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You can read the recommendations in the user guide, the technical guide or the installation guide for MAXTOR ST9140AG. You'll find the answers to all your questions on the MAXTOR ST9140AG in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

**User manual MAXTOR ST9140AG**  
**User guide MAXTOR ST9140AG**  
**Operating instructions MAXTOR ST9140AG**  
**Instructions for use MAXTOR ST9140AG**  
**Instruction manual MAXTOR ST9140AG**



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*ST9190 Family:*

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**ST9140AG**

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**ST9190AG**

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**AT Interface Drives**

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*Installation Guide*



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**Manual abstract:**

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ST9190 Family Installation Guide, Rev. A 1 Read before you begin... Application.

Your drive is designed for IBM AT and compatible personal computers, particularly laptop and notebook models. Warning. Turn off the computer before you open the case, touch any internal components or install the drive. Note. Special training or tools may be needed to service laptop and notebook computers. Opening the case may void your warranty. Review the terms and conditions of your warranty before opening the case. Static discharge. Observe the following precautions: · Keep the drive in its static-shielded bag until you are ready to complete the installation. Do not attach any cables to the drive while it is in its static-shielded bag.

· Handle the drive by its edges or frame. · Do not touch the I/O connector pins or the circuit board. · Before handling any components, put on a grounded wrist strap, or ground yourself frequently by touching the metal chassis of a computer that is plugged into a grounded outlet. · Use antistatic padding on all work surfaces. · Avoid static-inducing carpeted areas. Drive handling. The drive is extremely fragile--handle it with care. Do not attach labels to any part of the drive. Inspection. Once you are familiar with the handling precautions listed above, inspect the drive.

If it appears to be damaged, call your distributor or dealer immediately. Warranty. See your authorized Seagate® distributor or dealer. 2 ST9190 Family Installation Guide, Rev. A Maintenance and repair.

Seagate drives do not require maintenance. The head/disc assembly is sealed; if you break the seal, you void the warranty. Seagate customer service centers are the only facilities authorized to repair Seagate drives. Seagate does not sanction any third-party repair facilities. Shipping.

Keep your original box and packing materials for transporting or shipping your drive. The box has a Seagate Approved Package label. Shipping a drive in an unapproved container voids the warranty. Call your authorized Seagate distributor to purchase additional boxes. Configuring the drive Put on a grounded wrist strap. If you are grounding yourself to the chassis of the computer, plug the power cord into a grounded outlet. Wear a grounded wrist strap throughout the installation procedure. Install master/slave jumpers. In a two-drive system, you need to designate one drive as the master, or drive 0, and the other drive as the slave, or drive 1. In a one-drive system, configure the drive as a master.

To configure the drive as a master or slave, install the master/slave jumpers as shown in Figure 1. As an alternative to configuring the drive as a master or slave using jumper settings, you can use a specialized daisy-chain cable that grounds pin 28 (CSEL) on only one of its two drive connectors. In this case, a drive becomes a master if it is attached to the grounded CSEL connector; otherwise it becomes a slave. To configure an ST9190 family drive for master/slave selection using cabling, install both master/slave jumpers. In choosing this approach, you should be aware that the drive consumes less power with fewer jumpers installed. ST9190 Family Installation Guide, Rev. A 3 Master/slave configuration jumpers Pin 1 B A D C Pin 20 removed for keying Circuit board

Drive is master; slave may be detected using DASP signal Drive is master; Seagate slave drive present Drive is slave; Seagate master drive present Use CSEL pin grounding to differentiate master from slave Figure 1. ATA interface cable connector and master/slave configuration jumpers 4 ST9190 Family Installation Guide, Rev. A Attaching cables This drive is designed for a host computer that supplies interface signals and +5V power through a single 44-pin connector and cable. If your computer has a fixed connector that attaches directly to the drive, skip ahead to the following section, "Mounting the drive. " Otherwise, perform the following steps: 1. Turn off the computer. In some notebook and laptop computers, you may need to remove the battery. 2. Put on a grounded wrist strap.

3. Connect the 44-pin interface/power cable. Connect the 44-pin interface/power cable. Match pin 1 of the interface cable to pin 1 of the interface connector on the drive and on the computer. Pin 1 is usually denoted by a stripe along one edge of the ribbon cable.

The location of pin 1 on the drive interface connector is shown in Figure 1 on page 3. The cable should be no longer than 18 inches. Caution. The printed circuit cables used in some laptop computers are delicate. Be careful not to tear them. Mounting the drive You can mount the drive in any orientation using the four side mounting screws or the four bottom mounting screws. Be careful not to crimp or strain the connector cable. If you plug the drive directly into a fixed connector, be careful not to bend the drive connector pins. Caution. To avoid damaging the drive: · Allow a minimum clearance of 0.

030 inches (0.762 mm) around the entire perimeter of the drive for heat dissipation. ST9190 Family Installation Guide, Rev. A · Use M3X0.5 metric mounting screws only. 5 · Do not insert mounting screws more than 0.150 inches into the screw holes. · Do not overtighten the screws (maximum torque: 3 inch-lb).

This drive is designed according to the industry-standard MCC mounting specifications and must be used with MCC-compatible connectors and mounting hardware in fixed-mounting applications. If the mounting screws in your computer do not line up with the screw holes on the drive, your computer may not be MCC compatible.

Configuring system BIOS Before your computer can recognize a new drive, you must enter basic information about the drive into the computer's BIOS.

Specifically, you need to know the number of cylinders, heads, and sectors, and the overall capacity of the drive you are installing. It is not necessary to understand these terms to set up the system BIOS. The table below lists these specifications for the ST9190 family drives. Drive Specification No.

Drive Specification No.	cylinders No.	read/write heads No.	sectors per track	Total No. sectors	Bytes per sector	Capacity (Mbytes)	BIOS calculated Usable
ST9190AG 873	16	24	335,232	512	163.		



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6 ST9140AG 980 15 17 249,900 512 121.9 127.9 6 ST9190 Family Installation Guide, Rev. A To determine which drive types your BIOS supports, read your computer documentation or run your system setup program. Alternatively, you can run the FINDTYPE.EXE utility program, available from Seagate Technical Support services (on the SeaBOARD BBS). The methods used to configure system BIOS vary from computer to computer. In some computers you can run a setup program from the DOS prompt. In other computers, you must initiate BIOS setup by pressing certain keys while the computer is booting up. See your system documentation.

Within the setup program, there are three possible ways that you can specify your drive type: · Match your drive specifications (from the table on page 5) with those of a drive type listed in the setup program. · Specify a custom or user-defined drive type in the setup program, then manually enter your drive specifications (from the table on page 5). · Select a drive type having specifications lower than those required for your drive, and allow your drive to mimic the drive type selected. When you enter drive specifications for a custom or user-defined drive type, the BIOS should display a drive capacity equal to that listed as BIOS calculated capacity in the table on page 5. This value is slightly lower than the usable drive capacity. @@@@A 7 types. @@@@A In other words, total sectors per drive (No. cylinders) × (No. read/write heads) × (No. @@@@A Several key compatibility issues are discussed below. @@@@A Note. @@@@A To partition a drive, you must first boot the computer using a floppy disk that contains system files. Partition the drive using the DOS FDISK utility program (described in your DOS manual). If you are partitioning a drive that will be used to boot the computer, make sure that the primary DOS partition is marked active. ST9190 Family Installation Guide, Rev.

A 9 High-level formatting After you partition the drive, use the DOS FORMAT command (or equivalent utility program) to high-level format each of the drive partitions. This prcomes on after you reboot, the host adapter may be incompatible or defective. If so, see your dealer. At startup, the computer does not recognize the presence of the drive. · Check all cables.

· Check jumper settings on all drives. · Check the power supply specifications. · Reboot the computer and make sure the drive spins up. If your drive is very quiet, it may be difficult to hear it spin up—check the drive activity LED, if your computer has one. If the drive does not spin up, check the drive cables again. · Verify the BIOS drive type. 12 ST9190 Family Installation Guide, Rev. A · Try a warm boot. Press CTRL, ALT, and DELETE at the same time to reboot the computer without turning off the power. If a warm boot causes a previously unrecognized drive to become recognized, there may be a timing problem, in which the drive fails to become ready before the host completes its power-on self-test.

One possible solution is to slow the processor speed of your computer during startup. If your computer has a turbo switch, turn it off before powering-on the computer. If your computer does not have a turbo switch, you may be able to use keyboard commands to slow the processor speed. After the computer is up and running, return your processor speed to fast. (See your computer manual for details.) Another solution is to simply warm-boot your computer after every power-on. · Check for I/O address conflicts. To isolate the conflict, first verify that the drive and host adapter are compatible with your system by disconnecting all of the other peripherals (except the video card). Then install the drive and host adapter. Next, install the other peripherals, one at a time, until the conflict reappears.

After you have isolated the source of the address conflicts, you can resolve the conflict by changing the I/O address of the peripheral that appears to cause the conflict. The dealer partitioned and high-level formatted the drive for you in the store. Later, you installed the drive and it does not work. · Reboot the computer and make sure the drive spins up. · Check all cables.

· Check the power supply specifications. · Use the same version of DOS throughout your system. Check with your dealer to make sure the DOS version the dealer used ST9190 Family Installation Guide, Rev. A 13 to partition and high-level format the drive is the same as the version you have installed on your computer. · Verify the BIOS drive type.

You must use the same BIOS drive type or translation geometry to install the drive that the dealer used to partition and high-level format it. · Check for memory conflicts. · Check for viruses. During FDISK, the computer hangs or fails to create or save the partition record. · Check all cables. · The FDISK program on your DOS utilities diskette may be corrupted. Try a backup DOS diskette. · Make the partitions smaller. · Use another drive type or translation geometry. Sometimes the host BIOS does not accept a particular translation geometry even though that geometry is listed as an option during system setup.

· Change the interrupt jumper setting on the host adapter. · Check for media defects at the beginning of the drive (where the partition record is stored). Use a third-party surface harddisc scan utility. During FDISK, the error message, "No Fixed Disk Present," appears. · Check all cables. · Check the power supply specifications. · Reboot the computer and make sure the drive spins up. · Verify the BIOS drive type. 14 ST9190 Family Installation Guide, Rev. A · Check for I/O address conflicts.

During high-level formatting, the drive keeps finding hard errors and reporting the following message. "Attempting to recover allocation units. . ." · This is normal with DOS Version 4.

0 or later. The drive will format normally. However, after formatting the drive, you may want to run a third-party surface-scan program to check for bad sectors. During high-level formatting, the drive does not format to full usable capacity. @@@@Note.

@@@A · Run FDISK again and make the partitions smaller. At startup, the DOS messages, "Disk Boot Failure," "NonSystem Disk," or "No ROM Basic - SYSTEM HALTED," appear. · Check all cables. · Check to make sure that the same version of DOS is in use throughout your system. · Reinstall the DOS system files using the DOS SYS utility. ST9190 Family Installation Guide, Rev. A · Make sure the primary partition is active in FDISK. · Check for viruses. 15 During operation, the system error message, "Drive not Ready," appears. · Check all cables.

For each ribbon cable, verify that pin 1 of the cable is matched to pin 1 of the connector.



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Pin 1 is usually denoted by a stripe on the side of the ribbon cable. · Check the power supply specifications. · Reboot the computer and make sure the drive spins up. Technical support services Always consult your computer dealer first for technical support. Dealers are generally more familiar with unique system configurations. Technical support is available for all Seagate products by calling the SeaFAXTM, Seagate Technical Support FAX, SeaFONETM, SeaBOARDTM and SeaTDDTM services. SeaFAX. 408/438-2620 You can use a touch-tone telephone to access Seagate's automated FAX system to receive technical support information by return FAX. This service is available 24 hours daily. Seagate Technical Support FAX. 408/438-8137 You can FAX questions or comments to technical support specialists 24 hours daily. Responses are sent between 8:00 A.M. and 5:00 P.

M. (Pacific time), Monday through Friday. SeaFONE. 408/438-8222 You can talk to a technical support specialist between 8:00 A.M. and 5:00 P.M. (Pacific time), Monday through Friday. 16 ST9190 Family Installation Guide, Rev. A SeaFONE provides recorded technical information on selected Seagate products while you are on hold. You can access the recordings 24 hours daily. Before calling, note your computer configuration and drive model number (STxxx). SeaBOARD Using a modem, you can: · Access documentation, drive specifications and jumper settings for Seagate's entire product line. · Download software for installing and analyzing your drive. · Request a return phone call from the technical support staff.

SeaBOARD is available 24 hours daily. It supports communications up to 9,600 baud. Set your communications software to eight data bits, no parity, and one stop bit (8-N-1). SeaBOARD phone numbers are listed in the following table. Location United States Canada England France Germany Singapore Australia Korea SeaTDD. 408/438-5382 Using a telecommunications device for the deaf (TDD), you can send questions or comments 24 hours daily and exchange Modem number 408-438-8771 416-856-5581 44-62-847-8011 33-1-40 67 10 34 49-89-140-9331 65-292-6973 61-2-756-2359 82-2-556-7294 ST9190 Family Installation Guide, Rev. A 17 messages with a technical support specialist between 8:00 A.M. and 5:00 P.M. (Pacific time), Monday through Friday. Seagate Technology, Inc. 920 Disc Drive, Scotts Valley, CA 95066, USA Publication Number: 36231-001, Rev. A, Printed in USA .



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