



CHAPTER 3

Messages and Codes

Your system can provide you with diagnostic, error, and status information in the form of messages that appear on the monitor screen, or beep codes that sound through the system speaker. This chapter documents the diagnostic and beep codes and system messages generated by the system basic input/output system (BIOS).

System Messages

System messages during the system's power-on self-test (POST) alert you to a possible operating system problem or to a conflict between the software and hardware. Table 3-1 lists possible system messages.



NOTE: If you receive a system message that is not listed in Table 3-1, check the software documentation provided with your system for a possible explanation of the message and recommended action.

Table 3-1. System Messages

Message	Cause	Corrective Action
8042 Gate A20 Error	Faulty keyboard controller (defective system board)	Replace the system board. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.
Address Line Short!	Faulty memory circuitry on system board	Replace the system board. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.
C: Drive Error	Hard-disk drive is not responding correctly to system commands	Run the Dell Diagnostics. See Chapter 5, "Running the Dell Diagnostics," for instructions. Replace the hard-disk drive. See Chapter 9, "Installing Drives," for more information.
C: Drive Failure	Faulty hard-disk drive	Replace the hard-disk drive. See Chapter 9, "Installing Drives," for more information.

NOTE: For the full name of an abbreviation or acronym used in this table, see "Abbreviations and Acronyms."

Table 3-1. System Messages (continued)

Message	Cause	Corrective Action
Cache Memory Bad, Do Not Enable Cache!	Faulty cache memory	Replace the microprocessor. See Chapter 8, "Installing System Board Options," for more information.
CH-2 Timer Error	Faulty system board	Replace the system board. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.
CMOS Battery State Low	The system battery power is low	Replace the system battery. See Chapter 8, "Installing System Board Options," for more information.
CMOS Display Type Mismatch	Incorrect video configuration setting in System Setup program	Correct the System Setup program video configuration settings. See "Using the System Setup Program," in the <i>User's Guide</i> for instructions.
CMOS Memory Size Mismatch	System memory value in System Setup program is incorrect	Correct the System Setup program video configuration settings. See "Using the System Setup Program," in the <i>User's Guide</i> for instructions.
CMOS System Options Not Set	Missing settings in System Setup program	Check the System Setup program configuration settings. See "Using the System Setup Program," in the <i>User's Guide</i> for instructions.
CMOS Time and Date Not Set	Defective system battery	Replace the system battery. See Chapter 8, "Installing System Board Options," for more information.
D: Drive Error	Hard-disk drive is not responding correctly to system commands	Run the Dell Diagnostics. See Chapter 5, "Running the Dell Diagnostics," for instructions. Replace the hard-disk drive. See Chapter 9, "Installing Drives," for more information.
D: Drive Failure	Faulty hard-disk drive	Replace the hard-disk drive. See Chapter 9, "Installing Drives," for more information.
Diskette Boot Failure	No operating system on diskette	Use a bootable diskette.
DMA Error DMA 1 Error DMA 2 Error	Faulty DMA controller	Replace the system board. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.
FDD Controller Failure	Faulty diskette/tape drive controller (defective system board)	Replace the system board. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.

NOTE: For the full name of an abbreviation or acronym used in this table, see "Abbreviations and Acronyms."

Table 3-1. System Messages (continued)

Message	Cause	Corrective Action
HDD Controller failure	Loose cable, improperly connected hard-disk drive, or faulty IDE controller	Check the hard-disk drive cable connections. If the problem persists, replace the system board. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.
INTR1 Error INTR2 Error	Faulty system board	Replace the system board. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.
Invalid Boot Diskette	No operating system on diskette	Use a bootable diskette.
KB/Interface error	Keyboard cable connector loose or improperly connected, defective keyboard, or defective keyboard/mouse controller (defective system board)	Check the keyboard cable connection (See Figure 2-1). Replace the keyboard. If the problem persists, replace the system board. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.
No ROM BASIC	No bootable sector on diskette or CD	Use a different bootable diskette or CD, or remove nonbootable diskette from drive to allow system to boot from hard-disk drive
Off Board Parity Error Addr = xxxx	Faulty DIMMs or defective system board	Replace DIMMs. See Chapter 8, "Installing System Board Options," for more information.
On Board Parity Error Addr = xxxx	Faulty DIMMs or defective system board	Replace DIMMs. See Chapter 8, "Installing System Board Options," for more information.
Parity Error ????	Faulty DIMMs or defective system board	Replace DIMMs. See Chapter 8, "Installing System Board Options," for more information.

NOTE: For the full name of an abbreviation or acronym used in this table, see "Abbreviations and Acronyms."

POST Beep Codes

If the monitor cannot display errors or problems, during POST the system may emit a series of beeps, or *beep code*, that identifies the problem.

Table 3-2. System Beep Codes

Code	Cause	Corrective Action
1	BIOS checksum failure; the memory refresh circuitry on the system board is faulty	Replace the system board. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.
2	Parity error; faulty DIMMs or defective system board	Replace the DIMMs or system board. See Chapter 8, "Installing System Board Options," for more information.
3	Base 128 KB memory failure	Replace the first DIMM or system board. See Chapter 8, "Installing System Board Options," for more information.
4	Timer not operational	Replace the system board. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.
5	Processor error	Replace the microprocessor. See Chapter 8, "Installing System Board Options," for more information.
6	8042 - Gate A20 failure	Replace the system board. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.
7	Processor exception interrupt error	Replace the microprocessor. See Chapter 8, "Installing System Board Options," for more information.
8	Display memory read-write error	Unless your system is connected to monitor, no action is required. If a monitor is connected, the video adapter is faulty. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.
9	ROM checksum error	This error usually requires that you replace the BIOS firmware. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.
10	CMOS shutdown register read/write error	Replace the system board. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.
11	Cache memory bad	The cache memory test has failed. See Chapter 8, "Installing System Board Options," for more information.

NOTE: For the full name of an abbreviation or acronym used in this table, see "Abbreviations and Acronyms."

Diagnostics Messages

When you test a device group or device in the Dell Diagnostics, an error message may result. These particular error messages are not covered in this section. Record the message on a copy of the Diagnostics Checklist in Chapter 10, “Getting Help,” and then follow the instructions in that section for obtaining technical assistance.

Alert Log Messages From the Dell OpenManage Server Agent

The optional Dell OpenManage Server Agent management application program generates alert messages that are written to the Simple Network Management Protocol (SNMP) trap log file. See your Dell OpenManage Server Agent documentation for more information.

