

## Power on Self Test Beep Codes for AMI and Phoenix BIOS

When an IBM compatible computer is first turned on, the hardware runs a Power-On Self Test (POST). If errors are encountered during this POST test, they are usually displayed via an audio beep or in the form of a code number flashed across the screen. With this audio code in hand, you can determine what part of the system is having problems and find a solution.

The pattern of beeps whether it's the number of beeps or the length of those beeps will give you an indication of the actual problem. Its a distress signal from the computer in a morse code like pattern. Unless you have a [diagnostic card](#) to tell you more about the particular problem, you will have to use the charts below to decipher the computer error and get your machine back up and running.

### Standard Original IBM POST Error Codes

<b>1 short beep</b>	Normal POST - system is ok
<b>2 short beeps</b>	POST Error - error code shown on screen
<b>No beep</b>	Power supply or system board problem
<b>Continuous beep</b>	Power supply, system board, or keyboard problem
<b>Repeating short beeps</b>	Power supply or system board problem
<b>1 long, 1 short beep</b>	System board problem
<b>1 long, 2 short beeps</b>	Display adapter problem (MDA, CGA)
<b>1 long, 3 short beeps</b>	Enhanced Graphics Adapter (EGA)
<b>3 long beeps</b>	3270 keyboard card

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### IBM POST Diagnostic Code Descriptions

<b>100 - 199</b>	System Board
<b>200 - 299</b>	Memory
<b>300 - 399</b>	Keyboard
<b>400 - 499</b>	Monochrome Display
<b>500 - 599</b>	<a href="#">Color</a> /Graphics Display
<b>600 - 699</b>	Floppy- <a href="#">disk drive</a> and/or Adapter
<b>700 - 799</b>	Math Coprocessor
<b>900 - 999</b>	Parallel <a href="#">Printer</a> Port
<b>1000 - 1099</b>	Alternate Printer Adapter

<b>1100 - 1299</b>	Asynchronous Communication Device, Adapter, or Port
<b>1300 - 1399</b>	Game Port
<b>1400 - 1499</b>	Color/Graphics Printer
<b>1500 - 1599</b>	Synchronous Communication Device, Adapter, or Port
<b>1700 - 1799</b>	Hard Drive and/or Adapter
<b>1800 - 1899</b>	Expansion Unit (XT)
<b>2000 - 2199</b>	Bisynchronous Communication Adapter
<b>2400 - 2599</b>	EGA system-board Video (MCA)
<b>3000 - 3199</b>	LAN Adapter
<b>4800 - 4999</b>	Internal Modem
<b>7000 - 7099</b>	Phoenix BIOS Chips
<b>7300 - 7399</b>	3.5" Disk Drive
<b>8900 - 8999</b>	MIDI Adapter
<b>11200 - 11299</b>	SCSI Adapter
<b>21000 - 21099</b>	SCSI Fixed Disk and Controller
<b>21500 - 21599</b>	SCSI CD-ROM System

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## AMI BIOS Beep Codes

<b>1 Short Beep</b>	One beep is good! Everything is ok, that is if you see things on the screen. If you don't see anything, check your monitor and video card first. Is everything connected? If they seem fine, your motherboard has some bad chips on it. First reset the SIMM's and reboot. If it does the same thing, one of the memory chips on the motherboard are bad, and you most likely need to get another motherboard since these chips are soldered on.
<b>2 Short Beeps</b>	Your computer has memory problems. First check video. If video is working, you'll see an error message. If not, you have a parity error in your first 64K of memory. First check your SIMM's. Reseat them and reboot. If this doesn't do it, the memory chips may be bad. You can try switching the first and second banks memory chips. First banks are the memory banks that your CPU finds its first 64K of base memory in. You'll need to consult your manual to see which bank is first. If all your memory tests good, you probably need to buy another motherboard.
<b>3 Short Beeps</b>	Basically the same thing as 2 beeps. Follow that diagnosis above.
<b>4 Short Beeps</b>	Basically the same thing as 2 beeps. Follow that diagnosis above. It could also be a bad timer
<b>5 Short Beeps</b>	Your motherboard is complaining. Try reseating the memory and rebooting. If that doesn't help, you should consider another motherboard. You could probably get away with just replacing the CPU, but that's not too cost-effective. Its just time to upgrade!

<b>6 Short Beeps</b>	The chip on your motherboard that controls your keyboard (A20 gate) isn't working. First try another keyboard. If it doesn't help, reseal the chip that controls the keyboard, if it isn't soldered in. If it still beeps, replace the chip if possible. Replace the motherboard if it is soldered in.
<b>7 Short Beeps</b>	Your CPU broke overnight. Its no good. Either replace the CPU, or buy another motherboard.
<b>8 Short Beeps</b>	Your video card isn't working. Make sure it is seated well in the bus. If it still beeps, either the whole card is bad or the memory on it is. Best bet is to install another video card.
<b>9 Short Beeps</b>	Your BIOS is bad. Reseat or Replace the BIOS.
<b>10 Short Beeps</b>	Your problem lies deep inside the CMOS. All chips associated with the CMOS will likely have to be replaced. Your best bet is to get a new motherboard.
<b>11 Short Beeps</b>	Your problem is in the Cache Memory chips on the motherboard. Reseat or Replace these chips.
<b>1 Long, 3 Short Beeps</b>	You've probably just added memory to the motherboard since this is a conventional or extended memory failure. Generally this is caused by a memory chip that is not seated properly. Reseat the memory chips.
<b>1 Long, 8 Short Beeps</b>	Display / retrace test failed. Reseat the video card.

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## Phoenix BIOS Beep Codes

These audio codes are a little more detailed then the AMI codes. This BIOS emits three sets of beeps. For example, 1 -pause- 3 -pause 3 -pause. This is a 1-3-3 combo and each set of beeps is separated by a brief pause. Listen to this sequence of sounds, count them, and reboot and count again if you have to.

<b>1-1-3</b>	Your computer can't read the configuration info stored in the CMOS. Replace the motherboard.
<b>1-1-4</b>	Your BIOS needs to be replaced.
<b>1-2-1</b>	You have a bad timer chip on the motherboard. You need a new motherboard.
<b>1-2-2</b>	The motherboard is bad.
<b>1-2-3</b>	The motherboard is bad.
<b>1-3-1</b>	You'll need to replace the motherboard.
<b>1-3-3</b>	You'll need to replace the motherboard.
<b>1-3-4</b>	The motherboard is bad.
<b>1-4-1</b>	The motherboard is bad.
<b>1-4-2</b>	Some of your memory is bad.
<b>2- _ -</b>	Any combo of beeps after two means that some of your memory is bad, and unless you want to get real technical, you should probably have the guys in the lab coats test the memory for you. Take it to the shop.

3-1- <u>  </u>	One of the chips on your motherboard is broken. You'll likely need to get another board.
3-2-4	One of the chips on your motherboard that checks the keyboard is broken. You'll likely need to get another board.
3-3-4	Your computer can't find the video card. Is it there? If so, try swapping it with another one and see if it works.
3-4- <u>  </u>	Your video card isn't working. You'll need to replace it.
4-2-1	There's a bad chip on the motherboard. You need to buy another board.
4-2-2	First check the keyboard for problems. If nothing, you have a bad motherboard.
4-2-3	Same as 4-2-2.
4-2-4	One of the cards is bad. Try yanking out the cards one by one to isolate the culprit. Replace the bad one. The last possibility is to buy another motherboard.
4-3-1	Replace the motherboard.
4-3-2	See 4-3-1
4-3-3	See 4-3-1
4-3-4	Time of day clock failure. Try running the setup program that comes with the computer. Check the date and time. If that doesn't work, replace the battery. If that doesn't work, replace the power supply. You may have to replace the motherboard, but that is rare.
4-4-1	Your serial ports are acting up. Reseat, or replace, the I/O card. If the I/O is on the motherboard itself, disable them with a jumper (consult your manual to know which one) and then add an I/O card.
4-4-2	See 4-4-1, but this time is your Parallel port that's acting up.
4-4-3	Your math coprocessor is having problems. Run a test program to double-check it. If it is indeed bad, disable it, or replace it.
Low 1-1-2	Your motherboard is having problems
Low 1-1-3	This is an Extended CMOS RAM problem, check your motherboard battery, and motherboard.

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## Award BIOS Post Codes

Unfortunately there are many versions of the Award BIOS, and they are supported not by one company, but by the motherboard maker. [Award's website](#) states "Award Software software products are sold to a board or system manufacturer ("hardware vendor"), who customizes them further before selling the system. Award Software cannot supply upgrades for a BIOS that has been subsequently modified by hardware vendors."

## **BIOS Upgrades**

With so many advances in technology, sometimes your computer may need a BIOS upgrade to take advantage of new devices, or make your computer perform better.

[eSupport.com](http://eSupport.com) is the world's oldest and largest provider of BIOS Upgrade technology with nearly 15 years of unparalleled excellence in the industry. eSupport.com is the **OFFICIAL AUTHORIZED** BIOS upgrade and support center for **Award BIOS** and **AMI BIOS (American Megatrends Inc.)**.

Take advantage of their free tools to examine your BIOS and learn more.

### [BIOS Agent](#)

The BIOS Agent is a simple, easy to use program that will automatically identify your computers BIOS and other system information. You'll quickly identify:

- BIOS Date
- BIOS Type
- BIOS ID String
- Motherboard OEM data
- Motherboard Chipset
- Super I/O data
- CPU data
- BIOS ROM data
- Memory data

### [BIOS Wizard](#)

The BIOS Wizard is a simple and easy to use program that will examine and identify the BIOS and Chipset on your system.