



Wicked3D Vengeance™

INSTALLATION GUIDE

INSTALLATIONSANLEITUNG

GUIDE D'INSTALLATION

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Should you have any questions concerning this Agreement, or if you desire to contact Metabyte for any reason, please write to: Metabyte, Inc./Wicked3D Board Company-Customer Service/39350 Civic Center Dr. Suite 200/Fremont, CA 94538

YOU ACKNOWLEDGE THAT YOU HAVE READ THIS AGREEMENT, UNDERSTAND IT AND AGREE TO BE BOUND BY ITS TERMS AND CONDITIONS.

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INTRODUCTION

The Wicked3D Vengeance is a 128-bit, state-of-the-art, 2D/3D/Video graphics accelerator. It is built with the Voodoo Banshee graphics chipset – the hottest new technology from 3Dfx Interactive – and ultra-fast SDRAM. This combination produces the absolute fastest 2D and most realistic 3D ever seen on a PC, and will give you the most eye-popping, gut-wrenching, heart-pounding gaming experience on or off this planet!

The Wicked3D Vengeance has a 128-bit 2D core with hardware optimizations which provide the highest levels of performance to all your Windows applications such as web browsing, presentation graphics and 2D games.

With full 3D API support including 3Dfx Interactive's GLIDE, Microsoft's Direct3D, id software's GameGL, Criterion's Renderware, and Argonaut's BRender, any game will run at speeds faster than you could imagine. As games get increasingly more complex, the Wicked3D Vengeance will continue to render them quickly and painlessly, while other "mortal" 3D cards will merely slow down to a crawl, ruining your gaming experience.

This guide provides you with the all the information you need to install and operate your Wicked3D Vengeance product.

BEFORE YOU BEGIN

The following files on the Wicked3D Vengeance Installation CD-ROM contain important information, which may not have been ready in time for inclusion in this manual.

README.TXT – Text file which contains the latest information about your Wicked3D Vengeance drivers and software.

CONTACT.TXT – Text file that contains addresses, telephone numbers, and e-mail addresses of Wicked3D Board Co.'s worldwide support locations.

LAYOUT.TXT – Text file which contains the layout and structure of the directories and files on the Wicked3D Vengeance Installation CD-ROM.

Before starting on the installation of the Wicked3D Vengeance, it is very important that you read the following sections:

- **DOCUMENT CONVENTIONS**
- **WHAT YOU GET**
- **SYSTEM REQUIREMENTS**
- **STATIC ELECTRICITY AND YOUR Wicked3D Vengeance**

DOCUMENT CONVENTIONS

The following conventions are used throughout this guide.

Example

<CAPITALS IN BRACKETS>

Lucida Sans Unicode

Arial Italics

Arial Bold Italics

Courier

Description

Specifies a keyboard key. "+" symbol between keys specifies a key combination.

Indicates program names, menu options, and standard controls.

Useful tip. Important point to observe.

Caution statements. Take particular care to read these instructions.

Represents a command to be entered by the user.

WHAT YOU GET

- Wicked3D Vengeance in an Anti-static Bag
- Installation Guide
- Installation CD-ROM

SYSTEM REQUIREMENTS

The following are the minimum system requirements for the Wicked3D Vengeance:

- A 90MHz Intel Pentium (or compatible) processor
- 16 MB of system memory (RAM)
- Empty PCI or AGP slot (depending on version purchased)
- A 4x CD-ROM drive
- 4 MB hard disk space
- Microsoft Windows 9x, or Windows NT 4.0 operating system

STATIC ELECTRICITY AND YOUR Wicked3D Vengeance

As with all computers and computer components, the Wicked3D Vengeance is very sensitive to static electricity. To keep the possibility of electrostatic discharge to a minimum, please observe the following precautions:

- Turn off power to your computer when installing the Wicked3D Vengeance card.
- Touch the grounded metal chassis of your computer (to drain off any static electricity) before touching the Wicked3D Vengeance.
- Do not wear wool or polyester clothing.
- Work in an area with a relative humidity of at least 50 percent.
- Do not remove the Wicked3D Vengeance from its anti-static bag until you are ready to perform the installation.
- Handle the Wicked3D Vengeance as little as possible, and by the edges only. Avoid touching PCI/AGP connector contacts.

PREPARING YOUR COMPUTER

The Wicked3D Vengeance is a no compromise 2D and 3D accelerator. If you have an existing Voodoo Graphics card (Diamond Monster 3D, Orchid Righteous 3D, Canopus Pure 3D, Guillemot Maxi Gamer 3D, etc.), it is recommended that you remove the drivers from Windows, shut down your computer, then remove the old hardware. The Wicked3D Vengeance will provide a tremendous performance increase over the existing hardware.

If you currently have a Wicked3D featuring Voodoo² card (or other Voodoo²-based 3D accelerator), however, you can install both cards to have the ultimate graphics setup. The Wicked3D featuring Voodoo² will provide better performance in multitexture games while the Wicked3D Vengeance will scream in 2D and non-multitexture games. Follow the instructions that came with the Voodoo² card to install this setup. Note: This will also work with Voodoo² SLI.

If you are using Windows98 and have multiple monitors, you can use your Wicked3D Vengeance with your existing 2D or 2D/3D graphics card for multiple monitor support. Follow the instructions with Windows98 to properly configure multiple monitor support.

If you have the AGP version of the Wicked3D Vengeance and you already have an AGP graphics card, you will need to remove your existing AGP graphics card and replace it with the Wicked3D Vengeance.

Proceed to **Installing the Hardware** if you are installing the Wicked3D Vengeance normally.

Removing Voodoo Graphics Drivers from Windows 95 or Windows 98

- 1) From your Windows desktop, highlight the My Computer icon, right-click it with your mouse, then select Properties from the menu that appears. This brings up the System Properties window.
- 2) Click on the Device Manager tab, and then find the Sound, video and game controllers entry.
- 3) Expand the Sound, video and game controllers entry by clicking on the "+" next to it. This will list all of the entries in this category.
- 4) Find the entry appropriate for your Voodoo Graphics card. In this example, we are removing the *Diamond Monster 3D's* device driver.
- 5) Select the correct entry by clicking on it with your mouse, highlight it, then click on Remove.
- 6) The Confirm Device Removal dialog box will appear. Click on OK.
- 7) The device driver has been successfully removed. Close the System Properties window.
- 8) At this time you will also need to remove entries (if any) related to the Voodoo Graphics card from your AUTOEXEC.BAT file. To edit this file, go to the Start menu, then to Run..., type `sysedit` in the text box, then click OK.
- 9) This will bring up the System Configuration Editor, with the AUTOEXEC.BAT file being in the active window. Look for any lines that start with:
 `SET SST_`
 `SET SST96_`
 `SET FX_GLIDE_`
and delete them, as they are not used by your new Wicked3D Vengeance..
- 10) Save your changes by choosing Save from the File menu.
- 11) Close the System Configuration Editor by choosing Exit from the File menu.
- 12) Finally, you will need to shut down your computer by selecting Shut Down... from the Start menu. Turn off your computer. Continue with the next step, **INSTALLING THE HARDWARE**.

INSTALLING THE HARDWARE

WARNING: To avoid the chance of electric shock to yourself, and damage to your computer and components, we strongly recommend disconnecting the power supply cord from both your computer and monitor during the installation process. Also please review the section titled *STATIC ELECTRICITY AND YOUR Wicked3D Vengeance*, found earlier in this manual.

- 1) Turn off your PC, disconnect the power cord, then remove the case, cover, or access panel.
- 2) If you are removing a Voodoo Graphics card, do this now. Disconnect the video pass-through cable and the monitor cable from the outside first. Unscrew and remove the Voodoo Graphics card, noting which slot it was in.
- 3) **For PCI:** Gently but firmly, insert the Wicked3D Vengeance into an empty PCI bus slot until it is fully seated in the slot connector. (If you removed a Voodoo Graphics card, place the Wicked3D in the same slot you took the Voodoo Graphics card out of.)
For AGP: If you have an existing graphics adapter in your AGP slot, remove it. Gently but firmly, insert the Wicked3D Vengeance into the empty AGP slot until it is fully seated in the slot connector.
The Wicked3D Vengeance should not be forced into place. If it does not fit properly, remove it and try again.
- 4) Verify the card is fully seated in the PCI/AGP slot. Secure the Wicked3D Vengeance's bracket to the PC case using the screw or fastener provided with your PC.
- 5) Connect your monitor cable to the VGA connector on the Wicked3D Vengeance's bracket.
- 6) Close your computer's case, reattach the power supply cords, and turn on your PC and monitor. You should see the normal boot display (BIOS message, memory count, etc.). ***If the display is scrambled or blank, or if your system beeps or makes other unusual noises, power down your PC. Verify that the Wicked3D Vengeance and your SVGA 2D graphics card are properly seated in their slots; that the cards are attached to the computer case with screws; and that the pass-through cable and monitor cable are correctly installed and screwed down tight. All connections must be secure.***
- 7) The hardware installation is complete. Proceed by booting into Windows and installing the Wicked3D Vengeance's drivers as outlined in the appropriate section for your operating system.

INSTALLING THE DRIVERS IN WINDOWS 95 / 98 (setupex.exe)

Upon successfully installing the Wicked3D Vengeance hardware, you may use the following installation procedure to install the Wicked3D Vengeance software in Windows 95 or Windows 98.

- 1) Start Windows 95/98. Upon entering the operating system, Windows will detect that new hardware was found.
- 2) If you are operating Windows 98, you will receive a "Add New Hardware Wizard" dialogue box. If you are operating Windows 95, you will receive a "Update Device Driver Wizard" dialogue box. There will be a message telling you that "This wizard searches for new drivers for PCI Multimedia Video Device". Click the Next button and continue to install the VGA drivers.



Figure 1: Add New Hardware dialogue box

- 3) Once in the Windows operating system: From the Start menu, choose Run..., then Browse. Double-click on your CD-ROM drive, then the WIN95 directory, then on SETUPEX.EXE. Once you have been returned to the Run dialog box, click on OK.
Note: If you downloaded the driver as an update, you will need to specify the path where you placed the SETUPEX.EXE file.
- 4) You will receive a popup dialogue box "InstallShield Self-extracting EXE" on title bar. The message reads "This will install Wicked3D Vengeance. Do you wish to continue?" Click the Yes button.

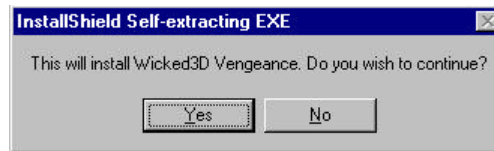


Figure 2: InstallShield Self-extracting EXE

- 5) InstallShield will extract setup files to your hard drive. After doing so, you will receive the "Software License Agreement" dialogue box. Read the Software License Agreement. Click the Yes button to accept the terms and continue the installation procedure. *Note: Clicking the NO button will terminate the setup program.*

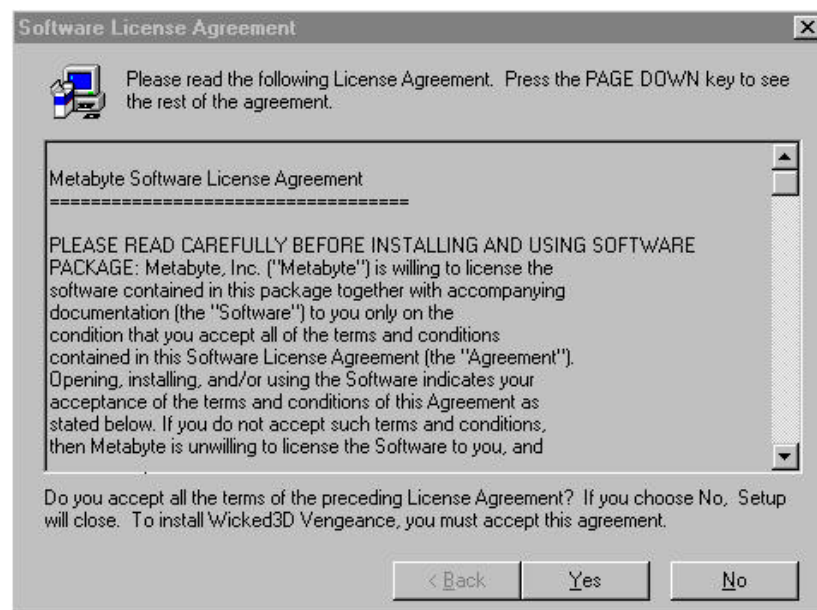


Figure 3: Software License Agreement

- 6) You will then receive a "Medical Warning" dialogue box. Carefully read the WickedVision™ Medical Warning. Click the Yes button to accept the terms and continue the installation procedure.
Note: Clicking the NO button will terminate the setup program.

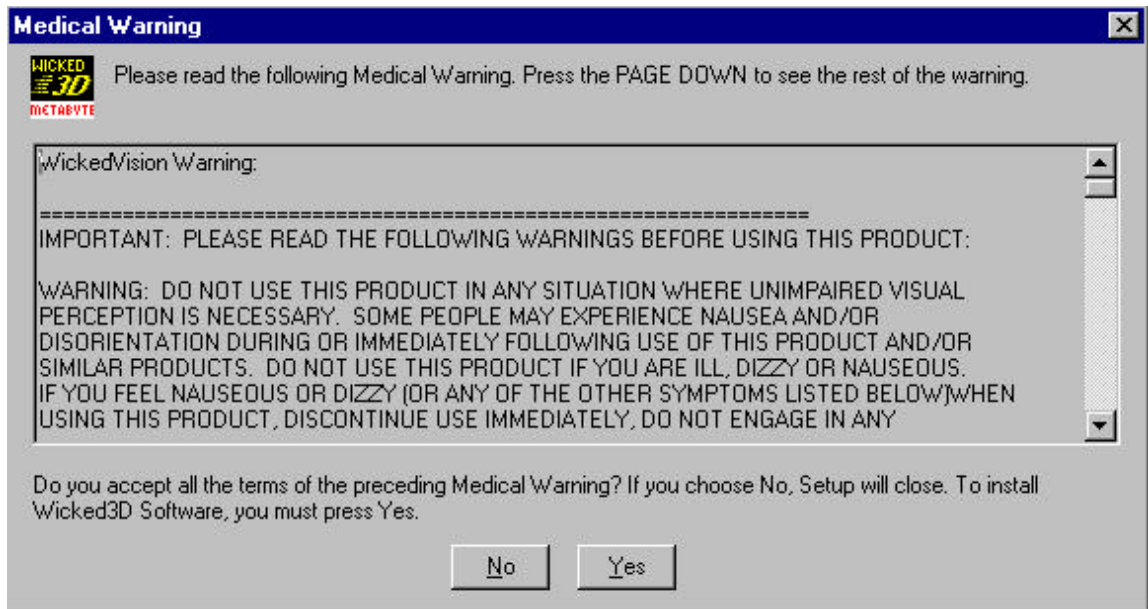


Figure 4: WickedVSION Medical Warning

- 7) You will proceed to the "Wicked3D Setup" dialogue box. The message will inform you that "This Setup program will install the Metabyte Wicked3D Software on your computer." You will be presented with options to install stereoscopic support. Choose the options you wish to install by placing a check mark next to them. *Note: Direct3D stereoscopic support is integrated into the Direct3D driver. Therefore, no option for Direct3D stereoscopic support is available (it's installed automatically!).*

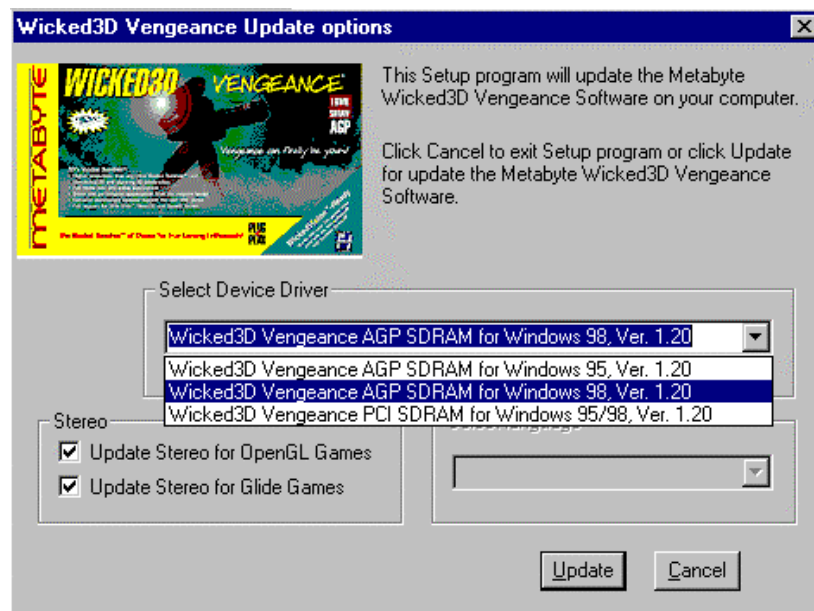


Figure 5: Wicked3D Vengeance Update options

Note: If you receive the following dialog box instead of the box above, please make sure that your Wicked3D Vengeance is securely installed and try the driver installation procedure again. If this continues, please contact Wicked3D for further assistance.

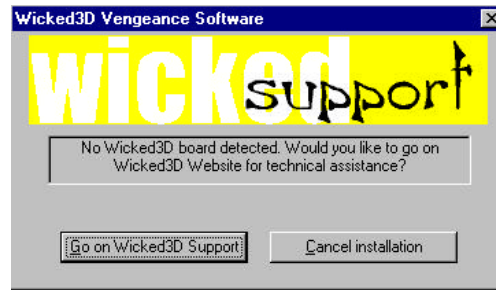


Figure 6: Board detection failure dialogue box

- 8) After making your selections, click the Update button to continue. The setup program will proceed to install the software for the Wicked3D Vengeance card.
- 9) After the necessary files are installed, you will receive a "Setup Complete" dialogue box. You may choose to review the README file for the latest information on the software release. Click the Finish button.

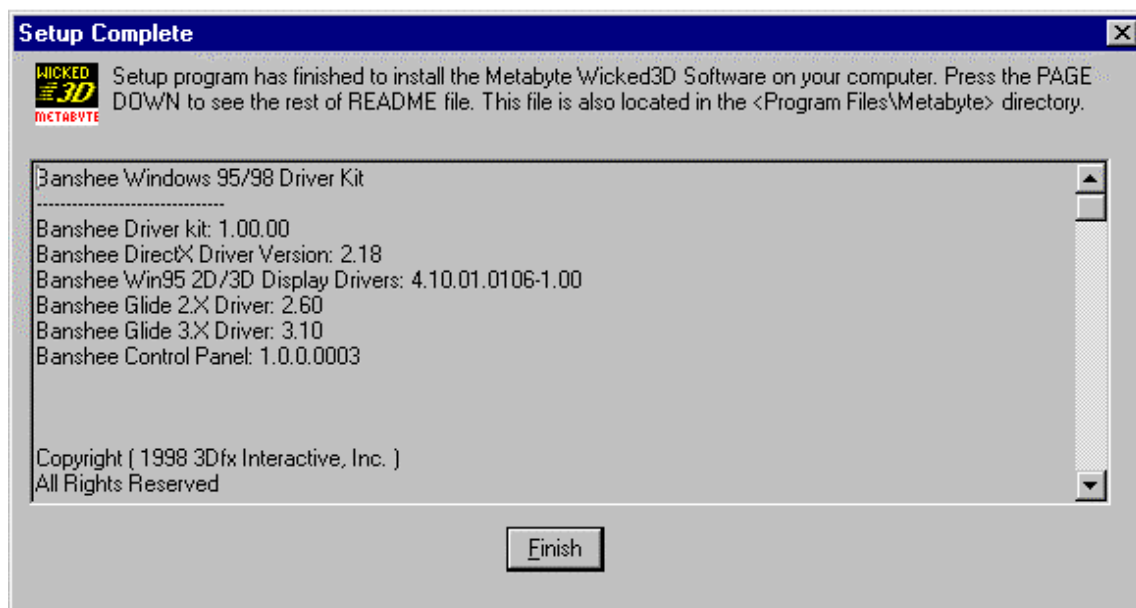


Figure 7: Setup Complete dialogue box with README file

- 10) At this point, you have the option to install the Mindspring Internet Software. If you choose to do so, please follow the onscreen instructions to install. *Note: You must have the Metabyte installation CD if you wish to install the Mindspring Internet Software. Due to it's size, Mindspring Internet Software is not included with driver updates on our website.*



Figure 8: MindSpring software installation prompt

- 11) Reboot your computer for the driver installation to be complete.
- 12) ***Congratulations! You are now ready to experience the ultimate in 2D/3D graphics!***

INSTALLING THE DRIVERS IN WINDOWS NT 4.0

Windows NT 4.0 has neither the plug and play nor Direct3D acceleration features of Windows 95 or Windows 98, so the installation process is a little different. Only the Glide API drivers will be installed, allowing you to play 32-bit games written specifically for the Glide API, in the Windows NT 4.0 operating system. Some Windows 95 games will not run under Windows NT 4.0 due to the use of Windows 95-specific API calls. Please contact the game publisher for more information on using Windows NT. For 2D, Windows NT will fully benefit from the performance of the Wicked3D Vengeance.

The setup program requires the user to be logged in with an account that has Administrator privileges. If an account has insufficient permission, the 3Dfx device services will not be installed.

- 1) Click Start, Control Panel. Double-click on Display.
- 2) Click the settings tab then click "Change"
- 3) Click "Have Disk" and enter the path to the drivers. (i.e. "D:\WINNT\")
- 4) When asked to choose a device, select "Voodoo Banshee"
- 5) You may then be prompted to insert the Windows NT Voodoo Banshee Driver Disk. If so, enter the path to the drivers again.
- 6) Windows NT will copy the drivers.
- 7) Restart your computer to complete the driver installation.
- 8) ***Congratulations! You are now ready to experience the ultimate in 2D/3D graphics!***

QUICKLY!

OK... So you installed everything, and you're on a mission to frag somebody!? Use this section to get everything up and running as fast as possible with the least amount of hassle.

Check these settings in the Wicked3D Vengeance property sheet:

Direct3D

Direct3D/Settings – Select "Force selected video mode". Choose the mode you want to use.

Glide

Glide/Settings – Select the Wicked3D Vengeance Glide driver under Wicked3D Glide2x wrappers.

Glide/Wrapper – Select "Force selected video mode". Choose the mode you want to use.

OpenGL

Before you can use this wrapper, you must copy C:\Program Files\Metabyte\Wicked3D\OpenGL32.DLL to the game directory you wish to use it with. (I.e. C:\QUAKE2\).

OpenGL/Settings – Select "Force selected video mode". Choose the mode you want to use.

I want to use WickedVision ..Now!

Check these settings in the Wicked3D Vengeance property sheet:

WickedVision

WickedVision/WickedVision Settings – It is VERY IMPORTANT to test the mode you want to use. Make sure that the vertical alignment is even. Failing to do this could cause eyestrain.

WickedVision/Keyboard Controls – It is VERY IMPORTANT to set up your hot keys!

Direct3D

Direct3D/Stereo – If you want WickedVision to come on by default, check "Default stereo on"

Glide

Glide/Stereo – Click the "Enable" button to enable stereo.

OpenGL

WickedVision is enabled by default.

Metabyte Wicked3D Display Property Sheet

The Metabyte Wicked3D Display Property Sheet allows you to customize the Metabyte Wicked3D Vengeance boards features for your use. With the availability of Metabyte's Re2Flex technology, you can specify custom resolutions and refresh rates to get the most out of your board/monitor configuration. You may also customize settings for your Direct3D, Glide, and OpenGL applications. If your board is equipped with WickedVision, you can use this page to customize your stereoscopic support.

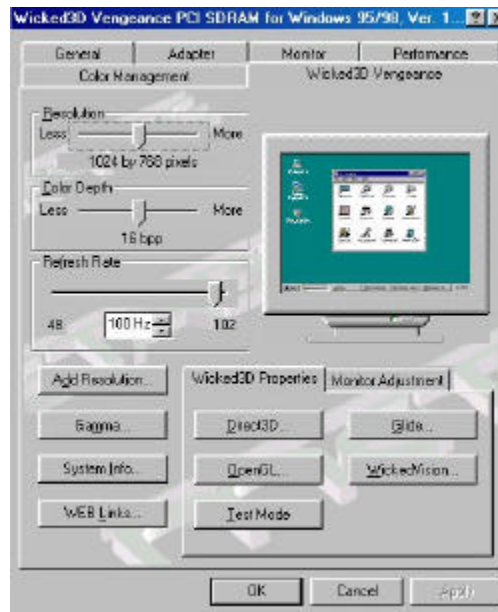


Figure 9: Wicked3D Vengeance display property sheet

Resolution

Resolution is the number of pixels contained on a display. It is expressed in terms of the number of pixels on the horizontal axis and the number on the vertical axis. The Resolution slider bar allows you to set the resolution of your desktop. Your Wicked3D Vengeance card can support resolutions up to 2000x1500 (dependant on monitor's capabilities). If you would like to select a custom resolution, you must first add the desired resolution using the "Add Resolution" button. Please refer to section titled "Add

Color Depth

Color Depth determines the amount of available colors you are able to display. The Color Depth slider bar allows you select the color depth of your desktop (expressed in **bits per pixel**). You may select from the following:

- 8bpp – 256 colors
- 16bpp – 65,536 colors
- 24bpp – 16.7 million colors
- 32bpp – 16.7 million colors

Refresh Rates

Refresh rate refers to how many times per second an image is updated on your monitor screen. In general, the higher the refresh rate, the more ergonomic it is to view. The *Refresh Rate* section in the Metabyte tab allows you to set the optimal refresh rate at the current screen display resolution. Metabyte's Re2Flex technology provides you with complete control over your refresh rate selection, allowing you to adjust the refresh rate in 1Hz increments. Note that the range of available refresh rates (i.e., the minimum and the maximum) adjusts for each given resolution. Re2Flex determines these ranges either by reading the information directly from the monitor or by the information provided by the monitor's .INF file. Please be sure that you have the proper monitor selected for Windows 95/98. You may wish to contact your monitor manufacturer for your monitor's Windows 95/98 .INF file. You may select a refresh rate using any of the following methods:

- Moving the slider bar to the desired refresh rate.
- Typing in the desired refresh rate in the refresh rate window.
- Using the increment and decrement arrow buttons on the side of the refresh rate window.

Custom 3D Refresh Rates

Metabyte's Re2Flex technology also allows you to customize the refresh rates used in your 3D environment. When selecting a resolution using our Direct3D, Glide, or OpenGL wrappers, your refresh rate will be the same as the refresh rate set at the equivalent desktop mode.

Custom Resolution Control Center

One of Re2Flex's most unique and powerful features is the ability to select non-standard resolutions. To access this feature, click on the *Add Resolution* button to bring up the *Custom Resolution Control Center*. This window allows you to select a custom resolution in sixteen pixel increments horizontally and two pixel increments vertically. To change resolution, either highlight the Width value or Height value and type in a new value, or you can click on the arrow keys to adjust the resolution. You may also resize the screen bitmap with your mouse. The values must fit within the ranges specified. These values are determined by the monitor's resolution support. You may obtain resolutions up to 2000x1500, depending on the capabilities of your monitor.

Perform the following procedure to add a custom resolution:

- 1) Click on the Add Resolution button. This will bring you to the Custom Resolution Control Center.
- 2) There are two possible ways to select the resolution.
 - a. Type in the desired width and height values in the Input Desired Resolution. You may also increment and decrement the values using the arrows on the sides of the input windows. *Note: The Wicked3D bitmap will change in size to reflect the values indicated.*
 - b. Place your mouse cursor on the lower right corner of the Wicked3D bitmap. The mouse pointer will change to a diagonal resize cursor. You can resize the bitmap to reflect the desired resolution. *Note: The numbers in the Input Desired Resolution fields will change as you resize this image.*
- 3) When the desired resolution has been reached, select Add. The new resolution will be added to the list of available resolutions. The new resolution will have the word "custom" next to it to indicate it is user specified.
- 4) Click the OK button to return to the main Wicked3D Vengeance property sheet.

You may now select the new mode using the Resolution slider bar. *Note: Modes added are selectable in both 2D and 3D.*

If you would like to remove a custom mode, use the following procedure:

1. Click on the Add Resolution button. This will bring you to the Custom Resolution Control Center.
2. Select the resolution you would like to remove. (*Note: You may NOT remove the predefined modes. Only modes marked "(custom)" may be removed.*)
3. Click on the Delete button.
4. Click the OK button to return to the main Metabyte Wicked3D display property sheet.

Custom 3D Resolutions

The Wicked3D Vengeance utilizes Metabyte's Re2Flex technology that allows you to customize the resolution of your 3D gaming environments as well. As mentioned above, the Custom Resolution Control Center creates customized resolutions for both 2D and 3D. You may use modes up to 1920x1440 (2000x1500 without Z-Buffer) in 3D with the Wicked3D Vengeance.

Warning: *Different monitors have different mode capabilities. Use the Test Mode button to test custom modes before using in actual games.*

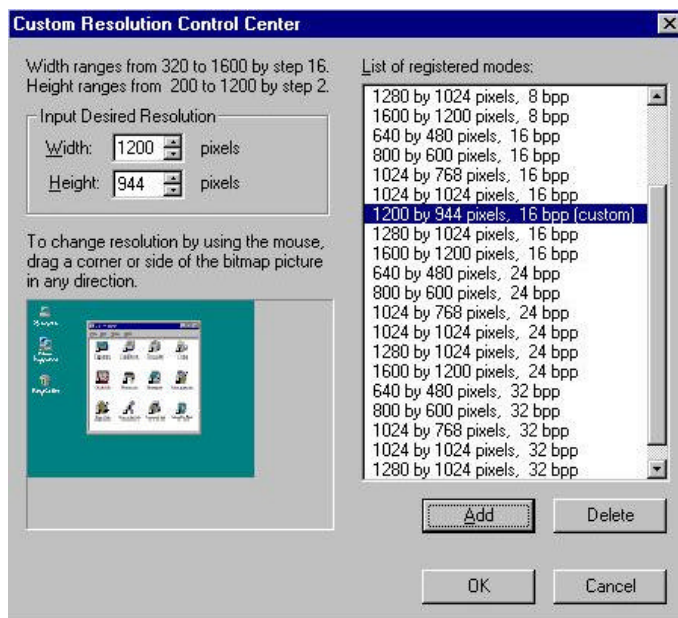


Figure 10: Custom Resolution Control Center

Gamma Correction

Gamma correction controls the overall brightness of an image. You may use the Gamma Correction settings to adjust both desktop and 3D gamma. Red, Green, and Blue gamma settings are linked by default. You may unlink the gamma slider bars by removing the checkmark next to "Link Gamma Sliders". You may then adjust the Red, Green, and Blue gamma settings independently.

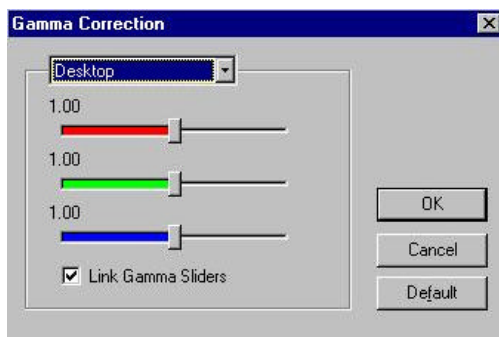


Figure 11: Gama Correction sheet

System Info

This section contains information on your Wicked3D subsystem. This information is especially useful if you experience a technical issue with your Wicked3D Vengeance product. It will help our technical support department determine if your hardware is properly detected, and whether the driver components are current.

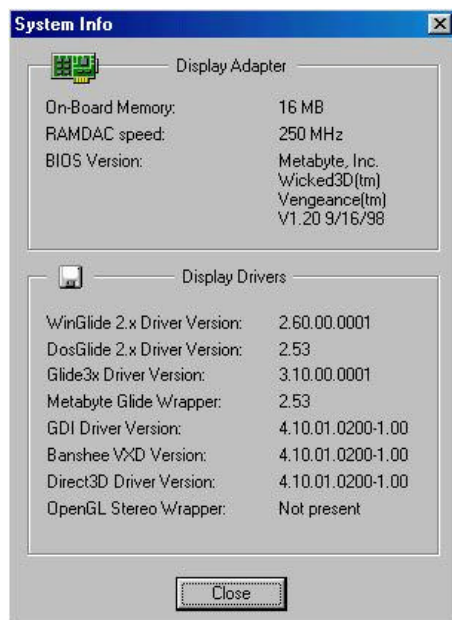


Figure 12: System Info

Metabyte Wicked3D Useful Links

This section contains web site and email addresses for our online resources.



Figure 13: Metabyte Wicked3D Useful Links

Monitor Adjustment

The Re2Flex *Monitor Adjustment* controls allow you to adjust the position and size of the display image without using your monitor's controls. To adjust the position of the screen display, click on the appropriate arrow button to adjust the display up, down, left, or right. To change the size of the screen display, click on the appropriate + or - (plus or minus) button to increase or decrease the horizontal and vertical size of your display. Re2Flex will remember the monitor settings that you have specified for each mode every time you restart your computer. You do not have to make manual adjustments each time. In the event that you do want to reset a particular mode, click on the *Reset* button and your screen image will revert to its default size and position for that particular mode.

Note: Adjusting the position and the size of the screen image may occasionally cause the screen to go blank for up to a couple of seconds. This is a normal result of the video card synchronizing with the monitor.

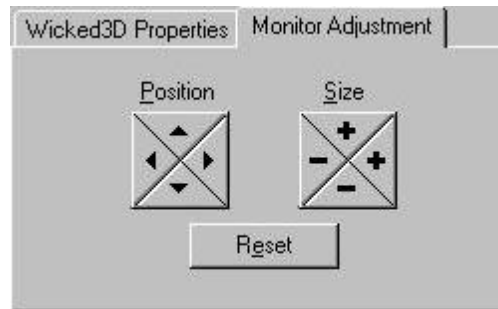


Figure 14: Monitor Adjustment tab

Wicked3D Properties

The Wicked3D Properties tab controls all of the Direct3D, Glide, and OpenGL wrapper function. It also controls the WickedVision properties.



Figure 15: Wicked3D Properties tab

Direct3D Properties

Settings Tab

Direct3D Advanced Options

Allows you to manipulate a couple of 3D features supported by your Wicked3D Vengeance product, which are supported by some (but not all) Direct3D applications.

Enable Anti-Aliasing

Anti-aliasing reduces the "jaggies" in certain game polygons, thereby providing cleaner visuals. Anti-aliasing is enabled by default. Disable this option if you experience problems with your Direct3D applications.

Don't sync buffer swaps to monitor refresh rate

Use this checkbox to allow games to run at the fastest framerate possible, ignoring the limit imposed by the monitor's refresh rate.

Note: When the framerate is faster than the refresh rate, the application data is being updated faster than the monitor is putting it on the screen. In some instances where a lot of data is being processed (i.e. the rendering of lots of polygons and textures in a high-speed environment), your image may have the appearance of "tearing". This is not a driver or board issue; it is a side effect of the application being updated faster than the monitor can refresh the screen.

Video Mode selection

This section allows you to override the resolution selection of your Direct3D applications. Once the Force selected video mode capability is enabled, you must set a hot key to turn on this function in the Keyboard Controls section of WickedVision™ Properties sheet.

Use mode selection in game

When this option is selected, the mode selection is performed in the Direct3D application.

Force selected video mode

When this option is selected resolution override is activated, meaning the mode specified by the Video Mode slider bar will override the mode selected by the Direct3D application.

Video Mode

Allows you to select the mode you wish to use with your Direct3D application. You must select Force selected video mode to use this feature. You must also set a hot key to toggle Resolution override located in the Keyboard Controls section of WickedVision Properties sheet.

Default resolution override On

Sets the mode selected in Video Mode to be applied to all Direct3D applications by default.

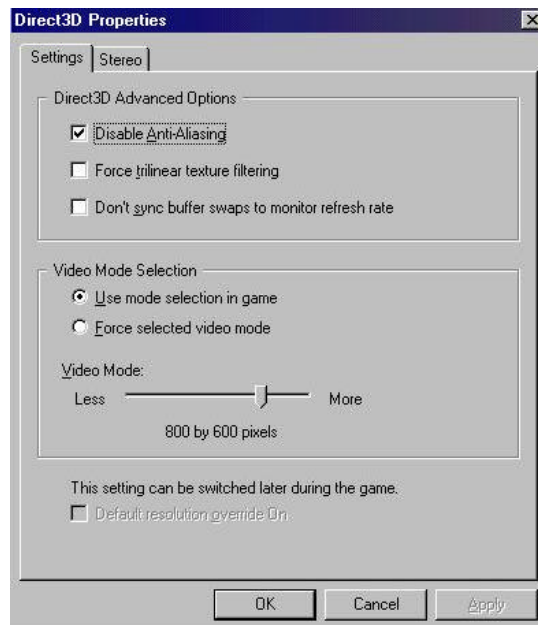


Figure 16: D3D Properties, Settings tab

Stereo Tab

Default Stereo On

Use these radio buttons to select whether or not to enable stereoscopic support by default. Enable stereo support only if you have WickedVision™ Eyewear.

Enable advanced stereo controls

This selection allows you to manipulate the Zero stereo separation distance and Depth Gap Correction settings. These default settings should be fine for most applications.

Zero stereo separation distance

This setting may be used to set the closest point of the closest object to zero stereo separation. An example of when an adjustment may be appropriate would be if the gun or heads up display (HUD) is "sticking out" of the screen, when it should be "inside" the screen. *Note: Do not adjust this setting unless you are sure that the application you are using requires this adjustments.*

2D Objects Detection

Sets the minimum depth coordinate of a 3D object. Objects with a depth coordinate of a lesser value are treated as 2D objects, and are not displayed with stereo separation.

Note: Do not adjust this setting unless you are sure that the application you are using requires this adjustment.

Ignore Partial Clear

The "Partial Clear" function is a 2D instruction that clears a portion of the Direct3D screen to display a separate Direct3D window (i.e. A rear-view mirror in a racing game.) Since this "Partial Clear" is a 2D function, it may not appear correctly in stereo. Ignoring the "partial clear" causes the second Direct 3D image to be overlaid on top of the first, causing the image to appear correctly in stereo.

Note: Do not adjust this setting unless you are sure that the application you are using requires this adjustment.

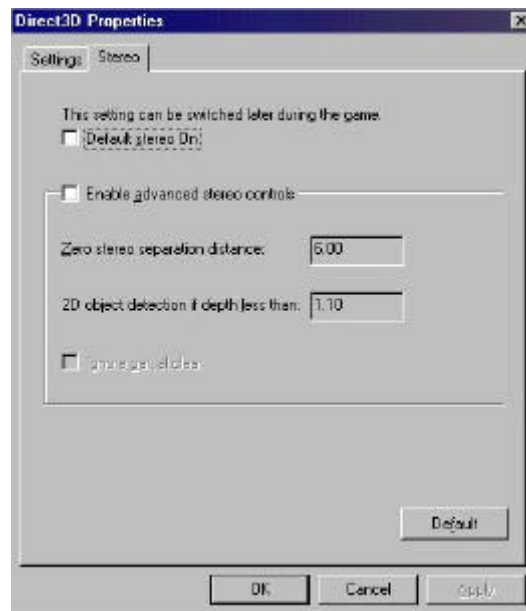


Figure 17: D3D Properties, Stereo tab

Glide Properties

Settings Tab

Original Glide Advanced Options

This section allows you to manipulate specific features within your Glide environment. Not all Glide applications support these features.

Force mipmap dithering

Turns on mipmapping dithering for Glide applications. Can result in higher visual quality.

Limit texture memory to 2MB

Use this checkbox if you experience problems with certain older Glide games.

Force triple color buffering

Enables triple buffering for Glide applications. This can result in a frame rate increase, however some games that expect only double buffering can experience graphics flashing.

Don't sync buffer swaps to monitor refresh rate

Use this checkbox to allow games to run at the fastest framerate possible, ignoring the limit imposed by the monitor's refresh rate.

Note: When the framerate is faster than the refresh rate, the application data is being updated faster than the monitor is putting it on the screen. In some instances where a lot of data is being processed (i.e. the rendering of lots of polygons and textures in a high-speed environment), your image may have the appearance of "tearing". This is not a driver or board issue; it is a side effect of the application being updated faster than the monitor can refresh the screen.

Glide Switch

This field allows you to choose which Glide driver you would like to use. The Wicked3D Vengeance™ installs the 3Dfx reference Glide drivers by default. You may select the Wicked3D Glide wrapper for WickedVision support, switch between Vengeance and Voodoo2, or switch back to the 3Dfx reference Glide driver. The text above the Glide Switch field will state which Glide driver is currently being used. Clicking on the “+” in front of “Wicked3D Glide2X wrappers” will expand the tree to show the Wicked3D drivers. Double-clicking on one of these drivers will select it as the default Glide driver. Likewise, clicking on the “+” in front of “Original Glide2X wrappers” will expand the tree to show the 3Dfx reference drivers. Double-clicking on one of these drivers will select it as the default Glide driver.

NOTE: Once the default Glide driver has been selected, it is still possible to select a different Glide driver for individual games. Simply copy the glide2x.dll or glide3x.dll file into the working directory of the application

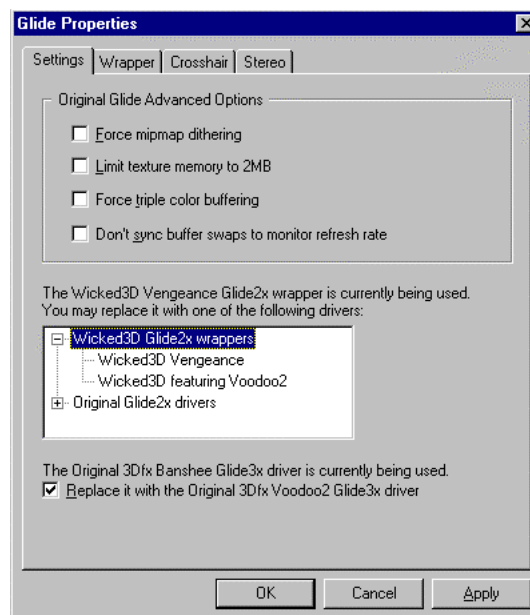


Figure 18: Glide Properties, Settings tab

Wrapper Tab

Video Mode Selection

With Re2Flex, you can override a game's built-in resolution controls, allowing you to run in custom resolutions up to 1920x1440. To enable this feature, select the Force selected video mode radio button and select the desired resolution using the Video Mode slider bar. To use the game's built-in resolution controls, select the Use mode selection in game radio button.

Note: In order to select a custom resolution, you must have added the custom resolution in the Custom Resolution Control Center.

Original Vengeance Glide Path

This section shows you the location of your Original Vengeance Glide driver. It will also allow you to change the path if necessary.

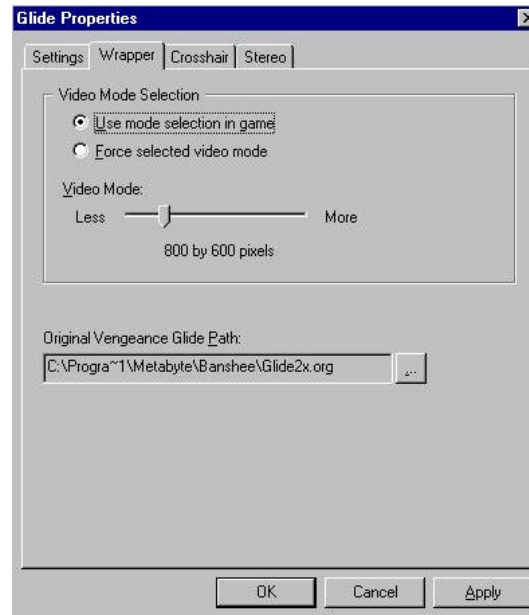


Figure 19: Glide Properties, Wrapper tab

Crosshair Tab

A stereo-correct crosshair as well as a dynamic laser sight has been implemented to provide a unique experience in Glide-based first person shooters.

Note: This feature only works when our "wrapper" is running. If you are playing a game, which DOES NOT require a crosshair (such as a "race car" game,) you need to turn off the crosshair by selecting Off in the Image section of this tab.

Image

Choose Off for use the game's built-in targeting device. Select Cross for a stereo-correct crosshair or Laser for a dynamic laser sight targeting device.

Size

Selects the size of the crosshair or laser sight. Values larger than 100 specify a 3D crosshair that changes its size depending on the distance to the objects being targeted.

Shift X

Use to correct aiming for non-centered gun in first-person shooter type games.

Shift Y

Use to correct aiming for non-centered gun in first-person shooter type games.

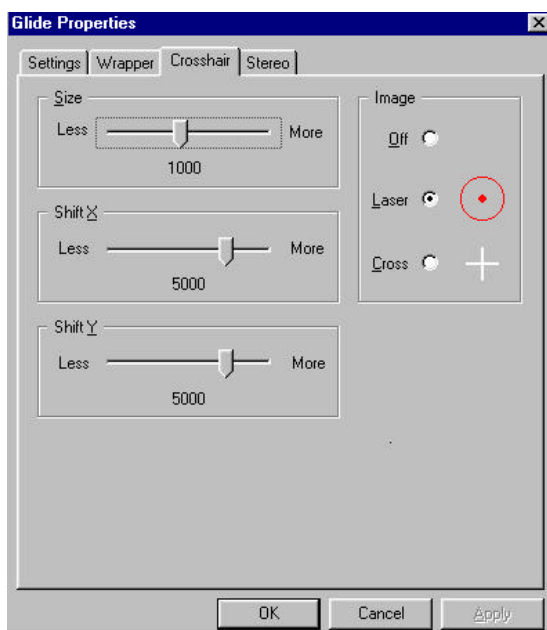


Figure 20: Glide Properties, Crosshair tab

Stereo Tab

Stereo Enabled/Disabled

Use these radio buttons to select whether or not to enable stereo support. Enable stereo support only if you have WickedVision™ Eyewear.

Enable advanced stereo controls

This selection allows you to manipulate the Zero stereo separation distance and Depth Gap Correction settings. These default settings should be fine for most applications.

Zero stereo separation distance

This setting may be used to set the closest point of the closest object to zero stereo separation. An example of when an adjustment may be appropriate would be if the gun or heads up display (HUD) is "sticking out" of the screen, when it should be "inside" the screen. *Note: Do not adjust this setting unless you are sure that the application you are using requires this adjustment.*

Depth Gap Correction

Includes:

- Gap start
- Correction
- Reduced stereo separation

These settings may be used to "compress" distance on a portion of the Z-axis to correct instances where objects are closer or further than they should appear.

Note: Do not adjust these settings unless you are sure that the application you are using requires these adjustments.

2D Objects Detection

Sets the minimum depth coordinate of a 3D object. Objects with a depth coordinate of a lesser value are treated as 2D objects, and are not displayed with stereo separation.

Note: Do not adjust this setting unless you are sure that the application you are using requires this adjustment.

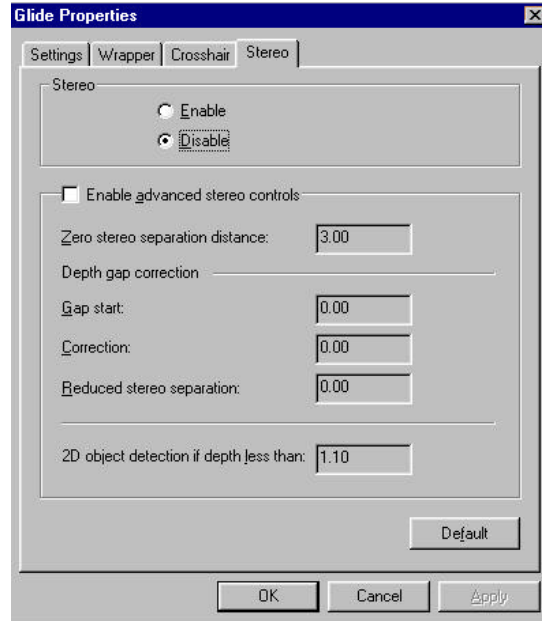


Figure 21: Glide Properties, Stereo tab

OpenGL Properties

Installing the Metabyte OpenGL Wrapper

The Metabyte OpenGL wrapper must be manually installed. In the C:\Program Files\Metabyte\Wicked3D directory, there are 3 files pertaining to OpenGL:

OpenGL32.ORG - Backup copy of the original OpenGL

OpenGL32.WRP - Backup copy of the Metabyte OpenGL Wrapper

OpenGL32.DLL - Metabyte OpenGL Wrapper

To install the Metabyte OpenGL wrapper, copy C:\Program Files\Metabyte\Wicked3D\OpenGL32.DLL to the game directory you wish to use it with. (I.e. C:\QUAKE2\). To reinstate the original version of OpenGL, copy C:\Program Files\Metabyte\Wicked3D\OpenGL32.ORG to your game directory and rename it OpenGL32.DLL.

Settings Tab

Video Mode Selection

With Re2Flex, you can override a game's built-in resolution controls, allowing you to run in custom resolutions up to 1920x1440. To enable this feature, select the Force selected video mode radio button and select the desired resolution using the Video Mode slider bar. To use the game's built-in resolution controls, select the Use mode selection in game radio button.

Note: You must add the desired custom resolutions in the Custom Resolution Control Center prior to their availability in Video Mode Selection.

Additional Gamma Correction

Settings for software gamma correction. Use to change the display brightness of games.

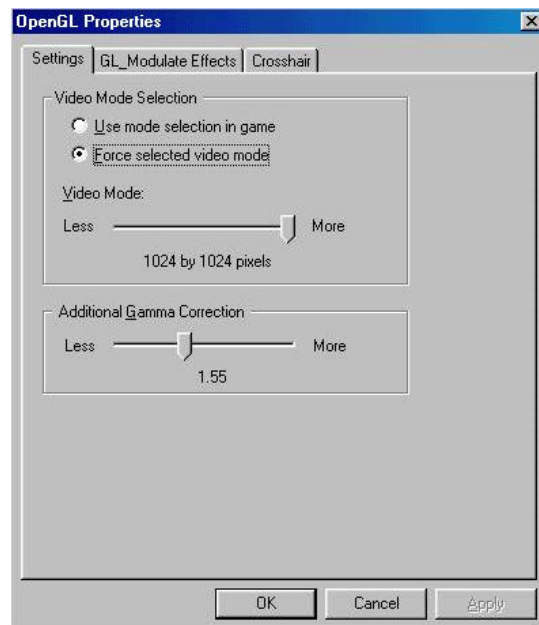


Figure 22: OpenGL Properties, Settings tab

GL Modulate Effects Tab

More Gamma Correction

Use this slider bar to change the brightness of objects in a game. (Can be used to make opponents easier to spot!) Set this value to 1 leaves objects at the same gamma level as the rest of the environment. Setting this value to less than 1 will make objects darker. Setting this value to greater than 1 will make objects brighter.

Animate

Step - Setting this value to anything other than 1 will cause the objects in a game to flash. The greater distance from the value of 1, the greater the amplitude of the flashing effects.

Frequency - Frequency of the animated gamma correction.

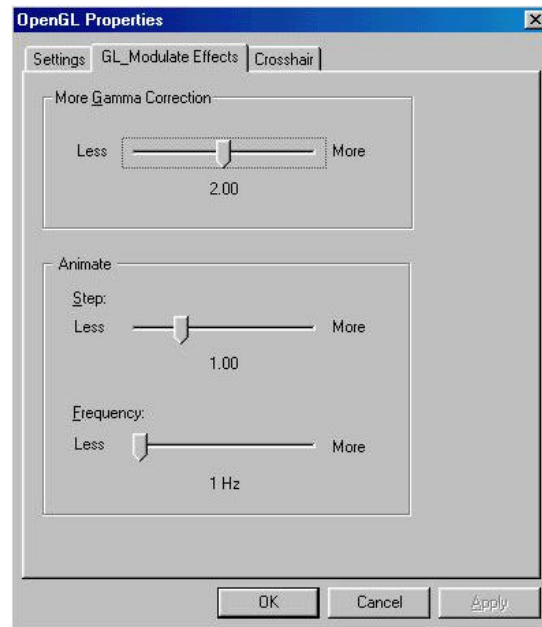


Figure 23: OpenGL Properties, GL_Modulate Effects tab

Crosshair Tab

A stereo-correct crosshair as well as a dynamic laser sight has been implemented to provide a unique experience in GL-based first person shooters.

Note: This feature only works when our "wrapper" is running. If you are playing a game, which DOES NOT require a crosshair (such as a "race car" game,) you need to turn off the crosshair by selecting Off in the Image section of this tab.

Image

Choose Off to use the game's built-in targeting device. Select Cross for a stereo-correct crosshair or Laser for a dynamic laser sight targeting device.

Size

Selects the size of the crosshair or laser sight. Values larger than 100 specify a 3D crosshair that changes its size depending on the distance to the objects being targeted.

Target Highlight

Additional gamma correction for objects being targeted by the crosshair.

Shift X

Use to correct aiming for non-centered gun in first-person shooter type games.

Shift Y

Use to correct aiming for non-centered gun in first-person shooter type games.

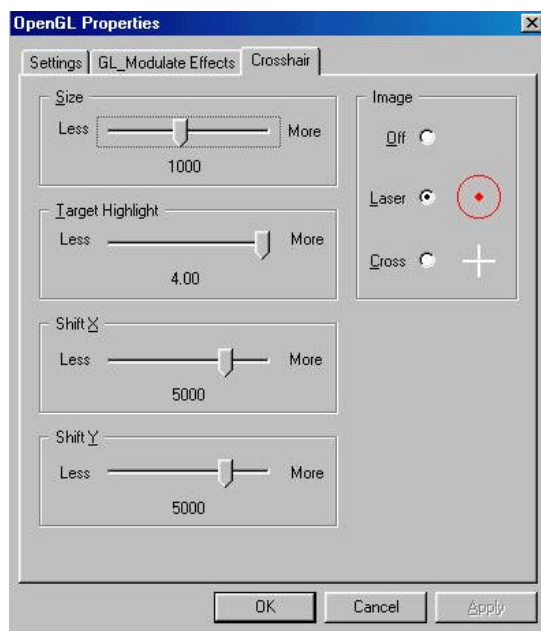


Figure 24: OpenGL Properties, Crosshair tab

WickedVision Settings Tab

Video Mode

Use this slider bar to select the mode that you want to test in stereo. If you want to try custom modes, you must first add the custom mode using the Custom Resolution Control Center. The maximum supported resolution for WickedVision is 1200x1200.

Note: Selecting a resolution using this slider bar will not select the actual resolution for the game. The game resolution is controlled by the Re2Flex slider bar (when enabled).

Monitor Size

Move the slider bar to set the size of your monitor. This setting determines the pixel separation between the left and right eye images. (You can use the dynamic adjustments to fine-tune the settings during gameplay.)

Reduced Stereo Separation

Given the selected monitor size, 100% stereo separation will give the most accurate, ideal stereo image. However, you may find that 100% separation is too much for your eyes, causing you to see double. Use the Reduced Stereo Separation slider bar to reduce the separation to a level that is comfortable to your eyes.

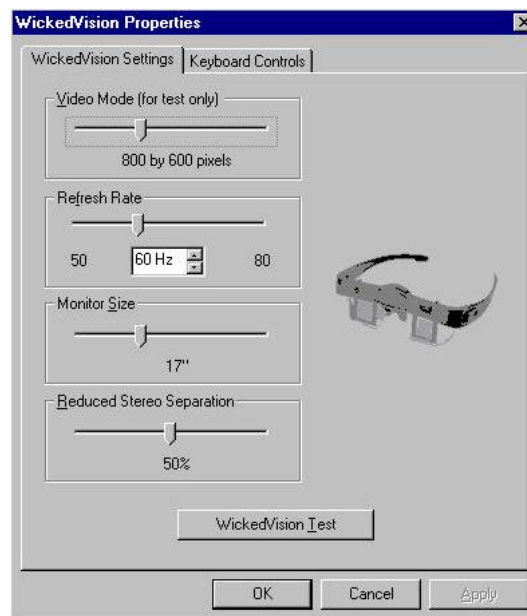


Figure 25: WickedVision™ Properties, WickedVision™ Settings tab

WickedVision™ Test

Use the WickedVision™ Test screen to fine tune your stereo and screen settings. The current mode is displayed on the lower right hand corner of the screen. Use the <U> and <I> keys to adjust the vertical separation so that the text is readable. Use the <O> and <P> keys to adjust the stereo separation to suit your preference. The wider the stereo separation, the more depth you will see. However, if you see "double", reduce the separation to a comfortable amount for your eyes. Use the arrow keys to adjust the position of the screen. Hold down shift and press the arrow keys to change the size of the screen. Press <Enter> or <Z> to save these screen settings. The vertical separation and stereo separation values are saved when you exit the Stereo Test. Press <R> to reset the stereo hardware, in case you see separate top and bottom images. Press <Y> to toggle stereo On/Off.

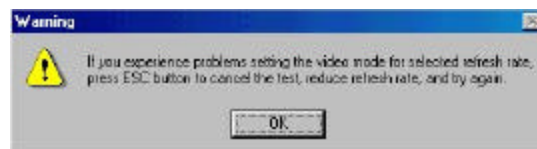


Figure 26: WickedVision™ Test warning



Figure 27: WickedVision™ Test screen

Press <T> to bring up the Depth Perception Test. You should see a row of 5 stars, each progressively "deeper" into the monitor from left to right.

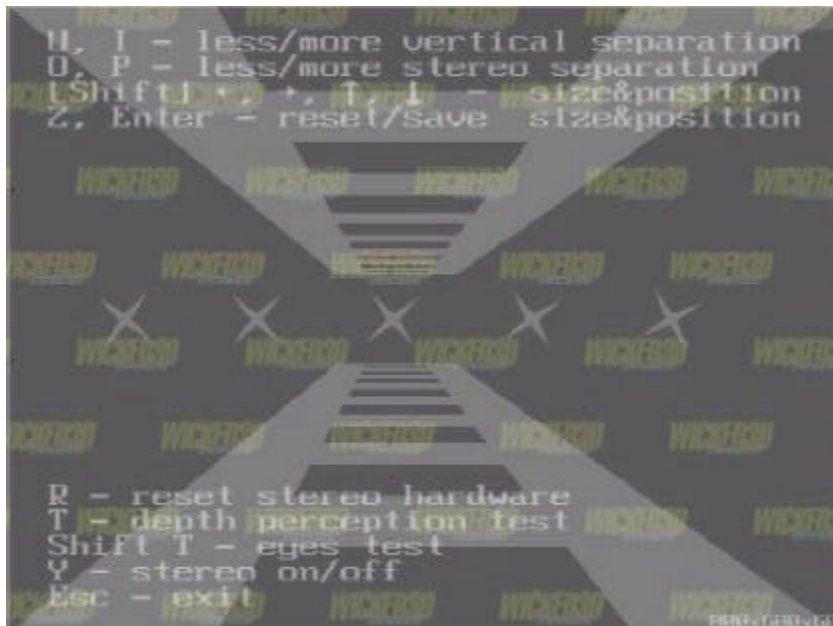


Figure 28: WickedVision™ Depth Perception test

Press <Shift+T> to see the Eyes Test to verify that you can indeed see stereo images. If you can see a square within the middle left side of the larger square, you can see stereo images correctly. There are various reasons why you would not be able to see the square; however, it is best to consult a physician. Press <Shift+T> again to exit the Eyes Test.



Figure 29: WickedVision™ Eye test

Press the <Esc> key to exit the Stereo Test screen. You will receive the following dialogue box warning you to make adjustments to your settings if the video mode was not properly displayed. Using incorrect settings in a 3D game or application may result in a loss of monitor sync, which will leave the screen blank or unreadable.



Figure 30: WickedVision™ Test exit warning

Keyboard Controls Tab

The Keyboard Controls tab allows you to define "hot keys" that will allow you to adjust and reset stereo separation within a game. Select the function for which you want to define a key, and enter the key in the box on the right. Note that you can enter a combination of keys using <Alt>, <Ctrl>, and/or <Shift>. Hold down the modifier key(s) and press the key to be defined. This gives you the ability to configure key combinations, which aren't in use by the game itself.

Reset Stereo

Use this function to reset stereo separation if your monitor stops producing a stereo image (by switching to another windows application, for example).

Less/More Stereo Separation

Use these functions to dynamically reduce/increase the stereo separation within the game.

Less/More Vertical Separation

Use these functions to reduce/increase the vertical separation between the images. The easiest way to correct vertical separation is to align text on the screen so that there is no vertical separation.

Toggle Stereo

Use this to toggle stereo on/off within a game. You can use this function to switch back and forth between stereo and non-stereo to view items that are illegible in stereo. Works only with Direct3D games.

Toggle Separation

Use this function to toggle the stereo separation between none and the amount that you have set. This is useful if the game has small text that is illegible in stereo.

Toggle Resolution Override

Sets a hot key to toggle the resolution override in Direct3D applications. This key takes effect only if Force selected Video Mode is chosen in the **Direct3D Properties**.

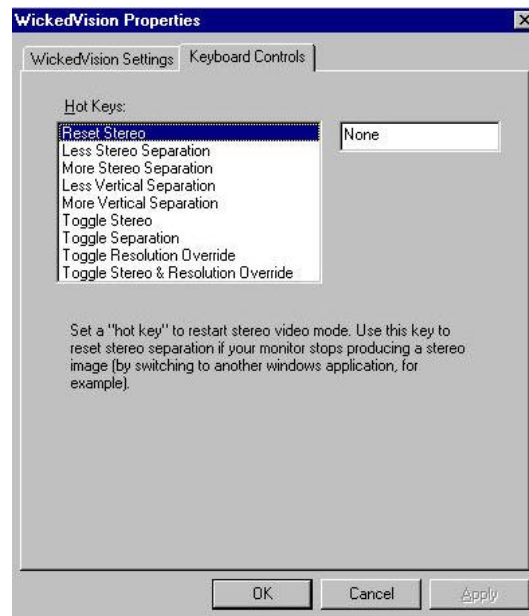


Figure 31: WickedVision™ Properties, Keyboard Controls tab

Testing a 3D Mode

It is important to test a 3D mode prior to attempting to use it in a game. Using the Test Mode feature will assure you the mode is safe to use in your 3D environment. To test a mode, select the desired resolution and refresh rate using the slider bars. Then select the Test Mode button. When you click the Test Mode button, you will get the following dialogue box:

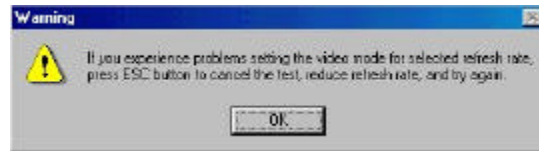


Figure 32: Test Mode warning dialogue box

After clicking OK, you should get a screen, which the letters spelling "Wicked3D" will float around. The mode you are testing will appear at the bottom right corner of the test screen. If the mode is not centered, we recommend you use your monitor controls to adjust the image. If your monitor does not have this capability, you may use the software controls provided in the test screen to adjust the image.

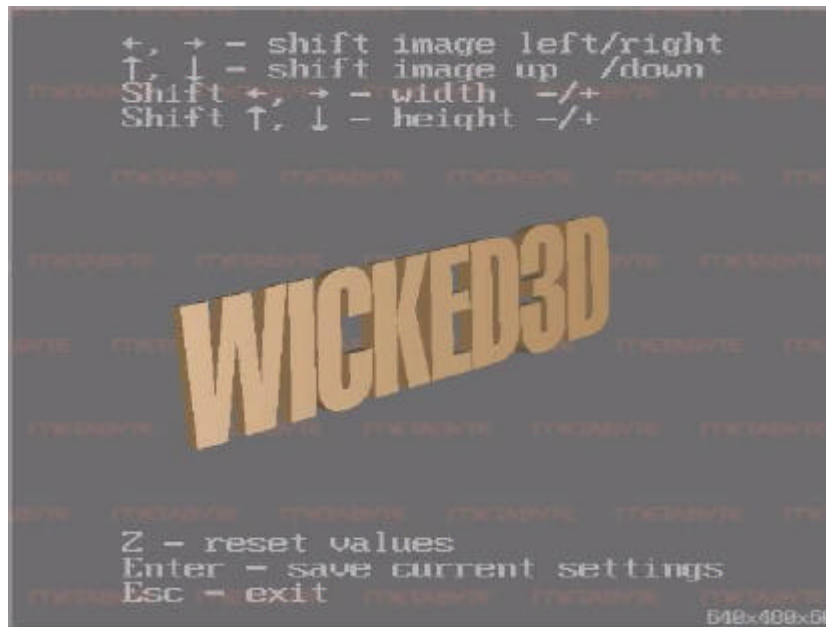


Figure 33: Test Mode screen.

Once you have verified the desired mode works correctly, hit the <Esc> key. If the mode does not display properly, lower the refresh rate and try the test again.

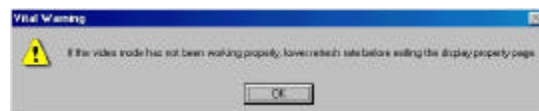


Figure 34: Test Mode exit warning

Stereo Configuration Files (for WickedVision only!)

Your Metabyte software contains customized stereo configuration files for a variety of games. These stereo configuration files are stored in an archive file named STERCFG.ZIP. Extracting the contents of this file will create a directory name STEREO.CFG\, and subdirectories within STEREO.CFG for each game title with a customized stereo configuration file. Each of these subdirectories will consist of a READ.ME file and a STEREO.CFG file. The READ.ME file contains information on the function of the STEREO.CFG file. The STEREO.CFG file is to be copied into the game directory of the corresponding game.

Note: Not all games require a STEREO.CFG file. However, if a STEREO.CFG file is not found when WickedVision is activated, you will receive a warning message. Simply press <C> to continue.

TECHNICAL INFORMATION

Jumper Settings

- There are no jumpers on the board

I/O Ports And Memory Locations

Memory-mapped Address Space

- xx000000-xx3FFFFFFF
- xx400000-xx7FFFFFFF
- xx800000-xxFFFFFFF

Note: These memory addresses are assigned by Windows when installing the drivers and cannot be changed.

ROM BIOS

- A000-C7FF

I/O Locations

- There are no I/O addresses used by the board

General Hardware Information

Chipset

- 3Dfx Interactive Voodoo Banshee Graphics
- 1 Pixelfx² chip
- 1 Texelfx² chips

Memory

- 25ns (100MHz) EDO DRAM

Connectors

- 15 pin (female) VGA OUT connector
- 40 pin (female) VMI connector
- 26 pin (male) feature connector

Bus

- PCI 2.1 compliant

Or

- AGP 1X

3D FEATURES

3D Rendering Features

- Triangle-based raster engine with Gouraud shading
- 16-bit integer and floating-point Z-buffering with biasing
- Full hardware setup of triangle parameters
- Automatic back-face culling
- Support for multi-triangle strips and fans
- Transparency and chroma-key with dedicated color mask
- Alpha blending on source and destination pixels
- Sub-pixel and sub-texel correction to 0.4 x 0.4 resolution
- 24-bit color dithering to native 16-bit RGB buffer using a 4x4 or 2x2 ordered dither matrix
- Per-pixel atmospheric fog and haze effects
- Polygon-edge anti-aliasing

3D Texture Mapping Features

- Perspective-corrected (divide-per-pixel) 3D texture mapping
- Texture mapping and filtering through point-sampled, bilinear, trilinear, and MIP mapped filters
- RGB modulation/addition/blending combines texture and shading data
- Texture compositing for multi-texture special effects
- Supports 14 input formats for texture maps
- 8-bit palette textures with full-speed bilinear filtering
- Texture compression through proprietary narrow-channel YAB format
- Per-pixel level-of-detail (LOD) MIP mapping with biasing and clamping

Wicked3D Mailing List

Do you wish to be automatically notified of software updates and other important information pertaining to your Metabyte Wicked3D Vengeance? If so, you can subscribe to the Metabyte Wicked3D Vengeance mailing list. To subscribe, send an email to majordomo@wicked3d.com. No subject is required, just place the following text in the body of the message:

subscribe vengeance

You will receive a message confirming your subscription to the list. If you do not receive this confirmation message, please contact support@wicked3d.com for assistance.

RETURN MERCHANDISE AND SERVICE

If you suspect that there is a defect in the material or workmanship of this PRODUCT, you should contact the person or company from which you purchased it. That person or company may be able to solve the problem and if not, will be able to contact us for technical assistance or repair. If it is determined that the PRODUCT must be returned to METABYTE, INC. for repair or replacement, a Return Merchandise Authorization (RMA) number must be obtained from METABYTE'S Technical Support Department before it is returned. Each returned item must have a separate RMA number.

The following rules apply to all returned items:

1. The PRODUCT must be returned **with the original invoice** either in its original packaging or in other packaging which is appropriate for the PRODUCT and the manner of shipment, and the RMA number must be displayed prominently on the outside of each such package.
2. If a PRODUCT is determined to be ineligible for warranty service, the customer will be notified before any further action is taken with the PRODUCT.
3. METABYTE, INC. will not be responsible for any loss or damage to property shipped with the RMA PRODUCT not originally sold by METABYTE, INC. (e.g., coprocessor chips, peripheral boards, memory modules, enclosures, power supplies or any other accessories or attached items.).
4. Any item returned to METABYTE, INC. without a valid RMA number will be returned to the shipper.

Products shipped to METABYTE, INC. must be shipped or mailed at the shipper's risk, with freight prepaid to the appropriate address below.

Mailing and Shipping Address

United States, Canada and International Returns:

Europe:

Metabyte, Inc.
The Wicked3D Board Company
39350 Civic Center Drive
Suite #200
Fremont, CA 94538
<http://www.wicked3d.com>

Metabyte, Inc.
European Service Center
Unit 4, Shannon Industrial Estate
Shannon, Co. Clare
Republic of Ireland

Technical Support

Technical support, to assist you in resolving problems with METABYTE products, is now available through METABYTE'S Technical Support Department.

In the U.S.A., the Technical Support Department can be reached by telephone by

Phone: (510) 494-9700 , Fax: (510) 494-9167.

Current hours of operation are from 8:00 A.M. through 5:00 P.M. Pacific Standard Time (PST), Monday through Friday, excluding holidays. Email: support@wicked3d.com

In Europe, the Technical Support Department can be reached by telephone by phone. (Please visit our website for local technical support Phone numbers)

Current hours of operation are from 8:00 A.M. through 5:00 P.M. Greenwich Mean Time (GMT), Monday through Friday, excluding holidays. Email: metabyte@pie.ie

METABYTE, INC. will make reasonable efforts to address compatibility problems, which may arise with respect to the third party products, but should not be responsible for the compatibility of its products with the products of any third party. Customers are advised to verify each product's compatibility with their installation before committing to any particular procurement plan.