

How to Speed Up a Slow Windows Computer for Free



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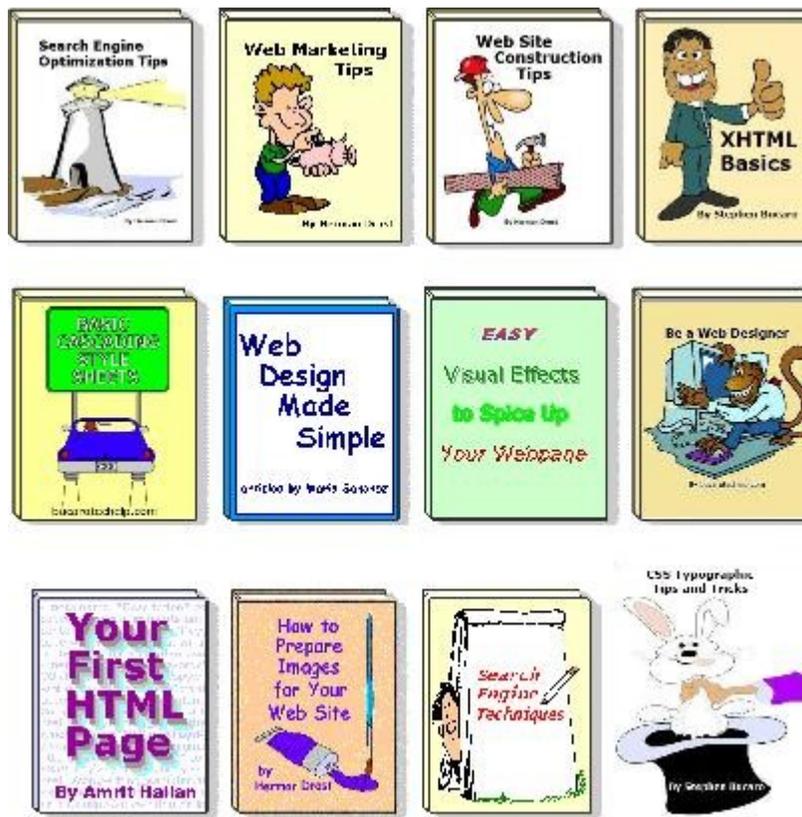
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Introduction

Does your computer run slower than a 69 AMC Gremlin? Before you toss it out that second floor window try a few things suggested in this ebook. There are many things that can make a computer run slow, and most of them can be easily fixed by you.

You can shut down unneeded applications running in the background. You can fix errors on, and defragment the hard drive. You can delete unnessecary entries in the registry. You can delete temporary files and empty the recyle bin. There are many other things you can do yourself to speed up Windows, and this ebook tells you how.

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1. Learn the basics

Windows PCs typically slow down as applications are installed and used. Each application increases the size of the Windows Registry file resulting in increasing the amount of time for the file to be processed and loaded. Whether using word processing, spreadsheets, internet, games or anything else, hard drives fill with temporary files that do not always get removed when no longer needed. Read on to learn of ways to help keep a PC running smoothly with little or no money.



Program icons running in the Taskbar

1. Stop all unused applications. The Taskbar is on the bottom edge of the screen (unless relocated by the user). In the right side of the Taskbar appears a group of small icons, collectively named the system tray. Each of these icons represent a program that has been at least partially started or is running "in the background". Regardless of state, each represents a reduction of available memory and processing power, or resources. Closing, exiting or canceling any unused icon returns those resources to the system, and becomes available for use by the application(s) started specifically by the user.

- There is a utility built in to Windows XP and Vista called the Process Explorer. The program file is `procexp.exe`. This will list all programs running on your Windows system. It is more comprehensive than the Task Manager, and hovering your mouse pointer over any program name will tell you what it is.
- A utility is built into Windows that can enable/disable taskbar programs and processes from automatically loading with Windows. To access it, go to Start > Run > type in "MSCONFIG" and click OK. If you do not know what a process does, Google its name. Do not disable processes if you do not know what they do, as some are necessary for your computer to function normally.
- A useful program called "Game Booster" by the people who wrote the Advanced SystemCare V3 software will temporarily disable unnecessary background processes and boost performance on your computer when you are actively using only one program; such as a game program or video editing software. When you are finished, you can resume "normal mode" and all the background processes will be reloaded.

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2. Do a shut down/reboot also known as a cold reboot. Some programs do not release memory properly when they close. Even doing a warm restart will not release some of the drivers and other core programs in memory. The computer has to be completely shut down and then restarted. The Windows system is designed to hold on to those programs for a period of time. Shutting down the system for 30 seconds will cause the chips to "forget" the settings, and they will start anew when you restart the system. Curing these "Memory Leaks" is as simple as rebooting the machine when it starts getting sluggish.

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A full Recycle Bin icon indicates there are files waiting to be deleted.

3. Empty the Recycle Bin. Simply deleting files from the disk doesn't really delete them at all, rather they are moved to a temporary holding area on the hard drive for easy restoration. This area is called the Recycle Bin and is usually displayed on the Desktop. Review the contents before emptying. Once emptied, the space on the hard drive that the data occupied is made available for reuse and the restoration of files emptied from the recycle bin becomes extremely difficult. Note that this will only speed up your computer if the hard drive is nearly full.

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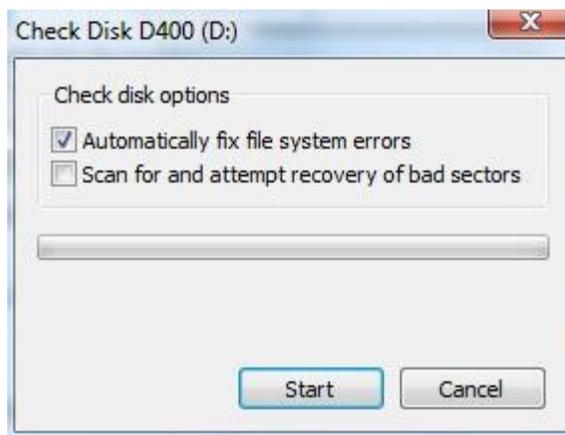
The "3D Image Commander" application is selected. Clicking

"uninstall" directly above it, will start the uninstall process.

4. Uninstall all applications that are no longer needed. When applications and games are installed to a Windows PC, in addition to copying files to the new application directory, some files are written in the Windows directory structure and dozens (or more) changes are made to the Windows Registry file. Most of these changes are not readily apparent to the user, so proper removal requires uninstalling the application through the Control Panel's "Add or Remove Program" or "Programs and Features" icon.

If the program is not listed in the Control Panel use the "uninstall" command provided by the application. Simply deleting the entire application directory is not the same as uninstalling, as all the files written to the Windows directory and changes to the Windows Registry file will remain and may be reloaded when the system is rebooted. Make sure that you do not uninstall any programs that are required by others. e.g. iTunes® will not work if Quicktime® is uninstalled, and many programs rely on other Microsoft programs.

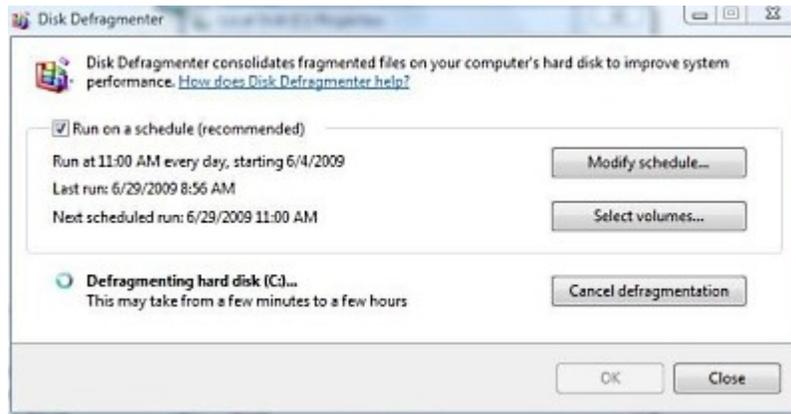
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This "Check Disk" options window is presented after clicking "Error Checking".

5. Run "Error Checking" on all hard drives. Right-click a drive icon in "My Computer" and select "Properties" followed by "Tools". Choose "Error Checking" to let the utility scan the drive for damaged files that can contribute to slow drive access speeds. This process may take several minutes or more to complete.

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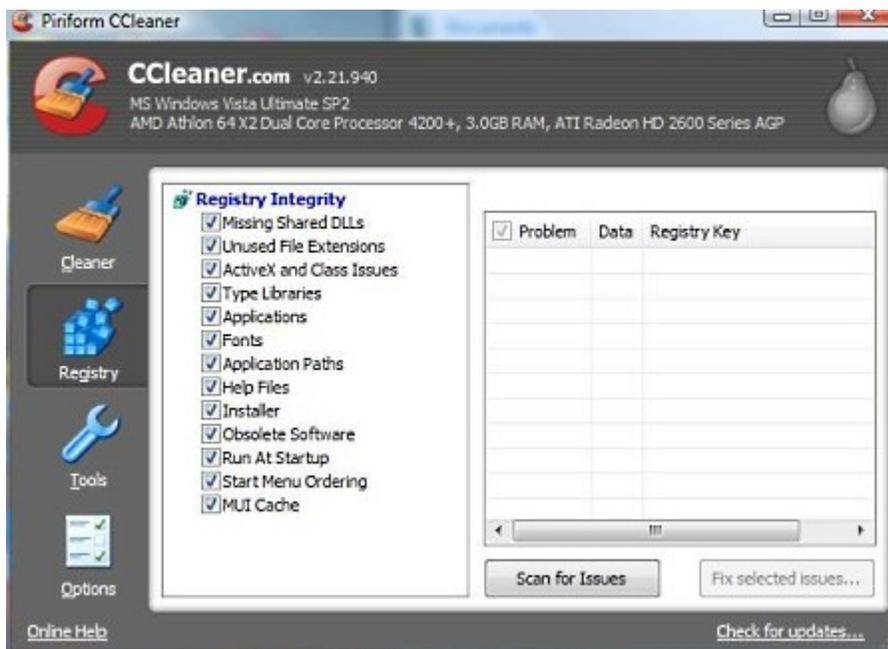


This is the Disk Defragmenter scheduling and options window

6. Run "Defragment" on all hard drives. Right-click a drive icon in "My Computer" and select "Properties" followed by "Tools". Choose "Defragment" to let the utility clean up fragmented files and consolidate free space on the drive. This should be done at least once per week, or more often if the PC is used heavily. Some versions of Windows allow for the scheduling of this utility, and in those cases could be set to run automatically without ever having to manually run again.

This process may take anywhere from several minutes to an hour or more to complete depending on size of the drive(s) and amount of unused capacity or free space. Consider starting the defragment process so that it will run over night or prior to logging off. After completion the speed of hard drive read and write times may improve significantly. There are also stand-alone defragmenting programs available from other developers available for download that may or may not charge a fee for use.

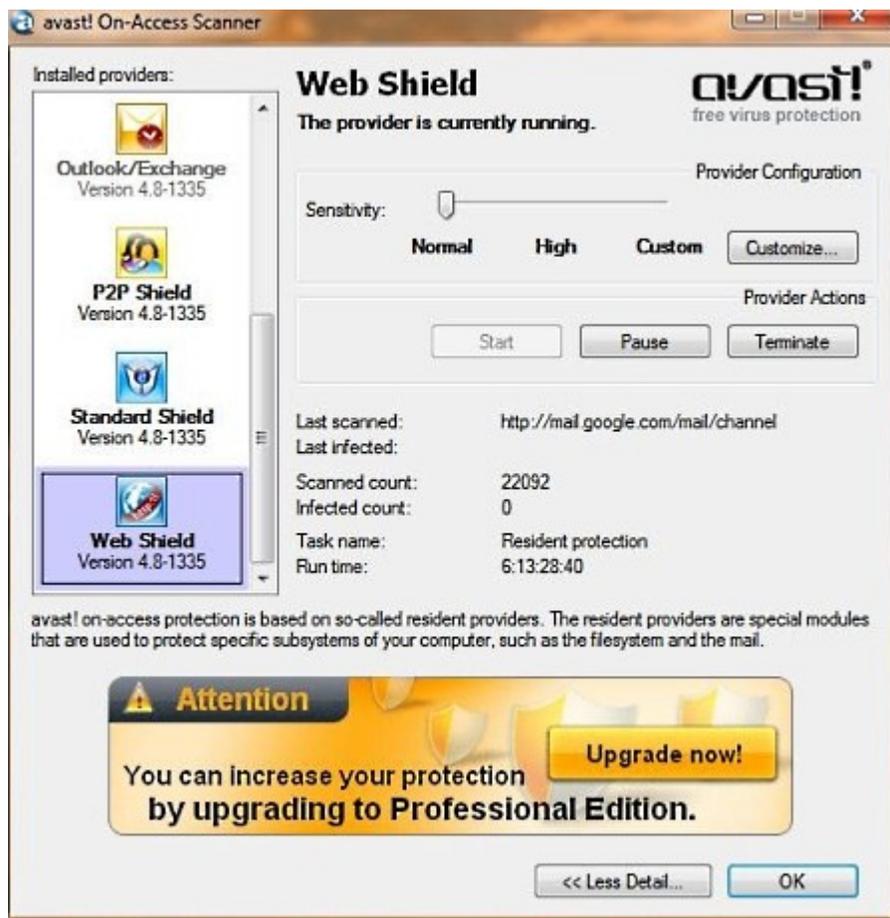
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The opening window of the CCleaner application

7. Run CCleaner. [CCleaner](#) is a freeware application that can perform an entire suite of Windows PC optimizations. Included are options to help protect privacy, system and registry cleaning among others. It has a loyal user base as shown by the number of downloads (over 300 million), is fully supported and is adware and spyware free. Follow the link above to the application's webpage for complete details. There are other system optimizers available for download that may or may not charge a fee for use.

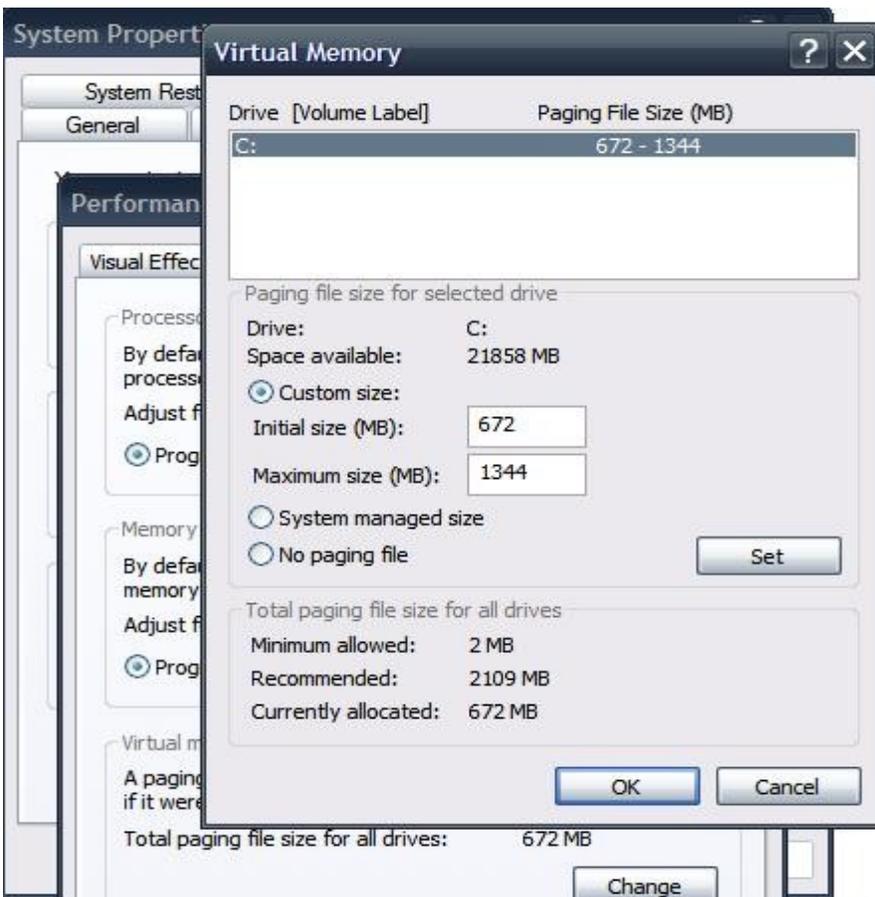
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Screen shot of the free version of Avast! antivirus

8. Install anti-virus software and keep it current. Anti-virus (AV) software is an absolute must. There are many from which to choose at the software store, but there are free AV solutions that do a very good job, too. Three popular free AV solutions are Avast!, [AVG](#), and Avira AntiVir. All include regular "virus definition" file updates that allow the AV program to detect and protect from the latest virii being released. Note that while installing antivirus software actually slows down your computer, it does not slow it down as much as malware does.

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This is the Virtual Memory options page for an x86 Windows XP Pro system with only one hard disk. Usually "System managed size" is set, but this one is "Custom". There should be at least one disk with a Virtual Memory file.

9. Relocate the Swapfile or Virtual Memory file. These files (depending on Windows version installed) are hidden and are usually located on the Windows drive (usually "C:") If there is a second physical hard drive in the system, consider moving to the secondary drive. Ideally, these files work best when located on the fastest and largest (in terms of free space) drive in the system. The procedure for changing the location varies by version of Windows, and is not detailed here at this time as it is fairly advanced.

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10. Find and Delete Temporary Files. Temporary Files are used for supporting some applications for a limited period of time and left unused for later. Go to "C:/Documents and Settings/<username>/Local Settings/Temp" (Windows XP), "C:/Users/<username>/AppData/Local/Temp" (Windows Vista), or "%TEMP%" (any version of Windows) and delete all the files from this folder. If there is a problem deleting one or more files, skip those files and remove the rest. This will free a lot of space on the drive. The

Temporary Internet Files directory can also be emptied.

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System	
Rating:	 Windows Experience Index
Processor:	AMD Athlon(tm) X2 Dual Core Processor BE-2400 2.30 GHz
Installed memory (RAM):	4.00 GB (3.25 GB usable)
System type:	32-bit Operating System
Pen and Touch:	No Pen or Touch Input is available for this Display

The System Page in Control Panel in a 32 bit Windows 7 PC with 4 Gb of RAM installed. The system reports only 3.25 Gb of the 4 Gb is "usable"

11. Add memory. Adding memory will boost system performance if your system does not have enough. Generally having twice the recommended hardware for an operating system will yield good performance. The hardware specifications for Windows XP and Windows Vista may be found on the Microsoft website or on Wikipedia. While unfortunately not a free solution, it is one of the most effective ways of boosting performance. The computer's operating system is important to know when selecting memory upgrades. Newer computers run either 32 bit or 64 bit operating systems. A 64 bit (x64 or x86-64) Windows Operating System can support more memory than is currently available, whereas a 32 bit (x86) version of Windows will only recognize up to 3.25 - 3.5 GB regardless of how much more is installed.

Increasing the amount of memory installed reduces the need for the computer to keep reading data from the hard drive (which is slower), since it can keep it in the memory. Regardless if the computer is running a 32 bit or 64 bit Operating System, check the motherboard or system documentation to determine size, type, speed and permissible configurations of memory before purchasing and installing additional memory. A 64 bit operating system and a 64 bit motherboard and CPU are required to use more than 4 GB of memory. Systems with lower amounts of memory (256 MB to 1 GB) installed receive the greatest boost when increased to 2 GB or more (as this represents a 100-400 PERCENT increase in system memory). 32 bit systems that already have 2 GB or more already installed receive a less noticeable boost when upgraded, as most of the extra memory will go unused.

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12. Replace your main hard drive and keep it cool: It has been observed, particularly on laptops, that replacing the hard disk without

changing anything else (i.e. by a direct sector to sector copy) can drastically speed-up an old PC... which will slow down again after some time. This suggests that, especially on laptop computers, hard drive overheating can produce bad sectors, which are quickly detected and moved/hidden by the hard drive itself. But, in the mean time, this causes some hidden fragmentation which may slow down the whole computer.

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13. Be realistic. The "high end" computer purchased as new five years ago may run the latest version of Windows, but that doesn't mean that it will do it very well. Technology marches on and it seems there is a game of "one-up-man-ship" played between software developers and hardware designers. Regardless, eventually new software will require new hardware or vice-versa. It seems that the amount of frustration you can endure best determines how long you will run your current setup.

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14. Original OS. Restore the original operating system it came with. If it's an old windows 3.1 machine, put 3.1 back on and it will probably run like new. Be aware though, web security software and browsers are rarely backward compatible to a machine of this vintage.

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Tips

- Be Aware that some of these steps will work on Windows XP and some will work on Windows Vista. They are not cross-compatible.
- Consider using a different operating system. If you have a slow or old computer consider switching to Linux.
- Defrag solid state drives? The newer solid state drives appear not to need defragmenting. Since there are no moving parts (heads, platters, etc.) in these drives, it would make sense that there is little benefit of doing so. A check with the manufacturer for definitive information about your particular drive would provide the most reliable answer.

Guaranteed-compatible memory upgrades for your A8V D

We were not able to determine the manufacturer and/or model of your PC your motherboard.

Scan Id: 77E43DBF31D928C3

Crucial Recommends

Your system configuration	Our suggested upgrades	3GB
1GB Total	1.5GB Total	3GB
1GB current memory	1GB current memory	1GB
2 empty slots	512MB new memory added	2GB
current system performance	performance with this upgrade	performance with this upgrade
	US \$52.99	
	DETAILS	
view all compatible memory upgrades	ADD TO BASKET	

Crucial's scan results and suggested upgrades (including prices) are presented in the system's default browser.

- Scan the PC to determine memory information. Crucial Memory provides a free and easy to use memory scanner to help determine a PC's existing memory configuration and provides a list memory upgrade options. There may be other scanners available from other memory manufacturers and distributors.
- Consider formatting the computer. It may be easier to format the hard drive and re-install Windows on the computer. Verify possession of CD keys on original software disks - including Windows; if any are missing, read the installed keys with a keyfinder and write them down on a piece of paper for reuse during re-installation. Be sure to back up important data first and have all program installation disks ready for re-installation. The format process will delete *all* files on the disk.
- Adding memory to a 32 bit computer for gaming performance. The effect of adding memory decreases as you have more of it. You do not need more than 2 GB unless you play very graphic intensive games.

- Clean up your desktop. Having large files located on your desktop can cause performance problems.



Two PC3200 512 Mb memory modules

- Adding memory. Adding memory is one of the easiest ways to improve performance. For most systems, it is inexpensive and it is very accessible for most users. The operating system itself, Linux, XP, Vista, etc., will take up roughly the same amount of memory each time it loads. The amount of memory remaining, combined with the memory allocated in the swap file, will be available for programs to run. Increasing system memory (RAM) will provide more memory for programs to run in.

For example, if your system runs fine with only the browser open, but when you start Word and Excel, it slows to a crawl, it might be that the system is pushing those running programs into swap space. This forces the computer to use the hard drive (slow) rather than system memory (fast). Find out what is the maximum amount of system memory that is supported by your motherboard/chipset etc. Find out what kind of memory chips your system takes. Remember that a 32-bit OS will see only 4Gb of system memory.

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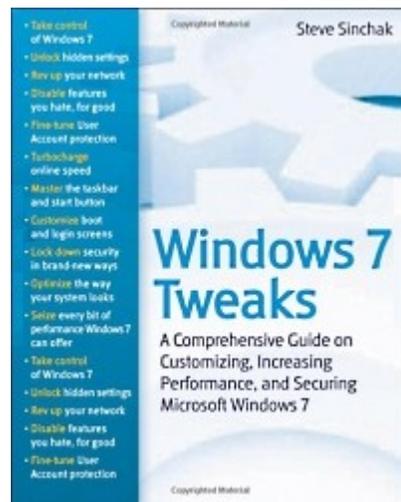
Warnings

- Know the Operating System. A 64 bit computer can run either a 32 bit (x86) or a 64 bit (x64) version of an Operating System. A 32 bit Operating System running on either a 32 bit or 64 bit computer however, will only register up to 4 GB of memory as discussed earlier. This 4 GB value is further reduced to between 3.25 - 3.5 GB due to a limitation of 32-bit Operating Systems ability to address other hardware devices (Video cards, etc.) installed in the computer. In order to eliminate the 4 GB limit, a 64 bit computer must run a 64 bit Operating System (designated specifically as 64 bit or "x64"). It is not possible to run a 64 bit Operating System on a 32 bit computer.
- Download files from trustworthy sources the developer's page is best, but probably not the fastest. P2P, newsgroups and anonymous file hosting sites may be faster, but are more likely to be infected

with a virus.

- Shut down your computer and disconnect all the cables from it prior to opening the case. This eliminates the chances of electrocution or damage to system components. Besides, most old PCs do not support "hot swapping" (replacement of components while powered) of hardware.
- Discharge any static electricity. Touch an electrically grounded source (a heating or plumbing pipe or the metal case of an electrical device powered by a grounded 3 prong cord connected to a grounded receptacle) prior to touching components inside the PC case. Static electricity can pass through hands and could cause delicate electronics inside the PC case to fail.
- Beware of using MSConfig Using MSConfig as anything but a troubleshooting tool is considered dangerous by many in the IT field to long term computer stability. Autoruns will allow you to do the same thing and much more including permanently removing unneeded/unwanted entries. Since it can do more, it can be just as or more dangerous than using MSConfig. If your unsure of something do your research and don't remove it until you know for sure you don't need it. You can always uncheck it and come back later.

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A Comprehensive Guide on Customizing, Increasing Performance, and Securing Microsoft Windows 7

This book provides you with the ultimate collection of hidden gems that will enable you to get the most out of Windows 7. Packed with more than 400 pages of insider tips, this book delves beneath the surface to reveal little-known ways to tweak, modify, and customize Windows 7 so you can get every ounce of performance from your operating system.

Regardless of your experience with tweaking your system, you'll find fascinating and fun tips and tricks for getting under the hood of Windows 7 that will allow you to optimize its appearance, speed, usability, and security.

This book shows you how to customize boot and login screens, supercharge your network and online speed, get rid of features that drive you nuts, fine tune your User Account Protection, and more

- Analyze the performance of your PC and learn how specific components can be optimized
- Security is improved in Windows 7 but the most powerful and flexible settings are hidden from normal users
- Understand the different versions, choose what you need, and install Windows 7
- Customize startup and navigation, including the Taskbar and Windows Explorer interface
- Tweak Windows Media Player and Media Center for your specific needs
- Optimize the file system, RAM, and other core Windows components
- Analyze performance to find and fix bottlenecks
- Take command of User Account Control and secure your data
- Improve online security and guard your privacy

This book unlocks hidden gems for optimizing the appearance, speed, usability, and security of the Windows 7 Operating System.

[Click here](#) for more information.

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Watch and Record Standard and High Definition TV on Your PC



The [Pinnacle PCTV HD Card](#) brings Standard and High Definition TV

with full personal video recorder (PVR) functionality to your PC – with no desktop clutter. Watch, time shift and even automatically record all of your favorite TV shows with no service fees.

The PCI TV Tuner card fully supports both analog (NTSC) and digital (ATSC) TV signals; the TV tuner hardware is also ready for ClearQAM (unencrypted digital cable). Record programs on your hard drive in MPEG-2 or DivX or even direct-to-DVD. Pause, rewind and fast-forward live TV with time shifting. Capture SD video from a camcorder or set-top box using the included adapter cable.

Supports the following TV Standards:

- ATSC (HDTV up to 1080i, SDTV)
- NTSC (cable, over the air)
- ClearQAM (HDTV up to 1080i, SDTV)

Inputs:

- TV antenna input (F- connector/Coaxial)
- FM antenna input
- S-Video
- Composite Video (RCA)
- Stereo Audio (2 x RCA)

Recording Formats:

- MPEG-1/2
- DivX.

System Requirements:

- Windows Vista (32-bit) or Windows XP with latest service pack
- Intel Pentium 4 2.4 GHz, Pentium M 1.3 GHz or AMD Athlon 64 processor (for HDTV reception, a Pentium 4 2.8GHz or Pentium M 1.7 GHz or equivalent AMD Athlon 64 processor is recommended)
- RAM: Windows XP – 256 MB (512 MB recommended); for Windows Vista – 512 MB (1 GB recommended)
- Free PCI rev. 2.3 slot
- Sound&grasl;graphics controller with support for DirectX 9
- Hard drive with minimum 1 GB free space (20 GB recommended for TV recording)
- DVD player/burner
- Internet connection for registration/activation
- High-gain indoor or rooftop aerial and/or connection to an existing cable TV jack (coaxial cable).

Package Contents:

- PCI TV tuner card for for ATSC, ClearQAM, NTSC and FM radio reception
- Mini remote control including batteries
- Remote control receiver
- cable FM radio antenna
- A/V Adapter Cable

- Printed quick start guide
- CD with Pinnacle TVCenter Pro and VideoSpin editing software

Marvin Protoss of Barbados says, "I knew when I purchased this product I would have no disappointments. I had and purchased Hauppauge products before and living it up now. This Pinnacle PCTV installed easy and worked remarkably. Hauppauge is affiliated with this product by hardware while Pinnacle handles the software to my knowledge. Make note the product software was made for and works with XP and Vista (only). The driver portion did not properly install in windows 2000 and the TV Center software does not at all install in 2000. GREAT PRODUCT AND GREAT PRICE

Pinnacle PCTV HD PCI Card user Dominicius says, "This capture card is a great "budget" card. The quality of picture is beautiful with myhttv. I have yet to install the software included with the card, however I have a the 801se USB and the software looks the same. A good choice for a dual SD/HD card. [Click here](#) for more information.

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