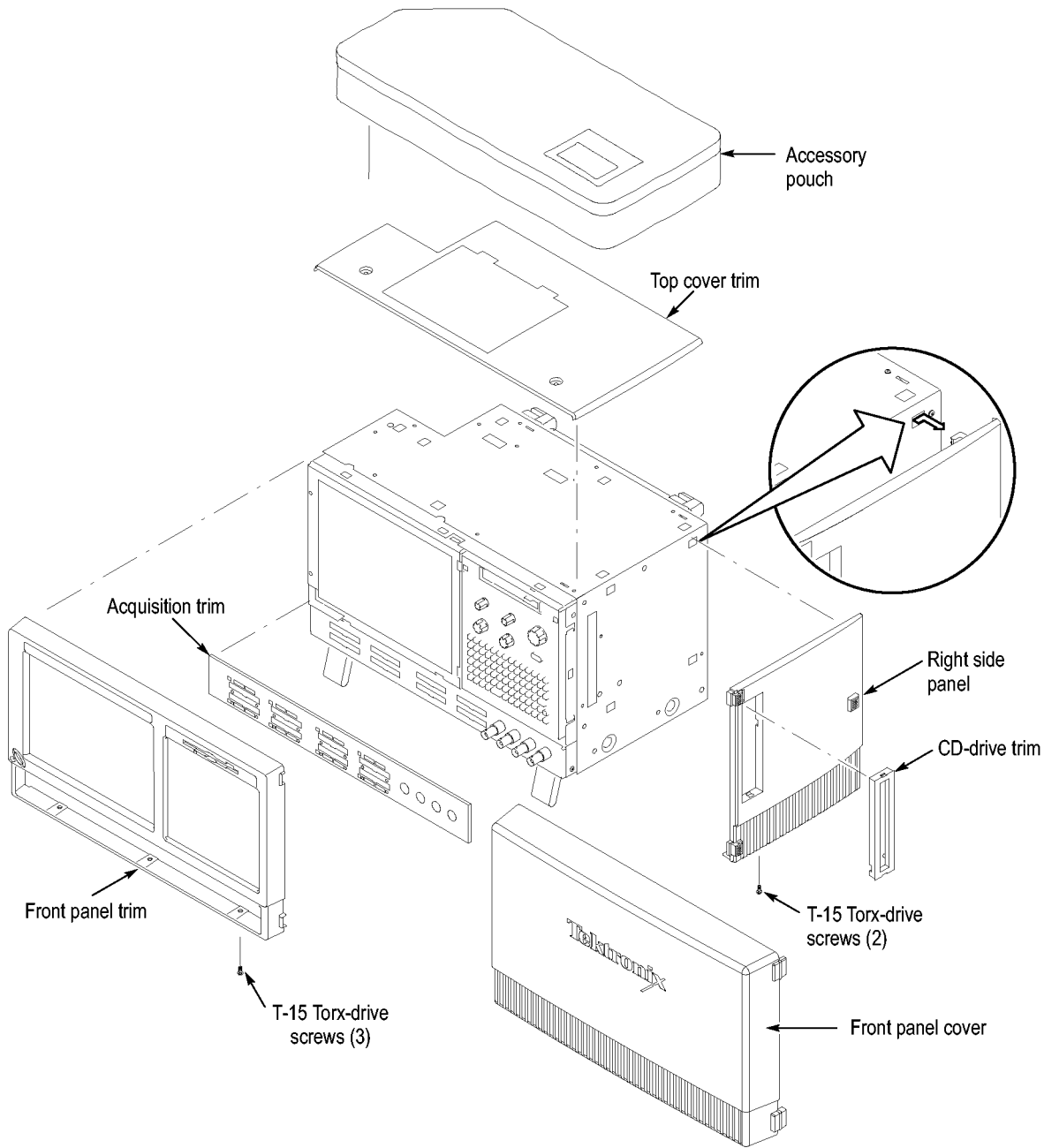


Figure 10: Trim and covers

Remove the Right-Side Cover

Remove the right-side cover to access most of the internal components of the instrument. (See Figure 11.)

1. Remove the top and right trim to access the right-side cover.

NOTE. All mounting screw holes are indicated by a star etched around the mounting hole.

2. Remove the 15 T-15 TORX-drive screws that secure the cover to the top and right sides of the chassis.
3. Remove the cover.

CAUTION. The covers can damage internal cables if they get tangled during removal or installation. Take care not to bind or snag the covers on the cables as you remove or install.

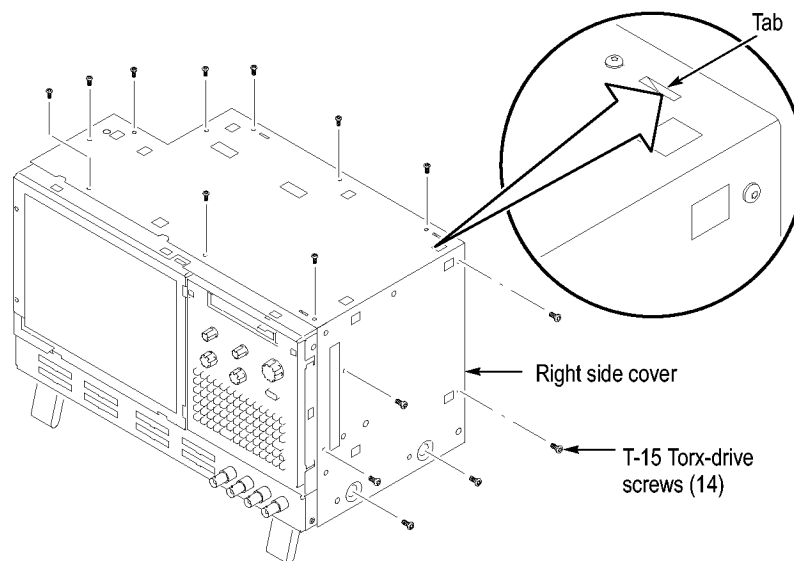


Figure 11: Right-side cover removal

Locator Diagram

Locate the components for the remaining removal and installation procedures.
(See Figure 12.)

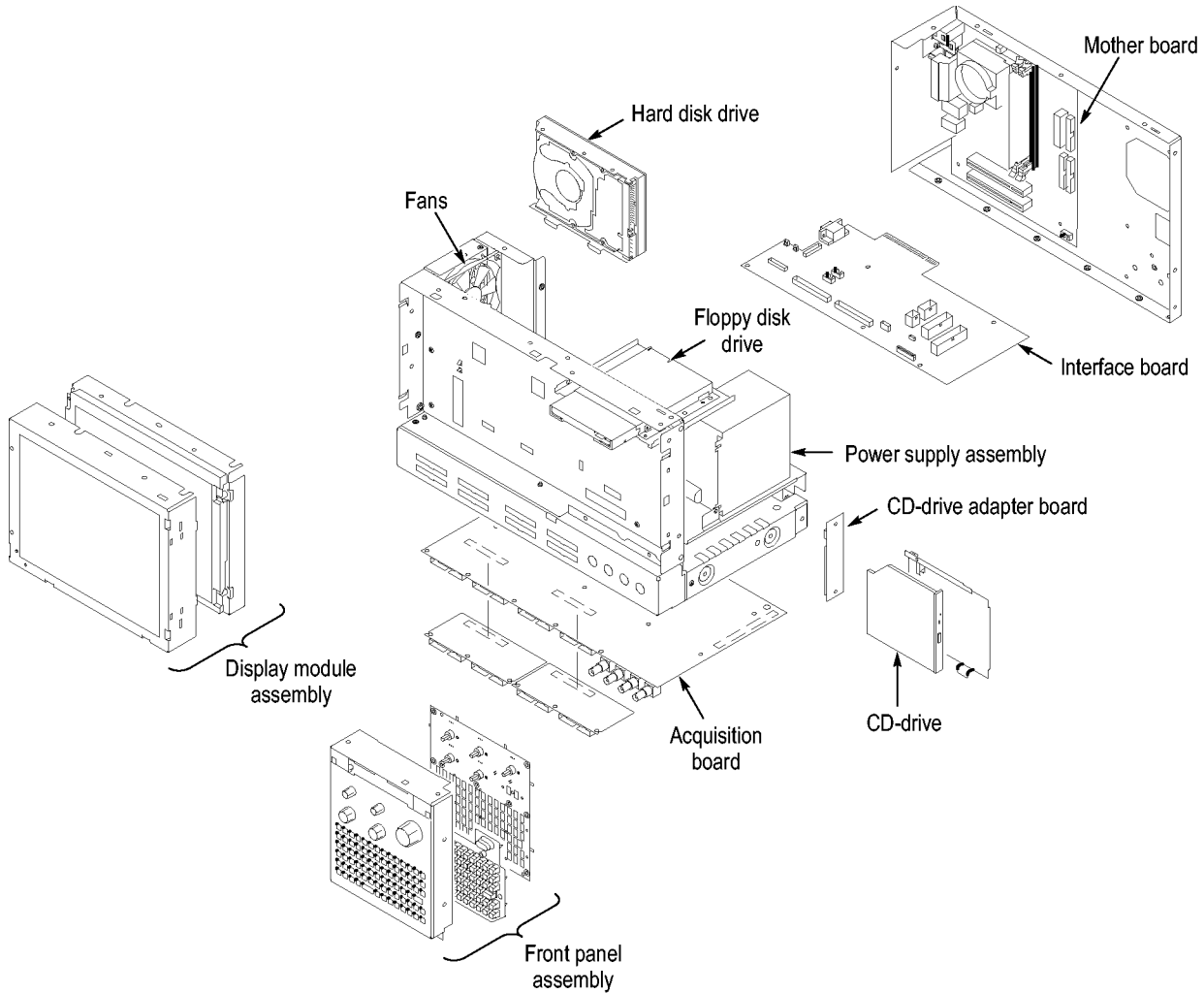


Figure 12: Locator diagram

Remove the Floppy Disk Drive

Remove the floppy disk drive for better access to the CD-RW drive.

1. Locate the Floppy Disk Drive. (See Figure 12.)
2. Set the instrument so its bottom is down on the work surface and the front panel is facing you.
3. Remove the cable from the back of the floppy disk drive.
4. Remove the two T-15 TORX-drive screws that secure the floppy disk drive assembly to the chassis.

Replace the CD Drive

1. Locate the CD drive in the locator diagram. (See Figure 12 on page 24.)
2. Remove the single T-15 TORX-drive screw that secures the CD drive assembly to the chassis.
3. Pull the assembly away from the chassis so that you can disconnect the ribbon and power cables.
4. Disconnect the ribbon and power cables and then remove the CD drive from the chassis.
5. Remove the Phillips screws that secure the CD drive to the bracket.
6. Gently pull the CD drive away from the connector and remove the drive from the bracket.
7. Remove the Phillips screws that secure the CD drive adapter board to the back of the CD drive.
8. Remove the CD drive adapter board from the old CD drive and attach the board to the new DVD-ROM/CD-RW drive. Install the Phillips screws that you removed earlier and tighten them to 2 in-lbs.
9. Slide the new drive into the bracket and install the Phillips screws that you removed earlier; tighten the screws to 2 in-lbs.
10. Install the assembly in the chassis by aligning the two tabs from the bracket to the slots in the chassis before tightening the TORX-drive screw. Tighten the T-15 TORX-drive screw to 8 in-lbs.
11. Connect the ribbon and power cables to the assembly.
12. Reinstall the floppy disk drive, right-side cover, trim, and the accessories pouch.

Verifying Operation

To verify the proper operation of the logic analyzer, follow these steps:

1. Attach the power cord and power on the logic analyzer.
2. Exit all applications and close any open windows.
3. Click Start in the Windows tool bar.
4. Select Programs from the Start menu.
5. Select the CheckIt application from the Programs menu.
6. Run the appropriate verification tests from the CheckIt diagnostics.
7. Insert a CD and verify the CD write capability using the appropriate media-burning software.
8. Insert a pre-recorded DVD and verify the read capability.
9. Turn the logic analyzer off, and then on again before running any application software including the TLA application software.

Attach the Upgrade Kit Label to the Instrument

After completing all the previous steps, you need to install the upgrade kit label on the instrument to indicate that the kit is installed.

Locate the big label on the rear of the instrument, and then attach the TLA5KUP kit label. (See Figure 13.)

NOTE. *If there is an upgrade kit label already installed, install the new label above or below the old one, wherever there is room.*

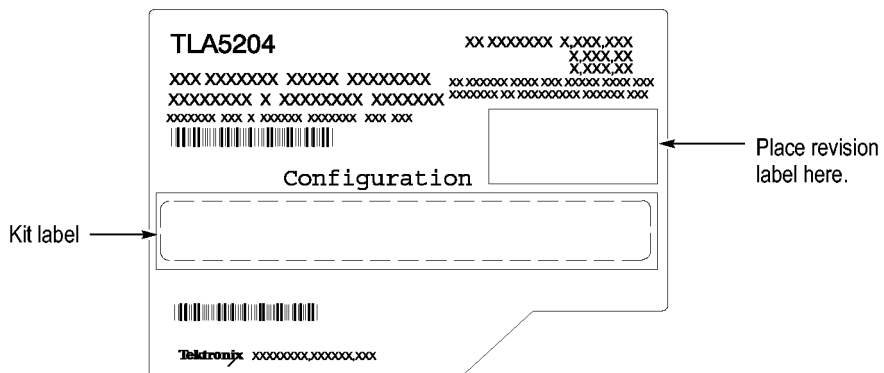


Figure 13: Kit label locations

TLA5KUP Option 46: TLA Application Software Upgrade

TLA5KUP Option 46 supports the upgrade to TLA application software version 5.6. This kit provides instructions to upgrade the TLA application software and firmware for a TLA5000B or TLA5000 Series logic analyzer with TLA Application Software V5.0 or higher and Windows XP purchased from Tektronix. The software will also run on a PC with Windows XP.

Instruments

Instruments	Serial number range
TLA5000 Series Logic Analyzers	All Serial Numbers
TLA5000B Series Logic Analyzers	All Serial Numbers

Installation Prerequisite

Requires TLA Application Software Version 5.0 (or higher), Windows XP.

Parts List

Table 8: TLA5KUP Option 46 parts list

Quantity	Part number	Description
1 ea	N/A	Tektronix Logic Analyzer Family Application Software Version 5.6
1 ea	N/A	Nero Software CD
1 sheet	N/A	Software revision labels
1 ea	N/A	TLA5KUP kit label

Minimum Tool and Equipment List

No special tools or equipment are required to install this option.

Upgrade Instruction Overview

NOTE. *Third-party software applications are included to use with your logic analyzer. These applications may include software license agreements. Be sure to abide by those license agreements.*

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 on 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 Microsoft Windows Add or Remove Programs Control Panel utility to remove existing software.
- You may be asked to restart the instrument after you install each software package. If you do not restart the instrument when prompted, your software may not install properly and can cause unpredictable behavior.
- If the instrument does not restart normally, press and hold the On/Standby button for five or six seconds to force a shutdown.

Update the Software

NOTE. *You may want to compare the software version listed under Software Compatibility in the release notes against the software on your instrument. If the software versions do not match, remove the old software using the Microsoft Windows Add or Remove Programs utility and then install the new software from the TLA Application CD.*

TLA Application Software

The TLA Application software uses a wizard to remove older software and install the new software for your instrument.

1. Log on as Administrator.
2. Insert the first CD of the TLA Application software in the instrument.
3. Start Windows Explorer, and browse to and execute D:\TLA Application SW\Setup.exe.
4. Click Yes to start the installation.
5. Follow any on-screen instructions. If you are asked for permission to overwrite any read-only files, select Yes to All.
6. After the software has been successfully installed, restart your instrument.

Other Software

Complete the following instructions to install other software from the TLA Application Software CD:

1. Log on as Administrator.
2. Insert the TLA Application software CD in the instrument.
3. Start Windows Explorer, and browse the CD to look for your software (you might need to browse the second CD if you can't find the software that you are looking for).
4. Double-click the executable file for the software and follow the on-screen instructions.

NOTE. When you reinstall the CheckIt Utilities software, you will be prompted for a serial number; use U7-999999.

Follow the instructions to install the NI-GPIB software to use with iView. (See page 32, Install the NI-GPIB Software.)

5. After the software has been successfully installed, restart your instrument.

Upgrade the Instrument Firmware

Complete the following steps if the TLA startup messages indicate that you need to upgrade the instrument firmware:

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. Select the module from the Supported list box near the top of the window.
6. Select **Load Firmware** from the Execute menu.
7. Click the TLA520x.lod file.
8. Click **Open**. You will be asked to confirm your action; click **Yes**.
9. When the process is complete, exit the firmware loader program.

Upgrade the Mainframe BIOS (Instruments with Serial Numbers B020000 to B049999 Only)

Use the following steps to determine if you need to upgrade the BIOS on the logic analyzer mainframe:

1. Restart the logic analyzer and then press function key **F2** repeatedly to enter the BIOS setup.
2. For TLA5000 instruments with serial numbers from B020000 to B039999, check that the version string ends in P24 or higher. For TLA5000B instruments with serial numbers from B040000 to B049999, check that the third field of the BIOS version string is 4089 or higher.
3. If you have the correct version, skip the remaining steps in this procedure. Restart the instrument, or press the **Escape** key, and answer OK to discard any changes and exit (this allows the instrument to restart).
4. To update the BIOS, complete the following steps:
 - a. Connect to the internet and go to one of the following Web sites:
 - For instruments with serial numbers B020000 to B039999, go to http://developer.intel.com/design/motherbd/lc/lc_bios.htm.
 - For instruments with serial numbers B040000 to B049999, go to <http://www.intel.com/products/motherboard/d945gtp/tools.htm>.
 - b. Review the information on the Web site about the Express BIOS update and then download the file and copy it to your instrument desktop.
 - c. Close all applications on your instrument and then execute the file that you just downloaded.

NOTE. *Do not power down the instrument until the upgrade is complete.*

- d. Follow the on-screen instructions.

The logic analyzer will update the BIOS and the screen will be blank. During the update processes you will hear several beeps and then the instrument will restart. A message will appear on the screen when the upgrade is complete.

The upgrade process should not change the BIOS settings of your instrument. If the screen remains blank, the video BIOS settings might have been reset. Complete the following steps to recover from any problems:

5. Connect an external monitor to the video port near the RS-232 port.
6. Restart the instrument and then press function key **F2** to enter the BIOS setup.

The BIOS screen should appear on the external monitor.

7. Use the keyboard or front panel keys to change the BIOS settings.

Table 9: TLA5000 BIOS settings

Menu		Recommended settings	
Advanced	Peripheral Configuration	Parallel Port Mode	ECP
		Audio	Disabled
	Diskette Configuration	Diskette Controller	Disabled
	Video Configuration	Primary Video Adapter	PCI
Boot		Silent Boot	Enabled

8. Press function key **F10** to save and exit the BIOS setup. The instrument should restart and the screen should work properly.

Calibrate the Instrument

After verifying proper operation, you need to calibrate the logic analyzer.

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 the Run button and click Yes to any confirmation messages.

NOTE. *The calibration process may take several minutes.*

The Status column indicates Running while the instrument is being calibrated.

5. Verify that the Status column changes to Calibrated.
6. Close the dialog box.

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.
- To control a logic analyzer with the same TLA application software version over a network.

Install Third-Party Software

To use all of the features of the TLA application software on your PC, you must install additional third-party software. The following third-party software is available on the TLA Application Software CD V5.6:

- The NI-GPIB software allows you to use the iView software with your PC.
- The SnagIt software is useful for copying screen shots of logic analyzer data for use with other applications.

NOTE. *Several third-party software applications are included to use with your logic analyzer. These applications may include software license agreements. Be sure to abide by those license agreements.*

Install the NI-GPIB Software. Complete the following steps to install the third-party software on your PC:

1. Insert the TLA Application Software CD in the CD drive.
2. Browse to the NI-GPIB-USB folder on the CD and run the Setup.exe program.
3. Follow the on-screen instructions and note the items below:
 - a. When prompted, select the Typical installation option.
 - b. When the Add GPIB wizard appears, click Cancel.
 - c. After restarting the instrument, the NI-488.2 Getting Started wizard displays. This is not needed; select **Do not show at Windows startup** and then click X to exit.
 - d. When you first connect the iView cable, the instrument will detect the new hardware. Select **Install the software automatically (Recommended)**.

Install the SnagIt Software. Complete the following steps to install the SnagIt software on your PC:

1. Browse to the SnagIt folder on the CD and run the Setup.exe program.
2. Follow the on-screen instructions.

Install the TLA Application Software

Browse to the TLA Application software folder on the CD and run the Setup.exe program. Follow the on-screen instructions to install the TLA application software.

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

If you have installed the TLA application software on a PC for remote operation, start the software by double-clicking on the TLA Application icon. The TLA Connection dialog box displays.

1. Select an 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 local 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.

Attach the Upgrade Kit Label to the Instrument

After completing all the previous steps, install the upgrade kit label on the instrument to indicate that the kit is installed.

Locate the big label on the rear of the instrument, and then attach the software revision label and the TLA5KUP kit label. (See Figure 14.)

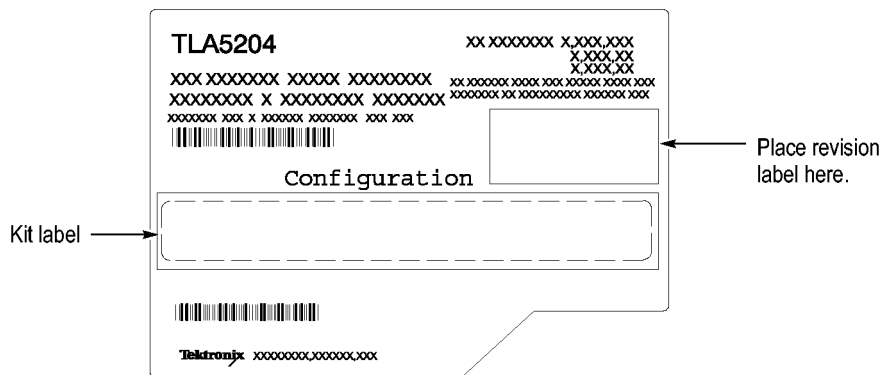


Figure 14: Revision and kit label locations