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GeForce FAQ 19.4 in PDF format - thanks to Andrej Cepko
Polish translation of Hardware section : Polish translation of Software section
Russian translation
Italian translation #1
Italian translation #2
Japanese translation
I want to translate the FAQ!

UPDATE - 8/4/2004: THIS VERSION OF THE FAQ IS NO LONGER UPDATED. I am no longer responsible for updating the GeForce FAQ. I have handed over maintenance of the FAQ to another website. To see the latest version, go to the following URL:
http://go.to/geforcefaq
The copy on this server is maintained for historical purposes and to redirect people to the new site.

This FAQ contains information pertaining to all NVIDIA GeForce, GeForce2 and GeForce3 based cards, and especially Creative cards.

If you find this FAQ useful, please consider using your spare processor cycles to help the Intel-United Devices Cancer Research Project.

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What's new in this version?

Version History

Renamed and added lots of information to 'Where can I download drivers that support 3D glasses and how can I fix problems with them?' question.
Updated and removed dead link from 'How can I make the TV-OUT display stretch to the full size of my TV, and generally tweak TV-OUT?' question.
Renamed and updated link in 'What is and where can I get AGP Wizard?' question.
Updated download link and general information in 'Is there an update available for the WinDVD software supplied with the Annihilator?' question.
Updated download link in 'Are there any newer Video BIOS upgrades for the Annihilator?' question.
Removed dead link from 'Does the Annihilator or the Annihilator Pro have extra outputs like TV-OUT or DVI?' question.
Changed link display in 'Why have I only got one overclocking slider with the Creative drivers?' question.
Changed link display in 'Where can I get and how do I use NVFlash?' question.
Removed dead GeForce3 Video BIOS link in 'Where can I get the latest NVIDIA Flash BIOS and which should I use?' question.
Simplified links in 'What is a good replacement fan for a GeForce?' question.

Updated link in 'Games stutter with my GeForce. How can I fix it?' question.
Removed dead link in 'My 2D image quality is poor (fuzzy, ghosting, smeared bold text). How can I fix it?' question.
Removed dead link in 'I get rolling lines with my GeForce2 Ultra. How can I fix it?' question.
Fixed dead link in 'How can I get my Abit LX6, ASUS P2L97 or Gigabyte 6BXC, 6BXE or BX2000 working with the GeForce?' question.
Fixed dead link in 'How can I get my ASUS P5A working with my GeForce?' question.
Removed dead link from 'Why can't I overclock higher than (insert speed here) when others are clocking much higher?' question.
Fixed links in 'Where can I download demos to show off my GeForce?' question.
Changed link display in 'How can I manually set refresh rates and force the refresh rate above 60hz?' question.
Removed dead link from 'When I resume from monitor power saving modes in Windows 9x/ME, I get display corruption and / or instability problems, or my card seems slower than usual. How can I fix it?' question.
Changed link in 'I installed DirectX 8 and it caused more problems than it fixed. How can I uninstall it?' question.
Changed link display in 'Microsoft Baseball 2000 quits or crashes when I run it. How can I fix it?' question.
Removed dead link from 'What Glide wrapper works best with UltraHLE and the GeForce?' question.
Updated links and removed dead links from 'I get horizontal lines in Final Fantasy 8. How can I fix them?' question.
Fixed link in 'I get problems with Star Trek: Armada. How can I fix them?' question.
Removed dead link from 'How can I get SMP working with Quake 3 Arena under Windows 2000?' question.
Updated link in 'How can I speed up Unreal Tournament on my GeForce?' question.
Updated link in 'DVD playback seems slow with my ALI chipset based motherboard. How can I fix it?' question.
Changed link display in 'When I start Microsoft Expedia Streets and Trips 2000 or Microsoft Autoroute Express 2000 (Europe and Great Britain), my computer hangs. How can I fix it?' question.
Changed link display in 'Where can I get the latest NVIDIA Flash BIOS and which should I use?' question.

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Q. Does the Annihilator or the Annihilator Pro have extra outputs like TV-OUT or DVI?

No, despite what you may have read in reviews. There is only the standard monitor output.

However, Gateway do have an OEM version that does have TV-OUT and DVI.

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Q. Can I connect my hardware DVD decoder to my Annihilator?

If you have a standard 26 pin VMI connector on the DVD decoder you can plug the cable into the left half (near the bracket) of the VIP connector on the Annihilator. However, pins 14/27 will be in the way - you will have to bend them out of the way. **Note that doing this isn't officially supported!**

If you don't want to bend the pins, instead use an internal SCSI connector. The connector is the correct width - connect only the correct half of the SCSI connector to the MPEG card.

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Q. Are there any newer Video BIOS upgrades for the Annihilator?

- There is one upgrade that has been produced by Creative for the Annihilator Pro. It is available on their website:
  http://www.americas.creative.com/support/files/download.asp?Centric=56&descID=1079
  However, there is a password on the zip file. You can contact Creative support if you have the problem that the BIOS fixes. I won't tell you the password - Creative deliberately put a password on the file to reduce support costs for those who might make a mistake in flashing their video BIOS where there is no need.

  This BIOS version is supposed to fix problems with the Annihilator Pro only displaying 16MB of RAM detected on bootup.

- You can also use an NVIDIA reference BIOS: see the 'Where can I get the latest NVIDIA Flash BIOS and which should I use?' question.

  Be warned that using the NVIDIA BIOS will void your warranty. Also, check your card's current BIOS version as some cards already have a more up to date BIOS than the NVIDIA BIOS that is available. Check this by rebooting and looking at the screen that comes up before the POST screen - the NVIDIA control panel applet does not give a reliable reading of the CL BIOS version (read the 'How do Creative's BIOS versions differ from NVIDIA's BIOS versions?' question for the reason why).

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Q. How do Creative's BIOS versions differ from NVIDIA's BIOS versions?

This response was given by William Ball of Creative:

We have a different versioning convention from NVIDIA. Basically ours is CC.cc.oo.mm.ee and NVIDIA's is CC.cc.mm.ee.oo, where .oo is the OEM revision. So on NVIDIA's control panel or NVFLASH program, the .oo part is displayed last whilst our bootup signon message and the later BlasterControl application would display our convention. So, for our SDR BIOS, the version is displayed as 2.10.1.01.04 (our convention) instead of 2.10.01.04.1 (NVIDIA's convention). This might have led people to believe that we are using a 2.10.01.01 BIOS.

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Q. Why can't I set my Virtual Desktop to higher than my monitor's maximum resolution

with the Creative drivers?

This is a known limitation of the current Creative drivers. Creative may release a driver set in the future that fixes this problem.

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Q. The fan on my Annihilator is making a grinding noise. How can I fix it?

Unscrew the fan from the card, and lift it away. Blow away any dust that is around the fan. Then peel back the sticker from the back of the fan (the side you don't usually see) and put a drop of oil in the small metal area that you should be able to see. Replace the fan and put the screws back in (not too tightly). This should stop the grinding and will not invalidate your warranty so long as you don't damage the card.

People often ask what kind of oil to use. While I've heard of people using cooking / vegetable / olive oil, and this doesn't mess up the card, I'd recommend some more 'conventional' oil. Liquid silicon is ideal, and you can not only buy it as oil for RC cars, but also in the form of shoe water proofer! You can also use sewing machine oil from any craft shop. Personally I used 3 in 1 when I got this problem.

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Q. Why have I only got one overclocking slider with the Creative drivers?

This is a known limitation of the current Creative drivers - the core clock speed can not be adjusted. You can download a utility that will allow you to set both core and memory clock at the following page:
http://www.geocities.com/johnkok/Johnnie.html.

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Q. What is the difference between an Annihilator and an Annihilator Pro?
Q. What is the difference between an SDR and a DDR board?
Q. How can I tell if my board is SDR or DDR?

The Annihilator board has SDR memory: the Pro board has DDR memory. DDR is twice as fast as SDR, and so at high resolutions (1024x768x32 and above) the DDR board is a lot faster than the SDR board.

Note that some DDR cards will have memory listed as running at twice the speed mentioned in the 'What different types of GeForce card are available and what are the differences between them?' question - this is because DDR memory is able to transfer data twice in each clock signal.

The memory on SDR cards will probably have pins on only two sides, as most SDR cards use SDRAM memory. On DDR cards the memory will probably have pins on all four sides, as most DDR cards use SGRAM memory (although ASUS in particular have made cards that do not comply with this rule of thumb!).

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Q. What different types of GeForce card are available and what are the differences between them?

The following list is with the cheapest and slowest cards first, and the most expensive and fastest cards last.

- GeForce 256 SDR - Runs at 120mhz core / 166mhz memory.
- GeForce 256 DDR - The same as a GeForce 256 SDR, except it uses DDR memory.
- GeForce2 MX-200 - Uses SDR memory, with only a 64-bit addressing mode. Runs at 175mhz core / 166mhz memory.
- GeForce2 MX - May use SDR or DDR memory, but both types produce roughly the same speed because

DDR memory is forced to run in 64-bit mode, while SDR memory is still able to run in 128-bit mode. Runs at 175mhz core / 166mhz memory.

- GeForce2 MX-400 - The same as a GeForce2 MX, except it runs at 200mhz core / 166mhz memory.
- GeForce2 GTS (DDR) - Runs at 200mhz core / 166mhz memory.
- GeForce2 Pro (DDR) - The same as a GeForce2 GTS, except it runs at 200mhz core / 200mhz memory.
- GeForce2 Ti (DDR) - The same as a GeForce2 GTS, except it runs at 250mhz core / 200mhz memory.
- GeForce2 Ultra (DDR) - The same as a GeForce2 GTS, except it runs at 250mhz core / 230mhz memory.
- GeForce3 Ti 200 (DDR) - The same as a GeForce3, except it runs at 175mhz / 200mhz memory.
- GeForce3 (DDR)- Runs at 200mhz core / 230mhz memory.
- GeForce3 Ti 500 (DDR) - The same as a GeForce3, except it runs at 240mhz core / 250mhz memory.

See the 'What is the difference between an SDR and a DDR board?' question for information on SDR and DDR.

The GeForce2 series uses a 0.18 micron manufacturing process instead of the 0.22 micron used in the previous process, meaning less power consumption and heat production. All cards in the series have a second generation T&L engine, can render two textures per pixel instead of just one, have the NSR (NVIDIA Shading Rasterizer) and an HDVP (High Definition Video Processor) for better DVD and HDTV support.

The GeForce2 MX supports 2 monitor outputs for TwinView (two video outputs to two monitors, or one monitor and a flat screen display or TV) on the same card) and Digital Vibrance Control. It has only 2 texture pipelines instead of 4 on the GeForce or GeForce2 GTS, is restricted to a 64 bit memory bus for DDR, and has a less advanced HDVP without support for some high-end modes. In general it does not require a fan on the heatsink.

The GeForce3 uses 0.15 micron manufacturing process. It is a new generation of chip, much faster than the GeForce2, fully DirectX 8 compliant, has the nfiniteFX Engine engine, providing support for vertex and pixel shaders, Lightspeed Memory Architecture for improved memory bandwidth, and High-Resolution Antialiasing (HRAA) support for faster antialiasing support in the form of Quincunx antialiasing. It also supports Digital Vibrance Control.

The GeForce2 Go chips are for integration in laptops - once again, the cheapest and slowest chips first, and the most expensive and fastest cards last.

- GeForce2 Go 100 - Runs at 125mhz core / 166mhz memory, with 16MB of 32bit DDR memory.
- GeForce2 Go 200 - Runs at 143mhz core / 166mhz memory, with 32MB of 64bit DDR memory.
- GeForce2 Go - Runs at 143mhz core / 166mhz memory, with 64MB of 64bit DDR memory or 128bit SDR memory.

The GeForce2 Go is based around the same architecture as the standard GeForce2, with less power consumption produced by a lower core voltage and speed.

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Q. What is and where can I get AGP Wizard?

If you have a Creative card, there is a utility called AGP Wizard that will allow you to enable sidebanding as well as Fast Writes and switch between AGP1X/2X/4X. It will **not** work on any other card because it checks the Video BIOS to see if you have a Creative card. You do **not** have to have Creative drivers installed. It is available here:
http://www.americas.creative.com/support/files/download.asp?Centric=61&descID=706
In addition, the Creative official drivers and FastTrax drivers have the functionality of AGP Wizard built in.

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Q. What is Unified?
Q. Where can I get Unified?
Q. Why doesn't my serial number work on the Unified page?

Unified is a Glide wrapper created by Creative, so that you can run 3dfx only games on your non-3dfx card. Unfortunately all currently known download links appear to be dead, so it is currently unavailable.

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Q. How powerful should my power supply be in order to use the GeForce?

- At least 250 watts is recommended and 300 watts is ideal: however, you may still be able to run it on 230W or lower (I once had a machine that ran on 200W, and I've had a report of someone running on 150W).

- You need a more powerful power supply if you have a more power hungry processor like the Athlon or more peripherals than usual in your system.

- If you have a GeForce2 series card you may not need such a powerful power supply as they consume less power.

- Elsa provides the following power supply recommendations when using a GeForce card and Athlon processor:
    - 20A for the +3.3V power.
    - 30A for the +5V power.
    - 165W for the combined +5V/+3.3V power.

- If you think that your power supply may be causing problems, try temporarily unplugging any extra cards, drives, fans and memory sticks that you have and see if that helps with the problem. If it does, you will need to get a more powerful power supply.

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Q. How can I remove and replace the fan on my GeForce?
Q. What is a good replacement fan for a GeForce?

- There are some instructions for fan removal in English on the following website:
  http://home.earthlink.net/~chinmonster/
  There is a link to the instructions on the first page you read.

- There are some instructions for fan removal in German at the following page:
  http://www.3dcenter.de/news/geforce-luefter.php3

- There are really two choices for a replacement fan. Firstly, I recommend the TennMax Lasagna BGA cooler. It doesn't obstruct your first PCI slot, and cools very well, although it is a bit pricey. If the TennMax cooler is too expensive, try the ThermalTake Blue Orb cooler. It is cheaper than the TennMax cooler, and also cools very well, but it will obstruct your first PCI slot. I have personally used both coolers and they are both great quality.

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Q. My GeForce gets very, very hot when it is in use. Is this normal?

In most situations, yes. GeForce chips are very complex, some more complex than the main processor inside your computer, and run very fast, and as such they give off a lot of heat. If the fan on your GeForce is turning at a good speed, not making much of a noise, and 3D games don't crash, the temperature is probably normal.

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Q. What AGP slot voltage do GeForce cards use and is this compatible with i845 and i850 boards?

The Intel i845 and i850 specifications contain the following statement:

AGP 1.5 V Connector support only. No support for 3.3 V or Universal AGP connectors.

However, this should not be an issue for GeForce cards, as apparently they are AGP 1.5V devices.

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Q. Does the GeForce support Texture Compression (DXTC/S3TC)?
Q. Can I use the compressed textures on the second Unreal Tournament CD with my GeForce?

- This information was sent to me by NVIDIA's manager of developer 3D tools and technology:

  S3's texture compression scheme (S3TC) was licensed to Microsoft who incorporated it into DirectX. It is referred to as DXTC compression in Direct3D. The GeForce supports all five texture compression formats in Direct3D. With the 5.xx (Detonator 2) drivers the GeForce also supports S3TC texture compression in OpenGL.

- You can use the compressed textures in Unreal Tournament if you download the latest OpenGL renderer. See the 'How can I speed up Unreal Tournament on my GeForce?' question for more information.

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Q. What should my AGP Aperture size be set to?
Q. How can I change my AGP Aperture size?

It should be set to half your system RAM if possible, and if not it should be set at some point below or equal to the amount of RAM that you have. However, it is possible to experience speed advantages of 2-3 fps from setting the AGP Aperture size to 256 regardless of the amount of RAM that you have, and there are some games that may have visual problems fixed by setting the AGP Aperture size to 256.

Beware that setting the AGP Aperture size too low (below 32) will actually disable AGP which will cause a speed decrease, although stability problems may be solved - see the 'My GeForce keeps on locking up or drops me back to the desktop during 3D applications. How can I fix it?' question for more information.

There are also some programs that have problems (stuttering, flashing or corrupted textures, blank screens) when the aperture size is set too high. Experiment and see which setting is best for your system and programs.

It's possible that if you set your AGP Aperture size to 256 you will be able to load the 64MB texture test in 3DMark2000 even if you haven't got enough video memory. In addition, if you set the aperture too large you may get 'Out of Memory' errors - see the 'I get 'Out Of Memory' errors although I have plenty of RAM installed. How can I fix it?' question for more information.

You can only change this in your BIOS setup - it may be called something slightly different, so look for a setting that is measured in MB and can be set to values such as 16, 32, 64, 128 and 256. Different motherboards allow different settings - for example, i815 motherboards will not allow you to set the aperture size above 64MB.

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Q. What are the recommended BIOS settings for a GeForce?

Note that the settings in *italics* may have to be changed in order to maintain stability on some systems. The changes that may have to be made to them are detailed in the instability section, and in particular the 'My GeForce keeps on locking up or drops me back to the desktop during 3D applications. How can I fix it?' question.

The settings described here should provide maximum performance and stability:

- *UC or USWC* - USWC. See 'I have a Video Memory option in my BIOS that I can set to UC or USWC. What should it be set to?' question.
- *Fast Writes* - Enabled.
- *AGP Mode* - 2x or 4x, depending on whether your motherboard supports AGP4X or not.
- *AGP Driving Control* - Auto.
- *AGP Master 1 WS Write* - Enabled.
- *AGP Master 1 WS Read* - Enabled.
- AGP Aperture - see 'What should my AGP Aperture size be set to?' question.
- Assign IRQ to VGA - Enabled.
- Video BIOS Shadow - Disabled.
- Video BIOS Cacheable - Disabled.
- Video RAM Cacheable - Disabled.
- C8000 - xxxxx Shadow - Disabled.
- Peer Concurrency - Enabled.
- Concurrent PCI Host - Enabled.
- PCI Streaming - Enabled.
- VGA Palette Snoop - Disabled.

You can also try these settings if you are having problems:

- Memory hole between 15-16MB - Enabled.

For other BIOS settings, see the excellent BIOS Optimization Guide at Adrian's Rojak Pot here:
http://web.archive.org/web/20011018120214/http://www.rojakpot.com/Speed_Demonz/BIOS_Guide/BIOS_Gu

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Q. I have a Video Memory option in my BIOS that I can set to UC or USWC. What should it be set to?

- Setting this to USWC should increase performance in most cases, but only by a very small amount.

- If this is set to USWC it may cause problems after POST.

- If this is set to UC it may cause lockups after recovering from Standby.

- Creative Labs recommend setting this to UC.

- Overall, it's probably best to try setting it to USWC and then set it to UC if you have problems.

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Q. How can I use the latest Video BIOS without flashing my Video BIOS?

WARNING: This section is really only for people who understand how DOS works. Don't email me asking what conventional memory or TSRs are, how to use EMM386 or LOADHIGH, or for instructions as to how to edit your autoexec.bat file - if you don't know, then this section is too advanced for you.

There is a program called VGABIOS that was written by NVIDIA. It is a TSR program that will load a Video BIOS after you have booted your machine, and use that BIOS instead of the BIOS on your card.

This means that if something goes wrong, all you have to do is remove VGABIOS from your startup files and your old BIOS will be used instead (it is unaffected by the process.

The disadvantage of this is firstly that the program takes up 64KB of memory (oh no!) and secondly that I

imagine it is very, very slightly slower.

The program cannot be run under Windows - you must run it either before Windows starts or in MS-DOS mode.

You can download the latest version of this program from the following website:
http://www.x-bios.3dgames.ru/
or here:
http://www.gforcex.com/bios_johan/index.htm

The syntax for the program is 'vgabios -f**FILENAMEFILENAME** is the name of your video BIOS file. You can put this in your AUTOEXEC.BAT file and load it at bootup.

If you want to save on 64KB of conventional, you can use LOADHIGH (after loading EMM386) to load VGABIOS into the HMA.

See the 'Where can I get the latest NVIDIA Flash BIOS and which should I use?' question for information on NVIDIA reference Flash BIOS files.

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Q. Where can I get the latest NVIDIA Flash BIOS and which should I use?

You can download the latest (leaked) NVIDIA GeForce flash BIOS files from the following site:
http://www.x-bios.3dgames.ru/
or here:
http://www.gforcex.com/bios_johan/index.htm

Once you get to the site, you will have a number of options as to which Flash BIOS you should download. Here is a short guide (thanks RobRich):

If you have a:	Use
SDR card with no TV-OUT (Creative Labs Annihilator)	SM
SDR card with a Brooktree TV-OUT	BT
SDR card with a Chrontel TV-OUT	CH
DDR card with no TV-OUT (Creative Labs Annihilator Pro)	DDRSM
DDR card with a Brooktree TV-OUT	DDRBT
DDR card with a Chrontel TV-OUT	DDRCH (not available)

If you don't know what TV-OUT chip you have, go into the NVIDIA Control Panel and take a look at the main 'GeForce' tab. There should be a line that says 'TV Encoder Type' - thanks Matthew Manor!

WARNING: Before you flash your card with the standard NVIDIA BIOS, please note that once you have done so you will **NOT** be able to:

- Install any drivers except the NVIDIA reference drivers.
- Use any other BIOS flashers except the NVIDIA reference BIOS flasher (which will probably mean you can't flash back to your manufacturer's BIOS unless you make a backup beforehand).
- Use AGP Wizard (more information in the 'How can I enable AGP Sidebanding?' question) to enable AGP Sidebanding if you have a Creative card.

You may find that when you use NVFlash, it complains that the ROMFile PCI Subsystem Vendor ID does not match the Chip PCI Subsystem Vendor ID. This is because you are flashing a non-reference card with an NVIDIA reference BIOS, and can be safewly ignored.

In addition you will **void your warranty**. Please do **NOT** email your manufacturer if this goes wrong!

For that reason, I would advise **everyone** to make a backup of their original BIOS file before they flash their BIOS. You can use a DOS program called SaveBIOS to do this - just run the program and it will create a VIDBIOS.BIN file. Put this file somewhere safe, and if you ever need to revert back to the old version just use NVFlash with your backup file.

You can download SaveBIOS here:
http://www.geforcefaq.com/files/savebios.zip

If you were silly and didn't take a backup, try the following page:
http://www.x-bios.3dgames.ru/

See the 'Where can I get and how do I use NVFlash?' question for information on using the NVFlash program that actually flashes the Video BIOS.

You might also want to read the 'How can I use the latest Video BIOS without flashing my Video BIOS?' question.

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Q. Where can I get and how do I use NVFlash?

NVFlash does not work under Windows 2000. If you want to flash your Video BIOS under Windows 2000, you will need to make a bootdisc on a computer running Windows 9x and boot from that disc to run NVFlash. If you are using NTFS you will have to put all the relevant files that you need to access onto the boot disc before you start as you will be unable to access your hard drive while you are using the boot disc.

If you want to use NVFlash under Windows ME, make sure you install the Real DOS-Mode Patch for Windows Millennium first - available here:
http://www.geocities.com/mfd4life_2000/

You might want to read the 'How can I use the latest Video BIOS without flashing my Video BIOS?' question. Be warned that flashing your Video BIOS could quite possibly permanently damage your card, and it is unlikely that any company would be willing to replace the card for free. Having said that, so long as you follow these instructions you should not have any problems. This is NOT for beginners.

You can download the NVIDIA Flash program at the following website:
http://www.x-bios.3dgames.ru/
or here:
http://www.gforcex.com/bios_johan/index.htm

You will also need a copy of DOS4GW - download it here:
http://www.geforcefaq.com/files/dos4gw.zip

1. Extract both files to an empty directory, along with the Flash BIOS file that you are going to use (see 'Where can I get the latest NVIDIA Flash BIOS and which should I use?' question).

2. Reboot your PC and when it says 'Starting Windows 9x/ME...' press F8. Select 'Safe Mode Command Prompt'.

3. Switch to the directory where you extracted the files and type: NVFLASH -f**FILENAME** where **FILENAME** is the name of the Flash BIOS file you downloaded.

4. Now wait. The screen may go black, but watch the keyboard lights - they will make a pretty pattern to assure you that the system is still working ;)

5. When the process is finished, reboot.

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Q. NVFlash does not support my EEPROM. What can I do?

Currently the following EEPROMs are not supported by any publicly available copy of NVFlash:

- SST MTP 37VF512

The only option if your card has one of these chips is to use VGABIOS - see the 'How can I use the latest Video BIOS without flashing my Video BIOS?' question. If you are using Windows 2000 or XP and therefore cannot use VGABIOS, unfortunately there is currently no solution except to hope that a copy of NVFlash that does support your EEPROM is released soon.

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Q. My card's Video BIOS is corrupted and I can't use my manufacturer's flash program to restore it. How can I restore it?

- If you cannot get any display, get a PCI graphics card, put it in your system along with the GeForce, and plug your monitor into it. You should now be able to use NVFlash to reflash your GeForce's Video BIOS.

- If you do not have a PCI graphics card spare, create a boot floppy disc on another system (select 'Copy system files' when you format it). Create a file called '*autoexec.bat*' in the main directory of the floppy disc, and put the following line **only** inside:
  nvflash -p -h -ffilename.ext
  where **filename.ext** is the name of the BIOS flash file that you are going to use. Also copy nvflash.exe and dos4gw.exe into the main directory of the floppy disc.

  Then put the disc in the drive and start the computer. The floppy disc should be read within 30 seconds or so. You should soon notice the keyboard lights going mad - this means that your video BIOS is being flashed. Your computer should reboot when finished, and hopefully your video card will then work.

- If you want to get your original manufacturer's video BIOS back, try using WinAce to open your manufacturer's flash program file and see if you can extract the raw BIOS file from it. You can use NVFlash with this raw BIOS file. This has been tested with ASUS BIOS files.

  You can download WinAce at the following website:
  http://www.winace.com

  Otherwise, you will have to find someone else with the same card and ask them to save their Video BIOS using NVFlash and then send you the file.

You can find out more about NVFlash in the 'Where can I get and how do I use NVFlash?' question.

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Q. Does the GeForce / GeForce2 / GeForce 3 support flat panel (DVI) correctly?

- The GeForce does not support DVI inside the chip itself - it was added with another external chip. This should not cause problems.

- The GeForce2 supports DVI in the chip itself - however there appears to be a problem as the chip can and does generate out of band signals. This means that with some displays there is no problem but with others there is.

If the manufacturer uses an external chip for DVI output on a GeForce2 this is not a problem, but be wary of using a GeForce2 card without an external chip with your flat panel display as it may not work.

There is more information on this problem at the following website:
http://www.riva3d.com/dvi.html

- The GeForce3 on-chip DVI support appears to be flawless.

- Of course, not every GeForce card actually has a DVI connector, even if the chip supports it onboard (because it adds slightly to the cost of the card). You should check with the card manufacturer's website to see if they put a connector on or not.

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Q. What is a Quadro and how can I convert my GeForce into a Quadro?

The Quadro is a high end version of the GeForce for 3D graphic designers. It costs a lot more and generally comes with more Video RAM. There are some extra features that it supports as well:

- Anti-aliased Lines
- Two-sided Lighting
- Shared Back Buffer
- 3D Window Clipping
- 128 MB Frame Buffer
- Pro App Validation

Note that you can gain the first extra feature (Anti-aliased lines) using a registry file - see the 'How can I enable OpenGL hardware accelerated anti-aliased lines on a non-Quadro card?' question.

In addition, having the extra features has little to no effect on 3D games - if you only play games, don't bother with this stuff :)

- The only physical difference between the GeForce and the Quadro (apart from the extra RAM and a chip that may be of slightly better quality) is that a few resistors are in a different location. It is possible to resolder these resistors to make your GeForce think it is a Quadro.

  WARNING: If you resolder your resistors then you will **void your warranty**. In addition you could permanently mess up your card if you get it wrong. For gamers there is very little advantage in performing this conversion.

  To read more about this operation, see benchmarks before and after, and find out where the all important resistors are and where you should move them to, read the pages on the following website:
  http://www.geocities.com/tnaw_xtennis/

- In addition, recently a software patch has been released that can fool drivers into thinking that you have a Quadro without any soldering. You can download the patch here:
  http://www.nvworld.ru/downloads/SoftQuadro.ZIP
  and read more about the patch in English here:
  http://web.archive.org/web/20010713160030/http://www.guru3d.com/rivatuner/softquadro/
  and in German here:
  http://www.3dcenter.de/artikel/2001/06-27a.php3

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Q. Will my motherboard work with the GeForce?

There is a list being compiled here:

http://www.g256.com/guides/geforcecomp.shtml

If you have a GeForce2 you might want to also read this page:
http://www.insanehardware.com/articles.php?i=00003

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Q. When I install my GeForce I can only set the card to use 640x480 with 16 colours. How can I fix it?

- Make sure that you have 'Assign IRQ to VGA' set in your BIOS setup.

- Make sure that you have uninstalled all old video drivers using the uninstallation programs provided, and also try uninstalling old NVIDIA drivers as described in the 'How can I completely uninstall old NVIDIA GeForce or Creative Labs Annihilator drivers?' question.

- Make sure that you have installed the latest AGP drivers for your motherboard's chipset.

- Make sure that you have the correct monitor drivers installed. If you are using the standard Windows monitor drivers and your monitor does not have specific drivers available, try a different Windows monitor driver.

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Q. Games stutter with my GeForce. How can I fix it?

- Make sure you have the latest drivers installed.

- Make sure that you have closed all programs before you start the game - press Ctrl-Alt-Delete and select all the programs one by one except 'Explorer' and 'Systray' and click 'End Task'. Even if a program says that it is 'Not Responding' after 20 seconds, you should still be able to close it. If the problem persists, switch off your screensaver and desktop background before starting the game.

- Make sure that you have enough RAM free to run the game - try running a RAM recovery program before starting the game or putting some more RAM into your system.

- If you are experiencing stuttering with Unreal Tournament or any games that use the Unreal Tournament engine, read the 'How can I speed up Unreal Tournament on my GeForce?' question first.

- The following solution was originally from the following website:
  http://www.daytonsmisc.com/

  1. *Go into the System Control Panel, click on Device Manager, and find your CD/DVD-ROM drive(s) and hard drive(s). Go into each one, click on Settings and tick DMA. This enables UltraDMA.*

  2. *Make a permenant swap file of 150MB. In the System Control Panel, click on Performance and select Virtual Memory. Select 'Let me select my own virtual memory settings', select the hard drive that you want the swapfile on (the fastest drive) and type 150 in both boxes. Click OK, ignore the warning and restart.*

- Make sure that Video BIOS shadowing is disabled in your BIOS.

- If you have a network card installed, try setting the connection type in the Network Control Panel from the automatic sensing option to the type of network that you use (10BaseT / 100BaseT, full / half duplex).

- Make sure that your GeForce card is not sharing any IRQs with another card (with the exception of the

'IRQ Holder for PCI Steering' device which will always use the same IRQ as the GeForce). If you find that the GeForce is sharing an IRQ with a PCI or ISA card, in the case of a PCI card try moving the PCI card to another slot (avoid the slot directly next to the AGP slot as this usually shares an IRQ with the AGP slot) or, in the case of an ISA card, reconfigure the card to use another IRQ. You may need to read the 'I have Windows 2000 and all of my devices share the same IRQ, causing problems with my GeForce. How can I fix it?' question.

- If your AGP Aperture is set to 256MB, try changing your AGP Aperture to another value (keep it above 16 as setting it at or below 16 will disable AGP) - see the 'How can I change my AGP Aperture size?' question.

- If you have a TwinView supposting card but are only using one monitor, try disabling TwinView as mentioned in the 'I get two monitors detected when I only use one. How can I disable TwinView?' question.

- Try ticking the 'Disable support for enhanced CPU instruction sets' box in the OpenGL tab of the NVIDIA Control Panel applet.

- You may find that switching your desktop colour depth to 256 colours helps with stuttering problems.

- You can try disabling auto-mipmapping in the NVIDIA control panel. This has helped some people with stuttering problems: however, it may result in reduced image quality and overall speed.

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Q. All 3D applications are slow on my GeForce. How can I fix it?

- If you are using a non-Intel chipset based motherboard, make sure you download and install the very latest AGP and other drivers from your chipset manufacturer's or motherboard manufacturer's website.

- If you have a low end CPU, then you may have to upgrade your CPU to make the most out of the GeForce. Only higher end CPUs can take full advantage of the power of the GeForce, despite the T&L engine. In particular, any AMD Super Socket 7 chips in general give poor performance, due to the poor AGP implementations on most Super Socket 7 motherboards.

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Q. When I run a 3D application, the screen suddenly goes black (I lose the monitor signal), but the computer doesn't lock up. How can I fix it?

- Try going into Safe Mode and go to Control Panel / System. Remove all monitor devices listed and let Windows redetect the monitor when it restarts.

- Try changing your refresh rate. See the 'How can I manually set refresh rates and force the refresh rate above 60hz?' question for more details.

- If you have no monitor drivers for your monitor, select 'Plug and Play Monitor' from the (Standard monitor types) section of the monitor drivers list.

- Make sure that you are using a powerful enough power supply. See the 'How powerful should my power supply be in order to use the GeForce?' question for more information.

- Your motherboard may not be supplying enough power to the GeForce - see the 'What's all this with the original GeForce and motherboards not supplying enough power?' question.

- Try forcing AGP1X. Read the 'How can I force AGP1X to be used instead of AGP2X or AGP4X?' question for more information.

Q. I have problems with flickering, tearing or polygons in the wrong place in 3D applications. How can I fix it?

- If you have flickering or tearing problems with Quake 3 Arena, make sure you read the 'I get flickering textures in Quake 3 Arena and Windows 9x/ME. How can I fix it?' and 'I get tearing on Quake 3 Arena, whether I set VSYNC on or off. How can I fix this?' questions first.

- If you have any of these problems with Half-Life, make sure you read the 'I get problems with Half-Life. How can I fix them?' question first.

- If you have flickering problems with Rogue Spear, make sure you read the 'I get flickering in Rogue Spear. How can I fix it?' question first.

- If you have tearing problems, try turning up your refresh rate. See the 'How can I manually set refresh rates and force the refresh rate above 60hz?' question for more details.

- If you have tearing problems, try forcing VSYNC off in the NVIDIA control panel.

- Try changing your AGP Aperture to another value (keep it above 16 as setting it at or below 16 will disable AGP) - see the 'How can I change my AGP Aperture size?' question.

- The following tips were provided by Rich Carless:

  If you have tearing problems with any OpenGL programs, go to the OpenGL tab of the NVIDIA control panel and change the 'Buffer flipping mode' option from 'Auto-select' to 'Use block transfer'.

  If you have polygons in the wrong place in Direct3D programs, go to the Direct3D tab of the NVIDIA control panel and tick 'Enable alternate depth buffering technique'.

- Try upgrading your Video BIOS to the latest version. You might want to read the 'Where can I get the latest NVIDIA Flash BIOS and which should I use?' question.

Q. I have problems with flashing textures. How can I fix it?

- Try changing your AGP Aperture to another value (keep it above 16 as setting it at or below 16 will disable AGP) - see the 'How can I change my AGP Aperture size?' question.

- If you have an option called 'PCI Delay Transaction' in your BIOS, try disabling it.

- Try installing the latest BIOS update for your motherboard. You can get help with finding out what BIOS you need and instructions as to how to flash it at Wim's BIOS page.

- Try reducing the 'PCI Texture Memory Size' setting in the NVIDIA control panel to a lower level.

- If you have a VIA chipset, try disabling AGP4X in your BIOS or using registry files (see the 'How can I enable AGP4X in the Detonator 5.16+ driver sets on my VIA 133mhz chipset motherboard?' question). If disabling it helps, then try reading the 'I have a VIA chipset based motherboard and I can't get AGP4X to work without causing instability. How can I fix it?' question.

- Try connecting your CPU fan to another socket on the motherboard.

- Try reseating all of the components on your motherboard (including power leads and the GeForce).

- Try turning up the I/O voltage of the motherboard in the BIOS by a small amount.

- Make sure that you are using a powerful enough power supply. See the 'How powerful should my power supply be in order to use the GeForce? question for more information.

- If you are using more than one stick of memory, try taking out all but one of the memory sticks and see if that helps. If it does, you need a more powerful power supply: see the 'How powerful should my power supply be in order to use the GeForce?' question for more information.

- Try using the Detonator 2 (5.xx) series of drivers.

- Try switching on AGP Turbo, turning up the bus speed, or setting your AGP ratio to 1:1, (in that order) - this will put extra strain on the card, but it seems to fix the problem for some people.

- After trying the above, try turning up the bus speed above 100 **and** setting the AGP ratio to 1:1.

- Try forcing AGP1X. Read the 'How can I force AGP1X to be used instead of AGP2X or AGP4X?' question for more information.

- Try turning down the AGP Aperture to 16 or below, if your motherboard supports it - see the 'How can I change my AGP Aperture size?' question. This will disable AGP, but may fix your problem. You can also use DXDiag to disable AGP.

Note that this problem is closely related to the locking up problem - you may also want to try reading the 'My GeForce keeps on locking up or drops me back to the desktop during 3D applications. How can I fix it?' question for more hints. Let me know if any of the hints in the lockup question help with flashing textures and are not already mentioned here, so that I can copy them over.

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Q. I get texture bleeding, small flashing triangles or corrupted textures. How can I fix it?

- Try changing your AGP Aperture to another value (keep it above 16 as setting it at or below 16 will disable AGP) - see the 'How can I change my AGP Aperture size?' question.

- If you are getting texture psoblems in Quake 3 Arena, try reading the 'The sky looks blocky and textures have strange colours in Quake 3 Arena with the latest drivers installed. How can I fix this?' question.' question.

- If you have a RealMagic Hollywood Plus or another DVD decoder card, try taking it out and seeing if that helps. An motherboard that supports ATA66 may also cause these problems in some cases. If this does seem to be the problem, take the DVD card out immediately because some people *appear* to have actually had their GeForce damaged somehow.

- Try reflashing the video card's BIOS with the BIOS supplied from the CD by copying the BIOS files to your hard drive, rebooting, pressing F8 on the Starting Windows 9x/ME screen and selecting 'Safe Mode Command Prompt' and then running the utility. The version is the same as the version currently on your card but it may fix the problem.

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Q. I get dots all over the screen in some programs. How can I fix it?

- In 2D programs, this may be caused by the Detonator 3 (6.xx) driver sets. Try reverting to the Detonator 2 (5.xx) driver sets.

- In 3D games, these are polygon junctions. You should only be worried if these occur without

overclocking.

- o If you have an option in your BIOS called 'Fast CPU Command Decode', try setting it to Normal instead of Fast.

- o If you are playing with a Quake engine based game, try the console command:

  - /gl_keeptjunctions "1"

- o Reset all of the options in the NVIDIA control panel to default.

- o Try underclocking your card.

- o Try going into 32 bit colour mode instead of 16 bit.

- o Replace your card if you can. It is most likely that it is defective.

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Q. My sound card crackles or stutters with the GeForce. How can I fix it?

- Make sure you have muted all unused sound inputs in the Windows Volume Control application, to make sure that you are not just picking up noise from inside your system.

- Try installing the latest drivers for your sound card.

- Try installing the latest drivers for your motherboard.

- Try installing the latest BIOS update for your motherboard. You can get help with finding out what BIOS you need and instructions as to how to flash it at Wim's BIOS page.

- Make sure that your sound card is not sharing an IRQ with another card. If it is, try moving your sound card to another PCI slot. You may also have to read the 'I have Windows 2000 and all of my devices share the same IRQ, causing problems with my GeForce. How can I fix it?' question.

- If you are using a SoundBlaster Live! soundcard, make sure that you have reserved IRQ 5 for the SoundBlaster 16 emulation in your system's BIOS - set IRQ 5 to 'Reserved for Legacy (or ISA) Device' in the 'PCI/PNP IRQ Resource Exclusion' section - your BIOS may use different wosding.

- If you have a Super Socket 7 motherboard, the registry fix in the 'I have problems with my Super Socket 7 motherboard. How can I fix them?' question may help.

- Try disabling the 'Delayed Transaction' option in your BIOS.

- Try enabling the 1MB memory hole between 15-16MB option in your BIOS.

- If you have a 'PCI Latency Timing', 'CPU-to-PCI Bridge latency' or similar setting in your BIOS, try setting it to 0, or raising it to 64 (the usual setting is 32). This may help in particular on VIA KX133 based motherboards.

  If you do not have this option in your BIOS, and you have a VIA MVP3 chipset based motherboard, try putting the following program in your startup folder. It sets the CPU-to-PCI Bridge latency timer to 0. You can download the Windows 9x/ME version of this program here:
  http://koti.mbnet.fi/parru/CPU-to-PCIBridgeLatencyTimerTo0clks.zip
  and the Windows 2000 English version here:
  http://www.deinmeister.de/mvp3_zlt_e.htm
  and the Windows 2000 German version here:

http://www.deinmeister.de/mvp3_zlt.htm

If you have another chipset on your motherboard, you may be able to use the shareware program TweakBIOS to change the PCI Latency on your soundcard. You can find out more information about this and download it at the following website:
http://www.miro.pair.com/tweakbios/

- Try setting the DirectSound Debug Output Level in the DirectX control panel higher - you can get a copy of the DirectX control panel here:
http://www.geforcefaq.com/files/dxcpl.zip

- Under Windows 2000 try altering the hardware acceleration level of your soundcard - you can find the slider in the Sounds and Multimedia control panel under the Audio tab / Advanced for Sound Playback and Sound Recording.

- Try disabling DMA transfers on all of your drives. You can do this under the System control panel by opening each drive in turn and disabling DMA under the 'Settings' tab. This will reduce your drive's performance but may fix the problem.

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Q. My TV card has problems with the GeForce. How can I fix them?

- Try installing the latest reference drivers. The 5.22+ drivers fix many problems with TV cards and may make the steps below unnecessary.

- The following instructions were provided by Bill Ball from Creative Labs, who got them from NVIDIA:

    1. *Open the Display properties.*

    2. *Go to Settings, Advanced, GeForce/TNT/TNT2/TNT2Ultra, Additional Properties, Overlay Color Control.*

    3. *You can make adjustments or just hit the Default button and hit OK.*

    4. *Close the Display properties.*

       The point of this seemingly useless maneuver is that it creates a registry key that you will need IF you have not opened the Overlay Color Control sheet before. If you have, then just skip the above step.

    5. *Run Regedit and locate this key:*
       HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\Class\Display\000#\NVIDIA\Direc

       Note: You may have several display entries numbered successively. Usually the last one is the active one, but if you have several that refer to other graphics cards no longer installed, you may want to delete them or run any uninstall for those cards. If you have several referring to your current card and can't figure out which is active, you may want to reboot into Safe Mode, go into Device Manager and remove ALL display driver entries and reboot to reinstall the drivers once.

    6. *In the active DirectDraw key create a new DWORD entry called 'VideoBusMasterMode' and give it a value of 1.*

    7. *Close regedit and reboot*

    8. *Try the TV card application. NVIDIA says this fixes the ATI TV Wonder and they believe it will fix the Hauppauge and other cards.*

9. *If not, run regedit again and look for this entry:*
   HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\Class\Display\000#\NVIDIA\Direc

10. *Change the value for OverlayMode from 0 through 5, restarting and testing the TV application each time.*

- If this does not help, and you have a card based on the Brooktree BT848 chipset, you can disable Overlay mode until a fix is found by going into the following registry key:
  HKEY_CLASSES_ROOT\bt848\Force Primary
  and changing the default value from 0 to 1.

- Finally, if all else fails, try loading two copies of your TV card application. The second instance of the application may not show the problem. This may be the only way to fix the problem in Windows 2000.

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Q. I get errors involving a DirectDraw "failure at step 11". How can I fix them?

Try forcing AGP1X - see the 'How can I force AGP1X to be used instead of AGP2X or AGP4X?' question for more information.

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Q. In the DXDiag Display tab, I get AGP Not Available. How can I fix it?

- Have you got Windows 95? You must have OSR2 and the USB supplement installed.

- Upgrade to Windows 98.

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Q. I can't run any Direct3D programs, but OpenGL programs run fine. How can I fix it?

- If you have Windows 2000 installed and you use NetMeeting, this may be because you have Remote Desktop Sharing enabled or NetMeeting is started or is improperly shut down. If you close NetMeeting, this should fix the problem. You can read more about this in the following Microsoft Knowledge Base article:
  http://support.microsoft.com/support/kb/articles/Q260/5/65.ASP
  You might like to try running and then quitting NetMeeting even if you don't usually use it - it may fix the problem.

- Note that this problem still appears sometimes when you are just running NetMeeting without Remote Desktop Sharing enabled. This appears to be an NVIDIA driver issue - you will have to close NetMeeting.

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Q. I can't run any OpenGL programs, but Direct3D programs run fine. How can I fix it?

- If you are using Windows XP, make sure you read the 'Hardware accelerated OpenGL doesn't seem to be working at all in Windows XP. How can I fix it?' question.

- If you previously had another graphics card installed before the GeForce, go to the following registry key using regedit:
  HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\OpenGLdrivers
  and remove any keys except the RIVATNT key.

- Try the following instructions:

  1. Click Start / Run.

  2. Type "win.ini" (without quotes) and press OK.

  3. Search for a line that says "DVA=0" (without quotes).

  4. Add a semicolon (;) before the DVA (The line should now look like this: ";DVA=0" (without quotes))

  5. Save and close the file

  If you find this causes more problems, just take out the semicolon. The setting refers to Direct Video Access - apart from that very little is known about it, but it should not cause any problems when enabled.

  Note that not everyone has this line, and if there is none you'll have to try another solution.

- If you get a 'GLimp_EndFrame()-SwapBuffers() failed!' error message when starting OpenGL applications, you can either try using the latest reference drivers or use the fixglimperror.reg registry file under Windows 9x/ME - available here: http://www.geforcefaq.com/files/fixglimperror.reg

  If you get the same error under Windows 2000, use the fixglimperror2k.reg registry file - available here: http://www.geforcefaq.com/files/fixglimperror2k.reg

- Try changing your AGP Aperture in your BIOS to another value (keep it above 16 as setting it at or below 16 will disable AGP) - see the 'How can I change my AGP Aperture size?' question.

- Try completely uninstalling and reinstalling the drivers according to the 'How can I completely uninstall old NVIDIA GeForce or Creative Labs Annihilator drivers?' question.

- If you have a Tyan Trinity 400 motherboard, try reverting to the BIOS version 1.0.

- Try underclocking your card.

- Try forcing AGP1X. Read the 'How can I force AGP1X to be used instead of AGP2X or AGP4X?' question for more information.

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Q. OpenGL programs run very slowly or crash in Windows 2000. How can I fix it?

Try downloading and installing the iopagelock.reg registry file - available here: http://www.geforcefaq.com/files/iopagelock.reg

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Q. I have Windows 2000 and all of my devices share the same IRQ, causing problems with my GeForce. How can I fix it?

This is a 'feature' of Windows 2000 - it uses ACPI in such a way that all devices share the same IRQ, usually 9 or 11.If you don't have problems, then leave it alone, but if you do get problems, use one of the procedures below (note that for Windows 2000 Microsoft recommends that you disable the PNP OS option in your BIOS before installation):

Note that Windows XP does not force all devices to share the same IRQ.

Note that some people find that disabling ACPI means they lose all power management functions.

- This procedure, submitted by Steve Aucoin, will allow you to disable ACPI without reformatting:

    1. *Disable PNP OS and ACPI in your BIOS, if you can (you may not be able to, and it is not always necessary) - if the option is not available try installing the latest BIOS update for your motherboard. You can get help with finding out what BIOS you need and instructions as to how to flash it at Wim's BIOS page.*

    2. *Reboot. Go to Control Panel - Hardware and double click on My Computer in the hardware manager.*

    3. *You'll see ACPI - get into its properties and click to install another driver. When prompted, look under the Microsoft section and install the "Standard PC" driver.*

    4. *Reboot. At this point Win2k will try and reinstall all devices on your system so install any drivers you are prompted for (have them **all** handy) and reboot. Finalise any drivers you may be prompted for on the 2nd boot and reboot again.*

    5. *With all your drivers re-installed, take a look in hardware manager - and every device should have its own IRQ.*

    Be warned that this method is discouraged by Microsoft - see the note at the bottom of this Knowledge Base article.

- You can select not to enable ACPI when you first install Windows 2000 - During the first phase of Setup, at the Setup is inspecting your computer's hardware configuration screen, press the F5 key. You can select 'Standard PC' instead of an ACPI option.

- You can also press F7 during the portion of setup that displays the message to press F6 for adding SCSI drivers. This configures Setup to not try ACPI machine types.

- If for some reason the above procedures doesn't work, follow the following procedure, provided by Aaron Dierking, to disable ACPI from the outset.

    1. *Copy the i386 directory off the Windows 2000 CD onto your hard drive.*

    2. *Go into the i386 directory on your HDD and find the txtsetup.sif. Open it with notepad.*

    3. *Find the [ACPIOptions] section in the file. Below will be a setting for ACPIEnable - set it to 0.*

    4. *Install Windows 2000 using your hard drive copy.*

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Q. I have an ASUS AGP-V6800 Deluxe card and I have updated my BIOS, but now I have severe problems. What's going on?

This is because older ASUS AGP-V6800 Deluxe cards use 8 Infineon RAM chips, and newer cards of the same model only use 4 Samsung RAM chips, with a different BIOS to go with them (version 2.10.02.10.04). ASUS offer a 'newer' BIOS on their website that enables sidebanding (version 2.10.02.10.02 sba), but this BIOS only works with the 8 chip cards, not the newer 4 chip cards. If you use the sba BIOS on a newer card, you will get display corruption and instability problems.

Jurgen Ludolph has provided me with a copy of the 2.10.02.10.04 BIOS that you can download if you have this problem. It is available here:
http://www.geforcefaq.com/files/v6800d-2.10.02.10.04.zip

You will need to use NVFlash to use this BIOS - you can read more about NVFlash in the 'Where can I get and how do I use NVFlash?' question.

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Q. My PC won't POST (doesn't display anything when I switch it on) after I put my GeForce card in. How can I fix it?

- Make sure that your card is firmly seated in the AGP slot, and clean away any dust in the slot or on the card.

- Make sure that your processor and RAM are firmly seated - you may have dislodged them when you installed the GeForce.

- Try a different monitor. In some rare cases the GeForce simply won't work with a certain monitor. If this is the case, try replacing the GeForce and seeing if that helps.

- Try increasing the I/O voltage of your motherboard to 3.4V in your BIOS setup if your BIOS supports it.

- Try setting the AGP Driving Value setting in your BIOS setup to EA or FF.

- Try installing the latest BIOS update for your motherboard. You can get help with finding out what BIOS you need and instructions as to how to flash it at Wim's BIOS page.

- Try delaying your drives from spinning up for a few seconds if your BIOS supports it.

- If you are using a KVM (Keyboard / Video / Mouse) switch between your GeForce and your monitor, try first connecting the GeForce directly to the monitor. If this helps, try booting the PC when the KVM is pointing at a different monitor.

- If the above solutions don't help, you may find that on motherboards that are only AGP 1.0 compliant you may be able to fix this problem by putting insulating tape over the last pair of contacts on the AGP connector on the GeForce card (the contact furthest from the monitor port, on both sides). This has been tested on the Chaintech 6BTM motherboard. You may find that once you have done this once you will be able to take the tape back off (even if the tape didn't seem to have any effect).

- If your motherboard has two power supply connectors (AT and ATX), then try connecting the ATX connector instead of the AT. ATX supplies the 3.3V required by AGP cards to run.

- If you are using PC100 RAM, try switching to PC133 RAM.

- Your Video BIOS may be corrupt (this can occasionally occur even on brand new cards). See the 'My card's Video BIOS is corrupted and I can't use my manufacturer's flash program to restore it. How can I restore it?' question for more information on how to reflash it.

- If you have an ABIT K7V motherboard and an ASUS V7700 card, and none of the above tips help, then unfortunately there seems to be a compatibility issue with the two. You'll have to change the card or the motherboard. Contact Kagemusha if want more information.

- If none of this helps, you may have a dodgy card. Try to get it replaced under warranty.

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Q. I have an Abit KA7 or ASUS P3V4X and sometimes when I switch my computer on the video card is not detected. How can I fix it?

- If you have a Abit KA7, you will have to return your motherboard to Abit for modification. There is a

compatibility problem between this motherboard and certain manufacturer's GeForce2 cards. It will not cost you anything in labour and component charges but you will have to pay for P&P to and from Abit. Contact Abit for more information.

- If you have a ASUS P3V4X, follow the instructions in the 'I have an ASUS P3V4X motherboard and I have instability problems with the GeForce. How can I fix it?' question.

- Switching your monitor on before you switch on your PC may also help with this problem.

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Q. I (occasionally or always) get less than 32MB of video RAM reported when I first switch on my PC. What's up?

- Try slightly changing your FSB speed.

- Make sure that you are using a powerful enough power supply. See the 'How powerful should my power supply be in order to use the GeForce? question for more information.

- You can find a link for a BIOS that may fix this problem for the Creative Annihilator Pro in the 'Are there any newer Video BIOS upgrades for the Annihilator?' question.

- You may want to replace the card even if this does help: this problem may also be a bad solder joint on one of the memory chips that causes problems occasionally or all the time.

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Q. When I put my GeForce card in my Adaptec AHA-39160 SCSI card doesn't detect any devices. How can I fix it?

- Try disabling the SCSI BIOS on your card if you don't need it. You only need it enabled if you actually boot off the SCSI device.

- You may need an updated SCSI BIOS for your AHA-39160 card. The version you need is 2.57.2 or later. You can download the BIOS from Adaptec's site.

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Q. Windows locks up before it finishes loading, and a thin green line may appear across the top of the screen. How can I fix it?

- This may be caused by the Backup utility supplied with Windows 9x/ME attempting to detect new tape devices on boot. You can fix it by deleting the files *drvwppqt.vxd* and *drvwq117.vxd* in the *Windows\System\Iosubsys* directory. If this helps, then search for the string 'TAPEDETECT' in your registry and delete any entries that exist. If you find this causes your tape drive to stop working, you'll have to reinstall Microsoft Backup. You can also simply uninstall Microsoft Backup if you don't use it.

- Try updating the motherboard's BIOS. In particular on some Gigabyte boards based on the VIA KT133 chipset this may fix the problem. See the following page for more information: http://www.giga-byte.com/faq/question/question_kt133.htm This may also fix the problem on ASUS A7V motherboards - upgrade the BIOS to version 1004C or later.

- You may find that on motherboards that are only AGP 1.0 compliant you may be able to fix this problem by putting insulating tape over the last pair of contacts on the AGP connector on the GeForce card (the contact furthest from the monitor port, on both sides). This has been tested on the Chaintech 6BTM motherboard. You may find that once you have done this once you will be able to take the tape back off

(even if the tape didn't seem to have any effect).

- Try disabling the Windows startup sound.

- Make sure that VSYNC is enabled in the NVIDIA control panel.

  If you have IomegaWare installed, try uninstalling it. If this fixes the problem, just use Iomega Guest.

- Also try reading the 'My GeForce keeps on locking up or drops me back to the desktop during 3D applications. How can I fix it? question.

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Both of these problems may be caused by your monitor. Try another monitor and see if it fixes the problem.

The first problem in particular seems to be caused by non-DDC compliancy. You may also experience a pause when you enter the Output Devices tab in the NVIDIA Control Panel.

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Q. If I set the GeForce as the primary card in the BIOS, my secondary PCI video card is not detected. How can I fix it?

Check in your C:\CONFIG.SYS file to see if you are loading EMM386.EXE. If you are, remove the line.

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Q. I have 1GB of RAM, and Windows 9x/ME will not boot. What's up?

- The problem might be fixed by the fix mentioned in the following Microsoft Knowledge Base article: http://support.microsoft.com/support/kb/articles/Q184/4/47.ASP.

- You can also try the tips in the 'I get 'Out Of Memory' errors although I have plenty of RAM installed. How can I fix it?' question.

- This is a known issue with Windows 9x/ME, due to the way in which it accesses memory. Because Windows 2000 uses the NT style of accessing memory, the problem does not occur. The problem only turns up with the GeForce because it is one of the first cards to to be 100% true AGP (most other cards still address memory via the PCI bus because developers can design the cards to be cheaper that way). Thanks to Anthony McDowell for explaining this problem to me!

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Q. I have problems with my Super Socket 7 motherboard. How can I fix them?

- You can disable certain features that cause problems with Super Socket 7 motherboards using the ss7compat1.reg registry file - available here:
  http://www.geforcefaq.com/files/ss7compat1.reg
  If you still get problems, you can disable even more features using the ss7compat2.reg registry file - available here:
  http://www.geforcefaq.com/files/ss7compat2.reg
  You can reenable all features again using the ss7compatoff.reg registry file - available here:
  http://www.geforcefaq.com/files/ss7compatoff.reg

  If these files don't seem to have any effect, you may have to edit them in Notepad and change the 0000 to 0001, or another value. Take a look at the
  HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\Class\Display

registry key using regedit and find out which number your graphics card is using.

This registry tweak does not work in the latest (5.xx+) drivers.

- Try setting the following settings in your computer's BIOS:
    - AGP Bus Turbo Mode - Disabled.
    - K6 Write Allocation - Disabled.

  Also ensure that you keep the first PCI slot (usually the one nearest the AGP slot) free of any other PCI cards, as it usually shares an IRQ with the AGP bus, and a card in the slot will inhibit ventilation for the GeForce core.

- If you find that the 6.31+ drivers cause massive slowdowns with your VIA MVP3 based motherboard, try using the 7.56+ drivers, which should fix the problem.

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Q. I have an Intel 440LX based motherboard with a Celeron II upgrade, and 3D applications won't work on my GeForce. What's wrong?

It appears that this configuration is just incompatible because the 440LX chipset was never designed to support Celeron II CPUs. You could try enabling the 'Disable support for enhanced CPU instruction sets' option in the NVIDIA OpenGL control panel, but other than that there is no known solution.

You can read more about this problem at the bottom of the following page:
http://home.earthlink.net/~billselk/al440lx/slockets2.html

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Q. I have an Intel i815 based motherboard and 3D performance is very poor. How can I fix it?

Try installing the Intel chipset drivers from:
http://support.intel.com/support/chipsets/driver.htm.

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Q. I have an Intel i820 based motherboard and I have various problems. How can I fix it?

- There is a problem with this chipset and the AGP Fast Writes function of the GeForce which means that 3D applications are actually slower. You can find out more about disabling AGP Fast Writes in the 'How can I enable or disable AGP Fast Writes?' question.

  You may not have to switch off Fast Writes in the 5.08+ drivers, especially 5.14+ - the problem seems to be fixed.

- If you are having problems with the i820, and you are using SDRAM memory, you will probably need to get your motherboard and memory replaced, for free, by Intel. See this page for more details:
  http://www.intel.com/support/mth/

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Q. I have an Intel i840 based motherboard and I get blue screens. How can I fix it?

Contact your manufacturer for an updated Video BIOS. Creative will certainly be able to supply you with a Video BIOS to fix this problem.

Q. I have a VIA chipset based motherboard and I can't get AGP working or I get lockups in Windows 2000. How can I fix it?

- There is a new viaagp.sys driver from Microsoft that may fix lockups in Windows 2000. You can get more information and download the driver at the following website: http://support.microsoft.com/support/kb/articles/Q261/6/06.asp
  Be warned, however, that installing the AGP component of any VIA 4in1 driver on top of this update will stop it working, as the 4in1 drivers use a file called viaagp1.sys instead. You can tell which driver you are using because the Microsoft driver will be called 'Via Tech CPU to AGP Controller' and the VIA driver will be called 'Via CPU to AGP Controller'.

- There is a solution for the AGP disabled problem for the VIA KX133 chipset available at the following website: http://www.tomshardware.com/mainboard/00q2/000417/kx133-04.html

Q. I have a VIA chipset based motherboard and I can't get AGP2X or AGP4X wosking. How can I fix it?

- Make sure that you installed the VIA AGP driver in 'Turbo' mode - otherwise you will be restricted to AGP1X only.

- Make sure that you have AGP2X or AGP4X enabled in the BIOS of your motherboard.

- If you have an ASUS A7V motherboard, the 1004 series of BIOS updates seem to disable AGP4X. Try 1003a or the 1005+ series to enable AGP4X.

- Make sure that you have the latest (leaked) reference drivers installed.

- In addition, make sure you read the 'How can I enable AGP4X in the Detonator 5.16+ driver sets on my VIA 133mhz chipset motherboard?' question.

Q. I have a VIA chipset based motherboard and I can't get AGP4X to work without causing instability. How can I fix it?

To enable AGP4X on VIA chipset based motherboards, see the 'How can I enable AGP4X in the Detonator 5.16+ driver sets on my VIA 133mhz chipset motherboard?' question. However, note that AGP4X is disabled on these motherboards because of issues with AGP4X, VIA chipsets and the GeForce2, so these steps may not work for everyone.

- The following instructions were provided by Gary Shapiro:

  1. *Check your BIOS setup, usually in the Chipset Features Setup, for something called the AGP Driving Value. This value controls the timing of the AGP driver in Windows. The value you place here can make AGP4X stable. This value is a hex value from 00-FF.*

  2. *In order to place a value here you might need to change another BIOS setup feature called the AGP Driving Control. This should appear with the AGP Driving Value. Set this to MANUAL if not already. The other option is AUTO.*

  3. *Try setting this value to DA or EA. Try DA for a VIA Apollo Pro 133A motherboard. On a KT133 motherboard you might want to try E7.*

4. *Save your options and reboot your machine. Make sure you are running AGP4X and try some 3D games. Where they might have hung or crashed before they should now be running fine. If not, then go back into the BIOS Setup and try another value. I've found that values that end in an 'A' seem to work the best.*

If your BIOS Setup does not have the AGP Driving Value option, there are two programs on the Web that let you modify your BIOS and change this value manually to any value. These programs are called WPCREDIT and WPCRSET. You can find them at the following website:
http://www.h-oda.com/

WPCREDIT is used to modify the BIOS on the fly. Any value changed will disappear after you do a cold reboot of your machine. WPCRSET is designed to make the change each time Windows starts up.

I recommend that you use WPCREDIT to try different values and when you get one working use WPCRSET to make in 'permanent'. Keep in mind that a 'wrong' value might cause you to hang or have a corrupted display. You might have to reboot. You might want to use WPCREDIT even though your BIOS Setup has the AGP Driving Value. This might be easier as far as testing goes. Once you get a 'good' value then you can change it in your BIOS Setup without even using WPCRSET.

Go to the following website for detailed instructions on how to use these programs:
http://viahardware.com/memtweakguide1.shtm

Once you read the article and are familiar with modifying your BIOS then changing the AGP Driving Value is simple. The Driving Value is located at x'B1'. That's offset Hex, Baker One. Place a DA or EA or any other value that you might want to try here. Once you save the change it takes effect immediately. If it does work for you then you can change your BIOS Setup or use WPCRSET.

If you have an ASUS P3V4X motherboard, there is a special utility that you can use to alter the AGP Driving Value. It is available here:
http://www.users.bigpond.net.au/slop/beta4w.com
If you add the line '*beta4w x*' to your autoexec.bat, it will set the AGP Driving Value to FF automatically.

- Try setting your memory to run at CAS4 if you have the option, and if not use WPCREDIT to change the two bits associated with CAS latency to 11. This will lead to a drop in memory bandwidth but may allow you to enable the other AGP features.

- If you are running your memory at 100mhz and you have the option to set it to 133mhz, try doing so.

- You can also try setting the PCI texture memory size settings for Direct3D and OpenGL to their maximum settings. Although this setting only appears to be useful for PCI cards, it still may help. However, this fix only works for some people.

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Q. I have a VIA 133A based motherboard and the amount of video and texture memory is reported incorrectly. How can I fix it?

- Try changing the 'Video Cacheing Mode' setting in your BIOS to UC (Uncacheable) as opposed to UCWC (Uncacheable, Write Combining).

- Try installing the latest BIOS update for your motherboard. You can get help with finding out what BIOS you need and instructions as to how to flash it at Wim's BIOS page.

- Try installing the latest NVIDIA reference drivers. Drivers 5.16+ may fix this problem.

- Try installing the latest VIA AGP drivers.

- Try changing the AGP Aperture size in your BIOS to another value - see the 'How can I change my AGP Aperture size?' question.

- Try using the registry key mentioned in the 'How can I enable AGP4X in the Detonator 5.16+ driver sets on my VIA 133mhz chipset motherboard?' question with the 5.16+ drivers.

- Try disabling the Windows startup logo by either using TweakUI (in the Boot tab, uncheck 'Display splash screen while booting') or editing the c:\msdos.sys file (don't forget to turn off the read only attribute first) and putting '*Logo=0*' in the '*[Options]*' section.

- Boot to Windows as normal, and once Windows is fully loaded, hold the left SHIFT key and click start, shutdown, then restart. Once you see the message 'Windows is restarting...' you can let go of the SHIFT key. You will now have the correct amount of video and texture memory and will be able to run the 64MB texture text in 3DMark2000 and you will be able to set the AGP aperture size to 256 without crashing.

  Unfortunately you will need to perform this step each time you boot up your PC. There is no other known fix.

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Q. My 2D image quality is poor (fuzzy, ghosting, smeared bold text). How can I fix it?
Q. I have 2D image quality problems with jittery text. How can I fix it?

- Make sure that your internal and external power cables are not too close to your GeForce and your monitor signal cable.

- It is possible that this problem only turns up after recovering from your monitor's power saving mode. Try rebooting.

- Try changing the 'Monitor timing' under 'Device Selection' / 'Device Adjustments' / 'Display Timing' in the NVIDIA control panel to first GTF and then DMT.

- Try changing the refresh rate - you may want to try just altering it by 1hz or so by setting up a custom refresh rate to see if the problem goes away. See the 'How can I manually set refresh rates and force the refresh rate above 60hz?' question for more details

- Make sure that there are no electrical devices near your PC and monitor that may be causing interference.

- Try manually adding the following switch to your pstrip.ini in PowerStrip 2.62+:

  [Options]
  ClkDeviation=n

  where n is an integer between 5 and 1000. If set, the PowerStrip will post-process all mode changes in search of a close, but hopefully more stable refresh rate. A lower n is more likely to reduce jitter but also likely to vary more from the desired refresh rate. Try a value of 250 and work downwards until you arrive at something suitable.

  You can download a demo of PowerStrip at the following website:
  http://www.entechtaiwan.com/

- Try reversing the polarity of the monitor using PowerStrip. You can download a demo of PowerStrip at the following website:
  http://www.entechtaiwan.com/

  You may also be able to reverse the polarity of the monitor with hztool under Windows 9x/ME.

- It may be that your monitor does not have 75 ohm terminators on all unused D-subs and BNC inputs. Some monitors may have a (very small) switch on the back which will allow you to switch this on (one example is the Eizo Flexscan T562). It may have an infinity sign at one end and 75 ohm at the other end. Switch this to 75 ohm.

- If you have BNC inputs to your monitor try buying a lead that will allow you to use them. They must be 75 ohm BNC cables.

- Try using RF chokes on the monitor cable.

- Try using an external VGA signal amplifier between your GeForce and your monitor. Be warned, however, that these amplifiers are expensive!

- You might want to read the information on the following website - it details how your card may be poorly designed and give a bad signal:
  http://www.geocities.com/porotuner/

- It could be a dodgy card. Try replacing it if it's still under warranty.

- Try another monitor and cable. This issue seems to turn up especially with Trinitron and DiamondTron monitors, and unfortunately there is no current fix.

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Q. My 2D display is corrupted. How can I fix it?

You may also want to read the 'When I resume from monitor power saving modes in Windows 9x/ME, I get display corruption and / or instability problems, or my card seems slower than usual. How can I fix it?' question.

- If you are overclocking, try setting the card back to the default settings and then underclocking. If this helps, you might want to try cooling your card with a more efficient cooler. See the 'What is a good replacement fan for a GeForce?' question for some tips.

- If you are using ASUS drivers and in particular the SmartDoctor's 'Dynamic Chip Cooling' feature, try using the NVIDIA reference drivers.

- If the corruption is on your Start button and toolbar buttons in particular, try disabling your soundcard / sound chipset. If this fixes the problem, then if you have a Yamaha chipset based soundcard try using the Yamaha drivers included with Windows ME or Windows 2000 instead of those available on the website. Unfortunately there is no similar fix for the problem for Yamaha soundcards under Windows 9x/ME. If you are using another soundcard, try downloading the latest official drivers from the sound card chipset manufacturer's homepage - in particular, Turtle Beach Santa Cruz sound card owners should download the latest official drivers from the Turtle Beach website instead of anywhere else.

  If you have a Yamaha DX-XG soundcard, you may be able to just disable the game port and legacy sound system in the Windows System control panel.

- You can also try using the 5.xx series of drivers.

- This may also be caused by a dodgy card - see if you can get it replaced under warranty.

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Q. My display flickers. How can I fix it?

- Your refresh rate may be too low. Try reading the 'How can I manually set refresh rates and force the

' question.

- Try going into the troubleshooting tab of the advanced settings of your video card (Windows 2000) or System Control Panel / Performance / Graphics (Windows NT 4) and setting the Hardware Acceleration slider one notch down. This may also make your system faster and more stable, but it is possible that you will not be able to overclock so far.

- This may occur in Windows 2000 when the mouse pointer shadow is enabled. Disable it by going into Control Panel / Mouse / Pointer and deactivating the mouse shadow.

- You may also need to reset your mouse pointer scheme to 'None' in Control Panel / Mouse / Pointer.

- If you have a USB mouse that can be moved to PS/2, try using the PS/2 port instead. It may fix the problem without having to perform any of the above solutions.

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Q. I get rolling lines with my GeForce2 Ultra. How can I fix it?

This problem appears only in GeForce2 Ultra cards, and looks like electromagnetic interferences with the VGA-output signal. Depending on the resolution and refresh rate, the lines will have different size and look, and may not appear in all resolutions and refresh rates.

Unfortunately there is currently no solid fix, although NVIDIA and several card manufacturers have reproduced the problem and are looking for a solution.

Above all, if you have this problem, **please report it to your card manufacturer**, so that they know this is a real problem that is affecting a lot of people.

In the meantime, you can try the following workarounds:

- Try plugging your monitor power cable into a grounding plug (part # 61-2720 at RadioShack). This puts the monitor on an isolated ground.

- Try changing the refresh rate that your card is using. You might want to try just changing it by 1hz or so by setting up a custom refresh rate. See the 'How can I manually set refresh rates and force the refresh rate above 60hz?' question for more details.

- You can also try altering the horizontal refresh rate of your card by a few hertz using PowerStrip. You can download a demo of PowerStrip at the following website: http://www.entechtaiwan.com/

- Try changing the resolution that your card is displaying at.

- Try moving the monitor signal cable.

- Make sure that there are no electrical devices near your PC and monitor that may be causing interference.

- If the fan leads on your GeForce are twisted together, try untwisting them.

- Try unplugging the fan on your GeForce card's heatsink. You will need to put in extra cooling measures if you intend to keep your card in this state, such as putting thermal compound between the heatsink and card and using a Card Cooler or similar.

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Q. I can't get programs that use video overlay (DVD players, TV card viewers, video media

players) to work. How can I fix it?

- Note that the GeForce2 MX does not support hardware overlay on the secondary display.

- Try following the tips in the 'I can't run any Direct3D programs, but OpenGL programs run fine. How can I fix it?' question.

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Q. I have a TwinView setup but when my computer reboots the second display is blank. How can I fix it?

Read the following article on eVGA.com:
http://web.archive.org/web/20010611030508/http://www.evga.com/support/support.ihtml?page=tvfix1.htm

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Q. I have a TwinView setup and I experience mouse lag with Half-Life running in extended desktop mode. How can I fix it?

This is a known problem and currently there is no known solution. It appears that this only occurs with the latest updates for Half-Life.

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Q. I cannot use OpenGL when I have two monitors installed. How can I fix it?

- Under Windows 9x/ME, this is a known issue with the Microsoft OpenGL driver and systems with more than one monitor, whether TwinView or separate cards. The only way to get round it currently is to disable one of the monitors.

- Under Windows 2000 on TwinView cards, full screen OpenGL will only work on the primary monitor and then only if the secondary monitor is disabled.

- Under Windows 2000 on TwinView cards, windowed OpenGL will work on both monitors.

- Under Windows 2000 on separate cards, full screen OpenGL only works on the primary card and then only if the secondary card is disabled. However, if the two graphics cards are both based on NVIDIA chipsets that use the Detonator drivers, full screen OpenGL will work on both cards.

- Under Windows 2000 on separate cards, windowed OpenGL usually only works on the primary card. However, if the two graphics cards have the same NVIDIA chipset (e.g. they are both TNT2 cards), the 'Enable advanced multiple monitors' option is available which will allow windowed OpenGL to work on both cards.

- In all situations, if a 3D application is designed to work on the primary monitor only then it will not launch on the secondary monitor nor will it operate if dragged over to the secondary monitor (when run in windowed mode).

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Q. I get two monitors detected when I only use one. How can I disable TwinView?

Create a binary registry key called 'TwinViewDisabled' to the value 1 in the following registry subkey:
HKEY_LOCAL_MACHINE\Software\NVIDIA Corporation\Global\System
and TwinView should be disabled, preventing a second monitor from being detected.

Q. My GeForce keeps on locking up or drops me back to the desktop during 3D applications. How can I fix it?

If you are getting lockups at startup, make sure you read the 'Windows locks up before it finishes loading, and a thin green line may appear across the top of the screen. How can I fix it?' question first.

There are a number of causes of this:

- Are you overclocking either the GeForce or your processor? If you are, try clocking back to normal and see if it fixes the problem. If it does, you need more cooling.

- Have you assigned an IRQ to VGA in your BIOS? If not, do so.

- Make sure that your GeForce card is not sharing any IRQs with another card (with the exception of the 'IRQ Holder for PCI Steering' device which will always use the same IRQ as the GeForce). If you find that the GeForce is sharing an IRQ with a PCI or ISA card, in the case of a PCI card try moving the PCI card to another slot (avoid the slot directly next to the AGP slot as this usually shares an IRQ with the AGP slot) or, in the case of an ISA card, reconfigure the card to use another IRQ. You may need to read the 'I have Windows 2000 and all of my devices share the same IRQ, causing problems with my GeForce. How can I fix it?' question.

  Note that in Windows 2000 all PCI and AGP cards by default are assigned to the same IRQ. You will need to follow the steps in the 'I have Windows 2000 and all of my devices share the same IRQ, causing problems with my GeForce. How can I fix it?' question if you think that this is the cause of the lockups.

- Are you running a virus checker in the background? Try disabling it.

- If you are using a VIA chipset motherboard and an Athlon processor, then try reading the following guide, which includes most of the relevant tips from below:
  http://www.teamanarchy.com/writeups.php?idx=986866324

Other things to try:

- Try turning the 'Hardware acceleration' slider in the System Control Panel's Performance / Graphics section down one notch. This may also increase performance, although it is possible that you will not be able to overclock so far.

- Try installing the latest AGP drivers for your motherboard chipset if you haven't got an Intel motherboard. If you have a VIA board you may have to read the 'I installed the VIA AGP drivers under Windows 2000 but they don't seem to have had any effect (the names of the devices have not changed). How can I fix this?' question to check that they are installed correctly.

- Try installing the latest (leaked) drivers.

- If you are using the 2x.xx series of drivers and Windows 2000/XP, make sure you read the 'When I install the 2x.xx series of drivers Windows 2000/XP I get instability problems, insufficient virtual memory errors or an error (possibly about an infinite loop) in nv4_disp.dll. How can I fix it?' question.

- Try changing your AGP Aperture in your BIOS to another value (keep it above 16 as setting it at or below 16 will disable AGP) - see the 'How can I change my AGP Aperture size?' question.

- Check that you have the following settings set as follows in your BIOS:
  - Video BIOS Shadow - Disabled
  - Video BIOS Cacheable - Disabled
  - C8000 - xxxxx Shadow - Disabled

- Peer Concurrency - Enabled
- Concurrent PCI Host - Enabled
- PCI Streaming - Enabled
- VGA Palette Snoop - Disabled

The following settings are recommended in particular for the ASUS KT7E motherboard, with all other settings set to the highest speed settings. These settings may also prevent lockups in other motherboards:
- 4K Page DRAM addressing - Off
- DRAM Driving Force - Lo
- Dram Latch Delay - Auto

- If you have a line in your CONFIG.SYS file mentioning the UMB386.SYS memory manager, try removing this line.

- Try installing the latest BIOS update for your motherboard. In particular this will help with the Soyo 6VCA motherboard (use BIOS version 2AA5 or later), and Compaq motherboards. You can get help with finding out what BIOS you need and instructions as to how to flash it at Wim's BIOS page, or your motherboard manufacturer's website.

- Try installing the latest Video BIOS update for your GeForce. You could also try using an NVIDIA reference BIOS (if you are feeling brave): see the 'Where can I get the latest NVIDIA Flash BIOS and which should I use?' question.

- Make sure that old drivers are cleaned out by using the method described in the question: 'How can I completely uninstall old NVIDIA GeForce or Creative Labs Annihilator drivers?'.

- If you are using CAS3 memory at CAS2 or in any other way running memory over specifications, try resetting it back to defaults. This setting may also be called 'Memory Timing' in your BIOS - set it to the highest nanoseconds setting. You might also want to try using each of your memory sticks on its own in turn and see if it is an issue with one particular memory stick - sometimes poor quality memory only causes problems when you have a high performance AGP card.

- Try installing the Intel chipset drivers from:
  http://support.intel.com/support/chipsets/driver.htm
  for **all** versions of Windows 9x/ME.

- If you have an Athlon processor and you are running Windows 2000, read the following article in Microsoft's Knowledge Base:
  http://support.microsoft.com/support/kb/articles/Q270/7/15.ASP
  There is an easy to use registry file available on AMD's website:
  http://www.amd.com/products/cpg/athlon-duron/amd_win2k_patch.html
  However, note that performing this step may reduce performance. If it causes problems with PowerStrip, try upgrading to the latest version of PowerStrip.

- If you have a VIA chipset based motherboard and you are running Windows 2000, read the 'I have a VIA chipset based motherboard and I can't get AGP working or I get lockups in Windows 2000. How can I fix it?' question.

- If you are using a SoundBlaster Live! soundcard, make sure that you have reserved IRQ 5 for the SoundBlaster 16 emulation in your system's BIOS - set IRQ 5 to 'Reserved for Legacy (or ISA) Device' in the 'PCI/PNP IRQ Resource Exclusion' section - your BIOS may use different wording.

- If you have a 'PCI Latency Timing', 'CPU-to-PCI Bridge latency' or similar setting in your BIOS, try setting it to 0, or raising it to 64 (the usual setting is 32). This may help in particular on VIA KX133 based motherboards.

  If you do not have this option in your BIOS, and you have a VIA MVP3 chipset based motherboard, try putting the following program in your startup folder. It sets the CPU-to-PCI Bridge latency timer to 0.

You can download the Windows 9x/ME version of this program here:
http://koti.mbnet.fi/parru/CPU-to-PCIBridgeLatencyTimerTo0clks.zip
and the Windows 2000 English version here:
http://www.deinmeister.de/mvp3_zlt_e.htm
and the Windows 2000 German version here:
http://www.deinmeister.de/mvp3_zlt.htm

If you have another chipset on your motherboard, you may be able to use the shareware program TweakBIOS to change the PCI Latency on your soundcard. You can find out more information about this and download it at the following website:
http://www.miro.pair.com/tweakbios/

- If you have an 'AGP Driving Control' setting in your BIOS, try switching it to 'BA' or another value instead of 'Auto'. See the 'I have a VIA chipset based motherboard and I can't get AGP4X to work without causing instability. How can I fix it?' question for more details.

- Try setting the 'PNP OS' or 'PNP Aware OS Installed' setting in your BIOS to No or Disabled. This is recommended under Windows 2000 anyway.

- This problem may be caused by installing DirectX 8. Try uninstalling it as mentioned in the 'I installed DirectX 8 and it caused more problems than it fixed. How can I uninstall it?' question.

- If you have a VIA chipset, try disabling AGP4X in your BIOS or using registry files (see the 'How can I enable AGP4X in the Detonator 5.16+ driver sets on my VIA 133mhz chipset motherboard?' question). If disabling it helps, then try reading the 'I have a VIA chipset based motherboard and I can't get AGP4X to work without causing instability. How can I fix it?' question.

- If you have a VIA chipset, you may also want to try **enabling** AGP4X in your BIOS - read the 'How can I enable AGP4X in the Detonator 5.16+ driver sets on my VIA 133mhz chipset motherboard?' question as well.

- Try turning off VSYNC in the NVIDIA control panel.

- It is possible that this is caused by bus collisions. Try following these steps provided by William Ball from Creative Labs:

  1. *Disable non-essential add-in devices except video one at a time in Device Manager. For example:*
     - *Network card*
     - *Sound card*
     - *TV card*
     - *Scanner interface*

  2. *See if lock up behavior is resolved. If not, physically remove the add-in cards and run the game again.*

  3. *Once you get a stable platform, start re-installing/re-enabling devices.*

- If you have an LX based motherboard or an early revision of your motherboard, read the 'What's all this with the original GeForce and motherboards not supplying enough power?' question in this FAQ.

- If you think that your motherboard is not supplying your GeForce with enough power, try the tip mentioned on this web page:
http://www.systemlogic.net/articles/00/8/agpstability/
The page provides instructions on how to power your GeForce's fan from the motherboard, reducing the power required by the GeForce.

- If you have an Athlon motherboard, read the 'What's all this with the GeForce and the Athlon?' question in this FAQ.

- If you have Super Socket 7 based motherboard, read the 'I have problems with my Super Socket 7 motherboard. How can I fix them?' question in this FAQ.

- Make sure that there is adequate cooling for your GeForce, your AGP chipset and your processor. You can see if overheating is the problem by leaving your case lid off and using a desk fan to blow inside the case. If this helps, you may need to buy a better fan for the GeForce (see the 'What is a good replacement fan for a GeForce?' question), underclock the GeForce, or get bettes case / CPU cooling. **This is a particular problem with AMD chips - they generate much more heat than Intel chips.**

- If you have an Athlon motherboard, try disabling Super Bypass in your BIOS setup or using the Chipid program available here:
  http://www.slota.com/files/chipid.zip

- If you have an ASUS card and are running the SmartDoctor utility, try disabling it. In addition, if you have an ASUS card and a VIA chipset motherboard, try getting another make of GeForce, such as a Leadtek.

- If your network card has a boot BIOS and the ability to disable it, try disabling it.

- Try removing other PCI cards and seeing if that fixes the problem. In particular, Diamond Monster soundcards may cause instability problems when combined with a GeForce card. If removing one particular card helps, try updating the drivers for that card. If that doesn't help, get a different card of a different make and model.

- Try disabling Advanced Power Management in the System Control Panel.

- Try connecting your CPU fan to another socket on the motherboard.

- Try reseating all of the components on your motherboard (including power leads and the GeForce).

- Try turning up the I/O voltage of the motherboard in the BIOS by a small amount if your BIOS supports it.

- Try switching on AGP Turbo in your BIOS, turning up the Front Side Bus speed slightly, or setting your AGP ratio to 1:1 (in that order) - this will put extra strain on the card, but it seems to fix the problem for some people.

- If your CPU currently runs at a 100Mhz FSB, try setting the FSB to 133Mhz if the processor can handle it (you will be overclocking it). If you have an ASUS P3C-2000 motherboard and this fixes the problem you should read the 'I have an ASUS P3C-2000 motherboard, and I experience problems in 3D applications when the system is heavily loaded. How can I fix it?' question.

- If you have memory that isn't rated for the Front Side Bus speed that you are running at, or if you have unbranded (low quality) memory, you might want to try replacing or taking out the slower / unbranded memory and see if it fixes your problem. If you only have unbranded memory, then try running it at a lower speed (e.g. 100 instead of 133).

- Make sure that you are using a powerful enough power supply. See the 'How powerful should my power supply be in order to use the GeForce?' question for more information.

- If you are using more than one stick of memory, try taking out all but one of the memory sticks and see if that helps. If it does, you need a more powerful power supply: see the 'How powerful should my power supply be in order to use the GeForce?' question for more information.

- Try going into the System Control Panel, Device Manager, System Devices, Direct Memory Access Controller, and changing the Access Restrictions (on the Settings Tab) to restrict DMA transfers to memory below 16MB.

- If you are using a slotket card to connect a socketed processor to a slot motherboard, try getting a different, better quality slotket.

- If you are using CAS3 memory, and can get access to some CAS2 memory, try using that instead (you will have to set your BIOS to use CAS2).

- Try disabling AGP Fast Writes. Read the 'How can I enable or disable AGP Fast Writes?' question for more information.

- Try forcing AGP1X. Read the 'How can I force AGP1X to be used instead of AGP2X or AGP4X?' question for more information.

- If you have enabled AGP sidebanding with AGP Wizard or with an updated Video BIOS, try disabling it again. This may help, but will reduce performance slightly.

- Try turning down the AGP Aperture to 16 or below, if your motherboard supports it - see the 'How can I change my AGP Aperture size?' question. This will disable AGP, but may fix your problem. You can also use DXDiag to disable AGP.

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Q. What's all this with the GeForce and the Athlon?

The GeForce has stability problems when using Athlon motherboards based on AMD's chipset and AGP2X, due to 'poor filtering on the AGP strobe line'. AMD have released a new version of their motherboard chipset which fixes this problem and this is now being implemented into motherboards. NVIDIA have released drivers (3.62 onwards) that will disable AGP2X if an Athlon motherboard with an AMD chipset is detected.

However, some system configurations do not display this instability, and on these motherboards you can use the athlon2xon.reg registry file to force AGP2X - available here:
http://www.geforcefaq.com/files/athlon2xon.reg
In Windows 2000 you can use the athlon2xonw2k.reg registry file to force AGP2X - available here:
http://www.geforcefaq.com/files/athlon2xonw2k.reg
This will enable the AGP2X support no matter what motherboard and chip you have. Creative have also released a utility called AGP Wizard which enables you to force AGP2X support on any motherboard - see the 'What is and where can I get AGP Wizard?' question in this FAQ for more details.

If you have problems after enabling this, you will have to manually remove the registry key:

1. Run Regedit.

2. Go to HKEY_LOCAL_MACHINE\Software\NVIDIA Corporation\Global\System for Windows 9x/ME or HKEY_LOCAL_MACHINE\SYSTEM\ControlSet001\Services\nv4\Device0 for Windows 2000.

3. Delete the value named '*EnableIrongate2x*'.

WARNING: The registry file may not work if you have a 64MB Prophet II card. It seems that AGP2X is disabled in the video BIOS for Athlons with that card. In addition you may not be able to use AGP2X if you have the Athlon AGP sidebanding hack enabled as well in the 5.xx+ drivers.

I received the following information from from Louis-Philippe Dubrule:

For the Irongate based motherboards (AMD's 750 chipset), in order to be able to use AGP2X reliably you need one that has the 751 IronGate Stepping 5 chipset (or later). One sign of this is if the board supports the "SuperBypass" function or not.

You should always be able to use AGP2X if your motherboard is based on another non-AMD IronGate chipset,

such as the VIA 133mhz chipsets.

However, it is still possible that you will not be able to enable AGP2X on a Stepping 5+ motherboard without problems.

The 5.22+ drivers may help AGP2X instability problems for Athlon users.

Don't worry yourself too much about being able to enable AGP2X as the performance increase from AGP1X to AGP2X is only minimal, and even then the increase is only significant in games that have to use AGP memory in order to run - most games can simply load all their textures into the on board video RAM, in which case you will only see a speedup when the textures are loaded initially at the start of the game.

All users with AMD chipset based motherboards should also install AMD's latest AGP Miniport Driver. You can get download it at the following webpage:
http://www.amd.com/products/cpg/bin/

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Q. What's all this with the original GeForce and motherboards not supplying enough power?

- Some motherboards do not meet the AGP 2.0 specification, which means that they do not supply enough power to the GeForce card. In the case of LX and BX motherboards this is because they use linear voltage regulators which do not supply enough power. This can cause instability problems. It also appears that it can cause TV-OUT to stop working (see the 'TV-OUT is greyed out on my TV-OUT capable GeForce. How can I fix it?' question). Unfortunately the only way to see if your motherboard will work is to try it out, or ask if anyone has your motherboard and can successfully use the GeForce on it. It is also possible that a BIOS update will be able to fix this problem.

  The GeForce2 series does not have this problem to such an extent because it uses a 0.18 micron architecture that requires less power.

  If your motherboard supports being able to increase the I/O voltage of the motherboard in the BIOS, you can also increase this value slightly to fix the problem.

  You may also be able to help this problem by forcing AGP1X. See the 'How can I force AGP1X to be used instead of AGP2X or AGP4X?' question for more information.

  You may be able to fix this by removing some of your PCI cards if you have a lot installed.

  Since the LX motherboards are the ones which have the problem most, below there is a list of LX motherboards that WILL work with the GeForce (although it's not definitive). Below that is a list of LX, BX and Via 133 motherboards that MAY exhibit problems - if you can add to any of these lists, please email me.

  LX motherboards that **can** support the GeForce:
  - Intel AL440LX
  - Biostar M6TLA
  - AOpen AX6L (with BIOS update)
  - QDI Legend I (with BIOS update)
  - QDI Legend V (with BIOS update)
  - Shuttle Hot 637 (with BIOS update)

  LX motherboards that **cannot** support the GeForce:
  - QDI say that all of their LX motherboards will not officially support the GeForce.
  - Abit LX6 (there is a fix for the Abit LX6, but it requires rewiring. See the 'How can I get my Abit LX6, ASUS P2L97 or Gigabyte 6BXC, 6BXE or BX2000 working with the GeForce?' question in this FAQ)

- ○ ASUS P2L97 revision 1.05 and earlier (there is a fix for the ASUS P2L97, but it requires rewiring. See the 'How can I get my Abit LX6, ASUS P2L97 or Gigabyte 6BXC, 6BXE or BX2000 working with the GeForce?' question in this FAQ)
  - ○ MicroStar MSI-6111 and MS-6161

  BX motherboards that **cannot** support the GeForce:
  - ○ Gigabyte 6BA, 6BXC, 6BXE, BX2000 (there may be a solution for this depending on the revision of your motherboard. See the 'Will my Gigabyte 6BA, 6BXC, 6BXE or BX2000(+) work with the GeForce?' question in this FAQ)

  AMD 751 motherboards that **cannot** support the GeForce:
  - ○ FIC SD11 revision 1.6 and earlier

  Via Apollo Pro motherboards that **cannot** support the GeForce:
  - ○ Gigabyte GA-6VXE

  Via 133 motherboards that **cannot** support the GeForce:
  - ○ Transcend AVD-1 (early revisions)

- You may find that on motherboards that are only AGP 1.0 compliant you may be able to fix this problem by putting insulating tape over the last pair of contacts on the AGP connector on the GeForce card (the contact furthest from the monitor port, on both sides). This has been tested on the Chaintech 6BTM motherboard. You may find that once you have done this once you will be able to take the tape back off (even if the tape didn't seem to have any effect).

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Q. I have an Intel D815EEA motherboard and I have various problems with the GeForce. What's up?

Unfortunately it seems that this motherboard has various issues with the GeForce, including display corruption and instability. The only advice I can give at the moment is to bug Intel to try and find out what's wrong - these problems don't occur on other i815 motherboards - and don't buy one of these motherboards if you have the choice.

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Q. Will my Gigabyte 6BA, 6BXC, 6BXE or BX2000(+) work with the GeForce?

Yes, so long as you have the revision which have 'Voodoo3' jumpers. If you close these jumpers (put a jumper block over them) the card should work. If it does not have these jumpers, the motherboard does not meet the AGP specification - see the 'What's all this with the GeForce and early LX / BX / Via 133 motherboards?' question for more information.

The GeForce2 series does not have this problem because it uses a 0.18 micron architecture that requires less power.

This is a table of the revisions that do or do not have the 'Voodoo3' jumpers, kindly provided by Clay Pot:

Model	Version	Jumper?	Jumper location
6BA	2.9 and below	No	
	3.0 and above	Yes	JP11, JP12
6BXC	1.9 and below	No	
	2.0 and above	Yes	JP12, JP13
	1.9 and below	No	

6BXE	2.0 and above	Yes	JP18, JP19
BX2000(+)	1.0	No	
	1.1 and above	Yes	JP20, JP21

If you have a 6BXA, you will have to replace the board for a later revision, as there are no revisions with the 'Voodoo3' jumper.

If you have any of the other boards, you can perform some rewiring - see the 'How can I get my Abit LX6, ASUS P2L97 or Gigabyte 6BXC, 6BXE or BX2000 working with the GeForce?' question.

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Q. How can I get my Abit LX6, ASUS P2L97 or Gigabyte 6BXC, 6BXE or BX2000 working with the GeForce?

You may get lockups with these motherboards due to the fact that they may not operate according to the AGP specification - see the 'What's all this with the GeForce and early LX / BX / Via 133 motherboards?' question for more information. You may not get this problem with your motherboard however - if your card is operating properly there is no need to perform the following step!

The GeForce2 series does not have this problem because it uses a 0.18 micron architecture that requires less power.

There are some websites that have details as to how to get the motherboards working, with some rewiring... of course, this will invalidate your motherboard's warranty - **use it as a last resort only!**

The rewiring will mean that the linear voltage regulator that causes the problems is bypassed. The instructions may be for getting a Voodoo3 or TNT to work - however, the same solution will also work for the GeForce.

If this solution messes up your system, it's your problem.

- The fix for the Abit LX6 is available here:
  http://hem.fyristorg.com/redtop/

The ASUS P2L97 only has this problem in revision 1.05 and any earlier sevisions.

- The fix for the ASUS P2L97 is available here:
  http://web.archive.org/web/20000815205610/http://www.asus.com.tw/products/Techref/Misc/rivatnt-rework.html

For the Gigabyte motherboards, you may only need to set some jumpers - see the 'Will my Gigabyte 6BA, 6BXC, 6BXE or BX2000 work with the GeForce?' question in this FAQ. Otherwise, each of the pages on this German website has one picture of the motherboard, and one picture of the underside of the motherboard and the pins you must connect.

All three of these solutions have been confirmed to work.

- The fix for the BX2000 is available here:
  http://www.nickles.de/artikel/html/27.htm

- The fix for the 6BXC is available here:
  http://www.nickles.de/artikel/html/29.htm

- The fix for the 6BXE is available here:
  http://www.nickles.de/artikel/html/28.htm

You may also be able to fix this problem on the Gigabyte boards by increasing the FSB speed from 100 to 133. This will overclock your processor but may fix the problem. You may also be able to take down the CPU multipler by one or two steps in order to reduce the effects of the overclocking.

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Q. I have an ASUS K7M, A7V or Abit BE6-II motherboard and I have instability or tearing problems with the GeForce. How can I fix it?

- Thanks to Markus Weissmann who told me about this solution from Creative Labs:

  The ASUS K7M has a jumper for selecting the I/O-voltage, which is set to 3.4V by default. Set this to 3.31V (since this is the 'official' voltage for video cards). On the K7M this jumper is on the upper right side, a jumper-block with 4 pins.

- The ASUS A7V runs at 3.56V by default. Try changing this to 3.31V or 3.35V.

- This is also true of the Abit BE6-II, which is set to have an I/O voltage of 3.5V by default. Try changing this to 3.31V.

- However, for some people the reverse may be true - increasing the voltage or leaving it at the default may fix the problem.

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Q. I have an ASUS P3C-2000 motherboard, and I experience problems in 3D applications when the system is heavily loaded. How can I fix it?

This information was mailed to me by a Creative representative, and the information is straight from ASUS:

This problem was not found with systems built with 133MHz FSB CPUs. Neither was it observed with other AGP 4X capable graphics controllers such as the Matrox G400 and S3 Savage4. But for a 100MHz/100MHz CPU FSB/SDRAM configuration, the problem would only occur in AGP 4X mode and some P3C-2000 motherboards. To fix it, enable the reserved test mode by moving the JP5 jumper to the 2-3 pins on the motherboard whenever applicable. The test mode is designed to increase the noise margin and most systems were proved in our lab to workaround this problem in the test mode. If the test mode can not solve this problem, please contact us directly.

It is also possible to fix this with an extra capacitor on the motherboard, and as such in the later production versions of the board there is no longer a problem. You can tell if your board has been altered if it's version number is '1.12.' - the dot at the **end** of the version number indicates that it has been fixed (and of course any versions after '1.12.' will have been fixed too).

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Q. I have an ASUS P3V4X motherboard and I have instability problems with the GeForce. How can I fix it?

- Try using the 1003 BIOS instead of any later versions.

- Make sure you read the 'I have a VIA chipset based motherboard and I can't get AGP4X to work without causing instability. How can I fix it?' question.

- There is also a modification that you can make to your board to fix the problem. See the following website for more details:http://web.archive.org/web/20010127183700/http://www.btinternet.com/~p3v4x/vr_mod.htm

Q. How can I get my ASUS P5A working with my GeForce?

- Try disabling USB in your BIOS if you don't use it. It may help solve your problems.

- These instructions were provided by Daniel Cowdery:

*The following is a step by step manual to prepare your ASUS P5A Motherboard for the GeForce. If followed **exactly** these should work. **Do not overclock with this card!** . The P5A, especially in the older revisions, creates AGP noise feedback when overclocking the board. There is no fix for this (other than a new motherboard).*

1. *Download and install the following files:*

   The latest Flash BIOS for this board from the ASUS website:
   http://www.asus.com/

   From the following website:
   http://www.ali.com.tw/eng/support/drivers/aladdin_5_driver.htm
   download and install the latest version of the following files:

   - *AGP driver for Win95 OSR2.1/98SE*
   - *IDE driver for Win95/98/NT*

   *Extras - **caution***

   - *AGP Utility - Used to adjust the features of the AGP port. Will cause **major** issues if used improperly - **use at your own risk** (for you overclockers out there)*
   - *IDE Utility - Great utility to use to make sure UDMA is working. Very safe, and easy to use. Must have the newest IDE drivers mentioned above.*

2. *Alter the hardware to adjust the voltage of your motherboard. Note that **this step may not be necessary for some people - try out the card at this point and if you still have problems, then do this step**.*

   You must alter two jumper settings - VIO1 (set AGP voltage to 3.6) and OFTEST (10% voltage increase across the board):

   VIO1 is directly right of the DIMM chipset if your CPU were at the top of the board, IO and serial ports facing left. OFTEST is directly below the VID jumpers. The VID jumpers are located to the right of the VIO jumpers. A diagram is provided below. Place jumpers on the "" indicated bridge.*

```
D
I        - VIO1-
M        *1    1
M        *2    2                                    -VID (ignore)-
-         3    3                                        123
C                                                       123
H             -BF (ignore)-                             123
I                  123                                  123
P                  123
S                  123
-                                                      -OFTEST-
                                                         *1
                                                         *2
```

3. *Make sure your GeForce is running the latest drivers.*

4. *Make sure your card is fully seated in the AGP slot.*

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Q. How can I enable the overclocking utility in NVIDIA's drivers?
Q. How can I enable the VSYNC changing area of the NVIDIA control panel?

- For Windows 9x/ME drivers, use the coolbits.reg registry file to enable them - available here:
  http://www.geforcefaq.com/files/coolbits.reg

- For Windows 2000 driver versions 5.13 and later, use the coolbitsw2k.reg registry file to enable them - available here:
  http://www.geforcefaq.com/files/coolbitsw2k.reg

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Q. How can I overclock in Linux?

Use NVClock - you can download a copy here:
http://www.evil3d.net/products/nvclock/

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Q. How far can I overclock my card?

Different cards can be overclocked by different amounts, depending on how good the card's fan is, how good the case ventilation is, whether there are RAM heatsinks attached and so on. In addition some cards simply can't overclock as far as other cards because they're all slightly different due to the manufacturing process. I can't tell you how far your card will overclock - just follow these guidelines:

1. Add an extra 5mhz or so to the current clock speed.
2. Use a program like 3DMark to 'stress test' the card by running the tests 3 or 4 times.
3. If you see visual corruption or the system crashes during the test, you've overclocked too far. Take yourself back down 5mhz - this is how far you can overclock.
4. If the test ran correctly with no problems, go back to step 1.

If you overclock bit by bit, as described above, it is very unlikely that you will damage your card. If after this process you find that your card is crashing more often, take it down another 5mhz or so until it stops crashing.

Don't forget that you may be able to increase the core speed more than the memory, or the memory speed more than the core. In general increasing the memory speed will have a greater effect on speed than increasing the core speed.

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Q. Coolbits doesn't work or I can only adjust my memory speed. How can I fix it?

- Coolbits is disabled in various driver sets. You can fix this by copying the nvcpl.dll and nvqtwk.dll files from the nearest version of the drivers that does not disable Coolbits into your Windows\System folder - for example, to fix 3.76, you can copy the files from the 3.77 drivers.

- Apart from this, Coolbits works in all Windows 9x/ME driver sets. For the Windows 2000 drivers you need versions 5.13 and above for it to work, and a different registry file. See the 'How can I enable the overclocking utility in NVIDIA's drivers?' question for more information.

- Note that if drivers are WHQL certified (generally you can see this in the file name) it is unlikely that Coolbits will work as Microsoft refuse to pass drivers that allow you to disable VSYNC or overclocking.

See the 'What is the difference between the 3.xx, 5.xx, 6.xx, 7.xx, 8.xx, 10.xx, 11.xx, 12.xx, 21.xx, WHQL and non-WHQL versions of the drivers?' question for more information.

- If you are using the latest Creative driver sets, and cannot alter the core speed, add a DWORD value named GrfxClock to the following registry key:
  HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\Class\Display\0000\DEFAULT
  with a value of your choice (the value must be in **hexadecimal**. You can use Calculator in scientific mode to convert between hex and decimal).

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Q. Why can't I overclock higher than (insert speed here) when others are clocking much higher?

- The range of overclocking available on the NVIDIA reference drivers by default is larger than the default range of the Creative drivers.

- You can alter the range of the overclocking slider in the Creative drivers by double clicking on the end of the slider.

- You can alter the range of the overclocking sliders in the ASUS drivers using the following utility:
  http://www.geforcefaq.com/files/asusrc.zip

- You can use the following file, provided by Juris "3Dman" Perkons to alter the range of the NVIDIA control panel's overclocking slider under Windows 9x/ME:
  http://www.geforcefaq.com/files/gespeed.zip

- You can use the following file, provided by Levi "Caleb_2" Weiss to alter the range of the NVIDIA control panel's overclocking slider under Windows 2000:
  http://www.geforcefaq.com/files/gespeedw2k.zip

- You can trying running the following command from Start / Run 2 or 3 times - unconfirmed reports indicate that it may result in an increase in the overclocking slider range:
  rundll32.exe nvqtwk.dll,NvHWCtl
  Thanks to 3DChipset for this tip.

- DDR memory is nominally clocked at twice the speed of SDR memory: therefore it seems possible to overclock higher.

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Q. How can I increase speed and stability for my GeForce in general?

- Always install the latest chipset / AGP drivers for your motherboard's chipset.

- You can overclock the card using the NVIDIA drivers as described in the 'How can I enable the overclocking utility in NVIDIA's drivers?' question in this FAQ for a speed boost: however this may harm stability.

- This tip to improve stability was taken from the following page, where you can read more information on it:
  http://members.prestige.net/geforce/Settings.htm
  Try turning the 'Hardware acceleration' slider in the System Control Panel's Performance / Graphics section down one notch - although note that this may prevent you from overclocking so far.

- Here is a tip for a speed increase from BJ:

1. *Right-click on My Computer icon on your Desktop, then left-click on Properties. Navigate to Device Manager and double-click on Computer. Under "View Resources" you will find a list of IRQs, each with description of the device that's using it. Note the IRQ number used by your GeForce.*

2. *Navigate to Start > Run and type sysedit. Find the [386enh] Section in the System.ini file and add irq[n]=4096 under it, where [n] is the IRQ number of your GeForce and 4096 is the amount of RAM you want to reserve in bytes (e.g. "irq10=4096"). I recommend using 4096, however you can experiment with different values if you want. Save changes in the file, exit and reboot for changes to take effect.*

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Q. Where can I download demos to show off my GeForce?

- The following page contains links to NVIDIA's demos:
  http://www.nvidia.com/view.asp?PAGE=power_demos

- The following page contains links to NVIDIA's technical demos, including source code:
  http://developer.nvidia.com/view.asp?PAGE=effects

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Q. What Windows 9x/ME drivers should I use?

There are a number of driver sets that you can use:

- Firstly, there are manufacturer driver sets. These driver sets are usually based on the NVIDIA reference drivers with customised control panels and possibly more options. However they are likely to not be as up to date as the NVIDIA reference drivers. You will have to visit your manufacturer's website to find out about the drivers that they supply and what additional features they may offer.

- Secondly, there are NVIDIA's reference drivers.
  There are generally a few versions available: one (or two) official versions and some leaked versions that are not officially supported but may be faster or have more features than the official drivers (and may also be slower and have less features).

  Detonator (3.xx - 4.xx series) drivers
  Detonator 2 (5.xx series) drivers
  Detonator 3 (6.xx - 11.xx series) drivers

  You can download the latest set of official NVIDIA drivers from NVIDIA's website:
  http://www.nvidia.com/

  You can download leaked driver sets from a number of unofficial fan sites:
  http://www.3dchipset.com/
  http://www.the-cad.com/

    o 12.00 - These drivers have been leaked.
      The 'The Overlay Color Control tab of the NVIDIA control panel is greyed out. How can I enable it?' question applies to these and all later drivers.

    o 12.10 - These drivers have been leaked.

    o 12.20 - These drivers have been leaked.

    o 12.40 - These drivers have been leaked.

Palettized textures appear to be fixed in these and all following drivers.

- 12.41 - These drivers are officially released drivers.
  These drivers will cause Coolbits to stop working. See the 'Coolbits doesn't work or I can only adjust my memory speed. How can I fix it?' question for information on how to fix this.

- 12.42 - These drivers have been leaked.

- 12.60 - These drivers have been leaked.

- 12.90 - These drivers have been leaked.

- 14.10 - These drivers have been leaked.

- 14.40 - These drivers have been leaked.

- 14.61 - These drivers have been leaked.

- 14.70 - These drivers have been leaked.

- 20.80 - These drivers have been leaked.
  When you use the Hebrew regional settings inside Windows with these drivers and later, you may not see all the text in the display adaptor control panel.

- 21.81 - These drivers are officially released drivers.
  NVIDIA describe three main new features in this version:
    - Performance increases of up to 50%
    - Highly optimized DirectX and OpenGL pipelines
    - New OpenGL 1.3 ICD with NVIDIA extensions
  These drivers may cause Fast Writes to be disabled in certain system configurations.

- 21.83 - These drivers are officially released drivers.
  These drivers may cause slowdowns in certain situations, especially in 3DMark99.

- 21.85 - These drivers have been leaked.

- 22.50 - These drivers have been leaked.

- 22.80 - These drivers have been leaked.

- 23.10 - These drivers have been leaked.

- 23.11 - These drivers are the latest officially released drivers.
  Some control panel options (including the Direct3D Enable Alternative Depth Buffering Technique checkbox) are no longer available in these and later drivers.

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Q. What Windows 2000/XP drivers should I use?

There are a number of driver sets that you can use:

- Firstly, Windows XP supplies drivers for the GeForce family - they appear to be based on the 12.91 NVIDIA reference drivers. However you should read the 'Hardware accelerated OpenGL doesn't seem to be working at all in Windows XP. How can I fix it?' question before simply using the default drivers.

- Secondly, there are manufacturer driver sets. These driver sets are usually based on the NVIDIA

reference drivers with customised control panels and possibly more options. However they are likely to not be as up to date as the NVIDIA reference drivers. You will have to visit your manufacturer's website to find out about the drivers that they supply and what additional features they may offer.

- Thirdly, there are NVIDIA's reference drivers.
  There are generally a few versions available: one (or two) official versions and some leaked versions that are not officially supported but may be faster or have more features than the official drivers (and may also be slower and have less features).

  Note that it seems that all Windows 2000 drivers have the following issues at the moment:

  - You will not be able to enable SMP in Quake 3 Arena without Quake 3 Arena crashing. Read the 'How can I get SMP working with Quake 3 Arena under Windows 2000?' question for information on how to fix this.
  - You will not be able to enable TV-OUT without a reboot in these drivers. Read the 'How can I enable TV-OUT in Windows 2000 (and without a reboot)?' question.
  - The refresh rates available in high resolutions do not go as high as those in the Windows 9x/ME drivers.

  Also note that many of the notes for the drivers in the 'What Windows 9x/ME drivers should I use?' question also apply to these drivers.

  Detonator (3.xx & 4.xx series) drivers
  Detonator 2 (5.xx series) drivers
  Detonator 3 (6.xx - 11.xx series) drivers

  You can download the latest set of official NVIDIA drivers from NVIDIA's website:
  http://www.nvidia.com/

  You can download leaked driver sets from a number of unofficial fan sites:
  http://www.3dchipset.com/
  http://www.the-cad.com/

  - 12.00 - These drivers have been leaked.

  - 12.10 - These drivers have been leaked.
    These drivers may cause problems with the QuickTweak utility and Color Correction tab.

  - 12.20 - These drivers have been leaked.

  - 12.40 - These drivers have been leaked.

  - 12.41 - These drivers are officially released drivers.
    These drivers will cause Coolbits to stop working. See the 'Coolbits doesn't work or I can only adjust my memory speed. How can I fix it?' question for information on how to fix this.

  - 12.60 - These drivers have been leaked.

  - 12.90 - These drivers have been leaked.

  - 14.10 - These drivers have been leaked.

  - 14.20 - These drivers have been leaked.

  - 14.40 - These drivers have been leaked.

  - 14.60 - These drivers have been leaked.

- 14.61 - These drivers have been leaked.

- 14.70 - These drivers have been leaked.

- 20.80 - These drivers have been leaked.
  When you use the Hebrew regional settings inside Windows with these drivers and later, you may not see all the text in the display adaptor control panel.

- 21.81 - These drivers are officially released drivers.
  NVIDIA describe three main new featues in this version:
    - Performance increases of up to 50%
    - Highly optimized DirectX and OpenGL pipelines
    - New OpenGL 1.3 ICD with NVIDIA extensions

  These drivers may cause problems with older versions of the Windows 2000 NVidia Refresh Rate Fix utility - make sure you download the latest version of the utility after you install this and later drivers.
  These drivers may cause Fast Writes to be disabled in certain system configurations.
  These drivers and later versions may cause various problems under 2K / XP due to the so-called 'Infinite Loop' issue - see the 'When I install the 2x.xx series of drivers Windows 2000/XP I get instability problems, insufficient virtual memory errors or an error (possibly about an infinite loop) in nv4_disp.dll. How can I fix it?' question for more information.

- 21.83 - These drivers are officially released drivers.
  These drivers appear to fix the problem mentioned in the 'I cannot set my refresh rate above 75hz under Windows 2000. How can I fix it?' question.
  These drivers may cause slowdowns in certain situations, especially in 3DMark99.

- 21.85 - These drivers have been leaked.

- 22.50 - These drivers have been leaked.

- 22.80 - These drivers have been leaked.

- 23.10 - These drivers have been leaked.

- 23.11 - These drivers are the latest officially released drivers.
  Some control panel options (including the Direct3D Enable Alternative Depth Buffering Technique checkbox) are no longer available in these and later drivers.

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Q. What Windows NT 4 drivers should I use?

There are a number of driver sets that you can use:

- Firstly, there are manufacturer driver sets. These driver sets are usually based on the NVIDIA reference drivers with customised control panels and possibly more options. However they are likely to not be as up to date as the NVIDIA reference drivers. You will have to visit your manufacturer's website to find out about the drivers that they supply and what additional features they may offer.

- Secondly, there are NVIDIA's reference drivers.
  There are generally a few versions available: one (or two) official versions and some leaked versions that are not officially supported but may be faster or have more features than the official drivers (and may also be slower and have less features).

  Note that many of the notes for the drivers in the 'What Windows 9x/ME drivers should I use?' question also apply to these drivers.

Detonator (3.xx & 4.xx series) drivers
Detonator 2 (5.xx series) drivers
Detonator 3 (6.xx - 12.xx series) drivers

You can download the latest set of official NVIDIA drivers from NVIDIA's website:
http://www.nvidia.com/

You can download leaked driver sets from a number of unofficial fan sites:
http://www.3dchipset.com/
http://www.the-cad.com/

- 12.00 - These drivers have been leaked.

- 12.10 - These drivers have been leaked.

- 12.20 - These drivers have been leaked.

- 12.40 - These drivers have been leaked.

- 12.41 - These drivers are officially released drivers.
  These drivers will cause Coolbits to stop working. See the 'Coolbits doesn't work or I can only adjust my memory speed. How can I fix it?' question for information on how to fix this.

- 12.90 - These drivers have been leaked.

- 14.20 - These drivers have been leaked.

- 14.61 - These drivers have been leaked.

- 21.81 - These drivers are officially released drivers.
  NVIDIA describe three main new features in this version:
    - Performance increases of up to 50%
    - Highly optimized DirectX and OpenGL pipelines
    - New OpenGL 1.3 ICD with NVIDIA extensions
  When you use the Hebrew regional settings inside Windows with these drivers and later, you may not see all the text in the display adaptor control panel.

- 22.50 - These drivers have been leaked.

- 23.11 - These drivers are the latest officially released drivers.
  Some control panel options (including the Direct3D Enable Alternative Depth Buffering Technique checkbox) are no longer available in these and later drivers.

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Q. What Linux drivers should I use and how do I install them?

- There are a few very extensive articles on setting up NVIDIA drivers on different Linux distributions at the following website:
  http://www.evil3d.net/articles.shtml

- There is a walkthrough for installing NVIDIA drivers on Mandrake 8.0 at the following website:
  http://www.littlewhitedog.com/reviews_other_00022.asp

- If you have problems, try downloading and running the following diagnostic script:
  http://www.geforcefaq.com/files/nv_check.sh

- In addition, there is an FAQ for the NVIDIA XFree 4.0 drivers available at the following location: http://www.mcdownloads.com

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Q. What BeOS drivers should I use?

You can download the 2000.09.30 Unified NVIDIA driver from the following website: http://www.bebits.com/app/1622

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Q. How can I find out what version of the drivers I am currently using?

The most reliable method is the information provided by the NVIDIA control panel - see the 'How do I get to the NVIDIA control panel and what should I set the settings to?' question.

At the bottom of the main control panel screen there will be a box labelled 'Driver Version Information'. All of the files should have the same version number. The last three characters of the version number are the driver version number - just divide the number by 100. (e.g. 650 = 6.50).

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Q. What is the difference between the 3.xx, 5.xx, 6.xx, 7.xx, 8.xx, 10.xx, 11.xx, 12.xx, 21.xx, WHQL and non-WHQL versions of the drivers?

- The 3.xx versions of the drivers are the first set of NVIDIA's unified drivers to officially support the GeForce.

- The 5.xx versions of the drivers support S3TC and palettized textures in OpenGL and full scene antialiasing (FSAA) (in OpenGL, and in Direct3D as well in the 5.22+ drivers). However, for some people they also cause lockups when they load Windows, so that some people simply cannot use them yet. They are also faster than the 3.xx drivers in most cases.

- The 6.xx versions of the drivers are faster and have a new NVIDIA control panel with extra FSAA options and information, and extra support for the GeForce2 MX. However, they may cause problems for some people.

- The 7.xx versions of the drivers are optimised for DirectX 8 and add support for palettized textures in Direct3D up to version 7.49. In 7.50+ the drivers are optimised for DirectX 7 and palettized textures support is gone.

- It is currently unknown that new features the 8.xx series introduced.

- The 10.xx versions are optimised for DirectX 8, add support for palettized textures in Direct3D, add native support for 3D glasses, simplify the antialiasing options in the NVIDIA control panel and support the GeForce3.

- The 11.xx and 12.xx versions add support for anisotropic filtering - see the 'How can I enable and change the quality of anisotropic filtering?' question for more information. Palettized texture support appears to be fixed from versions 12.40 onwards.

- The 21.xx versions are dubbed 'Detonator XP' and have three main new features:
  - Performance increases of up to 50%
  - Highly optimized DirectX and OpenGL pipelines
  - New OpenGL 1.3 ICD with NVIDIA extensions

- WHQL stands for Windows Hardware Quality Labs, and is a Microsoft testing procedure where drivers are tested to check that they are up to scratch. Drivers that are WHQL certified have passed this (rather time consuming) procedure but are no different from non-WHQL drivers with the same version number (so 10.40 WHQL is the same functionally as 10.40 non-WHQL). WHQL drivers will say that they are certified in the DXDiag application, but will not have VSYNC or overclocking options in their control panels (that is, Coolbits will not work) as Microsoft specifically disallows these options in the WHQL testing procedure.

  If a driver does not specifically state that it is WHQL certified, it is not - and all of the links in the driver questions link to non-WHQL certified drivers unless there are only WHQL drivers available, so that Coolbits can be used on the largest possible number of drivers. You can tell WHQL drivers because they will probably have WHQL in their file name.

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Q. How can I completely uninstall old NVIDIA GeForce or Creative Labs Annihilator drivers?

- This is the standard advice from Creative on removing old drivers:

  1. Run any uninstall from Add/Remove Programs. These frequently are not totally thorough but should be done anyway.

  2. After you reboot, delete these files if found:

     - In C:\Windows\System: nv*.*, bc*.*, bls*.*, 3dbg*.* (the latter 3 only apply to Creative drivers - also note that you should be careful not to delete certain Borland C++ files like BC450RTL.DLL. Check in the file properties to see if they are Creative files.)

     - In C:\Windows\Inf: drvdata.bin, drvidx.bin, 3dbg*.inf, nv*.inf

     - In C:\Windows\Inf\Othes: 3dbg*.inf, nv*.inf

  3. Run regedit and delete the following:

     - HKEY_LOCAL_MACHINE\SOFTWARE\Creative Tech\Blaster Control 4.0

     - HKEY_LOCAL_MACHINE\SOFTWARE\NVIDIA Corporation

     - HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Controls Folder\Device\shellex\PropertySheetHandlers\Blaster Control 4.0

     - HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Controls Folder\Device\shellex\PropertySheetHandlers\NVTweak
       (look under Controls Folder\Display as well as Device keys here for Blaster Control or NVTweak keys)

     - HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Run
       (look for bcdetect or NVInitialize entries on the right side and delete them but not the whole Run key. Also, check the RunOnce key for the same entries)

     - HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\OpenGLdriv
       (delete the RIVATNT entry on the right side)

- There is a program called NVCleaner available which can automatically remove all files and registry entries. You can download the latest version at the author's website:
  http://www.btinternet.com/~bobruck/download.html

- Alternatively, you can use the following batch file, created by Chris Ivarson, which will delete just the relevant files automatically (this only works if you use the NVIDIA reference drivers):
  http://www.geforcefaq.com/files/cleaninstall.zip

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Q. How do I get to the NVIDIA control panel and what should I set the settings to?

- From Windows 98, 98SE and 2000, the method to get to the control panel is:

  Start / Settings / Control Panel / Display / Settings / Advanced...

- From Windows 95, the method to get to the control panel is:

  Start / Settings / Control Panel / Display

The control panel consists of a number of tabs which have the NVIDIA logo on them.

You can find out what each setting does by right clicking on it and clicking 'What's This?'.

For most systems, the default settings are the best, but if you want to try tweaking them then give the following tweak guide a try - the settings in the control panel are covered in the guide as well as other settings:
http://www.tweak3d.net/tweak/geforce/

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Q. How can I force AGP1X to be used instead of AGP2X or AGP4X?

There are a number of methods:

- Some BIOSes support forcing AGP1X in the BIOS setup.

- If you have a VIA chipset motherboard, installing the AGP drivers in 'Normal' mode instead of 'Turbo' mode will force AGP1X.

- If you have a Creative card you can use AGP Wizard. Read more about this in the 'What is and where can I get AGP Wizard?' question.

- You can use the forceagp1xon.reg registry file to force AGP1X in Windows 9x/ME - available here:
  http://www.geforcefaq.com/files/forceagp1xon.reg
  If you want to go back to auto detection of the AGP rate, you can use the forceagp1xoff.reg registry file - available here:
  http://www.geforcefaq.com/files/forceagp1xoff.reg
  Note that these registry keys may not work with the 10.xx drivers.

- You can use the forceagp1xonw2k.reg registry file to force AGP1X in Windows 2000 - available here:
  http://www.geforcefaq.com/files/forceagp1xonw2k.reg
  If you want to go back to auto detection of the AGP rate, you can use the forceagp1xoffw2k.reg registry file - available here:
  http://www.geforcefaq.com/files/forceagp1xoffw2k.reg
  Note that these registry keys may not work with the 10.xx drivers.

- Finally, you can use PowerStrip- you can download a demo of PowerStrip at the following website:
  http://www.entechtaiwan.com/.

Note that forcing AGP1X from AGP2X or AGP4X may help with some problems such as instability, but will reduce performance slightly in certain 3D applications.

Q. How can I enable or disable AGP Fast Writes?

Note that in order to enable fast writes both your motherboard and your graphics card must support it. All GeFosce cards support Fast Writes, but not all motherboard chipsets do. In particular the various versions of the Intel i815 chipset do **not** support Fast Writes.

There are a number of methods:

- Some BIOSes support enabling and disabling AGP Fast Writes in the BIOS setup. If you have a Tyan Trinity 400 motherboard, you must use BIOS version 1.0 as in later versions Tyan have removed the Fast Writes option in the BIOS.

- If you have a Creative card you can use AGP Wizard. Read more about this in the 'What is and where can I get AGP Wizard?' question.

- You can use the fwoff.reg registry file to disable AGP Fast Writes in Windows 9x/ME - available here:
http://www.geforcefaq.com/files/fwoff.reg
If you ever want to switch Fast Writes back on, you can use the fwon.reg registry file - available here:
http://www.geforcefaq.com/files/fwon.reg

- You can use the fwoffw2k.reg registry file to disable AGP Fast Writes in Windows 2000- available here:
http://www.geforcefaq.com/files/fwoffw2k.reg
If you ever want to switch Fast Writes back on, you can use the fwonw2k.reg registry file - available here:
http://www.geforcefaq.com/files/fwonw2k.reg

Disabling Fast Writes may help with instability problems but may also cause 3D applications to run slower.

Q. How can I enable AGP Sidebanding?

- **Before you read this question:** Don't worry too much if you can't get AGP sidebanding enabled. There's only about 1-2fps in it and it can cause instability.

- If you have a Creative card, there is a utility called AGP Wizard that you can use to enable AGP sidebanding. You can read more about it in the following question: 'What is and where can I get AGP Wizard?'.

- In the 3.69 and later drivers you can use the athlonsbaon.reg segistry file to enable sidebanding on Athlon motherboards only - available here:
http://www.geforcefaq.com/files/athlonsbaon.reg
If you have problems after enabling this, use the athlonsbaoff.reg registry file to disable it again - available here:
http://www.geforcefaq.com/files/athlonsbaoff.reg

  WARNING: The registry file may not work if you have a 64MB Prophet II card. It seems that AGP sidebanding is disabled in the video BIOS for Athlons with that card. In addition you may not be able to use AGP Sidebanding if you have the Athlon AGP2X hack enabled as well in the 5.xx drivers.

- If you have an ASUS card, you can download a special Flash BIOS file that will enable sidebanding from the ASUS website.

- If you really like living dangerously, it is possible to change your BIOS file before you flash it so that sidebanding is enabled. However, this will **invalidate your warranty**, and could in theory mess up your

card. Don't email me or your manufacturer's technical support for more information or if it messes up your card!

You can download various BIOS editors from the following website:
http://www.x-bios.3dgames.ru/

Once again, this is for experienced users only.

- The sidebanding registry hack (involving the DISABLEAGPSIDEBAND key) that is being spread around is fake and does not work.

Q. How can I enable OpenGL hardware accelerated anti-aliased lines on a non-Quadro card?

OpenGL hardware accelerated anti-aliased lines is a features that is only likely to be useful to people that use professional 3D modelling applications. It is unlikely that gamers will find this feature very useful, as it only speeds up the rendering of wireframe models.

The following registry key was found by Stefano G:

- You can enable OpenGL hardware accelerated anti-aliased lines in Windows 9x/ME using the nv15alineson.reg registry file - available here:
  http://www.geforcefaq.com/files/nv15alineson.reg

  If this file don't seem to have any effect, you may have to edit it in Notepad and change the 0000 to 0001, or another value. Take a look at the
  HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\Class\Display
  registry key using regedit and find out which number your graphics card is using.

  If you find this causes problems, you can disable the setting again using the nv15alinesoff.reg registry file - available here:
  http://www.geforcefaq.com/files/nv15alinesoff.reg

- You can enable OpenGL hardware accelerated anti-aliased lines in Windows 2000 using the nv15alinesw2k.reg registry file - available here:
  http://www.geforcefaq.com/files/nv15alinesonw2k.reg

  If you find this causes problems, you can disable the setting again using the nv15alinesoff.reg registry file - available here:
  http://www.geforcefaq.com/files/nv15alinesoffw2k.reg

- Unfortunately there does not seem to be a way to get this to work under Windows NT 4.

Q. What is the status of 2D stretched sprite smoothing in the latest drivers?
Q. What is the status of auto mip-mapping in the latest drivers?
Q. Can I force a 16-bit z-buffer in the latest drivers?

- They are all currently disabled, although there may be drivers released later that will support them.

- In the case of 2D stretched sprite smoothing, this appears to have been disabled since the 5.xx drivers. You can see the effects of this in games like G-Police (beacons) and some SNES emulators.

Q. How can I easily enable and change the quality of antialiasing?

- As of the 6.xx+ drivers, you can enable and specify the FSAA quality directly from the NVIDIA control panel.

- There are a couple of free programs to enable you to both enable FSAA only when you run certain programs (RunAA) and to easily set the FSAA settings from the task tray (GeForceAASet) available to download at the following website:
http://www.geocities.com/mastercoco/files.htm

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Q. What do the different antialiasing options mean?

- In the 10.xx+ drivers, there are just four antialiasing options:

  - Off (no antialiasing)
  - 2x
  - Quincunx Antialiasing(tm) - GeForce3 only
  - 4x

  The further down the list, the higher the quality of the antialiasing but the greater the slowdown. Quincunx will also cause the image to be slightly more blurry than the other two methods, but will roughly give 4x quality with 2x performance.

- In the pre 10.xx drivers, there were more options:

  - For OpenGL there are three options to pick from:
    - 1.5 x 1.5
    - 2 x 2 [LOD bias]
    - 2 x 2

  - For Direct3D there are eight options to pick from:
    - 1 x 2
    - 2 x 2 (low detail)
    - 2 x 2
    - 2 x 2 (special)
    - 3 x 3 (low detail)
    - 3 x 3
    - 4 x 4 (low detail)
    - 4 x 4

  - The higher the two numbers, the better the quality of the antialiasing, the more memory required and the greater the slowdown.

  - The [LOD bias] and (low detail) options mean that mipmaps are stored at the resolution that the game is actually displayed at - otherwise mipmaps are stored at the resolution that the image is processed at, which makes the image sharper, but also requires more memory and will cause a slight slowdown.

  - The (special) option means that a special filtering algorithm is used that yields better image quality, but is slightly slower.

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Q. How can I enable and change the quality of anisotropic filtering?

Anisotropic filtering makes textures that are far off appear less blurry and helps to eliminate 'texture aliasing' where textures appear to shimmer in the middle distance.

The 11.xx+ drivers enable anisotropic filtering, and provide a control panel option in OpenGL, but the code in the 11.01 control panel is buggy and doesn't work.

In the final 12.xx driver release enabling anisotropic filtering should be provided for in the NVIDIA control panel: in the mean time you can use registry files to force anisotropic filtering in all 3D applications:

- You can use the anis(xx)tap.reg registry files to force the different levels of anisotropic filtering for both Direct3D and OpenGL under Windows 9x/ME - available here:
  http://www.geforcefaq.com/files/anis16tap.reg
  http://www.geforcefaq.com/files/anis32tap.reg
  http://www.geforcefaq.com/files/anis64tap.reg
  You can use the anisoff.reg registry file to stop the effect of these keys - available here:
  http://www.geforcefaq.com/files/anisoff.reg

  If these files don't seem to have any effect, you may have to edit them in Notepad and change the 0000 to 0001, or another value. Take a look at the HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\Class\Display registry key using regedit and find out which number your graphics card is using.

- You can use the anis(xx)tapw2k.reg registry files to force the different levels of anisotropic filtering for both Direct3D and OpenGL under Windows 2000 - available here:
  http://www.geforcefaq.com/files/anis16tapw2k.reg
  http://www.geforcefaq.com/files/anis32tapw2k.reg
  http://www.geforcefaq.com/files/anis64tapw2k.reg
  You can use the anisoffw2k.reg registry file to stop the effect of these keys - available here:
  http://www.geforcefaq.com/files/anisoffw2k.reg

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Q. How can I enable AGP4X in the Detonator 5.16+ driver sets on my VIA 133mhz chipset motherboard?

- AGP4X is disabled on these motherboards because of issues with AGP4X, VIA chipsets and the GeForce2. The registry files below may cause problems if you have a GeForce2. If you do get these problems, try reading the 'I have a VIA chipset based motherboard and I can't get AGP4X to work without causing instability. How can I fix it?' question.

- Many thanks to PJ who discovered this registry key.

  In the 5.16 and later drivers in Windows 9x/ME you can use the viaagp4xon.reg registry file to enable AGP4X on VIA 133mhz chipset motherboards only - available here:
  http://www.geforcefaq.com/files/viaagp4xon.reg
  If you have problems after enabling this, use the viaagp4xoff.reg registry file to disable it again - available here:
  http://www.geforcefaq.com/files/viaagp4xoff.reg

- Many thanks to Joe Meheski who discovered this registry key.

  In the 5.16 and later drivers in Windows 2000 you can use the viaagp4xonw2k.reg registry file to enable AGP4X on VIA 133mhz chipset motherboards only - available here:
  http://www.geforcefaq.com/files/viaagp4xonw2k.reg
  If you have problems after enabling this, use the viaagp4xoffw2k.reg registry file to disable it again - available here:
  http://www.geforcefaq.com/files/viaagp4xoffw2k.reg

- If you are using AGP2X mode because AGP4X creates instability, make sure you also force AGP2X in your computer's BIOS as well as using the drivers for maximum stability during bootup.

- You may need the VIA 4.03+ AGP drivers installed to use the above files.

- You may also need to read the 'I have a VIA chipset based motherboard and I can't get AGP2X or AGP4X working. How can I fix it?' question.

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Q. What are these Simpsons related registry keys that I just found (Bart, Homer, Krusty & Marge)?

They're all to do with the overclocking tab that is enabled in the NVIDIA control panel with Coolbits (see the 'How can I enable the overclocking utility in NVIDIA's drivers?' question for information on Coolbits). They are stored in the
HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\Class\Display\0000
\NVIDIA\NVTweak\Hardware
registry key and are set when you first tick the 'Allow clock frequency adjustments' box in the NVIDIA control panel and are asked to restart.

Marge sets whether the panel is enabled or not, and the rest are all to do with the actual values and ranges of the overclocking sliders.

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Q. How can I manually set refresh rates and force the refresh rate above 60hz?

You should be able to adjust refresh rates for the current display resolution and colour depth using the Display control panel under the 'Adaptor' settings. On most drivers 'Optimal' is the best setting, but some drivers do not pick the optimal refresh rates correctly and set the refresh rate to 60hz. You can tell this because your display will flicker. You can use the following tips to change all of the refresh rates easily:

(Note that under Windows 2000 there is a separate problem that means you cannot set your refresh rates above 75hz. See the 'I cannot set my refresh rate above 75hz under Windows 2000. How can I fix it?' question for more information and fixes for the problem.)

- Make sure that you have the latest drivers installed for your monitor.

- For Windows 9x/ME, use hztool to adjust the rates manually to the ones you use. You can also set up custom refresh rates with this tool. You can download hztool at the following page;
  http://hem.spray.se/doxx/

- For Windows 2000, use the Windows 2000/XP NVidia Refresh Rate Fix program to adjust the rates manually to the ones you use. You can download this tool here:
  http://www.planetquake.com/ztn/nvreffix/

- For Direct3D games in Windows 2000, you can also run DXDiag, click on 'More Help', click 'Override...' and type in your desired refresh rate.

- For Quake 3 Arena you can simply type the following commands at the console:

    - /r_displayrefresh "x"
    - /vid_restart

  where x is the desired refresh rate (e.g. 75)

- You can also use the freeware program MultiRes to force refresh rates - available at the following website:
  http://www.entechtaiwan.com/

- You can also use PowerStrip to manually set refresh rates - you can download a demo of PowerStrip at the following website:
  http://www.entechtaiwan.com/

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Q. How can I enable TV-OUT in Windows 2000 (and without a reboot)?

- You can use the tvoutw2k.reg registry file to enable TV-OUT in Windows 2000 - available here:
  http://www.geforcefaq.com/files/tvoutw2k.reg

- The TVTool program has been recently updated to work with Windows 2000 and will allow you to enable TV-OUT without a reboot. You can read more about it in the 'How can I make the TV-OUT display stretch to the full size of my TV, and generally tweak TV-OUT?' question.

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Q. How can I make the TV-OUT display stretch to the full size of my TV, and generally tweak TV-OUT?

- If you have a card with a Brooktree TV chipset, download TVTool, and if you have a card with a Chrontel TV chipset, download TVCC2000. Both of these utilities are available at the following website:
  http://www.tvtool.de/

- You may also be able to use Video Live TV Out - available at the following website:
  http://www.ab.ru/~lookin/

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Q. Where can I download drivers that support 3D glasses and how can I fix problems with them?

NVIDIA now supply a 3D stereo driver for 3D glasses on their homepage along with the driver links. The driver works under Windows 9x/ME and Windows 2000/XP. There is also an extensive manual which includes a Tips and Troubleshooting section available on their site:
http://www.nvidia.com/

Some of the following information was taken from the now-defunct Stereovision.net:

- After you have installed the drivers you may need to follow the instructions in the 'I get errors involving desk.cpl. How can I fix them?' question in order to be able to open the NVIDIA control panel applets.

- The 3D stereo driver should work with all the following glasses:
    - Anaglyph glasses (with red and blue shaded panes)
    - All Anotherworld products
    - Asus VR100
    - The latest Cybervision products
    - Elsa 3D Revelator
    - H3D
    - miro 3D-Fanatix
    - All I-Art products expect Eye3D PCI
    - I-Glasses H3D Cruiser and H3D universal model
    - IO-Displays I-Glasses HMD with TV-OUT

- Stereographics CrystalEyes2&3, SimulEyes, StereoEyes
- All Tetratel products
- All VRStandard products
- VFX3D, in pageflipping, works above 640x480

The following glasses may not work with the 3D stereo driver:
- 3D Glasses that are plugged into the parallel or serial port
- I-Art Eye3D PCI - Limited success with the Eye3D Activator
- H3D/Wicked3D Classic

- If you have a Soundblaster Live! soundcard you may experience problems when using the stereo driver. If you do, try disabling 3D sound acceleration if possible.

- Some Microsoft Flight hardware products may cause problems when using the stereo driver - you may have to avoid using them at the same time as the stereo driver.

- If you find that you cannot adjust the stereo settings dynamically while you are running a 3D application, it may be because the 3D application uses T&L. You can disable T&L by creating a DWORD registry value called 'StereoDisableTnL' in the 'HKEY_LOCAL_MACHINE\Software\NVIDIA Corporation\Global\Stereo3D' registry subkey, and setting it to 1. However, this will slow down the 3D application somewhat.

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Q. Hardware accelerated OpenGL doesn't seem to be working at all in Windows XP. How can I fix it?

The default drivers that are supplied with Windows XP do not support hardware accelerated OpenGL. If you download and install any set of drivers mentioned in the 'What Windows 2000/XP drivers should I use?' question the problem should be solved.

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Q. I cannot set my refresh rate above 75hz under Windows 2000. How can I fix it?

In Windows 2000 for some drivers some people cannot set the refresh rate above 75hz even if they use the NVIDIA Refresh Rate Fix program. It appears that some monitors do not send DDC information correctly, and these drivers use the DDC information to set refresh rates - Philips monitors are fine but other makes like iiyama are not. The following fixes help for some people but not others:

- The 21.81 Detonator XP drivers appear to fix this problem for most if not all people.

- You may be able to fix this by installing your monitor as a 'Default Monitor' in Windows instead of using the specific drivers.

- You may be able to fix the problem by leaving your monitor off until Windows has finished loading, stopping Plug and Play from detecting the monitor.

- If your monitor supports BNC inputs, try plugging your monitor in using these instead. This will disable the Plug and Play support that seems to be causing the problems.

- You can try physically removing pin 15 from your D-SUB monitor connector. This will have the same effect as using a BNC cable as this pin is used for Plug and Play support. You will, of course, almost certainly void your monitor's warranty by doing this. The pins on the cable are numbered as following:

```
 +--------------------+
  \   1  2  3  4  5   /
```

```
\  6  7  8  9  10 /
 \ 11 12 13 14 15/
  +------------+
```

If you don't want to pull apart your monitor's signal cable, get a monitor signal extension cable and take out those pins instead. This may cause degraded 2D display because the longer lead will allow for more interference.

Apparently iiyama will send owners of their monitors a free adaptor that blocks DDC signals with no loss in image quality.

- You can also use PowerStrip to manually set refresh rates - you can download a demo of PowerStrip at the following website:
  http://www.entechtaiwan.com/

- Ideally there should be a switch in the drivers to turn off using DDC information to set refresh rates - if anyone knows of such a switch, let me know.

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Q. When I resume from monitor power saving modes in Windows 9x/ME, I get display corruption and / or instability problems, or my card seems slower than usual. How can I fix it?

- Thanks to Jarhead for pointing out this problem.

  In the 6.47+ drivers under Windows 9x/ME only, there is an issue for *some* (not all) systems when using monitor power saving modes. On these systems, if you allow the monitor to go into standby mode, the drivers may try to reapply any overclocking settings **ON TOP** of your current settings when the monitor resumes from the power savings mode. This causes display corruption and instability, and can seriously damage your card if the card is used in this overclocked state for a long period of time.

  For the most part, this only affects people that are actually overclocking with Coolbits, but it has been reported to happen even if Coolbits is not enabled.

  To see if your system is affected by this problem, perform the following steps:
  - Right click on your desktop, click Properties / Screensaver / Settings / Power Schemes, and set your monitor to shut off within 1 minute. Sit back and allow Windows to shut off your monitor. Wait about a minute and then move the mouse a little to wake the system up.

  - If you can see display corruption or the computer crashes, you have got the problem. Do not enable the monitor power savings modes or go into Standby mode on this system.

  - If you are using Coolbits to overclock, and the system does not display any problems after you perform this test, check the NVIDIA hardware options tab to see if the overclock setting you have previously made is still there. If it is, then the bug does not affect you.

  - If you are not using Coolbits to overclock, and the system does not display any problems after you perform this test, wait for the power saving mode to kick in and then move the mouse 5 or so times more and see if you then get the problem. If you do not then it is almost certain that the bug does not affect you.

  This problem is eliminated for some after version 6.50, **but not for others**. You should test your system before enabling monitor power saving modes.

- Alternatively, you may find that when you come out of power saving modes your 3D card seems slower because the clock speed has not been restored correctly. If this is the case, you can use NVresume to reset your clock speed when you come out of power saving modes - just put it in your Startup group. You can

download NVresume from the following website:
http://www.entechtaiwan.com/

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Q. The Overlay Color Control tab of the NVIDIA control panel is greyed out. How can I enable it?

This is by design in the latest driver sets. The Overlay Color Control tab is only enabled when you actually have an overlay in use. To enable the controls, run a video (AVI or Quicktime) or a DVD in the background while the control panel is open.

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Q. I installed DirectX 8 and it caused more problems than it fixed. How can I uninstall it?

There are various DirectX uninstallers available - you should be able to find one at Reactor Critical:
http://www.reactorcritical.com/

Note that some of the problems relating to DirectX 8 may be fixed when you use the drivers optimised for DirectX 8 - 10.xx onwards.

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Q. Why I can't enable hardware acceleration in PowerDVD 3.0 under Windows 2000?

This information is taken from the PowerDVD 3.0 readme file:

For most display chips and integrated chipsets, Hardware Motion Compensation and Subpicture Alpha blending is only available for most display cards under Windows 98 and Windows ME due to Windows 2000 driver limitations. Under Windows 2000, only SiS630 (integrated chipset) and SiS300 (display chip) are supported.

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Q. When I install the 5.xx series of drives Windows 9x/ME locks up at the bootup screen. How can I fix it?

Make sure that your GeForce card is not sharing any IRQs with another card (with the exception of the 'IRQ Holder for PCI Steering' device which will always use the same IRQ as the GeForce). If you find that the GeForce is sharing an IRQ with a PCI or ISA card, in the case of a PCI card try moving the PCI card to another slot (avoid the slot directly next to the AGP slot as this usually shares an IRQ with the AGP slot) or, in the case of an ISA card, reconfigure the card to use another IRQ.

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Q. When I install the 2x.xx series of drivers Windows 2000/XP I get instability problems, insufficient virtual memory errors or an error (possibly about an infinite loop) in nv4_disp.dll. How can I fix it?

Unfortunately there is no 'catch-all' fix at the moment. In the mean time try the tips on the following page:
http://www.viaarena.com/?PageID=64

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Q. I get 'Out Of Memory' errors although I have plenty of RAM installed. How can I fix it?

- There is a solution for this problem (which is more likely to occur with AGP graphics cards and large amounts of memory) in the following Microsoft Knowledge Base article:
  http://support.microsoft.com/support/kb/articles/q253/9/12.asp
  You may also be able to reduce the size of your AGP aperture to fix this problem, although this fix is not directly mentioned in the article. See the 'How can I change my AGP Aperture size?' question to find out how to do this and possible side effects.

- Note however that this may also be caused by incorrect virtual memory settings - if in doubt, allow Windows to manage your virtual memory settings.

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Q. How can I stop the 'Render no more than x frame(s) ahead' option from resetting to zero when 'Vertical Sync' is set to 'Always Off'?

This is a known bug with the current NVIDIA control panel. Every time that you enter the 'More Direct3D' dialog the value is reset to zero, even though your original value is still displayed.

To fix this, you have to set the value **every time** you enter the 'More Direct3D' dialog, even if it seems that the value displayed is correct. Hopefully NVIDIA will fix this bug soon.

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Q. I have downloaded some drivers and they have an nvalm.inf file instead of an nvagp.inf file. I can't get them to install properly. What's up?

Drivers with this file generally support languages other than English in the NVIDIA control panel.

- If you have trouble installing them try uninstalling your old drivers using the method described in the 'How can I completely uninstall old NVIDIA GeForce or Creative Labs Annihilator drivers?' question before you install the new drivers.

- Otherwise, just replace the nvaml.inf file with the nvagp.inf file from the nearest set of drivers that you can find.

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Q. I installed the VIA AGP drivers under Windows 2000 but they don't seem to have had any effect (the names of the devices have not changed). How can I fix this?

If you find that even after installing the VIA 4in1 drivers your devices are still called AMD devices, follow these steps:

1. Go to Control Panel, System, and select your AMD AGP-to-CPU Device.
2. Choose Update Drivers, select 'Have Disc'.
3. Select the place where you unzipped the AGP 4in1 drivers, and then select the Win2K subdirectory. You can ignore any warnings.
4. Reboot the computer. You should see that the device is now called VIA AGP-to-CPU.

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Q. I get a blue screen of death when I close Windows ME. How can I fix it?

Note that these solutions may not fix the problem for everyone.

- This problems should be fixed in drivers 6.49 and above.

- If you have an Intel based machine and are using the 6.xx+ drivers, you may be able to fix this problem by using the intelcompaton.reg registry file - available here:
http://www.geforcefaq.com/files/intelcompaton.reg
You can disable this option again by using the intelcompatoff.reg registry file - available here:
http://www.geforcefaq.com/files/intelcompatoff.reg

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Q. TV-OUT is greyed out on my TV-OUT capable GeForce. How can I fix it?

- Make sure you have plugged in and switched on the TV before you boot the computer.

- Thanks to Roger Sheppard for this suggestion:

  The GeForce needs to see a real 75 ohms AV input. However, not all TVs have this, and some have a switch labelled 'Terminate' next to the AV inputs to turn the 75 ohms off to allow more than one TV to be connected. If you are having this problem, especially with a smaller or portable TV, then try another TV to see if this is a problem, or check for a 'Terminate' switch.

- According to ASUS this may also be a problem caused by motherboards using a linear voltage regulator that does not supply enough voltage to the GeForce, and therefore there is not enough voltage to maintain TV-OUT. Read the 'What's all this with the original GeForce and motherboards not supplying enough power?' question for more information and possible fixes.

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Q. Does my VIVO module allow me to use Video for Windows applications or only DirectShow?

Most manufacturer's drivers only allow for DirectShow access to the VIVO module, which means that only newer applications can use the video in functions. However, ASUS provide a VfW 'wrapper' with their drivers, which means that you can use both sorts of applications.

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Q. I get errors involving desk.cpl. How can I fix them?

- Delete any .DLL files whose names begin with 'Nvrs' in your Windows\System directory.

- You may have too many display properties tabs installed. Use DPSclean to remove some entries. You can download DPSclean from the following website:
http://www.entechtaiwan.com/

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Q. I get crashes involving DDHELP.EXE. How can I fix them?

- This may be caused by a corrupt installation of DirectX. Try reinstalling it.

- You should also try installing the Detonator 3 (6.xx) or later drivers.

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Q. I get horizontal lines when I watch certain DivX ;-) movies under Windows 2000. How can I fix it?

This is a known problem with the Detonator 2 (5.xx) drivers. Try using the Detonator 3 (6.xx) or later drivers.

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Q. I cannot view videos in overlay mode if they are wider than 704 pixels horizontally, or if the width is not a multiple of 32. What's going on?

There is a freeware utility developed to fix a problem with the Matrox G400 series and Divx ;-) playback when the width of the movie isn't a multiple of 32. This utility also works with the GeForce series. In addition to the playback issue, it adds support for subtitles in Windows Media Player, even in fullscreen mode. You can find it here:
http://www.tac.ee/~prr/videoutils/DivXG400.1_91.zip

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Q. What games work and don't work with the GeForce?

There is a list being compiled here:
http://www.daytonsmisc.com/geforce.htm

If you have any games not currently included on the list that do / do not work, email the author:
sal@ispchannel.com

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Q. I get flashing menus in various games. How can I fix it?

This may occur in games like Battlezone 2, Urban Chaos, Trespasser and Deer Hunter 4.

- The 6.50 drivers and DirectX 8 may fix this problem.

- Try using the Detonator 2 series of drivers (5.xx). These may fix the problem.

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Q. I have problems with Shogun: Total War. How can I fix it?

- Use the 12.41+ driver sets. If these driver sets still don't work, the following website contains other Shogun troubleshooting tips:
  http://erado.totalwar.org

- You may also be able to fix any problems by starting Shogun: Total War in windowed mode. You can do this with the following steps provided by Steve Evest:

  1. Right click on the shortcut that you launch the game from.
  2. Click Properties.
  3. Click the shortcut tab.
  4. Where it says
     "C:\Program Files\Total War\Shogun - Total War\Shogun.exe" (note it may be in a different folder)
     change it so it says
     "C:\Program Files\Total War\Shogun - Total War\Shogun.exe" /deb

  The game will now run in a window, although battle sequences run slower.

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Q. I have problems with The Sims. How can I fix them?

- Make sure that you have the latest game patch and latest drivers for your GeForce.

- Try setting your desktop colour depth to 16-bit before starting the game.

- If you have WinDVD, read and apply the fix mentioned in the 'When I try to play MPEG files with Windows Media Player I get out-of-sync sound/green bars/too large playback. I have WinDVD installed. How can I fix it?' question.

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Q. I have problems with Giants: Citizen Kabuto. How can I fix them?

NVIDIA drivers above 6.xx may cause problems with environmental mapping and shadows. Currently the only way to solve it is to launch a level twice (although the problem does not manifest itself in multiplayer mode).

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Q. I have problems with Shogo: Mobile Armor Division. How can I fix them?

- If you find that Shogo does not show the movies or the game menu, try enabling 'Triple Buffer' and 'Poly Gap Fixing' in the Advanced Options menu.

- You may also have to use PowerStrip to turn off VSYNC - you can download a demo of PowerStrip at the following website:
  http://www.entechtaiwan.com/

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Q. I get various visual problems with Dagoth Moor Zoological Gardens with Windows 2000. Can I fix them?

Unfortunately in the current drivers there are some issues with Dagoth Moor Zoological Gardens. There is no current known fix.

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Q. I get an orange screen with Dagoth Moor Zoological Gardens. How can I fix it?

- Make sure Fog Table Emulation is switched on in the Direct3D section of the NVIDIA control panel, as outlined in the DMZG FAQ.

- Make sure you are using the latest drivers.

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Q. I get flickering in Rogue Spear. How can I fix it?

Check that you have all the settings in the 'What are the recommended BIOS settings for a GeForce?' question are set correctly.

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Q. Wizards & Warriors is too dark in the dungeons. How can I fix it?

Read the following page, download the patch and change the command line in the way mentioned:
http://www.heuristicpark.com/techhelp.htm

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Q. I have problems with Diablo 2. How can I fix them?

- Disabling the Perspective mode and 3D sound in the game options greatly enhances the game performance

- The 7.78 drivers are the best performers for the game, at least for MVP3 users - they fix the slowdown problems and work perfectly in Direct3D mode.

- Try the DirectDraw 2D mode if the game is not booting correctly, or if the game is too slow or skipping frames.

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Q. I have problems with Midtown Madness 1 or 2. How can I fix them?

- Make sure you have the latest patch installed:
  Midtown Madness 1:
  http://download.microsoft.com/download/midtownmad/Patch/1.2/W9XNT4/EN-US/midtown1_patch_aspac.exe
  Midtown Madness 2:
  http://download.microsoft.com/download/midtownmad2/Patch/1.01/W9X2K/EN-US/mm2pat.EXE

- To fix stuttering graphics in Midtown Madness 1, install the latest drivers. Drivers 5.13+ will fix this problem.

- If you get graphic corruption in Midtown Madness 1, switch off the pedestrians (this should be fixed by the patch mentioned above).

- In Midtown Madness 1 you can also try setting everything in the Midtown Madness graphics options to the highest possible quality, checking all the checkboxes and setting the resolution as high as possible.

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Q. I get what looks like missing polygons on the wheels and seat of the bike in Motocross Madness. How can I fix it?

This is a known bug and NVIDIA are looking into it.

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Q. Microsoft Baseball 2000 quits or crashes when I run it. How can I fix it?

There is a Microsoft Knowledge Base article about this problem:
http://support.microsoft.com/support/kb/articles/Q252/4/04.ASP.

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Q. I have problems with Need for Speed 5: Porsche. How can I fix them?

- Try NVIDIA's latest (leaked) reference drivers. In particular 6.18 may help with speed and instability problems.

- Make sure that the Direct3D settings in the NVIDIA control panel are set to defaults. In particular, 'Enable fog table emulation' should be enabled.

- Try setting your Windows colour depth to 16-bit colour instead of 32-bit.

- If you get lockups, try the following tips, in the Options/Graphics/Advanced Settings dialog:

  - Switch off lens flare
  - Switch headlights to vertex

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Q. How can I enable mipmapping in Rollcage Stage 2 on my GeForce3?

Unfortunately, at the moment you will have to install the card as a GeForce2 inside Windows if you want mipmapping to work.

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Q. What Glide wrapper works best with UltraHLE and the GeForce?

Gl²ide works best with the GeForce. You can find a copy by searching the Web.

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Q. I get texture corruption in Populous 3. How can I fix it?

Setting the texture alignment in the NVIDIA control panel to 0 may help the problem.

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Q. I get horizontal lines in Final Fantasy 8. How can I fix them?

Install the latest NVIDIA patch for Final Fantasy 8.

The US English version is available here:
ftp://ftp.ea.com/pub/ea/patches/ff8/FF8SqeaNVPatch.zip

The UK English version is available here:
ftp://ftp.eidos.co.uk/pub/uk/final_fantasy_8/patches/FF8EidosEngNVPatch.zip

The French version is available here:
ftp://ftp.eidos.co.uk/pub/fr/final_fantasy_8/patches/FF8EidosFreNVPatch.zip

The German version is available here:
ftp://ftp.eidos.co.uk/pub/de/final_fantasy_8/Patches/FF8EidosGerNVPatchV12.zip

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Q. I get problems with Star Trek: Armada. How can I fix them?

- The 5.22+ drivers fix many problems with Armada.

- There is more information on these problems and possible solutions on the following page:
  https://activision.custhelp.com/cgi-bin/activision.cfg/php/enduser/std_adp.php?p_faqid=388

Q. I get problems with X-Wing Alliance. How can I fix them?

If you get problems with white textures, use the 10.50+ drivers.

Q. I get problems with Serious Sam. How can I fix them?

- Make sure that you have the latest patch for Serious Sam installed.

- If you get clipping problems in the game, try setting 'gfx_iDepthBits' to '24' at the console.

- Try using the 6.50 drivers instead of the latest drivers if you get problems with slowdowns or texture corruption.

Q. I get very poor performance with Deus Ex. How can I fix it?

- Try installing the Direct3D Beta patch for Deus Ex. You can download it here - instructions for installation are included in the file:
  http://www.deusex.com/downloads/dxd3d.zip

- If this does not help, this may be caused by having both 32-bit colour and high texture detail enabled. Disable one of these to fix the problem for now.

Q. I get screen corruption with Deus Ex. How can I fix it?

The 6.xx series of drivers and the 7.xx before 7.52 all cause problems with Deus Ex in Direct3D mode. Try switching to a later set and see if this fixes the problem.

Q. I get problems in Messiah, especially when enabling T&L. How can I fix them?

- Install the latest patch and run Messiah with the -p command line switch.

- If you want to use T&L support, currently you must set 'Character Texture Resolution (AGP)' to 'Medium'.

Q. I get problems with No One Lives Forever. How can I fix them?

- Make sure you have the latest patch installed.

- Try ticking the 'Enable alternative depth buffering technique' box in the Direct3D tab of the NVIDIA control panel. Unfortunately this option has been removed in the latest drivers.

Q. I get problems with Half-Life. How can I fix them?

- Make sure you have the latest patch for Half-Life. The 1.1.07 patch and later supposedly fix problems with missing textures.

- Make sure you have the very latest drivers installed. The 5.13+ drivers fix the missing textures problem, the 5.16+ drivers fix problems with flashing in shadowy areas and the 5.22+ drivers fix problems with slow loading times.

- Make sure you run Half-Life at a resolution below the current desktop resolution.

- Try changing the Buffer Flipping Mode in the OpenGL tab of the NVIDIA control panel to 'Block Transfer'.

- If you get blurry text in Direct3D mode, try moving the Texture Alignment slider in Advanced Direct3D options in the NVIDIA control panel to the 0 position.

- If you're using OpenGL (recommended), try using Direct3D, and vice versa.

- Try flashing your GeForce card's Video BIOS with the latest version (you may have to use the NVIDIA reference BIOS). This may fix problems with green pixels being displyed instead of grey. You may want to read the 'Where can I get the latest NVIDIA Flash BIOS and which should I use?' question in this FAQ.

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Q. Half-Life is too dark. How can I fix it?

- If the brightness and gamma controls in the NVIDIA control panel don't work, try adding the command line parameter -3dfxgamma to your Half-Life shortcut.

- If you use OpenGL, create a folder in your game directory called '*hw*' (so that it looks like 'c:\sierra\half-life\cstrike\hw' or similar), and then create a file inside that called '*opengl.cfg*' with the following contents:

```
GAMMA 5
TEXGAMMA 2
LIGHTGAMMA 2
```

These values can be altered to change the brightness levels.

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Q. When I join a game or start a LAN game in Half-Life I never enter the game. How can I fix it?

This problem only occurs when you enable the console using the -console command line switch.

You can fix it by changing the Buffer Flipping Mode in the OpenGL tab of the NVIDIA control panel to 'Block Transfer'.

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Q. I have Counter-Strike and a GeForce 2 Ultra 64MB DDR and my framerate drops dramatically whenever there is more than one person (myself) connected to a server. What's up?

This is a very unusual problem but one that has been experienced by a number of people. Getting a different model GeForce card (the GeForce 3, or the GeForce 2 MX) appears to fix the problem, but apart from that

currently there is no known fix.

Strangely enough, it seems that most of the conflicts appear with people using AMD Athlon 750mhz processors.

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Q. Quake is very dark. How can I fix it?

- Download the following file and put it in your Quake/Id1 directory:
  http://www.geforcefaq.com/files/pak2.pak
  The above file was created with idGamma - you can download it and make a file with different settings if you want. It is available here:
  http://www.g256.com/idgamma/

- You can also try using one of the unofficial GLQuake updates - many will allow you to change the brightness as well as adding useful new features. Any decent Quake site should give you links to a number of these updates.

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Q. Players 'phase' while I play Quake 1. How can I fix it?

If you find that players are visible one frame and then not visible the next at certain points in the game, there are a few possible solutions:

- Go into the NVIDIA control panel's OpenGL tab and set 'Buffer flipping mode' to 'Use block transfer'.

- Go into the NVIDIA control panel's OpenGL tab and set 'Vertical Sync' to 'Always Off'.

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Q. When I ALT-TAB while playing Quake 1, I get problems. How can I fix it?

- Make sure you play Quake 1 with the same resolution as your desktop. This means that if you are running your desktop at 1024x768 at 32 bpp, start Quake up with this command line:
  glqwcl.exe -width 1024 -height 768 -bpp 32

- You can also try right-clicking on the task bar, selecting Properties and unchecking 'Always on top'.

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Q. Quake 2 is very dark. How can I fix it?

Type these three commands at the console:

- /set intensity "2.0"
- /set gl_modulate "2.5"
- /vid_restart

If you don't like these settings, try:

- /set intensity "1.0"
- /set gl_modulate "4.0"
- /vid_restart

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Q. When I use my GeForce in Quake 2 my ping rises dramatically. How can I fix it?

You need to limit your framerate - the GeForce is too fast and is causing your system to be swamped. Use the following console command:

- /cl_maxfps x

where x is a value around which your framerate will be limited to. Try values from 30 to 60.

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Q. How can I get the best possible image quality from Quake 3 Arena?

Firstly, adjust all settings to High Quality in the menu options of Quake 3 Arena, and then set Geometry Detail to High and Texture Detail to the extreme right hand side.

These settings were suggested by John Carmack in order to make the best use of the GeForce - type them in the console:

- /r_lodBias -2 // don't use lower detail models.
- /r_subdivisions 1 // lots more triangles in curves.
- /r_lodCurveError 10000 // don't drop curve rows for a long time.
- /vid_restart

If you want to undo these settings, just select a geometry detail level inside the game.

- /r_stencilbits 8 // enable the 8 bit stencil buffer.
- /vid_restart
- /cg_shadows 2 // enable stencil shadows.

If you want to undo these settings, set cg_shadows back to 1.

However, the shadows options may slow you down quite significantly - they're not recommended if you're into huge 20 player frag fests!

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Q. How can I get SMP working with Quake 3 Arena under Windows 2000?

- Thanks to lazerus and BankZ on the BP6.com messageboard for this solution:

    Change your Quake 3 shortcut to read the following:

    cmd.exe /c start /realtime C:\PROGRA~1\QUAKEI~1\QUAKE3.EXE +set r_smp 1

    If you have installed Quake 3 in an alternative directory you should of course alter this to fit.

- Note that if you have the ASUS drivers installed, they may cause choppiness in SMP mode. Use the NVIDIA reference drivers instead.

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Q. On some levels in Quake 3 Arena I get severe slowdowns with all of the settings maxed out. How can I fix this?

- Turn down the texture colour depth to 16-bit or slide the texture detail slider down one notch. There's not

quite enough memory to store all the textures in the video memory on certain levels, such as Q3DM6, Q3DM9, Q3DM11 and Q3DM15.

- The following tip was provided by Korhan Uran:

  As an alternative to this, if you don't mind editing console variables manually, type the following into the console:

    - */r_texturebits 24*
    - */vid_restart*

  This will turn texture colour depth to 24-bit which will not affect image quality but will reduce video memory requirements.

- Switching the AGP Aperture size to 256 helped some people to reduce the problem in some levels. See the 'What should my AGP Aperture size be set to?' question for more information.

- If you use the latest drivers then you do not have to do either of these things as S3TC support in OpenGL is implemented, which means that all the textures can fit in Video RAM.

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Q. The sky looks blocky and textures have strange colours in Quake 3 Arena with the latest drivers installed. How can I fix this?

This is a by-product of the S3TC support in the latest drivers. Basically the S3TC format used by default in Quake 3 Arena (DXTC1) forces textures to be in 16-bit colour instead of 32-bit.

- The following registry key was found by Unwinder:

  In the 6.47+ drivers, you can use the s3tcqualityon.reg registry file to force all OpenGL applications to use DXTC3 compression instead of DXTC1 - available here:
  http://www.geforcefaq.com/files/s3tcqualityon.reg
  If you get problems, you can reenable DXTC1 compression using the s3tcqualityoff.reg registry file - available here:
  http://www.geforcefaq.com/files/s3tcqualityoff.reg

  If these files don't seem to have any effect, you may have to edit them in Notepad and change the 0000 to 0001, or another value. Take a look at the
  HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\Class\Display
  registry key using regedit and find out which number your graphics card is using.

  The Windows 2000 equivalent files are available here:
  http://www.geforcefaq.com/files/s3tcqualityonw2k.reg
  http://www.geforcefaq.com/files/s3tcqualityoffw2k.reg

  There is more information on this fix available here:
  http://www.gamebasement.com/pages/home.asp?nav=articles&id=58

- If you do not use the 6.47+ drivers, you can fix the problem in Quake 3 Arena only by forcing the game to use DXTC3 compression instead of DXTC1. You can read more about this and download a patch at the following website:
  http://www.gamebasement.com/pages/home.asp?nav=articles&id=38

  There is a page in German with the same information at the following website:
  http://www.3dcenter.de/artikel/2000/10-26a.php3

- You can disable S3TC in Quake 3 Arena using the following console commands:

  - /r_ext_compress_textures 0
  - /vid_restart

  but be warned that this will cause the problems described in the 'On some levels in Quake 3 Arena I get severe slowdowns with all of the settings maxed out. How can I fix this?' question.

- If you type in the following command to the console it may help to reduce the effects of S3TC on the sky:

  - /r_overbrightbits 0
  - /vid_restart

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Q. Quake 3 Arena looks very dark in Windows 2000. How can I fix it?

- The Quake 3 Arena 1.25 patch and above should fix this problem. If it doesn't you can also try the fixes below.

- Type the following command at the console:

  - /r_ignorehwgamma 1
  - /vid_restart

  and see if it helps.

- You can also try the following:

  - /r_ignorehwgamma 0
  - /r_overbrightbits 0
  - /vid_restart

  This should mean that the brightness slider works as usual.

- If that doesn't help, try typing the following commands at the console:

  - /r_mapoverbrightbits x
  - /vid_restart

  where x is a value from 2 to 3.

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Q. Some of the textures in Diamond's special S3TC level 'dmmq3dm3' for Quake 3 Arena are white. How can I fix this?

Install the latest drivers from NVIDIA. Driver versions 5.13+ fix this problem.

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Q. I get flickering textures in Quake 3 Arena and Windows 9x/ME. How can I fix it?

Type the following at the console:

- /r_ext_compiled_vertex_array 0
- /vid_restart

Q. I get tearing on Quake 3 Arena, whether I set VSYNC on or off. How can I fix this?

- Use the 3.76 drivers or later. These may fix the problem.

- This solution was provided by Chas Profitt:

  Delete your q3config.cfg file and let Quake 3 Arena rebuild it. You will lose all your settings but this may help!

- If this doesn't help, enable VSYNC in the NVIDIA control panel and try typing:

  - /r_swapinterval 1

  at the console. This may slow you down.

Q. How can I speed up Unreal Tournament on my GeForce?

- There are a number of Direct3D and OpenGL interfaces for Unreal Tournament that you can try in order to get better performance:

  - The latest OpenGL renderer (which supports the high resolution DXTC textures on the second CD) is available here:
    http://unreal.epicgames.com/files/opengldrv.zip
    You will need to add some settings to the OpenGLDrv setting of your UnrealTournament.ini file:

    ```
    [OpenGLDrv.OpenGLRenderDevice]
    RefreshRate=75
    DetailTextures=1
    UseTrilinear=1
    UseS3TC=1
    UseTNT=0
    LODBias=0
    UseMultiTexture=1
    UsePalette=1
    UseAlphaPalette=0
    Translucency=1
    VolumetricLighting=1
    ShinySurfaces=1
    Coronas=1
    HighDetailActors=1
    MaxAnisotropy=0
    AlwaysMipmap=0
    UsePrecache=0
    SupportsLazyTextures=0
    ```

    - The 4.25 patch includes a new d3ddrv.dll. Unfortunately if you install the 4.20 or 4.25 patch you cannot use pre 4.20 d3ddrv.dll files, unless you replace d3ddrv.int with a copy from a previous version of UT.

    - The 1.8b d3ddrv.dll which may help performance with the 4.25 patch is available here:
      http://unreal.epicgames.com/files/d3d_18b/d3ddrv.dll

    - The 0.8 d3ddrv.dll includes a new 'UseLocalTextures' switch in the Direct3D preferences.

Switching this to 'True' may speed up performance (it forces all textures to be loaded into video memory on the card only). It is available here: http://unreal.epicgames.com/files/d3d_08/d3ddrv.dll

○ The 4.13 patch includes the 0.7 d3ddrv.dll. It is also available here: http://unreal.epicgames.com/files/d3ddrv.dll

○ The 0.6 d3ddrv.dll is available here: http://unreal.epicgames.com/files/d3d_06/d3ddrv.dll

○ The d3ddrv.dll that was included with the 4.05b patch is available here: http://unreal.epicgames.com/files/d3d_405b/d3ddrv.dll

All the files go in your UnrealTournament\System directory.

- Try using OpenGL instead of Direct3D and vice versa.

- The 6.11+ drivers may help with Unreal Tournament Direct3D performance.

- Try disabling Precaching. Use the tilde key to bring up the console and then type in 'Preferences'. Select Renderer / Direct3D / Precache and set it to False.

- Here are a few tips from 3DSL:

  First you will need to use the coolbits.reg registry file - read the 'How can I enable the overclocking utility in NVIDIA's drivers?' question for more information.

  1. *Use the latest NVIDIA reference drivers.*

  2. *Download the latest patch for UT from: http://unreal.epicgames.com*

  3. *In Display Properties => NVIDIA Control Panel => Direct3D Settings => More Direct3D*

     a. *Set 'PCI Texture Memory Size' to 63 (assuming you have 128MB of RAM).*

     b. *Tick 'Disable vertical sync'.*
     c. *Set 'Render no more than x frames ahead' to 5.*

- In addition there is an excellent Unreal Tournament tweak guide available here: http://www.3dspotlight.com/tweaks/ut/

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Q. I get mouse lag in Unreal Tournament. How can I fix it?

- Make sure you have the latest chipset drivers for your motherboard installed, in particular the VIA 4in1 drivers.

- Perform the 'Disable vertical sync' instructions mentioned in the 'How can I speed up Unreal Tournament on my GeForce?' question. You may also find that enabling VSYNC actually fixes mouse lag.

- You may also need to use a different d3ddrv.dll (try version 0.8), as descrived in the 'How can I speed up Unreal Tournament on my GeForce?' question.

- Try using 16-bit colour mode instead of 32-bit colour mode.

- Try searching for 'unreal' in your registry - if you find an entry under 'Mouse\Exceptions', remove it.

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Q. The menu text in Unreal Tournament is distorted. How can I fix it?

In the GeForce Direct3D options, reset the Texture Alignment back to 3.

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Q. If I turn on precaching in Unreal Tournament it crashes. How can I fix this?

- Download the latest patch for UT from:
  http://unreal.epicgames.com

- This possible solution was provided by Jarhead:

  Try uninstalling ALL Unreal engine based games and then reinstalling UT. If this helps, you can try uninstalling all Unreal games, then installing them one by one, but with UT last. The problem appears to be with UT using the original Unreal D3D engine instead of it's own vastly updated engine, and installing UT last will stop this if it is your problem - however, this solution doesn't work for everyone, and if it doesn't you'll have to turn off precaching until another solution is found.

- If none of these help, read the 'My GeForce keeps on locking up or drops me back to the desktop during 3D applications. How can I fix it?' question in this FAQ.

- Try disabling Precaching - you may even get a performance gain. Use the tilde key to bring up the console and then type in 'Preferences'. Select Renderer / Direct3D / Precache and set it to False.

- If this still doesn't help, it is very likely that the problem is with your motherboard - one motherboard in particular that shows this problem is the ASUS P3B-F, revision 1.03. and below. There is no current solution to this problem except to replace the motherboard. ASUS will replace your motherboard with a revision 1.04, which does not have the problem, but it may take some time.

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Q. What DVD software can I use with my GeForce?

You can use any DVD software with the GeForce, but some software supports the GeForce's DVD acceleration features (Motion Compensation - MC) so that CPU utilisation is reduced while the DVD is playing.

- PowerDVD 2.55 supports the GeForce's MC. A demo version can be downloaded at the following website, which now does support MC:
  http://www.3dsl.com

- WinDVD 2000 also supports GeForce MC, but you have to enable it in the registry. Go to:
  http://www.inmatrix.com
  to download DVD Genie, a program which will allow you to enable the MC support easily. You can download a demo of WinDVD 2000 at this website:
  http://www.intervideo.com

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Q. When I enable Hardware Acceleration in PowerDVD the image quality falls. How can I fix it?

Select the 'Force Weave' option instead of 'Auto Select' in Configuration/Video/Video Mode.

Q. When I enable Hardware Acceleration in PowerDVD it either crashes or gives me an error message. How can I fix it?

- Try the latest (leaked) NVIDIA reference drivers.

- Make sure that you are using PowerDVD 2.55 build 0620, as this fixes problems with PowerDVD Hardware Acceleration.

- Try disabling Fast Writes. You can read more about how to do this in the 'How can I enable or disable AGP Fast Writes?' question.

Q. DVD playback seems slow with my ALI chipset based motherboard. How can I fix it?

Download the AGP Utility from the following page:
http://www.ali.com.tw/eng/support/drivers/aladdin_5_driver.htm
and set the following settings:

- Write allocation enabled without holes
- K6 features mask to 3
- GAT to 1 (not 2)
- AGP2X and sidebanding enabled
- Write combining enabled

Q. Is there an update available for the WinDVD software supplied with the Annihilator?

Yes, there is an update to take the WinDVD supplied with the Annihilator and Annihilator Pro (version 1.3.1) to version 1.3.5 (equivalent to WinDVD 2000). This patch will allow installation under Windows NT 4 but disables S/PDIF support.

The patch is available here - it is multilingual and should work for all language versions:
http://www.americas.creative.com/support/files/download.asp?Centric=56&descID=938

Q. When I try to play MPEG files with Windows Media Player I get out-of-sync sound/green bars/too large playback. I have WinDVD installed. How can I fix it?

This solution was provided by X-Default User-X:

What you have to do is rename, delete, or unregister (your choice) the two *.ax files in the Program Files\InterVideo directory. The files should be named:

- *iviaudio.ax*
- *ivivideo.ax*

You can unregister the files easily by using DVD Genie, available to download here:
http://www.inmatrix.com

These are DirectShow filters that allow Windows Media player to play DVDs (provided you know how to enable it via a registry hack) and MPEG2 VOB files. They were primarily designed for the few DVD games out

there that use MPEG2 videos for their cut scenes. For some reason, they also take the task of playing regular MPEG1 files when the original filters that come with Windows Media Player 6.4 are more than adequate.

Registering/unregistering DirectShow filters will not affect WinDVD's ability to play DVD movies.

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Q. When I start Microsoft Expedia Streets and Trips 2000 or Microsoft Autoroute Express 2000 (Europe and Great Britain), my computer hangs. How can I fix it?

There is a Microsoft Knowledge Base article about the Expedia problem, which appears to also cover Autoroute:
http://support.microsoft.com/support/kb/articles/Q248/3/26.ASP

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Q. I have problems running SoftIce on my GeForce. How can I fix it?

- Any problems should be resolved by upgrading to SoftICE version 4.05 or later. If this is not possible, try using the 5.xx series of Detonator drivers.

- You should also try installing the latest swdvid drivers from the NuMega website.

- If you are unable to upgrade to version 4.05 and you do not want to use the 5.xx drivers, try setting the DWORD registry value called 'Siwvid' in the 'HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services' registry subkey to 1 or 0.

- If you press Ctrl-D and get a black screen, press Ctrl-D again to go back to the desktop. You can then access SoftICE agaio by opening a full screen DOS box and pressing Ctrl-D once more.

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Q. Why does my 3DMark2000 score drop by about 200 when I install drivers based on 3.62 and above?

Dynamic lighting is enabled in the 3.62 and above drivers, which looks much nicer but is slower. Look at the rockets in the helicopter demo - they light up the ground as they pass in 3.62+.

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Q. Why can't I run the 64MB texture test in 3DMark2000, even when I've got enough memory?

- Try installing the latest drivers.

- Make sure you have as much main memory free as possible before running the test - disk caches and programmes running in the background may take up memory that the test requires.

- Try setting the AGP Aperture size to 128MB or above (try 256MB) and see if that helps. You can find out to do this in the 'How can I change my AGP Aperture size?' question.

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