



Barracuda 7200.7 Serial ATA Installation Guide

ST3160021AS, ST3120022AS, ST380011AS, ST340014AS,
ST3160023AS, ST3120026AS, and ST380013AS
Serial ATA (SATA) Interface Disc Drives

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Serial ATA interface disc drives are designed for easy installation. It is not necessary to set any jumpers, terminators, or other settings on this drive for proper operation. The jumper block adjacent to the SATA interface connector is for factory use only.

With a Serial ATA 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.

The easiest way to install your drive

To successfully install and obtain the maximum capacity from the drive, use DiscWizard™ 2003 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. In either case, you should run DiscWizard before you install your drive.

Note. Older versions of DiscWizard do not recognize Serial ATA model numbers. Make sure that you use DiscWizard 2003 or later when installing a Barracuda® 7200.7 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.

What you need

- A Phillips screwdriver and four 6-32 UNC drive mounting screws.
- A Serial ATA interface cable (sold separately). Maximum length is 39 inches (1 meter).
- A Serial ATA-compatible power cable or adapter (sold separately).
- A version of Windows with FAT32 or NTFS file system.
- A system with a motherboard that has a Serial ATA connector on it, or a Serial ATA host adapter and available PCI slot in which to install the adapter.

Refer to your computer system documentation to see if your system supports Serial ATA on the motherboard and to locate the Serial ATA connector. If your system does not have a Serial ATA connector on the motherboard, you must purchase a Serial ATA 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 Serial ATA components including host adapters, cables, and power adapters.

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. Keep the drive in the protective SeaShell™ container until you are ready to install it to minimize handling damage.
- 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.

Drive characteristics

	ST3160021AS	ST3120022AS	ST380011AS
Formatted capacity	160 Gbytes	120 Gbytes	80 Gbytes
Total # of sectors*	312,581,808	234,441,648	156,301,488
Cache size	2 Mbytes	2 Mbytes	2 Mbytes

	ST3160023AS	ST3120026AS	ST380013AS
Formatted capacity	160 Gbytes	120 Gbytes	80 Gbytes
Total # of sectors*	312,581,808	234,441,648	156,301,488
Cache size	8 Mbytes	8 Mbytes	8 Mbytes

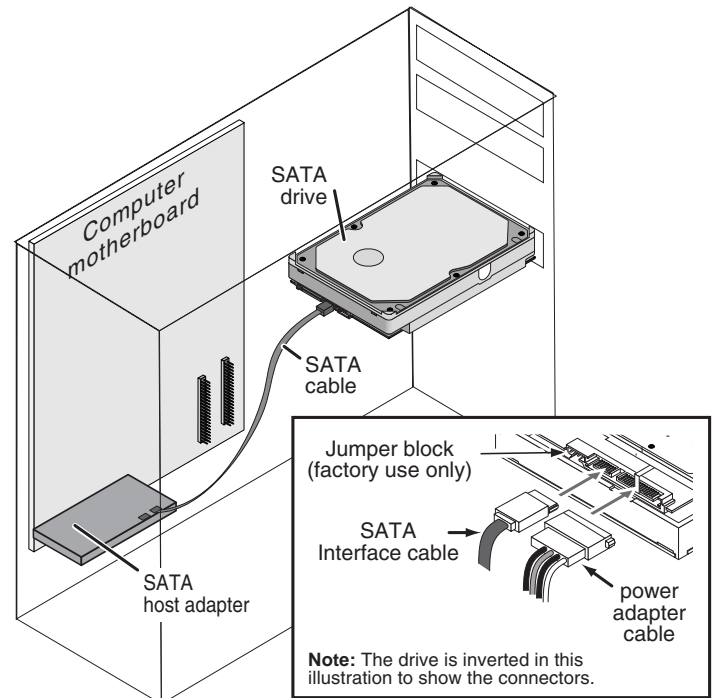
	ST340014AS
Formatted capacity	40 Gbytes
Total # of sectors*	78,165,360
Cache size	2 Mbytes

*One sector equals 512 bytes.

Attaching cables and mounting the drive

1. Attach one end of the drive interface cable to the Serial ATA interface connector on your computer's motherboard or Serial ATA host adapter (see your computer manual for connector locations). Host adapter configuration is shown below.

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.
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. Serial ATA is a new interface type. Some older systems may see the drive and classify it as a SCSI device if you are using a Serial ATA host adapter. This is normal even though this is not a SCSI disc drive. This does not affect drive 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.
2. Go to <http://support.microsoft.com>.
3. Enter 313348 in the Microsoft web site's search box.
4. Press Enter.

The article is displayed on your screen.

Operating System	Microsoft Knowledgebase Article Numbers
Windows XP	313348
Windows 2000/NT	308209 See also: 175761
Windows Me/98/95	255867 See also: 166172

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 auto-detect 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. **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. **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>.
5. **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.
6. **Why does my computer hang on startup?** Verify that your system is Serial ATA compatible. You need either a Serial ATA 1.0-compatible motherboard connector or Serial ATA host adapter to use this drive.

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	+31-20-316-7222	New Zealand	0800-443988
Australia	1800-14-7201	Norway	800-113 91
Austria	0 800-20 12 90	Poland	00 800-311 12 38
Belgium	0 800-74 876	Spain	900-98 31 24
Denmark	80 88 12 66	Sweden	0 207 90 073
France	0 800-90 90 52	Switzerland	0 800-83 84 11
Germany	0 800-182 6831	Singapore	800-1101-150
Hong Kong	800-90-0474	Taiwan	+886-2-2514-2237
India	1-600-33-1104	Thailand	001-800-11-0032165
Indonesia	001-803-1-003-2165	Turkey	00 800-31 92 91 40
Ireland	1 800-55 21 22	United Kingdom	0 800-783 5177
Italy	800-790695	USA/Canada/	1-800 SEAGATE or
Malaysia	1-800-80-2335	Latin America	+1-405-936-1234
Middle East	+31-20-316-7222	Other European	
Netherlands	0 800-732-4283	countries	+31-20-316-7222

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 properly designed 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 Laufwerkes 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% 0,74A; +12V +/- 5% 2,8A **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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