RSA6BUP Option WINXP Upgrade for RSA6120B Series Real-Time Signal Analyzers

Instructions

Tektronix

Contacting Tektronix

Table of Contents

RSA6BUP Option WINXP Upgrade

Service safety summary

Only qualified personnel should perform service procedures. Read this *Service Safety Summary* and the *General Safety Summary* located in the *RSA6100B Real-Time Signal Analyzer Service* manual (Tektronix part number 077-0648-XX) 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, 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.

Kit description

This kit describes the installation of Option WINXP in an RSA6120B Series Real-Time Signal Analyzer.

Products

RSA6120B. All serial numbers.

Kit parts list

The following parts lists detail the parts included with your upgrade kit.

Parts list

Quantity	Part number	Description
1 ea	NS	SOFTWARE COA (CERTIFICATE OF AUTHENTICITY); MICROSOFT WINDOWS XP PRO EMBEDDED ENTERPRISE SP3, FOR EMBEDDED SYSTEMS
1 ea	063-4477-00	BIOS PREP, USB FLASH DRIVE, BIOS VERSION SOM5788L20, USE ON SOM-5788FG-U0A1E ONLY, WIN7, WINXP, 32-BIT AND 64-BIT SUPPORT
1 ea	071-2179-XX	MANUAL, TECH; SVCPT-UPG; TEKTRONIX SUPPLEMENTAL INFORMATION SHEET FOR THE PEOPLES REPUBLIC OF CHINA; CHINA ROHS
1 ea	071-3098-00	MANUAL, TECH; INSTALLATION, RSA6BUP WINXP, ONLY FOR RSA6120B UPGRADE
2 ea	211-1050-00	SCREW, MACHINE; 6-32 X 0.312 L, PNH, STEEL, ZINC FINISH, T15
4 ea	211-1081-00	SCREW, MACHINE; M3 X 0.5 X 3.5MM, FLAT WAFER HD W/SERRATIONS STRESS RELIEVED, PHL, ZINC PLATED STEEL
1 ea	335-3035-00	MARKER, ID, REMOVABLE HARD DRIVE WINXP
1 ea	407-5337-00	BRACKET, RHDD; SATA COMBO CABLE RETENTION
1 ea	407-5473-00	BRACKET; HARD DRIVE 2.5 INCH REMOVABLE
1 ea	650-5632-00	"DISK DRIVE ASSEMBLY; REMOVABLE HARD DRIVE, PROGRAMMED, RSA61XXB SERIES, WINXP

Overview

There are two major steps required to install Option WINXP in RSA6120B instruments. The first step consists of removing current instrument drives and installing the Windows XP removable hard drive. The second step involves updating the BIOS in the instrument.

The procedure for installing the removable hard drive on your instrument depends on the hard drive currently installed in your instrument. If your instrument has a removable hard drive (option 56), the first major step of the upgrade consists of replacing the removable drive currently installed with the new replaceable hard drive supplied in this kit. If your instrument has a DVD drive (Option 57) or an internal hard drive only (Option 59) you will remove the existing drive(s) and install the removable hard drive supplied in this kit.

If your RSA6120B has Option 57 (DVD-R/W drive and internal hard drive) or Option 59 (Internal Hard Disk Drive only), proceed with *Removing Option 57 and Option 59 Installed Drives*. (See page 4.)

If your RSA6120B has Option 56, proceed with *Replacing an Existing Removable Hard Drive*. (See page 11.)

NOTE. If your instrument already has a removable hard drive installed, you will not use all the parts supplied in this kit because your instrument already has the necessary internal parts installed.

Removing option 57 and option 59 installed drives

This section explains how to remove Option 57 (DVD-R/W drive and internal hard drive), or Option 59 (Internal Hard Disk Drive only) drives from your instrument. The section following this one describes the installation of the new drive.

Minimum tool and equipment list

The following tools are required to remove the instrument covers and to remove and install the new drive(s). All tools are standard tools that should be readily available.

Table 1: Tools required for installation

Item no.	Name	Description
1	Screwdriver handle (magnetic)	Torque driver handle. Accepts 1/4-in. hex-head driver tips
2	No. 2 Phillips or Pozidriv tip	Phillips or Pozidriv-driver tip for number 2 size screw heads
3	T15 TORX tip	TORX driver tip for T15 size screw heads
4	T20 TORX tip	TORX driver tip for T20 size screw heads
6	5/32-in. hex wrench	Hex wrench to remove Allen head screws at front of top cover

These instructions are for qualified service personnel who are familiar with servicing the product. If you need further details for disassembling or reassembling the product, refer to the *RSA6100B Series Real-Time Signal Analyzers Service Manual*, Tektronix part number 077-0648-XX.

Removing a DVD drive and internal hard drive (Option 57 or option 59)

NOTE. Right-side or left-side references in these instructions assume you are viewing the instrument from the front panel.

⚠ *WARNING. To avoid electric shock, switch off the instrument power, then disconnect the power cord from the mains power. Failure to do so could result in injury or death.*

If you have Option 57 (DVD drive) installed in your instrument, you have to remove the DVD drive and the internal hard drive from your instrument.

If you have Option 59 (internal hard drive) installed in your instrument, you have to remove the internal hard drive from your instrument.

1. Remove the power cord.

2. If it is installed, pull the front cover off the instrument.

3. Remove the two T20 screws that secure the plastic carrying handle to the side of the instrument. (It is not necessary to remove the black metal handles.) (See Figure 1.)

4. Remove four T15 Torx-drive screws along each side that secure the top and bottom covers to the instrument, and remove two 5/32-in. Allen head screws near the front edge of the top cover (next to the folding handles).

5. Remove the top cover by pulling straight back about 1 inch. Then pull out on the sides of the top cover outward, flexing them slightly to clear the instrument chassis, and pull it away from the instrument.

5/32" Allen head screw (2)

Top cover

5/32" Allen head screw (2)

Carrying handle (1)

T-20 Torx head screw (2)

Screw (4)

Bottom cover
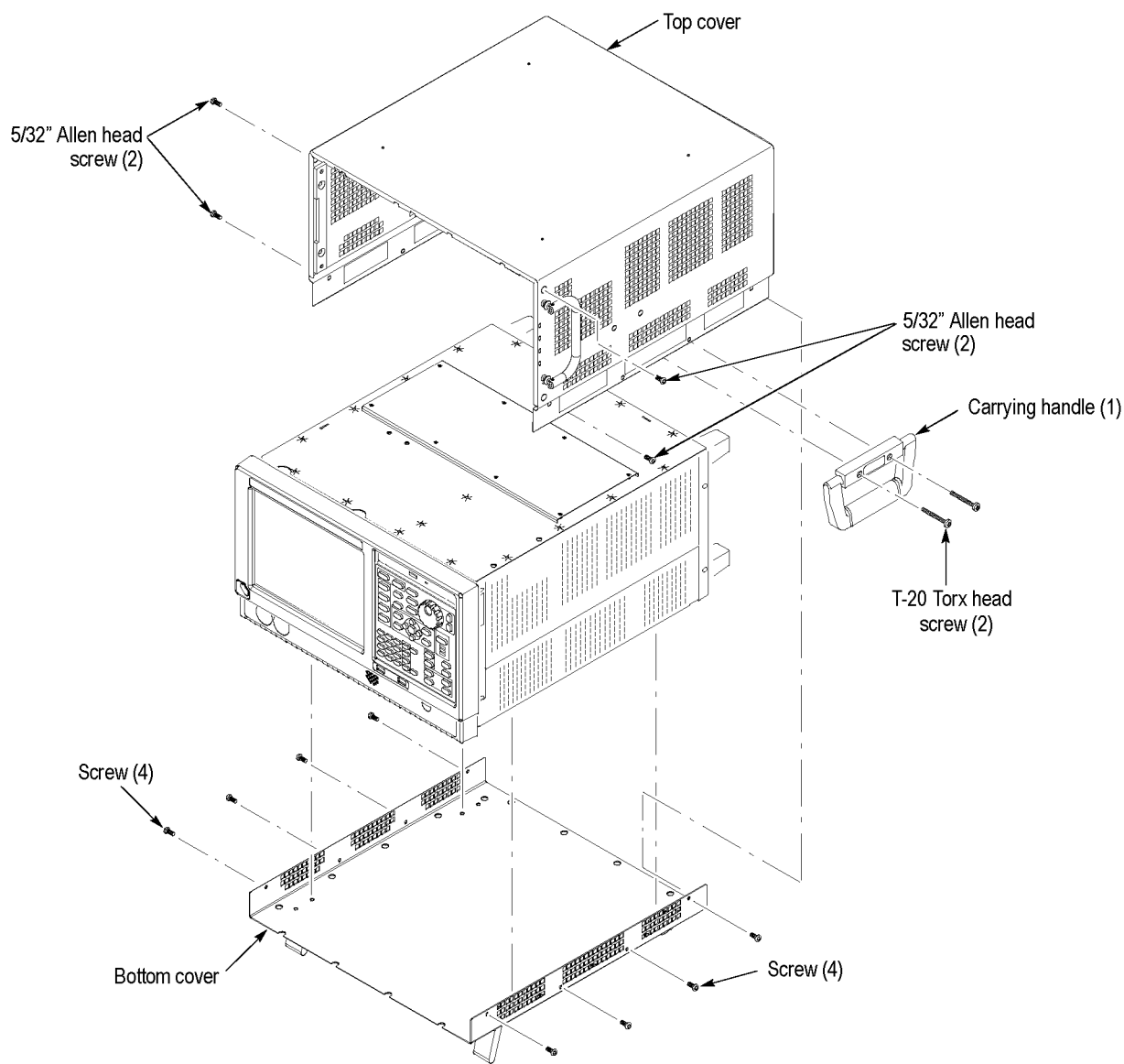
Screw (4)

3098-001

Figure 1: Removing the top cosmetic cover.

6. Remove the 18 T15 screws that secure the top internal cover to the chassis, and then remove the top internal cover from the instrument.

Removing a DVD drive

1. Remove the two black screws securing the DVD bezel to the front panel and remove the bezel.

2. Disconnect the SATA cable and power cable from the PC Carrier board. Pull the SATA cable and power cable back through the metal bracket, away from the PC Carrier board.

Disconnect the DVD SATA and Power cables from the slot PC board
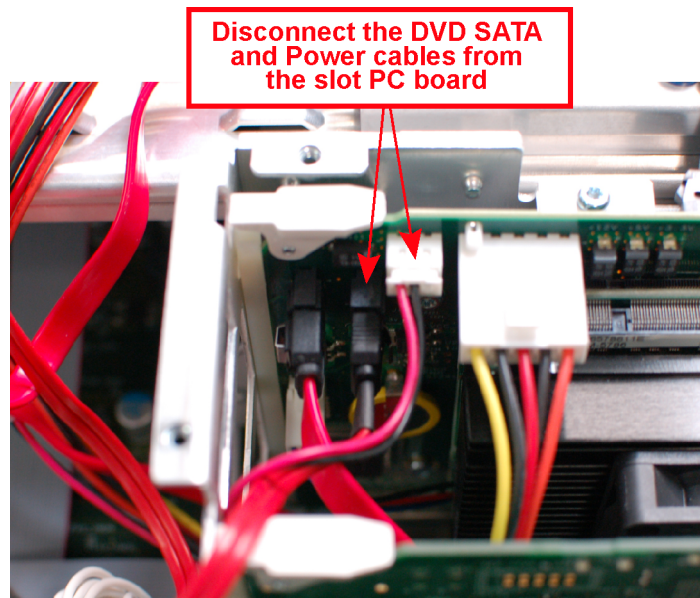
3. Pull the DVD drive out from the front of the chassis, pulling the SATA and power cable out with the drive.

4. Place the removed DVD drive and cabling in antistatic packaging and store it in a protected location for possible future use or discard the drive, according to your organizations security protocols.

Removing the internal hard drive

1. Disconnect the two video cables from the PC carrier board. Move the cables out of the way.
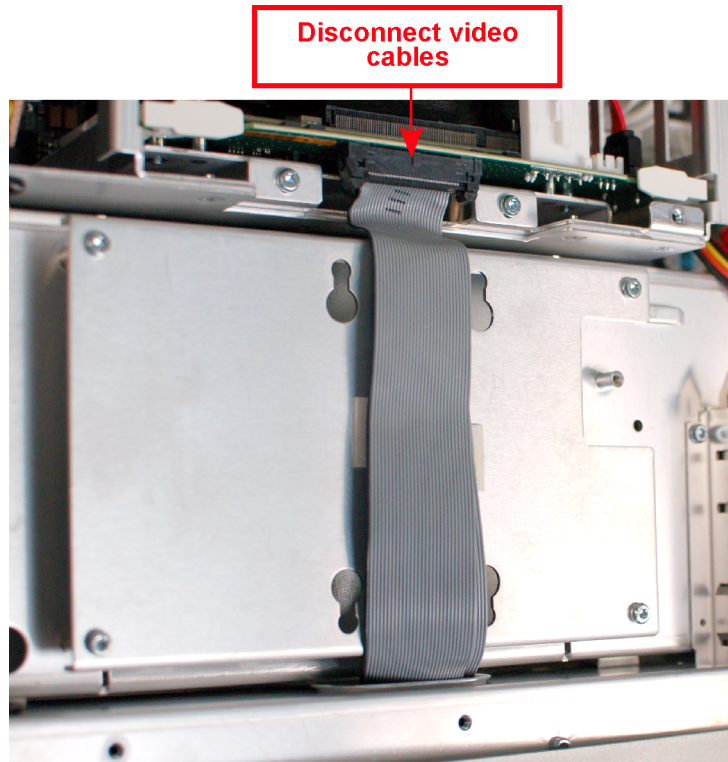
2. Remove the four screws at the corners of the hard disk drive mounting plate that secure the mounting plate to the instrument.

3. Lift the hard disk drive mounting plate out of the instrument. Disconnect the SATA cable from the hard disk drive.

4. Remove the four screws that secure the hard disk drive to the mounting plate.
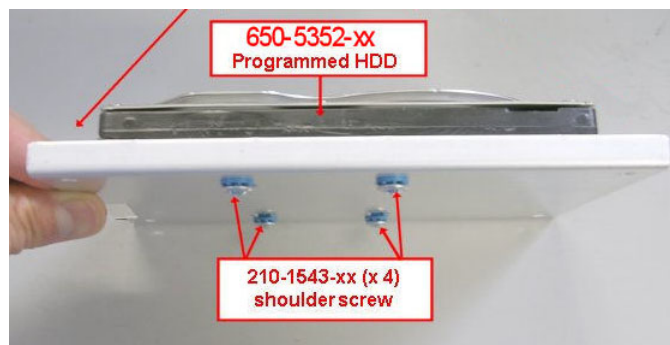
5. Place the removed hard drive in antistatic packaging and store it in a protected location for possible future use or discard the drive.

NOTE. If you discard or recycle the removed drive, be sure to follow your organization's security protocols to ensure the destruction of sensitive data.

---

6. Reinstall the hard disk drive mounting plate in the chassis and reconnect the ribbon cables to the PC Carrier board.

Installing a new removable hard drive

This section describes how to install a removable hard drive in instruments that do not already have a removable hard drive.

Installing the Option WINXP removable hard disk drive

To perform the following procedure you must have already removed Option 57 or 59 from your instrument. (See page 4, *Removing a DVD drive and internal hard drive (Option 57 or option 59)*.)

1. Attach the removable hard drive to the removable hard disk drive bracket (part number 407-5473-XX) with four screws (part number 211-1081-XX) using a torque driver with a T1 tip. Tighten the screws to 4.0 in-lbs.

2. Attach the removable hard drive label to the removable hard drive bracket. Start by centering one end of the label and making it flush with the bracket. Make sure the label is correctly oriented with the bottom of the label aligned with the bottom of the bracket.
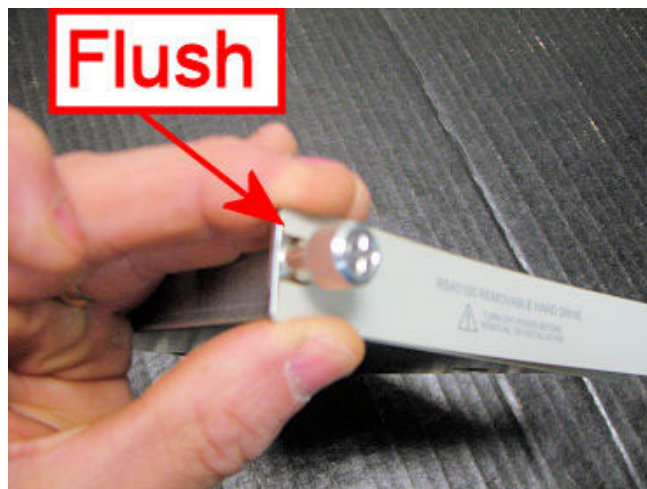
3. Slide the removable hard disk drive assembly into the drive opening and secure the hard drive with the two thumbscrews.

4. Connect the SATA and power cable connector to the connector on the removable hard drive.
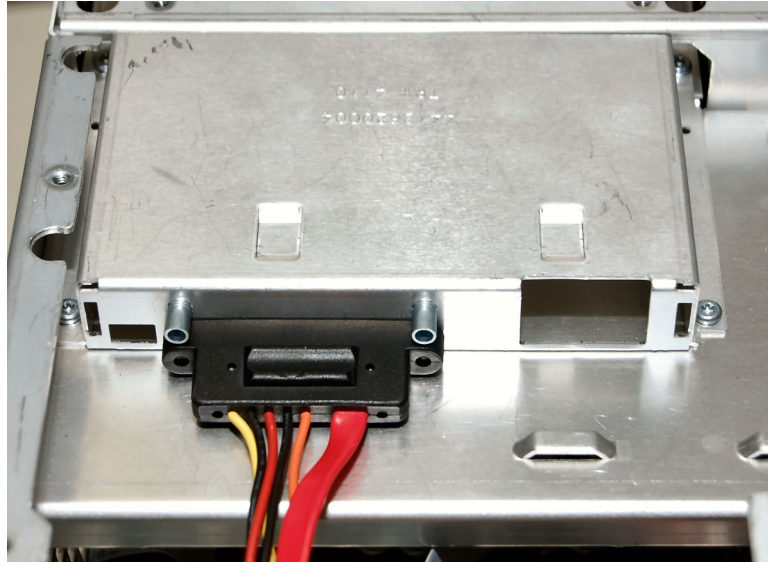
5. Slide the SATA combo cable retention bracket (part number 407–5337–00) over the cable and secure the retention bracket with two screws (part number 211-1050-XX) using a torque driver with a T15 tip. Tighten the screws to 4.0 in-lbs.

Secure the cable retention bracket
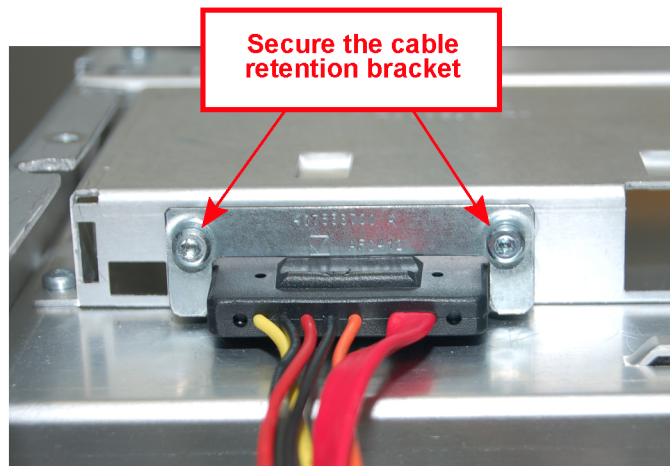
6. Reinstall the top internal cover:

   a. Position the top internal cover on the instrument, so that the protrusions in the cover match up with the slots in the chassis.

   b. Reinstall the 18 T15 screws to secure the cover to the chassis. Tighten these screws to 8.0 in/lb.

7. Reinstall the top and bottom cosmetic covers and carrying handle:

   a. Place the instrument on its rear feet, so the front panel is facing up and the top is toward you.

   b. Place the top cover over the top of the instrument and slide it toward the front panel. Make sure that the top cover wraps around the flanges on the rear panel on all three sides.

   c. Reinstall the four 5/32" hex head screws (two on each side) that secure the top cover to the instrument, near the front edge of the top cover (next to the folding handles).

   d. Align the four screw holes on each side in the top and bottom covers with the holes in the chassis, and install eight T15 screws, four on each side. Tighten these screws to 8.0 in/lb.

   e. Position the plastic carrying handle and its bracket on the right side of the instrument, and install the two T20 screws that secure it in place. Tighten these screws to 8.0 in/lb.

8. Reinstall the power cord.

This completes the installation of the removable hard drive. Proceed to *Update the Instrument BIOS*. (See page 12.)

NOTE. If you need to restore the operating system on your instrument, use the operating system restore procedure in the RSA6100B Series Service manual. You can download the manual from the web at www.tektronix.com/manuals. There is no cost to download the manual. Do not use the operating system restore disk that originally shipped with your instrument or any operating system restore disks you might have created to restore the operating system on your new removable hard drive.

Replacing an existing removable hard drive

If your instrument already has a removable hard drive (Option 56), you must replace the installed Windows 7-based removable hard drive with the Windows XP-based removable hard drive supplied in this kit.

To install the new removable drive:

1. Shut down the instrument.

2. Loosen the thumb screws that secure the removable hard drive and pull the removable hard drive out of the instrument.

Place the removed drive assembly in antistatic packaging and store it in a protected location for possible future use or discard the drive, according to your organizations security protocols.

3. Insert the Windows XP-based removable hard drive supplied with this kit into the instrument. Tighten the thumb screws to secure the removable hard drive.

This completes the installation of the Windows XP-based removable hard drive. Proceed to *Update the Instrument BIOS*. (See page 12.)

Update the instrument BIOS

To update the instrument BIOS:

⚠ **WARNING.** *To avoid making the instrument unusable, do not remove power from the instrument while the BIOS update is in progress. If the power is lost during the BIOS update, you will have to return the instrument to Tektronix for service.*

1. Configure the instrument for a BIOS update:

   a. Turn the instrument off.

   b. Loosen the thumb screws that secure the removable hard drive and remove the removable hard drive from the instrument.

   c. Connect a keyboard (PS/2 or USB) to the instrument.

   d. Install the provided USB flash drive, part number 063-4477-00, into a rear USB slot.

2. Update the instrument BIOS:

   a. Turn on the instrument.

      The instrument will boot into DOS by booting from the USB flash drive.

b. When the DOS prompt appears, enter `bios` to start the update.

c. At the prompt `Do you want to flash the [5788N202.bin] new bios (Y/N)?`, enter `Y`.

d. At the prompt, `PDR region already exists in flash.  You may lose important data.  Do you want to continue (Y/N)?`, type `Y` and press **Enter**.

The update utility then erases the flash, programs the flash, verifies the flash, and then updates the EEPROM.

When the BIOS update is complete, the utility will return to the `C:\BIOS>` prompt.

    e. Turn off the instrument. Remove the power cord.

3. Post-update instrument configuration:

    a. Remove the USB Flash drive from the rear panel.

    b. Insert the WINXP removable drive supplied with this kit into the instrument. Tighten the thumbscrews.

    c. Wait 20 seconds after installing the removable hard drive.

    d. Connect the power cord to the instrument.

4. Configure the SATA mode:

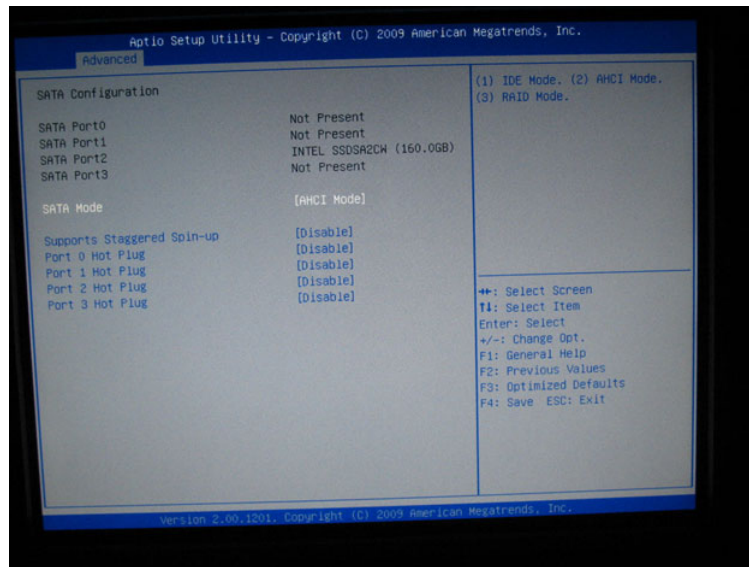   **a.** Turn on the instrument.

b. Enter the BIOS setup utility:

a. Tap the DELETE key on the keyboard to enter the BIOS setup utility while the Tektronix screen is displayed.
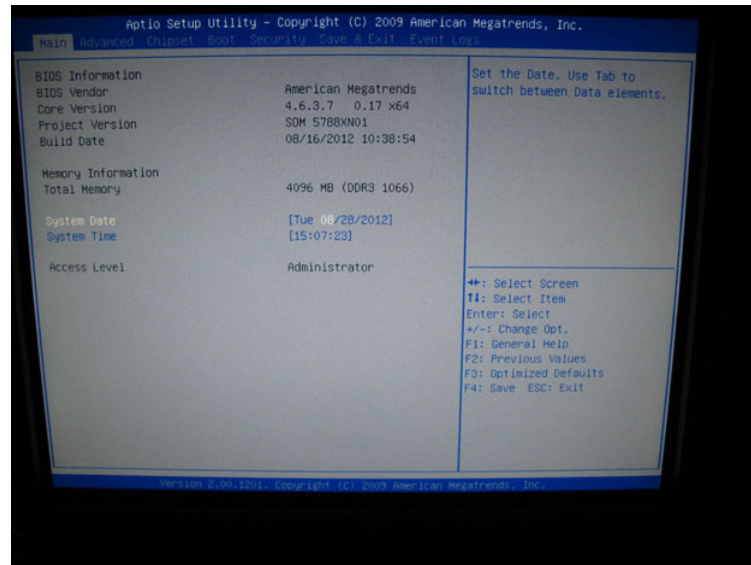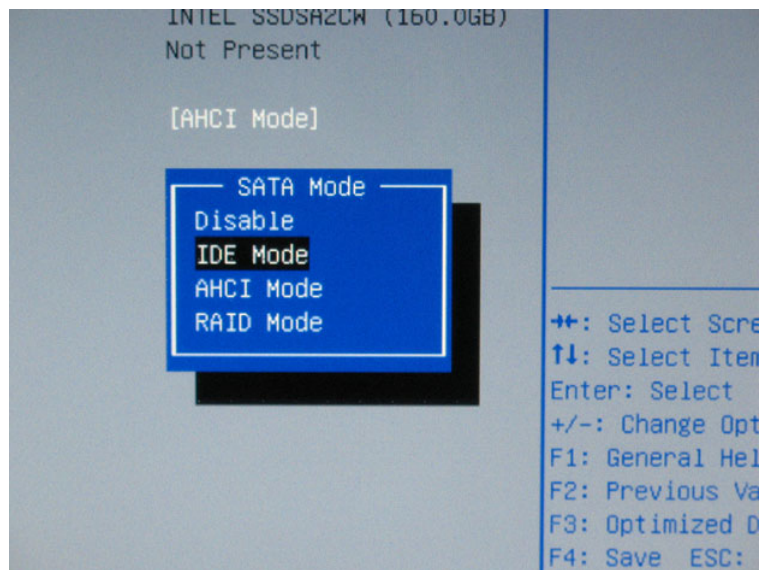

b. Use the right arrow key to select the **Advanced** menu, then press the down arrow key to select **SATA Configuration** and press **Enter**.
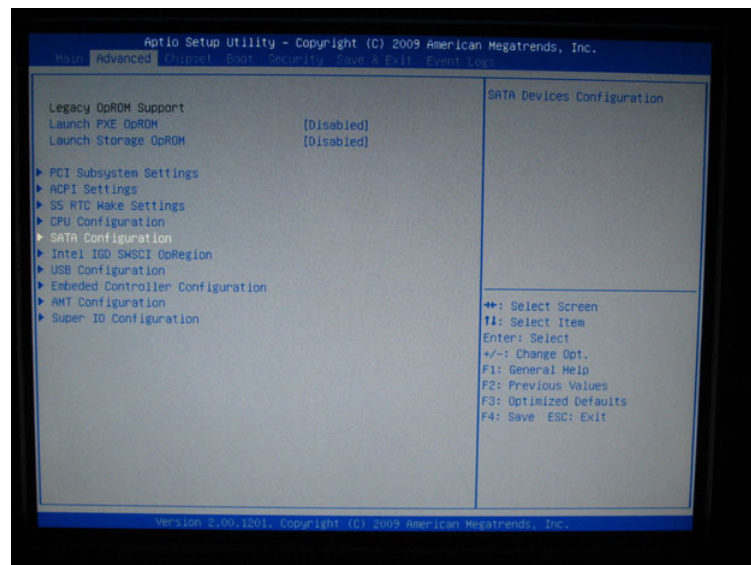
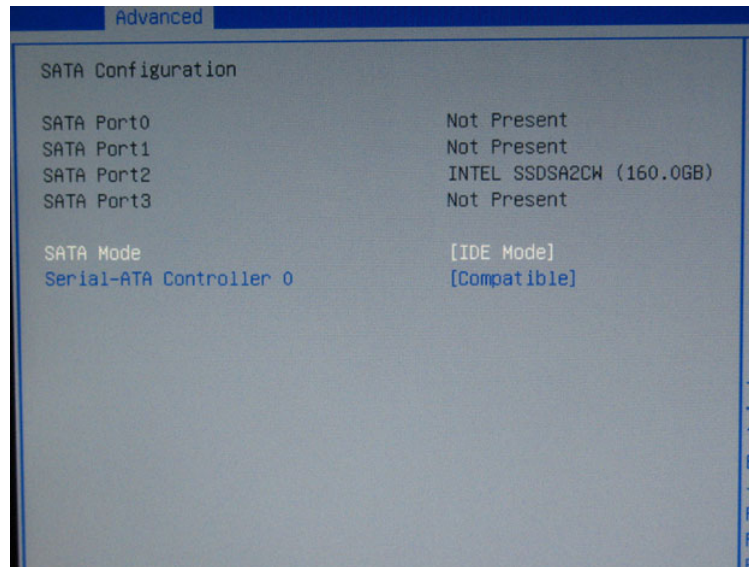**c.** Use the up/down arrows to select **SATA Mode** and press **Enter**.

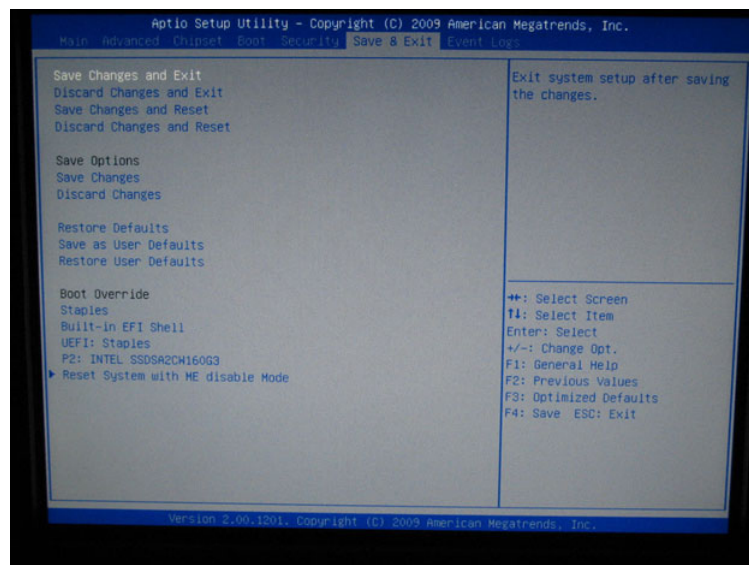**d.** Use the up/down arrows to select **IDE Mode** and press **Enter**

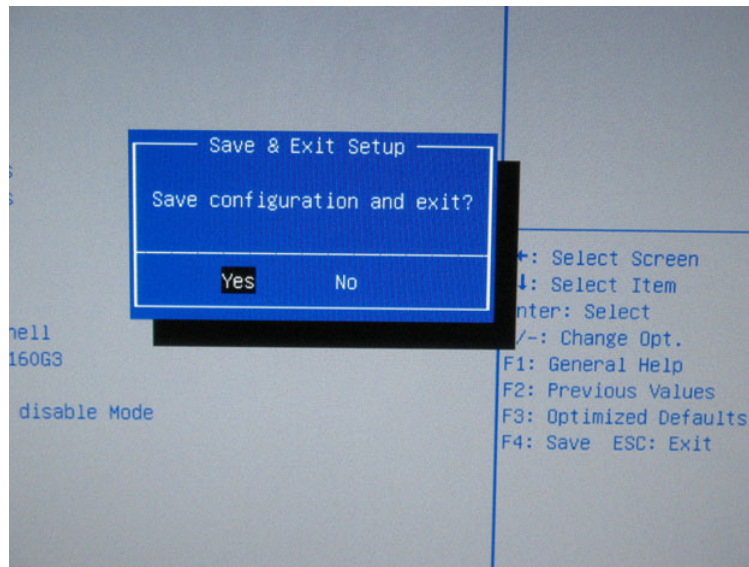**e.** Confirm the IDE Mode has been selected.

   f. Press **ESC** to go up a menu level, then use the right arrow to select the **Save & Exit** menu, then use the up/down arrow keys to select **Save Changes & Exit** and press **Enter**.

   g. When the confirmation dialog appears, select **Yes** and press **Enter**.

After rebooting, the instrument will cycle power (on->off->on), boot to Windows XP and launch the RSA application. After the RSA application is launched, the instrument is ready to use.

Installing the Windows Certificate of Authenticity label

Place the supplied Windows XP Certificate of Authenticity on the rear panel.

This completes the installation of the RSA6BUP WINXP upgrade kit.

■ End of Document ■