Matrox PowerDesk

Use Matrox PowerDesk software to take full advantage of your Matrox graphics hardware and to access additional Matrox display-related features.

You can access many Matrox PowerDesk features with property sheets. These property sheets are in the Windows **Display Properties** dialog box. To access Matrox PowerDesk property sheets:

n   In Windows 95, right-click your Windows desktop background, then click **Properties**.

n   In Windows 98/Me/2000/XP, right-click your Windows desktop background, then click **Properties** à **Settings** à **Advanced**. If you're using a multi-display desktop, select a display before clicking **Advanced**.

Also, you can quickly access Matrox PowerDesk features with Matrox QuickDesk. Some PowerDesk features can only be accessed with QuickDesk.

For more information on Matrox PowerDesk software, see the rest of this guide and the context-sensitive help where available. To access context-sensitive help, click ? on the title bar of a dialog box, then click the item you want help on. Right-click a help topic for a pop-up menu that lets you print or copy it.

See also...

ø   Multi-display desktop

ø   Matrox QuickDesk

Using this guide

This guide assumes you're familiar with basic functions like click, right-click and double-click, and that you're familiar with the basics of the operating system you're using. Also, we use the following conventions:

n **Bold** for text that appears on-screen, subheadings, and labels.

n *Italics* for file names, paths, publication titles, and new terms.

n ***Bold Italics*** for emphasis.

n Keyboard keys in square brackets, with a plus sign separating keys that you press simultaneously. For example: press [Ctrl]+[Alt]+[Del] to restart your computer.

n Arrows ("à") to separate ordered directions. For example, "click **OK** à **Close** à **OK**" is the same as "click **OK**, then click **Close**, then click **OK**".

n Green for cross-references. If you're viewing online, click green text to jump to what is being referenced.

See also...

ø Context-sensitive help

Context-sensitive help

Context-sensitive help is available in certain dialog boxes. This type of help individually describes each item in a dialog box. Some information may only be accessible through this type of help.

For context-sensitive help where available, click **Help** ( ) on the title bar of a dialog box, then click the item you want help on. You can right-click a help topic for a pop-up menu that lets you print or copy that topic.

Matrox PowerDesk

This is copyright information.

Close

Click this button to close the dialog box.

Apply

Click this button to apply changes without closing the dialog box.

Cancel

Click this button to close the dialog box without making changes.

OK

Click this button to apply changes and close the dialog box.

Matrox PowerDesk

This is a description for this dialog box or property sheet.

Reset

Click this button to restore settings to their default values.

Save

Click this button to save changes made in the dialog box.

Matrox PowerDesk

Back

Click this button to go back one step.

Next

Click this button to proceed with the next step.

Matrox PowerDesk

Don't show this message again

Enable this if your don't want this dialog box to appear again. Instead, a default action will be taken.

Matrox PowerDesk

No help topic is associated with this item.

Matrox QuickDesk

Use QuickDesk to quickly access Matrox PowerDesk features. To show or hide QuickDesk, use the check boxes on the Matrox PowerDesk **Options** property sheet.

 When QuickDesk is running, its icon appears on your Windows taskbar. Pause your mouse pointer over this icon to see a pop-up tooltip identifying what desktop settings you're currently using. Click the icon to see the QuickDesk menu.
You can also double-click the QuickDesk icon to quickly open the **Display Properties** dialog box.

Note: One or more Matrox QuickDesk menu items may not be in the contents list of this guide. For information on a menu item not in the contents list, click the menu item and then see the context-sensitive help or the on-screen instructions.

Matrox PowerDesk à **Matrox QuickDesk**

Hot Keys

Click this menu item to define or change keyboard shortcuts for desktop schemes and Matrox PowerDesk features.

Schemes and features

This is a list of desktop schemes and Matrox PowerDesk features. You can define keyboard shortcuts for these schemes and features.

To define a keyboard shortcut, select a list item, click in the edit box that appears, press a key or combination of keys (for example, [Ctrl]+[F10]), then click **Save**.

Keyboard shortcut

Click in this box, press a key or key combination (for example, [Ctrl]+[F10]), then click **Save** to define a keyboard shortcut for the selected list item.

"**None**" appears in this box if no keyboard shortcut has been pressed or if the keyboard shortcut pressed can't be used.

Desktop Schemes

Select this menu item to access or organize your desktop schemes. A desktop scheme is a saved combination of display settings. It includes resolution and color palette. If you're using a multi-display desktop, a desktop scheme also includes the virtual position of each display in your Windows desktop.

Click this menu item to see the following list of choices:

n   Any desktop schemes already defined will be listed by name. Click a name to switch to its settings.

n   Click **Add** to save your current desktop settings into a desktop scheme.

n   Click **Organize** to rename, delete or get information on a saved desktop scheme.

Scheme list

This is the list of existing desktop schemes.

Maximum number of schemes in QuickDesk menu

Use this box to indicate the maximum number of desktop schemes you want to appear in the QuickDesk menu.

If you have more schemes than the number selected here, you can use the QuickDesk **More Schemes** menu item to access additional schemes. If you have a large number of schemes and the number selected here is too large, all the scheme names in the QuickDesk menu may not fit in your display.

Rename

Click this button to rename the selected desktop scheme.

Delete

Click this button to delete the selected desktop scheme.

Matrox PowerDesk à **Matrox QuickDesk** à **Desktop Schemes** à **Organize**

Apply

Click this button to apply the selected desktop scheme.

Scheme preview

This is a preview of the selected desktop scheme. To see display mode descriptions, move your mouse pointer over the preview.

Window Positions

Select this menu item to save and restore the position and size of program windows for your current desktop area.

The position and size of a window can only be restored if they were previously saved. A different set of window information is saved for each desktop area. This window information is saved until you shut down your computer, restart Windows, or log off Windows.

Automatic -- Select this menu item to have the position and size of windows saved at regular intervals. Also, with this option selected, the position and size of windows are automatically restored when your desktop area changes. To configure this feature, click **Settings**. (**Settings** is only available while **Automatic** is selected.)

Note: If you're using a multi-display desktop and the virtual position of a display is changed, your desktop area also changes.

See also...

ø   Desktop area

ø   Multi-display desktop

Desktop Icons

Select this menu item to save and restore the positions of your desktop icons for your current desktop area.

The position of an icon can only be restored if it was previously saved. A different set of icon information is saved for each desktop area.

n   **Automatic** -- Select this menu item to have Matrox PowerDesk automatically save and restore your icon positions when your desktop area changes.

n   **Make All Visible** -- Select this menu item to move any off-screen desktop icons into your on-screen desktop area.

Note: If you're using a multi-display desktop and the virtual position of a display is changed, your desktop area also changes.

Note: To use these features, make sure the Windows **Arrange Icons** à **Auto Arrange** feature is disabled. To access this setting, right-click your Windows desktop background.

See also...

ø   Desktop area

ø   Multi-display desktop

Desktop preview

This is a preview of how desktop icons will appear with the currently selected settings.

Snap icons to grid

Use this box to configure grid settings for your desktop icons. Enable the check box to have each desktop icon automatically align to a square or rectangle in the grid. Move the sliders to adjust the size of each grid square or rectangle.

Show grid on desktop

Enable this check box to see the icon grid on your desktop.

This check box is unavailable if the **Snap icons to grid** check box is cleared or if the Windows **Active Desktop** à **View as Web Page** feature is enabled.

Use a customized icon arrangement

Enable this check box to customize the arrangement of your desktop icons. Click one of the buttons to select an arrangement style.

To apply the arrangement style you've selected: (1) click **OK** or **Apply**, (2) right-click your Windows desktop background, (3) click **Arrange Icons**, then (4) click the name of a sort option (**by Name**, **by Type**, **by Size**, or **by Date**).

Note: To use this feature, make sure the Windows **Arrange Icons** à **Auto Arrange** feature is disabled.

Matrox PowerDesk à **Matrox QuickDesk**

Help

Click this menu item to access more information related to Matrox PowerDesk.

Save/Restore window positions when programs are opened/closed

When this check box is enabled, the size and position of program windows are saved when they're closed and restored when they're reopened.

Open program windows in display

When this check box is enabled, program windows open in the center of the selected display. A display can only be selected if it's part of the current desktop.

If a program window is larger than the display area, the window is unaffected by this feature.

Note: The "**Save/Restore window positions...**" feature takes precedence over this feature.

Use CenterPOPUP

When this check box is enabled and you're using a multi-display desktop, dialog and message boxes open in the center of a display or program window, depending on which of the following options is selected.

- n **In parent program window** -- centers a dialog box in the window area of its parent program. (The "parent program" of a dialog box is the program that generates it.) If the parent program window spans multiple displays, a dialog box may also span multiple displays when it opens.

- n **In mouse pointer display** -- centers a dialog box in the display the mouse pointer is currently in (regardless of which display the parent program window is in).

- n **In parent program display** -- centers a dialog box in the display that contains the largest portion of its parent program window.

- n **In display** -- centers a dialog box in the display selected. A display can only be selected if it's part of the current desktop.

See also...

ø **Use CenterPOPUP -- More information**

Use CenterPOPUP -- More information

If the window is bigger than the current view area (the visible part of your desktop or display area), it's placed in the upper-left corner of the view area. This check box and its options are only available in multi-display mode.

Note: This feature only takes effect *after* you log on to Windows.

Use MaxVIEW (DualHead only)

Enable this check box to control the way program windows are maximized. A program is maximized, for example, when you click the maximize button ( ) on its title bar. How windows are maximized depends on the option selected.

- n **In the display containing the window** -- Select this option if you want a program window to maximize in the display that already contains most of that window.

- n **In display** -- Select this option if you want program windows to maximize in the selected display.

If the check box is cleared, program windows are maximized across displays (that is, windows span displays while maximized).

See also...

ø <u>Use MaxVIEW -- More information</u>

Use MaxVIEW -- More information

n   This feature only affects the main and secondary displays of DualHead-supporting graphics hardware. This feature is only available if **DualHead Multi-Display** is enabled.

n   You can temporarily disable the MaxVIEW feature by holding down the [Shift] key while maximizing a window.

n   This feature only affects displays controlled by DualHead hardware.

n   This feature is only available if "DualHead Multi-Display" is enabled and configured so that both displays always use the same resolution and color palette.

See also...

ø   DualHead Multi-Display

ø   DualHead Multi-Display mode

Maximize windows across all displays

Enable this to be able to maximize windows across all your displays. To use this feature, hold down the [Ctrl] key while maximizing a window. A window is maximized, for example, when you click the maximize button ( ) on its title bar.

Note: If your displays aren't horizontally or vertically aligned on your Windows desktop (to form a complete rectangle), part of a window won't be viewable while it's maximized across all displays. To adjust the size and position of your displays, use Windows display settings.

This control may be unavailable if, by default, windows are already maximize across all displays.

Select Display

Click this button to select a display. You can only select a display that's currently part of your Windows desktop. The number of the currently selected display appears next to the button.

Matrox PowerDesk

This describes the selected feature.

Use gray palette

Enable this to use gray palette settings. While this feature is enabled, your graphics hardware uses only 8-bit gray scale output. When you enable or disable this feature, you need to restart your computer for the changes to take effect.

See also...

ø   Gray palette modes

ø   Gray Palette - Limitations

Gray palette modes

When working with medical imaging software, you may need to specify which palette your Matrox display driver should use. Select one of the following:

n **Fixed linear gray palette** -- This is a fixed palette with 256 shades of gray in a linear progression. This palette conforms to the DICOM (Digital Imaging and Communications in Medicine) standard. Your Matrox display driver determines this color palette and programs can't change this palette. Because this palette doesn't provide gray equivalents for the standard Windows colors (16 basic colors plus 4 reserved colors), the color of icons and other standard Windows graphics may appear incorrectly.

n **Fixed non-linear gray palette** -- This is a fixed palette with 256 shades of gray in a non-linear progression. This palette conforms to the DICOM standard. Your Matrox display driver determines this color palette and programs can't change this palette. Because this palette provides gray-mapped equivalents for the standard Windows colors, the colors of icons and other standard Windows graphics should appear correctly. However, colors other than the standard Windows colors may appear incorrectly.

n **Programmable gray palette** -- This is a partially customizable palette with shades of gray for the standard Windows colors plus 236 shades of gray. The additional shades of gray are customizable by a program. This palette doesn't conform to the DICOM standard. Because this palette provides gray-mapped equivalents for any colors displayed by Windows on a 256-color palette, the colors of icons and other Windows graphics usually appear correctly.

For changes to take effect, you may need to restart your computer.

See also...

ø **Gray Palette - Limitations**

Gray Palette - Limitations

The following are limitations when using gray palette settings with your Matrox hardware:

n   Windows XP -- Screen resolution slider is disabled. To change the screen resolution of your displays:

1   Right-click your Windows desktop background, then click **Properties** à **Settings**.

2   If you're using a multi-display desktop, select a display.

3   Click **Advanced** à **Adapter** à **List all modes**, select a resolution and refresh rate for your display, then click **OK** à **OK** à **OK**.

n   Windows XP -- Windows XP style themes are not supported in 8-bit mode.

Start Matrox DeskNav

Click this menu item to start the Matrox DeskNav program.

See also...

ø   Matrox DeskNav

Start Matrox Diagnostic

Click this menu item to start the Matrox Diagnostic program. This program may help you identify some display-related problems.

Matrox PowerDesk à **Matrox QuickDesk**

Start Screen Saver

Click this menu item to start your screen saver right away. This menu item doesn't appear if **"(None)"** is selected under **Screen Saver** in your Windows display settings.

Display Properties

Click this menu item to open the **Display Properties** dialog box.

Close Matrox QuickDesk

Click this menu item to close Matrox QuickDesk. When QuickDesk is closed, its icon no longer appears on your Windows taskbar.

To open Matrox QuickDesk again, enable the "**Show Matrox QuickDesk icon on taskbar**" check box on the **Options** property sheet.

Note: Some Matrox PowerDesk features can only be accessed through Matrox QuickDesk.

Monitor Settings

Use this property sheet to customize your Windows monitor settings.

Software-based monitor settings inform the display driver of the display resolution capabilities of your monitor and the refresh rate capabilities for each supported display mode. By customizing your Windows monitor settings, you may get the most out of your monitor.

Note: Matrox monitor settings are based on Windows monitor settings. If the type of monitor selected in Windows is changed, you may need to reselect or readjust your Matrox monitor settings.

WARNING: Selecting incorrect monitor settings may damage some monitors. For information on the settings your monitor supports, see your monitor documentation.

Current refresh

This is the current vertical refresh rate of your display. The vertical refresh rate is the number of times your graphics hardware redraws the entire screen in one second, expressed in hertz (cycles per second). A higher vertical refresh rate results in less noticeable flicker in your display.

Software monitor settings help determine the refresh rate. Different display modes have different software monitor settings. As a result, different display modes may have different refresh rates.

See also...

ø   Display mode

Use customizations to Windows monitor settings

Enable this check box to use monitor customizations. Monitor customizations are based on your current Windows monitor settings. When monitor customizations are created, adjusted or selected, this check box is automatically enabled and changes are applied.

If customizations were selected from the Matrox monitor list, a manufacturer name and model name appear under this check box.

Clear this check box to disable customizations to your current Windows monitor settings.

If no customizations to your current Windows monitor settings have been created or selected, this check box is unavailable.

Monitor settings selection method

Click one of the option buttons to choose your monitor settings selection method.

Adjust the current display mode

Click this button to adjust the monitor settings for the current display mode. A display mode is the combination of a display resolution and a color palette.

Adjust a different display mode

Click this to adjust monitor settings for any display mode supported by your Matrox graphics hardware. There's a different display mode for each combination of display resolution and color palette.

Select customizations from the Matrox list

Click this button to select monitor settings from the Matrox list. Monitor settings from the Matrox list are applied as pre-defined customizations to your current Windows monitor settings.

Note: If a display mode is supported by your current Windows monitor settings but isn't supported by monitor settings selected from the Matrox list, Windows monitor settings will be used for that display mode.

Load a customization file

Click this button to load previously saved monitor customizations. Loading customizations overwrites any customizations to your current Windows monitor settings.

Save a customization file

Click this button to save your current monitor customizations to a file.

This button is unavailable if there are no customizations to the current Windows monitor settings.

Delete all customizations

Click this button to delete all customizations to the current Windows monitor settings. This doesn't affect the Matrox monitor list or any monitor customization files.

This button is unavailable if there are no customizations to the current Windows monitor settings.

Use simplified monitor controls

Enable this check box to use simplified controls for adjusting monitor settings with Matrox PowerDesk software (recommended).

Clear this check box if you want to adjust advanced monitor settings.

Matrox PowerDesk à **Monitor Settings**

Size

Click these buttons to resize your display. These buttons don't change your display resolution.

Buttons are unavailable if monitor setting limitations are reached.

Click this button to stretch your display vertically.

Click this button to shrink your display vertically.

Click this button to stretch your display horizontally.

Click this button to shrink your display horizontally.

Position

Click these buttons to move the display area of your monitor.

Buttons are unavailable if monitor setting limitations are reached.

Click this button to move your display up.

Click this button to move your display down.

Click this button to move your display to the left.

Click this button to move the display to the right.

Undo

Click this button to undo the last action. Multiple undo is supported.

Reset

Click this button to reset to the original values.

Current display mode

This is the current display mode (display resolution and color palette). Any changes made in this dialog box only affect this display mode.

Matrox PowerDesk à **Monitor Settings**

Refresh rate adjustments

Use these controls to adjust the vertical refresh rate.

Advanced monitor settings

Use these controls to adjust advanced monitor settings.

Accept

Click this button to accept any changes to monitor settings. If you don't click this button before the timer runs out, your previous settings are restored.

Horizontal

Use these controls to modify the horizontal settings for the video signal.

Refresh rate (horizontal)

Use this box to modify the horizontal refresh rate.

Front porch (horizontal)

Use this box to modify the horizontal front porch value.

Sync (horizontal)

Use this box to modify the horizontal sync value.

Back porch (horizontal)

Use this box to modify the horizontal back porch value.

Positive sync polarity

Enable this check box to use positive sync polarity.

Vertical

Use these controls to adjust the vertical settings for the video signal.

Refresh rate (vertical)

Use this box to modify the vertical refresh rate.

Front porch (vertical)

Use this box to modify the vertical front porch value.

Sync (vertical)

Use this box to modify the vertical sync value.

Back porch (vertical)

Use this box to modify the vertical back porch value.

Standard refresh

Click this list box to select a standard refresh rate and its associated settings.

Pixel clock

This is the number of pixels drawn per second for the specified refresh rates (vertical and horizontal).

Interlaced

Enable this check box to set the video signal to interlace. Clear this check box to set the signal to non-interlaced. Most computer monitors are non-interlaced.

Matrox PowerDesk

Color

Use this property sheet to:

n   Fine-tune your display's color balance.

n   Compensate for the lighting where your computer is.

n   Match the display colors of other monitors.

For information on each control on this property sheet, see context-sensitive help.

Note: If your Matrox graphics hardware has DualHead support, this property sheet is unavailable for your secondary display. With certain versions of Matrox PowerDesk, this property sheet may not be available at all.

Color temperature

Move this slider to adjust the color temperature of your monitor. A "warm" setting causes your display's neutral gray color to have a yellow-red tint. A "cool" setting causes your display's neutral gray color to have a blue tint.

Contrast

Move these sliders to change the contrast of the three primary colors of your monitor (red, green and blue). The contrast of a color is related to its "gamma". Gamma, in this case, is a measure of the relationship between the brightness of a color on the screen and the amount of voltage the computer is sending to the monitor to generate that color.

Enable the **Link** check box, to keep the **Red**, **Green** or **Blue** sliders at the same level. When this check box is enabled, and you move a **Contrast** slider, you're changing the overall contrast of your display.

Color curves display
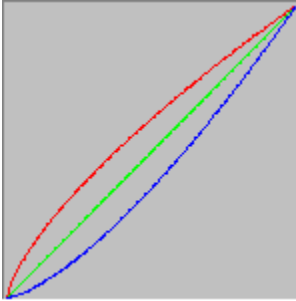
This panel shows the tonal reproduction curve of the red, green, and blue colors of your display. This panel reflects any change you make with the **Color temperature** and **Contrast** sliders.

Options

Use this property sheet to enable and disable various features and to control the performance settings of your Matrox display driver.

If you experience problems with Windows or a particular Windows program, you can try changing the settings of one or more of these check boxes (especially performance-related check boxes). For more information on each control, see context-sensitive help.

Prompt before applying desktop scheme

Enable this check box if you want Matrox PowerDesk to prompt you for confirmation when you apply a new desktop scheme.

This feature is useful when display settings your monitor doesn't support are applied. In this case, your screen image may become garbled or unusable. If you don't respond to the on-screen prompt within 15 seconds, your original display settings are restored.

Clear this check box if you don't want to be prompted.

Automatically save/restore desktop icon positions

When this check box is enabled, Matrox PowerDesk automatically saves and restores the positions of your desktop icons. Their positions are saved and restored each time you change your desktop or display area resolution.

Note: If you're using a multi-display desktop and the virtual position of a display is changed, your desktop area also changes.

Matrox PowerDesk à **Options**

Automatically save/restore window positions

When this check box is enabled, Matrox PowerDesk automatically saves and restores the size and position of program windows. Their positions are saved and restored each time you change your desktop or display area resolution.

Note: If you're using a multi-display desktop and the virtual position of a display is changed, your desktop area also changes.

Show menus in visible display

When this check box is enabled, Matrox PowerDesk makes menus appear in the visible part of your display area (your view area). This feature is useful when parts of your desktop area are outside your view area, as with the Matrox zoom feature.

Note: This feature doesn't affect the Windows 98/Me/2000/XP **Start** menu.

Show Matrox QuickDesk icon on taskbar

Enable this check box to show the Matrox QuickDesk icon ( ) on the Windows taskbar.
See also...

ø   Matrox QuickDesk

Start Matrox QuickDesk when Windows restarts

Enable this check box to have Matrox QuickDesk started each time Windows restarts.

See also...

ø   Matrox QuickDesk

Enlarge mouse pointer

Enable this check box to double the size of your mouse pointer.

Your mouse pointer is enlarged only if it's being drawn by your Matrox graphics hardware -- that is, only if it's not being drawn by software. Your mouse pointer is being drawn by software if it's using a color palette with more than 16 colors.

Note: On the secondary display of DualHead-supporting graphics hardware, your mouse pointer is always drawn by software. While using the "DualHead Multi-Display" feature with Windows 2000 or the "DualHead Clone" feature, both your main and secondary displays may use a mouse pointer that's drawn by software.

Use hardware to draw color mouse pointer

Enable this check box to make sure a color Windows mouse pointer can be drawn by your Matrox graphics hardware. If a mouse pointer is drawn by hardware, it's less likely to flicker or disappear when it's over an area that's being redrawn quickly (for example, a video window).

If this check box is enabled and your mouse pointer uses a color palette with more than 16 colors, its color palette will be reduced. This may degrade the appearance of your mouse pointer. If you don't want the color palette of your mouse pointer to be reduced, use Windows controls to select a mouse pointer that uses a color palette with 16 colors or less, or make sure this check box is cleared.

Note: On the secondary display of DualHead-supporting graphics hardware, your mouse pointer is always drawn by software. While using the "DualHead Multi-Display" feature with Windows 2000 or the "DualHead Clone" feature, both your main and secondary displays may use a mouse pointer that's drawn by software.

Roll windows up/down ([Shift]+Minimize)

Enable this feature if you want to be able to roll windows up and down like a window shade. With this feature, you can roll windows by holding the [Shift] key while minimizing a window. (A window is minimized, for example, by clicking ▬ on the title bar of a window.)

Fade-in PowerDesk dialog boxes

Enable this feature if you want Matrox PowerDesk dialog boxes to fade in when they're opened. (This doesn't affect the Windows **Display Properties** dialog box.)

Fade-out PowerDesk dialog boxes

Enable this feature if you want Matrox PowerDesk dialog boxes to fade out when they're closed. (This doesn't affect the Windows **Display Properties** dialog box.)

Rotate display

Enable this to rotate your display 90 degrees. This is useful, for example, if your monitor taller than it is wide or if your monitor can be physically rotated 90 degrees.

Note: While your display is rotated, display performance may be noticeably slower, video playback may be limited, and DualHead features (other than "DualHead Multi-Display") may be unavailable. Also, certain software (especially software that depends on hardware-based graphics acceleration) may not work properly while your display is rotated.

See also...

ø   Rotate counter-clockwise

Rotate counter-clockwise

Enable this to rotate your display counter-clockwise instead of clockwise.

This control has no effect while **Rotate display** is disabled.

See also...

ø   Rotate display

Use polygon acceleration

When this check box is enabled, hardware acceleration is used for drawing complex polygon objects. If complex polygon objects are not drawn properly within a particular application (likely a drawing or design package), de-select this check box.

Use device bitmaps caching

When this check box is enabled, hardware acceleration is used to cache some bitmapped images in the graphics memory.

If you experience problems with a particular program (for example, some bitmaps aren't drawn properly), try clearing this check box.

Use bus mastering

Enable this check box to use bus mastering with your Matrox graphics hardware. Bus mastering is a feature that allows expansion cards to perform tasks at the same time as your computer's CPU. If you have a fast Pentium computer (faster than 166 MHz), the display performance of most programs is improved when this check box is enabled.

To use bus mastering with 3D (DirectX) programs, your graphics hardware needs an IRQ (interrupt request). Most computers automatically assign an IRQ to graphics hardware, but some don't. If your graphics hardware hasn't been assigned an IRQ, programs that use Matrox bus mastering may not work properly. For more information, see your Matrox or system manual.

Some older computers may not support bus mastering at all. Clear this check box if your computer doesn't support bus mastering.

Also, if you're using an analog joystick and you notice "jittering" (erratic display motion) with DirectX programs, try clearing this check box.

Use 32-bit Z-buffering

Enable this check box to make a 32-bit Z-buffer available for programs that use Direct3D. Compared to a traditional 16-bit Z-buffer, a 32-bit Z-buffer allows for more accurate 3D depth calculations, but may slow down performance.

Not all Direct3D programs support a 32-bit Z-buffer.

Use filtering when scaling

When this check box is enabled, filtering methods are used to enhance the image quality when playing video files with scaling.

Page flip during vertical blank

When enabled, the DirectDraw/Direct3D driver will wait for the monitor's vertical blank before displaying a new frame image. Otherwise, the new frame will be displayed immediately.

Select this check box if you see "tearing" (fragmented animation) with your DirectX applications. Performance is generally better when this check box is cleared.

Use 16-bit video quality

When this check box is enabled and Windows is using a 256-color (8-bit) palette, the Matrox display driver uses a high-color (16-bit) palette to show digital video (AVI and MPEG files) on your computer screen.

Use fogging acceleration

Enable this check box to activate "fogging" support in the Matrox Direct3D driver.

"Fogging" is a visual effect used by some 3D programs to enhance the illusion of depth. With this effect, things that are farther away disappear into what looks like fog. Programs that use the fogging effect should look more realistic.

When this check box is enabled, Direct3D fogging is accelerated.

When this check box is cleared, programs may either; (1) not use the fogging effect at all (which is faster), or (2) emulate fogging in their own software (which is slower).

If problems appear in your display while using the fogging effect, try clearing this check box.

Use NT-style multi-display

Enable this to use the same display resolution and color palette with all the displays supported by this feature. With this feature, Windows treats these displays as if they were one but the Matrox display driver divides this one display into two or more. (This type of multi-display is similar to what Matrox software supports under Windows NT 4.0.)

See also...

ø   Use NT-style multi-display -- More information

Use NT-style multi-display -- More information

Use the **Screen area** (Windows 2000) or **Screen resolution** (Windows XP) slider to control several attributes of all displays supported by this feature. This slider is on the **Settings** property sheet in the Windows **Display Properties** dialog box.

You can use the slider to select the following attributes: (1) the resolution of the displays, (2) the layout of the displays relative to each other (that is, a horizontal, vertical, or square display layout), and (3) whether the display is part of your Windows desktop.

Each possible combination of attribute settings is a separate slider position. A resolution for a horizontal multi-display layout is wider than normal and a resolution for a vertical multi-display layout is taller than normal. For example, a setting that supports 2 side-by-side displays may have a 2048 x 768 resolution, twice as wide as a single display with a 1024 x 768 resolution.

Because there may be many slider positions available, we recommend you use your keyboard to select specific slider positions. To do this, click or drag the slider close to the position you want, then move incrementally from one setting to another by pressing the left or right arrow key. Slider settings are sorted by horizontal resolution. For example, 768 x 2048 comes before 2048 x 768.

Note:

n   If all your displays don't support the same resolutions, certain multi-display configurations may not be available.

n   With this feature, certain resolutions that are supported in single-display mode may not be supported in multi-display mode.

n   This feature may not support one or more displays in your system. This can happen if there's graphics hardware in your computer that's unsupported by this feature. If one or more displays aren't supported, Windows treats each of them as separate, independent displays. In other words, you can select a separate resolution, color palette, and relative virtual position for each of those displays.

n   DirectDraw hardware acceleration is unavailable for displays using this feature. Without DirectDraw acceleration, **Matrox Video Tools** software is unsupported and hardware acceleration for video playback is unavailable.

Matrox PowerDesk

Information

Use this property sheet to get specific information about your display hardware and software, including version numbers. Click plus signs ("+") to see more information. Click minus signs ("-") to hide information.

Graphics hardware

This groups information on the hardware controlling the currently selected display.

Model

This is the model name of the graphics hardware controlling the currently selected display.

Graphics chip

This is the name of the graphics chip controlling the currently selected display.

Serial number

This is a unique serial number for the graphics chip controlling the currently selected display.

Graphics memory

Click plus signs ("+") to see more information. Click minus signs ("-") to hide information.

Memory type

This is the type of graphics memory used by the currently selected display.

Amount of memory

This is the amount of graphics memory, in megabytes, associated with the currently selected display.

Maximum RAMDAC speed

This is the maximum speed, in megahertz, of the RAMDAC (Random Access Memory Digital-to-Analog Converter) used by the currently selected display. A faster RAMDAC allows for higher display resolutions and refresh rates.

Extra hardware

This lists any extra hardware associated with the currently selected display.

"**(built-in)**" indicates a feature built into the hardware when it was manufactured.

"**(add-on)**" indicates a feature added to the hardware after it was manufactured.

Graphics software (versions)

This groups information on software associated with the currently selected display.

Matrox driver package

This is the version of the Matrox driver package that controls the currently selected display. The driver package is made up of different parts with different functions. Generally, all the parts of a particular driver package are installed together.

Display driver

This is the version of the display driver that controls the currently selected display.

The first version number conforms to the Microsoft numbering system. The second version number (the one in parentheses) is Matrox version number.

Mini-VDD (Windows 95/98/Me only)

This is the version of the Matrox VDD (Virtual Device Driver) currently installed. The VDD handles basic (low-level) display functions that are specific to Matrox hardware. Other basic display functions are handled by the Windows VDD.

The first version number conforms to the Microsoft numbering system. The second version number (the one in parentheses) is Matrox version number.

Kernel driver (Windows 2000/XP only)

This is the version of the Matrox kernel driver currently installed. This kernel driver handles basic (low-level) display functions that are specific to Matrox hardware. Other basic display functions are handled by the Windows kernel.

The first version number conforms to the Microsoft numbering system. The second version number (the one in parentheses) is Matrox version number.

DirectDraw/Direct3D driver

This is the version of the currently installed Matrox driver for DirectDraw/Direct3D. Some programs use this driver for more direct access to Matrox hardware.

The first version number conforms to the Microsoft numbering system. The second version number (the one in parentheses) is Matrox version number.

OpenGL ICD

This is the version of the Matrox OpenGL driver for the currently selected display. This driver provides hardware acceleration to 3D programs designed to use OpenGL. This "ICD" (Installable Client Driver) is a more complete and potentially faster than the "MCD" (Mini Client Driver) driver type provided for older Matrox products.

The first version number conforms to the Microsoft numbering system. The second version number (the one in parentheses) is Matrox version number.

If this driver version isn't listed, this driver is unavailable for the current display. If no OpenGL driver is available, OpenGL programs may run slower or may not run at all.

If you have a newer Matrox product or your Matrox software was provided by the manufacturer of your computer, full OpenGL support may be disabled with your Matrox display driver. For a Matrox display driver with full OpenGL support enabled, see the Matrox Web site (www.matrox.com/mga). (If your Matrox product was provided by the manufacturer of your computer, check the Web site of that manufacturer for a display driver. A display driver provided by the manufacturer of your computer is more likely to be tested with your computer model.)

Matrox PowerDesk à **Information** à **Graphics software (versions)** à **Matrox driver package**

TurboGL driver

This is the version of the Matrox TurboGL driver associated with the currently selected display. This driver provides extra hardware acceleration to certain 3D games. This driver is only available for certain systems and only certain games use this driver. (To find out if a TurboGL driver is available for your system, see the Matrox Web site at www.matrox.com/mga.)

If this driver version isn't listed, a TurboGL driver is unavailable for the currently selected display. If a TurboGL driver is unavailable but an OpenGL ICD is available, OpenGL programs will use the OpenGL ICD or MCD. If no OpenGL driver is available, OpenGL programs may run slower or may not run at all.

See also...

ø   OpenGL ICD

Matrox PowerDesk

This is the version of the Matrox PowerDesk software installed on your system. This software provides extra display-related features and controls.

Graphics BIOS

This is the version of the BIOS (Basic Input/Output System) associated with the currently selected display. This BIOS is software that's stored on your graphics hardware.

Microsoft DirectX

This is the version of Microsoft DirectX software currently installed. A recent version of DirectX must be installed for some programs to work properly.

Also, if a recent version of DirectX isn't installed, some Matrox PowerDesk features may not be available.

Windows 95/98/Me -- The number shown is the version number reported by DirectX. The third digit of this number is the version commonly referred to. For example, DirectX 4.06.00.0318 would be commonly referred to as DirectX 6.

Customer Support

Click this button to see customer support information.

Matrox PowerDesk à **Information**

This is customer support information.

View Readme File

Click this button to view the Matrox PowerDesk "Readme" file. This file contains important information on your Matrox PowerDesk display driver and software.

Go to Web Site

Click this button to connect to the Internet for product information, customer support or software updates.

DualHead

Use this property sheet to control DualHead features. With DualHead features, a single graphics chip can control two displays at a time.

This property sheet is only available if your Matrox graphics hardware has DualHead support. While using "DualHead Multi-Display", this property sheet is only available for your main display.

To select certain DualHead controls, use the expandable list. To expand the list, click the "+" sign next to list items. To select an item, simply click it. While an item is selected, a description of it appears and the settings associated with it are listed. To change those settings, click **Change Settings**.

DualHead Multi-Display

This feature adds an extra display to your Windows desktop.

Windows 95 -- This feature is unavailable because this version of Windows doesn't support multiple displays.

See also...

ø   Use DualHead Multi-Display

ø   DualHead Multi-Display -- Limitations

Use DualHead Multi-Display

Click this to add an extra display to your Windows desktop.

To enable or disable this feature, Windows must be restarted. While this feature is enabled, you can still use other DualHead features ("DualHead Zoom", "DualHead DVDMax", and "DualHead Clone") without restarting Windows. While these other DualHead features are active, your Windows desktop may be hidden on your secondary display. Your Windows desktop will reappear when all other DualHead features are hidden or disabled.

After this feature is enabled, you may need to adjust settings for your secondary display. You can do this with the Windows **Settings** property sheet in the **Display Properties** dialog box.

See also...

ø   DualHead Multi-Display -- Limitations

DualHead Multi-Display -- Limitations

There are limitations with the "DualHead Multi-Display" feature. Unless otherwise indicated, these limitations only affect the secondary display:

n   If your extra display isn't added to your Windows desktop after your computer is restarted, make sure the **Extend my Windows desktop onto this monitor** option is enabled. To access this control, right-click your Windows desktop background, click **Properties** à **Settings**, then select your extra display. Windows 2000 -- This only applies if you're using the "DualHead Multi-Display" mode that lets you select different resolutions and color palettes for both displays.

n   Windows 2000 -- If you're using the "DualHead Multi-Display" mode that lets you select different resolutions and color palettes for both displays, we recommend you restart Windows whenever you enable or disable **Extend my Windows desktop onto this monitor**. You may experience problems if DirectX software is running while this setting is changed.

n   You can only select a 16- or 32-bit color palette.

n   The Matrox zoom feature (PixelTOUCH) is unavailable.

n   The mouse pointer is drawn entirely by the software. As a result, the mouse pointer may flicker or disappear while it's in an area of the display that's being redrawn quickly (for example, a video window). Windows 2000 -- For both displays, the mouse pointer may be drawn entirely by software.

n   The secondary display may have a lower maximum display resolution and a lower maximum refresh rate than the main display.

n   Digital video playback may be limited.

n   The performance of the main display may be slightly reduced.

n   The Sonnetech **Colorific** program isn't supported and, if your version of Matrox PowerDesk includes the **Color** property sheet, this property sheet is unavailable.

n   Windows 95 -- The "DualHead Multi-Display" feature is unavailable because this version of Windows doesn't support multiple displays.

n   Windows 98/Me -- Regardless of your graphics hardware or display driver, this version of Windows only supports OpenGL acceleration with the primary display of your computer.

n   Hardware acceleration is only available for your secondary display if the DirectX software you're using is designed to take advantage of multiple displays. Windows 2000 -- This only applies if you're using the "DualHead Multi-Display" mode that lets you select different resolutions and color palettes for both displays.

n   Hardware acceleration for OpenGL software is only available for your main display and only if there's no other graphics hardware in your computer. Windows 2000 -- This only applies if you're using the "DualHead Multi-Display" mode that lets you select different resolutions and color palettes for both displays.

n   Graphics memory and AGP memory is divided between both your displays. (You can customize how memory is divided between your displays.)

DualHead Multi-Display mode (Windows 2000 only)

Depending on how you want to use "DualHead Multi-Display" feature, select one of the following modes:

n **Separate resolutions and color palettes for both displays** -- Click this if you want to select different resolutions and color palettes with both of your DualHead displays. In this mode, Windows treats your DualHead hardware as if it's two separate devices.

 Note: While using this mode, other DualHead features ("DualHead Clone", "DualHead Zoom", and "DualHead DVDMax") aren't available.

n **Same resolution and color palette for both displays** -- Click this if you want to use the same resolution and color palette with both of your DualHead displays. In this mode, Windows treats your DualHead hardware as if it's a single device controlling a single display. The Matrox display driver divides this display between your two monitors. There are limitations that are specific to this mode.

 Note: While using this mode, you can also use the "DualHead Zoom" feature.

To change modes, your computer needs to be restarted.

Note: These controls are only available if support for them was installed with your display driver.

See also...

ø Same resolution and color palette for both displays -- Limitations

Same resolution and color palette for both displays -- Limitations

Windows may be configured so that the same color palette and resolution must be used with your main and secondary displays. In this mode, note the following limitations for your DualHead displays:

n   Both displays always use the same resolution and color palette.

n   You can change the resolution for both displays by moving the Windows **Screen area** slider. (To access this control, right click your Windows desktop background, then click **Properties** à **Settings**.) Only certain **Screen area** settings use the extra display. A **Screen area** setting that uses the extra display is twice as wide or tall as its corresponding single-display setting. For example, to use 2 side-by-side displays with resolutions of 800 x 600, select 1600 x 600 with the **Screen area** slider.

n   In your Windows desktop, the virtual positions of both displays are always aligned next to each other.

n   When you maximize a window, it may maximize across both displays (as if both displays were one display). (You can use the Matrox MaxVIEW feature to override this.)

n   Newly opened windows, dialog boxes, or message boxes may open centered "between" displays (that is, overlapping the opposite edges of your displays). (You can use the Matrox CenterPOPUP feature to override this.)

n   With *both* displays, the mouse pointer is drawn entirely by the software. As a result, the mouse pointer may flicker or disappear while it's in an area of the display that's being redrawn quickly (for example, a video window).

n   When you enable "DualHead Multi-Display", Matrox PowerDesk software automatically clears the Windows check box called **Hide modes that this monitor cannot display**. (This check box is in the advanced settings of the **Display Properties** dialog box.) Please don't re-enable this check box -- doing so may cause problems. When this check box no longer needs to be disabled, PowerDesk automatically restores it to its previous setting.

n   Hardware acceleration for DirectX software is available for both displays (even if the DirectX software isn't specifically designed to take advantage of multiple displays). However, hardware acceleration for OpenGL software is only available for your primary display and only if there's no other graphics hardware in your computer.

See also...

ø   Use CenterPOPUP

ø   Use MaxVIEW

Display Position

Click this to select the position of your secondary display relative to your main display.

These controls are only available if the "DualHead Multi-Display" feature is configured to use the same resolution and color palette for both displays. If "DualHead Multi-Display" isn't configured in this way, use Windows controls to change the settings for each display.

DualHead Clone

Use these controls to change settings for the "DualHead Clone" feature. With the "DualHead Clone" feature, you can view a copy of your main display on your secondary display. This is can be useful for presentations or for playing games with a TV.

Note: If "DualHead Clone" is activated while "DualHead Multi-Display" is enabled, your Windows desktop on your secondary display will be hidden until the "DualHead Clone" feature is hidden or disabled. Also, if other DualHead features (for example, "DualHead Zoom" or "DualHead DVDMax") are activated after "DualHead Clone", they may hide the "DualHead Clone" feature.

See also...

ø   DualHead Clone -- Limitations

Use Clone Now / Disable Clone Now

Click this to enable or disable the "DualHead Clone" feature.

See also...

ø   DualHead Clone -- Limitations

Allow scaling

Enable this to allow the use of scaling while you're using the "DualHead Clone" feature. With this scaling feature, the maximum display resolution you can select with "DualHead Clone" is the maximum resolution of your main display (assuming it's higher than your secondary display). If you select a resolution that's higher than what your secondary display can normally support, the image on your secondary display (a copy of your main display) will be scaled down.

If scaling isn't allowed, the maximum display resolution you can select while you're using "DualHead Clone" is the maximum resolution of your secondary display (assuming it's lower than your main display).

Note: While scaling is used, details in your secondary display may appear blurry. Specifically, text may be hard to read. Also, display performance may be noticeably slower.

This control may be unavailable if your secondary display device doesn't support different resolutions and refresh rates (for example, if you're using a TV or a video recorder).

Quality/Performance

Use these controls to select whether image quality or performance should be favored with the "DualHead Clone" feature:

n **Favor image quality** -- Click this if you want to favor image quality over graphics performance. This may be preferable if your main and secondary monitors have different capabilities. With this setting, refresh rates specific to each monitor may be used.

n **Favor performance** -- Click this if you want to favor graphics performance over image quality. This may be preferable if your main and secondary monitors have the same capabilities. With this setting, the exact same refresh rate may be used with both your main and secondary monitors.

These controls may be unavailable if your secondary display device doesn't support different resolutions and refresh rates (for example, if you're using a TV or a video recorder).

WARNING: Some computer monitors may not support the 50 Hz vertical refresh rate used with European TV settings. Some monitors may even be damaged if they use this refresh rate. For more information, see your monitor documentation.

See also...

ø Refresh rate

DualHead Clone -- Limitations

While you're using the "DualHead Clone" feature, both displays have the following limitations:

n   The mouse pointer may be drawn entirely by the software. As a result, the mouse pointer may flicker or disappear while it's in an area of the display that's being redrawn quickly (for example, a video window).

n   The maximum display resolution is limited by what both displays can support.

n   Digital video playback may be limited.

n   Display performance may be slightly reduced.

n   The Sonnetech **Colorific** program isn't supported and, if your version of Matrox PowerDesk includes the **Color** property sheet, this property sheet is unavailable.

DualHead Zoom

Use these controls to change settings for the "DualHead Zoom" feature. With the "DualHead Zoom" feature, you can use your secondary display to view a zoomed-in area of your main display.

You can enable and disable "DualHead Zoom" with keyboard shortcuts you define. (To define keyboard shortcuts, click **Hot Keys**.) When you enable "DualHead Zoom", your mouse pointer will change into crosshairs. After this, drag your mouse pointer in your main display to define a zoom region. This region will appear full-screen on your secondary display.

Note: If "DualHead Zoom" is activated while "DualHead Multi-Display" is enabled, your Windows desktop on your secondary display will be hidden until the "DualHead Zoom" feature is hidden or disabled. Also, if other DualHead features (for example, "DualHead Clone") are activated after "DualHead Zoom", they may hide the "DualHead Zoom" feature.

See also...

ø   DualHead Multi-Display

ø   DualHead Zoom -- Limitations

DualHead Zoom -- Limitations

n   With the "DualHead Zoom" feature, the resolution used for your secondary display is based on the maximum display capabilities of your secondary display, and on the size of the zoom area you selected on your main display. The feature will try to use a supported resolution that is larger (specifically, the next higher available resolution) than the zoom area you selected. If the feature is forced to use a display resolution that is smaller than the zoom area you selected, the zoom area appearing on your secondary display may not look as good (image detail may be distorted).

n   The "DualHead Zoom" feature doesn't display digital video that's using the video overlay feature of your Matrox graphics hardware. Many video playback programs use this video overlay feature. If the "DualHead Zoom" feature is used on a region that's using hardware-based video overlay, that region will appear as a solid color on your secondary display.

Follow mouse pointer

For the "DualHead Zoom" feature, enable this check box if you want the zoomed area in your secondary display to follow the mouse pointer in your main display.

Center on mouse pointer

For the "DualHead Zoom" feature, enable this if you want the zoomed area in your secondary display to be centered on the mouse pointer in your main display.

Matrox PowerDesk à **DualHead** à **DualHead Zoom**

Smooth zoomed area

For the "DualHead Zoom" feature, enable this check box if you want digital filtering applied to the zoomed area appearing on your secondary display. Filtering gives a smoother appearance and is good for general usage, while a non-filtered zoom is more appropriate for image editing.

Matrox PowerDesk à **DualHead**

DualHead DVDMax

Use these controls to change settings for the "DualHead DVDMax" feature. With this feature, you can play digital video in a window on your main display and, at the same time, view that video full-screen on your secondary display.

Note: If "DualHead DVDMax" is activated while "DualHead Multi-Display" is enabled, your Windows desktop on your secondary display will be hidden until the "DualHead DVDMax" feature is hidden or disabled. Also, if other DualHead features (for example "DualHead Clone") are activated after "DualHead DVDMax", they may hide the "DualHead DVDMax" feature.

Use DualHead DVDMax

Enable this to play digital video in a window on your main display and, at the same time, view that video full-screen on your secondary display.

To use this feature, the following conditions must be met: (1) **Use DualHead DVDMax** is enabled. (2) The current display settings (resolution and color palette) aren't too high. (3) The "DualHead Zoom" feature isn't currently in use. (4) Digital video is played using the video overlay feature of your Matrox graphics hardware. Programs that use the video overlay feature include Microsoft Media Player and other programs that use ActiveMovie or DirectX Media.

See also...

ø DualHead DVDMax -- Recommendation

ø DualHead DVDMax -- Limitations

DualHead DVDMax -- Limitations

There are limitations with the "DualHead Multi-Display" feature:

n   This feature doesn't work with video played back using a hardware-based compressor/decompressor. However, automatic full-screen video playback on a TV may be available separately. For example, this feature is separately supported with the MJPEG video playback of the Matrox Rainbow Runner G-Series video editing card.

n   If no part of your video playback is visible in your main display, full-screen video may not be updated on your secondary display. This is because many programs don't update video if it's not visible in the video window. You can work around this limitation by using a different video player (for example, a Matrox-distributed DVD player or Matrox PC-VCR). You may also be able to work around this limitation by configuring your video window to be "always on top".

DualHead DVDMax -- Recommendation

Video may appear squished on your TV if the aspect ratio of a video doesn't match the aspect ratio of your TV. To fix this: (1) click **DVDMax Options**, (2) select **Preserve aspect ratio**, (3) select the aspect ratio of your TV (4:3 or 16:9 -- most TVs are 4:3), (4) select **Detect based on video window size**, then (5) click **OK** or **Apply** for your changes to take effect.

Aspect ratio

For the "DualHead DVDMax" feature, use these controls to choose how you want digital video to be resized on your secondary display.

See also...

ø   DualHead DVDMax -- Recommendation

Always scale to full screen

Select this button if you want digital video to display full-screen on your secondary display.

If this button is selected and the aspect ratio of your digital video source isn't the same as your secondary display, video may appear stretched or squished when viewed on your secondary display.

Preserve aspect ratio

Select this button if you want the aspect ratio of your digital video source to be preserved when it's displayed on your secondary display.

If this button is selected and the aspect ratio of your digital video source isn't the same as your secondary display, black borders will appear on your secondary display.

TV aspect ratio

Select one of these buttons to indicate the aspect ratio of the video device (TV or video recorder) you're using for your secondary display.

n **4:3 (traditional)** -- for a standard TV.

n **16:9 (wide)** -- for a wide screen TV.

If the correct button isn't selected, video may appear stretched or squished when viewed on your secondary display.

These controls are unavailable if your secondary display isn't a TV or a video recorder.

Aspect ratio detection method

Select one of these buttons to choose how the aspect ratio of the video is determined.

n **Detect based on video source size** -- The resolution of source video determines the aspect ratio. For example, a video with a resolution of 320 x 240 has an aspect ratio of 4:3.

n **Detect based on video window size** -- The size of the video window on your main display determines the aspect ratio. (Some video player programs may preserve the aspect ratio of the video even when the video window is stretched. In this case, the black borders displayed in the video window won't appear on your secondary display.)

Advanced settings

Use these controls to adjust advanced settings for the "DualHead DVDMax" feature. These settings only affect how video appears on your secondary display.

If you're experiencing problems with a specific video player program, try adjusting these settings. Settings that are appropriate for one video player program may not be appropriate for another. For more information, see context-sensitive help for each control.

Preserve source cropping

Enable this check box to use the cropping settings of the video player program. This option needs to be enabled for some video player programs to display video properly on your secondary display.

If this option is enabled, video playback performance may be reduced. Also, with some video player programs, the video display on your secondary display may be partially covered or cut off if the video window is partially covered or cut off.

Scale only on page flip

Enable this check box to improve video playback performance with some video player programs.

Clear this check box if video isn't being properly updated on your secondary display. Specifically, clear it if only the first frame of a video is displayed, or if a video frame is updated only when the video window is moved.

Use field-based scaling

Enable this check box to use field-based scaling. If the video source is field-based (interlaced), this may improve video image quality. NTSC and PAL video are field based.

Clear this check box to use frame-based scaling and to possibly improve video playback performance. If the video source is frame-based (for example, MPEG-1 video), clearing this check box may improve video image quality.

Matrox PowerDesk à **DualHead**

Hot Keys

Click this button to define or change keyboard shortcuts for Matrox PowerDesk features and options.

Secondary Monitor Limits

Use these controls to select the settings which best describe the physical capability of the secondary monitor.

These controls are only needed and available while the "DualHead Multi-Display" feature is disabled and if your secondary display is a computer monitor.

WARNING: Incorrect monitor settings may cause some monitors to become unusable. Some monitors can be permanently damaged. For information on the settings your monitor supports, see your monitor documentation.

Display Capabilities

Use these controls to select the capabilities of your main and secondary displays. You can do this by adjusting the maximum settings for your secondary display. The higher the display capabilities selected for your secondary display are, the more likely it is that the display capabilities of your main display may be restricted.

In general, select settings that are only as high as you need. What you need depends on the capabilities of the monitors you're using and how you intend to use your displays. To find out the maximum capabilities of a monitor, see its documentation.

Selecting higher settings than you need may unnecessarily restrict certain display capabilities. Certain features may depend on higher display capabilities for a certain display. For example, the "DualHead DVDMax" feature is dependent on high display capabilities on your main display.

These controls are only available if **Use DualHead Multi-Display** is enabled.

Note: If you change one or more of these settings, you may be prompted to restart your computer for changes to take effect.

See also...

ø   DualHead Multi-Display

Maximum graphics memory for secondary display

Use this to select the maximum amount of graphics memory you want available for your secondary display.

This control affects how graphics memory is divided between your main and secondary display. Selecting a higher amount may limit the display modes available to your main display.

Extra graphics memory can be used by software designed to use the Microsoft DirectX API (Application Program Interface) and designed to take advantage of multiple displays. For example, many video playback programs, 3D programs, and games use DirectX. If not enough graphics memory is available, software that uses DirectX may not work properly.

If DirectX software doesn't work properly with your secondary display, try increasing this setting. If DirectX software doesn't work properly with your main display, try decreasing this setting.

Note: The "DualHead DVDMax", "DualHead Zoom", and "DualHead Clone" features are dependent on the amount of graphics memory available for your main display. If any of these features don't work properly, try decreasing this setting.

See also...

ø   Supported display modes

Supported display modes

This is a list of supported display modes for your main and secondary display. Supported display modes are listed in descending order, the highest display mode first, and vary according to the resources allocated to the secondary display.

Show highest modes only -- Enable this if you only want to see the highest display modes, for each color palette, available for your main display and for your secondary display.

AGP Memory

Use this to select how AGP memory is divided between your main and secondary displays. The setting you select depends on how you use your displays and what software you run on each display. If not enough AGP memory is available, software that uses AGP memory may not work properly. If software that uses AGP memory doesn't work properly with a particular display, try increasing the amount of AGP memory available to that display.

AGP memory is system memory reserved for use by AGP graphics hardware. Among other things, AGP memory is used for 3D graphics.

TV Output

Use these controls to adjust advanced TV output settings.

n **DVDMax TV Settings** -- Use this to adjust advanced TV output settings for the "DualHead DVDMax" feature. The default DVDMax TV settings are adjusted for viewing full-screen video (for example, from a video file).

n **Desktop TV Settings** -- Use this to adjust advanced TV output settings. These settings are for the "DualHead Multi-Display", "DualHead Clone" or "DualHead Zoom" features. The default desktop TV settings are adjusted for viewing computer graphics (for example, computer games or your Windows desktop).

n **TV Adjustments** -- Use this to adjust the size and position of the displayable area on your TV.

These controls are only available if you're currently using a TV or a video recorder for your secondary display.

Note: If you change advanced TV output settings for the DVDMax feature, these settings are only used while you're using this feature. If the DVDMax feature isn't being used, desktop TV output settings are used.

TV Adjustments

Use these controls to adjust the size and position of the displayable area on your TV.

For information on each control on this property sheet, see context-sensitive help.

ø   Context-sensitive help

Size / Position

Use these controls to change the size and position of the displayable area on your TV.

Overscan

Enable this have your display fill your entire TV screen. While this feature is used, the edges of your display may be cut off by the edge of your TV screen.

Note: While this feature is enabled, other TV output controls for size and position are unavailable.

Fine tuning

Enable this to increase the precision of the **Size** and **Position** controls.

This control is unavailable while **Overscan** is enabled.

See also...

ø   Size / Position

ø   Overscan

Resize proportionally

Enable this to change the display size proportionally when you use **Size** controls. The proportion this feature maintains is based on a 4:3 aspect ratio (the traditional TV aspect ratio).

This control is unavailable while **Overscan** is enabled.

See also...

ø   Size / Position

ø   Overscan

Select Secondary Output

Use these controls to determine what type of device you want to use for your secondary display.

n **Computer monitor** -- Select this if you want to use a computer monitor (a device using an HD-15 or DVI connector).

n **TV** -- Select this if your want to use a TV or a video recorder (a device using a composite video or S-video connector).

These controls are only available with certain Matrox hardware.

TV Output

Use this property sheet to change TV output settings.

For information on each control on this property sheet, see context-sensitive help.

This property sheet is only available if you have a G100- or G200-based Matrox graphics card with TV output support.

Show display on TV

Enable this check box if you want to view or record your computer display on a TV or VCR connected to your computer.

When this check box is enabled, your computer display uses TV settings. TV settings have lower resolutions and refresh rates than typical computer monitor settings. Lower refresh rates may result in more noticeable flicker.

WARNING: Some computer monitors may not support the 50 Hz vertical refresh rate used with European TV settings. Some monitors may even be damaged if they use this refresh rate. For more information, see your monitor documentation.

TV standard

Click one of these buttons to indicate the TV standard used by a TV or VCR connected to your computer:

n **NTSC** -- is the TV standard used in North America and Japan, among other places.

n **PAL** -- is the TV standard used in Europe and China, among other places.

If an incorrect TV standard is selected, the output from your computer may not appear or record properly on your TV or VCR. To find out what standard your TV or VCR supports, see its documentation.

Advanced TV settings

Click this button to adjust advanced TV output settings. These settings only affect what you see or record on your TV or VCR.

This button is only available if **Show display on TV** is enabled and the currently selected TV standard is applied.

See also...

ø   Advanced TV Settings -- Recommendation

Advanced TV Settings -- Recommendation

Matrox default advanced TV output settings are good for viewing most computer graphics (for example, computer games or your Windows desktop) on most TVs. Based on broadcast standards, there are advanced TV output settings that are better suited for viewing full-screen video (for example, from a video file). These settings are:

- n **NTSC**
  Brightness: 180
  Contrast: 234
  Saturation: 137
  Hue: 0

- n **PAL**
  Brightness: 167
  Contrast: 255
  Saturation: 138
  Hue: 0

Note: For ideal settings, you may also need to adjust the settings on your TV. The default brightness, contrast, saturation and hue settings on most consumer video devices are higher than broadcast standards. These settings are usually OK for viewing video but may not look OK with computer graphics. (This is why Matrox default TV output settings are lower than what's ideal for video.) For more information on how to adjust settings on your TV, see your TV manual.

Image quality options

Use these controls to change your TV image quality options.

These controls don't affect your computer monitor.

Anti-flicker

Enable this check box to use "flicker reduction" with a TV or VCR connected to your computer. This may improve image quality.

This control doesn't affect your computer monitor.

Black and white

Enable this check box to show or record black and white video on a TV or VCR connected to your computer.

This control doesn't affect your computer monitor.

Enhance text

Enable this check box to slightly enhance the appearance of text on a TV or VCR connected to your computer. With this feature, text may appear sharper and more distinct.

Clear this check box if you don't want the TV signal from your computer to be altered in this way.

This control doesn't affect your computer monitor.

Reduce edge flickering

Enable this check box to reduce a dot crawl problem for a TV or VCR connected to your computer with a composite video (RCA) cable (there's little effect with S-video). "Dot crawl" is a TV display problem that looks like a row of dots moving along edges in the image.

Clear this check box if you don't want the TV signal from your computer to be altered in this way.

This control doesn't affect your computer monitor.

Output cable type

Use this box to indicate the type of cable you're using to connect the video output of your computer to your TV or VCR. Select one of the following:

n **Composite video or S-video** -- for composite video or S-video cables. This is used most often, especially outside Europe.

n **SCART - Composite** -- for a SCART cable with a composite video connector.

n **SCART - RGB** -- for a SCART cable with RGB video connectors.

TV image settings

Use the list box to select a TV control type, and then use the slider to change the setting for this control. These controls affect what you view or record on a TV or VCR connected to your computer.

These controls don't affect your computer monitor.

Note: Different image settings are saved for each TV standard (NTSC or PAL).

Reset All Image Settings
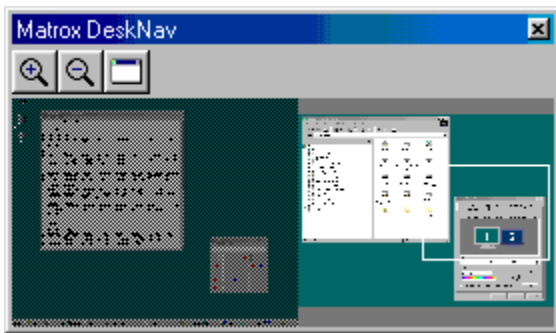
Click this button to restore settings for a TV or VCR connected to your computer. Settings are restored to their default values.

Restoring settings doesn't affect your computer monitor.

Matrox DeskNav

Use this program to zoom in on your Windows desktop area and to quickly move your view area. To start DeskNav, use the Matrox QuickDesk menu.

With the DeskNav desktop preview, you can "navigate" while you're using the Matrox zoom feature or a multi-display desktop. The desktop preview shows you an image of your current desktop, including what's off-screen while zooming. If you're using a multi-display desktop, the DeskNav desktop preview shows a representation of each display in your system.

You can double-click the preview area to move your mouse pointer to the corresponding location on your desktop. Right-click the preview area for a context menu.

While you're using the zoom feature, you can move your view area simply by clicking or dragging on the desktop preview. A rectangle in the desktop preview shows where your current view area is relative to your desktop area.

See also...

ø   Matrox QuickDesk

ø   Multi-display desktop

Matrox PowerDesk à **Matrox DeskNav**

Always on top

Enable this option for the DeskNav window to always appear over other windows.

Show menu

Use this control to show or hide DeskNav menus. You can access this control by right-clicking the DeskNav title bar.

Matrox PowerDesk à **Matrox DeskNav**

Show toolbar

Use this control to show or hide the DeskNav tool bar.

Matrox PowerDesk à **Matrox DeskNav**

Show preview

Use this control to show or hide the DeskNav desktop preview area.

Matrox PowerDesk à **Matrox DeskNav**

Update Preview

Click this menu item to update the DeskNav desktop preview.

Proportional Sizing

Click this menu item to make the width and height of the DeskNav desktop preview proportional to the width and height of your actual desktop.

Preferences

Click this menu item to open the DeskNav preferences dialog box. You can access this control by right-clicking the DeskNav title bar.

Window

Click this menu to see a list of currently open program windows. To switch to one, click its name in the list. When you click a name, that program window becomes active and your mouse pointer is moved to the middle of it.

Zoom In

Click this button to magnify part of your display area. Click again to magnify it more. When you magnify a display area, parts of it are outside the view area.

Two zoom factors are available, x2 and x4. The x4 zoom factor may be unavailable at display resolutions 800 x 600 and lower.

This button is unavailable if you're currently at the maximum zoom factor, if the selected display isn't supported by the PowerDesk display driver, or if you're using TV output mode.

Zoom Out

Click this button to zoom out from your view area. Click again to zoom out more. This button is unavailable if you're not currently zoomed in on part of your desktop.

CenterWINDOW

Click this button to see a list of currently open program windows. To switch to one, click its name in the list. When you click a name, that program window becomes active and your mouse pointer is moved to the middle of it.

Options

Use these controls to change DeskNav options.

Snap to corner

Enable this check box if you want the DeskNav window to stay in a corner of the view area DeskNav is in.

If this feature is enabled and you want to move the DeskNav window to a different corner, simply drag the window close to a corner and it will "snap" into position.

Keep DeskNav in mouse-pointer display

If you're using a multi-display desktop, enable this check box for the DeskNav window to automatically move to the display your mouse pointer is in.

This feature is only available if you're using a multi-display desktop and if **Snap to corner** is enabled.

Center mouse pointer when changing view area

Enable this check box to have your mouse pointer centered when you're using the Matrox zoom feature and you move the view area rectangle of the DeskNav desktop preview. Your mouse pointer will be centered in the view area you just moved.

Proportional sizing

Enable this check box item to keep the width and height of the DeskNav desktop preview proportional to the width and height of your actual desktop.

Show desktop snapshot

Enable this check box for the DeskNav desktop preview to show a "snapshot" of your Windows desktop.

Move the slider to adjust the quality of the preview. Higher-quality desktop snapshots may slow down system performance.

Hide DeskNav in desktop snapshot

Enable this check box to hide the DeskNav window in the DeskNav desktop preview.

This check box is only available if **Show desktop snapshot** is enabled.

Automatically update desktop snapshot

Enable this check box for DeskNav to periodically update the desktop preview snapshot. Move the slider to adjust how often DeskNav updates the desktop snapshot. Frequent updates of the desktop preview snapshot may slow down system performance.

These controls are only available if **Show desktop snapshot** is enabled.

Matrox PowerDesk à **Matrox QuickDesk** à **Start Matrox Diagnostic**

Results

Test results are displayed in this box.

Test Now

Click this button to perform the selected tests.

Select the tests you want performed.

Is recent DirectX software installed?

Enable this check box to test for Microsoft DirectX software.

A recent version of DirectX must be installed for some programs to work properly. Also, if a recent version of DirectX isn't installed, some Matrox PowerDesk features may be unavailable.

Is bus mastering (for display acceleration) working?

Enable this check box to test bus mastering.

See also...

ø   Use bus mastering

Is another Matrox video editing card installed?

Enable this check box to check if another Matrox video capture card is installed in your computer. Per computer, only one Matrox video capture card is supported.

Is the add-on graphics memory module (if any) working okay?

Enable this check box to test if a graphics memory add-on (if any) is compatible with the memory on your graphics card.

Matrox PowerDesk

More information

Some help topics are only accessible through context-sensitive help. For context-sensitive help where available, click the " [?] " button on the title bar of a dialog box, then click the item you want help on.

For additional information, click **Matrox QuickDesk** ( ) à **Help** à **View Readme File**.
See also...

ø   Matrox QuickDesk

Color palette

The number of simultaneous colors the display driver can show. This number is based on the number of bits used to store the color information for each pixel. The higher the number of bits, the more simultaneous colors the display driver can show.

Note: To change display settings in Windows, right-click your Windows desktop background, then click **Properties** à **Settings**. To change your color palette setting use the **Color palette** (Windows 95), **Colors** (Windows 98/Me/2000), or **Color quality** (Windows XP) control.

Note: With Matrox hardware, 3D acceleration is only available with a 16- or 32-bit color palette.

See also...

ø   Pixel

ø   Display resolution

Desktop area

The whole work area of your windowing operating system.

If you're using a multi-display desktop, your desktop area includes more than one display area. If you're not using a multi-display desktop, your desktop area and your display area are effectively the same.

See also...

ø   Display area

ø   Multi-display desktop

Display area

The work area of a display in your windowing operating system.

If you're using a multi-display desktop, your desktop area includes more than one display area. If you're not using a multi-display desktop, your desktop area and your display area are effectively the same.

Note: To change display settings in Windows, right-click your Windows desktop background, then click **Properties** à **Settings**. To change your display area, use the **Desktop area** (Windows 95), **Screen area** (Windows 98/Me/2000), or **Screen resolution** (Windows XP) control.

See also...

ø   Desktop area

ø   Display resolution

ø   Multi-display desktop

Display mode

The combination of a display resolution and color palette.

See also...

ø   Color palette

ø   Display resolution

Display resolution

The number of horizontal by vertical pixels shown on your display. For example, a 640 x 480 display resolution is 640 pixels wide by 480 pixels high. Higher display resolutions can show more detail or information.

See also...

ø   Pixel

ø   Display area

Multi-display desktop

A desktop with more than one display.

With Windows 98/Me/2000/XP, you can use a multi-display desktop if you have more than one graphics card, or a multi-monitor graphics card, installed in your computer. The same Matrox PowerDesk display driver can control more than one Matrox graphics card if the model of each card is supported by the driver. For more information, see Windows 98/Me/2000/XP documentation.

Note: Windows 95 doesn't support multi-display mode.

See also...

ø   Desktop area

ø   Display area

Pixel

The smallest element that can be drawn on your display.

Refresh rate

This usually refers to the vertical refresh rate. The "vertical refresh rate" is the number of times that a screen is updated in a second. This is measured in cycles per second -- Hz (Hertz). A higher vertical refresh rate may result in less noticeable flicker in your display, but also requires more bandwidth from your graphics hardware.