

Computer Training & Troubleshooting Guide

Stage #1

- * BIOS/CMOS → Loading → POST
- * Assignment of System Resources (IRQ's, I/O Addresses, DMA's, Memory Addresses)
- * Trouble Shoot Hardware Issues
- * Last Step Of Stage #1 is the Boot Sequence of Stage #2 Storage.

Basic Computer

- Motherboard
- CPU
- Memory (Constant Beep)
- Video Card (1 Long, 3 Short Beeps)
- Power Supply

If a problem occurs in **stage #1** it is a hardware, BIOS/CMOS related issue.

If a problem occurs in **stage #2** it is probably a Software related issue (95% of the time – Operating System, MBR / Boot Sector, Device Driver, Virus, Trojan, Malware), or Hardware (5% of the time - HDD or System Memory).

Stage #2

- * Bootable Storage Devices
- * Pause boot Process → Press F8

Storage Devices

- * Hard Disk Drive (HDD)
 - PATA
 - SATA
- * RAID (0,1,5,10, 0+1)
- * DVDRW± CDRW
- * Flash Memory
- * Floppy Drive

Connectivity Method

- * IDE Controller
- * Sata Controller
- * USB 2.0, USB 1.1
- * IEEE 1394 (Firewire)
- * Bluetooth
- * NIC (802.3, 802.11a,b,g,n)
- * Parallel Port (Lpt1, Lpt2)
- * Serial Port (Com1, Com2, Com3, Com4)
- * Infrared

Media Type (CD / DVD Only)

- CDROM, CDR, CDRW
- DVD 5 (Single Sided / Single Layer)
 - * DVDR+, DVDRW+
 - * DVDR-, DVDRW-
- DVD 9 (Single Sided / Double Layer)
 - * DVDR+, DVDRW+
 - * DVDR-, DVDRW-
- DVD 10 (Double Sided / Single Layer)
 - * DVDR+, DVDRW+
 - * DVDR-, DVDRW-
- DVD 18 (Double Sided / Double Layer)
 - * DVDR+, DVDRW+
 - * DVDR-, DVDRW-
- Blueray, Holographic DVD

File Format Type

- .jpg (picture)
- .tif (picture)
- .bmp (picture)
- .mp3 (audio, music)
- .wma (audio, music)
- .rm (audio, music)
- .mpg (movie)
- .avi (movie)
- .mov (movie)
- .iso (Virtual CD/DVD image)
- .vcd (Virtual CD/DVD image)
- .nrg (nero CD/DVD image)
- .tib (Acronis Partition Image)
- .gho (ghost Partition Image)

File System Type

- Windows**
 - FAT 12
 - FAT 16
 - FAT 32
 - NTFS
 - CDFS
- Linux**
 - Reiser FS5
 - GFS
 - OCFS
 - ODS-5
 - OCFS2
 - NILFS
 - GFS2

Storage Considerations

Capacity – What is the **storage capacity** (size/volume) of the storage to be used.

Compatibility - Is the storage **media** compatible with other storage / electronic devices (like car CD, or TV DVD player).

Connectivity – Does the storage device provide **fast** and **available** data transfers.

Safety – Is the storage media **safe** to store data – Short vs. Long term.