Computer Repair

Build. Configure. Troubleshoot.

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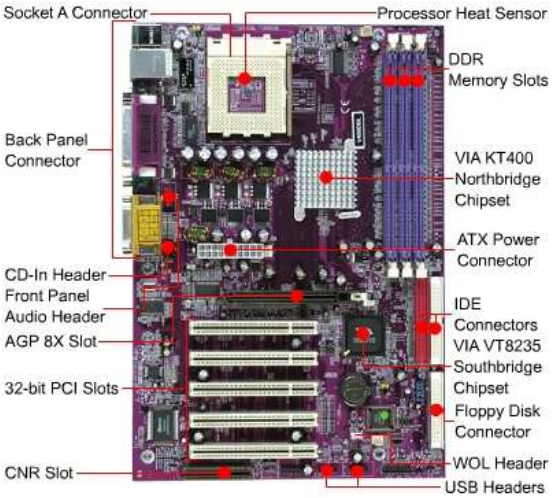
Core PC Components

To see how a PC works, let's start with the pieces that come together to make up the machine. The following are the components common to PCs in the order they're typically assembled:

Case -- If you're using a laptop, the computer case includes keyboard and screen. For desktop PCs, the case is typically some type of box with lights, vents, and places for attaching cables. The size of the case can vary from small tabletop units to tall towers. A larger case doesn't always imply a more powerful computer; it's what's inside that counts. PC builders design or select a case based on the type of motherboard that should fit inside.



Motherboard -- The primary circuit board inside your PC is its motherboard. All components, inside and out, connect through the motherboard in some way. The other components listed on this page are removable and, thus, replaceable without replacing the motherboard. Several important components, though, are attached directly to the motherboard. These include the complementary metal-oxide semiconductor (CMOS), which stores some information, such as the system clock, when the computer is powered down. Motherboards come in different sizes and standards, the most common as of this writing being ATX and MicroATX. From there, motherboards vary by the type of removable components they're designed to handle internally and what ports are available for attaching external devices.

Power supply -- Other than its CMOS, which is powered by a replaceable CMOS battery on the motherboard, every component in your PC relies on its power supply. The power supply connects to some type of power source, whether that's a battery in the case of mobile computers, or a power outlet in the case of desktop PCs. In a desktop PC, you can see the power supply mounted inside the case with a power cable connection on the outside and a handful of attached cables inside. Some of these cables connect directly to the motherboard while others connect to other components like drives and fans.

Central processing unit (CPU) -- The CPU, often just called the processor, is the component that contains the microprocessor. That microprocessor is the heart of all the PC's operations, and the performance of both hardware and software rely on the processor's performance. Intel and AMD are the largest CPU manufacturers for PCs, though you'll find others on the market, too. The two common CPU architectures are 32-bit and 64-bit, and you'll find that certain software relies on this architecture distinction.

Random-access memory (RAM) -- Even the fastest processor needs a buffer to store information while it's being processed. The RAM is to the CPU as a countertop is to a cook: It serves as the place where the ingredients and tools you're working with wait until you need to pick up and use them. Both a fast CPU and an ample amount of RAM are necessary for a speedy PC. Each PC has a maximum amount of RAM it can handle, and slots on the motherboard indicate the type of RAM the PC requires.

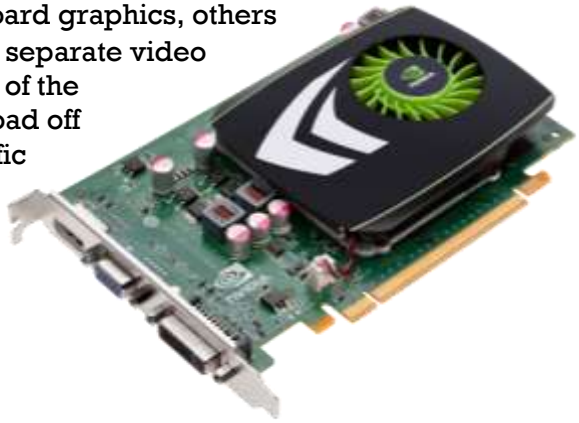
Drives -- A drive is a device intended to store data when it's not in use. A hard drive or solid state drive stores a PC's operating system and software, which we'll look at more closely later. This category also includes optical drives such as those used for reading and writing CD, DVD and Blu-ray media. A drive connects to the motherboard based on the type of drive controller technology it uses, including the older IDE standard and the newer SATA standard.

Cooling devices -- The more your computer processes, the more heat it generates. The CPU and other components can handle a certain amount of heat. However, if a PC isn't cooled properly, it can overheat, causing costly damage to its components and circuitry. Fans are the most common device used to cool a PC. In addition, the CPU is covered by a metallic block called a heat sink, which draws heat away from the CPU. Some serious computer users, such as gamers, sometimes have more expensive heat management solutions, like a water-cooled system, designed to deal with more intense cooling demands.

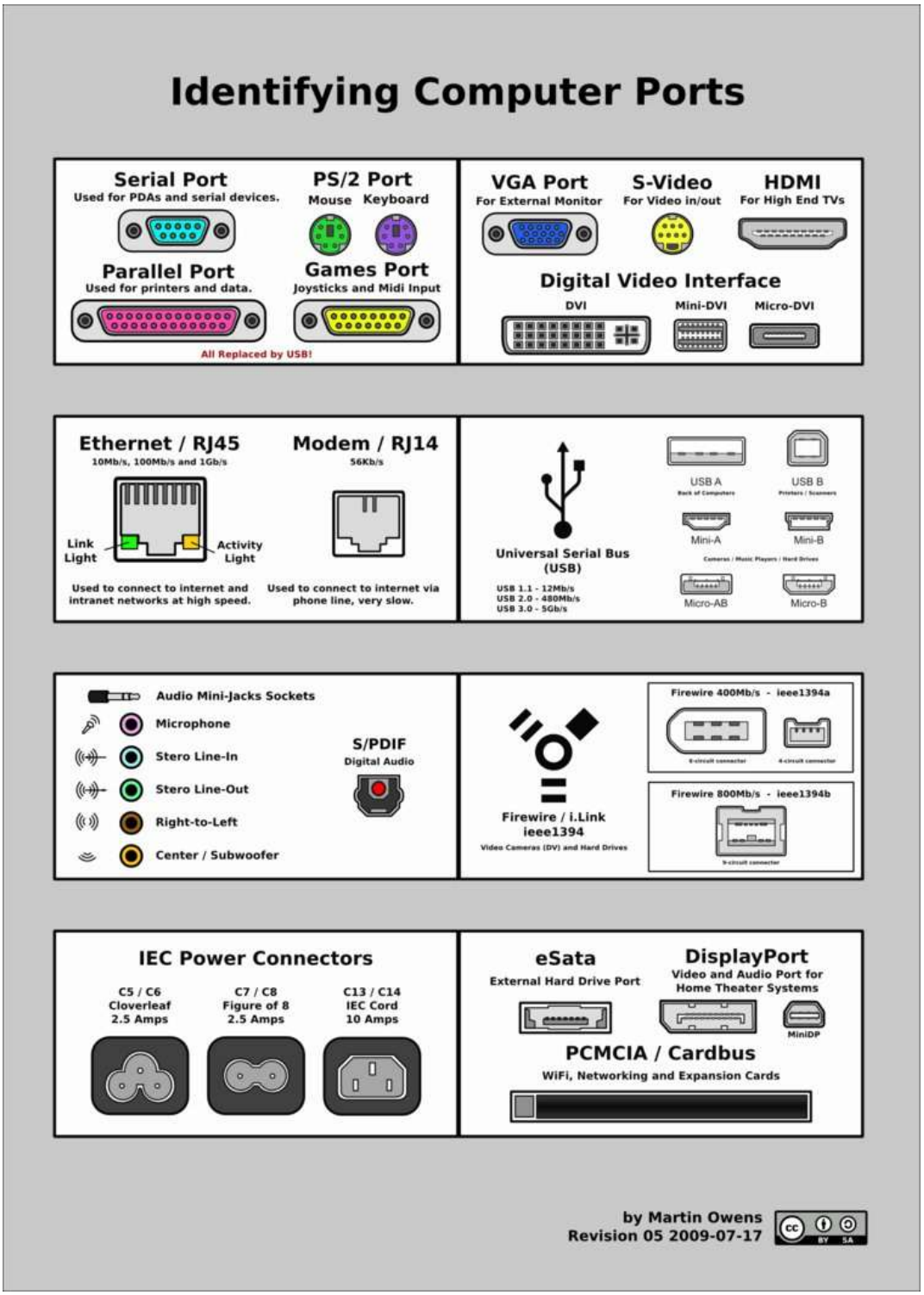
Cables -- All the components we've mentioned so far are connected by some combination of cables. These cables are designed to carry data, power or both. PCs should be constructed so that the cables fold neatly within the case and do not block air flow throughout it.
A PC is typically much more than these core components. Next, we'll look at the ports and peripherals that let you interact with the computer and how you can add even more components using expansion slots.

Ports, Peripherals and Expansion Slots

The core components we've looked at so far make up a PC's central processing power. A PC needs additional components, though, for interacting with human users and other computers. The following are the PC parts that make this happen:



Graphics components -- While some motherboards have on-board graphics, others include what's called an expansion slot, where you can slide in a separate video card. In both cases, the video components in a PC process some of the complex graphics data going to the screen, taking some of the load off your CPU. A motherboard accepts video cards based on a specific interface, such as the older AGP standard or one of the newer PCI standards.



Ports -- The word port is often used to describe a place on the outside of your PC where you can plug in a cable. Describe a port by its use, such as a USB port or an Ethernet port. (Note that the word port is also used to describe a software connection when two pieces of hardware try to communicate.) Many ports are affixed directly to the motherboard. Some of the ports you'll find on a PC include the following:

1. USB ports
2. network ports, typically Ethernet and FireWire
3. video ports, typically some combination of VGA, DVI, RCA/component, S-Video and HDMI
4. audio ports, typically some combination mini analog audio jacks or RCA
5. legacy ports, or ports that follow old standards which are rarely used in modern computers, such as parallel printer ports and PS2 ports for a keyboard and mouse

Peripherals -- Any piece of hardware that isn't mounted inside a PC's case is called a peripheral. This includes your basic input and output devices: monitors, keyboards and mice. It also includes printers, speakers, headphones, microphones, webcams and USB flash drives. Anything you can plug in to a port on the PC is one of the PC's peripherals. The essential peripherals (such as monitors) aren't necessary on laptops, which have them built in instead.

Expansion slots -- On occasion, you'll want to add components to a PC that don't have a designated slot somewhere on the motherboard. That's why the motherboard will include a series of expansion slots. The removable components designed to fit into expansion slots are called cards, probably because of their flat, card-like structure. Using expansion slots, you can add extra video cards, network cards, printer ports, TV receivers and many other custom additions. The card must match the expansion slot type, whether it's the legacy ISA/EISA type or the more common PCI, PCI-X or PCI Express types.
Now that we've looked at the parts of a PC, let's press the power button and see what makes it boot.

The Top 5 Most Common Computer Problems

If you have a PC, then you have most likely suffered from computer problems. Most people have accepted that there PC will eventually crash due to a virus or some massive error. However this is a myth. Your PC is built to last more than a decade. However you must keep well tuned for it to make its third birthday. Nevertheless, most people would rather buy a shiny new PC rather than spend an hour trying to fix computer problems on there 2 year lap top or desktop. After another two year after their purchase lack of maintenance will cause their new PC to lose its performance speed. What's next you guess, $3000 Windows Vista Ready PC. This is known as the consumer vicious cycle.

Why have does your computer have problems?

Well, the biggest problem that your computer has is its owner. More than 80% of computer problems stem from neglecting to perform simple maintenance task such as cleaning your registry, emptying your cache files and updating software regularly. You would be reading this article from a five year old machine running on Windows 98 operating system. So, lets take a look at the top five computer problems and how to avoid them.

1. Computer has performance has slowed.

This is the number one complaint from most users. There are several reason why this has occurred. However, most can attributed to lack of maintenance. Fragmented data, corrupted registry, spyware, and load of unnecessary programs and services running can all eat away at your PC speed and performance. Manage your programs and cleaning your registry would easily award you a 30% gain in performance speed.

2. Lockup, freezes, and blue screens of death.

This is a another common computer problem. However, this particular issue is a bit more serious; therefore, it needs a few diagnostic steps. In most cases this problems are caused by spyware. To avoid this problem update your anti-spyware program daily. Having the most up to date signatures will help you avoid having a serious spyware problem. However, if you have concluded that your PC is spyware free. You should update your hardware drivers. The computer cannot communicate with various hardware components without an up to date driver. When it cannot find a driver, the CPU locks up. Also, increasing your virtual memory can also help to avoid freezes. Virtual Memory will allow to you get more use out your computer's RAM. Check the resource box for more info on the subject.

3. The computer spontaneously reboots or turn itself off.

This computer problem can be usually attributed to a hardware issue. Usually its the power supply is dying or in most cases a dirty or defective cooling fan. The computer trying to cool itself by automatically switching off. So, if you feel a bit of extra heat coming out the computer. Clean the fan and make sure it running properly. If your fan is functional, check your power supply. Also, you will be surprised how many people fail to make sure the cables are attached tightly. This be the cause of this particular computer problem.

4. Strange noises and vibrations.

This is almost totally a hardware issue. You computer is made up of thousands of parts. Its not unheard of that one of them can become unhinged. Overheating can cause expansion of wires and melt some sensitive. High pitch noises such as squealing or whining sounds can be cause electronic components. Whatever the reason, you conduct a small investigation. Remove the case and run the computer to discover the origin of the computer problem. If its not a simple matter such as a loose wire or fan issue, it may be time to call a computer tech.

5. Your home page, default search engine, or web browser has changed itself.

This is also known as "high-jacking". Spyware has been installed on your computer via social networking or from email link. This action has allowed spyware to install a java script into your web browser. The spyware then sends a message to your browser to change your user settings. For example change your home page to another web page.

As you have discovered from reading the article, the most common computer problems can be handle quite easily by simple maintenance of your PC. Net time you are suffering from computer problems. Take a few minutes to run some diagnostic test before rushing out to computer technical center claiming your PC is broken. When all you need to do was just make sure it was plugged in.

For more answers to computer problems:

http://www.delete-computer-history.com/fix-computer-problems.html

For tips and tweaks to increase PC speed"

http://www.delete-computer-history.com/how-to-speed-up-pc.html Article Source: http://EzineArticles.com/?expert=Gaelim_Holland

Top 10 Computer Problems

By Jonathan Langdon, eHow Contributor

Insufficient Memory

Processor-intensive programs also demand a lot of memory. Random access memory (RAM) aides the central processing unit (CPU) by storing instructions linked to common operations. Without enough RAM, software crashes and slowdowns can occur.

Adware

Mysterious pop-up messages and random banner ads that hamper computer performance are symptoms of adware. The only purpose of adware is to violate computer screens with advertising. Adware is annoying, but is generally easy to remove.

Slowdown

Computers are supposed to perform processes faster and better, which makes the occasional bout of slowdown more pronounced. Video out of sync with audio, longer than normal load times and stuttering mouse movement all indicate either a fragmented hard drive or an overtaxed CPU.

Weird Noises

Whirling fans are sometimes accompanied by other clicks and flutters that could signal either a pending mechanical failure or that a part is loose. The problem is usually minor and can be fixed by shifting a wire's path or by tightening screws.

Failing Power Supply

A computer that suddenly shuts off or has difficulty starting up could have a failing power supply. Without sufficient power, a computer will not operate.

Overheating

Computer components generate heat during operation. If the case lacks a sufficient cooling and ventilation setup, the computer parts could burn themselves out. Under rare circumstances, when the electrical system is damaged, the computer could become a fire hazard.

Bad Hard Drive Sectors

Over the course of a hard drive's life, parts of the hard drive begin to fail. Mechanical problems are possible, but the hidden threats are bad sectors. Data stored in bad sectors can become corrupted and can cause problems with data and settings throughout the computer.

Rootkits

A rootkit gives a remote user complete control over a victim computer. The computer bearing a rootkit often becomes a tool to attack other computers, and at worst implicates the unwitting user in the crimes of someone else.

Spyware

Spyware can monitor computer processes and log key strokes. Banking records, passwords and other forms of private information are recorded and then exported, and this could result in identity theft.

Viruses

Viruses are computer programs designed to debilitate a computer and then use it as a carrier to spread the virus to other computers. An infected computer is a danger to itself and every computer on its network. No computer is truly immune to viruses.

Top 10 Most Common Computer Errors and Their Troubleshooting Tips

The most common top 10 computer issues and the tips to troubleshoot and fix those problems are as follows:

1) The computer is unable to start up – If the computer does not turn on when you press the power button, the following suggestions may help you to determine why the computer will not start up. First of all, check if the computer is plugged in to an AC outlet properly. Plug another electrical device into the outlet to be sure that the outlet is providing adequate power.

2) The computer screen is blank – If the screen is blank, the computer may not be set to display the image on the computer screen. First, check if the monitor is plugged in to a power outlet and is connected to the computer securely and make sure the monitor power button is on. If the power light is not on, it means that the outlet is not delivering power to the monitor. Fixing the power outlet in such cases should help you.

3) Trouble with video card – If the power light of the computer and monitor is on and nothing comes up on the screen when you start your computer then there must be something wrong with video card. You should take your computer to a repair shop or change its video or the graphics card with a new one.

4) OS or some Software is functioning abnormally – If the Operating System (OS) or some other software is unresponsive or responds abnormally, follow these tips. Restart your computer and run a virus scan. For this purpose you should have a reliable antivirus software installed on the computer to fix this issue.

5) Windows do not boot properly – If windows do not boot properly then you should reinstall windows with the windows recovery disk. Most of the times, this should help you get rid of the problem.

6) The computer is on but not responding – If the computer is turned on but not responding to software or keyboard commands, then it must be frozen or halted. Press and hold the power button for at least 5 seconds, it will be turn off. Now restart your computer. This should fix things up.

7) An external device is not working – If an external device does not function as expected, turn it on according to Manufacturers instruction; be sure that all device connections are secure and receiving electrical power and compatible with the operating system. And that the correct drivers are installed and updated.

Five Best Windows Maintenance Tools

CCleaner

Any application called CCleaner where the first 'C' stands for Crap has to be good, right? Okay, maybe not, but this one is, thoroughly cleaning out your web browser, Recycle Bin and temporary files, registry, unnecessary third-party application trash, and oh so much more. Running CCleaner on your system promises to free up space, keep your computer running smoothly, and protect your privacy. It's also very fast and very easy to use.

Revo Uninstaller

Revo Uninstaller is a feature-rich replacement for the Windows default Add or Remove Programs feature (or Uninstall Programs in Vista). Why use Revo Uninstaller instead? Because not only does it just uninstall a program—it also removes all traces of the program from your system where the basic uninstaller may not. Revo also boasts a Hunter Mode for uninstalling apps by dragging a cross-hair onto the app you want to uninstall, whether *it's* the app's system tray icon or just a shortcut. It even helps manage your startup applications.

Auslogics Disk Defrag

Auslogics Disk Defrag is a fast and effective disk defragmenter intended to replace the Windows default. It's quick and easy to use, and Auslogics DD provides a nicely formatted report of the latest defrag, including a motivating "Defragmentation has increased this computer performance by X%" message.

JkDefrag

JkDefrag is an open-source disk defragmenting tool. Unlike Auslogics DD, JkDefrag boasts command line support to allow you to set up your disk defrags on a schedule. Perhaps even better, JkDefrag has an installable screensaver that will automatically start defragging your hard drive whenever the screensaver is launched—it even displays the defrag process. Out of the box JkDefrag isn't the most attractive application you'll ever use, but when teamed with thepreviously mentioned JkDefrag GUI, it's just as attractive and easy to use as any defragger you'll find.

Spybot - Search & Destroy

Even if you're using one of the best antivirus applications available, you may still end up with some form of malware on your computer. Spybot-S&D will ensure that it isn't there for long. Apart from removing spyware, adware, dialers, keyloggers, and trojans, Spyware-S&D can also cover your usage tracks—like browsing or file history—to give you enhanced privacy on your computer.

http://lifehacker.com/397792/five-best-windows-maintenance-tools

Five Best Antivirus Applications

Computer viruses are increasingly sophisticated and pervasive. If you can't afford to run your computer without some sort of antivirus software installed, check out these five popular options to protect your PC.

Earlier this week we asked you to share your favorite antivirus application; now we're back with the five most popular apps to help you secure your PC and keep it running virus free.

Avast! (Windows/Linux, Basic: Free, Premium $39.95 per year) Having just celebrated its 21st birthday, Avast! is an old player in the antivirus market. Avast! has built up a solid following based on their philosophy of offering dependable and effective antivirus protection for free to home users. In addition to standard antivirus scanning, Avast! offers a variety of resident protection modules that cover different aspects of your computer like instant messaging, email, P2P applications, and more.

Microsoft Security Essentials (Windows, Free) Microsoft Security Essentials is the newest addition to Microsoft's computer protection software. It replaces the Windows Live OneCare subscription service and Windows Defender by providing more comprehensive coverage than either of the two originally provided. Microsoft Security Essentials is free for all Windows users and provides protection against a variety of threats including viruses, malware, adware, and spyware.

Avira (Windows, Basic: Free, Premium: $30 per year) Avira is another antivirus app available for free, although the free version of Avira doesn't offer as many bells and whistles as some of the other free offerings in today's Hive. Nonetheless, you still get dependable antivirus scanning and protection from malware and rootkits. In addition to the free antivirus software, Avira also offers a Linux Live CD recovery disc loaded with Avira and other free system recovery tools to help you get back on your feet if fighting the virus infection from within Windows just isn't cutting it.

ESET NOD32 Antivirus (Windows, $39.99 per year) NOD32 has built a large based of users over the years by having a low number of false positives and a high rate of early detection thanks to their community-sourced ThreatSense detection system. As a fun bit of trivia, American users may know the application as "NOD" and pronounce the acronym as an actual word, but the name is actually an acronym that hails from the Eastern European origins of the application. From the Wikipedia entry on NOD32:

The acronym NOD stands for Nemocnica na Okraji Disk ("Hospital at the end of the disk"), a pun related to the Czechoslovakian medical drama series Nemocnica na okraji mesta (Hospital at the End of the City).

AVG (Windows, Basic: Free, Premium: $34.99 per year) The free offering from AVG is one of the lightest, feature-wise, among the nominations in this Hive Five. That said, if you're looking for a basic antivirus application that will scan your computer, keep an eye out for spyware, and keep you from visiting malware and virus laden websites (via their LinkScanner protection), AVG is a solid free offering.

Common Troubleshooting Techniques & Strategies

http://www.directron.com/strategy.html

Here are five common-sense techniques and strategies to solve common computer hardware problems.

(1) Trial-and-error

Personal computers are highly modular by design. The most powerful trouble-shooting technique is to isolate the problem to a specific component by trial-and-error. Swap compatible components and see if the system still works. Try different peripherals on different machines and see if the same problem occurs. Make one change at a time.

(2) "It's the cable, s-----."

More than 70% of all computer problems are related to cabling and connections. Ensure all cables are connected firmly. IDE and floppy ribbon cables and power cables can often go loose. Ensure microprocessor, memory modules, and adapters such as video card and sound card are inserted correctly and didn't "pop-up" during transportation.

(3) Don't be frustrated!

Don't be afraid of computer problems. It is often the best opportunity to learn. Trouble-shooting is part of the fun of owning a computer. Imagine the satisfaction you could get by solving a problem yourself.

Of course the fun could ran out quickly once you are frustrated and have spent too much time on the same problem. If you feel frustrated, it's time to leave it for a while and go back with some new ideas or call someone who can help. Rule of thumb: You shouldn't spend more than three hours on the same problem at one time.

(4) Take notes!

Take notes of what you have done and all the error messages. You may need to use them later. For instance, when you see an unusual blue screen with an error message, copy the entire message onto a piece of paper. In many situations, that message may point to the right direction in getting the problem solved quickly.

(5) Take a look?

It's OK to open a computer case and take a look inside. There is only 5V and 12V DC voltage supplied to the components outside the power supply. Those who have never seen the inside of a computer are often amazed by how simple it looks. **Of course, still always power down and unplug the power cord first.**

Troubleshooting Tips for New Monitors

You are encouraged to make links to this article from your website and tell your friends

Here are some basic trouble shooting tips for new monitors:

1) The picture does not appear
Check to make sure the signal cable is firmly connected in the socket.
Check to see if the computer system's power is ON.
Check that the Brightness Control is at the appropriate position, not at the minimum.

2) The Screen is not synchronized
Check to make sure the signal cable is firmly connected in the socket.
Check that the output level matches the input level of your computer.
Make sure the signal timing of the computer system is within the specification of the monitor.

3) The position of the screen is not in the center
Adjust the H-Size, H-Phase or V-Size, V-Center controls.
Check if the signal timing of the computer system is within the specification of the monitor.

4) The screen is too bright or too dark
Check if the Brightness or contrast control is at the appropriate position, not at the maximum or minimum.
Check if the specified voltage is applied
Check if the signal timing of the computer system is within the specification of the monitor.
Especially, check the horizontal frequency.

5) The screen is shaking
Move all objects that emit a magnetic field, such as a motor or transformer, away from the monitor.
Check if the specified voltage is applied.
Check if the signal timing of the computer system is within the specification of the monitor.

Troubleshooting Tips for a New Motherboard

More than 70% of all computer problems are related to cabling and connections. Ensure all cables are connected and connected firmly. IDE and floppy ribbon cables and power cables can often go loose. Ensure microprocessor, memory modules, and adapters such as video card are inserted correctly and didn't "pop-up" due to vibration.

System has no power at all. Power light does not illuminate, fan inside the power supply does not turn on, and indicator light on keyboard does not turn on.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Power cable is unplugged.	Visually inspect power cable.	Make sure power cable is securely plugged in.
Defective power cable.	Visual inspection, try another cable.	Replace cable.
Power supply failure.	Power cable and wall socket are OK, but system is still dead.	Contact technical support
Faulty wall outlet;circuit breaker or fuse blown.	Plug device into socket know to work and test.	Use different socket, repair outlet, reset circuit breaker or replace fuse.

System inoperative. Keyboard lights are on, power indicator lights are lit, and hard drive is spinning.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Expansion card is partially dislodged from expansion slot on the motherboard.	Turn off computer. Take cover off system unit. Check all expansion cards to ensure they are securely seated in slots.	Using even pressure on both ends of the expansion card, press down firmly on expansion card.
Defective expansion card.	Turn computer off. Remove an expansion card.	Make sure expansion card is secure in expansion socket.

System does not boot from hard disk drive, can be booted from floppy disk drive.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Connector between hard drive and system board unplugged.	When attempting to run the FDISK utility described in the HARD DISK section of the manual you get a message, INVALID DRIVE SPECIFICATION.	Check cable running form disk to disk controller on the board. Make sure both ends are securely plugged in; check the drive type in the Standard CMOS Setup (in your motherboard manual).
Damaged Hard Disk or Disk Controller.	Format hard disk; if unable to do so, the hard disk may be defective.	Contact Technical Support.

Error message reading "SECTOR NOT FOUND" or other error messages indication certain data is not allowed to be retrieved.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
A number of causes could be behind this.	Use a file by file backup instead of an image backup to backup the Hard Disk.	Back up any salvageable data. Then do a low level format, partition, and high level format of the hard drive(see Hard Disk section of your manual for instructions). Re-install all saved data when completed.

After install an expansion card (network card, tape drive card, etc.) the system no longer works properly.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
No power to monitor.	All or part of the system may be inoperable. The new card may work but a mouse or COM port may not work.	Change the interrupt or RAM address on the new expansion card. See the documentation that came with the new card in order to change pin settings. many expansion devices come with proprietary software that will assist you in doing this.

Screen message says "Invalid Configuration" or "CMOS Failure."

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Incorrect information entered into the configuration (setup) program.	Check the configuration program. Replace any incorrect information.	Review system's equipment. Make sure correct information is in setup.

Screen is blank.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
No power to monitor.	Power connectors may be loose or not plugged in.	Check the power connectors to monitor and to system. Make sure monitor is connected to display card, change I/O address on network card if applicable.
Monitor not connected to computer.		See instructions above.
Network card I/O address conflict.		See instructions above.

System does not boot from hard disk drive, can be booted from USB drive.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Connector between hard drive and system board unplugged.	When attempting to run the FDISK utility described in the HARD DISK section of the manual you get a message, INVALID DRIVE SPECIFICATION.	Check cable running form disk to disk controller on the board. Make sure both ends are securely plugged in; check the drive type in the Standard CMOS Setup (in your

Problem

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Memory problem, display card jumpers not set correctly.		Reboot computer. Re-install memory, make sure that all memory modules are installed in correct sockets. Check jumper and switch settings on display card. See display card section for information of settings.
Computer virus.		Use anti-virus programs (McAfee/PC-cillin, E-port, etc) to detect and clean viruses.

C: drive failure.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
SETUP program does not have correct information.		Boot from drive A: using DOS system disk. Input correct information to SETUP program.
Hard Drive cable not connected properly.		Check Hard drive cable.

Cannot boot system after installing second hard drive.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Master/Slave jumpers not set correctly.		Set master /Slave jumpers correctly.
Hard Drives not compatible / different manufacturers.		Run SETUP program and select correct drive types. Call drive manufactures for compatibility with other drives.

Missing operating system on hard drive.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
CMOS setup has been changed.		Run setup and select correct drive type.

Trouble Shooting Tips after Installing a New Hard Drive

1. **Basic Troubleshooting Tips after Installing a New Hard Drive**
   Based on Seagate IDE hard drives.

   If you have installed your drive and it does not function properly, perform the following **basic checks**:

   Warning: Always turn off the computer before changing jumpers or unplugging cables and cards. Wear a ground strap or use other antistatic precautions while working on your computer or handling your drive.

- **Verify compatibility**. Verify that the host adapter and drive are appropriately matched to each other and to your computer. Refer to the relevant documentation for details.
- **Check all cards**. Verify that all cards are seated in their slots on the motherboard and secured with mounting screws.
- **Check all connectors and cables**. Make sure all ribbon and power cables are securely connected. Ribbon cables are easily damaged, especially at the connector. Try a new cable that you know is good. Make sure no connector pins are bent. Verify that pin 1 on the interface cable is aligned with pin 1 on the drive and host adapter (see Figure 2 on page 6).
- **Verify jumper settings**. Review the instructions in this guide and in your host adapter installation guide. Make sure all appropriate jumpers are installed or removed as necessary.

- **Check your power-supply specifications**. Each time you add a new device to your computer, make sure your cornputer's internal power supply can support the total power demand. If necessary, consult your dealer for a new power supply.
- **Verify the drive-type settings in the system setup program**. The drive-type settings in the system BIOS must not exceed the physical specifications of your drive. Also, the settings must not exceed the limitations set by the operating system and BIOS.
- **Check for viruses**. Before you use someone else's diskette in your system for the first time, scan the diskette for viruses.

Troubleshooting Tips for Cases and Power Supplies

- The most important part of a computer case is its power supply. Unfortunately, it's also the part that has most of the problems for a case. There are two situations when a new power supply may appear dead on arrival (DOA) when they are actually working as described below:

- Most cases and power supplies these days are made and tested in China and other Asian countries where 220V electricity is used. Desktop computer power supplies do not switch the power voltage automatically. (Most notebook computers do!) If the factory forgets to turn the manual switch back to 110V for the North American market after testing, the power supply would appear DEAD if you use on a 110V-outlet. Therefore, ***always check the voltage setting on the back of a new power supply FIRST*** if it appears dead.

- Do not expect an ATX power supply to work by simply plugging the power and turning on the switch. ATX power supplies are soft-switched on and off by the motherboard and BIOS. Therefore, you must plug it to a working motherboard with a working microprocessor, memory and video card to work. If your computer does not turn on after you turn on the power switch, it may not necessarily mean a dead power supply. ***The problem might be with the motherboard, microprocessor, memory or video card instead.*** You must examine all these components to isolate the problem.

- The most effective technique to tell if a power supply is causing any problem is to use a different one to see if it solves the problem. If everything works with a different power supply, then the new power supply is most likely the troublemaker. Alternatively, you can plug the new power supply to an existing, working computer to see if it works there.

- Computer cases are highly modular. If your computer case is still under warranty, you don't have to send the entire case back if only one part of it is defective. For instance, send only the power supply back for exchange if only power supply is dead. The same is true for the face panel and cover. This would save you quite a bit of shipping and sometimes downtime.

- More than 70% of all computer problems are related to cabling and connections. Ensure that you all the power plugs are connected firmly, including power connections to your motherboard and all the drives.

- Make sure the cooling fan inside the power supply is working all the time. Reach out to feel the fan behind your case often. Clean the fan if necessary. If your case feels warmer than room temperature, check the power supply fan first. Most power supply fans are difficult to replace. You are better off to replace the entire power supply since the new one comes with a brand-new warranty.

- Before ATX form factor became popular, the compatibility between a power supply and a specific motherboard could be problematic. However, this problem nowadays does not happen very often any more.

- The rest of a case is mostly mechanical. You should be able to find a way to get around most of the problems if you are mechanically inclined.

Stop (blue screen) error caused by a device or driver

http://wer.microsoft.com/responses/Response.aspx/10/en-us/5.1.2600.2.00010100.2.0

Stop (blue screen) error caused by a device or driver

You received this message because a hardware device, its driver, or related software has caused a stop error, also called a *blue screen* error. This type of error means the computer has shut down abruptly to protect itself from potential data corruption or loss. In this case, we were unable to detect the specific device or driver that caused the problem.

The following troubleshooting steps might prevent the stop error from recurring. Try them in the order given. If one step does not solve the problem, then move on to the next one.

Steps to solve this problem

- Download and install the latest updates and device drivers for your computer
- Scan your computer for viruses
- Check your hard disk for errors

Steps to work around this problem

Warning

These steps are designed to address a particular problem but might do so by temporarily disabling or removing some functionality on your computer.

- Remove any new hardware or software to isolate the cause of the blue screen
- Restore your computer to an earlier state