Seagate

Medalist XE Family

275xe, 545xe

ATA Interface Drives

Installation Guide

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Read before you begin...

Application. Your Seagate® drive is designed for NRTL-listed personal computers. It uses the ATA interface.

Warning. Turn off the computer before you open the case, touch any internal components or install the drive.

Static discharge. Your drive and computer contain components that can be damaged by static discharge. Static electricity is generated from the friction of two contributors rubbing together. The charge is stored in your body and is discharged when you touch another conductor. Wool, synthetic clothing, carpets and plastics, including most bags, are common contributors. Observe these precautions to avoid damage from static electricity:

- Ground yourself before handling the drive. Wear a grounded wrist strap that is properly connected to earth ground, or touch the metal chassis of the computer power supply if it is plugged into a grounded outlet.
- Keep the drive in its antistatic bag until you are ready to install it. Do not attach any cables to the drive in the antistatic bag.
- Handle the drive gently and only by its edges or frame.
- Do not touch the drive's connector pins or printed circuit board.

Drive handling. The drive is extremely fragile—handle it with care. Do not remove any labels from the drive.

Inspection. Hold the drive by the frame edges to inspect it. Call your distributor or dealer immediately if it appears to be damaged.

Warranty. See your authorized Seagate distributor or dealer for the terms of the drive warranty.

Note. With regard to the EZ-Drive software, there are no warranties, express or implied, including, but not implied, warranties of merchantablity or fitness for a particular purpose. All such warranties are expressly and specifically disclaimed.

Maintenance and repair. Seagate drives do not require maintenance. The head/disc assembly is factory-sealed; a broken seal voids the warranty. Seagate customer service centers are the only facilities authorized to repair Seagate drives. Seagate does not sanction any third-party repair facilities.

Note. Throughout this manual, the Medalist 275xe is referred to by its model number, ST3295A, and the Medalist 545xe is referred to by its model number, ST3660A.

ST3660A free installation software

Files containing the free hard disc installation software and a program for extracting them, Seamove, are written on the ST3660A drive at the factory. The installation software is a version of EZ-Drive™ for Seagate. It provides a software solution for computers using DOS and some BIOS combinations that limit the hard disc capacity to 528 Mbytes. It allows the computer to access the ST3660A's entire 544.8 Mbytes. Before you partition and format the drive, transfer the EZ-Drive files to a bootable diskette. Instructions for transferring the EZ-Drive files are on page 11 and in the README.EXE file on the drive.

Note. The EZ-Drive software is authorized for installation only with the drive on which it is shipped.

Quick software transfer

- Install the ST3660A drive.
- Boot the computer with a diskette that has 300 Kbytes available for transferring the files.
- Select drive type 2 for the ST3660A in CMOS.
- Activate the prompt for the ST3660A.
- Type **seamove**. Seamove transfers the files to the diskette in Drive A, erases the drive partition and reboots the computer.

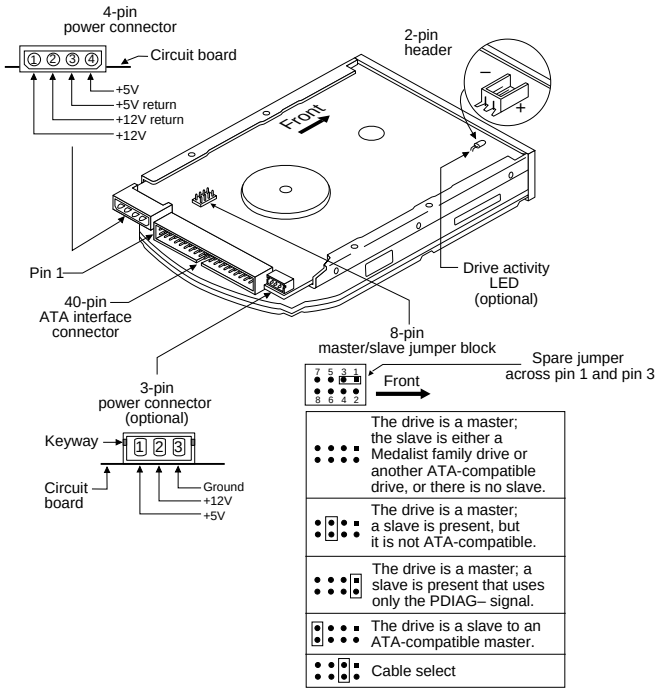

Figure 1. Jumpers and connectors

Installing the drive

1. **Turn the computer off.**

   Warning. Installing or removing the drive or adapter cards while the computer is powered on can damage your drive, adapter and computer.

2. **Remove the computer's cover.**

   Caution. Special training or tools may be required to service laptop computers. Removing the cover may void your warranty. Review the terms and conditions of your warranty before removing the cover.

3. **Ground yourself.**

Configuring the drive

Your ST3295A or ST3660A is configured at the factory for single-drive operation. If you are installing two drives, you must reconfigure your Seagate drive as either the master or the slave. If you install the Seagate drive as your only drive but add a second drive later, you must reconfigure it as the master or slave at that time.

1. **Remove the drive from its antistatic bag.**
2. **Install master/slave jumpers.** The master/slave configuration is set using the jumper block shown in Figure 1 on page 3. The chart below the jumper block shows how to set the jumpers for different configurations. An extra jumper is included with the drive and is attached to pins 1 and 3 of the jumper block.

   Installing one drive: No jumper setup is required.

   Installing two drives: Your Seagate drive may be installed with another ATA-compatible drive. Your system may use either a standard ATA interface cable or the cable-select method. The chart in Figure 1 shows the jumper settings for the master and slave configurations.

Attaching cables

Refer to Figure 1 on page 3 for the locations of the connectors.

1. **Connect the remote LED (optional).**
2. **Attach the power cable.** Attach one of the cables from the power supply to the power connector on the drive.

Caution. The cable and connector are designed to mate. Do not force a connection. Improper alignment may damage your drive.

3. **Attach the interface cable.** The edge-stripe on the interface cable for the drive is used to denote pin 1. The cable length must be no longer than 18 inches.

Caution. Cable misalignment can result in damage to the computer and the drive. Ribbon cables are delicate—be careful not to crimp or strain them.

Installing one drive with a standard ATA 40-pin interface cable:

Attach one end of the cable to the drive's 40-pin ATA interface connector. Align the cable's edge-stripe with pin 1 of the drive shown in Figure 1. Attach the other end of the cable to the host adapter card or to the hard drive connector located on the motherboard. Align the cable's edge-stripe with pin 1 (see your system user's guide or host adapter user's guide).

Installing two drives with an ATA interface cable:

You need an interface cable designed for two drives. Attach a cable connector to each drive's 40-pin ATA interface connector. Align the cable's edge-stripe with pin 1 of the drive shown in Figure 1. Attach the other end of the cable to the host adapter card or to the hard drive connector located on the motherboard. Align the cable's edge-stripe with pin 1 (see your system user's guide or host adapter user's guide). You can attach the drives in any order on the cable.

Installing drives in computers that use cable-select:

If your computer uses the cable-select method, refer to your computer reference guide to determine which cable connector or drive slot denotes the master drive and which the slave.

Mounting the drive

Your Seagate drive is designed to fit into a 3.5-inch bay. You can mount the drive securely in the computer in any orientation using either the side mounting holes or the bottom mounting holes. Position the drive so that you do not strain or crimp the cables.

Your Seagate drive is not shipped with mounting screws. Use the screws in the current drive if this drive is a replacement.

- Drives that have an “S” stamped on the frame runner use 6-32 UNC standard screws.
- Drives that have an “M” stamped on the frame runner use M3 metric screws.

Caution. To prevent drive mounting hole damage, use only the appropriate type of screws as specified. Tighten them gently using no more than 6 inch-lb of torque.

Bottom mounting holes. Insert four mounting screws not more than 0.20 inches (6 full turns) into the drive frame.

Side mounting holes. Insert four mounting screws not more than 0.13 inches (4 full turns) into the drive frame.

5.25-inch drive bay. You can mount your drive in a 5.25-inch drive bay with a Seagate 5.25-inch frame kit. Contact your dealer for the frame kit you need.

Configuring the computer

Your computer maintains records representing the hardware in the system. This representation includes the translation geometry that is used by the BIOS to map the drive surface and that is stored in CMOS memory. During the boot cycle, a test is run comparing the record to the hardware. When you install a new drive, you must update this record to include a representation of the new drive. This is done in your computer's System Setup. This section tells you how to configure your computer. It also discusses drive capacity limitations imposed by some computers and available solutions. If you are installing a ST3295A, go to the "Standard installation" section on page 8.

528-Mbyte system-capacity limit

Computers using DOS and some BIOS impose a 528-Mbyte capacity limit on ATA hard discs. This occurs because the BIOS is designed to use up to 1,024 cylinders in the translation geometry for mapping the data surface of the drive. The ST3660A has 1,057 cylinders. If your computer's BIOS limits the drive capacity to 528 Mbytes, you have several options for installing the drive.

- Install the drive using the standard installation procedure on page 8. This assures you the maximum capacity allowed by your computer.
- Use a host adapter that supports more than 528 Mbytes.
- Upgrade the BIOS to one that uses logical block addressing (LBA) or an extended cylinder-head-sector (ECHS) addressing scheme that allows for more than 528 Mbytes.
- Use the hard disc installation software, EZ-Drive, included on your ST3660A drive. Instructions for extracting the software are on page 11. Instructions for using EZ-Drive start on page 12. (Only ST3660A drives with part number 958002-4*xx* are shipped with EZ-Drive.)

Standard installation

1. Turn the computer on**.**
2. Enter the System Setup routine. (Refer to your computer user's guide. System Setup may be called Setup, BIOS Setup or CMOS Setup.) If your computer uses an automatic setup utility, see the caution below.
3. Find the hard disc configuration in the System Setup screen.
4. Select a drive type that matches the drive translation geometry for your drive as shown in the following table.

Model	CHKDSK Mbytes	Translation geometry			CMOS (Setup) Mbytes
		Cyl	Heads	Sectors per track	
ST3295A	272.7	761	14	50	260
ST3660A*	545.5	1057	16	63	520
ST3660A**	528.5	1024	16	63	504

***** Use this translation geometry if you know your computer can accept more than 1,024 cylinders.

****** Use this translation geometry if you are not sure your computer can accept more than 1,024 cylinders.

Note. CHKDSK and CMOS capacities are approximations. The capacities your computer reports may vary slightly.

Caution. If your computer is capable of automatic System Setup, it may read the total number of physical cylinders into the translation geometry chart in System Setup. If your system does not acknowledge more than 1,024 cylinders, it may overwrap the initial cylinders in its representation. This reduces the effective drive capacity to only the overwrapped cylinders. The effective cylinder count is

1,057 – 1,024 = 33, or 17.3 Mbytes. To avoid this problem, configure your System Setup manually.

If none of the standard drive types offered in System Setup match the translation geometry of your Seagate drive, select the *user-defined or custom* drive type, if available, and enter your drive's translation geometry.

If your System Setup routine does not offer a user-defined drive type, select a standard drive type with a capacity that approximates, but does not exceed, the capacity listed in the table on page 8 under *CMOS (Setup) Mbytes.*

If System Setup does not list the drive types it supports, you can get assistance choosing an appropriate drive type by downloading the FindType utility from the Seagate Sea-BOARD™ bulletin board (see page 25).

The drive does not use write precomp and landing zone. If these parameters are listed, make their value zero.

If you upgrade your system at a later date to achieve the drive's full capacity, you must repartition and reformat the disc. Be sure to save your data first.

5. When you have completed setting the translation geometry for your drive, save the values and exit System Setup. Reboot your computer. Refer to your user's guide for assistance on saving your changes.

Partitioning and formatting the drive

Before you can use your Seagate drive, you must partition and format it. In this guide we discuss partitioning and formatting your drive with DOS; have your DOS user's guide available for reference. If you are using another operating system, consult your operating system user's guide for formatting instructions.

Low-level formatting

Your drive is low-level formatted at the factory to 512 bytes per sector. Low-level formatting is not required.

Partitioning

You must partition the drive into one or more logical drives before you can use it.

Caution. Partitioning or formatting a drive at any level erases all data on it. Before you repartition or reformat your drive, make a backup of your existing files on another disc or media. Seagate assumes no liability if you erase your data.

You can partition a drive as follows:

1. Insert a bootable DOS diskette and boot the computer.
2. At the prompt, type **fdisk**. Press ENTER to run the FDISK utility.
3. Select *create DOS partition or logical DOS drive*. Press ENTER. If there are two drives on your system, make sure your selection is for the correct drive.
4. Select *create primary DOS partition*. Use the maximum available size for your primary partition and make the partition active. This puts the entire drive on one partition and allows the computer to boot (load DOS) from the partition. Press ENTER after every selection.

After you make all the appropriate selections, the computer automatically reboots itself.

High-level formatting

High-level formatting verifies the information written by the low-level format and builds the file allocation table (FAT) that DOS uses to access files on the drive. If you put more than one partition on the drive, you must high-level format each partition. Refer to your DOS reference guide for instruction. Use the DOS FORMAT utility to high-level format the drive as follows:

1. Type the following command at the DOS prompt:
   format *drive:* /v /s

drive: designates the drive you are formatting. Type **c:** if you are formatting the boot drive or if your system contains only one drive. Type **d:** to format a second drive.

/v tells the computer you want to label the drive after it is formatted. Labeling the drive can prevent someone from accidentally deleting the partition and losing your data.

/s tells the computer to make the drive bootable and copy the necessary system files to the drive.

2. When the computer prompts you for a volume label, type any valid name you want to designate the partition.

Transferring and using the installation software

Before you partition and format the drive, you must transfer the hard disc installation files on the drive to a bootable diskette in Drive A. The diskette must have 300 Kbytes available. To create a bootable diskette:

1. Put your DOS diskette into Drive A.
2. Type **format a:/s**.

   The drive will read the DOS diskette and ask you to insert the diskette you want to format into Drive A.
3. Insert the blank diskette. Press ENTER. When the format is complete, you can transfer the installation software files to the diskette.

Transferring the installation software

1. Boot the computer with the diskette to which you want to transfer the installation software files**.**
2. Enter the System Setup routine. (Refer to your computer user's guide. System Setup may be called Setup, BIOS Setup or CMOS Setup.) If your computer uses an automatic setup system, go to step 5.
3. Find the hard disc configuration in the System Setup screen.

4. Select drive type 2 for your new ST3660A. If your computer does not offer drive type 2, use the following values: 615 cylinders, 4 heads and 17 sectors.

   Note. These are interim drive type values that allow you to access the drive for extracting the installation files.

5. Activate the prompt for the ST3660A drive.
6. Type **seamove**.

   This command transfers the files from the ST3660A to the diskette in Drive A. When the transfer is complete, the files are erased, the drive partition is removed and the computer is rebooted. The computer returns an invalid drive specification error when you try to access the ST3660A.

This completes the file extraction.

Using the installation software

The EZ-Drive installation software allows your computer to access the ST3660A's full 545 Mbytes. It works by bypassing the BIOS during the boot sequence and using information it creates on Drive C to identify the drive prior to loading DOS. During the installation, EZ-Drive:

- Determines how many drives are installed
- Sets the drive type in System Setup so that the computer knows the drive is available
- Modifies the Drive C boot record with the new drive's translation geometry
- Partitions and formats the new drive
- Copies the boot files to the new drive if it is Drive C
- Enables Maximum Overdrive™ on drives that use this feature. Maximum Overdrive enables the read/write multiple command, enhancing performance. The Change Installed Features option that appears in the dialog box when the format is complete allows you to disable Maximum Overdrive.

EZ-Drive is easy and safe to use and versatile. If you already have a drive installed, EZ-Drive will not alter its format and files unless you instruct it to override the partition and format. You can choose a fully automatic installation that establishes one partition and quick formats the drive or a custom installation that lets you set multiple partitions of equal size (see page 15 for instruction on creating multiple partitions of unequal size). You can choose a full format and other options.

Note. You must have DOS 4.0 or later to use EZ-Drive. It works in most computers but does not support:

- Toshiba laptops, XT™ or Micro Channel™ computers
- Some Local Bus adapters that use 32-bit mode
- Some systems that have PIO mode 3 active
- OS/2 and NT above 528 Mbytes

Caution. Because EZ-Drive uses about 4 Kbytes of conventional memory, some older virus-detection programs may misidentify EZ-Drive as a virus. If all 640 Kbytes of conventional memory are not free when these virus programs inspect conventional memory, they assume a virus is present and clean and restore the memory. If this happens, information about the EZ-Drive installed drive is destroyed and the drive cannot be identified by the computer. Do not use these programs.

Note. The Seagate version of EZ-Drive cannot install a non-Seagate drive without a Seagate drive present.

1. Boot your computer with the EZ-Drive diskette. This is a precaution to ensure that the EZ-Drive installation does not conflict with any terminate-and-stay resident (TSR) programs that may be in memory.

Caution. Do not write protect the EZ-Drive diskette. The system must write important information back to the diskette.

2. Type **ez**.
3. Disregard the Notice dialog box. The EZ-Drive software is authorized for installation only with the drive on which it is shipped. Press ENTER to continue.
4. Locate the bottom box on the screen. The model number of each drive EZ-Drive identifies is listed in this box. If a drive is missing or the order is incorrect or there is a drive not identified message, make sure the master and slave jumpers are set correctly on the drives and the cables are properly connected.

   Caution. Turn off your computer before resetting the jumpers or removing the cables.
5. If the drives are correctly identified, choose Select Fully Automatic Installation in the top box.

   Note. Additional information about EZ-Drive is offered in the Installation Help option. Installation and troubleshooting information is available there also.

   If you are installing the drive as Drive C, EZ-Drive automatically writes the system files to the drive to make it bootable.
6. When the format is complete, EZ-Drive presents an options dialog box. Select and read the Important Information option. This instruction tells you how to boot from a floppy and still retain the use of the EZ-Drive installed drive.
7. Select Reboot to reboot the computer and to save the installation. Remove the EZ-Drive diskette and put it away. It contains information about the drive setup. The computer should boot to the C: prompt.

   Toward the end of the boot sequence, your screen should display a prompt for booting with a diskette followed quickly by the Micro House banner and the C: prompt. If the instruction and the banner fail to appear, your computer has not found the EZ-Drive installed drive.

Booting with a diskette after EZ-Drive is installed

To boot your computer with a diskette:

1. Boot the computer with the diskette-drive door open.
2. Press the CTRL key when the following message appears near the end of the boot sequence:

   Hold the CTRL key down to boot from a floppy
3. Insert the boot diskette. The computer boots to the diskette drive.

Installing multiple partitions

The custom installation option in the installation menu allows you to create up to nine partitions of equal size on the drive. To create partitions of unequal size on your EZ-Drive installed drive, use the FDISK and format commands on a DOS diskette. Refer to your DOS manual if you need assistance deleting, creating and formatting partitions. This instruction assumes you have already installed the drive with EZ-Drive.

1. Boot your computer from Drive C. If the EZ-Drive banner does not appear, the EZ-Drive installed drive is not recognized.
2. Insert the DOS diskette into the diskette drive and change the prompt.
3. Type **fdisk**.
4. Delete the Primary partition from the EZ-Drive installed drive.

   Caution. If you have two drives, be sure you choose the correct drive before deleting the partition. Deleting the partition erases everything on the drive.

   Note. EZ-Drive puts a volume label on the partition it creates. You must enter the label to delete the partition.
5. Repartition the drive with the partitions in the sizes you want. Refer to your DOS manual if you need assistance creating extended partitions. Remember to make the primary partition active for Drive C.

The computer will reboot when the partitioning process is complete. However, you must make sure the EZ-Drive installed drive is present to continue with the format. (The EZ-Drive banner appears when the drive is recognized.)

1. Open the diskette-drive door when you reboot. Press the CTRL key when the following message appears:

   Hold the CTRL key down to boot from a floppy

   The message is very quick and you may need to boot several times before you succeed. (Some computers allow you to press the CTRL key early.) If you get an "Invalid OS" error message, the computer has not found the EZ-Drive installed drive and you must start the boot process again.
2. Insert a DOS diskette with the format program.
3. Type **format *drive*:** for each partition you have created.

   Note. DOS automatically assigns a letter to each partition. Use the appropriate letter in the format statement.

   If you are formatting Drive C, you must copy the system files for the computer to boot from the drive. To copy the system files during the format, type **format c: /s**.
4. Reboot the computer when you are done formatting.

Windows™ 32-bit disk access.

If 32-bit disk access is enabled in your Microsoft® Windows, a device conflict message appears when you load Windows after you install your drive with EZ-Drive. To resolve the conflict:

1. Press ENTER to open Windows.
2. Open the Main menu.
3. Open the Control Panel.
4. Select Virtual Memory.
5. Select Change.
6. Disable 32-Bit Disk Access at the bottom of the screen.
7. Select OK. Follow the screen instructions to reboot.

You can re-establish the 32-bit disk access capability using the SETUP program on the EZ-Drive diskette as follows:

1. Load Windows.
2. Open the Program Manager menu and select File.
3. Select Run.
4. Load the EZ-Drive diskette.
5. In the command line box, type ***drive*:Setup**.
6. Select Install Driver. This loads the MH32BIT.386 replacement driver designed to work with EZ-Drive.
7. Select Restart Windows.

Basic troubleshooting

Warning. Always turn off the computer before changing jumpers or unplugging cables and cards.

Caution. Your drive and computer contain static-sensitive devices. Wear a ground strap or take other antistatic precaution while handling your drive.

If you have installed your drive and it does not function properly, perform the following basic checks.

- **Verify compatibility.** Verify that the host adapter and the drive are appropriately matched to each other and to your computer. Refer to relevant documentation for details.
- **Check all cards.** Verify that all cards are seated in their slots on the motherboard and are secured with mounting screws.
- **Check all cables.** Make sure all ribbon and power cables are securely connected. Ribbon cables are easily damaged, especially at the connector. Try a new cable or a known good cable. Make sure no socket pins were bent when the cable was inserted. For each cable, verify that cable-connector pin 1 is aligned with equipment-connector pin 1. The edge-stripe on the ribbon cable is used to denote pin 1.

  Caution. Do not reverse-plug connectors. This can damage the computer and the drive.
- **Verify equipment configuration.** Review the instructions in this guide and the host adapter installation guide and make sure that all appropriate jumpers are installed, or removed, to suit your application.
- **Check the power-supply specifications.** If new devices are installed, your computer's power supply may not support the new total power requirement. Consult your dealer.
- **Verify the drive type setting in System Setup.** The drive type stored in CMOS memory by your System Setup program must not exceed the physical specifications of your drive. Also,

if you have a large capacity drive, the translation geometry settings must not exceed the limitations set by the operating system and BIOS. Refer to the caution in “Standard installation” on page 8.

- **Check for viruses.** Before you use someone else’s diskette in your system for the first time, scan the diskette for viruses.

Advanced troubleshooting

If you have performed the preceding basic checks but the problem has not been solved, follow these guidelines for troubleshooting specific cases:

The system does not recognize the drive.

- Check all cables.
- Make sure the power supply is adequate for system needs.
- Reboot the computer and make sure the drive motor runs. If your drive is very quiet, it may be difficult to hear its discs reach operating speed. Recheck all drive cables if the drive is not running.
- Verify the System Setup drive type values.
- Try a warm boot (a reboot without turning off computer power). To do this, press CTRL, ALT, and DELETE at the same time.

  If the drive is recognized after the warm boot, the computer BIOS’ setup test may be completing before the drive is ready.

  One possible solution is to slow your computer’s processor speed during startup. If your computer has a turbo switch, set it to slow speed before turning the computer on. If there is no turbo switch, you may be able to use keyboard commands to slow the processor speed; see your computer manual for details. After the computer is up and running, return the processor to the fast speed.

  Another solution is to 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 computer by removing all the peripheral adapter cards (power must be off) except for the video card. Then reinstall the drive and host adapter card. If this is successful, reinstall the other peripherals one at a time until the conflict reoccurs.

  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.
- If your drive was installed with EZ-Drive, the special instruction in the boot sequence on Drive C may have been bypassed. Remove the diskette and reboot. Follow the instructions in "Booting with a diskette" on page 15 on booting with a diskette.

The dealer partitioned and high-level formatted the drive for you in the store. Later, you installed the drive and it does not respond.

- Reboot the computer and make sure the drive spins up.
- Check all cables.
- Make sure the power supply is adequate for system needs.
- Use the same version of DOS within all partitions. Make sure the DOS version the dealer used to partition and high-level format the drive is the same as the version you have installed on your computer. If it isn't, see your dealer.
- Verify the System Setup drive type value. You must install the drive using the same drive type or translation geometry that your dealer used to partition the drive.
- Check for I/O address conflicts between peripheral cards.
- Check for viruses.

The screen remains blank when you power up the system.

- Make sure the monitor is plugged in and turned on.
- Check all cards. Make sure the video card is seated in its slot and secured with mounting screws.

- Check all cables. Make sure the video card-cables are securely attached.
- While the computer is powered down, remove the drive host adapter. If the screen turns on after you reboot, the host adapter may be incompatible or defective. If so, see your dealer.

The system hangs in FDISK or fails to create or save the partition record.

- Check all cables.
- The DOS utilities diskette may be corrupted. Try your backup DOS diskette.
- Make the partitions smaller.
- Try another drive type or translation geometry. The computer's BIOS may not accept a particular translation geometry for writing into the CMOS setup memory.
- Change the interrupt jumper setting on the host adapter.
- Check for media defects at the beginning of the drive. Use a third-party surface scan utility.

System error message, "Drive not Ready," appears.

- Check all cable connections. For each ribbon cable, verify that pin 1 of the cable is matched to pin 1 of the connector. Pin 1 is usually denoted by the edge-stripe on the ribbon cable.
- Make sure the power supply is adequate for system needs.
- Reboot the computer and make sure the drive spins up.
  The FDISK error message, "No Fixed Disk Present," appears.
- Check all cables.
- Make sure the power supply is adequate for system needs.
- Reboot the computer and make sure the drive spins up.
- Verify the System Setup drive type values.
- Check for I/O address conflicts.

During the DOS high-level format, the drive does not format to full capacity.

- Verify your computer's System Setup drive-type values. One of the following problems may have occurred: 1) the values may be set for an incorrect drive type or translation geometry; 2) you may have entered a parameter value that exceeded the physical capacity of the drive; 3) you selected a translation geometry or drive type that does not take full advantage of the drive's capacity; or 4) the drive's physical specifications exceeds the translation geometry limits imposed by the operating system and BIOS. Refer to "Standard installation" on page 8 if any of these cases is true.

  If you reset the System Setup drive type value, you must partition and high-level format the drive again.
- If you partitioned the drive into individual logical drives, you may need to make the partitions smaller so that the computer can use all of the drive's capacity.

DOS messages "Disk Boot Failure," "Non-System Disk," or "No ROM Basic - SYSTEM HALTED," appear.

- Reinstall the DOS system files using the DOS SYS utility.
- Check all cables.
- Use FDISK to verify that the primary partition is active.
- Rerun the partition and high-level format. Make sure you use the same version of DOS for all partitions on your computer.
- Check for viruses.

System error message, "HDD controller failure" appears.

- Confirm the jumper settings on the drive.
- Verify the System Setup drive values.

The error message "Microsoft Windows 32-bit disk driver (WDCTRL) phase 03, 3f" appears when you open Windows.

- A device conflict occurs between Microsoft Windows 32-bit access and the EZ-Drive driver. To resolve the conflict and enable 32-bit access, follow the instructions in the "Windows 32-bit disk access" section on page 16.

Disabling EZ-Drive

- You can remove the EZ-Drive boot information from the boot sector of Drive C. In doing so, you may lose access to the files on your EZ-Drive installed drive. Before you disable EZ-Drive, we recommend that you back up your files. To disable EZ-Drive:

  1. Insert a bootable diskette in the diskette drive and boot the computer. Do not open the diskette drive door to load the EZ-Drive installed drive.
  2. Insert a diskette with FDISK.
  3. Type **fdisk/mbr**. This command erases the EZ-Drive instruction in the boot record on Drive C and restores the original DOS master boot record. The files on your drive are not affected. However, you can no longer access the EZ-Drive installed drive with EZ-Drive. To make the drive available, you must repartition and reformat it using another method. Any files written to the drive are erased during the repartition and reformat.

Disabling Maximum Overdrive

You can disable Maximum Overdrive during the installation process or anytime afterward.

To disable it during the installation, select the Change Install Features option in the Options dialog box that appears when the format completes. This feature allows you to enable or disable Maximum Overdrive.

To disable it after the drive has been installed.

1. Insert the EZ-Drive diskette into the diskette drive.
2. Type **ez** at the command line.
3. Press ENTER until the Select Installation Type dialog box appears.
4. Use the down arrow key to select Change Install Features.
5. Press ENTER.
6. The first selection gives the current Maximum Overdrive status. Press the ENTER key to change the status.
7. Use the down-arrow key to select Save Changes. Press ENTER to save.

Additional EZ-Drive troubleshooting and help information is available when you select Information Help in the Select Installation Type dialog box.

Answers to frequently asked troubleshooting questions are available in the EZ-HELP.EXE file on the diskette.

Technical support services

If you need assistance installing your drive, consult your dealer. Your dealer is knowledgeable of computer system configurations and can help you with system conflicts and other technical issues.

If you need additional assistance with your Seagate drive or other Seagate product, you can call SeaBOARD™, SeaFAX™, Seagate Technical Support FAX, SeaFONE™ or SeaTDD™ services. Seagate technical support is also available on CompuServe.

SeaBOARD

Using your 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 and supports 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	Modem number
United States	408-438-8771
England	44-62-847-8011
France	33-1 4 0 67 10 34
Germany	49-89-140-9331
Singapore	65-292-6973

continued

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Location	Modem number
Thailand	662-531-8111
Australia	61-2-756-2359
Korea	82-2-556-7294

SeaFAX

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.

Location	Telephone number
United States	408-438-2620
England	44-62-847-7080

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. 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 system configuration and drive model number (ST*xxxx*).

SeaTDD. 408/438-5382

Using a telecommunications device for the deaf (TDD), you can send questions or comments 24 hours daily and exchange messages with a technical support specialist between 8:00 A.M. and 5:00 P.M. (Pacific time) Monday through Friday.

Seagate CompuServe forum

Online technical support for Seagate products is available on CompuServe. To access the Seagate technical support forum, type **go seagate**. This forum provides information similar to that found on SeaBOARD.

Storing and shipping your drive

Keep your original box and packing materials for storing 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.

The following figure shows how a drive fits in an approved single-pack box, including the packing materials.

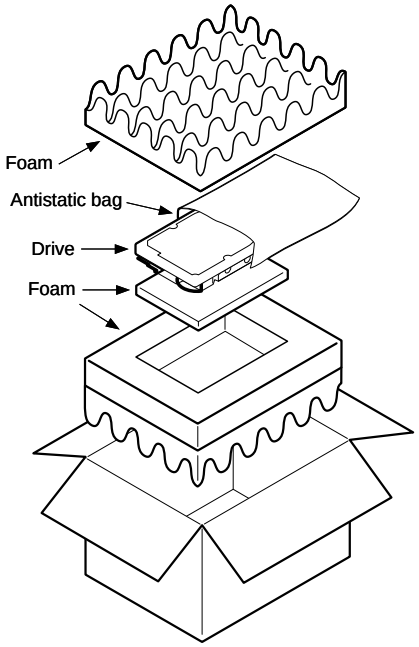

Figure 2. A drive in an approved package

Seagate

Seagate Technology, Inc.
920 Disc Drive, Scotts Valley, CA 95066, USA

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