Award BIOS Error Codes

Award BIOS Text Error Messages and Beep Codes

During the power on self test (POST), if the BIOS detects an error requiring you to do something, it will either sound a beep code or display a message. If a message is displayed, it will be accompanied by the following:

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PRESS F1 TO CONTINUE, CTRL-ALT-ESC OR DEL TO ENTER SETUP
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Currently there is only one beep code in the Award BIOS. A single long beep followed by two short beeps indicates that a video error has occurred and the BIOS cannot initialize the video screen to display any additional information.

One or more of the following messages may be displayed if the BIOS detects an error during the POST. Table 8 includes Award BIOS messages for both the ISA and the EISA BIOS.

Table 8 Award BIOS Error Messages (ISA and EISA BIOS)

Error Message	Description
BIOS ROM checksum error – System halted	The checksum of the BIOS code in the BIOS chip is incorrect, indicating the BIOS code may have become corrupt. Replace the BIOS.
CMOS battery failed	CMOS battery is no longer functional. Replace battery.
CMOS checksum error - Defaults loaded	Checksum of CMOS is incorrect, so the system loads the default equipment configuration. A checksum error may indicate that CMOS has become corrupt. This error might have been caused by a weak battery. Check the battery and replace if necessary.
CMOS CHECKSUM ERROR DISK BOOT FAILURE, INSERT SYSTEM DISK AND PRESS ENTER	Checksum of CMOS is incorrect. This can indicate that CMOS has become corrupt. This error may have been caused by a weak battery. Check the battery and replace if necessary.
CPU at nnnn	Displays the running speed of the CPU.
DISKETTE DRIVES OR TYPES MISMATCH ERROR - RUN SETUP	Type of diskette drive installed in the system is different from the CMOS definition. Run Setup to reconfigure the drive type correctly.
Display switch is set incorrectly.	The display switch on the motherboard can be set to either monochrome or color. This message indicates the switch is set to a different setting than indicated in Setup. Determine which setting is correct, and then either turn off the system and change the jumper; or, enter Setup and change the VIDEO selection.
DISPLAY TYPE HAS CHANGED SINCE LAST BOOT	Since last powering off the system, the display adapter has been changed. You must configure the system for the new display type.
EISA Configuration Checksum Error	The EISA nonvolatile RAM checksum is incorrect or cannot correctly read the EISA slot. This can indicate either the EISA nonvolatile memory has become corrupt or the slot has been configured incorrectly. Also be sure the card is installed firmly in the slot.
EISA Configuration Is Not Complete	The slot configuration information stored in the EISA nonvolatile memory is incomplete.
ERROR ENCOUNTERED INITIALIZING HARD DRIVE	Hard drive cannot be initialized. Be sure the adapter is installed correctly and all cables are correctly and firmly attached. Also be sure the correct hard drive type is selected in Setup.
ERROR INITIALIZING HARD DISK CONTROLLER	Cannot initialize controller. Make sure the cord is correctly and firmly installed in the bus. Be sure the correct hard drive type is selected in Setup. Also check to see if any jumper needs to be set correctly on the hard drive.

Error Message	Description
FLOPPY DISK CNTRLR ERROR OR NO CNTRLR PRESENT	Cannot find or initialize the floppy drive controller. Make sure the controller is installed correctly and firmly. If there are no floppy drives installed, be sure the Diskette Drive selection in Setup is set to NONE.
Floppy disk(s) fail	Cannot find or initialize the floppy drive controller or the drive. Make sure the controller is installed correctly. If no floppy drives are installed, be sure the Diskette Drive selection in Setup is set to NONE or AUTO.
HARD DISK initializing	Please wait a moment… Some hard drives require extra time to initialize.
HARD DISK INSTALL FAILURE	Cannot find or initialize the hard drive controller or the drive. Make sure the controller is installed correctly. If no hard drives are installed, be sure the Hard Drive selection in Setup is set to NONE.
Hard disk(s) diagnosis fail	The system may run specific disk diagnostic routines. This message appears if one or more hard disks return an error when the diagnostics run.
Invalid EISA Configuration	The nonvolatile memory containing EISA configuration information was programmed incorrectly or has become corrupt. Rerun EISA configuration utility to correctly program the memory.
Keyboard error or no keyboard present	Cannot initialize the keyboard. Make sure the keyboard is attached correctly and no keys are being pressed during the boot. If you are purposely configuring the system without a keyboard, set the error halt condition in Setup to HALT ON ALL, BUT KEYBOARD. This will cause the BIOS to ignore the missing keyboard and continue the boot.
Keyboard is locked out - Unlock the key	This message usually indicates that one or more keys have been pressed during the keyboard tests. Be sure no objects are resting on the keyboard.
Memory Address Error at…	Indicates a memory address error at a specific location. You can use this location along with the memory map for your system to find and replace the bad memory chips.
Memory parity Error at…	Indicates a memory parity error at a specific location. You can use this location along with the memory map for your system to find and replace the bad memory chips.
MEMORY SIZE HAS CHANGED SINCE LAST BOOT	Memory has been added or removed since the last boot. In EISA mode, use configuration utility to reconfigure the memory configuration. In ISA mode, enter Setup and enter the new memory size in the memory fields.
Memory Test	This message displays during a full memory test, counting down the memory areas being tested.
Memory test fail:	If POST detects an error during memory testing, additional information appears giving specifics about the type and location of the memory error.
Memory Verify Error at…	Indicates an error verifying a value already written to memory. Use the location along with your system's memory map to locate the bad chip.
No boot device was found.	This could mean that either a boot drive was not detected or the drive does not contain proper system boot files. Insert a system disk into drive A: and press Enter. If you assumed the system would boot from the hard drive, make sure the controller is inserted correctly and all cables are properly attached. Also be sure the disk is formatted as a boot device. Then reboot the system.
OFFENDING ADDRESS NOT FOUND	This message is used in conjunction with the I/O CHANNEL CHECK and RAM PARITY ERROR messages when the segment that has caused the problem cannot be isolated.
OFFENDING SEGMENT:	This message is used in conjunction with the I/O CHANNEL CHECK and RAM PARITY ERROR messages when the segment that has caused the problem has been isolated.

(continues)

Table 8 Continued

Error Message	Description
Override enabled - Defaults loaded	If the system cannot boot using the current CMOS configuration, the BIOS can override the current configuration with a set of BIOS defaults designed for the most stable, minimal-performance system operations.
PRESS A KEY TO REBOOT	This will be displayed at the bottom of the screen when an error occurs that requires you to reboot. Press any key to reboot the system.
Press ESC to skip memory test	You can press Esc to skip the full memory test.
PRESS F1 TO DISABLE NMI, F2 TO REBOOT	When BIOS detects a non-maskable interrupt condition during boot, this will allow you to disable the NMI and continue to boot; or you can reboot the system with the NMI enabled.
Press TAB to show POST screen	System OEMs may replace the Award BIOS POST display with their own proprietary display. Including this message in the OEM display permits the operator to switch between the OEM display and the default POST display.
Primary master hard disk fail	POST detects an error in the primary master IDE hard drive.
Primary slave hard disk fail	POST detects an error in the secondary master IDE hard drive.
RAM PARITY ERROR - CHECKING FOR SEGMENT...	Indicates a parity error in RAM.
Resuming from disk, Press TAB to show POST screen	Award offers a save-to-disk feature for notebook computers. This message may appear when the operator restarts the system after a save-to-disk |shutdown. See the Press Tab... message earlier for a description of this feature.
Secondary master hard disk fail	POST detects an error in the primary slave IDE hard drive.
Secondary slave hard disk fail	POST detects an error in the secondary slave IDE hard drive.
Should Be Empty But EISA Board Found	A valid board ID was found in a slot that was configured as having no board ID.
Should Have EISA Board But Not Found	The board installed is not responding to the ID request, or no board ID has been found in the indicated slot.
Slot Not Empty	Indicates that a slot designated as empty by the EISA configuration utility actually contains a board.
SYSTEM HALTED, (CTRL-ALT-DEL) TO REBOOT...	Indicates the present boot attempt has been aborted and the system must be rebooted. Press and hold down the Ctrl and Alt keys and press Del.
Wrong Board In Slot	The board ID does not match the ID stored in the EISA nonvolatile memory.

Award BIOS POST Codes

Award BIOS POST Codes are shown in Table 9.

Table 9 Award BIOS POST Codes

POST (Hex)	Name	Description
C0h	Turn Off Chipset Cache	OEM specific-cache control
01h	Processor Test 1	Processor Status (1FLAGS) Verification. Tests the following processor status flags: carry, zero, sign, overflow. The BIOS will set each of these flags, verify they are set, and then turn each flag off and verify it is off.
02h	Processor Test 2	Read / write / verify all CPU registers except SS, SP, and BP with data pattern FF and 00.

POST (Hex)	Name	Description
03h	Initialize Chips	Disable NMI, PIE, AIE, UEI, SQWV. Disable video, parity checking, DMA. Reset math coprocessor. Clear all page registers, CMOS shutdown byte. Initialize timer 0, 1, and 2, including set EISA timer to a known state. Initialize DMA controllers 0 and 1. Initialize interrupt controllers 0 and 1. Initialize EISA extended registers.
04h	Test Memory Refresh Toggle	RAM must be periodically refreshed in order to keep the memory from decaying. This function ensures that the memory refresh function is working properly.
05h	Blank video, Initialize keyboard	Keyboard controller initialization.
06h	Reserved	
07h	Test CMOS Interface and Battery Status	Verifies CMOS is working correctly, detects bad battery.
Beh	Chipset Default Initialization	Program chipset registers with power on BIOS defaults.
C1h	Memory presence test	OEM-specific test to size onboard memory.
C5h	Early Shadow	OEM-specific early shadow; enable for fast boot.
C6h	Cache presence test	External cache size detection.
08h	Setup low memory	Early chip set initialization, memory presence test, OEM chip set routines, clear low 64KB of memory, test first 64KB memory.
09h	Early Cache Initialization	Cyrix CPU initialization, cache initialization.
0Ah	Setup Interrupt Vector Table	Initialize first 120 interrupt vectors with SPURIOUS_INT_HDLR and initialize INT 00h-1Fh according to INT_TBL.
0Bh	Test CMOS RAM Checksum	Test CMOS RAM Checksum; if bad, or Insert key is pressed, load defaults.
0Ch	Initialize keyboard	Detect type of keyboard controller (optional), set NUM_LOCK status.
0Dh	Initialize Video Interface	Detect CPU clock. Read CMOS location 14h to find out type of video in use. Detect and initialize video adapter.
0Eh	Test Video Memory	Test video memory, write sign-on message to screen. Setup shadow RAM. Enable shadow according to Setup.
0Fh	Test DMA Controller 0	BIOS checksum test. Keyboard detect and initialization.
10h	Test DMA Controller 1	Test DMA Controller.
11h	Test DMA Page Registers	Test DMA Page Registers.
12h	13 Reserved	None.
14h	Test Timer Counter 2	Test 8254 Timer 0 Counter 2.
15h	Test 8259-1 Mask Bits	Verify 8259 Channel 1 masked interrupts by alternately turning off and on the interrupt lines.
16h	Test 8259-2 Mask Bits	Verify 8259 Channel 2 masked interrupts by alternately turning off and on the interrupt lines.
17h	Test Stuck 8259's Interrupt Bits	Turn off interrupts then verify no interrupt mask register is on.
18h	Test 8259 Interrupt Functionality	Force an interrupt and verify the interrupt occurred.
19h	Test Stuck NMI Bits (Parity / IO Check)	Verify NMI can be cleared.
1Ah	Display CPU clock	None.

(continues)

Table 9 Continued

POST (Hex)	Name	Description
1B–1Eh	Reserved	None.
1Fh	Set EISA Mode	If EISA nonvolatile memory checksum is good, execute EISA initialization. If not, execute ISA tests and clear EISA mode flag. Test EISA Configuration Memory Integrity (checksum and communication interface).
20h	Enable Slot 0	Initialize slot 0 (System Board).
21-2Fh	Enable Slts 1–15	Initialize slots 1 through 15.
30h	Size Base and Extended Memory	Size base memory from 256KB–640KB and extended memory above 1MB.
31h	Test Base and Extended Memory	Test base memory from 256KB–640KB and extended memory above 1MB using various patterns. *Note:* This will be skipped in EISA mode and can be "skipped" with Esc key in ISA mode.
32h	Test EISA Extended Memory initialization	If EISA mode flag is set then test EISA memory found in slots. *Note:* This will be skipped in ISA mode and can be "skipped" with Esc key in EISA mode.
33–3Bh	Reserved	None.
3Ch	Setup Enabled	None.
3Dh	Initialize and Install Mouse	Detect if mouse is present, initialize mouse, install interrupt vectors.
3Eh	Setup Cache Controller	Initialize cache controller.
3Fh	Reserved	
BFh	Chipset Initialization	Program chipset registers with Setup values.
40h	Virus Protect	Display virus protect disable or enable.
41h	Initialize Floppy Drive and Controller	Initialize floppy disk drive controller and any drives.
42h	Initialize Hard Drive and Controller	Initialize hard drive controller and any drives.
43h	Detect and Initialize Serial / Parallel Ports	Initialize any serial and parallel ports (also game port).
44h	Reserved	None.
45h	Detect and Initialize Math Coprocessor	Initialize math coprocessor.
46h	Reserved	None.
47h	Reserved	None.
48–4Dh	Reserved	None.
4Eh	Manufacturing POST Loop or Display Messages	Reboot if manufacturing POST loop pin is set. Otherwise display any messages (that is, any non-fatal errors that were detected during POST) and enter Setup.
4Fh	Security Check	Ask password security (optional).
50h	Write CMOS	Write all CMOS values back to RAM and clear screen.
51h	Pre-boot Enable	Enable parity checker. Enable NMI. Enable cache before boot.
52h	Initialize Option ROMs	Initialize any option ROMs present from C8000h–EFFFFh. *Note:* When FSCAN option is enabled, will initialize from C8000h–F7FFFh.
53h	Initialize Time Value	Initialize time value in 40h: BIOS area.
60h	Setup Virus Protect	Setup virus protect according to Setup.

POST (Hex)	Name	Description
61h	Set Boot Speed	Set system speed for boot.
62h	Setup NumLock	Setup NumLock status.
63h	Boot Attempt	Set low stack boot via INT 19h.
B0h	Spurious	If interrupt occurs in protected mode.
B1h	Unclaimed NMI	If unmasked NMI occurs, display Press F1 to disable NMI, F2 reboot.
E1–Efh	Setup Pages	E1- Page 1, E2 - Page 2, etc.
FFh	Boot	None.