



Installation Guide

Installation Manual
for ROM BIOS Upgrades and other products
from eSupport.com,
Rev. 02.25.03



Please register your part online at www.esupport.com after you have installed your new bios.

Read the sections of this manual that pertain to the product you received thoroughly before upgrading your BIOS.

Important warranty and technical information is enclosed.

DISCLAIMER

While every effort has been made to ensure that all products work as specified eSupport.com, its creator, and any dealers associated with this product, are not responsible for any loss of data directly or indirectly related to the use of these products.

Important: BIOS chips returned under RMA's , MUST be returned in "Crush-proof" containers. Damaged chips will not be refunded.

STOP!!!!

Although our Technical Support is free, it may be a long distance call for you. Before calling Technical Support, please check the following resources for a solution to your problem. If you fail to resolve the problem, call our support center at (978) 686-2204.

To reduce your call time please have the following information available when calling tech support. Please refer to link #2 for help finding this information:

- Order # (or RMA#)
- Model # and Revision of your motherboard.
- Super I/O chip
- Clock chip if available

1. <http://www.esupport.com/faq/>
2. <http://www.esupport.com/techsupport/beforecallingtech.htm>
3. <http://www.bootdisk.com>
4. <http://www.phoenix.com/en/customer+services/bios/awardbios/set+up+index.htm>

Return Policy - eSupport.com,

eSupport.com, warrants all products to be free from defects for a period of thirty (30) days from date of purchase. eSupport.com only guarantees products are compatible in the base system specified at the time of purchase. eSupport.com will not be responsible for any third party hardware or software incompatibilities or conflicts, nor does eSupport.com guarantee compatibility with future software or hardware products. At the time of this printing, there are no known incompatibilities with BIOS's distributed by eSupport.com. eSupport.com makes no guarantee, express or implied, that any eSupport.com product will correct particular problems assumed to be related to the part being replaced. All prepackaged software/firmware sales are final. If this product is somehow defective upon receipt, please call eSupport.com Technical Support (978) 686-2204.

eSupport.com will not accept the return of any product without an RMA (Return Merchandise Authorization) number issued by our Technical Support staff, who can be reached at 978-686-2204. Due to the information necessary to process an RMA request, you must telephone our Technical Support department and speak with a technician. We cannot ensure timely responses to faxes/email requests for support or RMA numbers. You must have your packing list/invoice # available at the time of your call. Returns will not be accepted without an RMA clearly printed on the outside of the package. RMA numbers are valid for 14 days from date of issue. After such date, we will assume the customer has decided not to return the product and the RMA will be invalid. We reserve the right to refuse any package with an invalid RMA number. Customers shall be charged a restocking fee for any product returned which was never used, returned for 3rd party incompatibility problems, or found upon testing in our facilities to be in proper functioning order. This fee shall not be less than 20% of the purchase price. Also, customers shall be charged the full purchase price of their product returned which is not in resalable condition, whether returned for credit or exchange. Customers will also be assessed fees for any missing manuals, chip pullers, or any other items not returned. For any product returns, the refund will consist only of the purchase price for the merchandise minus any applicable restocking fee, and will not include shipping and handling charges. Any refunds issued after the 30 day period are at the sole discretion of management, and are calculated from INITIAL DATE OF PURCHASE ONLY.

eSupport.com will issue a credit/refund when the product is received in a proper shipping container, inclusive of all documentation and other parts associated with the returned merchandise (i.e., chip pullers and manuals). Enclose a COPY of your sales order to ensure proper credit. Return product in a box with the RMA # clearly printed on the outside. It is the customer's responsibility to ensure that the returned merchandise is received by eSupport.com Software, Credits are not issued for returns not received. Therefore, all returns should be shipped in a traceable manner. Credit card credits and refund checks will be issued only on the last day of each month.

Warranty Information

This agreement (“Agreement”) applies to the acquisition of hardware products (“Products”) from eSupport.com, Inc. by an eSupport.com customer (“Customer”).

1. **Counteroffer.** This Agreement is a counteroffer to Customer’s offer to acquire Products. eSupport.com does not agree to any other terms, including without limitation any terms on Customer’s purchase order. Customer’s acceptance of Products shall constitute Customer’s acceptance of this Agreement.
2. **Payment.** eSupport.com will invoice Customer according to eSupport.com’s current price list. Payment by Customer of the full invoice amount will be due within thirty (30) days after the date of such invoice. Customer shall pay all applicable taxes (other than taxes based on eSupport.com’s net income).
3. **Delivery and Acceptance.** eSupport.com shall use its reasonable commercial efforts to deliver the Products to the addresses and by the dates requested by the Customer. Title to Products will pass upon shipment; risk of loss of the Products will pass upon delivery of Products to Customer. Unless otherwise agreed by eSupport.com in writing, Customer will be responsible for all shipment costs. Products will be deemed accepted upon delivery and Customer hereby waives all right of revocation.
4. **Product Warranty.** Products are warranted to be free from defects in materials and workmanship for thirty (30) days from the date of purchase. In addition, eSupport.com warrants the products to be compatible in the base system specified at the time of purchase only. eSupport.com, at its option, either will repair or replace any defective Product which is returned to eSupport.com at Customer’s expense or will refund its purchase price. Repair, replacement, or refund is the sole remedy for breach of this warranty. This warranty is extended to Customer only and in no event to any other party. This warranty does not cover defects or damages resulting from: (a) use of Products other than in a normal and customary manner; (b) physical or electronic abuse or misuse, accident, or neglect; or (c) unauthorized alterations or repairs made to Products.

THIS WARRANTY IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED, OR STATUTORY, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, AND NON-INFRINGEMENT. EXCEPT AS EXPRESSLY STATED IN THIS SECTION 4, eSupport.com PROVIDES THE PRODUCTS ON AN “AS IS” BASIS.

5. **Limitations of Liability.** IN NO EVENT WILL eSupport.com BE LIABLE FOR ANY LOSS OF USE, INTERRUPTION OF BUSINESS, COST OF PROCUREMENT OF SUBSTITUTE GOODS, TECHNOLOGY OR SERVICES OR ANY INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND (INCLUDING LOST PROFITS) REGARDLESS OF THE FORM OF ACTION WHETHER IN CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT PRODUCT LIABILITY OR ANY OTHER LEGAL OR EQUITABLE THEORY EVEN IF eSupport.com HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL eSupport.com’s AGGREGATE CUMULATIVE LIABILITY FOR ANY CLAIMS ARISING OUT OF OR RELATED TO PRODUCTS EXCEED THE PRICE OF PRODUCTS.
6. **Product Service.** To obtain warranty service, Customer shall promptly notify eSupport.com in writing of defective Products. Upon such notification, eSupport.com will provide Customer with a Return Materialization (“RMA”) number. All RMA numbers are valid for fourteen (14) days. Customer shall return all such defective Products to eSupport.com fully insured and freight prepaid.
7. **Confidential Information.** The Products contain certain valuable confidential or proprietary information of eSupport.com which is not generally known to the public (herein “Confidential Information”). Customer agrees that it will not abuse or disclose to any third

party any Confidential Information except as expressly permitted by this Agreement. This section shall not apply to the extent customer can establish that such information: (a) was already lawfully known to Customer; (b) has lawfully become publicly known without a breach of this Agreement; (c) was lawfully received by Customer from a third party without restrictions; (d) is required to be disclosed pursuant to any statute, regulation or court order, provided, however, that Customer provides reasonable notice thereof to enable eSupport.com to obtain a protective order or take other protective measures as eSupport.com may deem necessary. Customer agrees that it shall not reverse compile, disassemble, or otherwise reverse engineer Products and that it shall not use Products except as expressly permitted by this Agreement. Customer understands and agrees that all information provided by Customer shall be non-confidential.

8. **Applicable Law.** This Agreement shall be subject to the laws of the State of Massachusetts, as such laws are applied to agreements entered into and to be performed in Massachusetts between Massachusetts residents. The State and Federal courts located in Essex County, Massachusetts shall have sole jurisdiction over and shall be the sole forum for resolving any disputes arising hereunder and the parties hereby submit to the personal jurisdiction of such courts. The United Nations Convention on Contracts for the International Sale of Goods shall not apply to this Agreement.
9. **Compliance with Laws: Export.** In exercising its rights and performing its obligations under this Agreement, Customer will comply with all applicable international, national, and local laws and regulations. Without limiting the generality of the foregoing, Customer will not use or re-export, or permit any person to use or re-export, the Products without all required licenses, and Customer will comply, and require all of its own customers to comply, with all applicable export and import control laws. Customer will defend, indemnify, and hold harmless eSupport.com and its successors, agents, officers, directors, and employees from and against any violation of any laws or regulations by Customer or any of its agents, officers, directors, employees, or customers.
10. **General.** If any provision of this Agreement is held to be invalid or unenforceable for any reason, the remaining provisions will continue in full force without being impaired or invalidated in any way. The parties agree to replace any invalid provision with a valid provision which most closely approximates the intent and economic effect of the invalid provision. The waiver by either party of a breach of any provision of this Agreement will not operate or be interpreted as a waiver of any other or subsequent breach. Neither this Agreement nor any rights or obligations of Customer may be assigned by Customer in whole or in part. Any assignment in derogation of the foregoing shall be void. Neither party shall be liable hereunder by reason of any failure or delay in the performance of its obligations hereunder (except for the payment of money) on account of strikes, shortages, riots, insurrection, fires, flood, storm, explosions, or acts of God, war, governmental action, labor conditions, earthquakes, material shortages or any other cause that is beyond the reasonable control of such party. This Agreement sets forth the entire understanding and the agreement of the parties and supersedes any and all oral or written agreements or understandings between the parties as to the subject matter of this Agreement and may be changed only by a writing signed by both parties.

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Before Installing (All BIOS Products)

Occasionally, when you change your BIOS or insert an extender card you may have to repartition and reformat your hard drives. If this becomes necessary it would result in the loss of ALL DATA on your hard drive. For this reason, we strongly recommend that you back up all data on your hard drives before installing your new BIOS, or extender card. **NOTE:** This is usually only necessary when you have a drive that was not fully supported by the original BIOS (as in the case of a 540 drive on a non-LBA system.) Another time this may become necessary would be if you are using a disk manager software such as EZ-BIOS to manage a large disk that your computer could not fully utilize before the new BIOS/extender card. There may however be ways to avoid a full reformat. So check the software before you delete.

1. Enter the CMOS (BIOS setup) of the original BIOS and record the settings.

Method 1: Enter each of the setup screens and press Print Screen.

Method 2: Using pen and paper record the information found in each of the setup screens.

Note: This information may be useful in setting up your new BIOS. Do not change the new settings to match your original settings unless necessary. The Default settings are usually sufficient for everyday operation.

2. To determine how to enter the CMOS, you can
 - a) Refer to your computer's/motherboard's manual, or
 - b) Follow the directions to enter SETUP during boot, or
 - c) Turn on the computer and look for the BIOS manufacturer's name that displays on the first screen, and then refer to Table 1 for what keys to press. This table is by no means complete. Manufacturers are constantly changing things.

Note: A video BIOS identification screen may precede this screen. For example: "Trident VGA BIOS ver 3.00."

Table1

AMI	Press DEL while the memory test is running.
AWARD	Press DEL or CTRL+ALT+ESC during boot.
MR BIOS	Press ESC at boot or CTRL+ALT+ESC later.
PHOENIX	Press F2, CTRL+ALT+ESC or CTRL+ALT+S.

NOTE: if you purchased the BIOS in order to install a large hard disk please do not run/install a disk overlay program such as EZ-BIOS, MAXBLAST or LIFEGUARD UTILITIES. The new BIOS does not require these utilities to support a large hard drive, and you may need to remove it for correct operation of your computer.

Installing BIOS CHIPS

Before Installing Chips

In order to avoid problems with the new bios it is recommended that the CMOS of the computer be cleared out. (The CMOS is an area of memory, which hold setting for the BIOS it is not part of the BIOS chip.)

There are a few ways to clear the CMOS

- Run the CLRCMOS.EXE program. if you did not receive this program it is available at <http://www.unicore.com/awardutils.htm>
- Check your motherboard manual for a clear CMOS jumper and instructions.
- Unplug the computer. Remove the battery and allow computer to sit for approximately 24 hours
- Use a PassROM chip. It is a hardware clrcmos.exe solution.

PassROM

If your BIOS is set up to use a password, and you cannot remove it any other way, you can remove this password with PassROM. To order PassROM, call eSupport.com at 800-800-BIOS. Note: This will also clear the CMOS settings.

To remove your BIOS password with PassROM:

1. Follow instructions for installing a BIOS chip.
NOTE: For a 32 pin BIOS socket and a 28 pin PassROM chip, leave four empty pinholes at the end of the socket with the notch.
2. When the chip is installed, turn on the computer. The PassROM will automatically erase the BIOS password.
3. Turn off the computer and re-install the original BIOS chip. When you re-boot the computer, the password will be gone.

To Install BIOS chip:

3. **Turn off the computer and unplug it.**

Make sure the computer is turned off and unplugged before you open the CPU case. Static electricity can hurt you as well as damage the sensitive components you are about to install. Be sure to grasp the metal of the CPU case before touching the inner components. Use a grounding strap, if you have one, attached to the system chassis.

4. **Open the CPU case.**

To open the CPU case, remove the cover's retaining screws (if you

don't know which ones are retaining screws, refer to your user's manual). There can be as many as six (6) of them along the back and side edges of the computer. Lift the cover off and put it to the side.

5. Find the chip you want to change.

Look on the motherboard for the BIOS chip. The chip may have a label with the name of the BIOS manufacturer on it to make it easier to locate.

Depending on which chip you ordered, the chip on your system could have either 28, 32, or 40 pins. The chip could also be a PLCC chip. This chip is an almost square chip with 7 pins on one side and 9 pins on the other.

6. Remember the proper orientation of the chip.

When you find the chip, remember in which direction the notch is pointed. The notch is at one end of the chip and may look like an indentation. Please refer to Figure 1.



Figure 1

Put the new chip in with the notch facing the same

direction as the old chip. If you do not do this, you will destroy the chip and may be charged for a chip replacement. See Figure 1.

Note: Never follow the orientation of the label. It may not be the same.

7. Be sure the chip is inserted in a socket, **NOT** soldered in see figure 2.

When you find the BIOS chip, make sure that it is inserted in a socket. If it is not in a socket, trying to remove it will cause damage to your motherboard.

Note: If the chips are not in sockets, eSupport.com Software, will not be liable for any damage caused by persons trying to remove them. If the chips are soldered in, call the eSupport.com Tech Support Department at (978) 686-2204 for options and solutions to this problem.

8. Carefully remove the old chip.

Use a chip puller to remove the BIOS chip from the socket. Place the prongs of the chip puller on each end under the chip and gently but firmly apply upward pressure and, if necessary, slightly more pressure on one end than the other, in a rocking motion, until chip comes free.

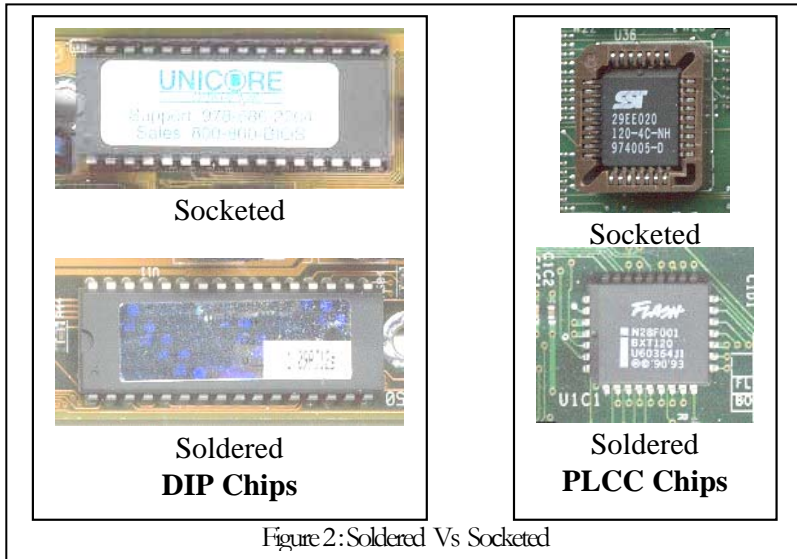


Figure 2: Soldered Vs Socketed

WARNING! Do not pull on only one end of the chip or you will bend the pins as you remove the chip. If you do not have a chip puller, you can remove the chips by placing the blade of a small flathead screwdriver under one end of the chip(s) and gently turning it until the chip moves. Repeat this on both ends of the chip evenly, a little at a time, in order to avoid bending the prongs.

Note: Place the chip puller's prongs between the chip and socket. **Never put any tool under the socket - this could damage the motherboard.** eSupport.com will not be liable for damage to motherboards resulting from improper removal/installation of BIOS chips.

9. Insert the new chips.

When the socket is empty, install the new chips. If the pins on the chips you received are slightly wider than the socket into which they must go, place the chip on a flat surface with the pins on one edge flat on the surface facing away from you. Hold the chip firmly and gently rock the chip forward until the pins bend inward a little bit. Repeat for the other side. (See Figure 3.) Check the fit of the socket. If the pins are still too wide, repeat the process.

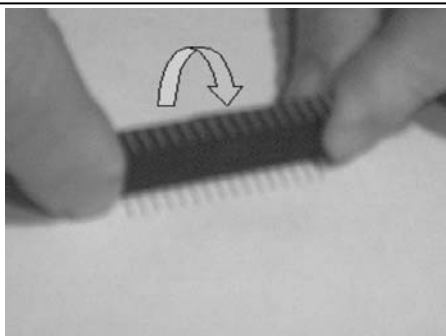


Figure 3

Note: Remember to bend the pins only a little at a time. It is much harder to bend them in the opposite direction.

When the chips are the correct width, place the pins in the socket and gently press down on the chip, being careful not to press too hard or you may damage the motherboard.



Figure 4

If you have a PLCC chip then you cannot use the chip puller tool. If you cannot find a PLCC chip tool than you can use small eyeglass type screwdrivers. See figure 4. Place the screwdriver blades in the notches at the 2 corners of the socket and pull screwdrivers away from each other. See

figure 5

To install the new PLCC chip into the socket, place the chip flat on the socket. Be sure that the notch is correctly aligned. Place your finger in the center of the chip and gently press down until the chip snaps into

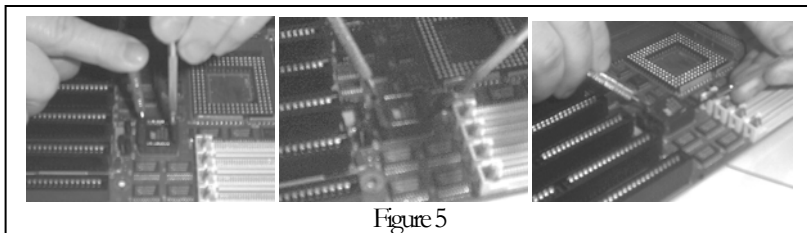
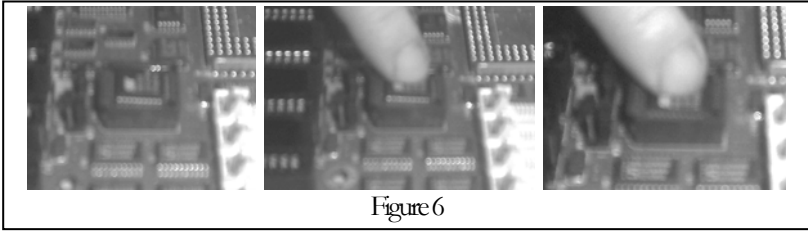


Figure 5

place.



You have now successfully completed the physical installation of your new ROM BIOS upgrade chip. Please refer to the setup manual you received with the BIOS or the troubleshooting section of this manual for further help with setup.

BIOS **Chip** customers please stop here. If you need further assistance please see the troubleshooting section.

Installing Flash BIOS

Read this section if you received a Flash BIOS DISK.

WARNING: Flash upgrading your BIOS can render you system inoperative. eSupport.com will not be responsible for users who flash upgrade their BIOS and render their system inoperable due to the use of incorrect filenames or file types used to program the BIOS.

1. Enter BIOS CMOS setup and set the Boot Sequence to boot from the A: (floppy) first. Save settings and exit by pressing F10.
2. Shut down the system, and then insert eSupport Flash BIOS Upgrade Disk
3. Reboot the system.
4. The program will perform the flash automatically. When asked to continue or quit, press any key to continue. Do NOT reset or turn off the computer during the flash process or your BIOS may be damaged. Your disk may have a menu system. In this case read the onscreen instructions. If you have a problem, reset the computer, and select the help option. If the system stops responding you may need to reset the system. In this case check our online help. Support, what to do before calling tech support.
5. When the flash is finished, you will be prompted to QUIT the program or RESTART the system. Choose to RESTART the system. (**IMPORTANT:** Make sure that the flash disk has been removed). (note: the actual command may be different such as RESET.)
6. Your system has now been flashed with the new eSupport BIOS upgrade. You should see the new BIOS version displayed on the screen during boot-up. Press the Delete key to setup your BIOS again if necessary.

Flash bios **disk** customers please stop here. If you need further assistance please see the troubleshooting section.

Installing BIOS Extender Cards

Read this section if you received **LBA Pro**, **Millennium Pro**, or **Dual Pro**.

There are three different kinds of BIOS extender cards:

- **LBA Pro:** This EIDE card allows you to use a 500 MB or larger hard drive with your current motherboard. It overrides some motherboards' 500 MB hard drive limitation. It also overrides limitations at 2gb, 8gb and 32gb that have hampered some systems. The card has been tested with the largest drives available.
- **Millennium Pro:** This card fixes any Year 2000 problems with your BIOS and motherboard.
- **Dual Pro:** This card is a combination of LBA Pro and Millennium Pro's features.

Memory Address Configuration

There are two extender cards: one made in Singapore and one made in China. The default setting is C8000 for both cards. These cards are configured with this default at the factory, so you probably will not need to set or change them.

If you have problems, try changing the memory address of the card. Try setting the address to D800. Please leave jumper A0 on. **DO NOT TAKE OFF OR PUT ON A1.**

The options C8000, D0000 and D8000 on the card select the range of memory addresses for the BIOS code. The default value is C8000 will place LBA Pro function just above the BIOS of your video card in memory.

If you have a SCSI controller card with on-board BIOS, select the SCSI controller BIOS address to be higher than that used for LBA Pro. For example, in the default configuration, select the SCSI BIOS to be at D0000 or higher. Please refer to your SCSI card manual for more information on this procedure.

Preliminary Installation instructions – LBA/DUAL Pro

Before installing your LBA Pro and hard drives, print each BIOS screen (go to the screen and press the Print Screen button on your keyboard) so you will have a record of the original settings. If you don't have printing capabilities, write down the settings.

When you have a record of the BIOS settings:

1. In your CMOS utility program, set the hard drive(s) to "Not Installed", or "NONE" depending on what the option is in the bios. If you do not have this option try "user defined" heads = 16,

sectors = 63, cylinders = 1023. Note: if you must use this setting or are unable to configure the drives the LBA Pro may not work in your system.

2. If there is a setting for LBA mode, Large Disk Access, CHS Mode, or Large Mode in CMOS, set this to normal, standard, disabled, or off depending on what is available in your BIOS.

Note: A user with 486 IBM BIOS will not need to do this.

3. Insert the LBA Pro card in a slot and install any hard drives.

LBA Pro Features

LBA Pro has these features:

- S.M.A.R.T. (**S**elf-**M**onitoring, **A**nalysis & **R**eporting **T**echnology) support. Warns of hard drive failure so you can backup data
- Enhanced Disk Drive Specifications for drives **larger** than 8.4GBs. This is required for the PC97 specifications from Microsoft and is more powerful than the standard LBA BIOS, which can only support up to 8.4GBs. The theoretical limit is 32 terabytes.
- Automatic IDE hard drive detection (up to 4 drives). True Plug & Play for IDE hard disk installation.
- Multi-sector read/write for an up to 30% increase in drive access speed over your old BIOS.
- Speed optimization.
- 32-bit port access capability.
- Enables PIO modes up to Mode 4 & beyond for 16.6MBs/s performance or better.
- Detects viruses attempting to write to partition and boot sectors.

S.M.A.R.T.

S.M.A.R.T. is part of the ATA-3 specifications. It means Self-Monitoring Analysis and Reporting Technology. S.M.A.R.T.-capable hard disk drives can detect drive failure conditions and report them to you so you can back up important files in a message that displays when you boot up the computer.

At bootup, LBA Pro detects all connected IDE drives and probes these drives for S.M.A.R.T. status. If S.M.A.R.T. is detected, LBA Pro announces this in bright green on the screen if the hard drive and card have S.M.A.R.T. and the hard drive is 1 Gigabyte or more.

- If the drive is okay, this will also be shown in bright green.
- If a possible failure condition is detected, it will be shown in bright red and you will be prompted to back up your data.

Hard disk manufacturers like Quantum treat S.M.A.R.T. failure alerts as actual, physical failures and will repair or replace these drives under standard field failure warranty terms

Note: On some hard drives such as Western Digital and Maxtor, it is necessary to remove the software that is shipped pre-installed on the drive. This software may be referred to as Maxblast, or ezBIOS.

