This option is used to turn fog table emulation on or off.

Direct3D specifies that a display adapter capable of D3D hardware acceleration should be able to implement either vertex fog or table fog.   Some games do not correctly query the D3D hardware capabilities and expect table fog support. Choosing this option will ensure that such games will run properly on your NVidia graphics processor.

This option allows you to disable the newer DirectX features of the drivers.

Some games written for earlier versions of DirectX may not run properly with DirectX versions 6 or 7 installed and their support enabled in the drivers. Selecting this option forces the drivers to run in DirectX 5 compatibility mode so that older games will run correctly.

Use this option if you wish to run certain older games that do not start or do not run as they should.

Forces the hardware to automatically adjust the depth of its Z-buffer to the depth that the application requests.

Normally, you will want to keep this option enabled, unless your work absolutely requires a specific Z-buffer depth. If this option is disabled, any application whose working Z-buffer depth does not match that of the current hardware configuration will not run.

Enables an alternate technique for depth buffering.

This lets the hardware use a different mechanism for depth buffering in 16 bit applications. Enabling this setting can produce higher quality rendering of 3D images.

Enables the NVidia logo in Direct3D.

Enabling this setting will display the NVidia logo in the lower corner of the screen while running Direct3D applications.

Your NVidia graphics processor can automatically generate mipmaps to increase the efficiency of texture transfers across the bus and provide higher application performance.

However, some applications may not display correctly when auto-generated mipmaps are enabled. To correct any problems, reduce the number of automatically generated mipmap levels until the images are properly displayed. Reducing the number of mipmap levels can often eliminate texture misalignment or "seaming" (at the expense of some performance).

Allows you to select the auto-mipmapping method used by the graphics processor.

You can select either the bilinear or the 8-tap anisotropic mipmapping method, whereby the bilinear method generally provides better performance, while the anisotropic method generally produces a higher quality image.

Allows you to adjust the LOD (Level of Detail) bias for mipmaps.

A lower bias will provide better image quality, while a higher bias will increase application performance. You can choose from five preset bias values, varying from "Best Image Quality" to "Best Performance".

A list of the custom settings (or "tweaks") you have saved. Selecting an item from the list will activate the setting. To apply the setting, choose the "OK" or "Apply" button.

Lets you save the current settings (including those set in the "More Direct3D" dialog) as a custom "tweak". Saved settings will then be added to the adjacent list.

Once you have found the optimal settings for a particular Direct3D game, saving the settings as a custom tweak allows you to quickly configure Direct3D before starting the game and eliminates the need to set each of the options individually.

Deletes the custom setting currently selected in the list.

Restores all settings to their default values.

Displays a dialog which allows you to customize additional Direct3D settings.

This option changes the hardware texture addressing scheme for texels (texture elements).

Changing these values will change where texel origin is defined. The default values conform to the Direct3D specifications. Some software may expect the texel origin to be defined elsewhere. The image quality of such applications will improve if the texel origin is redefined. Use the slider control to adjust the texel origin anywhere between the upper left corner and the center of the texel.

This allows the graphics processor to utilize up to the specified amount of system memory for texture storage (in addition to the memory installed on the display adapter itself).

Note: The maximum amount of system memory that can be reserved for texture storage is calculated based on the amount of physical RAM installed in your computer. The more system RAM, the higher the value you will be able to set.

This setting applies only to PCI display adapters (or AGP display adapters running in PCI compatibility mode).

Select this option to disable vertical sync.

Allows the image to be immediately rendered to the screen without waiting to be synchronized to the vertical retrace of the monitor. This allows for frame rates higher than the refresh rate of your monitor, but may produce visual artifacts and tearing resulting in reduced image quality.

This option allows you to determine the amount of antialiasing used in a particular D3D application.

Antialiasing is a technique used to minimize the "stairstep" effect sometimes seen along the edges of 3D objects. Your selection can range from turning antialiasing completely off to selecting the maximum amount possible for a particular application.

Use this option to force antialiasing in applications that do not directly support it.

Note that some applications which do not explicitly support antialiasing may not display properly or may render irregular images. Use this option with care. Turn this option off if you experience display problems with a game or application that does not support antialiasing.

This option allows you to limit the number of frames the CPU can prepare before they are processed by the graphics chip when vertical sync is disabled.

In some cases, the higher the number of pre-rendered frames allowed, the greater the "input lag" may be in response to devices such as joysticks, gamepads or keyboards.

Reduce this value if you experience a noticeable delay in response to the input devices connected to your computer while playing games.

Allows the drivers to use the OpenGL extension **GL_KTX_buffer_region**.

This can increase application performance in 3D modeling applications that support this extension.

Allows the use of local video memory when the GL_KTX_buffer_region extension is enabled.

However, if there are less than 8 MB of local video memory available, dual planes extension support will not be enabled.

This setting has no effect if the "Enable buffer region extension" option above is disabled.

Allowing fast linear-mipmap-linear filtering will provide increased application performance at the expense of some image quality.

In many cases, a loss of image quality may not be noticeable, so you may wish to take advantage of the extra performance gained by enabling this feature.

This option allows OpenGL to use anisotropic filtering for improved image quality.

Select this option to disable driver support for enhanced instructions used by certain CPUs.

Some CPUs support additional 3D instructions that complement your NVidia graphics processor and improve performance in 3D games or applications. This option allows you to disable support for these additional 3D instructions in the drivers. This can be useful for performance comparisons or for troubleshooting.

These options control full scene antialiasing for the OpenGL driver. Antialiasing is a technique used to smooth the edges of objects in a scene to reduce the jagged "stairstep" effect sometimes seen. The 1.5 x 1.5 method offers antialiasing with the best performance, while the 2 x 2 method provides the highest image quality.

This option determines whether textures of a specific color depth should be used by default in OpenGL applications.

Use desktop color depth will always use textures of the color depth at which your Windows desktop is currently running.

The **Always use 16 bpp** and **Always use 32 bpp** options will force the use of textures of the specified color depth, regardless of your desktop settings.

This option determines the buffer flipping mode for full-screen OpenGL applications.

You can select from the block transfer method, the page flip method or auto-select. Auto-select allows the driver to determine the best method based on your hardware configuration.

This option lets you specify how vertical sync is handled in OpenGL.

Always off will always disable vertical sync in all OpenGL applications.

Off by default will keep vertical sync disabled, unless an application specifically requests that it be enabled.

On by default will keep vertical sync enabled, unless an application specifically requests that it be disabled.

Lets you save the current settings as a custom "tweak". Saved settings will then be added to the adjacent list.

Once you have found the optimal settings for a particular OpenGL application, saving the settings as a custom tweak allows you to quickly configure OpenGL before starting the program and eliminates the need to set each of the options individually.

The slider controls allow you to adjust the brightness, contrast or gamma values for the selected color channel.

The color correction controls help you to compensate for variations in luminance between a source image and its output on a display device. This is useful when working with image processing applications to help provide more accurate color reproduction of images (such as photographs) when they are displayed on your monitor.

Also, many 3D-accelerated games may appear too dark to play. Increasing the brightness and/or gamma value equally across all channels will make these games appear brighter, making them more playable.

Allows you to select the color channel controlled by the sliders. You can adjust the red, green or blue channels individually or all three channels at once.

Digital Vibrance gives you more control over color separation and intensity, resulting in brighter cleaner images in all of your applications.

A graphical representation of the color curve. This curve will change in real time as you adjust the contrast, brightness or gamma.

Selecting this option will automatically restore the color adjustments you have made here when Windows is restarted.

Note: If your computer is running on a network, the color will be adjusted after you have logged on to Windows

A list of the custom color settings you have saved. Selecting an item from the list will activate the setting.

Lets you save the current color settings as a custom setting. Saved settings will then be added to the adjacent list.

Deletes the custom color setting currently selected in the list.

Restores all color values to the hardware factory settings.

Allows you to select your monitor timing mode:

> **Auto-Detect** allows Windows to receive the proper timing information directly from the monitor itself. This is the default setting. Note that some older monitors may not support this feature.
>
> **General Timing Formula** or **GTF** is a standard used by most newer hardware.
>
> **Discrete Monitor Timings** or **DMT** is an older standard still in use on some hardware. Enable this option if your hardware requires DMT.

Adds the NVidia QuickTweak icon to the Windows taskbar.

The icon allows you to apply any of the custom Direct3D, OpenGL or color settings "on the fly" from a convenient popup menu.
The menu also contains items for restoring default settings and accessing the Display Properties dialog.

Allows you to choose the icon used to represent the QuickTweak utility in the Windows taskbar.

Select the icon you want displayed from the list. Then choose "OK" or "Apply" to update the icon in the taskbar.

Closes this dialog and retains the changes you made so that they will take effect when you choose the "OK" or "Apply" button in the "Additional Properties" dialog.

Lets you determine which mouse button will bring up the menu when taskbar icon is clicked.

Turns confirmation messages on or off.

Check this option if you do not want confirmation messages to be displayed when you load a 3D configuration from the taskbar menu.

Select this option if you want the taskbar menu to be displayed with a 3D effect.

These options allow you to determine the placement of the image on your flat panel display when running at resolutions lower than the maximum resolution supported.

Use the arrow buttons to adjust the position of the desktop on your monitor.

Resets the desktop to its default position for the current resolution and refresh rate.

These options allow you to select the output display device (monitor, digital flat panel or TV, depending on which devices your display adapter supports) .

Opens a window where you can customize the settings for the active display device.

Indicates the current format and country settings used for TV output.

Opens a window where you can specify a particular TV output format.

This list allows you to select the TV output format based on the country where you live.

Note: If your country is not in the list, you should select the country closest to your location.

Makes the selected format the power-up default.

When starting up the computer with only a TV attached to the display adapter, this option ensures that all screen messages displayed during the boot process will be output in the proper format supported by your television.

Lets you specify the type of output signal sent to the TV.

If you have the proper connector cable, S-Video out will generally provide a higher quality output than Composite video out. If you are not sure which type of signal you should specify, choose the **Auto-select** setting.

Use the arrow buttons to adjust the position of the desktop on the TV.

Note: If the TV picture becomes scrambled or goes blank due to overadjustment, simply wait 10 seconds. The picture will automatically return to its default position. Then you can begin your adjustments again. Once you have positioned the desktop where you want it, you must press the "OK" or "Apply" button to save the settings before the 10 second interval has elapsed.

Resets the desktop to its default position on the TV for the current resolution.

Use these controls to adjust the brightness and saturation of the TV image.

Use these controls to adjust the brightness and contrast of the TV image.

Use this control to adjust the amount of flicker filter you want applied to the TV signal.

It is recommended that you turn off the flicker filter completely for DVD movie playback from a hardware decoder.

Sets the screen resolution and color depth for output to the TV.

Use these controls to adjust the quality of video or DVD playback on your monitor.

You can independently control the brightness, contrast, hue and saturation to achieve optimal image quality when playing back videos or DVD movies on your computer.

Allows you adjust the core and memory clock frequencies of your NVidia graphics processor.

Sets the core clock speed of your NVidia graphics processor.

Indicates the core clock speed in megahertz.

Sets the clock speed of the memory interface on your display adapter.

Indicates the clock speed of the memory interface in megahertz.

Tests the new clock frequency settings for stability before applying.

Note: You must test any new settings that differ from the manufacturer's defaults before they can be permanently applied.

Selecting this option will ensure that any changes you make to the clock frequencies are applied automatically each time Windows starts.

Note: You can bypass the automatic clock setting at startup by holding down the <Ctrl> key while Windows is starting. If your computer is connected to a network, hold down the <Ctrl> key immediately after you have logged on to Windows.

Resets all clock adjustment capabilities and forces a redetection of the graphics hardware before the controls can be reenabled.

It is recommended that you perform a reset any time you flash the BIOS of your display adapter with an updated BIOS image.

Allows you to select one of four TwinView modes:

Standard – Selects the standard, single display mode. Use this mode if you have only one display device attached to your Nvidia graphics adapter

Clone – This mode outputs an exact copy of the primary display on the secondary device.

Horizontal Span – This mode allows you to extend the Windows desktop across two display devices horizontally.   In this mode the the two displays combine to form one large spanned display surface.

Vertical Span – This mode allows you to extend the Windows desktop across two display devices vertically.   In this mode the the two displays combine to form one large spanned display surface.

When running in clone mode, this option allows you to run your primary display device at a higher desktop resolution than that of the secondary device. If the physical resolution of the secondary device is lower than that of the primary, the desktop on the secondary device will automatically pan as the mouse touches the borders of the screen.

Turns off the automatic panning feature on the secondary device if the "Allow virtual desktop on clone device" option is selected. This lets you effectively "freeze" the virtual desktop at a certain position. This is useful for presentations or fine detail work in applications.

A graphical representation of your TwinView primary device configuration.

Clicking the graphic allows you to configure the output device connected to the primary output on your TwinView-capable graphics board when running in clone mode.

A graphical representation of your TwinView secondary device configuration.

Clicking the graphic allows you to configure the output device connected to the secondary output on your TwinView-capable graphics board when running in clone mode

Enables the zoom controls to allow you to zoom in on a specific area of the video output screen.

Here, you can select the area of the video screen you would like to zoom. Once selected, you can zoom to that portion of the screen by moving the slider control below.

Lets you zoom in or out on the selected portion of the video playback screen.

Selects the display device on which video is to be played back in full-screen mode.

Lets you select the aspect ratio (horizontal size to vertical size) of the full-screen playback.

Activating this option allows the video driver to determine the optimal resolution for full-screen video playback.

Activating this option links the zoom control on the Overlay Controls page to simultaneously control the zoom factor on the full screen device as well.

Activating this option forces the overlay software to use busmastering. It is recommended that you leave this option unchecked unless you experience problems with video playback, such as image corruption or no video image at all.

Shows the type of monitor you are using with the selected video adapter.

Click to display device and driver properties for this monitor.

Lists the refresh rates available for this monitor.   A higher refresh frequency reduces flicker on you screen.

Specifies whether the list under Refresh Frequency will include modes that are not supported by your monitor.   Choosing a mode that is inappropriate for your monitor may cause severe display problems and could damage your hardware.   You must be logged on as a member of the Administrator's group in order to view unsupported modes.

The option forces the OpenGL driver to use a 16 bit depth buffer regardless of the pixel format chosen by the application. This improves the performance of depth buffer clears and operations at the cost of less precision in the depth buffer.

When enabled, OpenGL will use the Windows2000 Advanced Multi-Monitor feature.

Use this option to select which display contains the top left corner of the desktop.   The most obvious effect of this option is that it swaps the positions of the monitor images.

Displays all current TwinView display.   If more than one device is connected and you have switched to a mode other than Standard, you select which display is the current display.

You can also click on the monitor graphic in the control directly above to select it as the current display.

Click this button to setup or change settings related to the output device used for the current display.

The panning controls allow you to setup the dimensions of you viewable screen area in relation to your actual desktop area. This provides for desktops that are larger than you could normally display on you monitor, flat panel, or TV.

The Application Management settings page allows you to manage the positioning of application windows across multiple displays and desktops, on a per-application basis.

This is the list of applications currently managed by the Desktop Display Manager. Select an application from the list to configure its application management settings. Edit the list by using the "Add" and "Remove" buttons to the right.

Press this button to add a new application program to the list of applications managed by the Desktop Display Manager.

Press this button to remove the currently-selected application from the list of applications managed by the Desktop Display Manager.

Press this button to clear all entries from the application list.

Warning: this will reset all customizations you have may have made for your applications.

Selecting this option will force the application window to always start on the designated display that you specify.

This field specifies the display (monitor) on which the currently-selected application will always start, if the "Always start this application on screen number" option is selected.

If you select this option, the Desktop Display Manager will keep track of the application window's size and position. When you next start the application, the Desktop Display Manager will restore the application window to its previously-saved size and position.

This option allows you to specify that maximizing the application window will cause it to only fill the screen that it currently occupies, rather than the entire desktop which may be spanning multiple displays.

Select this option to start this application on a separate named application desktop.

For example, you could create a separate, additional desktops for your Web browser, one for your E-mail reader, in addition to the default Windows desktop.

Enter the name for the separate application desktop here. You can also use the drop-down button to select from any desktops you have already created for other applications.

This field is only available if you check the "Start this application on a separate desktop" option.

The Hot Keys page allows you to customize "hot key" combinations that you can use to manage the placement of application windows on your desktop.

This key-combination moves the currently active (focused) window to a corresponding position on another monitor.

This key-combination moves all windows on the display with the currently-active application to another display.

This key-combination moves all application windows onto the display where the mouse pointer is located.

When you have multiple application desktops active, this key-combination switches from one desktop to another. Repeatedly using this combination will cycle through the list of active application desktops.

The Global Settings page contains options that are global to Desktop Display Manager and its handling of all applications.

Choosing to maximize an application to "the entire desktop" means that maximizing it will fill the entire desktop, even when the latter spans multiple monitors.

Choosing to maximize an application to "its current screen" means that by default, maximizing an application will cause it to fill only the screen that it originally occupied.

Enabling this feature will insert an "NVIDIA Desktop Manager" submenu into the system menus of all top-level application windows. This submenu allows quick and easy access to all Application Management functions, without the need to open the Desktop Display Manager control panel.

An application window's system menu is accessed by right-clicking on the window caption (title bar), or by clicking on the small application icon at the left end of the window caption.

Selecting this option allows the Desktop Display Manager to prevent top-level pop-up windows from spanning or breaking across two (or more) monitors, by repositioning the popup to fit on one screen.

Choose this option to always center system-wide pop-up windows on the screen of your choice.

Select the monitor on which you wish pop-up windows to be centered. This field is only available when you check the "Center system-wide pop-ups on screen number" button.

This option causes system-wide pop-up windows (that span multiple monitors) to be centered on the display that contains the mouse cursor, since that is most likely to be the display that you are watching.

This option keeps application pop-up windows on the same screen as the application window that generated them. If a pop-up "strays" onto another monitor, the Desktop Display Manager will move it to fit on the application window's display.

Press this button to restore default Desktop Display Manager global settings and hot keys.

Note: this will not affect the per-application customizations that you may have made on the Application Management page.

Press the "OK" button to accept and apply any changes you have made to the Desktop Display Manager settings, and then close the control panel window.

Press the "Cancel" button to close the Desktop Display Manager control panel window without saving or applying any of your changes.

Warning: any changes to settings that you may have made will be discarded.

Press the "Apply" button to apply and save all of your settings changes, and leave the Desktop Display Manager control panel window open.

This dialog allows you to select a new application to be managed by the Desktop Display Manager.

This is the list of application programs currently running on your desktop. You may select an application from this list, or specify a different application--such as one that is not currently running--by pressing the "Browse" button.

Press this button to open a file dialog, from which you can select any Windows application that you wish to be managed by the Desktop Display Manager.

Press this button to accept the program file that you have selected, as a new application to be managed by the Desktop Display Manager.

Press this button if you do not want to select an application program at this time. The New Application dialog will close without changing any settings.

This dialog allows you to enter the name of a new application desktop.

Enter here a name for your new application desktop. You may also select from among the desktop names you have specified for other applications.

For example you may want a desktop called "Web" for your web browsers, "Mail" for your E-mail program, etc. The Desktop Display Manager "Hot Keys" feature allows you to unobtrusively switch between these various application desktops.

Press the "OK" button to accept the new name for your desktop. You will not be able to press the button until you have entered a valid desktop name.

Press the "Cancel" button if you do not wish to enter a desktop name at this time.

This key-combination triggers a series of animated converging rectangles to help you locate your mouse cursor.

Enable this option to snap windows fully onto one screen or the other when you move them by dragging them with your mouse.

These options affect user interface elements of your Windows client session, such as the behavior of the taskbar and task switcher windows.

Select this option to enable an alternate task switcher window that is correctly centered according to the current TwinView configuration, and that allows switching between applications on different desktops.

The task switcher window is activated by pressing Alt+Tab.

Checking this option forces the task switcher window to always appear on the specified monitor.

Select the monitor on which you wish the task switcher window to appear. Only currently-active monitors can be selected.

Select this option to constrain the taskbar to a single monitor, in other words, to prevent it from spanning across multiple monitors.

These options determine how the Desktop Display Manager manages the position and placement of pop-up windows, including message box dialogs and application dialogs.

Select this option to enable the Zoom feature. The Zoom feature displays on one monitor a magnified view of the area of the screen under the mouse cursor. The zoomed view appears on the monitor opposite to the mouse cursor; moving the mouse cursor across monitors causes the zoomed view to automatically switch to the other monitor.

The Zoom feature will function only when you have multiple monitors connected and you have selected horizontal or vertical spanning modes.

Enable this option to perform the magnification using filtered (interpolated) scaling.

The following hot keys are used to control the Zoom feature. As with hot keys in the "Hot Keys" tab, set a hot key by clicking on a field and then pressing the key combination of your choice.

Note: hot keys are disabled while the "Zoom" or "Hot Keys" pages are open, to prevent existing hot keys from interfering with defining new hot keys.

This hot key toggles the Zoom function on and off.

This hot key increases the magnification level of the Zoom view.

This hot key decreases the magnification level of the Zoom view.

This parameter specifies how many times per second the Zoom view is updated, when the mouse is not moving. (The Zoom view is automatically updated whenever the mouse is moved.) Note that increasing this number may adversely affect system or application performance.

This parameter is the number of milliseconds of delay before switching the Zoom view from one monitor to the other. This delay is designed to prevent the Zoom view from "popping" between monitors if the mouse cursor briefly strays onto the monitor with the Zoom view. This parameter may be set to zero for no delay.

Select this option to enable changing the Zoom view's magnification level on-the-fly by holding down some combination of Ctrl/Alt/Shift and using the mouse wheel.

Select what combination of Ctrl, Alt, and Shift should be held down to use the mouse wheel to change the Zoom view's magnification level.

The Hot Keys page allows you to customize "hot key" combinations that you can use to manage the placement of application windows on your desktop.

Note: hot keys are disabled while the "Zoom" or "Hot Keys" pages are open, to prevent existing hot keys from interfering with defining new hot keys.