Barracuda 7200.9 Serial ATA Installation Guide
ST3160811AS, ST3160211AS, ST3120811AS, ST3120211AS,
ST380811AS, ST380211AS, and ST340211AS
Serial ATA (SATA) Interface Disc Drives

Serial ATA interface disc drives are designed for easy installation. It is normally not necessary to set any jumpers, terminators, or other settings on this drive for proper operation.

With a Serial ATA (SATA) interface, each disc drive has its own cable that connects directly to a Serial ATA host adapter or a Serial ATA port on your motherboard. Unlike Parallel ATA, there is no master-slave relationship between drives that use a Serial ATA interface.

You can use a Serial ATA drive in the same system with Parallel ATA drives as long as both interfaces are supported on the motherboard or with a host adapter. This makes it easy to add Serial ATA capability to your existing system without removing existing Parallel ATA disc drives.

What you need

- A Phillips screwdriver and four 6-32 UNC drive mounting screws.
- A SATA interface cable (sold separately). Maximum length is 39 inches (1 meter).
- A SATA-compatible power cable or adapter (sold separately).
- A system with a SATA connector on it, or a SATA host adapter and available PCI slot in which to install the adapter.

Refer to your computer system documentation to see if your system supports SATA on the motherboard and locate the SATA connector. If your system does not have a SATA connector on the motherboard, you must purchase a SATA host adapter that is compatible with your computer and operating system and install it with the appropriate device driver according to the host adapter manufacturer's installation instructions.

Note. See www.seagate.com/support/disc/sata/ for a list of companies that sell SATA components.

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. See the Warranty information on page 2.
- Do not apply pressure or attach labels to the circuit board or to the top of the drive.

The easiest way to install your drive in a Windows system

To successfully install and obtain the maximum capacity from the drive, use DiscWizard for Windows disc drive installation software utility. This utility is available exclusively from Seagate. You can download this free disc drive installation software from our web site at www.seagate.com/support or run the program directly from your web browser.
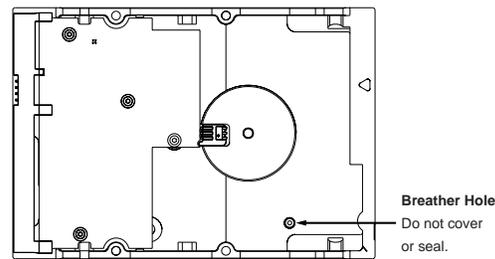
Note. Older versions of DiscWizard do not recognize Serial ATA model numbers. Make sure that you use DiscWizard for Windows or later when installing a Barracuda® 7200.9 Serial ATA disc drive.

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.

Breather filter hole precaution

Breather Hole
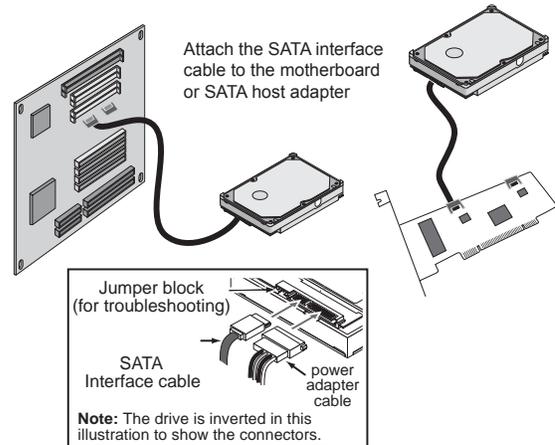Do not cover
or seal.

Caution. Do not cover, seal, or insert any object into this hole. If this hole is covered, sealed, or penetrated by any object, the drive reliability may be compromised and could lead to permanent damage and voids the warranty.

Attaching cables and mounting the drive

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

Note: Each drive requires its own cable.

Attach the SATA interface cable to the motherboard or SATA host adapter

Jumper block (for troubleshooting)

SATA Interface cable

power adapter cable

Note: The drive is inverted in this illustration to show the connectors.

Note. Serial ATA connectors are keyed to ensure correct orientation.

2. Attach the interface and power cables to the drive.

3. 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.

Configuring the BIOS

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.

1. 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.

2. Within the system setup program, instruct the system to auto detect your new drive.

3. 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 on the back of this sheet.

Note. Some systems may see the drive and classify it as a SCSI device. This is normal even though this is not a SCSI disc drive. This does not affect performance or capacity.

Microsoft operating system installation instructions

For detailed information about installing a Microsoft operating system on your new Seagate drive, refer to the Microsoft Knowledgebase Article references below. To locate an article, go to http://support.microsoft.com and enter the article number in any search box on the Microsoft web site. For

example, to view the Knowledgebase article for installing Windows XP on your new Seagate drive:

1. Open your browser and go to http://support.microsoft.com.
2. Enter **313348** in the Microsoft web site's search box, and then press **Enter**. Locate and select the most accurate options from the search results. The article is displayed on your screen.

Operating system	Microsoft knowledgebase article numbers
Windows XP	313348. See also: 316941
Windows 2000/NT	308209. See also: 175761

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. Just as the name implies, erasing erases all data on the selected drive.

Note. If you are installing the drive in an Apple G5 system and the system does not recognize the drive, contact Seagate Technical Support using the phone number for your region listed in the "Seagate support services" section in this installation guide for information about compatibility with Apple G5 systems.

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.
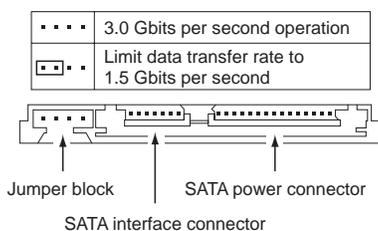
Macintosh Troubleshooting

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. If your drive does not spin, check that the power connector and interface cable are securely attached.
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. If the operating system does not recognize the drive, you need to load your host adapter drivers.
3. **I receive a "drive not detected" message. Why?** Your SATA-equipped motherboard or host adapter may use a chipset that does not support SATA speed autonegotiation or other SATA 3 Gbit feature. Install a jumper as shown in the following illustration to limit the data transfer rate to 1.5 Gbits per second and enhance compatibility with some computers.

::::	3.0 Gbits per second operation
::·	Limit data transfer rate to 1.5 Gbits per second

Jumper block   SATA power connector

SATA interface connector

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 does my computer hang on startup?** Verify that your system is SATA compatible. You need either a SATA 1.0-compatible motherboard connector or Serial ATA host adapter to use this drive.
6. **I'm running Windows 98 and FDISK is not reporting the full capacity of my drive. Why?** You need to upgrade your version of FDISK if you are using the diskettes or CD that came with your original Windows 95 or 98 operating system. Microsoft provides a free downloadable FDISK upgrade. See Microsoft Knowledgebase article number 263044 located at http://support.microsoft.com.

Note. If these tips do not answer your question or 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/	1-800 SEAGATE or
Japan	0034 800 400 554	Latin America	+1-405-324-4700
Korea	007 98 8521 7635	Other European	
Malaysia	1-800-80-2335	countries	+1-405-324-4714
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. In addition, please verify that your drive is defective by following the troubleshooting checklist in this guide. Seagate offers comprehensive 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. This prevents electrical and physical damage in transit.

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 Umgebungstempeatur 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 merh als 3,3 mm und bei Befestigung an der Unterseite nicht mehr als 5,08 mm betragen. **3.** Als Versorgungsspannungen werden benötigt: +5V +/- 5% 0,64A; +12V +/- 5% 2,8A **4.** Die Versorgungsspannung muss SELV entsprechen. **5.** Alle Arbeiten auf dem Festplattte dürfen nur von Ausgebiletem Serciepersonal 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 entspreche.