Instruction Manual

Tektronix

TLA7UP
Mainframe Field Upgrade Kit

071-0865-00

Warning
The 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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HARDWARE WARRANTY

Tektronix warrants that the products that it manufactures and sells will be free from defects in materials and workmanship for a period of one (1) year from the date of shipment. If a product proves defective during this warranty period, Tektronix, at its option, either will repair the defective product without charge for parts and labor, or will provide a replacement in exchange for the defective product.

In order to obtain service under this warranty, Customer must notify Tektronix of the defect before the expiration of the warranty period and make suitable arrangements for the performance of service. Customer shall be responsible for packaging and shipping the defective product to the service center designated by Tektronix, with shipping charges prepaid. Tektronix shall pay for the return of the product to Customer if the shipment is to a location within the country in which the Tektronix service center is located. Customer shall be responsible for paying all shipping charges, duties, taxes, and any other charges for products returned to any other locations.

This warranty shall not apply to any defect, failure or damage caused by improper use or improper or inadequate maintenance and care. Tektronix shall not be obligated to furnish service under this warranty a) to repair damage resulting from attempts by personnel other than Tektronix representatives to install, repair or service the product; b) to repair damage resulting from improper use or connection to incompatible equipment; c) to repair any damage or malfunction caused by the use of non-Tektronix supplies; or d) to service a product that has been modified or integrated with other products when the effect of such modification or integration increases the time or difficulty of servicing the product.

THIS WARRANTY IS GIVEN BY TEKTRONIX IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED. TEKTRONIX AND ITS VENDORS DISCLAIM ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TEKTRONIX' RESPONSIBILITY TO REPAIR OR REPLACE DEFECTIVE PRODUCTS IS THE SOLE AND EXCLUSIVE REMEDY PROVIDED TO THE CUSTOMER FOR BREACH OF THIS WARRANTY. TEKTRONIX AND ITS VENDORS WILL NOT BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES IRRESPECTIVE OF WHETHER TEKTRONIX OR THE VENDOR HAS ADVANCE NOTICE OF THE POSSIBILITY OF SUCH DAMAGES.

SOFTWARE WARRANTY

Tektronix warrants that the media on which this software product is furnished and the encoding of the programs on the media will be free from defects in materials and workmanship for a period of three (3) months from the date of shipment. If a medium or encoding proves defective during the warranty period, Tektronix will provide a replacement in exchange for the defective medium. Except as to the media on which this software product is furnished, this software product is provided "as is" without warranty of any kind, either express or implied. Tektronix does not warrant that the functions contained in this software product will meet Customer's requirements or that the operation of the programs will be uninterrupted or error-free.

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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TEKTRONIX SERVICE OPTIONS

Tektronix offers the following service options. These options are modular, flexible, and easy to order with your instrument. Designed to ease installation and start up, to support tracking of calibration to requirements of ISO9000, and to provide for extended repair coverage, these options help fix your long-term maintenance costs and eliminate unplanned expenditures. And these options can be converted from service at Tektronix service depots to service on-site (see Option S1 and S3), which helps keep downtime to a minimum.

Upgrade installation service[1]	Option IF	Provides installation of product upgrades performed at a Tektronix Service Center.
Product installation service[1]	Option IN	Provides initial product installation/configuration and start–up training session including front panel and product familiarization.
Three years of calibration services	Option C3	Provides factory calibration certification on delivery, plus two more years of calibration coverage. Throughout the coverage period the instrument will be calibrated according to its Recommended Calibration Interval.
Test data	Option D1	Provides initial Test Data Report from manufacturing.
Test data	Option D3	Provides test data on delivery plus a Test Data Report for every calibration performed during 3 years of coverage – requires Option C3.
Three years repair coverage	Option R3	Extends product repair warranty to a total of three years.
One year upgrade to on-site service[1,2]	Option S1	Upgrades the standard one year, "return to depot" warranty to an on-site warranty.
Three year upgrade to on-site service[1,2]	Option S3	Upgrades any C3, D3, and R3 options purchased to on-site coverage for three years.

Tektronix Service Options are available at the time you order your instrument. Contact your local Tektronix Sales Office for more information.

[1] **Availability of installation and on-site services depends on the type of product and may vary by geography.**

[2] **Upgrade options are ordered with the mainframe products and cover individual modules.**

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General Safety Summary

Review the following safety precautions to avoid injury and prevent damage to this product or any products connected to it. To avoid potential hazards, use this product only as specified.

Only qualified personnel should perform service procedures.

While using this product, you may need to access other parts of the system. Read the *General Safety Summary* in other system manuals for warnings and cautions related to operating the system.

To Avoid Fire or Personal Injury

Use Proper Power Cord. Use only the power cord specified for this product and certified for the country of use.

Use Proper Voltage Setting. Before applying power, ensure that the line selector is in the proper position for the power source being used.

Connect and Disconnect Properly. Do not connect or disconnect probes or test leads while they are connected to a voltage source.

Ground the Product. This product is grounded through the grounding conductor of the power cord. To avoid electric shock, the grounding conductor must be connected to earth ground. Before making connections to the input or output terminals of the product, ensure that the product is properly grounded.

Observe All Terminal Ratings. To avoid fire or shock hazard, observe all ratings and marking on the product. Consult the product manual for further ratings information before making connections to the product.

Do not apply a potential to any terminal, including the common terminal, that exceeds the maximum rating of that terminal.

Replace Batteries Properly. Replace batteries only with the proper type and rating specified.

Do Not Operate Without Covers. Do not operate this product with covers or panels removed.

Use Proper Fuse. Use only the fuse type and rating specified for this product.

Avoid Exposed Circuitry. Do not touch exposed connections and components when power is present.

Do Not Operate With Suspected Failures. If you suspect there is damage to this product, have it inspected by qualified service personnel.

Do Not Operate in Wet/Damp Conditions.

Do Not Operate in an Explosive Atmosphere.

Keep Product Surfaces Clean and Dry.

Provide Proper Ventilation. Refer to the manual's installation instructions for details on installing the product so it has proper ventilation.

Symbols and Terms

Terms in this Manual. These terms may appear in this manual:

WARNING. Warning statements identify conditions or practices that could result in injury or loss of life.

CAUTION. Caution statements identify conditions or practices that could result in damage to this product or other property.

Terms on the Product. These terms may appear on the product:

DANGER indicates an injury hazard immediately accessible as you read the marking.

WARNING indicates an injury hazard not immediately accessible as you read the marking.

CAUTION indicates a hazard to property including the product.

Symbols on the Product. The following symbols may appear on the product:

WARNING
High Voltage

Protective Ground
(Earth) Terminal

CAUTION
Refer to Manual

Double
Insulated

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.

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, disconnect the main power by means of the power cord or, if provided, the power switch.

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 instruction manual contains specific information about the TLA7UP mainframe field upgrades. The mainframe field upgrades consist of software and hardware options for the TLA700 series logic analyzer. Use Table i, *TLA7UP Mainframe Field Upgrade Matrix*, listed below to explore your possible upgrade paths.

Table i: TLA7UP Mainframe Field Upgrade Matrix

New Capability Desired	Current Mainframe Configuration	Please Order
Add More DRAM and a Larger HDD Add up to 128 MB DRAM and/or: 1) replace current hard disk drive with a larger (replaceable) bootable MAX hard disk drive that is configured as the master drive. 2) reconfigure replaceable hard disk drive for data storage only and add a second (internal fixed) bootable hard disk drive that is configured as the master drive. 3) add an additional (replaceable) MAX hard disk drive that is configured as the slave drive.	TLA714 Std or Option 1S with V3.X TLA Application Software. TLA720 Std with V3.X TLA Application Software.	TLA7UP Option 10[1]
Add New User Interface/Operating System Software Features: Add new functionality to existing TLA7NX/PX/QX Logic Analyzer, TLA7PG2 Pattern Generator and TLA7DX/EX Digitizing Oscilloscope module(s) by upgrading to V4.0 TLA Application Software and Windows 2000 Professional Series operating system to you existing TLA714/720 mainframe.	TLA714 Std or Option 1S with V3.X TLA Application Software. TLA720 Std with V3.X TLA Application Software.	TLA7UP Option 11[2]
Add New Measurement Modules to Existing Mainframe: Add new TLA7NX/PX/QX Logic Analyzer, TLA7PG2 Pattern Generator, and/or TLA7DX/EX Digitizing Oscilloscope module(s) to your existing TLA714/720 mainframe.	TLA714 Std or Option 1S with V3.X TLA Application Software. TLA720 Std with V3.X TLA Application Software.	TLA7UP Option 11[2]

Table i: TLA7UP Mainframe Field Upgrade Matrix (Cont.)

New Capability Desired	Current Mainframe Configuration	Please Order
Add New Expansion Mainframe to Existing Mainframe: Add new TLA7XM expansion mainframe(s) to your existing TLA714/720 mainframe.	TLA714 Std or Option 1S with V3.X TLA Application Software. TLA720 Std with V3.X TLA Application Software.	TLA7UP Option 11[2] TLA 7UP Option 09 (Required only for TLA 720 Benchtop Mainframes with a serial number of B19999 or lower.)

[1] **For maximum peformance, please order TLA7UP Option 11 for the latest version of Windows operating system software and TLA application software. Otherwise, you will need to reload Windows 98 and TLA application software, Version 3.X onto your new MAX hard disk drive.**

[2] **If you need to preserve user files on your current TLA714/720 mainframe's hard disk, please order an additional hard disk drive using TLA7UP Option 10 and install it as a second, internal hard disk (either master or slave) in your TLA714/720 mainframe. This procedure is documented in the TLA7UP Kit Instruction Manual.**

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 at the beginning of this manual.

■ The procedures in this manual may only be performed by a qualified service person.

Be sure to follow all warnings, cautions and notes.

Adjustment and Certification Interval

Generally, you should perform the adjustments and certification (calibration) described in the *TLA Family Logic Analyzer Performance Verification and Adjustment Technical Reference* (071–0862–00) once per year, or after repairs have been made that 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 the mainframe. Services are provided at Tektronix Services Centers and on-site at your facility, depending on your location.

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:

> www.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.

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. These service options are listed on the *Tektronix Service Options* page following the title page of this manual.

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.

Contacting Tektronix

Phone	1-800-833-9200*
Address	Tektronix, Inc. Department or name (if known) 14200 SW Karl Braun Drive P.O. Box 500 Beaverton, OR 97077 USA
Web site	www.tektronix.com
Sales support	1-800-833-9200, select option 1*
Service support	1-800-833-9200, select option 2*
Technical support	Email: techsupport@tektronix.com 1-800-833-9200, select option 3* 1-503-627-2400 6:00 a.m. – 5:00 p.m. Pacific time

* **This phone number is toll free in North America. After office hours, please leave a voice mail message.**
Outside North America, contact a Tektronix sales office or distributor; see the Tektronix web site for a list of offices.

TLA7UP Option 09

Enhanced Monitor Board Replacement

TLA7UP option 09 supports the removal and replacement of the enhanced monitor board. The new enhanced monitor board supplied with this kit provides functionality to the TLA720 benchtop mainframe so that the mainframe can be used with the TLA7XM expansion mainframe.

This option is required on all mainframes manufactured before the serial numbers specified in *Instruments* below.

This kit contains an enhanced monitor board and labels.

Instruments

TLA720   B010100 to B019999

Minimum Tool and Equipment List

Table 1–1: Tools required for installing upgrade

Item no.	Name	Description	General tool number
1 ea	#1 Phillips screwdriver	Screwdriver for removing the enhanced monitor board.	Standard

Kit Parts List

Table 1–2: TLA7UP option 09 parts list

Quantity	Part number	Description
1 ea	071-0865-XX	TLA7UP Mainframe Field Upgrade Kit Instruction Manual
1 ea	671-3982-02	Enhanced Monitor Board
1 ea	N/A	TLA 7UP kit label

Removal Instructions

To remove the enhanced monitor board follow these instructions.

1. Refer to Figure 1–1 and unscrew the captive screw that attaches the cable cover. Remove the cable cover and set it aside.

2. Unplug the blower cable from the connector marked 1/BLOWER.

3. Unscrew the two captive screws that attach the monitor board to the chassis.

4. Slide the enhanced monitor board out of the chassis as shown in Figure 1–2.

5. Dispose of the old enhanced monitor board.
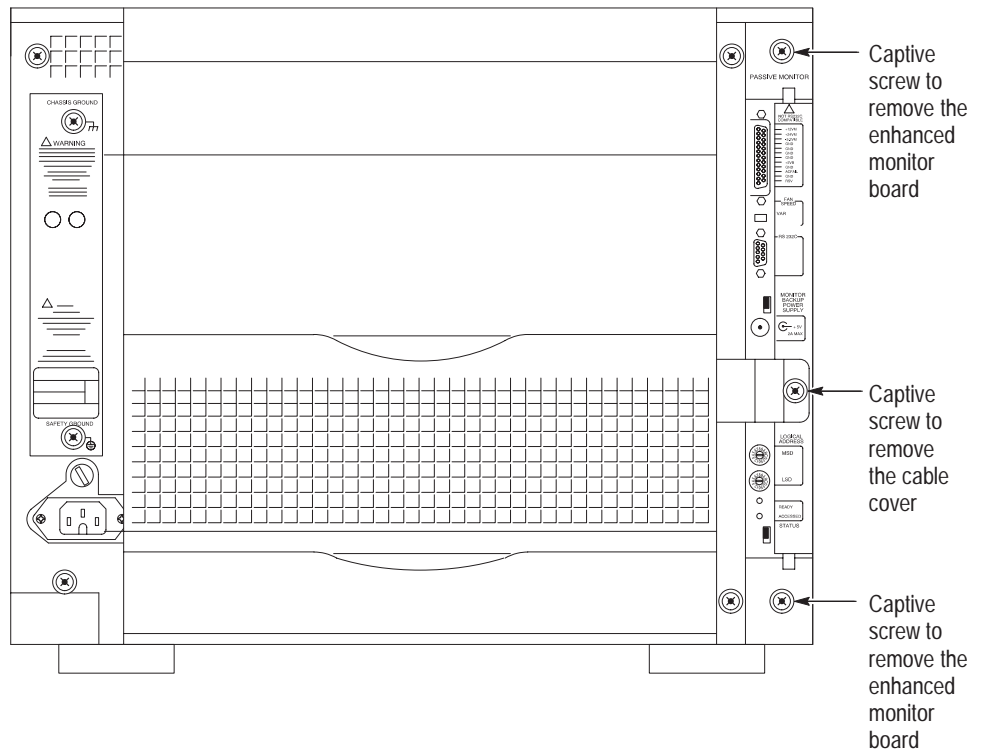
Figure 1–1: Location of enhanced monitor board screws
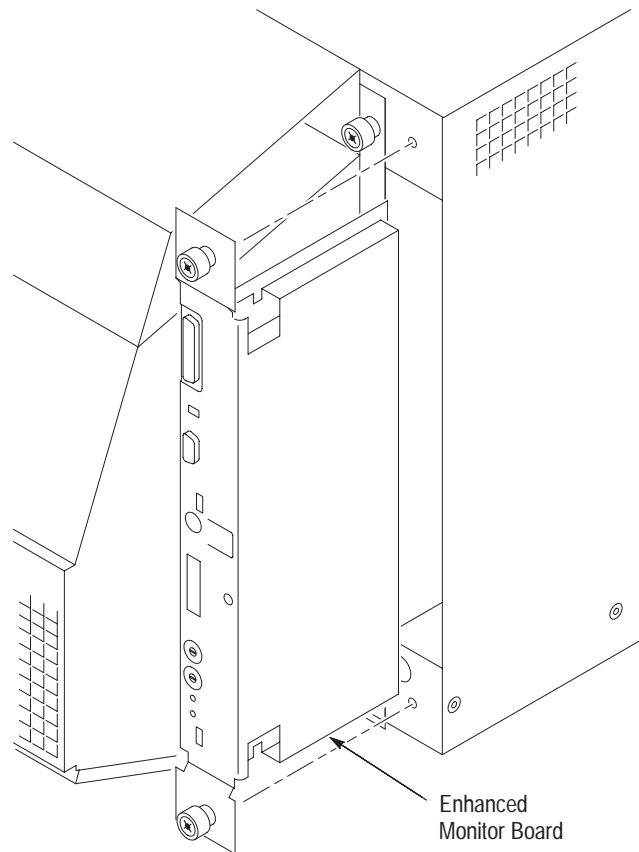
Figure 1–2: Remove/install the enhanced monitor board

Installation Instructions

To install the new enhanced monitor board shipped with this option kit follow these instructions:

1. Slide the enhanced monitor board into the chassis as shown in Figure 1–2. You might have to adjust the enhanced monitor board a little to engage the connectors on the rear of the board.

2. Push the board fully into the chassis to fully mate the rear connectors.

3. Tighten the two screws that attach the monitor board to the chassis.

4. Plug the blower cable into the connector marked 1/BLOWER.

5. Install the cable cover and tighten the captive screw that attaches to the chassis.

TLA7UP Option 10

TLA700 Series MAX HDD and MAX DRAM Installation

Option 10 supports the addition of a second (fixed) hard disk drive for your TLA700 series mainframe. This option additionally supports the upgrade to 128 MB of DRAM memory for TLA714 Portable Mainframes.

These instructions assume that you are familiar with servicing the instrument. If you need further details for disassembling or reassembling the instrument, refer to either the *TLA714 Portable Mainframe Service Manual* (071-0267-01) or the *TLA720 Benchtop Controller Service Manual* (071-0269-01). You may also contact your nearest Tektronix, Inc., Service Center or Tektronix Factory Service Center for installation assistance.

Instruments

TLA714 Portable Mainframe
TLA720 Benchtop Mainframe

Minimum Tool and Equipment List

Table 2–1: Tools required for installing upgrade

Item no.	Name	Description	General tool number
1	Screwdriver handle	Accepts Torx®-driver bits	620-440
2	T-10 Torx tip	Used for removing screws that attach the TLA714 hard disk drive to its bracket. Torx®-driver bit for T-10 size screw heads	640-240
3	T-15 Torx tip	Used for removing most the instrument's screws. Torx®-driver bit for T-15 size screw heads	640-247
4	Flat blade screwdriver	Screwdriver for removing screws that attach the TLA720 hard disk drive to its bracket and removing the instrument trim ring.	Standard tool
5	#1 Phillips screwdriver	Screwdriver for removing small phillips screws, CD, floppy and hard drive from its removable cartridge.	Standard tool

Kit Parts List

Table 2–2: TLA7UP option 10 parts list

Quantity	Part number	Description
1 ea	071-0865-00	TLA7UP Mainframe Field Upgrade Kit Instruction Manual
1 ea	156-8389-00	64 MB SO DIMM – Total of 128 MB (TLA714 Only)
1 ea	650-4272-00	Replaceable hard disk cartridge with MAX hard disk plus jumpers
1 ea	N/A	TLA7UP kit label

Installation Prerequisite

These instructions are for personnel who are familiar with servicing the product. If you need further details for disassembling or reassembling the product, refer to the appropriate product manual. Contact your nearest Tektronix, Inc., Service Center or Tektronix Factory Service for installation assistance.

⚠ *CAUTION. To prevent static discharge damage, service the product only in a static-free environment. Always wear a grounded wrist strap, grounded foot strap, and static resistant apparel while installing this kit.*

Mainframe-Specific Instructions

If you are updating your benchtop mainframe, refer to *MAX Hard Disk Drive Installation* on page 2–3, and *Benchtop Mainframe-Specific Update Instructions* on page 2–9 for update instructions. If you are updating your portable mainframe, refer to *MAX Hard Disk Drive Installation* on page 2–3, and *Portable Mainframe-Specific Update Instructions* on page 2–17 for update instructions.

MAX Hard Disk Drive Installation

The following instructions direct you through the preliminary stages of installing a fixed (second) MAX hard disk drive on either a TLA714 Portable or TLA720 Benchtop Mainframe. Because mainframe disassembly instructions differ substantially between the portable and benchtop mainframes, details are tailored to each instrument and are individually addressed in subsections to follow.

Master/Slave Drive Decision

At this point you need to decide where you would like the master hard disk drive to be, and where you would like the slave hard disk drive to be. The following guidelines may help you in your decision:

Master Hard Disk Drive

The master hard disk drive:

- Must have the Windows operating system resident.

- Must be the boot drive.

- Must have the TLA700 application software resident.

- Must not have a slave jumper installed.

- Can be the fixed or replaceable hard disk drive.

Slave Hard Disk Drive

The slave hard disk drive:

- Must not have an operating system resident.

- Cannot be a bootable drive.

- May not have the TLA700 application software loaded on it.

- Must have a slave jumper installed.

- Can be the fixed or replaceable hard disk drive.

NOTE. If the slave hard disk drive is the replaceable hard disk drive, it does not need to be installed to use the instrument.

Back Up Your Software

Prior to performing these procedures, take steps to protect the contents of your hard disk drive by backing up any files, applications and personal documents. Refer to *Backing Up Files* on page 3–8 for more details.

Preparation

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

⚠ *CAUTION. Many components within the mainframe 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.

⚠ *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.*

- 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.

- Wear an anti static wrist strap while handling the boards to discharge the static voltage from your body.

- 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.

Set Up The Slave Hard Disk Drive

Decide which hard disk drive you want to be the slave hard disk drive. If you want the replaceable hard disk drive to be the slave, you will need to add a slave jumper. If you want the fixed hard disk drive to be the slave, you will need to remove that hard disk drive from the replaceable cartridge and add a slave jumper.

To set up the hard disk drive as a slave drive, follow these instructions:

1. Determine which hard disk drive you want to be the slave drive.

2. Locate the shorting jumper that you received with this kit.

3. Remove the four #1 Phillips screws from the replaceable hard disk drive cartridge as shown in Figure 2–5 beginning on page 2–8.

4. Lift the hard disk drive from the cartridge, using the procedure that begins on page 2–8, but do not unplug the data cable.

   a. If the slave hard disk drive is to be the replaceable hard disk drive, do not remove the cable.

   b. If the slave hard disk drive is to be the fixed hard disk drive, remove the cable and set the replaceable cartridge aside.

5. If the hard disk drive is a Fujitsu model MHE20xxAT, place a shorting jumper on the slave drive in the location shown in Figure 2–1. If the hard disk drive is produced by a manufacturer other than Fujitsu, refer to the data printed on the hard disk drive for proper location of the slave drive jumper.
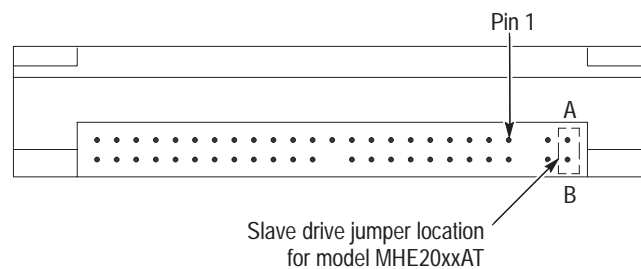
Figure 2–1: Slave drive jumper location

6. Place the hard disk drive back into the cartridge if it is to be the replaceable hard disk drive.

7. Replace the four screws into the cartridge to secure the hard disk drive (only if is to be the replaceable hard disk drive).

8. Label this hard disk drive with a permanent marker as a slave drive.

Remove the Replaceable Hard Disk Drive

⚠ *CAUTION. Do not remove the hard disk drive while the instrument is powered on. Always power down the instrument before removing the hard disk drive.*

The hard disk drive can be permanently damaged if you remove it while the instrument is powered on.

Verify that the instrument is turned off.

Remove the replaceable hard disk drive cartridge by depressing it to release the latch. Pull on the replaceable hard disk drive cartridge to remove it from the chassis. Figures 2–2, 2–3 and 2–4 show the procedures for removing the hard disk drive for the benchtop controller and for the portable mainframe.
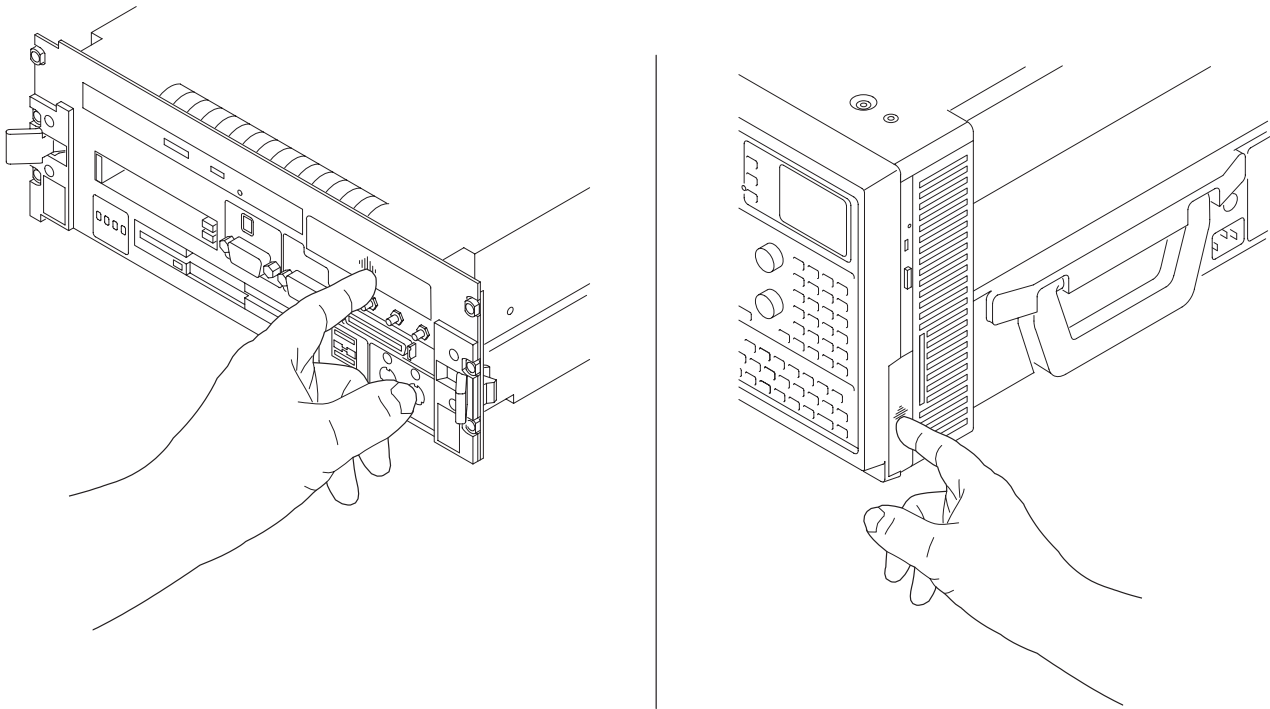
Figure 2–2: Depress the latch to release
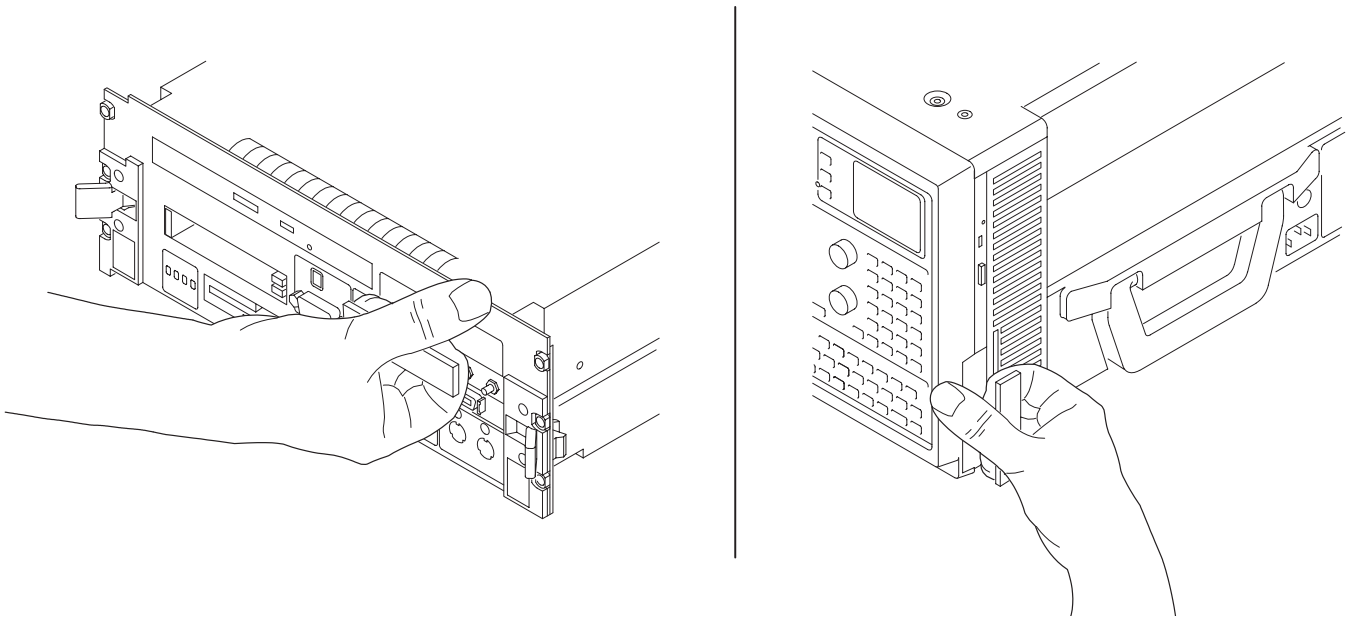
Figure 2–3: Pull the latch
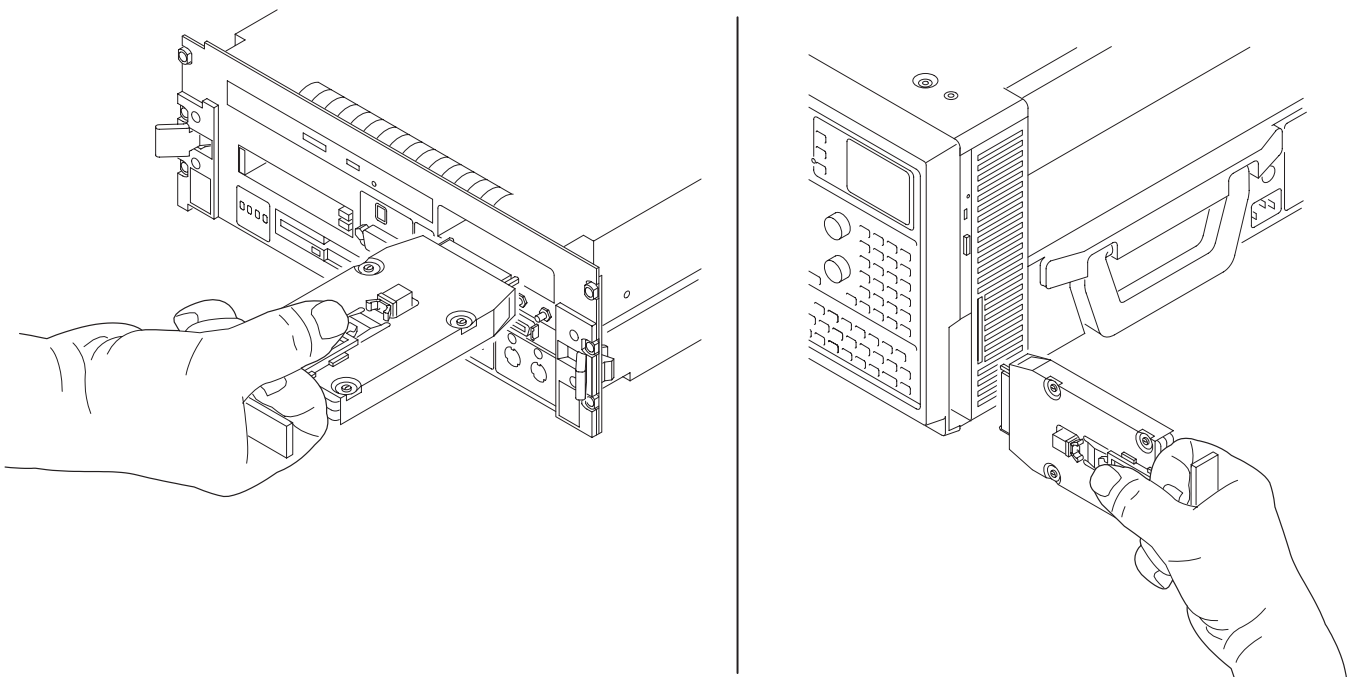
Figure 2–4: Remove the hard disk drive cartridge

Set Up The Master Hard Disk Drive

If you want the master hard disk drive to be the replaceable hard disk drive, you do not have to do anything to the drive. If you want the master hard disk drive to be the fixed hard disk drive, you will need to remove that hard disk drive from the replaceable cartridge.

Removal   You will need a #1 Phillips screwdriver to remove the hard disk drive from its cartridge. Use the following steps and refer to Figure 2–5 to perform this procedure:

1. Remove the four #1 Phillips screws that fasten the hard disk drive to the cartridge.

2. Carefully remove the hard disk drive from the cartridge and remove the cable assembly from the connector on the hard disk drive.

3. With a permanent marker label this hard disk drive as the fixed hard disk drive for reference. This is the hard disk drive you will install as the fixed hard disk drive.

4. Set the disk drive aside. You will install this drive after the mainframe is disassembled. If the replaceable hard disk drive cartridge will not be used, you can keep the cartridge as a spare part.
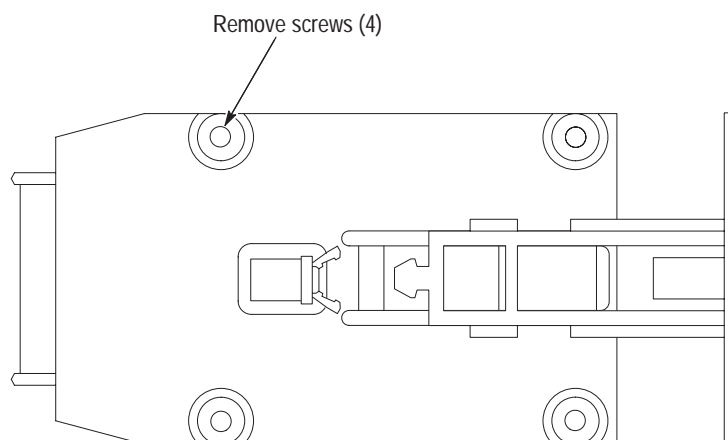
Figure 2–5: Remove the hard disk drive from the cartridge

Benchtop Mainframe-Specific Update Instructions

The following instructions direct you through the process of disassembling your benchtop mainframe and installing a second, fixed MAX hard disk drive.

These instructions require that you be familiar with servicing the instrument, because of the complexity of the Controller subassembly. If you are not familiar with servicing the instrument, you are strongly recommended to contact your nearest Tektronix, Inc., Service Center or Tektronix Factory Service for installation.

Remove the Benchtop Controller Cover

Remove the controller cover to gain access internal components and memory. You will need a screwdriver with a T-10 Torx tip to perform the following procedure.

Removal   Remove the eight T-10 Torx-drive screws, shown in Figure 2–6, and lift the controller cover off.

Remove screw (8)

Module cover

Chassis
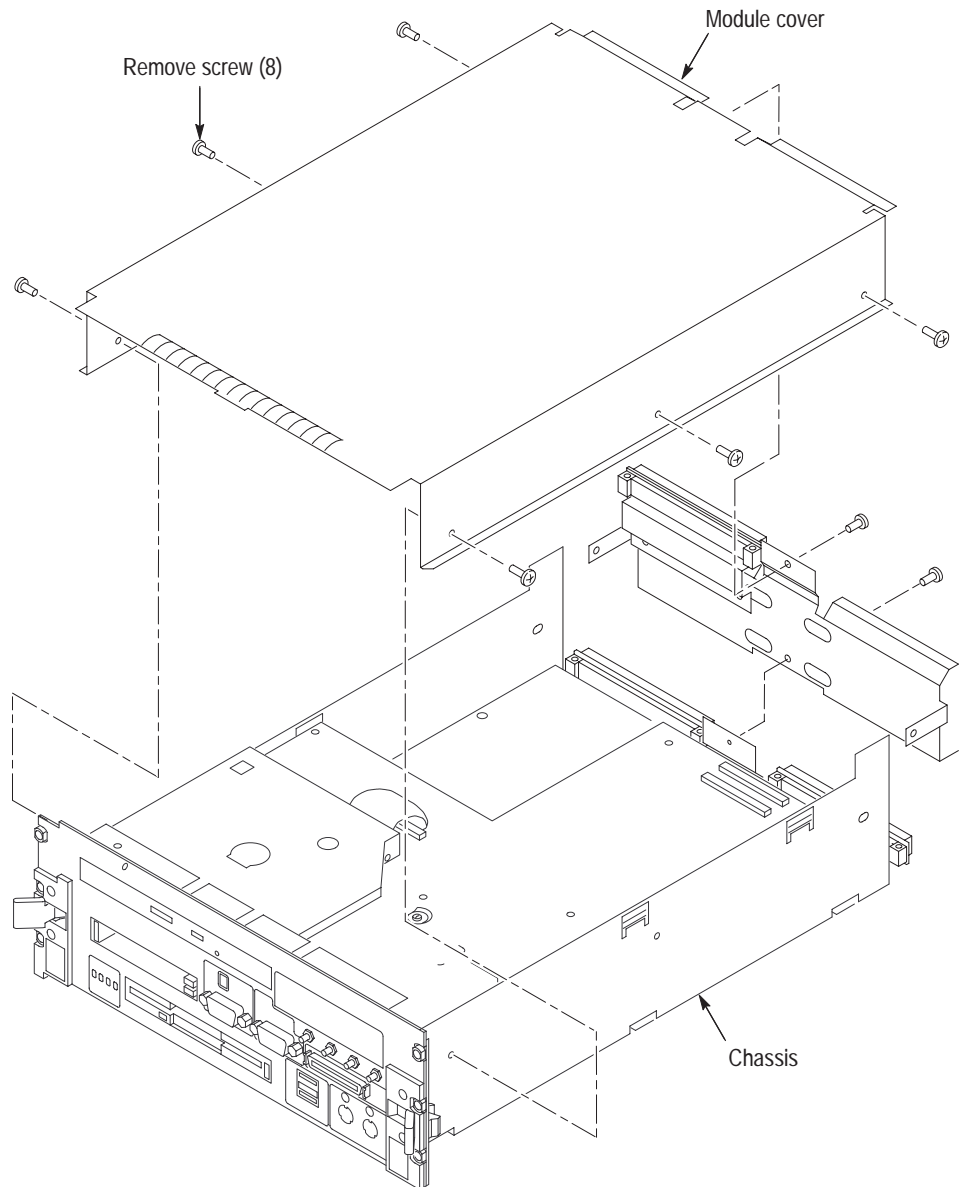
Figure 2–6: Remove and install the cover

Remove the Hard Drive Interface Board

Remove the hard drive interface board to improve access to the brackets you will use to secure the hard disk drive to the interface board. You will need a screwdriver with a T-10 Torx tip to perform this procedure.

Removal   Use the following procedure, and refer to Figure 2–7, to remove the hard drive interface board.

1. Disconnect the two ribbon cables located on the rear of the board.

2. Remove the four T-10 Torx-drive screws that secure the hard drive interface board.

3. Lift the hard drive interface board out of the module.
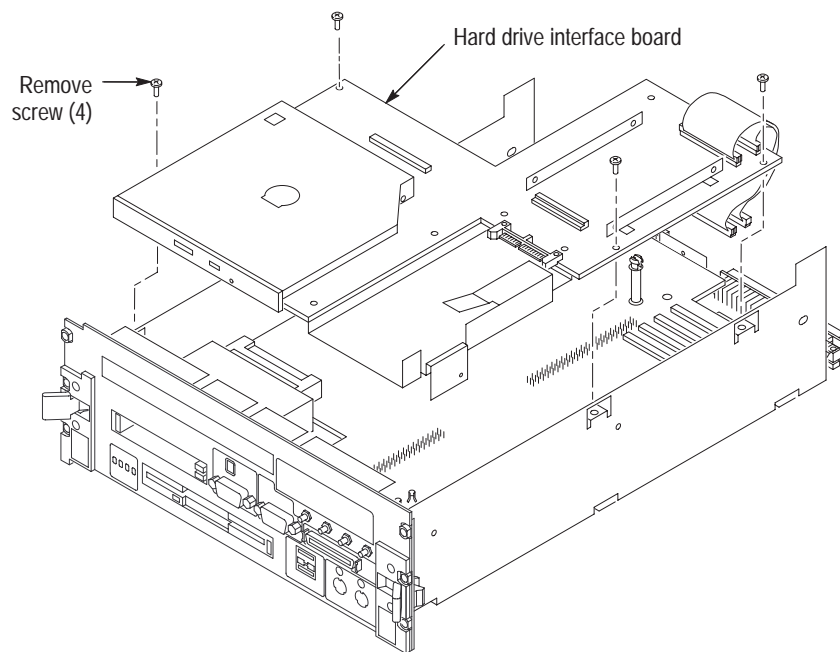
Figure 2–7: Remove the hard drive interface board

Install the Fixed Hard Disk Drive

You will need a screwdriver with a T-10 Torx tip to perform this procedure.

Removal Use the following procedure to secure the fixed hard disk drive to the interface board.

1. Loosen the fixed hard disk drive bracket T-10 Torx-drive screws to facilitate the insertion of the hard disk drive between the brackets.

2. Carefully align the connector pins on the back of the hard disk drive to the socket on the board. Gently slide the hard disk drive into the socket. Verify that all of the pins are fully engaged and that no pins are bent.

3. Install the four 3/16 inch flat bladed screws to secure the fixed hard disk drive to the brackets, as shown in Figure 2–8.

4. Tighten the fixed hard disk drive bracket T-10 Torx-drive screws to secure the fixed hard disk drive brackets to the interface board.
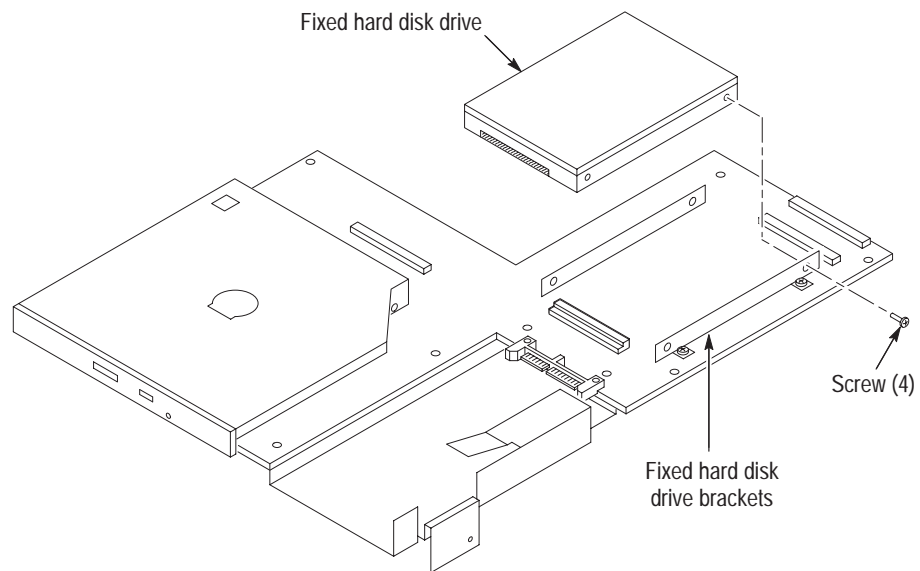
Figure 2–8: Install the fixed hard disk drive

Install the Hard Drive Interface Board

You will need a screwdriver with a T-10 Torx tip to perform this procedure.

Installation Use the following instructions, and refer to Figure 2–9, to install the hard drive interface board:

1. Connect the hard drive interface board to the adapter board by first inserting the CD–ROM faceplate into its chassis cutout. Then, locate the center standoff and center it on the hole. Carefully apply pressure to both boards until the two connectors engage.

2. Install the four T-10 Torx-drive screws.

3. Connect the two ribbon cables located on the rear of the board.

4. Replace the cover following the instructions on page 2–14.
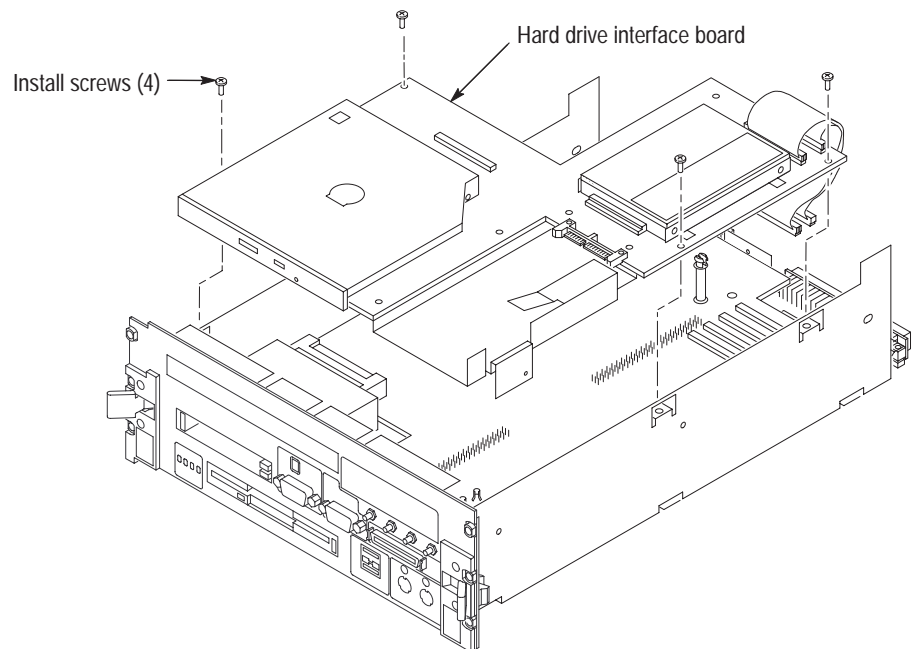
Figure 2–9: Install the hard drive interface board

Install the Benchtop Controller Cover

You will need a screwdriver with a T-10 Torx tip to perform this procedure.

Installation   Use the following instructions and refer to Figure 2–10 to install the controller cover:

1. Place the cover on the chassis.

2. Push forward on the cover so the tab on the front edge of the cover inserts into the rear of the front subpanel, as shown in Figure 2–10. Ensure that the cover is fully seated, with no gaps, against the front and rear chassis flanges.

Make sure tab inserts into
slot on rear of front panel

Leave no vertical gap
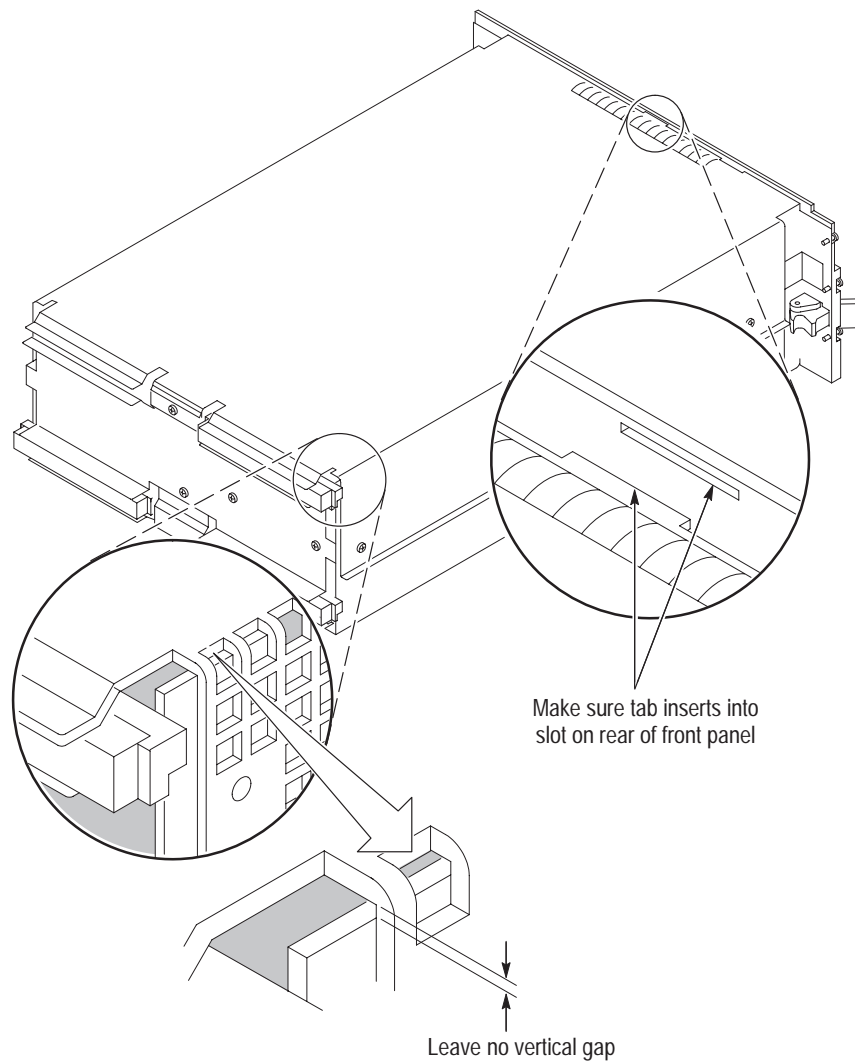
Figure 2–10: Seat the cover on the chassis

3. Secure the left side cover to the module with eight T-10 Torx-drive screws.

NOTE. Squeeze the sides together before tightening to ensure a good EMI seal and mechanical connection.

---

4. Install the replaceable hard disk drive by reversing the procedure located on page 2–6.

Set Up the Two Hard Disk Drives

If the master hard disk drive already contains the Windows operating system and the TLA application software loaded, the system will boot up and function properly.

If the master hard disk drive is the blank hard disk drive you received with this kit, you need to ensure that the hard disk drive is detected correctly using the verification procedure on page 2–27. If the hard disk drive is detected, then format the hard disk drive, load Windows and load both the TLA application and diagnostics software.

Reinstall Software

Reinstalling software on the new hard disk drive is a two-step process.

Step 1. Install the software that originally came with your TLA700 series mainframe. To do this, use the software media that came with your mainframe and follow the procedure that came in your mainframe documentation.

⚠

CAUTION. Depending on when you received your original TLA700 series mainframe, the procedure for reinstalling software is located in one of two places. Make sure that you use the correct procedure to install the software.

■ If your original TLA700 Series Logic Analyzer came with Version 3.0 software, refer to *Appendix A: Restoring and Reinstalling Software* in the *TLA700 Series Logic Analyzer, Version 3.0 Installation Manual* (071-0264-XX) to reinstall the software.

■ If your original TLA700 Series Logic Analyzer came with Version 3.1 software, refer to *Restoring and Reinstalling Software* in the *TLA700 Series, Version 3.1 Software User Manual* (071-0684-XX) to reinstall the software.

■ If your original TLA700 Series Logic Analyzer came with Version 3.2 software, refer to *Installing Software on the TLA700 Series* in the *Tektronix Logic Analyzer Family, Version 3.2 Software User Manual* (071-0729-XX) to reinstall the software.

Step 2. Use the procedure in the *TLA Application Software and Windows Operating System Upgrade,* Version 4.0 instructions beginning on page 3–1 to upgrade the operating system and software to the latest version.

Portable Mainframe-Specific Update Instructions

The following instructions direct you through the process of disassembling your portable mainframe and installing a second, MAX hard disk drive.

These instructions require that you be familiar with servicing the instrument, because of the complexity of the Controller subassembly. If you are not familiar with servicing the instrument, you are strongly recommended to contact your nearest Tektronix, Inc., Service Center or Tektronix Factory Service for installation.

Remove the Trim Ring

Remove the trim ring to access the flat panel display assembly. You will need a flat-bladed screwdriver (or other small prying tool) to perform this procedure.

Removal   Use the following procedure and Figure 2–11 on page 2–18 to remove the trim ring:

1. Set the mainframe with the cord-wrap feet on the work surface and the bottom facing you.

2. Grasp the trim ring by its bottom edge and pull toward you to detach the three plastic snaps. (Alternatively, you can use a flat-bladed screwdriver or other small prying tool to help you detach the snaps.) Then, swing the bottom of the ring upward and work the rest of the ring off the front panel.

When removing the trim ring, grasp its bottom edge and flex it toward you before pulling upward.
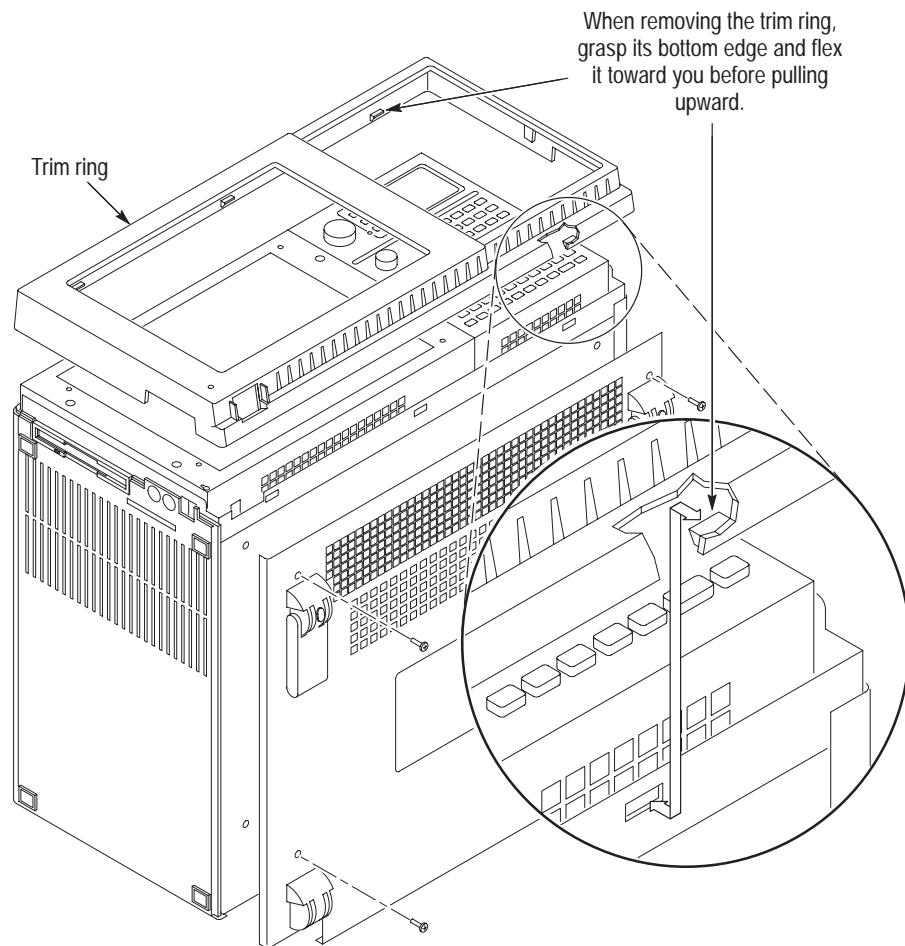
Trim ring

Figure 2–11: Trim ring removal

Remove Flat Panel Display Assembly

Remove the flat panel display assembly to gain access to the hard disk drive brackets. You will need a screwdriver with a size T-15 Torx tip to perform this procedure.

Removal   Use the following procedure and Figure 2–12 to remove the flat panel display
assembly:

1. Remove the five T-15 Torx-drive screws that attach the flat panel display
    assembly to the mainframe.

2. Lift the bottom edge of the flat panel display assembly and rotate it upward
    and off the front face of the mainframe.

---

*NOTE. Exercise care not to disloged the light pipe, which is located in the lower–
left corner of the front panel display assembly.*

---

3. Detach the cables that connect from the flat panel display assembly to both
    the front panel interface board and the high-voltage power supply.
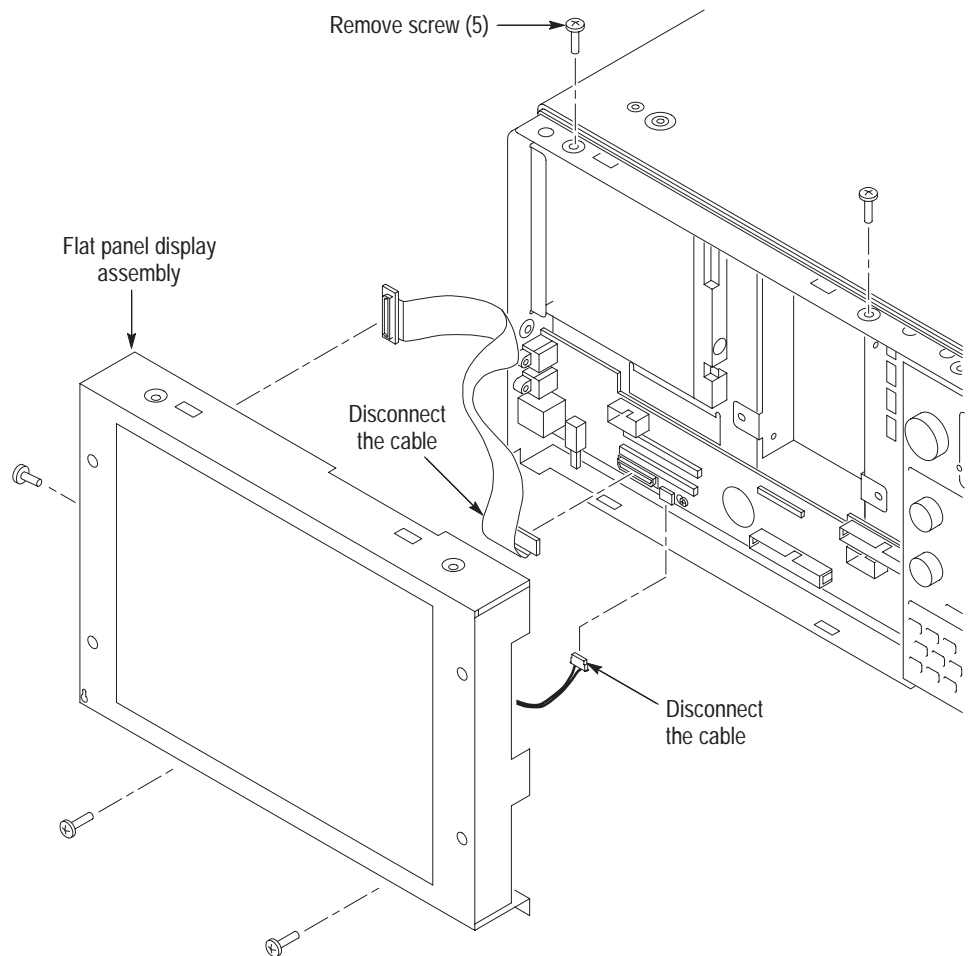
Figure 2–12: Flat panel display assembly removal

Install Fixed Hard Disk Drive

You will need a screwdriver with a size T-15 Torx tip to perform this procedure.

Installation   Use the following procedure, and refer to Figure 2–13, to install the fixed hard disk drive:

1. Remove the four T-15 Torx-drive screws that secure the fixed hard disk drive bracket to the chassis.

2. Locate the hard disk drive that will become the fixed hard disk drive.
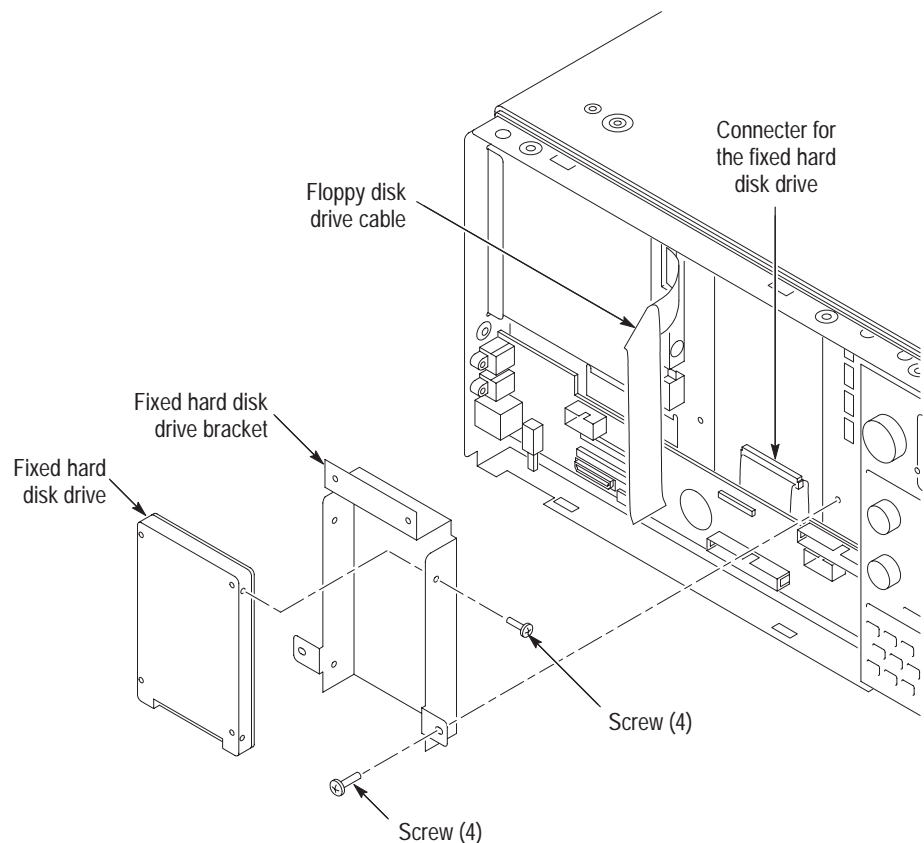
Figure 2–13: Installing the fixed hard disk drive

3. Mount the fixed hard disk drive to the fixed hard disk drive bracket with the four T-10 Torx-drive screws included in this kit. Ensure that the orientation matches the key on the data cable.

4. Attach the data cable to the fixed hard disk drive.

5. Attach the fixed hard disk drive bracket to the chassis with four T-15 Torx-drive screws.

Install Flat Panel Display Assembly

You will need a screwdriver with a size T-15 Torx tip to perform this procedure.

Installation Use the following procedure, and refer to Figure 2–12 on page 2–19, to reinstall the flat panel display assembly:

1. Reattach the cable connecting the flat panel display assembly to the interface board.

2. Reattach the high-voltage power supply cable to the power supply.

3. Reinstall the flat panel display assembly by first inserting the top edge and then rotating the bottom edge downward into position. Ensure that the tabs are engaged at the top of the assembly. Insert the five T-15 Torx-drive screws that attach the flat panel display assembly to the mainframe: two screws at the bottom of the assembly on the front of the instrument, two screws on the top, and one screw on the left side.

TLA714 Color Portable Mainframe MAX DRAM Installation

The following instructions support the upgrade to 128 MB of DRAM memory on your TLA714 Color Portable Mainframe.

Remove the Top Cover

You will need a screwdriver with a T-15 Torx tip.

Removal Use the following procedure to remove the top cover:

1. Set the mainframe with the bottom on the work surface and the front facing you.

2. Unsnap the accessories pouch from the top cover.

3. Remove the four T-15 Torx-drive screws that attach the top cover to the mainframe, as shown in Figure 2–14 on page 2–22.

4. Lift the top cover off.

Screw (4)

Top cover
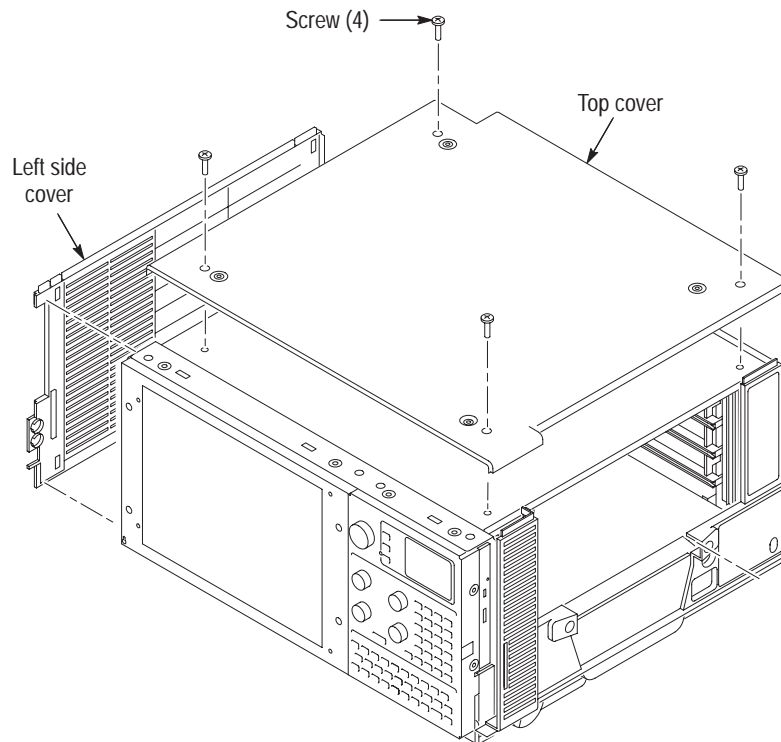
Left side
cover

Figure 2–14: Top and side cover removal

Remove the Left Side Cover and EMI Shield

No screws attach the left side cover to the mainframe. However, you must loosen the two T-15 Torx-drive screws closest to the left side of the bottom cover in order to remove the left side cover. To facilitate loosening these screws, place the mainframe on cord-wrap feet, with the left-side of the mainframe facing you.

You will need a screwdriver with a size T-15 Torx tip to perform this procedure.

Removal   Use the following procedure to remove the left side cover:

1. Loosen the two T-15 Torx-drive screws on the bottom cover closest to the left side of the mainframe.

2. Remove the left side cover.

3. Remove the eight T-15 Torx-drive screws securing the EMI shield to the chassis, as shown in Figure 2–15 on page 2–23, and then lift off the EMI shield.
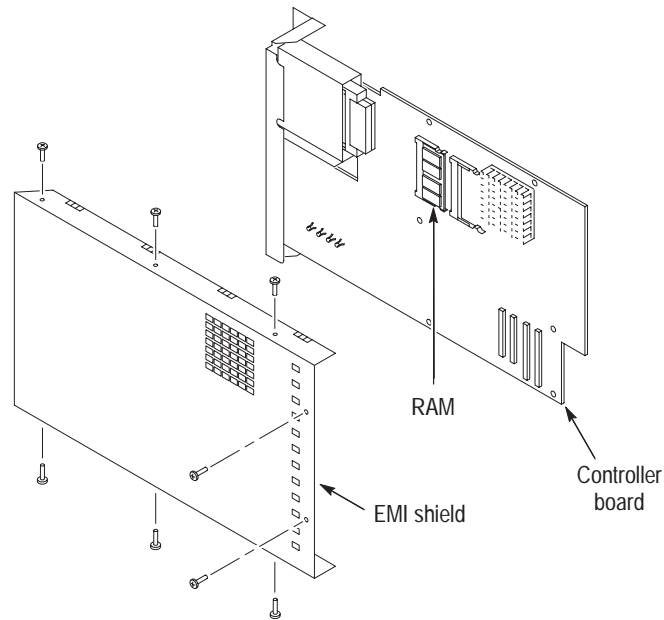
Figure 2–15: Internal parts

Install the SO DIMM

The SO DIMM memory is located on the controller board. Use the following procedure to install new DRAM memory into the controller board:

Insert the new DRAM board into the controller board by pressing down gently until the clips that hold the DRAM board to the controller board snap into place.

Install the Left Side Cover

You will need a screwdriver with a size T-15 Torx tip to perform this procedure.

1. Replace the EMI shield by first inserting the left edge beneath the chassis lip and then press the shield into place.

2. Fasten the eight T-15 Torx-drive screws that secure the EMI shield to the chassis.

3. Reposition the left side cover, then tighten the two T-15 Torx-drive bottom cover screws that attach the bottom cover to the chassis. These screws are located nearest the left side of the mainframe.

Install the Top Cover

You will need a screwdriver with a size T-15 Torx tip to perform this procedure.

Use the following procedure to reinstall the top cover:

1. Reposition the top cover on the portable mainframe.

2. Insert the four T-15 Torx-drive screws that attach the top cover to the mainframe. See Figure 2–14 on page 2–22.

3. Reattach the accessories pouch to the top cover. (It snaps on.)

Install the Trim Ring

Replace the trim ring on the front panel. Start at the top edge and work around to the bottom until the three plastic snaps engage. Press the trim ring down all around the edges until it is completely seated.

Set Up the Two Hard Disk Drives

If the master hard disk drive already contains the Windows operating system and the TLA application software loaded, the system will boot up and function properly.

If the master hard disk drive is the blank hard disk drive you received with this kit, you will have to set up the BIOS, format the hard disk drive, load Windows and load the TLA application software and diagnostics software.

Reinstall Software

Reinstalling software on the new hard disk is a two-step process.

Step 1. Install the software that originally came with your TLA700 series mainframe. To do this, use the software media that came with your mainframe. Use the procedure that came in your mainframe documentation.

⚠ *CAUTION. Depending on when you received your original TLA700 series mainframe, the procedure for reinstalling software is located in one of two places. Make sure that you use the correct procedure to install the software.*

■ If your original TLA700 Series Logic Analyzer came with Version 3.0 software, refer to *Appendix A: Restoring and Reinstalling Software* in the *TLA700 Series Logic Analyzer, Version 3.0 Installation Manual* (071-0264-XX) to reinstall the software.

■ If your original TLA700 Series Logic Analyzer came with Version 3.1 software, refer to *Restoring and Reinstalling Software* in the *TLA700 Series, Version 3.1 Software User Manual* (071-0684-XX) to reinstall the software.

■ If your original TLA700 Series Logic Analyzer came with Version 3.2 software, refer to *Installing Software on the TLA700 Series* in the *Tektronix Logic Analyzer Family, Version 3.2 Software User Manual* (071-0729-XX) to reinstall the software.

Step 2. Use the procedure in the *TLA Application Software and Windows Operating System Upgrade,* Version 4.0 instructions beginning on page 3–1 to upgrade the operating system and software to the latest version.

Verify Operation of Installed Upgrades

After installing TLA7UP hardware upgrades, use the following procedures to verify that both the MAX hard disk drive and additional DRAM are recognized and are operating correctly.

Verify MAX Hard Disk Drive Operation

Follow the steps below to ensure proper operation of the instrument after completing the fixed hard disk drive upgrade instructions:

1. Run the hardware setup routine to ensure that the fixed hard disk drive is detected and that the disk drive size is correctly recognized:

    a. Power on the logic analyzer and press function key F2 before the Windows operating system boots.

    b. From the Main menu, select IDE Adapter O Master and press Enter.

    c. Select Autotype Fixed Disk and press Enter to automatically detect the size of your hard disk drive.

2. If you defined the MAX hard disk drive as your master, reboot your instrument to confirm that the hard disk drive is operating properly.

3. If you defined the MAX hard disk drive as your slave, access the hard disk drive using Microsoft Windows Explorer and transfer one or more files to confirm that the hard disk drive is operating properly.

Verify MAX DRAM Operation

Follow the steps below to ensure that you instrument recognizes the newly installed DRAM after completing the upgrade:

1. Click the Start button, and then point to Programs.

2. Click Accessories.

3. Click System Tools. The system responds by displaying the Microsoft System Information dialog.

4. Verify that the Microsoft System Information dialog indicates that 128 MB of RAM is installed.

TLA7UP Option 11

TLA Application Software and Windows Operating System Upgrade

TLA7UP option 11 supports the upgrade to TLA application software, version 4.0 and Windows 2000 Professional Series operating system. TLA application software version 4.0 will only run on Windows 2000 Professional Series.

This kit provides instructions to upgrade the TLA application software and firmware for the TLA714 Portable or TLA720 Benchtop Mainframes.

Instruments

TLA714 Portable Mainframe
TLA720 Benchtop Mainfreame

Kit Parts List

Table 3–1: TLA7UP option 11 parts list

Quantity	Part number	Description
1 ea	071-0865-00	TLA7UP Mainframe Field Upgrade Kit Instruction Manual
1 ea	N/A	Tektronix Logic Analyzer Family Application Software Version 4.0
1 ea	N/A	Tektronix Logic Analyzer Family TLA700 Hard Disk Image Version 4.0
1 ea	N/A	Microsoft Windows 2000 Certificate of Authorization Sticker
1 ea	N/A	Microsoft Windows 2000 License
5 ea	131-4356-00	Jumper with pull–tab
1 ea	071-0863-00	TLA Family User Manual, V4.0
1 ea	016-1524-02	TLA Mouse Pad
1 sheet	N/A	Software Revision Labels
1 ea	N/A	TLA7UP Kit Label

Windows Operating System and Application Software Upgrade

TLA7UP option 11 supports the upgrade to Windows 2000 Professional Series operating system and TLA application software, version 4.0.

This kit provides instructions for upgrading the software and firmware that is specifically written for the TLA714 Portable and TLA720 Benchtop Mainframes.

⚠️ **CAUTION.** *The software installation procedure will remove the entire contents of your hard disk. If you want to save any files or software applications on the hard disk, back them up to another media (a second hard drive, floppy disks, or a network drive) before continuing with this procedure.*

Install Software

This kit provides information for installing software in your logic analyzer. Note that loading the contents of the CD provided in this upgrade kit will destroy user files and programs currently on your hard disk drive.

If you do not care that the contents of your hard disk drive will be overwritten, proceed to *Installing Windows 2000 Professional and the TLA Application Software* on page 3–9. However, if you want to preserve your user files, continue following the instructions contained in this upgrade kit.

In addition to the Tektronix Logic Analyzer application software, there are other software programs that are installed separately; Table 3–2 lists some of the software that you may have installed on your logic analyzer.

Table 3–2: Software not covered by the software setup

Software	Installation information
Microprocessor or bus support software	Refer to the manual that was shipped with the microprocessor or bus support.
PC Card Software	Refer to the instructions that come with your PC Card.
Other Software	Refer to the instructions that come with your software.

Set Up the TLA700 Controller BIOS

This procedure is necessary when the CMOS settings are corrupted or lost. To configure the Controller BIOS, complete the following steps:

1. Power on the logic analyzer and press function key F2 before the logic analyzer boots the Windows operating system.

2. Press function key F9, then select Yes and press Enter. This sets defaults and verifies that both the hard disk was auto-recognized and that the correct size of the hard disk is displayed in the Primary Master setting.

3. Verify that all of the settings are the same as the settings in Table 3–3.

4. Press function key F10 to exit and save the BIOS setup.

Table 3–3: TLA714 and TLA720 controller BIOS setup

Parameter	Factory setting	Submenu parameter	Factory setting
Main			
System Time	*Set to current time*		
System Date	*Set to current date*		
Legacy Diskette A	[1.44/1.25 MB, 3 1/2″]		
▶ Primary Master	*hard disk drive size*		
		Type	[Auto]
		Cylinders	*Set by Autotype*
		Heads	*Set by Autotype*
		Sectors	*Set by Autotype*
		Maximum Capacity	*Set by Autotype*
		Multi-sector transfers	*Set by Autotype*
		LBA Mode Control	*Set by Autotype*
		32-Bit I/O	[Disabled]
		Transfer Mode	*Set by Autotype*
		Ultra DMA Mode	*Set by Autotype*
▶ Primary Slave	[None]		
▶ Secondary Master	[CD-ROM]		
▶ Secondary Slave	[None]		
Enable SimlScan	[Disabled]		
Summary Screen	[Disabled]		
▶ Memory Cache			
		Memory Cache	[Enabled]
		External Cache	[Disabled]

Table 3–3: TLA714 and TLA720 controller BIOS setup (Cont.)

Parameter	Factory setting	Submenu parameter	Factory setting
		Cache System BIOS area:	[Enabled]
		Cache Video BIOS area:	[Disabled]
		Cache D000 – D3FF:	[Disabled]
		Cache D400 – D7FF:	[Disabled]
		Cache D800 – DBFF:	[Disabled]
System Memory	640 KB		
Extended Memory	*Installed memory – 640 K*		
Advanced			
▶ I/O Device Configuration			
		Local Bus IDE Adapter	[Both]
		Serial port A	[Enabled]
		Base I/O Address	[3F8]
		Interrupt	[IRQ4]
		Serial port B	[Enabled]
		Mode	[Normal]
		Base I/O Address	[2F8]
		Interrupt	[IRQ3]
		Parallel Port	[Enabled]
		Mode	[ECP]
		Base I/O Address	[378]
		Interrupt	[IRQ7]
		DMA Channel	[DMA 1]
		Floppy disk controller	[Enabled]
▶ Advanced Chipset Control			
		DRAM Speed	[60 ns]
		DMA Aliasing	[Enabled]
		16 Bit I/O Recovery	[4.5]
		8 Bit I/O Recovery	[4.5]
Plug & Play O/S	[Yes]		
Reset Configuration Data	[No]		
PS/2 Mouse	[AutoDetect]		
Large Disk Access Mode:	[Other]		
Secured Setup Configurations	[No]		

Table 3–3: TLA714 and TLA720 controller BIOS setup (Cont.)

Parameter	Factory setting	Submenu parameter	Factory setting
▶ PCI Configuration			
		ISA graphics device installed	[No]
		▶ PCI/PNP ISA UMB Region Exclusion	
		C800 – CBFF	[Available]
		CC00 – CFFF	[Available]
		D000 – D3FF	[Available]
		D400 – D7FF	[Available]
		D800 – DBFF	[Available]
		DC00 – DFFF	[Available]
		▶ PCI/PNP ISA IRQ Resource Exclusion	
		IRQ3	[Available]
		IRQ4	[Available]
		IRQ5	[Available]
		IRQ7	[Available]
		IRQ9	[Available]
		IRQ10	[Available]
		IRQ11	[Available]
		IRQ14	[Available]
		IRQ15	[Available]
Power			
Power Savings	[Disabled]		
Standby Timeout:	[Off]		
Auto Suspend Timeout	[Off]		
Resume On Time	[Off]		
IDE Drive 0 Monitoring	[Disabled]		
IDE Drive 1 Monitoring	[Disabled]		
IDE Drive 2 Monitoring	[Disabled]		
IDE Drive 3 Monitoring	[Disabled]		
PCI Bus Monitoring	[Disabled]		

Table 3–3: TLA714 and TLA720 controller BIOS setup (Cont.)

Parameter	Factory setting	Submenu parameter	Factory setting
Boot			
1.	[Diskette Drive]		
2.	[Removable Devices]		
3.	[Hard Drive]		
4.	[ATAPI CD–ROM Drive]		
▶ Hard Drive			
		1.	*Currently installed drive ID*
		2.	[Bootable Add-in Card]
▶ Removable Devices			
Exit			
▶ CMOS Save & Restore			
		CMOS Restore Condition	[Never]

Reinstall the Hard Disk Image

The Tektronix Logic Analyzer comes with a CD entitled *TLA700 Hard Disk Image*, which contains the Microsoft Windows 2000 Professional operating system and the latest application software. All software required to run the logic analyzer comes with the CD with the exception of any Microprocessor support packages or non-logic analyzer application software. The process of reloading the software on the hard disk will destroy any files or programs installed on the hard disk.

⚠ *CAUTION. The software installation procedure will destroy the **entire contents** of your hard disk. If you want to save any files or software applications on the hard disk, back them up to another media (a second hard drive, floppy disks, or a network drive) before continuing with this procedure.*

Backing Up Files   Before loading the Hard Disk Image software, make sure that you back up any files, applications, and personal documents to an external storage device. You can do this in one of several different ways:

- Move the files to another PC via a network or via another backup medium such as a ZIP drive.

- Purchase the TLA7UP Option 10, place the new hard disk drive in the removeable hard disk drive assembly (master configuration), and then place the original hard disk drive in the second hard disk location (slave configuration). This allows you to use a second hard disk drive so you can still access the user files.

  For TLA714 logic analyzers, the second fixed hard disk drive location is behind the front panel; For TLA720 logic analyzers, the hard disk drive plugs into a connector on an internal circuit board in the slot 0 controller.

NOTE. When installing a second hard disk drive, you do not need an additional cable or connector. The appropriate connection device is already contained in your TLA700 series logic analyzer.

You can find most TLA user files using the Windows Find utility. For example, open Windows Explorer and select the C:\My Documents folder. Right click the folder and select Find. Enter one of the suffixes from Table 3–4 to locate the TLA files in the current folder and all subfolders:

Table 3–4: Tektronix Logic Analyzer user file suffixes

Suffix	Description
.tla	TLA setup files and stored data
.tsf	TLA symbol files
.tbf	Tektronix binary format
.tls	TLA script file

Once you find the files, copy or drag them to the external storage device. Use this procedure to find any files or applications that you may want to save.

If you purchased any microprocessor support packages, you will need to reinstall them after you reinstall the hard disk image. If you do not have a copy of the microprocessor support software, contract your Tektronix Account Manager to order a replacement copy. If you cannot contact the account manager, contact the Tektronix Support Center (refer to *Contacting Tektronix* on page xii at the beginning of this document).

Installing Windows 2000 Professional and the TLA Application Software

This procedure automatically reformats the hard disk, installs the Windows 2000 Professional Operating system software, and installs the the Tektronix Logic Analyzer application software. Because this procedure reformats the hard disk drive, be sure to back up any files or software that you want to preserve by following the steps in the previous section.

Change the BIOS Boot Settings. Before installing the Hard Disk Image, you must change the BIOS settings.

1. Restart the logic analyzer and then press function key F2 to enter the BIOS setup.

2. In the BIOS setup, go to the Boot menu.

3. Set the Boot devices as shown below:

First Boot Device:	[ATAPI CD-ROM Drive]
Second Boot Device:	[Diskette Drive]
Third Boot Device:	[Hard Drive]

4. Save the settings by pressing function key F10 and confirm that you want to save the new settings.

Load the Hard Disk Image. Complete the following steps to load the Hard Disk Image.

1. Insert the Hard Disk Image CD in the CD-ROM drive.

2. Reboot the logic analyzer. After booting from the CD-ROM drive, the program on the CD will display its license agreement.

3. Review the license agreement. If you agree to the terms of the license agreement, proceed with the next step.

NOTE. Use care when prompting through the software license agreement to avoid confirming that you want to cancel the software installation procedure.

4. After you have reviewed the software license agreement, the EasyRestore dialog displays and prompts you to continue, or to cancel the upgrade process. Click the Continue button to load the contents of the upgrade CD.

    If you are using TLA700 software, version 3.2, EasyRestore may display the following error:

```
This program has detected error 110 on the partition...
Would you like the program to fix this error?
```

When prompted, click Yes to fix the displayed error. If other errors display, allow the program to fix them and continue with the installation procedure.

5. EasyRestore displays a warning that the contents of your hard disk drive will be destroyed if you choose to continue. Click Yes to continue the upgrade process.

6. The program automatically loads the hard disk image. This procedure is fully automatic and takes approximately 15 minutes to complete.

   The image loading procedure installs and sets up the logic analyzer application. You should not need to make any changes to the setup to use the logic analyzer.

7. After the image is loaded, remove the CD from the CD-ROM drive and reboot the logic analyzer.

8. The System Settings Change error message displays, prompting you to restart the computer before your changes can take effect. Click Yes to restart your computer.

9. Reinstall any user files that you backed up previously. Reinstall any software (such as the microprocessor support packages) that you want to use on the logic analyzer.

Reset the BIOS Boot Settings. After you have successfully installed the hard disk image, you are recommended to reset the BIOS settings.

1. Restart the logic analyzer and then press function key F2 to enter the BIOS setup.

2. In the BIOS setup, go to the Boot menu.

3. Set the Boot devices as shown below:

First Boot Device:	[Diskette Drive]
Second Boot Device:	[Removable Devices]
Third Boot Device:	[Hard Drive]
Fourth Boot Device:	[ATAPI CD-ROM Drive]

4. Save the settings by pressing function key F10 and press Enter to confirm that you want to save the new settings.

Update TLA700 Module Firmware

If you are currently using Tektronix Logic Analyzer application software Version 3.1 or earlier, you must perform the following steps to reinstall or update the flash ROM-based firmware on your modules. You can update multiple modules and module types during a single firmware update session.

1. Turn off the logic analyzer.

2. Disconnect any probes on the modules that you want to update.

3. Remove the module from the logic analyzer.

4. Refer to Figure 3–1 and locate the flash programming pins on the rear of the module.
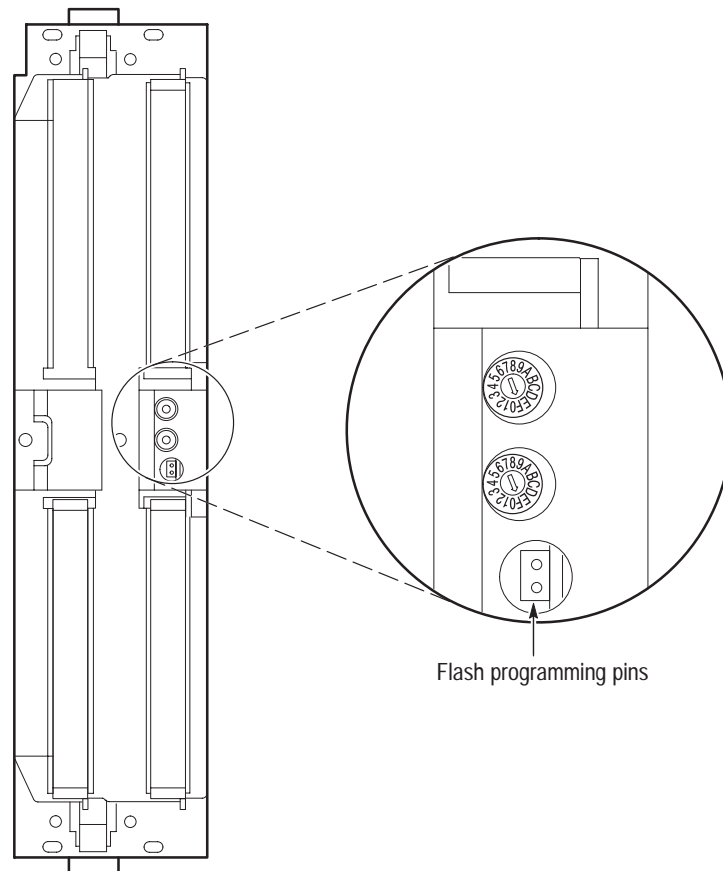

Flash programming pins

Figure 3–1: Flash programming pins

5. Install a jumper on the flash programming pins (use one of the spare jumpers that came with your logic analyzer).

6. Reinstall the module(s) in the logic analyzer.

7. Turn on the logic analyzer.

NOTE. Any modules with the flash programming jumper installed will not display in the System window.

8. Exit the logic analyzer application.

9. Click Start, point to Programs, point to Tektronix Logic Analyzer, and click TLA Firmware Loader.

10. Select the modules that you want to update from the list of modules displayed in the Supported list box near the top of the menu. If you are updating more than one module at a time, note the slot location of the module in the selection box.

11. Select Load Firmware from the Execute menu.

12. Click the proper .LOD file for the module in the:

    C:\Program Files\TLA 700 Firmware directory, or the

    C:\Program Files\Tektronix Pattern Generator Firmware directory.

    If you are updating more than one module make sure that you select the proper firmware file for the module in the listed slot number.

13. Click OK. You will be asked to confirm your action; click Yes when prompted.

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.

14. If you are updating another module, select the proper .LOD file for the module.

15. Click OK. You will be asked to confirm your action; click Yes when prompted.

    The program will load the firmware for each module one at a time. The process takes approximately five minutes per module.

16. Exit the program.

17. Turn off the logic analyzer and disconnect the power cord.

18. Remove the module from the logic analyzer and remove the jumper from the Flash programming pins on the rear of the module. Keep the jumper for future updates.

19. Attach a new label with the new firmware version to the module.

20. Reinstall the module in the logic analyzer and reconnect the probes.

21. Reconnect the power cord and turn on the logic analyzer.

22. Verify that the power-on diagnostics pass.

23. Run the self calibration on each module after a 30-minute warm-up.

TLA7UP Option IF

Upgrade Installation Service

TLA7UP option IF provides installation of product upgrades performed at a Tektronix service location.

NOTE. Availability of installation and onsite services depend on the type of product and may vary by geography.

Instruments

TLA714   All Serial Numbers
TLA720   All Serial Numbers

TLA7UP Option IN

Product Installation Service

TLA7UP option IN provides initial product installation/configuration and start up training session including front panel and product familiarization at your site.

NOTE. Availability of installation and onsite services depend on the type of product and may vary by geography.

Instruments

TLA714	All Serial Numbers
TLA720	All Serial Numbers