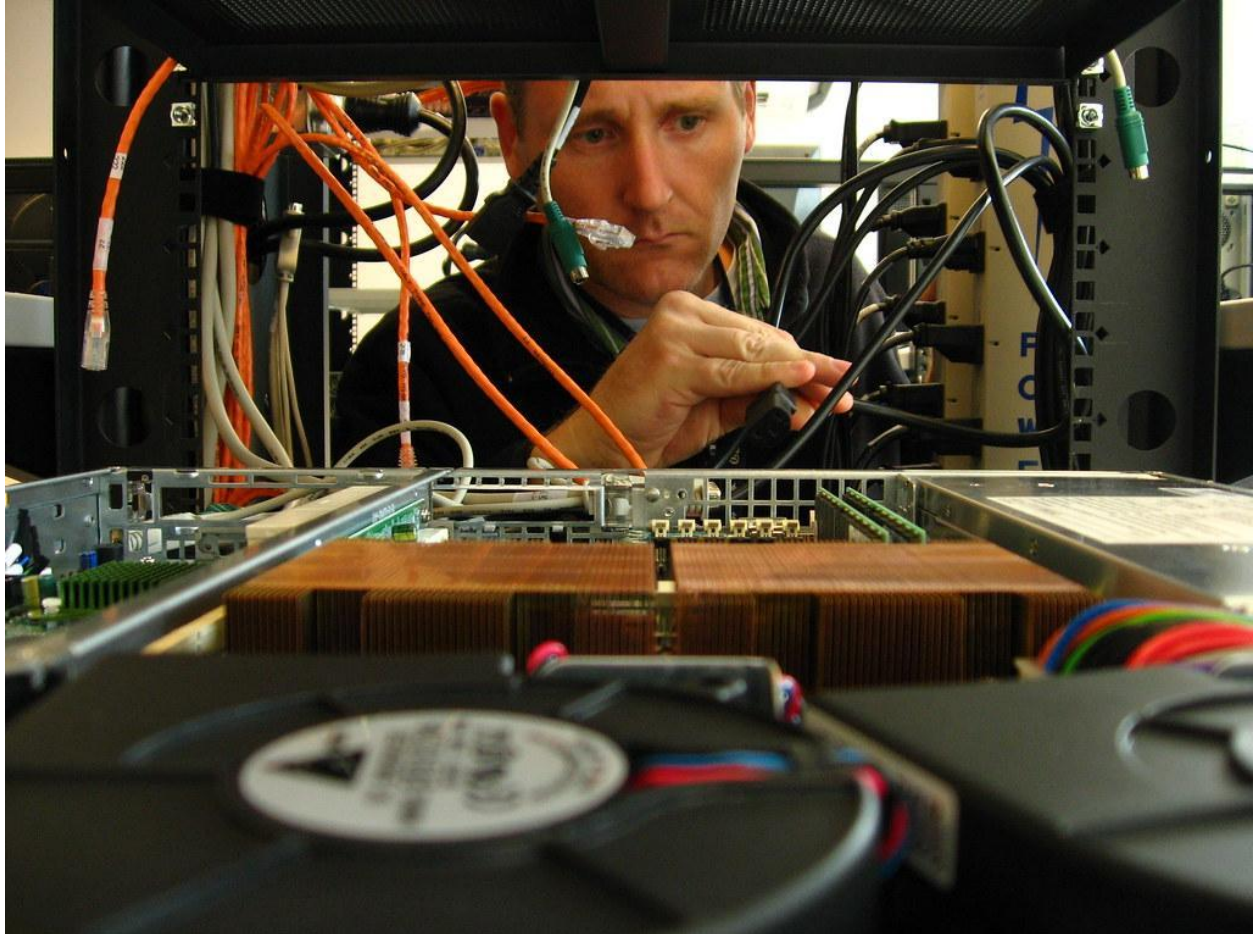




Beep Code Tutorial for computer repair

Computer beep codes are diagnostic sound signals emitted during the Power-On Self-Test (POST) to indicate hardware problems when the display is unavailable. Interpreting these codes requires knowing your motherboard's BIOS manufacturer (e.g., AMI, Award, Phoenix, Dell) as codes vary between them.

General Troubleshooting Steps

Listen Carefully: Turn on the computer and listen to the sequence of long and short beeps. Note the number and pattern of the beeps and the pauses between them. The sequence often repeats.

Identify your BIOS Manufacturer: The manufacturer's name is typically displayed on the screen during startup if the display is working. If not, check your motherboard or computer documentation, or look for a label on the motherboard itself.

Consult the Specific Code List: Use the appropriate table below (or your manufacturer's documentation) to match the beep pattern to the potential hardware error.

Troubleshoot the Indicated Component: Common solutions involve reseating the component (unplugging it and plugging it back in firmly), checking connections, or replacing the faulty part.

Common BIOS Beep Codes

Beep Code Pattern	AMI BIOS Meaning	Award/Phoenix BIOS Meaning	Common Action
1 Short	DRAM refresh failure	Normal POST, computer is OK	Reseat/replace RAM; if boot is normal, no action needed
2 Short	Parity error in base 64KB memory	Non-specified error (check screen for details)	Reseat/replace RAM
3 Short	Base 64KB RAM failure	(Usually part of a pattern)	Reseat/replace RAM
4 Short	System timer failure	Motherboard timer not operational	Reseat expansion cards; replace motherboard
5 Short	Processor (CPU) failure	Processor error	Reseat/replace CPU or motherboard
6 Short	Keyboard controller (Gate A20) error	Keyboard controller failure	Check keyboard connection; replace keyboard or motherboard

7 Short	Virtual mode exception error (CPU fault)	Processor or motherboard error	Reseat/replace CPU or motherboard
8 Short	Display memory R/W test failure	Graphics card memory error	Reseat/replace graphics card
9 Short	ROM BIOS checksum failure	CMOS battery error	Clear CMOS; replace CMOS battery or motherboard
10 Short	CMOS shutdown register failure	Error in CMOS shutdown register	Clear CMOS; replace motherboard
11 Short	Cache memory failure	Error in external cache memory	Replace motherboard
1 Long, 2 Short	Video card memory issue	Graphics card error (no display)	Reseat/replace graphics card
1 Long, 3 Short	Conventional/Extended memory failure	Video card not detected/insufficient memory	Reseat/replace RAM or graphics card
Continuous	Power supply error or memory/video failure	Memory or graphics card not detected	Check power supply unit (PSU), reseat RAM/GPU

Source:

Note: For Dell, HP, and other major manufacturers, the codes may be specific to their systems. Always consult the specific documentation for your computer model if possible.