Advanced/ZE BIOS Setup, Error Messages & Recovery

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OVERVIEW OF THE SETUP MENU SCREENS

The Setup program initially displays the Main menu screen. In each screen there are options for modifying the system configuration. Select a menu screen by pressing the left <←> or right <→> arrow keys. Use the up <↑> or down <↓> keys to select items in a screen. Use <Enter> to select an item for modification. For certain items, pressing <Enter> will bring up a submenu. After you have selected an item, use the arrow keys to modify the setting.

Setup Menu Screen	Description
Main	For setting up and modifying some of the basic options of a PC, such as time, date, diskette drives, hard drives.
Advanced	For modifying the more advanced features of a PC, such as peripheral configuration and advanced chipset configuration.
Security	For specifying passwords that can be used to limit access to the system.
Exit	For saving or discarding changes.

Setup Submenu	Description
Hard Disk Configuration	For configuring your hard drives.
Boot Options	For modifying options that affect the system boot up, such as the boot sequence.
Peripheral Configuration	For modifying options that affect the serial ports, the parallel port, and the disk drive interfaces.
Advanced Chipset Configuration	For modifying options that affect memory and system busses.
Power Management Configuration	For accessing and modifying Advanced Power Management (APM) options.
Plug and Play Configuration	For modifying options that affect the system's plug and play capabilities.

OVERVIEW OF THE SETUP KEYS

Setup Key	Description
<F1>	Pressing the <F1> key brings up a help screen for the currently selected item if available.
<Esc>	Pressing the <Esc> key takes you back to the previous screen. Pressing <esc> in the Main, Advanced, Security, or Exit screen allows you to Exit Discarding Changes (see later in this chapter).
<Enter>	Pressing the <Enter> key selects the current item or option.
<↑>	Pressing the up <↑> key changes the selection to the previous item or option.
<↓>	Pressing the down <↓> key changes the selection the to the next item or option.
<←> <→>	Pressing the left <←> or right <→> keys in the Main, Advanced, Security, or Exit menu screens changes the menu selection. Pressing either key in a submenu does nothing.
<F5>	Pressing the <F5> key allows you to Load Setup Defaults (see later in this chapter).
<F6>	Pressing the <F6> key allows you to Discard Changes (see later in this chapter).
<F10>	Pressing the <F10> key allows you to Exit Saving Changes (see later in this chapter).

MAIN SCREEN

This section describes the Setup options found on the main menu screen. If you select certain options from the main screen (e.g, Hard Disk), the Setup program will switch to a submenu for the selected option. Submenus are described in the sections following the description of the main screen options.

System Date

When selected, this brings up a dialog box that allows you to specify the current date.

System Time

When selected, this brings up a dialog box that allows you to specify the current time.

Floppy Options

When selected, this brings up the Floppy Options submenu.

Hard Disk 0:, 1:, 2:, 3:

This reports if a hard disk is connected to the system. When selected, this brings up the Hard Disk Configuration submenu.

Language

When selected, this brings up a dialog box that allows you to specify the language of the text strings used in the Setup program and the BIOS. The options are any installed languages. If no additional languages have been installed, this item will not appear.

Boot Options

When selected, this brings up the Boot Options screen.

Video Mode

This reports the video mode. This is informational only, and there are no options.

Mouse

This reports if a mouse is installed or not. This is informational only, and there are no options.

Base Memory

This reports the amount of base memory. This is informational only, and there are no options.

Extended Memory

This reports the amount of extended memory. This is informational only, and there are no options.

FLOPPY OPTIONS SUBMENU

Floppy A: Type

When selected, this brings up a dialog box that allows you to specify the physical size and capacity of the diskette drive. The options are Disabled, 360 KB, 5.25-inch; 1.2 MB, 5.25-inch; 720 KB, 3.5-inch; 1.44 MB, 3.5-inch; 2.88 MB, 3.5-inch. The default is 1.44 MB, 3.5-inch.

Floppy B: Type

When selected, this brings up a dialog box that allows you to specify the physical size and capacity of the diskette drive. The options are Disabled, 360 KB, 5.25-inch; 1.2 MB, 5.25-inch; 720 KB, 3.5-inch; 1.44 MB, 3.5-inch; 2.88 MB, 3.5-inch. The default is Disabled.

HARD DISK CONFIGURATION SUBMENU

Hard Disk Type

When selected, this brings up a dialog box that allows you to manually configure your hard drive or have the system auto configure it. The options are Auto Configured and User Definable. The default is Auto Configured. If you select User Definable then the Number of Cylinders, Number of Heads, and Number of Sectors items can be modified.

Number of Cylinders

If Hard Disk Type is set to User Definable, you must type the correct number of cylinders for your hard disk. If Hard Disk Type is set to Auto Configured, this reports the number of cylinders for your hard disk and cannot be modified.

Number of Heads

If Hard Disk Type is set to User Definable, you must type the correct number of heads for your hard disk. If Hard Disk Type is set to Auto Configured, this reports the number of heads for your hard disk and cannot be modified.

Number of Sectors

If Hard Disk Type is set to User Definable, you must type the correct number of sectors for your hard disk. If Hard Disk Type is set to Auto Configured, this reports the number of sectors for your hard disk and cannot be modified.

Maximum Capacity

This reports the maximum capacity of your hard disk. It is calculated from the number of cylinders, heads, and sectors. This is informational only, and there are no options here.

Initialization Timeout

When selected, this brings up a dialog box that allows you to specify the amount of time the system allows for auto-configuring an IDE drive before reporting that a drive is not present. The options are Disabled, 5, 10, or 31 seconds. The default setting for drive C: is 5 seconds, and the default for drives D:, E:, and F: is Disabled. To decrease boot-up time, you can set the time-out specification to Disabled for any drive not in the system. Furthermore, many hard drives do not require 5 seconds for auto-configuration. You may try setting the time-out to Disabled for a hard drive in your system. When set to Disabled, the system will try to auto-configure your drive once. If you set the time-out to Disabled and the drive is not detected, reset the time-out to a higher setting.

IDE Translation Mode

When selected, this brings up a dialog box that allows you to specify the IDE translation mode. The options are Standard CHS (standard cylinder head sector — less than 1024 cylinders), Logical Block Addressing (LBA), Extended CHS (extended cylinder head sector — greater than 1024 cylinders), and Auto Detected (BIOS detects IDE drive support for LBA). The default is Auto-detected.

Do not change this from the option selected when the hard drive was formatted. Changing the option may result in corrupted data or drive not properly recognized.

Multiple Sector Setting

When selected, this brings up a dialog box that allows you to set the IDE programmed I/O cycles so that multiple sectors are transferred in a single block. This only affects drives connected to the ISA/IDE connector. The options are Disabled, 4 Sectors/Block, 8 Sectors/Block, or Auto Detected. The default is Auto Detected. Check the specifications for your hard disk drive to determine which setting will provide the optimum performance for your drive.

Fast Programmed I/O Modes

When selected, this brings up a dialog box that allows you to set how fast transfers on the PCI IDE interface occur. The options are Disabled or Auto Detected. The default is Auto Detected. If set to Disabled, transfers occur at an un-optimized speed. If set to Auto Detected, transfers occur at the drive's maximum speed.

BOOT OPTIONS SUBMENU

Boot Sequence

When selected, this brings up a dialog box that allows you to set the order of drives the system uses to find an operating system to boot from. The following options are available:

C: First, Then A:	The system checks drive C first, followed by drive A.
A: First, Then C:	The system checks drive A first, followed by drive C.
	(The above selection allows you to boot from a diskette when necessary.)
C: Only	The system checks drive C and no other drives.
A: Only	The system checks drive A and no other drives.

The default is A: First, Then C:

System Cache

When selected, this brings up a dialog box that allows you to enable or disable both the primary and secondary cache memory. The options are Enabled or Disabled. The default is Enabled.

Boot Speed

When selected, this brings up a dialog box that allows you to set the system's boot speed. The options are Deturbo and Turbo. The default is Turbo. If Turbo is selected, boot-up occurs at full speed. If Deturbo is selected, the board operates at a slower speed (similar to a 25 MHz AT).

Num Lock

When selected, this brings up a dialog box that allows you to set the beginning state of the Num Lock feature on your keyboard. The options are On and Off. The default is Off.

Setup Prompt

When selected, this brings up a dialog box that allows you to turn on the "Press <F1> Key if you want to run Setup" prompt during the power-up sequence. The options are Enabled and Disabled. The default is Enabled.

Hard Disk Pre-Delay

When selected, this brings up a dialog box that allows you to set the hard disk drive pre-delay. The options are Disabled, 1, 2, 3, 4, 5, 6, or 7 seconds. The default is 3 seconds. When enabled, this option causes the BIOS to wait the specified time before it first accesses the hard drive. If your system contains a hard drive, and you don't see the drive type displayed during boot-up, the hard drive may need more time before it is able to communicate with the controller. Setting a pre-delay will provide additional time for the hard drive to initialize.

Typematic Rate Programming

When selected, this brings up a dialog box that allows you to set the typematic rates. The options are Default and Override. The default is Default. Choosing Override enables Typematic Rate Delay and Typematic Rate.

Typematic Rate Delay

When selected, this brings up a dialog box that allows you to set how long it takes for the key-repeat function to start when you hold down a key on the keyboard. The options are 250, 500, 750, and 1000 millisecond delays. The default is 250. If Typematic Rate Programming is set to Default, this option will not be visible.

Typematic Rate

When selected, this brings up a dialog box that allows you to set the speed at which characters repeat when you hold down a key on the keyboard. The higher the number, the faster the characters repeat. The options are 6, 8, 10, 12, 15, 20, 24, and 30 characters per second. The default is 6. If Typematic Rate Programming is set to Default, this option will not be visible.

ADVANCED SCREEN

This section describes the Setup options found on the Advanced menu screen. If you select certain options from the Advanced screen (e.g, Peripheral Configuration), the Setup program will switch to a submenu for the selected option. Submenus are described in the sections following the description of the Advanced screen options.

Processor Type

This reports the CPU type. This is informational only, and there are no options.

Processor Speed

This reports the clock speed of the CPU. This is informational only, and there are no options.

Cache Size

This reports the size of the secondary cache. This is informational only, and there are no options. If no secondary cache is installed, this field will not be displayed.

Peripheral Configuration

When selected, this brings up the Peripheral Configuration submenu.

Advanced Chipset Configuration

When selected, this brings up the Advanced Chipset Configuration submenu.

Power Management Configuration

When selected and enabled, this brings up the Advanced Power Management (APM) submenu.

Plug and Play Configuration

When selected, this brings up the Plug and Play Configuration submenu.

Configuration Mode

When selected, this brings up a dialog box that allows you to set the peripheral configuration yourself, or have the system do it. The options are Auto and Manual. The default is Auto.

When Auto is selected, the system peripherals are automatically configured during power up. The options below for the PCI/IDE Interfaces, Floppy Interface, Serial Port 1 and Serial Port 2 Addresses, and the Parallel Port Address can not be modified. The settings displayed for those options reflect the current state of the hardware, and not necessarily the state after reboot.

If Manual is selected, the options for the PCI IDE Interfaces, Floppy Interface, Serial Port 1 and Serial Port 2 Addresses, and Parallel Port Address can be explicitly configured.

PCI IDE Interface

When selected, this brings up a dialog box that allows you to enable the PCI IDE hard disk interface. The options are Enabled and Disabled. The default is Enabled. (If Configuration Mode is set to Auto, this option cannot be modified.)

Floppy Interface

When selected, this brings up a dialog box that allows you to enable the diskette drive interface. The options are Enabled and Disabled. The default is Enabled. (If Configuration Mode is set to Auto, this option cannot be modified.)

Serial Port 1 Address

When selected, this brings up a dialog box that allows you to select the address of the serial port. The options are Disabled; COM1, 3F8h; COM2, 2F8h; COM3, 3E8h; and COM4, 2E8h. The default is COM1, 3F8h. If the Configuration Mode is set to Auto, the Setup program assigns the first free COM port (normally COM1, 3F8h) as the serial port 1 address, regardless of what is selected under the Serial Port 1 Address option. (If Configuration Mode is set to Auto, this option cannot be modified.)

If either serial port address is set, the address it is set to will not appear in the options of the other serial port.

Serial Port 2 Address

When selected, this brings up a dialog box that allows you to select the address of the serial port. The options are Disabled; COM1, 3F8h; COM2, 2F8h; COM3, 3E8h; and COM4, 2E8h. The default is COM2, 2F8h. If the Configuration Mode is set to Auto, the Setup program assigns the first free COM port (normally COM2, 2F8h) as the serial port 2 address, regardless of what is selected under the Serial Port 2 Address option. (If Configuration Mode is set to Auto, this option cannot be modified.)

If either serial port address is set, the address it is set to will not appear in the options of the other serial port.

Serial Port 2 IR Mode

When selected, this dedicates Serial Port 2 for infrared applications. Serial Port 2 also can be enabled with software from application programs. This option is only available when the Configuration Mode is set to Manual.

Parallel Port Address

When selected, this brings up a dialog box that allows you to select the address of the parallel port. The options are Disabled; LPT3, 3bch, IRQ7; LPT1, 378h, IRQ7; LPT1, 378h, IRQ5, and LPT2, 278h, IRQ5. The default is LPT1, 378h. If the Configuration Mode is set to Auto, the setup program assigns LPT1, 378h, IRQ7 as the parallel port address, regardless of what is selected under the Parallel Port Address option. (If Configuration Mode is set to Auto, this option cannot be modified.)

Parallel Port Mode

When selected, this brings up a dialog box that allows you to select the mode for the parallel port. The options are Compatible, Bi-directional, ECP or EPP. The default is Compatible. Compatible means the parallel port will operate in AT-compatible output mode. Bi-directional means the parallel port will operate in bi-directional PS/2-compatible mode. EPP/ECP means the parallel port will operate in either ECP or EPP compatible mode, which is the most advanced mode at which the chipset will operate.

Serial Port 1 IRQ

This reports the IRQ number for serial port 1. This is informational only, and there are no options. If the Serial Port 1 Address field is set to Disabled, this field will not be visible.

Serial Port 2 IRQ

This reports the IRQ number for serial port 2. This is informational only, and there are no options. If the Serial Port 2 Address field is set to Disabled, this field will not be visible.

Parallel Port IRQ

This reports the IRQ number for the parallel port. This is informational only, and there are no options. If the Parallel Port Address field is set to Disabled, this field will not be visible.

ADVANCED CHIPSET CONFIGURATION SUBMENU

Base Memory Size

When selected, this brings up a dialog box that allows you to set the size of the base memory. The options are 512 KB and 640 KB. The default is 640 KB.

ISA LFB Size

When selected, this brings up a dialog box that allows you to set the size of the video linear frame buffer. The options are Disabled or 1 MB. The default is Disabled. If this is not set to Disabled, then the ISA LFB Base Address field will appear.

ISA LFB Base Address

This reports the base address of the LFB. This is informational only, and there are no options. This field will not appear if the ISA LFB Size is set to Disabled.

Video Palette Snoop

When selected, this brings up a dialog box that allows you to control the ability of a PCI graphics card to "snoop" write cycles to an ISA graphics card's color pallet registers. The options are Enabled and Disabled. The default is Disabled. *Note: Some video capture or TV tuner add-in boards may require this feature to be enabled. Depending on hardware limitations, this item may not appear.*

Latency Timer (PCI Clocks)

When selected, this brings up a dialog box that allows you to control the time and agent on the PCI bus can hold the bus when another agent has requested the bus. The valid numbers are between 0 and 256. The default is 66.

PCI Burst

This enables or disables support for PCI/memory burst mode data transfers. The options are Enabled or Disabled. The default is Enabled. PCI burst mode allows higher throughput of data between the PCI bus and memory. Not all cards are capable of utilizing this enhanced data transfer mode. Some cards may act unpredictably with PCI burst mode enabled. If you are having problems with a PCI add in card, PCI Burst mode should be disabled.

SIMM Type Detection

This reports the type of DRAM installed in each of the two memory banks: Fast Page Mode, Extended Data Out Mode, or None. This is informational only, and there are no options.

POWER MANAGEMENT CONFIGURATION

Power Management Configuration enables or disables the Advanced Power Management (APM) support in your system's BIOS. Power Management will only work with APM-capable operating systems to manage power consumption in your system. If Advanced Power Management is set to Disabled, none of the fields in the Advanced Power Management submenu will be visible.

IDE Drive Power Down

When selected, this brings up a dialog box that allows you to set any IDE drives to spin down when the system goes into power managed mode. The options are Enabled and Disabled. The default is Enabled.

VESA Video Power Down

When selected, this brings up a dialog box that allows you to set the command issued to your graphics card when the system goes into power managed mode. The command options are Disabled, Standby, Suspend, and Sleep. The default is Sleep.

Inactivity Timer

This allows you to set how many minutes the system must be inactive before it enters power managed mode. The range is 0 to 255 minutes. The default is 10 minutes.

Hot Key

This allows you to enter a hot key that, when pressed while holding down the <Ctrl> and <Alt> keys, will cause the system to enter power managed mode. All alphanumeric keys, punctuation, and spaces are valid.

PLUG AND PLAY CONFIGURATION SUBMENU

Configuration Mode

When selected, this brings up a dialog box that allows you to set how the BIOS gets information about ISA cards that do not have plug and play capabilities. The options are Use Setup Utility and Use ICU (ISA Configuration Utility). The default is Use Setup Utility.

If Use ICU is selected, the BIOS will depend on run-time software to ensure that there are no conflicts between ISA boards with plug and play capabilities and those without. None of the rest of the items in this submenu will be visible.

If Use Setup Utility is selected, the BIOS will depend on the following items to avoid conflicts.

ISA Shared Memory Size

When selected, this brings up a dialog box that allows you to set the size of ISA shared memory. The options are Disabled, 16 KB, 32 KB, 48 KB, 64 KB, 80KB, and 96 KB. The default is Disabled. If this is set to Disabled, ISA Shared Memory Base Address, below, will not be visible.

ISA Shared Memory Base Address

When selected, this brings up a dialog box that allows you to set the base address for the ISA Shared Memory. The options are C8000h, CC000h, D0000h, D4000h, D8000h, and DC000h. The default is C8000h. This setting may affect the ISA Shared Memory Size item. The value entered in the ISA Shared Memory Size item cannot extend into the E0000h address. For example, if a size of 64K was selected, options D4000h, D8000h, and DC000h will not be available.

Boot With PnP OS

When Enabled is selected, the BIOS will activate only those Plug and Play add-in cards needed to boot the system, then pass control to the operating system to configure any remaining Plug and Play add-in cards. The default is Disabled, but this feature should be set to Enabled for use with Windows 95..

IRQ 3, 4, 5, 7, 9, 10, 11, 12

When selected, this brings up a dialog box that allows you to set the status of the IRQ. The options are Available and Used By ISA Card. The default is Available. The PCI auto-configuration code looks here to see if these interrupts are available. If an interrupt is available, the PCI auto-configuration code can assign the interrupt to be used by the system. If your system contains an ISA agent that uses one of these interrupts, select Used By ISA Card for that interrupt.

Some of these interrupts may not be displayed if they already have been assigned to other peripherals, such as IRQ 3 and IRQ 4, which are normally used by the serial ports, and IRQ 7 for the parallel port, and IRQ12 for the mouse port.

Note: One IRQ is required for PCI devices. When selecting IRQs for use by ISA the BIOS will not allow you to select all IRQs as used by ISA.

Note: IRQ 14 and IRQ 15 will not show up on the list of available IRQs, even when the on board IDE controllers are disabled. If the on board IDE controllers are not used, these IRQs may be used for ISA cards, even though they do not show up on the menu. These interrupts will not be used by PCI devices other than the IDE controllers, as they must remain available for bootable devices.

SECURITY SCREEN

This section describes the two access modes that can be set using the options found on the Security screen, and then describes the Security screen options themselves.

ADMINISTRATIVE AND USER ACCESS MODES

The options on the Security screen menu make it possible to restrict access to the Setup program by allowing you to set passwords for two different access modes: Administrative mode and User mode.

In general, Administrative mode has full access to the Setup options, whereas User mode has restricted access to the options. Thus, by setting separate Administrative and User passwords, a system administrator can limit who can change critical Setup values. The actual limitations depend on whether either the Administrative or User passwords or both are set.

If you want to limit access to who can boot the system, you must set the User password. This is the password that the system will ask for before booting. If only the Administrative password is set, the system will boot up without asking for a password. If both passwords are set, you can enter either password to boot the system.

This table shows the effects of setting the Administrative and User passwords. (The table is for reference only, and is not shown on the Security screen.) In the table, the statement "Can change a limited number of options" means you can change the system date and time, the User password, and the security hot key.

Password Set	Administrative mode can:	User mode can:	Pswd Required at Boot
Neither	Change all options*	Change all options*	None
Administrative only	Change all options	Change a limited number of options	None
User only	N/A	Change all options	User
Both	Change all options	Change a limited number of options	Administrative or User

* If no password is set, any user can change all Setup options.

SECURITY SCREEN OPTIONS

User Password is

This reports if there is a User password set. This is informational only, and there are no options.

Administrative Password is

This reports if there is an Administrative password set. This is informational only, and there are no options.

Set User Password

When selected, this brings up a dialog box that allows you to set the User password.

Set Administrative Password

When selected, this brings up a dialog box that allows you to set the Administrative password.

Unattended Start

When selected, this brings up a dialog box that allows you to control when the security password is requested. The options are Enabled and Disabled. The default is Disabled. The User password must be enabled before you can enable this option. If Enabled is selected, the system will boot, but the keyboard will be locked until the User password is entered.

Security Hot Key (CTRL-ALT-)

This allows you to set a hot key that, when pressed, will lock the keyboard until the User password is entered.

EXIT SCREEN

EXIT SAVING CHANGES

When selected, this allows you to save the change to CMOS and exit the Setup program. You can also press the <F10> key anywhere in the Setup program to do this.

EXIT DISCARDING CHANGES

When selected, this allows you to exit the Setup program without saving any changes. This means that any changes made while in the Setup program will be discarded and **NOT SAVED**. Pressing the <Esc> key in any of the four main screens will do this.

LOAD SETUP DEFAULTS

When selected, this allows you to reset all of the setup options to their defaults. You can also press the <F5> key anywhere in the Setup program to do this. This selection loads the default values from the ROM table.

DISCARD CHANGES

When selected, this allows you to discard any changes you made during the current Setup session without exiting the program. You can also press the <F6> key anywhere in the Setup program to do this. This selection loads the CMOS values that were present when the system was turned on.

BIOS Recovery

The Advanced/ZE incorporates the AMIBIOS in a Flash memory component. Flash BIOS allows easy upgrades without the need to replace an EPROM. The upgrade utility fits on a floppy diskette and provides the capability to save, verify, and update the system BIOS. The upgrade utility also provides the capability to install alternate languages for BIOS messages and the SETUP utility. The upgrade utility can be run from a hard drive or a network drive, but no memory managers can be installed during upgrades.

USING THE UPGRADE UTILITY

If the utility is obtained from the bulletin board, UNZIP the archive and copy the files to a bootable MS-DOS 3.3, 4.01, 5.0, or 6.x diskette. Reboot the system with the upgrade diskette in the bootable floppy drive and follow the directions in the easy to use menu-driven program.

RECOVERY MODE

In the unlikely event that a FLASH upgrade is interrupted catastrophically, it is possible the BIOS may be left in an unusable state. Recovering from this condition requires the following steps (be sure a power supply and speaker have been attached to the board, and a floppy drive is connected as drive A:):

1. Change Flash Recovery jumper to the recovery mode position.
2. Install the bootable upgrade diskette into drive A:
3. Reboot the system.
4. Because of the small amount of code available in the non-erasable boot block area, no video is available to direct the procedure. The procedure can be monitored by listening to the speaker and looking at the floppy drive LED. When the system beeps and the floppy drive LED is lit, the system is copying the recovery code into the FLASH device. As soon as the drive LED goes off, the recovery is complete.
5. Turn the system off.
6. Change the Flash Recovery jumper back to the default position.
7. Leave the upgrade floppy in drive A: and turn the system on.
8. Continue with the original upgrade.

Error messages and Beep Codes

Errors can occur during POST (Power On Self Test) which is performed every time the system is powered on. Fatal errors, which prevent the system to continue the boot process, are communicated through a series of audible beeps. Other errors are displayed in the following format:

ERROR *Message Line 1*
ERROR *Message Line 2*

For most displayed error messages, there is only one message. If a second message appears, it is "RUN SETUP". If this message occurs, press <F1> to run AMIBIOS Setup.

BEEP CODES

Beeps	Error Message	Description
1	Refresh Failure	The memory refresh circuitry on the baseboard is faulty.
2	Parity Error	Parity is not supported on this product, will not occur.
3	Base 64 KB Memory Failure	Memory failure in the first 64 KB.
4	Timer Not Operational	Memory failure in the first 64 KB of memory, or Timer 1 on the baseboard is not functioning.
5	Processor Error	The CPU on the baseboard generated an error.
6	8042 - Gate A20 Failure	The keyboard controller (8042) may be bad. The BIOS cannot switch to protected mode.
7	Processor Exception Interrupt Error	The CPU generated an exception interrupt.
8	Display Memory Read/Write Error	The system video adapter is either missing or its memory is faulty. This is not a fatal error.
9	ROM Checksum Error	ROM checksum value does not match the value encoded in BIOS.
10	CMOS Shutdown Register Rd/Wrt Error	The shutdown register for CMOS RAM failed.
11	Cache Error / External Cache Bad	The external cache is faulty.

ERROR MESSAGES

Error Message	Explanation
8042 Gate - A20 Error	Gate A20 on the keyboard controller (8042) is not working. Replace the 8042.
Address Line Short!	Error in the address decoding circuitry on the baseboard.
Cache Memory Bad, Do Not Enable Cache!	Cache memory is defective. Replace it.
CH-2 Timer Error	Most AT systems include two timers. There is an error in timer 2.
CMOS Battery State Low	CMOS RAM is powered by a battery. The battery power is low. Replace the battery.
CMOS Checksum Failure	After CMOS RAM values are saved, a checksum value is generated for error checking. The previous value is different from the current value. Run AMIBIOS Setup.
CMOS System Options Not Set	The values stored in CMOS RAM are either corrupt or nonexistent. Run Setup.
CMOS Display Type Mismatch	The video type in CMOS RAM does not match the type detected by the BIOS. Run AMIBIOS Setup.
CMOS Memory Size Mismatch	The amount of memory on the baseboard is different than the amount in CMOS RAM. Run AMIBIOS Setup.
CMOS Time and Date Not Set	Run Standard CMOS Setup to set the date and time in CMOS RAM.
Diskette Boot Failure	The boot disk in floppy drive A: is corrupt. It cannot be used to boot the system. Use another boot disk and follow the screen instructions.
Display Switch Not Proper	Some systems require a video switch on the baseboard be set to either color or monochrome. Turn the system off, set the switch, then power on.
DMA Error	Error in the DMA controller.
DMA #1 Error	Error in the first DMA channel.
DMA #2 Error	Error in the second DMA channel.
FDD Controller Failure	The BIOS cannot communicate with the floppy disk drive controller. Check all appropriate connections after the system is powered down.
HDD Controller Failure	The BIOS cannot communicate with the hard disk drive controller. Check all appropriate connections after the system is powered down.
INTR #1 Error	Interrupt channel 1 failed POST.
INTR #2 Error	Interrupt channel 2 failed POST.
Invalid Boot Diskette	The BIOS can read the disk in floppy drive A:, but cannot boot the system. Use another boot disk.
Keyboard Is Locked...Unlock It	The keyboard lock on the system is engaged. The system must be unlocked to continue.

Keyboard Error	There is a timing problem with the keyboard. Set the *Keyboard* option in Standard CMOS Setup to *Not Installed* to skip the keyboard POST routines.
KB/Interface Error	There is an error in the keyboard connector.
Off Board Parity Error	Parity error in memory installed in an expansion slot. The format is: OFF BOARD PARITY ERROR ADDR (HEX) = (XXXX) *XXXX* is the hex address where the error occurred.
On Board Parity Error	Parity is not supported on this product, this error will not occur.
Parity Error ????	Parity error in system memory at an unknown address.

PLUG AND PLAY ERROR MESSAGES

Bad PNP Serial ID Checksum	The serial ID checksum of a Plug and Play card was invalid.
Floppy Disk Controller Resource Conflict	The floppy disk controller has requested a resource that is already in use.
NVRAM Checksum Error, NVRAM Cleared	The ESCD data was reinitialized because of an NVRAM checksum error. Try rerunning the ICU.
NVRAM Cleared by Jumper	The "Clear CMOS" switch has been moved to the ON position and CMOS RAM has been cleared.
NVRAM Data Invalid, NVRAM Cleared	Invalid entry in the ESCD area.
Parallel Port Resource Conflict	The parallel port has requested a resource that is already in use.
PCI Error Log is Full	This message is displayed when more than 15 PCI conflict errors are detected. No additional PCI errors can be logged.
PCI I/O Port Conflict	Two devices requested the same resource, resulting in a conflict.
PCI IRQ Conflict	Two devices requested the same resource, resulting in a conflict.
Primary Memory Conflict	Two devices requested the same resource, resulting in a conflict.
Primary Boot Device Not Found	The designated primary boot device (hard disk drive, diskette drive, or CD-ROM drive) could not be found.
Primary IDE Controller Resource Conflict	The primary IDE controller has requested a resource that is already in use.
Primary Input Device not Found	The designated primary input device (keyboard, mouse, or other, if input is redirected) could not be found.
Secondary IDE Controller Resource Conflict	The secondary IDE controller has requested a resource that is already in use.
Serial Port 1 Resource Conflict	Serial port 1 has requested a resource that is already in use.
Serial Port 2 Resource Conflict	Serial port 2 has requested a resource that is already in use.
Static Device Resource Conflict	A non-Plug and Play ISA card has requested a resource that is already in use.
System Board Device Resource Conflict	A non Plug and Play system resource has requested a resource that is already in use.

ISA NMI MESSAGES

ISA NMI Message	Explanation
Memory Parity Error at *xxxxx*	Memory failed. If the memory location can be determined, it is displayed as *xxxxx*. If not, the message is *Memory Parity Error ????.*
I/O Card Parity Error at *xxxxx*	An expansion card failed. If the address can be determined, it is displayed as *xxxxx*. If not, the message is *I/O Card Parity Error ????.*
DMA Bus Time-out	A device has driven the bus signal for more than 7.8 microseconds.