



Barracuda 7200.9 PATA Installation Guide

ST3500841A, ST3500641A, ST3400833A, ST3400633A, ST3300822A, ST3300622A, ST3250824A, ST3250624A, ST3200827A, ST3160812A, ST3160212A, ST3120814A, ST3120213A, ST3802110A, and ST3402111A

Parallel ATA (PATA) Interface Disc Drives

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What you need

- A Phillips screwdriver and four 6-32 UNC drive mounting screws
- An ATA interface cable. For optimum performance use an 80-conductor Ultra ATA/100 cable which has blue, gray, and black connectors.

Ultra ATA/100 requirements

The drive can be configured to support a default maximum transfer rate. This drive can support transfer rates up to 100 Mbytes per second (UDMA 5) in Ultra ATA/100 mode. Using a software utility, you can set the default transfer rate to the best capability of your system. For your drive to run in this mode, you need the following:

- A computer that supports UDMA mode 5
- A 40-pin, 80-conductor cable (available from your computer dealer)
- Windows XP, Windows 2000, Mac OS X, Linux, or other operating system that supports Ultra ATA 100.

Large disc requirements (for capacities over 137 Gbytes)

To realize the full capacity of drives over 137 Gbytes:

- Use an operating system that supports 48-bit addressing:
 - Microsoft Windows XP with Service Pack 1 (or later)
 - Windows 2000 with Service Pack 3 (or later)
 - Mac OS X10.2 (or later)
 - Mac OS 9.2.2 (or later)
 - Linux kernel v2.4.16 (or later)
- Use a 48-bit compatible Ultra ATA/133 PCI host adapter card or connector.
- Go to <http://support.seagate.com> for additional information.

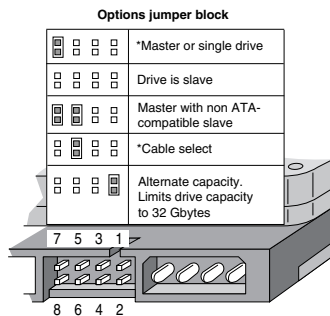
Handling precautions/electrostatic discharge protection

- Disc drives are fragile. Do not drop or jar the drive. Handle the drive only by the edges or frame.
- Drive electronics are extremely sensitive to static electricity. While installing the drive, wear a wrist strap and cable connected to ground.
- Turn off the power to the host system during installation.
- Do not disassemble the drive; doing so voids the warranty. Return the entire drive for depot service if any part is defective.
- Do not apply pressure or attach labels to the drive.

Setting the jumpers

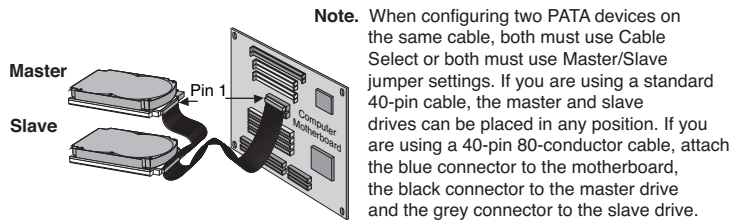
Refer to the jumper settings illustration below or on your drive label to configure the drive for your system. Jumper settings can also be accessed online from our web site at www.seagate.com.

- **Master or single drive:** When this jumper is used (connecting pins 7 and 8), the drive is configured as master or single drive.
- **Drive is slave:** To configure the drive as a slave or second drive on the cable, remove all the jumpers from pins 5-8.
- **Master with non-ATA compatible slave:** Use this setting if the slave drive is not recognized. Configure the master drive with a jumper set on pins 5 and 6 and pins 7 and 8 to enable this option.
- **Cable select:** Computers that use cable select determine the master and slave drives on the interface bus. To enable cable select, set a jumper on pins 5 and 6 (and make sure the "Master or single drive" jumper is not installed).
- **Alternate capacity jumper:** When this jumper is used, drives with a 40-Gbyte capacity or greater are limited to 32 Gbytes. Use this jumper only if you have a legacy system with a BIOS that does not support large capacity disc drives. When using the alternate capacity jumper, DiscWizard® Starter Edition software is required to achieve the drive's full capacity.



Attaching cables and mounting the drive

1. Attach one end of the drive interface cable to the interface connector on your computer's motherboard (see your computer manual for connector locations).



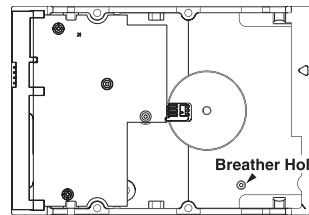
Caution. Align pin 1 on the motherboard connector with pin 1 on your drive connector. Pin 1 is marked by a stripe on one side of the cable.

2. Secure the drive using four 6-32 UNC mounting screws in either the side-mounting or bottom-mounting holes. Insert the screws no more than 0.20 inches (5.08 mm) into the bottom-mounting holes and no more than 0.14 inches (3.55 mm) into the side-mounting holes.

Note. Do not overtighten the screws or use metric screws. This may damage the drive.

3. Attach the interface connector and the power connector to the drive.

Breather filter hole precaution



Caution. Do not cover, seal, or insert any object into this hole.

This hole allows condensation inside the hard disc to equalize with ambient pressure. If this hole is covered, sealed, or penetrated by any object, drive reliability may be compromised and could lead to permanent damage and voids the warranty.

Configuring the BIOS (does not apply to Apple Macintosh systems)

Close your computer case and restart your computer. Your computer may automatically detect your new drive. If your computer does not automatically detect your new drive, follow the steps below.

- a. Restart your computer. While the computer restarts, run the System Setup program (sometimes called BIOS or CMOS setup). This is usually done by pressing a special key, such as DELETE, ESC, or F1 during the startup process. See your system documentation for details about your particular system.
- b. Within the System Setup program, instruct the system to auto detect your new drive.
- c. Enable LBA and UDMA modes if available and then save the settings and exit the Setup program.

When your computer restarts, it should recognize your new drive. If your system still doesn't recognize your new drive, see the troubleshooting section.

Installing the drive in Mac OS X systems

1. Install the drive in your system using the instructions provided on the front of this installation guide.
2. Insert the Mac OS X Install CD 1 (OS 10.3 and earlier) or Install DVD (OS 10.4). These operating system discs are provided by Apple and normally ship with Apple computers.
3. Restart the computer while holding the C key (you can release the C key after you see the Apple logo appear on the screen). In Mac OS X 10.4 or later, you must select your language after booting from these install discs.
4. If the new drive you just installed is the only disc in your system (replacing the original hard disc drive), click on "continue" and follow the on-screen instructions to install OS X on your new drive. If the new drive you installed is not the only drive in your system, do not click on 'continue.' Instead, select Disk Utility from the Utilities menu located in the top menu area.
5. Select the drive you want to install in the left panel.

Warning. Be sure to select the correct disc before erasing the drive.

6. Click on Erase and then select a volume format (Mac OS Extended is a commonly-used format), type a name of your choice in the Name field,

and click on Erase again. Confirm your intentions by clicking Erase once more to begin formatting the drive.

Installing the drive in Windows XP or Windows 2000 systems

DiscWizard™, available exclusively from Seagate®, provides you with customized installation instructions for your hard drive. You can get this free disc drive installation software from our web site at www.seagate.com/support or run the program directly from your web browser.

To run DiscWizard:

Follow the instructions on the download page at www.seagate.com to create a diskette and complete the installation.

If you cannot run DiscWizard, follow the instructions on this installation sheet to install and configure your drive.

Preparing the drive using DiscWizard

Installing a single drive

If you are installing a single drive, use DiscWizard to automatically partition and format your drive. DiscWizard software is available at www.seagate.com and is free. During the download, the Diskette Creator creates a portable bootable diskette. To run DiscWizard:

1. Insert your bootable DiscWizard diskette and follow the instructions. DiscWizard will guide you through the installation process.
2. Boot your computer from the Windows operating system CD or from your system startup diskette with the Windows CD loaded. At the prompt, type **setup**. Follow the instructions provided on your screen.

Installing a slave drive

If you are installing a second drive, or slave, to your system, use DiscWizard software available at www.seagate.com.

If you do not want to install your drive using DiscWizard, see "Standard Microsoft Installation" below to partition and format your drive.

Standard Microsoft installation

Caution. Partitioning or formatting a drive erases all data on the drive. Seagate assumes no liability if you erase your data.

1. Insert a bootable Windows Install CD and restart your computer. This is provided with your Microsoft Windows operating system software.
2. Run **fdisk** and create a primary DOS partition.
3. Mark the partition as active to make the partition bootable.

Drive formatting

Caution. Use the correct drive letters to prevent formatting a drive that already contains data.

1. At the A: prompt, type **format x:** (where x is the letter of your first new partition) and then press the Enter key. Repeat the format process for all new partitions.
2. Proceed to "Loading the operating system" below.

Loading the operating system

Note. The operating system needs to be installed on the master drive only. It is not required when adding a second drive.

1. Boot your computer from a Windows operating system CD or from your system startup diskette with the Windows CD loaded in the CD drive.
2. At the prompt, type **setup** and continue with the Windows setup as instructed on your screen.

Macintosh Troubleshooting

See www.apple.com for Macintosh troubleshooting information.

Windows Troubleshooting

If your drive is not working properly, these troubleshooting tips may help solve the problem.

1. **Does the drive spin up?** A spinning drive produces a faint whine and clicking noise that begins when power is applied. If your drive does not spin, check that the power connector and interface cable are securely attached and the jumpers are installed correctly.
2. **Does the computer recognize the drive?** Verify that the drive is enabled in the system CMOS or setup program. If not, select the autodetect option and enable it. If your drive has a problem, it may not be recognized by the system.
3. **Does FDISK detect the drive?** Run the FDISK program located on your Windows startup diskette. Type **fdisk/status** to verify that your hard drive is present and recognized by the system.
4. **Does Scandisk find the drive defect-free?** Scandisk is a utility located on your Windows startup diskette that scans the drive for defects. If defects are detected, this may be an indication of a problem.

5. **Why won't the drive format to full capacity?** Verify that your BIOS has autodetect and LBA mode enabled. Otherwise, you may need to use DiskWizard to achieve the full capacity of your drive. Download the latest version from www.seagate.com or find it on your CD. Additional information is provided at: support.seagate.com.
6. **Why does my computer hang on startup?** Verify that your system is ATA/100 compatible with the UDMA mode setting. Some legacy BIOS cause hangs on startup if it is not ATA/100 compatible. For more information, see the earlier section on the Ultra ATA/100 requirements. In addition, some legacy BIOS may cause a hang due to the large drive capacity. Use the alternate capacity jumper and DiskWizard software if your computer does not support higher capacity drives.

Note. If these tips do not solve the problem, contact your dealer or visit <http://seatools.seagate.com> to download SeaTools® disc diagnostics software and more troubleshooting advice.

Seagate support services

For online information about Seagate products, visit www.seagate.com or e-mail your disc questions to DiscSupport@Seagate.com.

If you need help installing your drive, consult your dealer first. If you need additional help, call a Seagate technical support specialist. Before calling, note your system configuration and drive model number.

Africa	+1-405-324-4714	Netherlands	00 800-47324283
Australia	1800-14-7201	New Zealand	0800-443988
Belgium	00 800-47324283	Norway	00 800-47324283
China*	800-810-9668	Poland	00 800-311 12 38
Denmark	00 800-47324283	Spain	00 800-47324283
France	00 800-47324283	Sweden	00 800-47324283
Germany	00 800-47324283	Switzerland	00 800-47324283
Hong Kong	800-90-0474	Singapore	800-1101-150
Hong Kong†	001-800-0830-1730	Taiwan*	00-800-0830-1730
India	1-600-180-1104	Thailand	001-800-11-0032165
Indonesia	001-803-1-003-2165	Turkey	00 800-31 92 91 40
Ireland	00 800-47324283	United Kingdom	00 800-47324283
Italy	00 800-47324283	USA/Canada/ Latin America	1-800 SEAGATE or +1-405-324-4700
Japan	0034 800 400 554	Other European countries	+1-405-324-4714
Korea	007 98 8521 7635		
Malaysia	1-800-80-2335		
Middle East	+1-405-324-4714		

*Mandarin

†Cantonese

Warranty. To determine the warranty status of your Seagate disc drive, contact your place of purchase or visit our web site at www.seagate.com for more information.

Return Merchandise Authorization (RMA). Run SeaTools to diagnose your drive before requesting a return authorization. Please verify that your drive is defective by following the troubleshooting checklist in this guide. Seagate offers customer support for all Seagate drives worldwide. Seagate customer service centers are the only facilities authorized to service Seagate drives. Drive return procedures vary depending on geographical location and are subject to current international trade regulations.

Shipping the drive

Caution. Back up the data before shipping. Seagate assumes no responsibility for data lost during shipping or service.

Shipping drive in an unapproved container voids the warranty. Pack the drive with original box and packing materials. Use no other materials.

Electromagnetic compliance for the European Union. This model complies with the European Union requirements of the Electromagnetic Compatibility Directive 89/336/EEC of 03 May 1989 as amended by Directive 92/31/EEC of 28 April 1992 and Directive 93/68/EEC of 22 July 1993. Compliance of this drive, as a system component, was confirmed with a test system. We cannot guarantee that your system will comply. The drive is not meant for external use (without enclosure, shielded I/O cable, etc.).

Sicherheitsanleitung 1. Das Gerät ist ein Einbaugerät, das für eine maximale Umgebungstemperatur von 60°C vorgesehen ist. **2.** Zur Befestigung des Lufwerks werden 4 Schrauben 6-32 UNC-2A benötigt. Bei seitlicher Befestigung darf die maximale Länge der Schrauben im Chassis nicht mehr als 3,3 mm und bei Befestigung an der Unterseite nicht mehr als 5,08 mm betragen. **3.** Als Versorgungsspannungen werden benötigt: +5V +/- 5% 0,67A; +12V +/- 5% 2,6A **4.** Die Versorgungsspannung muss SELV entsprechen. **5.** Alle Arbeiten auf dem Festplatte dürfen nur von Ausgebildetem Servicepersonal durchgeführt werden. Bitte entfernen Sie nicht die Aufschriftenschilder des Laufwerkes. **6.** Der Einbau des Laufwerkes muss den Anforderungen gemäß DIN IEC 950 VDE 0805/05.90 entsprechen.

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