Introduction

Congratulations on your decision to buy Creative's 3D Blaster Banshee (TM).

A feature-packed, powerful integrated 2D/3D accelerator, Banshee is the ultimate bridge between 3D entertainment and PC graphics. In Banshee you have the perfect marriage of critically-acclaimed Voodoo2 3D technology with ultra-fast 2D technology. Designed to accelerate graphic intensive Windows applications, Banshee offers the best of 2D and 3D performance in a single card.

Notes
- To find out more information and instructions on how to use Banshee, read this online help.
- For information on how to use Creative BlasterControl and Creative SoftMPEG, read the topics under their respective help files.
- Creative SoftMPEG is available only for Windows 95.

What is Creative 3D Blaster Banshee?

Creative 3D Blaster Banshee is a state-of-the-art, fully integrated 128-bit VGA/2D/3D/video accelerator with full VMI interface. With the new generation 3Dfx (TM) Voodoo Banshee (TM) chipset at its core, the ultimate bridge between 3D entertainment and PC graphics is now available with unprecedented Voodoo2 3D technology to drive 3D and 2D performance to levels you never thought your computer could achieve. Engineered to meet the demands of value-conscious but discerning gamers, 3D Blaster Banshee combines the best of VGA and 3D game accelerator technology to eliminate the need for a separate 3D accelerator card.

As a VGA card, it harnesses an outstanding graphics engine to enhance your overall visual experience. Its powerful graphics engine and rich 3D features give you smoother, more realistic play for games and let you do real-time 3D design work – far surpassing the average VGA card.

Equally uncompromising in the 2D arena, 3D Blaster Banshee speeds up your navigation within the Windows environment while you work on your documents and spreadsheets or use other applications.

As a 3D game accelerator, its processor and prodigious RAM delivers neck-breaking speed and breathtaking performance. Advanced features include anti-aliasing, bilinear and trilinear filtering. All these translate into overall visual improvement with complex 3D gaming environments. With this awesome power, you will learn to take seamless gameplay and stunning visuals for granted!

To help you get the most out of your graphics card, your computer and your monitor, we include a desktop control utility, Creative BlasterControl, that is easy to use.

Notes
▪   For more information on the graphics features and software support, read the topics under General Specifications.
▪   For more information on how to use Creative BlasterControl and Creative SoftMPEG, read the topics under their respective help files.
▪   Creative SoftMPEG is available only for Windows 95.

{button ,AL(`2D Graphics and Window Support;3D Features;Software Support',0,`',`')} Related Topics

To configure advanced settings for Banshee

1 Right-click your desktop, and then click Properties on the shortcut menu.

2 In the Display Properties dialog box, click the BlasterControl tab.

3 On the BlasterControl tabbed page, click the 3D Blaster Banshee Advanced icon.

4 Select from the following sets of options:

Use These Settings	To
Glide/OpenGL	Control how the system runs Glide and OpenGL applications.
Direct3D/DirectDraw	Control how the system runs Direct3D and DirectDraw applications.
Video	Specify the video display performance you want.
Performance	Specify the amount of acceleration you want for your graphics hardware
Update/Refresh	Synchronize the screen update rate with the monitor refresh rate.

5 To reset all the options to their default settings, click the Factory Default button.
   Otherwise, click the OK button.

Tip
▪   Right-click an option or a check box on the Banshee Advanced module dialog box and then click What's This to display a brief description.

3D Features

Creative 3D Blaster Banshee has a rich list of three-dimensional features including:
- Texture mapping

Adds realistic textures to the 3D objects and environments in your games and renderings.
- Bilinear filtering

Smoothens out the "blockiness" of textures.
- Perspective correction

Reduces any distortion on the textured objects and environment.
- Fogging

Creates more natural atmosphere by blending objects into environment.
- Anti-aliasing

Smoothens out jagged edges of diagonal and curved lines.

Software Support

Creative 3D Blaster Banshee supports the following:
- DirectDraw and Direct3D drivers

With these drivers, you can enjoy the new wave of 3D and 2D games designed for Windows 95 in high-quality display and speed.

2D Graphics and Windows Support

Creative 3D Blaster Banshee accelerates your 2D graphics in Windows and also supports the following:
- MPEG-1 video playback and assisted MPEG-2 decoding

MPEG-1 is the standard for Video CD playback.
- Color space conversion and filtered image scaling

Smoothens out full-screen video display and any jitters in high-frame video playback.

Note
- Refer to your Installation Guide for a list of display resolutions and refresh rates.

Glossary

Anti-Aliasing

Bilinear Filtering

Direct3D

DirectDraw

DirectX

Texel

Texture Anti-Aliasing

Texture Mapping

Anti-Aliasing

Removes the appearance of jagged edges on diagonal and curved lines by cleaning and smoothing out abrupt and jagged changes in a picture. There are other forms of anti-aliasing such as texture anti-aliasing.

Bilinear Filtering

Bilinear filtering is the basic form of texture anti-aliasing. It eliminates blockiness by taking an average of four surrounding pixels to determine the shading or texture of a single pixel. This allows a richer and more detailed image to be displayed on the screen.

Direct3D

An Application Programming Interface (API) for manipulating and displaying three-dimensional (3D) objects developed by Microsoft. Direct3D allows 3D applications and games to use whatever graphics acceleration card is installed in the system. Most 3D accelerator cards for computers in the market, such as Creative 3D Blaster Banshee, support Direct3D.

DirectDraw

A software interface standard for transferring video processing from a computer's central processing unit (CPU) to the video adapter. The standard was first developed by Intel and was called the Display Control Interface (DCI). DCI is now supported by Microsoft with the name DirectDraw as a registered trademark. DirectDraw can also provide applications, such as games, with direct access to the features of a particular display adapter.

DirectX

A set of Application Programming Interface (API) developed by Microsoft that enables programmers to write programs that provide access to the hardware features of a computer without knowing exactly what hardware will be installed on the computer.

DirectX achieves this by creating an intermediate layer that translates generic hardware commands into specific commands for particular pieces of hardware. In particular, DirectX lets the multimedia applications take advantage of hardware acceleration features supported by graphics accelerators. Some of DirectX components include DirectDraw and Direct3D.

Texel

A colored dot in a texture map. Texture mapping operates by assigning texels to the corresponding pixels of an object.

Texture Anti-Aliasing

If a pixel is in between texels, the texture anti-aliasing colors the pixel with an average of the texels' colors instead of assigning it the exact color of one single texel. Without this form of anti-aliasing, the texture appears very "blocky" when viewed close up. Texture anti-aliasing is also known as bilinear filtering or sub-pixel positioning.

Texture Mapping

Takes a bitmapped image, for example, like a brick surface or the wood grain surface, and maps them into a 3-dimensional surface. This makes the object look more realistic.

Use these settings to control texture mipmap dithering, limit the amount of texture memory for each texture mapping unit and control rendering performance through triple color buffering for Glide and OpenGL applications.

When enabled, Glide applications will enable texture mipmap dithering. When this option is selected, visual quality of the rendered scene may be improved. However, a decrease in rendering performance may result.

When selected, Glide apps will force 2 MBytes of texture memory for each texture mapping unit. Some Glide games may not work correctly if this option is not selected.

When selected, Glide apps will enable triple color buffering if there is enough frame buffer memory to support it. Rendering performance may increase when this option is enabled. However, as not all applications are compatible with triple color buffering, some applications may exhibit visual artifacts when this is enabled.

If a Voodoo2 3D accelerator card is connected to your Banshee card, select this option to disable Banshee's Direct3D support. This allows your Voodoo2 card to take over this function for better performance.   Otherwise, if no separate 3D accelerator card is connected to your Banshee card, selecting this option disables Direct3D support and you will not be able to run Direct3D applications.

When selected Direct3D will force on Anti-Aliasing. With this setting, graphics to look much smoother with little or no reduction in performance.

Use the Higher Performance and Better Quality radio buttons to choose between frame rate performance or image quality.

When selected, a higher frame rate is achieved. Image movements become smoother and less jerky. However, since image quality is sacrificed for speed, you may notice that the edges of images become more jagged.

When selected, higher image quality is achieved. Image edges become smoother and look more realistic. However, since speed is sacrificed for image quality, you may notice that Image movements become more jerky.

Use this control to select the desired clock speed of the Banshee chip. Remember that setting too high a rate causes pixel drop, screen corruption and your system to hang. Though the system default setting should give good performance, you can experiment with the setting to determine the optimal level for your system.

In the event that your system hangs, go to Windows Safe mode and restore the setting to the system default level by clicking the Factory Default button.

Use this control to specify the desired memory latency setting. Lowering the memory latency level will boost display performance PROVIDED that your system's memory configuration supports the reduced latency setting. Though the system default setting should give good performance, you can experiment with the setting to determine the optimal level for your system.

In the event that your system hangs, go to Windows Safe mode and restore the setting to the system default level by clicking the Factory Default button.

When selected, Glide and DirectX apps will synchronize buffer swaps with the vertical retrace signal of the monitor. This resolves any visual tearing problems.

Click this button to return all settings to their default values.

Click this button to go to the Advanced tabbed pages.

Increases or decreases the Gamma correction level for Glide.
This changes the color tonal balance for Glide applications.

Increases or decreases the Gamma correction level for Direct3D/DirectDraw. This changes the color tonal balance for Direct3D/DirectDraw applications.

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Select this checkbox to enable support for DirectX 6.   Games written specifically for DirectX 6 will benefit from this option as DirectX 6 provides many new features not available in DirectX 5.

However, DirectX 5 games may run slower with this option selected because the DirectX engine has to translate the DirectX 5 instructions into those of DirectX 6 and this may slow down the performance.

Select the desired number of multitexturing stages to be supported by DirectX 6.   If a game utilizes more than one texturing stage, the visual quality of the game will be enhanced.   However, the same scene will be rendered as many times as the number of multitexturing stages.

So, select 1 for accelerated performance, or 2 for enhanced visual quality (but with slower performance).