Wicked3D™ eyeSCREAM™

Stereoscopic Eyewear System

USER GUIDE

ES 11-10-98 WAM

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FCC COMPLIANCE STATEMENT

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. The use of shielded cables for connection of the monitor to the card is required to meet FCC requirements. **Note:** This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. If this equipment causes harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna. 2. Increase the separation between the equipment and receiver. 3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. 4. Consult the dealer or an experienced radio/TV technician for help.

The user is advised that any equipment changes or modifications not expressly approved by the party responsible for compliance would void the compliance to FCC regulations and therefore, the user's authority to operate the equipment.

Notice for Canada: This device complies with the Class "B" limits for radio interference as specified in the Canadian Department of Communications Radio Interference Regulations.

Compliance: This product conforms to the following Council Directive:
Directive 89/336/EEC, 92/31/EEC (EMC)

12-MONTH LIMITED WARRANTY

Thank you for purchasing this product for your computer system. In addition to this high-quality product, your purchase entitles you to the warranty coverage set forth herein. In order to provide this warranty coverage, we must have the warranty registration completed and returned to us within 15 days of your purchase. Also, in order for us to provide you the highest level of service, we must know where you purchased your product.

If at any time during the 12-month period immediately following the date of original purchase of the product enclosed herewith (the "PRODUCT") you discover one or more defects in the material or workmanship, METABYTE will repair or at METABYTE'S sole option, replace the PRODUCT. If the PRODUCT fails to operate at any time within seven days after the date of its original purchase, it will be replaced by METABYTE. Such repair or replacement will be your sole remedy against METABYTE and **METABYTE'S only liability to you, for any failure or malfunctions of the PRODUCT. The warranty set forth in this paragraph will be void if:**

1. The PRODUCT has been installed in an improper manner or in an improper operating environment
2. The PRODUCT has been modified or repaired by any party other than METABYTE or a METABYTE factory authorized service center.
3. The PRODUCT has been damaged

Some products will have a Warranty Expiration date label affixed to the product itself. When present, the warranty period will extend through the last day of the month indicated.

This warranty will not apply to, and METABYTE provides no warranty for, any BIOS software, ROM-based firmware or any other product developed or manufactured by any third party, whether included with this PRODUCT or not. Such warranty or any other warranties as are provided by third parties, to the extent permitted thereby, shall be made available, and are hereby assigned, by METABYTE to the purchaser of this PRODUCT.

If METABYTE issues a revision to software included with this PRODUCT within 30 days of your purchase, METABYTE will replace such firmware at no charge except handling fees.

Out Of Warranty Service

Products which are ineligible for warranty service may be serviced by METABYTE according to our standard price list, as modified from time to time. A current copy of the standard price list is available from the Technical Support Department.

LIMITATION OF LIABILITY

METABYTE'S liability arising from the sale, use and disposition of this PRODUCT shall in no event exceed the amount paid to METABYTE for this PRODUCT. METABYTE assumes no liability for damages arising from the use or failure of any product. The WARRANTY DESCRIBED ABOVE CONSTITUTES THE ONLY WARRANTY MADE BY METABYTE. METABYTE EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES OF ANY KIND WHATSOEVER, WHETHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANT ABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY EXPRESSLY EXCLUDED. IN NO EVENT WILL METABYTE BE LIABLE FOR INCIDENTAL, ECONOMIC, PUNITIVE, SPECIAL OR CONSEQUENTIAL DAMAGES (INCLUDING WITHOUT LIMITATION LOSS OF DATA, USE OR INCOME), EVEN IF ADVISED OF SUCH DAMAGES IN ADVANCE. Your sole remedies shall be as provided herein.

SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THAT EXCLUSIONS OF LIMITATION MAY NOT APPLY TO YOU.

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IF YOU NEVER READ MANUALS, READ THIS!

The eyeSCREAM™ Stereoscopic Eyewear System is designed to give you a very high quality, comfortable visual experience. You should not experience any discomfort whatsoever when using this product with the appropriate games. If you don't read anything else in this manual, please read the section on "Adjustments for the Maximum Visual Experience," to ensure that your experience is everything you're hoping for!

INTRODUCTION

Congratulations on your purchase of the eyeSCREAM™ Stereoscopic Eyewear System. You have joined a growing community of PC enthusiasts, who have demanded and found the ultimate PC gaming experience. The Wicked3D eyeSCREAM Stereoscopic Eyewear System will allow you experience truly immersive gaming with near universal 3D stereoscopic support. In addition, you will reap the benefits of Metabyte's awesome driver technology for use with your eyeSCREAM-Ready product. Features such as Metabyte's Re2Flex and Resolution Override technologies will give you flexibility in your gaming environment even when you are not using eyeSCREAM's stereoscopic support!

What does eyeSCREAM consist of?
- Wicked3D eyeSCREAM™ Eyewear
- Wicked3D eyeSCREAM™ Transmitter
- Wicked3D eyeSCREAM™ Adapter
- CR-2032 battery (included with Wicked3D eyeSCREAM™ Eyewear)
- 9 volt power adapter
- Wicked3D eyeSCREAM™ Installation CD

System Requirements

The following are the minimum system requirements for the use of this System:

- 3D-accelerator card, such as the Wicked3D featuring Voodoo^2, or other compatible 3Dfx Voodoo^2 – based product.

- Software that works with the eyeSCREAM Stereoscopic Eyewear System, such as eyeSCREAM™-rated games (see http://www.wicked3d.com for list of games).

- Multiscan monitor capable of at least 100Hz vertical refresh frequency

- Pentium 90 MHz or 100% compatible

- 8MB System Memory

- Windows 9x

THE eyeSCREAM EYEWEAR

Your eyeSCREAM Eyewear takes advantage of the latest advancements in electronics and optics to provide a lightweight, high-quality imaging system. The Eyewear contains high quality liquid crystal lenses which, when properly cared for, will deliver endless hours of viewing.

- The Eyewear fits most head sizes and can be worn over most prescription eyeglasses.

- The Eyewear turns on automatically when you place them on your head, and turn off automatically when removed.

- The Eyewear communicates with the Transmitter via infrared light signals similar to those used by your TV remote control. In order to work properly, a clean line of sight must be provided continuously between the Eyewear and the Transmitter.

- To ensure comfortable viewing for all types of individuals, the lens spacing on the Eyewear can be adjusted. Use the slides located on the bridge of the Eyewear to set the spacing of the lenses so that the edges do not obstruct your view of the monitor.

- The Eyewear is designed so that the temples and small shield attached to the center of the Eyewear are removable. They can easily be reattached if necessary. Reattach the shield by placing the tab on the top of the shield into the hole on the bridge of the Eyewear. The "hook" on the shield then easily clicks into place. Note: The "hook" should not be inserted into the hole on the bridge of the Eyewear.

Eyewear Operation Test

A useful test of proper operation of the Eyewear and batteries is to hold them by the temple pieces, flex the temples outward and hold for a few seconds. After releasing the temple pieces, watch to see if the right lens turns momentarily black, then fades to clear again. If so, your Eyewear is most likely operating properly.

Eyewear Care

The Eyewear uses optical-quality lenses that should be treated like any other high quality eyeglasses. You should handle your Eyewear carefully to minimize scratches, which reduce the quality of the visual experience. The plastic packaging that came with your Eyewear should be used for storage and protection of the Eyewear.

Soft clothes are ideal for cleaning your Eyewear. As an alternative, you can use a clean, soft, lightly dampened cloth and a mixture of 50% rubbing alcohol and water to clean the lenses. **Do not** use household cleaners or paper towels or similar products on your Eyewear, as these can ruin the surface of the lenses.

Never immerse your Eyewear in water or rinse them under a faucet or you risk damaging the electronics.

Battery Replacement

Your Eyewear will operate for up to 200 hours before the batteries need to be replaced. If the Eyewear begin to operate unreliably (e.g. lenses turn black or flutter during operation) or will only work at close distances, it may be due to low batteries. If you are unsure if the batteries need to be replaced, use the Operation Test (above). You can purchase battery replacements at most stores. The batteries in your Eyewear are CR-2032. Always replace batteries in pairs to insure best operating results.

To replace the batteries, remove the battery compartment door and carefully remove the batteries. Place the replacement batteries in the compartment one at a time with the (+) side face up. Both batteries should be firmly but comfortably seated within the compartment and the battery door placed back in its original position.
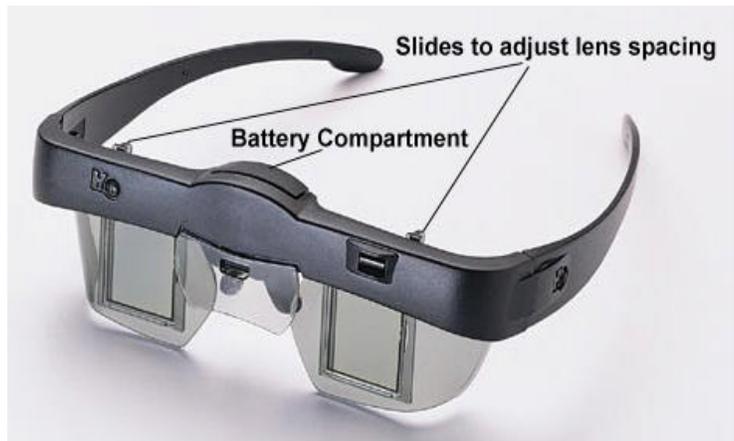
Eyewear Specifications

Temperature:	Operating:	50 to 80°F (10 to 27°C)	Humidity:	10 to 90% RH (non condensing)
	Storage:	14 to 113°F (-10 to 45°C)		5 to 95% RH

THE eyeSCREAM TRANSMITTER

The eyeSCREAM Transmitter plugs into the eyeSCREAM Adapter, which automatically activates it. The Transmitter receives instructions from the Adapter and communicates to the Eyewear via Infrared LED's located on the front surface of the Transmitter.

Near/Far Settings

The Transmitter has two settings, "Near" and "Far" which control the distance at which the Eyewear can reliably sense the signal. Normally, you should leave the Transmitter set at "Far" for a maximum viewing distance of about 20 feet (6 meters). However, if two Transmitters are working in close proximity, it may be necessary to set the Transmitter to "Near" operation (max 10 feet / 3 meters viewing distance) to avoid interference between the two signals.

THE eyeSCREAM ADAPTER

Once plugged in, the Adapter is automatically activated and communicates with the Transmitter. The Adapter must always be plugged in so that it can properly pass through the video signal at all times. The Adapter will not interfere with the monitor signal being sent by your PC under normal operation.

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INSTALLING THE HARDWARE

Note: To avoid the chance of electric shock to you and damage to your computer and components, we strongly recommend disconnecting the power supply cord from your computer during the installation process.

1. As a precaution to protect your PC and the hardware, shut down your system and turn off the power to your computer before beginning installation.

2. Locate the VGA cable that leads from your monitor to your PC and disconnect the end attached to the VGA port on your card. Next, connect the "male" end of the eyeSCREAM Adapter to the VGA output of your computer, then re-attach the monitor cable to the eyeSCREAM Adapter.

   NOTE: The eyeSCREAM Adapter should be attached to the VGA port that goes to your monitor. In the case of 3Dfx Voodoo^2-baseed products, it should not be connected to your 2D card, which should be attached to your 3D accelerator using the pass-through cable as normal.

3. Attach the power cord plug into a standard power outlet or power strip.

4. Attach the eyeSCREAM Transmitter cable to the eyeSCREAM Adapter.

5. Place the eyeSCREAM Transmitter on top of your monitor or, if you prefer, another flat surface in the vicinity of the monitor. There must be a direct line of sight between the eyeSCREAM Transmitter and the eyeSCREAM Eyewear while viewing the monitor. This is because the eyeSCREAM Transmitter sends an infrared signal into the room, which is picked up by the eyeSCREAM Eyewear. You can use the retractable stand on the bottom of the transmitter to adjust the angle at which the Transmitter sits.

INSTALLING THE SOFTWARE

Upon successfully installing the Wicked3D eyeSCREAM hardware, you may use the following installation procedure to install the Wicked3D eyeSCREAM software in Windows 95 or Windows 98. ***Note: Installing these drivers will replace your current 3D graphics card drivers. This is required for full eyeSCREAM software functionality.***

1) Start Windows 95/98.

2) Once in the Windows operating system: From the Start menu, choose Run…, then Browse. Double-click on your CD-ROM drive, then the WIN9x 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.

3) You will receive a popup dialogue box "InstallShield Self-extracting EXE" on title bar. The message reads "This will install Wicked3D eyeSCREAM. Do you wish to continue?" Click the Yes button.

4) 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.

5) You will then receive a "Medical Warning" dialogue box. Carefully Read the eyeSCREAM™ 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.

6) 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!).*

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7) After making your selections, click the Install button to continue. The setup program will proceed to install the software for the Wicked3D eyeSCREAM product.

8) 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.

9) Reboot your computer for the driver installation to be complete.

10) ***Congratulations! You are now ready to experience the ultimate in 3D gaming!***

GET ME GOING… 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.

I want my games to use the Wicked3D Direct3D, Glide, and OpenGL wrappers… Now!

Check these settings in the Wicked3D eyeSCREAM display property sheet:

Direct3D

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

Glide

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

Glide/Wrapper –   Select "Use Glide Wrapper for Glide games".

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 eyeSCREAM stereoscopic support… Now!

Check these settings in the Wicked3D eyeSCREAM display property sheet:

eyeSCREAM

eyeSCREAM/eyeSCREAM 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.

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

Direct3D

Direct3D/Stereo – If *you want* eyeSCREAM stereoscopic support to be on by default, check "Default stereo on"

Glide

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

OpenGL

eyeSCREAM stereoscopic support is enabled by default.

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ADJUSTMENTS FOR THE MAXIMUM VISUAL EXPERIENCE

The following are some of the areas where you can make adjustments to ensure the most comfortable viewing:

Vertical Separation

It is imperative that there is no vertical separation for maximum visual comfort. Having even a small amount of vertical separation can cause eyestrain over a period of time. Since vertical separation may change as you use different modes, please be sure to make adjustments for each mode you intend to use. This can be accomplished using the eyeSCREAM test mechanism described in the "eyeSCREAM Test" section on page 19. We also recommend setting hotkeys to control vertical separation, as described on page 21 in the section "Keyboard Controls Tab".

Stereo Image Separation

We know it looks really cool when the visual depth on your game is cranked up, but please be aware that this can strain your eyes if you turn up the depth too high. If you are experiencing eyestrain, it may be due to your exercising your eye muscles a little too strenuously. Take it easy and decrease the visual depth, using the settings in the eyeSCREAM display property sheet as described on Page 21 in the section named eyeSCREAM^{TM} Settings Tab …

Ambient lighting

As with any application, anything you can do to reduce screen glare reduces eyestrain. Dim the lighting in the room, and make sure there is no light shining directly on your monitor screen.

Monitor settings

- Adjust brightness: Since the eyeSCREAM Eyewear uses liquid crystal lenses, which include polarizers, some of the light from your monitor does not reach your eye. You can easily remedy this by adjusting the brightness setting on your monitor and/or in your game. If brightness is too high you'll see ghosting (see below). If brightness is too low, you won't get the visual effect you want. (Note: GLQuake ignores this setting, so you may need to modify the gamma values, using the Gamma button in the eyeSCREAM display property sheet.)

- Increase your contrast.

Resolution/Refresh Rate

The higher your resolution and the higher your refresh rate, the better the visual experience. We recommend that you keep your game at the highest resolution possible, while still running your game at least 100Hz (50 Hz per eye).

Image Ghosting

Because some monitors' phosphor glows a very long time, a "ghost" or partial image from the other eye may be visible, especially with colors that include some amount of green. Adjust the brightness of your monitor to minimize this, and dim the room lighting.

Viewing Comfort

Under normal operating conditions, the eyeSCREAM Stereoscopic Eyewear System is perfectly safe to use for any duration you would normally view your PC monitor. However, some people may experience discomfort. You can avert much of this discomfort by adjusting the items listed above (ambient lighting, monitor settings, and separation settings). If these items are properly adjusted, and you still experience discomfort, it could signal operating problems with the hardware, software and/or a physical problem with your visual system.

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METABYTE WICKED 3D eyeSCREAM DISPLAY PROPERTY SHEET

The Metabyte Wicked3D eyeSCREAM Display Property Sheet allows you to customize the Metabyte Wicked3D eyeSCREAM product 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. You also use this page to customize your stereoscopic support.

RE2FLEX

Metabyte's Re2Flex technology gives you complete control over your gaming resolutions and refresh rates in compatible Direct3D, QuakeGL, and Glide titles.   (Note: Not all Direct3D titles allow for custom resolutions and refresh rates). The Re2Flex section of the Metabyte Wicked3D Display Properties Tab allows you to adjust your gaming environment.

Custom Resolutions

Metabyte's Re2Flex technology allows you to customize the resolution of your 3D environment in increments of 1 pixel vertical and 1 pixel horizontal (providing your 3D application is capable of accepting a custom mode). The range of selectable modes starts at 320x200. You may select up to 1024x672 with one 3Dfx Voodoo^2 based product, and 1024x1024 with two cards (SLI configuration).

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

The Resolution slider bar located on the main Metabyte Wicked3D display property sheet will allow you to select from a group of pre-defined modes - 512x384, 640x400, 640x480, 800x600, 1024x672, 1024x768[*], and 1024x1024[*]. Perform the following procedure to add a custom resolution:

*These modes available with SLI configuration only.

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 Metabyte Wicked3D display property sheet.

You may now select the new mode using the Resolution slider bar. *Note: You can have a total of 14 modes, including the standard modes.*

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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 Refresh Rates

Metabyte's Re2Flex technology also allows you to customize the refresh rates used in your 3D environment in 1 Hz increments. 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.

Warning: Different monitors have different mode capabilities. Use the Test Mode button to test custom modes before using in actual games. If you get a blank screen, or the image is incorrect, reduce the refresh rate then test again.

Figure 2: Metabyte Wicked3D Display Properties sheet.   Figure 3: Custom Resolution Control Center

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Testing a mode

It is important to test a mode prior to saving your mode configuration. Using the Test Mode feature will assure you the mode is safe to use in your 3D environment. When you click the Test Mode button, you will get the following dialogue box:
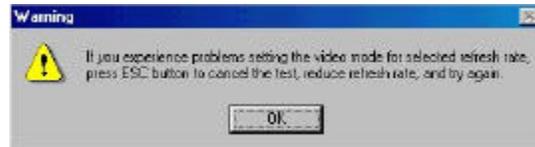

Figure 4: Test Mode warning dialogue box

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 5: 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 6: Test Mode exit warning

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<u>**Settings Tab**</u>

Direct3D Advanced Options

Allows you to manipulate a couple of 3D features supported by your Wicked3D eyeSCREAM 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.

Force trilinear texture filtering

Use this checkbox to force the Wicked3D eyeSCREAM drivers to render using trilinear filtering for D3D applications that use mipmapping and bilinear filtering. If supported, you will get smoother visual images. 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.
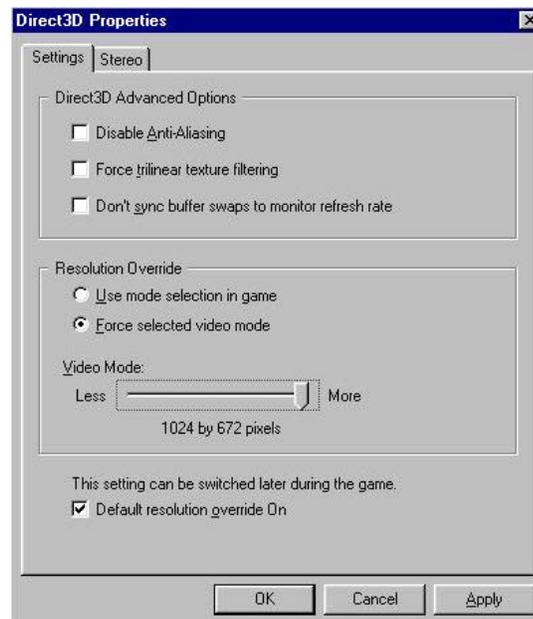

Figure 7: D3D Properties, Settings tab

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Resolution Override

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 EyeSCREAM^{TM} 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, 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 eyeSCREAM^{TM} Properties sheet.

Default Resolution Override On

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

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 eyeSCREAM^{TM} 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.

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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 Direct3D image to be overlaid on to 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.*
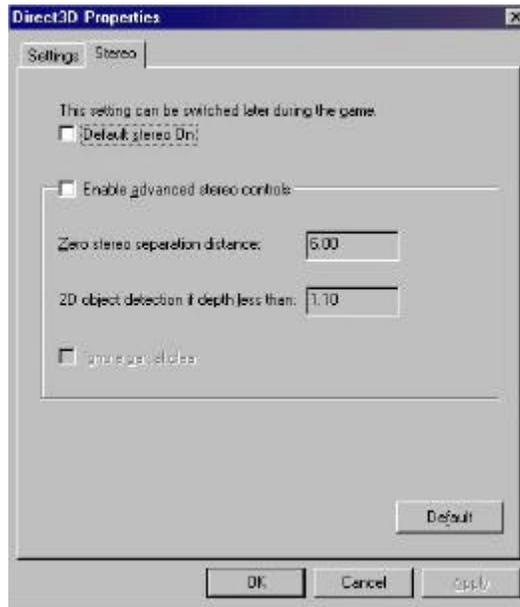

Figure 8: D3D Properties, Stereo tab

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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.*
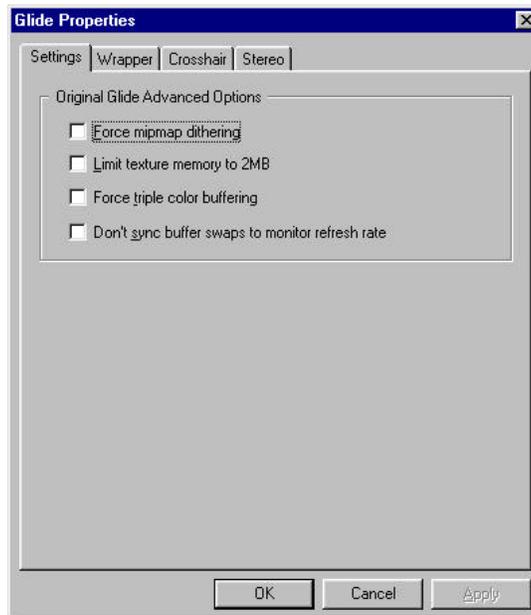
Figure 9: Glide Properties, Settings tab

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<u>Wrapper Tab</u>

<u>Resolution Override</u>

With Re2Flex, you can override a game's built-in resolution controls, allowing you to run in custom resolutions up to 1024x1024. 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.

<u>Original Glide Options</u>

This section allows you to enable Re2Flex and eyeSCREAM^{TM} stereoscopic support in Glide games. Choose the Use Glide Wrapper for Glide Games radio button to enable these features. To disable these features, select Use Original Glide. The Original Glide Path should point to GLIDE2X.ORG, located in the directory where the Wicked3D software is installed

Figure 10: Glide Properties, Wrapper tab

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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

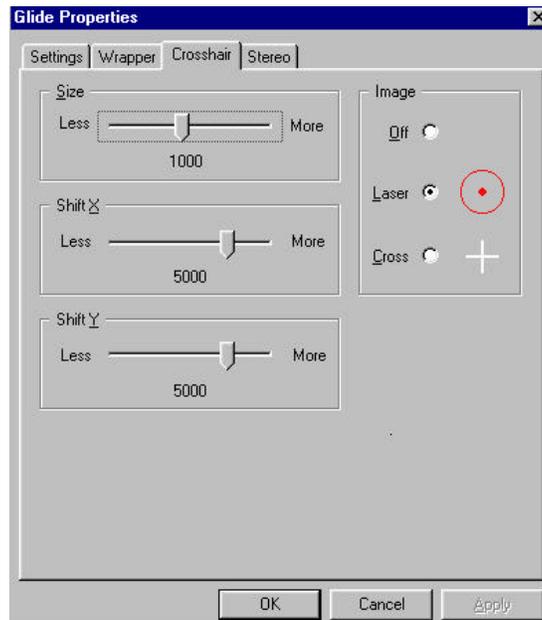Use to correct aiming for non-centered gun in first-person shooter type games.

Figure 11: Glide Properties, Crosshair tab

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<u>**Stereo Tab**</u>

Stereo Enabled/Disabled

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

<u>**Enable advanced stereo controls**</u>

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.

<u>**Zero stereo separation distance**</u>

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.*

<u>**Depth Gap Correction**</u>

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.

<u>**2D Objects Detection**</u>

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.
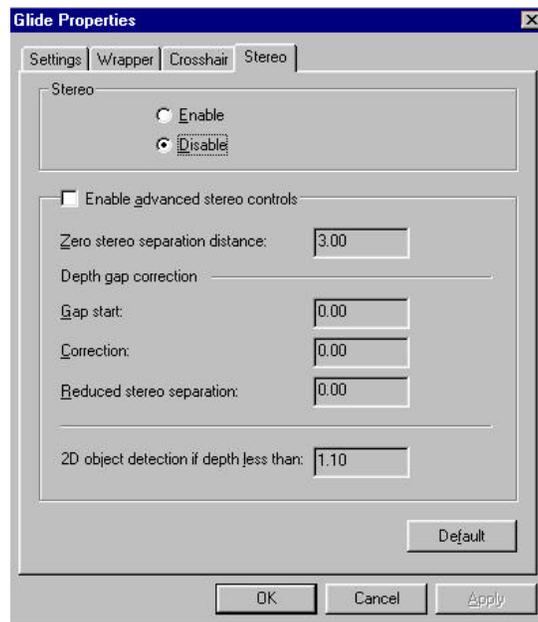

Figure 12: Glide Properties, Stereo tab

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Installing the Metabyte OpenGL Wrapper

The Metabyte Open GL 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 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.

Settings Tab

Resolution Override

With Re2Flex, you can override a game's built-in resolution controls, allowing you to run in custom resolutions up to 1024x1024. 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.
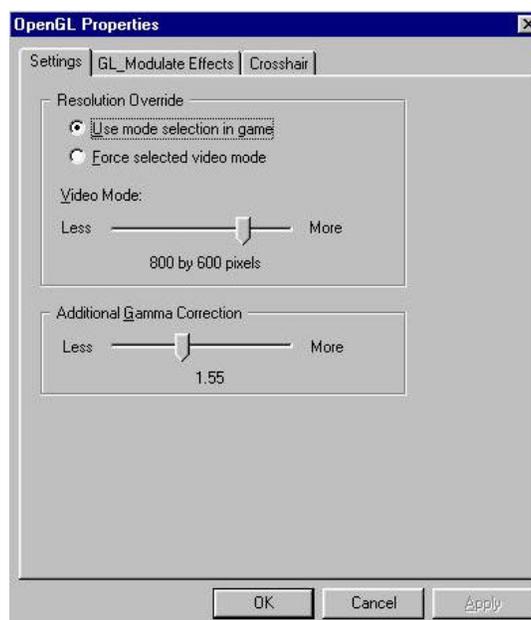

Figure 13: OpenGL Properties, Settings tab

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<u>**GL Modulate Effects Tab**</u>

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.
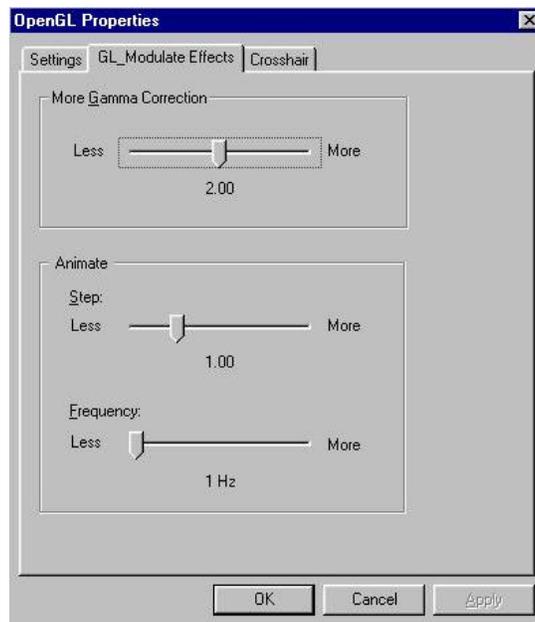
Frequency - Frequency of the animated gamma correction.

Figure 14: OpenGL Properties, GL_Modulate Effects tab

ΠΕΤΑΒΥΤΕ®

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 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.

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

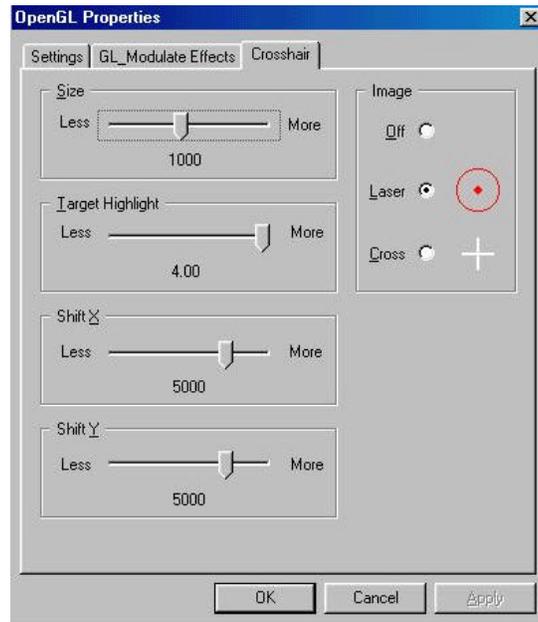Use to correct aiming for non-centered gun in first-person shooter type games.

Figure 15: OpenGL Properties, Crosshair tab

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eyeSCREAM^TM 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.

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 you 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.
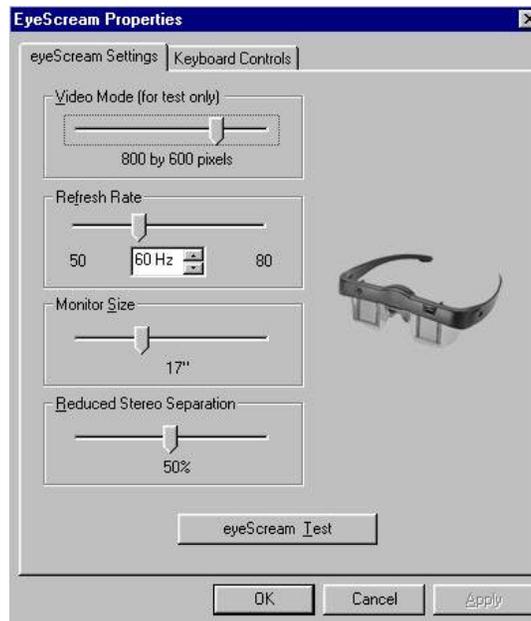

Figure 16: eyeSCREAM^TM Properties, eyeSCREAM^TM Settings tab

eyeSCREAM^TM Test

Use the eyeSCREAM™ 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.
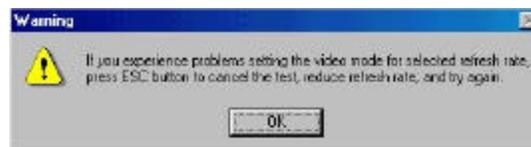

Figure 17: eyeSCREAM^TM Test warning

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Figure 18: eyeSCREAM™ 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 19: eyeSCREAM™ Depth Perception test

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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.
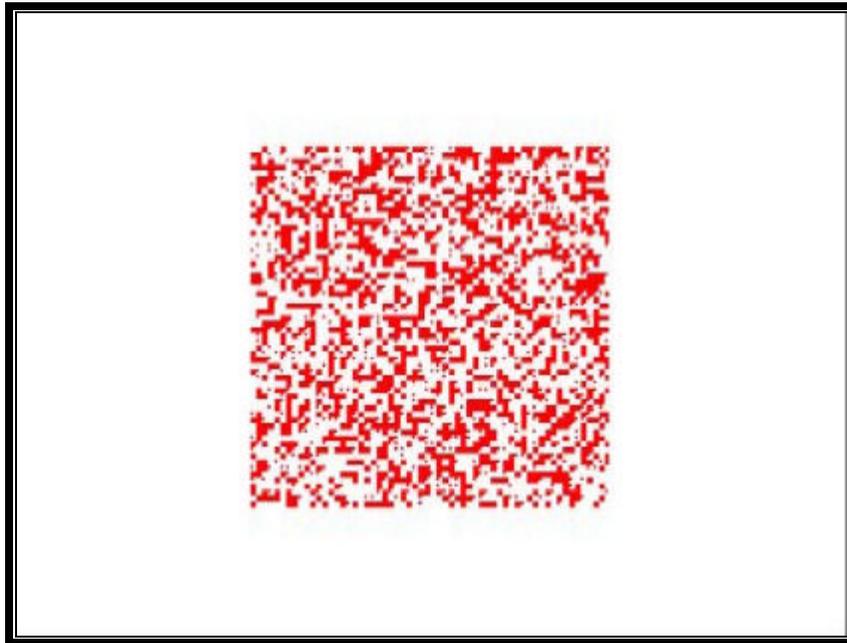

Figure 20: eyeSCREAM™ Eye test

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 21: eyeSCREAM™ Test exit warning

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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. *Note: Correctly aligning the vertical separation is necessary to reduce the chance of eyestrain!*

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**.
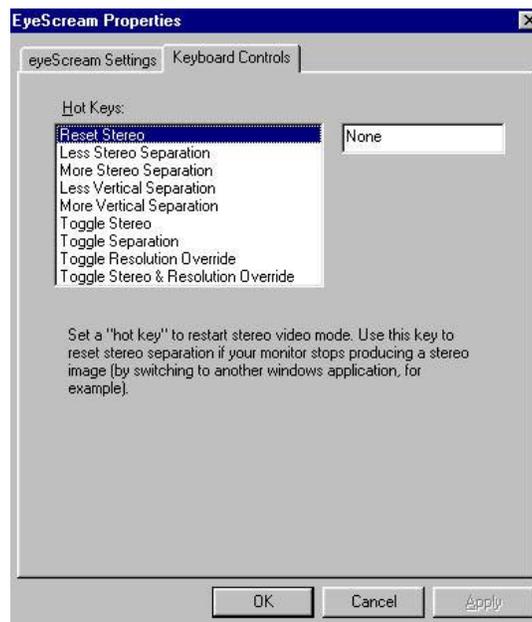

Figure 22: eyeSCREAM™ Properties, Keyboard Controls tab

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Clock Speed

Use the clock speed slider bar to set the speed of your Wicked3D eyeSCREAM. The default clock speed is 92MHz. Raise or lower this clock setting depending on the tolerance of your system and the game. ***Setting the clock speed above 95 MHz (the red zone on the slider bar) may greatly increase the probability of artifacts on your screen, and lock-ups. We recommend you use this option at your discretion, only if you have a well-cooled system or cooling fan for the processor on your Wicked3D card.***

Disable SLI

Click this checkbox to disable SLI / two card configuration if a game is having problems with SLI mode.

Enhance Desktop

This checkbox allows you to add a C☺☺L background to your desktop.
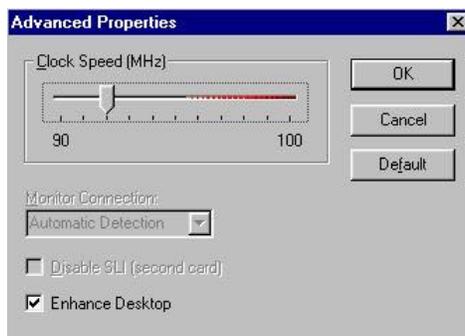

Figure 23: Advanced Properties

Gamma Correction

The gamma correction slider bars allow you to adjust the red, green, and blue gamma settings in your 3D applications.
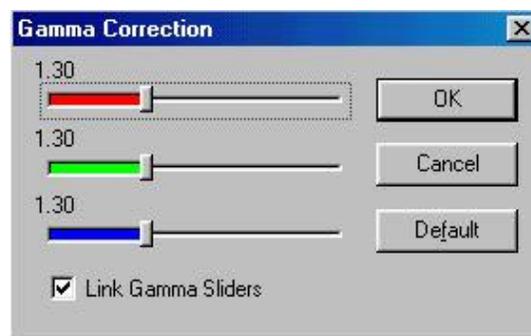
Figure 24: Gamma Correction

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System Info

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

Figure 25: System Info

Metabyte Wicked3D Useful Links

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

Figure 26: Metabyte Wicked3D Useful Links

TROUBLESHOOTING

No video image

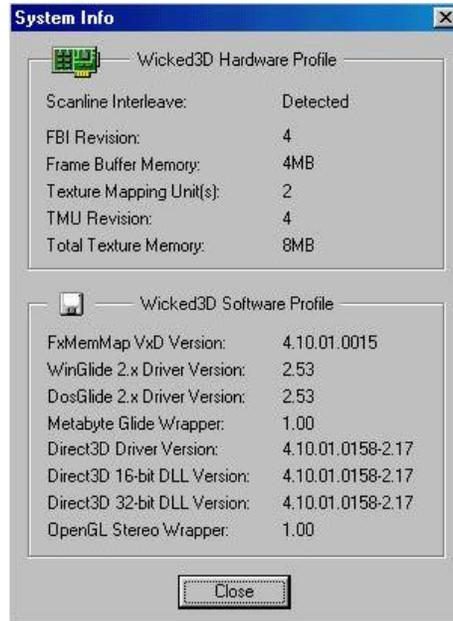Check to make sure that the Adapter is plugged into an outlet and the outlet has power. If so, disconnect the Adapter and reconnect your monitor directly to the PC. If the video image returns to the screen, the Adapter has malfunctioned. Contact Wicked3D Board Company. If the video does not reappear, the problem is either your PC or your monitor.

No depth effects

In order to give you the highest visual experience possible, your eyeSCREAM Stereoscopic Eyewear System will operate only with eyeSCREAM drivers on an eyeSCREAM-ready graphics card.

If you have a Wicked3D or compatible graphics card and a eyeSCREAM-ready application running, make sure that your eyeSCREAM Software and display property setting are set up correctly. Please see your Wicked3D manual for detailed instructions.

If you believe your software is running correctly, look at the screen without the Eyewear while the application is running and verify that a double image is appearing on the screen. If there is a double image but you're not seeing depth images, your Eyewear and Transmitter may not be communicating properly. Check to make sure that the Transmitter is securely connected to the Adapter and in a direct line of sight with the Eyewear. Perform the Operation Test (above) and replace the battery, if necessary. If you still can not see depth or if the double image is not being generated, contact Wicked3D Board Company technical support.

Dual images at top and bottom of monitor

If you have the Adapter incorrectly hooked up, it may result in a dual top and bottom image appearing on screen. The Adapter should be attached to the VGA port that goes to your monitor. In the case of 3Dfx Voodoo^2 based products, it should not be connected to your 2D card, which should be attached to your 3D accelerator using the pass-through cable as normal.

Intermittent depth effects

If you are operating another eyeSCREAM Stereoscopic Eyewear System in close proximity, you may be experiencing interference. Set both Transmitters to "Near" operation (see "The eyeSCREAM Transmitter") and attempt to reposition the systems to minimize potential interference. If only one System is operating in the room, check the following: a) The line of sight between the Eyewear and the Transmitter may be partially obstructed (you may want to remove your baseball cap!) You may be too far away from the Transmitter; or c) You may be viewing the monitor from an angle outside the range of the Transmitter.

It is also possible that your Eyewear batteries are low – you should test (Operation Test) and replace the batteries, if necessary. If you continue to experience problems, contact Wicked3D Board Company technical support.

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W A R N I N G

PLEASE READ THE FOLLOWING WARNINGS BEFORE USING THIS PRODUCT:

WARNING: DO NOT USE THIS PRODUCT IN ANY SITUATION WHERE UNIMPAIRED VISUAL PERCEPTION IS NECESSARY. SOME PEOPLE MAY EXPERIENCE NAUSEA AND/OR DISORIENTATION DURING OR IMMEDIATELY FOLLOWING USE OF THIS PRODUCT AND/OR SIMILAR PRODUCTS. DO NOT USE THIS PRODUCT IF YOU ARE ILL, DIZZY OR NAUSEOUS. IF YOU FEEL NAUSEOUS OR DIZZY (OR ANY OF THE OTHER SYMPTOMS LISTED BELOW) WHEN USING THIS PRODUCT, DISCONTINUE USE IMMEDIATELY, DO NOT ENGAGE IN ANY POTENTIALLY HAZARDOUS ACTIVITY (FOR EXAMPLE, DRIVING A VEHICLE) UNTIL YOUR DISCOMFORT HAS COMPLETELY GONE AWAY. IF YOU EXPERIENCED SUCH DISCOMFORT, DO NOT USE THIS PRODUCT AGAIN WITHOUT DISCUSSING YOUR DISCOMFORT WITH YOUR PHYSICIAN.

WARNING: FOR ALL USERS. IMMEDIATELY DISCONTINUE USE OF THIS PRODUCT, AND SEE A

PHYSICIAN BEFORE USING IT AGAIN, IF YOU EXPERIENCE ANY OF THE FOLLOWING SYMPTOMS:

DIZZINESS	INVOLUNTARY MOVEMENTS
NAUSEA	CONFUSION
DISORIENTATION	EYE OR MUSCLE TWITCHING
CONVULSIONS	LOSS OF AWARENESS OF YOUR SURROUNDINGS

TO MINIMIZE THE POSSIBILITY OF ANY OF THE ABOVE SYMPTOMS, ADJUST YOUR COMPUTER MONITOR REFRESH RATE TO THE HIGHEST POSSIBLE SETTING. CONSULT THE MANUAL FOR YOUR MONITOR FOR INSTRUCTIONS AS TO HOW TO DO THIS. CHILDREN UNDER THE AGE OF FIVE YEARS SHOULD NOT USE THIS PRODUCT WITHOUT

A PHYSICIAN'S PERMISSION.

METABYTE®

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 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.   Metabyte, Inc.

The Wicked3D Board Company   European Service Center

39350 Civic Center Drive   Unit 4, Shannon Industrial Estate

Suite #200   Shannon, Co. Clare

Fremont, CA 94538   Republic of Ireland

METABYTE®

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: support@wicked3d.com

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.

WICKED3D MAILING LIST

Do you wish to be automatically notified of software updates and other important information pertaining to your Metabyte Wicked3D eyeSCREAM? If so, you can subscribe to the Metabyte Wicked3D eyeSCREAM 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:

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subscribe eyescream
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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.

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