Introduction

The Hercules Touch™ is an easy-to-use, integrated set of Windows utilities for managing the features of your Hercules graphics accelerator. The following utilities are available:


Picture Window


Adjust


Refresh Rate Meter


Speedy


Wallpaper Express


Zoom In


Power Down


Power Preview


Power Player

Picture Window™

Picture Window is an easy way to select the screen resolution, pixel depth and font/resource size used by the Windows environment. Picture Window also lets you configure a virtual desktop on some Hercules products via the BigMap feature. You can also use Picture Window to tell Windows what font to use when displaying icons on the desktop. For a brief guide to all of the features of Picture Window, click on the Quick Tour button.

The resolutions available in the list on the left side of the dialog box will vary depending on your choice of Hercules product and monitor. If a resolution is not present and you think it should be (for example, if Picture Window gives you only 640x480 as an option), the software may not know about all the capabilities of your monitor. See the documentation that came with your Hercules product for details on selecting your monitor type.

Once you have clicked on a resolution, certain pixel depths may become available depending on the capabilities of your Hercules product. For example, 1024x768x24bpp is not possible on graphics cards with 2MB of RAM. Likewise, selecting one of the pixel depth buttons will cause Picture Window to display only the resolutions available for that pixel depth. If a particular combination of resolution and pixel depth is not available, and you think it should be (for example, if you have a 2MB card but 1024x768x16bpp is not available), see the troubleshooting section of your manual for assistance.

The **System Font:** option allows you to choose between the large and small system fonts at higher resolutions. The resource size is automatically adjusted to match the font size. The best way to find out which choice of fonts and resources is right for you at the higher resolutions is to give each option a try. On 15" and smaller monitors, many people like to switch to the large fonts to reduce eyestrain. On monitors that are 19" or larger, the increased screen size allows most people to use the small fonts at higher resolutions. In fact, use of the small fonts and resources in a high resolution mode on a large monitor increases screen real estate by reducing the percentage of the screen needed the various menu bars, scroll bars and title bars used by each application.

Once you have chosen your new configuration, click on **Restart...** to restart Windows with the new settings. When you select this button, you are given one last chance to either restart Windows immediately (any applications you have open will, of course, give you the option to save any pending work before they exit) or just to write the new configuration to the SYSTEM.INI file and return you to the Windows environment. If you choose the latter, the changes you have selected will take effect the next time you start Windows.

If you decide that you do not wish to make any changes to your environment, click on **Exit**. This will return you to the Windows environment without changing your configuration.

Choosing an Icon Font

When you minimize (iconize) applications and program groups, they appear as icons at the bottom of your screen and are labeled in legible, but somewhat plain, 8 pt. MS Sans Serif. For example:

Picture Window

You can use the **Icon Font...** feature of Picture Window to tell Windows to use any system or TrueType font available on your system, at up to a size of 14 pt. This is an easy way for your desktop to be a bit more expressive and stand out from the crowd.

As with changes to your resolution, pixel depth and font/resource size, Windows must be restarted for the changes to take effect. Picture Window automatically takes care of this for you when you select **Restart...**.

SYSTEM.INI

One of the configuration files that controls the basic ways in which Windows operates. Display drivers use SYSTEM.INI file to hold configuration information for the graphics card.

Quick Tour

Picture Window contains a **Quick Tour** button which briefly points out all the features of the Picture Window interface. Give it a try!

Screen Resolution

The number of pixels, vertically and horizontally, displayed by Windows. A screen resolution of 1024x768 is 1,024 pixels wide and 768 pixels high. Larger screen resolutions allow applications to display more data on screen, but since the pixels are smaller at higher resolutions, the relative size of objects onscreen, such as dialog boxes, can be smaller.

Pixel Depth (also known as **bits per pixel** or **color depth**)

The number of colors displayable in a graphics mode.

Pixel Depth (in bits)	Number of Displayable Colors
4	16
8	256
16	65,636 (usually referred to as 65K)
24	16,777,216 (usually referred to as 16.7 million)

The pixel depth of a graphics mode is usually given in its description. 1024x768x256 has a screen resolution of 1024x768 and a pixel depth of 256 colors, or 8 bits per pixel. Pixel depth is often referred to as bits per pixel, or bpp, as in "24bpp."

Font/Resource Size

Windows maintains two sets of resources used to draw scroll bars, scroll buttons, control-menu boxes (the boxes in the upper left hand corner of windows), and so on -- in short, the graphical components that make up a window. Windows also has the ability to use two different font sizes for the text that goes in title bars, menu bars, and menus.

Windows is designed this way because the larger the resolution, the smaller these elements appear on screen. The smaller resources and fonts are suitable for lower resolutions, but at 1024x768 and above, switching to the large fonts and resources makes for an easier-to-read display.

System Font

The font that Windows uses for title bars, menus, and error messages.

BigMap™ Virtual Desktop

Note: BigMap is not available on all Hercules products. If your card does not support BigMap, no BigMap resolutions will be available via the Picture Window application.

Hercules BigMap gives you immediate access to any pixel in a workspace that is larger than the physical screen resolution. For example, if your configuration supports it, you might choose to view a 1280x1024 workspace using a monitor capable of only 640x480 resolution. With a BigMap mode selected, the Windows desktop will scroll to reveal more of the virtual screen when the cursor nears the edge of the display area. BigMap will appeal most to users of smaller monitors and/or monitors that cannot take advantage of the high resolution display capabilities offered by many Hercules products.

When you choose a BigMap resolution, Windows and the applications that run under Windows will treat this resolution as the size of the desktop. In other words, you might have a 1024x768 "viewport" into a virtual 1600x1200 Windows session. Windows will "think" it is running at 1600x1200, and dialog boxes that pop up in the middle of the screen will appear in the center of the virtual space, which may not necessarily be the center of your screen at any given moment. If you have not used a virtual desktop before, this behavior might be unfamiliar to you the first time you use BigMap. Try it out! On a small monitor you may like to open two applications and give each of them plenty of desktop space to display in, and then pan from application to application rather than using Alt-Tab or using the mouse to minimize and maximize applications. Another popular use of the virtual desktop is to work with large spreadsheets where you may prefer a large virtual screen to the application´s slower software-based scrolling.

Adjust™

Note: Adjust is not available on all Hercules products. If your card does not come with the Adjust utility, it will not be an option in The Hercules Touch.

Adjust provides digital controls for your analog monitor. You can use Adjust to change the size and position of the image on your screen, save the settings to disk and set up your graphics card to use them every time it boots.

The buttons on the Adjust display have the following effects:

Expand the image vertically

Move the image up

Compress the image vertically

Move the image down

Move the image left

Expand the image horizontally (widen the image)

Move the image right

Compress the image horizontally (narrow the image)

When adjusting the display, you can hit **Esc** or click on **Undo** to undo the effect of the last adjustment you have made. Hitting ESC is useful if clicking on one of the buttons causes the display to go blank, lose synchronization, or otherwise become unreadable.

To restore your display to the state it was in when you launched Adjust, click on **Reset** or hit

F10.

To save your settings, click on **Save**. The next time you start Windows in the same resolution and pixel depth, the adjustments you have made will take effect.

Clicking on **Exit** quits Adjust. If you exit the program without selecting **Save**, the adjustments you have made will be in effect for the rest of the Windows session, but will be lost when you exit Windows.

Clicking on **Refresh Rate** toggles the Refresh Rate Meter application. The first time you click on this button, Refresh Rate Meter is launched and displayed in the lower right corner of the screen. The next time you click it, the Refresh Rate Meter application is closed. This is of use because the Adjust program works by manipulating the output of the graphics card. In some cases, the refresh rate may be affected, and in extreme cases, using the Adjust utility may lower the refresh rate to an undesirable level. Keeping an eye on the refresh rate will let you know if this is happening. If, to get an acceptable image size and position using Adjust, your refresh rate drops significantly, you may want to consider using your monitor´s hardware tuning controls instead of Adjust, or select a base scan rate/refresh rate combination with which your monitor is more compatible. See your graphics card and monitor documentation for more details.

Two other important notes on Adjust:

Adjust works by modifying internal registers in the graphics card. Its range is limited, and it has no way of seeing what your display looks like. If you find that Adjust is ineffective at giving you the display you want (for example, if the image is too large and the software controls can only expand it so far), try using your monitor´s hardware controls, or exiting to DOS and selecting a basic monitor type that is a closer match for your monitor´s capabilities. In particular, many monitors display a shrunken image when they are driven at or near their published maximum scan rate or refresh rate. In most cases, you will be able to use some combination of Adjust and the monitor´s hardware controls to expand the image to your liking, but if not, use the software that came with your graphics card to select a monitor configuration that uses a slightly lower scan rate and/or refresh rate. Because of the great variety of monitors, we cannot guarantee that you will be able to use Adjust by itself to obtain a perfect image at all resolutions. Adjust is not a universal replacement for your monitor´s hardware controls.

Lastly, Adjust individually tunes each combination of resolution and pixel depth. Adjust should be run once for each graphics mode under which you use Windows.

Refresh Rate Meter™

The Hercules Refresh Rate Meter allows you to test the vertical refresh rate you are currently using. It is especially helpful when used in concert with Adjust to tune your display for optimal refresh rate performance.

Higher refresh rates deliver more vibrant and stable images that are easier to work with for extended periods. In general, higher refresh rates deliver better displays.

Click on the COARSE button to get an approximate reading of your system´s refresh rate. Click on the FINE button to get a more accurate reading.

The COARSE measurement will take approximately 3 to 5 seconds to complete while the FINE measurement takes between 30 and 40 seconds.

Note: when you are running in an interlaced mode, Refresh Rate Meter will give a reading of approximately 87Hz in FINE mode. While this is technically correct, it may be misleading. A non-interlaced display, even one that is running at 60Hz, will always look better than an interlaced display. In interlaced mode, the electron gun completes a top-to-bottom pass of the screen approximately 87 times per second, but since it takes two passes to draw the screen, the entire display is only updated 43.5 times per second, giving you an effective refresh rate of 43Hz.

Interlaced Mode

A method of operation for graphics cards and monitors in which the electron beam draws the screen in two passes. The electron beam first travels from the top to the bottom of the display drawing every other scan line, then returns to the top of the display and draws the scan lines skipped the first time. Interlacing is a cost-effective way for many monitors and graphics cards to provide high resolution support. Because the display takes twice as long to update, an interlaced display typically has more flicker than a non-interlaced display.

All monitors and graphics cards are capable of a non-interlaced display at 800x600 and below; running in interlaced mode is only a possibility at 1024x768 and above. For details on the capabilities of your monitor and graphics card, consult your documentation.

Vertical Refresh Rate

The number of times that the electron beam retraces the screen per second. A vertical refresh rate of 76Hz means that the electron gun completes approximately seventy-six trips from the top to the bottom of the picture tube every second. The higher the refresh rate, the more stable the display.

Hz is short for "hertz" and means one cycle per second. The term is named for Heinrich Hertz, a German physicist born in 1857.

Speedy™

Speedy is a benchmark tool that can help measure the performance of your graphics card. It is one of the most strenuous benchmarks available.

To generate a Speedmark for your system, select Control/Autorun, or hit F2. Speedy will display nine Windows, each with its own process. After about a minute, your system´s Speedmark will be displayed in the center window.

To quit Speedy, hit F10.

You can also use Speedy´s other options to run any combination of graphics processes. However, the Speedmark is only valid when you use the Autorun (F2) option.

The **Options** menu lets you experiment with different processes. Selecting a GDI function from this menu and selecting **OK** opens a new window running a test of that GDI function. Advanced users can use this feature to get a more accurate idea of the strengths of the graphics card being used.

Speedy also has its own on-line documentation. To read it, hit F1 from within Speedy.

Graphics Device Interface (GDI)

The GDI is the "toolbox" of graphics functions that all Windows applications call upon to draw on the screen or the printer. Graphics accelerators work by optimizing these functions, improving the speed at which applications display data on the screen.

Speedmark™

The unit of measurement used by the Speedy benchmark program. A higher Speedmark means better performance.

Wallpaper Express™

This utility gives you a simple interface for choosing your desktop wallpaper bitmap. It saves you the time of going through the Control Panel, and unlike Control Panel, Wallpaper Express lets you preview your desktop before you exit the program.

You can **center** or **tile** your wallpaper. Tiling places many copies of the wallpaper pattern side to side and end to end, covering your screen. Centering places just one copy in the center of the screen. Typically, you will select centering when you use a large file (such as a scanned photograph) that takes up most of your screen, and tiling when you have a small file that you would like to use as a pattern.

The **screen preview** portion of the display gives you an estimate of what your desktop will look like with the selected wallpaper image. Once you have found one you like, choose **Apply** to accept the new bitmap file, or **Exit** to leave your desktop as it was. Select **Remove** to instruct Windows to use no bitmap, and simply draw the desktop with the default color or pattern selected in the Colors portion of Control Panel.

Although Windows may use any .BMP file as wallpaper, larger files will use more memory, and may affect Windows performance. Particularly, using 16bpp (65K color) or 24bpp (16.7M color) bitmap files can cause a large delay when moving windows around the desktop, as well as increasing the time Windows takes to start up. For optimal performance, stick to smaller bitmaps of 8bpp (256 colors) or less.

Power Down™

Note: Power Down is not available on all Hercules products. If your card does not come with the Power Down utility, it will not be an option in The Hercules Touch.

Power Down is a screen saver that allows you to control your VESA DPMS compliant monitor. It requires both a DPMS-compliant monitor and display card.

When you launch Power Down, it comes up maximized. After making any necessary adjustments, you will want to minimize it so it does not take much space on your screen. After a period of inactivity (no mouse movement, mouse clicks or keypresses) Power Down will place your monitor into a state of low power consumption according to how you have configured with the **Setup** option.

Clicking on **Setup** while Power Down is maximized gives you a dialog box with slider controls for Stand-by, Suspend and OFF modes (see VESA DPMS for a description of these modes). A typical configuration will first place the monitor in Stand-by mode, then Suspend mode, and finally OFF. For example, you might use the slider controls to tell Power Down to place your monitor in Stand-by mode after five minutes, Suspend mode after ten minutes, and finally turn the monitor off after fifteen minutes. You can use the slider controls to set any time period between 1 and 60 minutes. Note that after most monitors have been turned off via DPMS, they must be turned back on using the monitor´s on/off switch.

Exit quits Power Down without activating the screen saver.

VESA Display Power Management Signalling (DPMS)

DPMS is a VESA standard for controlling monitor power usage via software. The four DPMS states are:

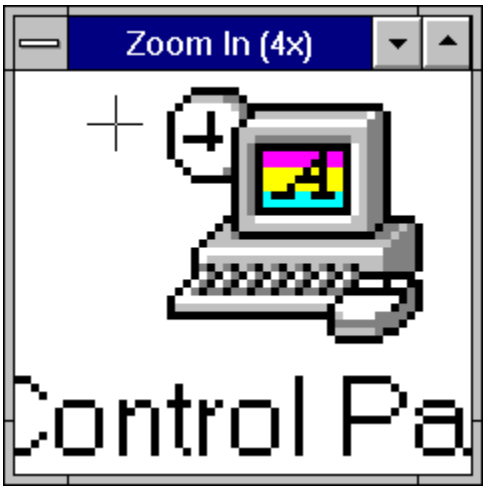
ON: normal operation. Your monitor is ON whenever you are using it.
Stand-by: an operating state of minimal power consumption. The screen is dark, but the display can be restored quickly.
Suspend: significant reduction of power consumption. A monitor in Suspend mode has a blank display and uses less power than Stand-by mode, but takes longer to return to ON mode.
OFF: lowest level of power consumption. Typically, a monitor which has been turned OFF via DPMS must be turned on again with the power switch.

Video Electronics Standards Association (VESA)

A computer industry association that sets standards covering PC hardware. Examples are the VESA VBE (Video BIOS Extensions), the VESA VL-bus (a type of local bus), and VESA DPMS (Display Power Management Signalling).

Zoom In™

This utility gives you a zoomed in view of the area around the mouse cursor, regardless of what application is running. It is useful for taking a closer look at images in applications which do not provide zoom capabilities, or which provide zooming capabilities that are not as fast or flexible as our instant zoom.



Zoom In takes the form of a window which you may expand, minimize, or manipulate in typical fashion. Additionally, a definable hotkey may be used to pop up the Zoom In window after it has been minimized.

When you launch Zoom In from the Hercules Touch interface, you are given the option of changing the default hotkey from the default Alt-1. Select **OK** to continue, or **Exit** to return to the Windows interface without enabling Zoom.

Once the zoom window is active, you can select from a variety of options from the control-menu box (the box in the upper left corner of the window that looks like this:):

Zoom Level (1x - 8x)

Panning lets you select *Continuous Pan* or *Edge Pan*. With *Continuous Pan* selected, the Zoom In window is updated every time you move the mouse cursor. With *Edge Pan* the Zoom In window displays the area surrounding the mouse cursor, and is updated when you move the mouse beyond the boundaries of this area. Edge Pan is useful when you need to keep the Zoom In window on a particular area of the screen for precision editing work.

Crosshair allows you to pick the size of the crosshair within the Zoom In window. The cross hair indicates where in the Zoom In window the mouse cursor is located; this is useful when you are editing an image on a single pixel basis. When *Continuous Pan* is selected in the **Panning** menu, the crosshair is always in the center, since the Zoom In window continuously follows the position of the mouse.

Hot Key... lets you assign the key sequence used to restore the Zoom In window after you ´ve minimized it. Using the pick list in the **Hot Key...** dialog box, you can pick from among many keys on the keyboard, including function keys. This key can be selected by scrolling through the pick list, or (in most cases) just typing the key itself. Below the pick list, you can use the check list to add any combination of Shift, Ctrl, or Alt (or none at all) to complete

the hotkey sequence.

All options are automatically saved when you exit Zoom In. Once you have configured Zoom In to your liking, you will not need to use these configuration options.

Power Preview™

Note: Power Preview is not available on all Hercules products. If your card does not come with the Power Preview utility, it will not be an option in The Hercules Touch.

Power Preview lets you see your entire collection of AVI files at a glance.

After you select the directory to view, each AVI file in the directory will be represented by a postage stamp image. You may play a clip by double-clicking on the image or selecting the **Play Video** button.

The **Preview** control lets you select which frame is used to represent each clip. You may select the first, second, middle or last frame, the second key frame, or just the filename, with no visual representation. These options can be useful when your collection includes clips that fade in or otherwise contain frames that don´t work very well as a representation of the entire clip.

Power Preview uses the Power Player utility to play video clips. The **Player Options...** button displays a dialog box which lets you control the operation of Power Player.

The **Show playback window only** and **Show both control deck and playback window** let you decide if you´d like the Power Player control panel itself to be visible onscreen when the video plays back. If you´re simply playing videos from beginning to end and you want to minimize clutter, the first option is best.

Start playing after loading and **Load file only** let you tell Power Player to play the video immediately, or simply to load the video clip and await your command. Even if you have configured Power Player to show the playback window only, you can stop and start playback with the controls at the bottom of the playback window.

Selecting **Use the same player for each video file** tells Power Preview not to launch a new instance of Power Player if you select another AVI file while one is already running. The first AVI file will be closed. Choosing **Invoke a new player for each video file** lets you play more than one video at the same time by launching another copy of Power Player. Note that system performance may suffer when playing more than one AVI file at a time, and the Power Playback multimedia acceleration hardware on your Hercules product may only work for one video stream at a time.

Power Player™

Note: Power Player is not available on all Hercules products. If your card does not come with the Power Player utility, it will not be an option in The Hercules Touch.

Power Player is a utility for viewing your AVI and MPEG files. It´s similar to the Media Player application included with Windows, and adds playback features not found on the original Media Player.

Opening and Closing Files

To open an AVI or MPEG file, click on the  open button. You´ll be presented with an Open dialog box.

To close the file, click on the  close button.

Playing Files

 This button plays the file. (Key equivalent: P)

 This button stops playback. (Key equivalent: S)

 This button pauses playback. It´s equivalent to the stop  button. (Key equivalent: S)


 You can use these buttons to step through the video one frame at a time. (Key equivalent: LEFT and RIGHT ARROW)

 This button advances the clip to the last frame. (Key equivalent: END)

 This button rewinds the clip to the first frame. (Key equivalent: HOME)

The  **repeat** button is used to toggle between single and continuous playback. The Power Player display indicates the playback mode. The **frame** and **time** buttons configure Power Player to display either elapsed and total frames, or elapsed and total time.

The **volume** dial controls the audio portion of the video clip. The **speed** dial controls the rate at which the video is played. You can also use the + and - keys on the numeric keypad to turn a dial whenever it has the focus.

Additionally, the playback window itself has a play/stop button and a slider control for rapidly moving through the file. The  button can be used to bring the control window back if it is hidden, minimized, or obscured by the playback window.

The **zoom** button lets you play the video clip at 25%, 50%, 100%, 200%, or 400% of the clip ´s original size. This is a handy way of returning the video clip to its default size.

The **scan** button lets you choose a scale for rapidly scanning through the video clip. Selecting scan displays a new set of buttons. If you´ve configured Power Player to display frame information (using the **frame** button), you´ll have the option of viewing every 5th, 10th, 25th, or 50th frame. If you´ve configured Power Player to display time information (using the **time** button), you´ll have the option of viewing the clip in 0.5, 1, 2.5 or 5 second increments. In either case, selecting ALL restores the default playback mode.
If, when using the **scan** button to select higher playback speeds, you find that the PC isn´t able to keep up (you see a garbled image or blank frames), you may use the **speed** dial to decrease the playback speed.

The ▼ control in the top right corner of the window minimizes Power Player. The
× control closes the application, and the
? control displays this help file.

Second Key Frame

To conserve space and improve playback speed of AVI files, usually only the areas of the frame which are different from the previous frame are stored. When consecutive frames are more similar than they are different, it´s not necessary to encode all of each frame.

A key frame is one which is stored in an AVI file in its entirety, rather than as a partial modification of the previous frame. The first frame of the file is always a key frame, since there´s no previous frame to use as a reference. When the image changes sufficiently (as in a scene change), a new key frame is stored.

Viewing only the second key frame can be a good way of identifying an AVI file.