

Righteous 3D



[Welcome!](#)

[Introduction](#)

[Configuring the Righteous 3D](#)

[Righteous 3D Online Manual](#)

[Direct3D](#)

[Support and Information Services](#)

Welcome!

Welcome to the Righteous 3D online help. We hope you find our online help very useful. Thank you for purchasing Righteous 3D. Care has been taken to ensure that it will provide you with years of trouble-free operation.

Righteous 3D Online Manual



[Copyright Notice](#)

[Before You Begin](#)

[Section 1: Hardware Installation](#)

[Section 2: Software Installation](#)

[Section 3: Technical Information](#)

[Appendix A: Technical Specifications](#)

[Appendix B: Direct3D](#)

Introduction

Welcome to the exciting world of 3D acceleration. The Righteous 3D® is a dedicated 3D accelerator that operates transparently with existing 2D graphics accelerators and delivers true arcade 3D graphics performance.

Based on the 3Dfx Interactive Voodoo™ graphics chipset, Righteous 3D's dual 64-bit memory architecture provides direct access to its frame buffer and texture memory. This advanced design accelerates all 3D features simultaneously without sacrificing frame rate performance.

Righteous 3D is multimedia-ready for your Pentium PCI-based system. It installs into an available PCI slot and connects via a cable to your VGA graphics accelerator. Righteous 3D is configured with 4MB of EDO DRAM memory with 2MB dedicated to texture memory.

The revolutionary 3D technology of Righteous 3D features real-time interactive rendering, full motion frame rate performance, simultaneous 3D acceleration and Windows 95® Direct3D™ support. Plug and Play compatibility with Microsoft Windows 95 features automatic configuration and ease of use.

Care has been taken to ensure that Righteous 3D will provide you with years of trouble-free operation. We believe you'll be pleased with your purchase.

Direct3D

Direct3D is the next generation of real-time, interactive 3D technology for use on the desktop and the Internet. You can experience more compelling and powerful 3D graphics on the Internet and when using games, education and business applications. Direct3D improves Windows 95 game quality and performance to rival arcade machines.

Direct3D is a complete set of real-time 3D graphics services that deliver fast software-based rendering of the full 3D rendering pipeline (transformations, lighting, and rasterization), transparent access to hardware acceleration and a comprehensive, next-generation 3D solution for your PC. Direct3D provides access to advanced graphics capabilities of 3D hardware accelerators including z-buffering, anti-aliasing, alpha blending, mip mapping, atmospheric effects and perspective correct texture mapping.

Tight integration with DirectX and ActiveX technologies allows Direct3D to deliver next-generation 3D graphics capabilities including video mapping and hardware 3D rendering in 2D overlay planes. Direct3D also integrates with DirectDraw to provide 2D drawing and texture services for 3D rendering. Applications use Direct3D and DirectDraw for 3D rendering in a relatively straightforward manner.

Support and Information Services

Orchid offers a variety of support and information services to help you get the most from your product. The following services are available:

- ◇ Technical Support
- ◇ Electronic Bulletin Board Service (BBS)
- ◇ Return Materials Authorization (RMA)
- ◇ Fax-On-Demand
- ◇ World Wide Web
- ◇ Customer Service

Refer to the table below for details on these services.

Technical Support

If you need technical assistance, our Technical Support Engineers will be glad to help you. You can contact us via telephone, fax or BBS. Before calling Technical Support please have the following information ready:

- ◇ The model name and serial number of your Orchid product.
- ◇ Your computer information such as CPU type, operating system, amount of installed memory and other peripherals installed in your computer.
- ◇ The version number of the Orchid product driver.
- ◇ Try to call from the location of your computer.

NOTE: For Return Material Authorization purposes, please keep a copy of your product receipt.

Service	Hours	Country	Telephone Number
Technical Support - Live phone help from Technical Support Engineers	M-F: 7:00am to 5:00pm (PST)	USA France UK	(510) 661-3000 (510) 651-6982 (Fax) +33 (1) 45 43 56 26 +33 (1) 45 43 17 78 (Fax) +44 (1256) 844899 +44 (1256) 364222 (Fax)
Electronic Bulletin Board Service (BBS) - Information on software upgrades, new releases and other helpful information	24 hours a day 7 days a week	USA UK	(510) 651-6837 14400 baud rate, Parity=N, Data Bits=8, Stop Bits=1 YMODEM and ZMODEM (recommended file transfer protocols) +44 (1256) 363373
RMA (Return Materials Authorization) - Return products for repair	M-F: 8:00am to 4:45pm (PST)	USA	(510) 661-3030 (510) 683-0543 (Fax)
Fax-On-Demand - Automated system for product literature, technical bulletins and other helpful information	24 hours a day 7 days a week	USA	(510) 661-3199
World Wide Web - Product information, press releases, technical support, driver updates, game patches and demos, links to other game sites, FAQ's section and other fun stuff.	24 hours a day 7 days a week	USA Europe	http://www.orchid.com http://www.mcmi.com
Customer Service - Order Orchid and Micronics products	M-F: 8:00am to 5:00pm (PST)	USA France UK Germany Taiwan	(800) 577-0977 (510) 651-3666 (Fax) +33 (1) 45 43 56 26 +33 (1) 45 43 17 78 (Fax) +44 (1256) 479 898 +44 (1256) 364222 (Fax) +49 (89) 58 09 82 55 +49 (89) 58 09 82 25 (Fax) +886 2 918 5005 +886 2 911 5472 (Fax)

Copyright Notice

© 1996, 1997 Orchid Technology. This manual is copyrighted. All rights reserved. This document may not, in whole or part, be copied, reproduced, reduced or translated by any means, either mechanical or electronic, without prior consent in writing from Orchid Technology.

Righteous 3D is a registered trademark of Orchid Technology. All other products mentioned in this manual are trademarks of their respective manufacturers.

Orchid Technology
45365 Northport Loop West
Fremont, CA 94538

Before You Begin

This manual will familiarize you with the features, installation and use of your Righteous 3D. Please refer to the list below for common names used throughout the manual.

Common Names

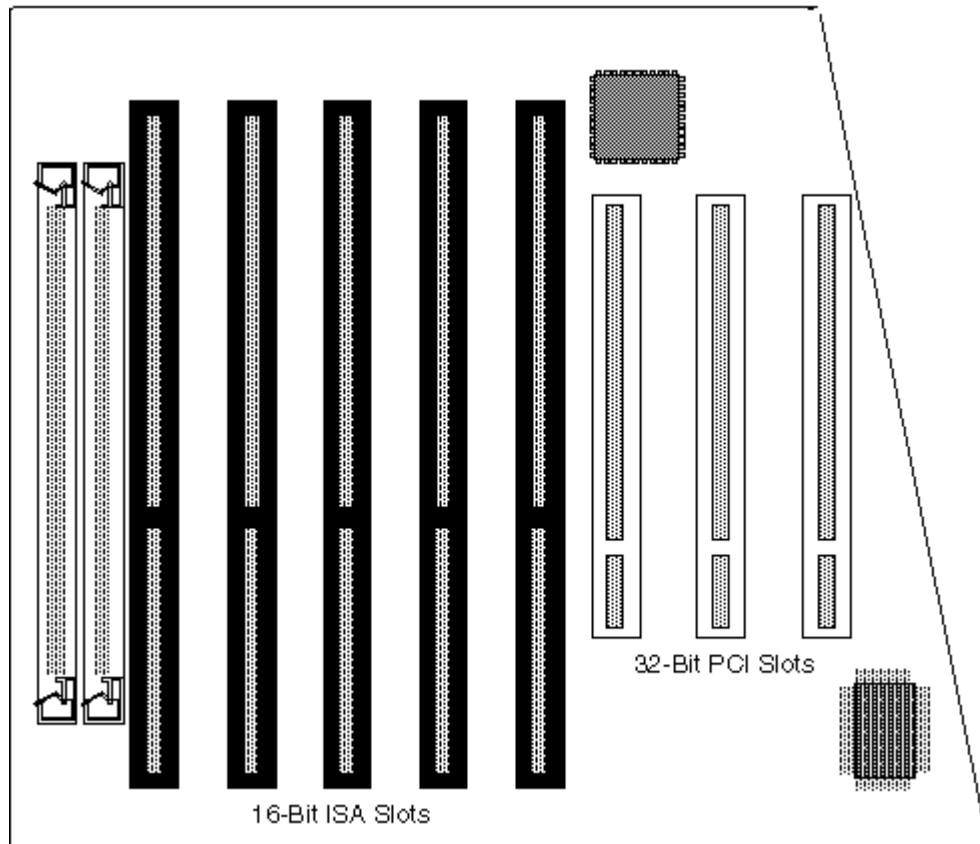
2D	Two Dimensional
3D	Three Dimensional
DDC	Display Data Channel
DRAM	Dynamic Random Access Memory
EDO	Extended Data Out
PCI	Peripheral Component Interconnect
VGA	Video Graphics Array

Section 1: Hardware Installation

Whether you are a beginner or experienced user, Righteous 3D's simplified design allows you to get up and running quickly. Installation is simple and all configuration settings are under software control. This section gives you help on how to properly install the Righteous 3D.

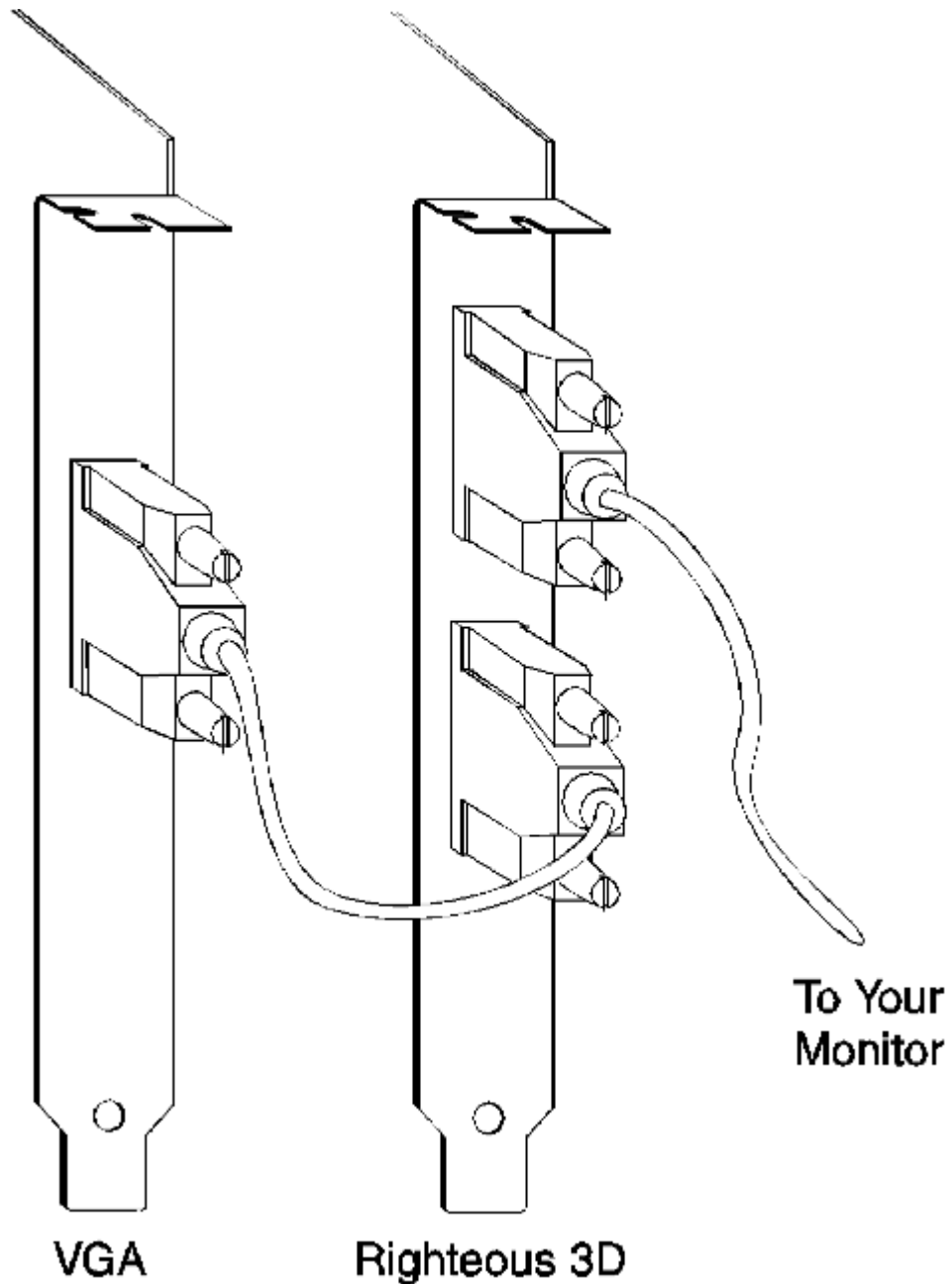
Installing Righteous 3D

- ◇ Turn off the power to your computer and remove the computer cover.
- ◇ Select a PCI slot close to your VGA graphics accelerator. Most computers accommodate both PCI and ISA slots. The PCI slots are usually the smaller slots (see the example below).



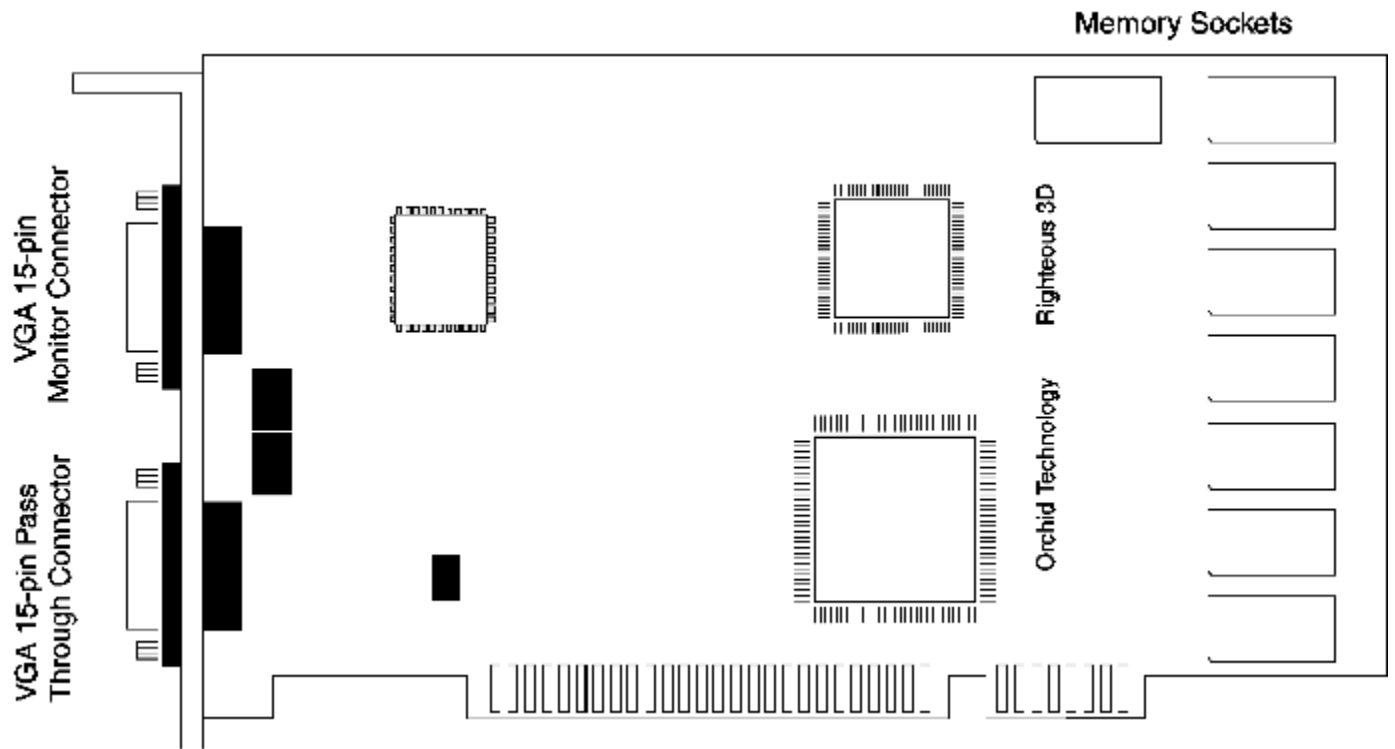
Please refer to your computer's reference manual for more information.

- ◇ Remove the rear slot cover bracket if it is present and save the screw.
- ◇ Now remove the Righteous 3D from its antistatic packaging.
- ◇ Carefully hold Righteous 3D by the top edges and lower it into the PCI expansion slot. Ensure that Righteous 3D seats firmly into the slot.
- ◇ Secure Righteous 3D in place by fastening its metal bracket with the screw you saved.
- ◇ Connect your monitor cable to the top 15-pin connector (blue) on the Righteous 3D.



- ◇ Connect one end of the VGA pass through cable to the bottom 15-pin connector on the Righteous 3D. For additional help, refer to the diagram below.
 - ◇ Connect the other end of the VGA pass through cable to the 15-pin connector on your VGA graphics accelerator.
 - ◇ Replace the cover of the computer.
- You are now ready to install the Righteous 3D software drivers. Refer to Section 2: Software Installation.

Righteous 3D Diagram



NOTES:

- o 15-pin VGA DDC connector ([see Appendix A](#)).
- o 15-pin VGA pass through connector ([see Appendix A](#)).
- o Memory - 4MB EDO DRAM.

Section 2: Software Installation

Once you complete the hardware installation, you can begin the Righteous 3D drivers and software installation. Righteous 3D includes 3D titles for your enjoyment. This section gives you the installation procedures for Windows 95 and DOS.

Windows 95

Driver Installation

- ◇ Start Microsoft Windows 95. The New Hardware Found screen appears.
- ◇ Insert the Righteous 3D CD #1 into your CD-ROM drive.
- ◇ From the New Hardware Found screen, select the Driver From Disk Provided by Hardware Manufacturer option. Click on OK.
- ◇ Type in the driver location: D:\WIN95 (where D is the CD-ROM drive letter). Click on OK.
- ◇ Windows 95 copies the Righteous 3D drivers to your hard drive.

Software Installation

- ◇ Start Microsoft Windows 95.
- ◇ From the Windows 95 desktop, click on the Start button and then click on Run.
- ◇ Insert the Righteous 3D CD #1 into your CD-ROM drive and type: D:\SETUP.EXE (where D is the CD-ROM drive letter). Click on OK. The Righteous 3D Setup screen appears.
- ◇ Before selecting any Direct3D game application or demo, you *must* install the DirectX software first. NOTE: It is highly recommended that you install the version of DirectX provided with Righteous 3D.
- ◇ Click on DirectX and follow the instructions on the screen.
- ◇ After the DirectX software is installed, you will be prompted to restart the system for the changes to take effect.
- ◇ After your system restarts, rerun the SETUP.EXE program to install your next selection.
- ◇ Select the game application of your choice and follow the instructions on the screen.
- ◇ After the game application is installed, the program will return to the Righteous 3D Setup screen.
- ◇ When you are finished making your selections, click on Exit to close the Righteous 3D Setup screen and return to the Windows 95 desktop.

DOS Software Installation

- ◇ Some software games do not require Windows 95 and can be run from the DOS environment. To install a game, follow the instructions below:
- ◇ Insert the Righteous 3D CD #1 into your CD-ROM drive.

- ◇ From DOS, change to your CD-ROM drive and type:



- ◇ The installation menu will appear on the screen.
- ◇ Select the game application of your choice from the menu.
- ◇ Follow the instructions on the screen for each game installation program.

NOTE: Direct3D supported games are available only in Windows 95. In addition, some games may only operate under Windows 95.

Configuring the Righteous 3D

Windows 95

The Righteous 3D Display Properties screen allows you to configure the Direct 3D refresh rate, Direct3D gamma correction and to display a Direct3D Demo.

- ◇ From the Windows 95 desktop, click on the Start button, select Settings, then select Control Panel.
- ◇ From the Control Panel group, double-click on Display. The Display Properties screen appears.
- ◇ From the Display Properties screen, click on the Righteous 3D Setup tab.
- ◇ Make your selections from the available options. When you are finished, click on OK or Apply to save your settings.

Direct 3D Refresh Rates

This selection allows you to select the refresh rates for the supported Direct3D resolutions. The resolution is determined by the game. Resolutions available are: 512x384, 640x400 and 640x480.

Gamma Correction

The Direct3D Gamma Correction selection allows you to adjust the brightness of your display. You can change the value of the Gamma for an individual channel (Red, Green or Blue). For example, to set the Gamma for Red, move the scroll bar up or down to adjust the Gamma value.

To test the Gamma value, select a Direct3D demo from the Image Selection pull-down menu. Click on the Test button to view the new Gamma value applied in 3D mode. To return to the Righteous 3D Display Properties screen, press the ESC key.

Test

Click on the Test button to view the Gamma Correction settings configured.

Defaults

Click on the Defaults button to restore the default settings.

Online Manual

This selection will give you access to the Righteous 3D's online user's manual.

Section 3: Technical Information

Orchid Technology is known for its responsiveness to its customers. This section gives you a list of helpful tips for troubleshooting your Righteous 3D. You're also given information on how to contact Technical Support and how to receive advice and support via our online services.

Troubleshooting Righteous 3D

To help you diagnose problems you may have with the Righteous 3D, we've presented the following helpful hints in a symptom and solution format. This format serves a twofold purpose:

You may be able to fix your problem . . . or if these steps don't help you solve your problem, they will most certainly give you a better handle on what to tell Technical Support once you contact them.

Operation

Symptom	Solution
Computer doesn't power-up or respond when turned on.	(1) Verify that your computer and monitor are plugged in. Check the power cables. (2) Make sure the Righteous 3D is properly installed in the slot. The edge connector must be inserted all the way into the expansion slot.
The Righteous 3D Setup tab doesn't appear in the Display Properties Sheet.	The driver may not have been installed correctly. Check the Windows 95 Device Manager list for the Righteous 3D. Follow the steps below: 1) From the Windows 95 desktop, click on Settings, then click on Control Panel. 2) From the Control Panel, click on the System icon. 3) From the System Properties, click on the Device Manager tab. 4) Check for "Righteous 3D" listed under the Sound, Video, & Game Controller category. 5) If "Righteous 3D" is not listed, check for "PCI Multimedia Video Device" listed under the Other Devices category. If it is listed, go to Step 8. 6) If "PCI Multimedia Video Device" is listed, remove it and restart your system. 7) Refer to the Windows 95 Driver installation instructions in Section 2. 8) If "Righteous 3D" is listed, click on it, then click on Properties. 9) Click on Change Driver, then click on the Have Disk option. Type in the driver location: D:\WIN95. Click on OK. 10) Follow the instructions on the screen to complete the driver installation.

Display

Symptom	Solution
Computer seems to boot up properly but there's no display.	<ol style="list-style-type: none">(1) Check the power cable to your monitor.(2) Your monitor cable may not be fastened securely and properly. Check both the connection at the monitor and at the Righteous 3D card.(3) Verify that the VGA pass through cable is connected properly between your VGA accelerator card and the Righteous 3D.(4) It's possible that your monitor cable is not the correct type for the Righteous 3D. See Appendix A for the proper pin-out information to determine if your cable is correct.(5) Hook up your monitor directly to your VGA accelerator card to determine if the problem is possibly with Righteous 3D or the overlay cable.

Appendix A: Technical Specifications

This appendix provides the technical specifications and features for Righteous 3D.

Configuration

Righteous 3D - 4096KB EDO DRAM

Video Chipset:

3Dfx Interactive Voodoo Graphics

Bus Interface:

PCI 2.1 Compliant

Minimum System Requirements*:

- Pentium PCI based system
- Available PCI expansion slot
- VGA Display Adapter
- VGA Compatible Monitor
- 8MB of System Memory
- MS-DOS 6.0 or later
- Windows 95 required for Direct3D support

Connectors:

- DB-15 analog VGA w/ DDC
- DB-15 VGA pass through connector

Temperature:

- Operating: from 0 to 50 degrees C
- Storage: from -30 to 60 degrees C

Humidity:

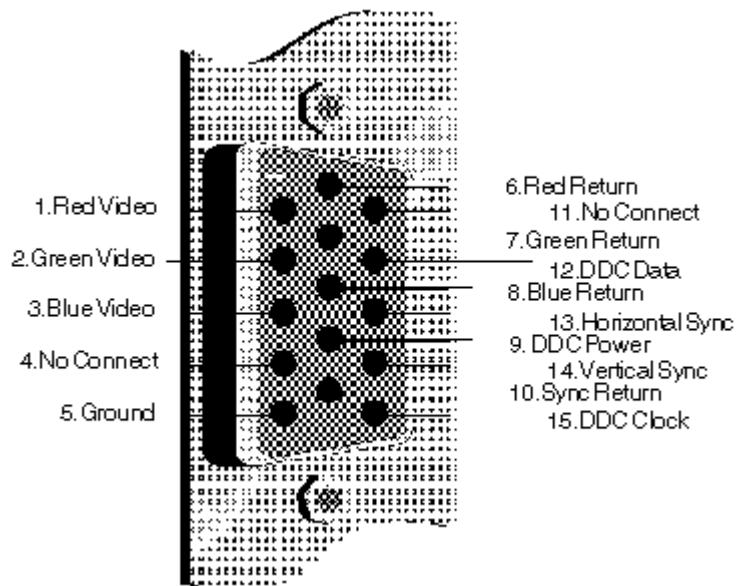
- Operating: from 15% to 90%
- Storage: from 10% to 95%

*Some software games may require additional resources.

Connector Pin-Out Specifications

The connector pinouts on the Righteous 3D are the same as the standard 15-pin D-shell connector pinouts. NOTE: The Royal Blue color indicates that power is available on pin 9 in accordance with the DDC standard.

The 15-pin VGA pass connector on the Righteous 3D is used for output from your VGA graphics accelerator. The pin-outs for both connectors are as follows:



Appendix B: Direct3D

Direct3D is the next generation of real-time, interactive 3D technology for use on the desktop and the Internet. You can experience more compelling and powerful 3D graphics on the Internet and when using games, education and business applications. Direct3D improves Windows 95 game quality and performance to rival arcade machines.

Direct3D is a complete set of real-time 3D graphics services that deliver fast software-based rendering of the full 3D rendering pipeline (transformations, lighting, and rasterization), transparent access to hardware acceleration and a comprehensive, next-generation 3D solution for your PC. Direct3D provides access to advanced graphics capabilities of 3D hardware accelerators including z-buffering, anti-aliasing, alpha blending, mip mapping, atmospheric effects and perspective correct texture mapping.

Tight integration with DirectX and ActiveX technologies allows Direct3D to deliver next-generation 3D graphics capabilities including video mapping and hardware 3D rendering in 2D overlay planes. Direct3D also integrates with DirectDraw to provide 2D drawing and texture services for 3D rendering.

Configuring the Righteous 3D

Configuring Your Righteous 3D in Windows 95

The Righteous 3D Display Properties screen allows you to configure the Direct 3D refresh rate, Direct3D gamma correction and to display a Direct3D Demo.

- ◇ From the Windows 95 desktop, click on the Start button, select Settings, then select Control Panel.
- ◇ From the Control Panel group, double-click on Display. The Display Properties screen appears.
- ◇ From the Display Properties screen, click on the Righteous 3D Setup tab.
- ◇ Make your selections from the available options. When you are finished, click on OK or Apply to save your settings.

Direct 3D Refresh Rates

This selection allows you to select the refresh rates for the supported Direct3D resolutions. The resolution is determined by the game. Resolutions available are: 512x384, 640x400 and 640x480.

Gamma Correction

The Direct3D Gamma Correction selection allows you to adjust the brightness of your display. You can change the value of the Gamma for an individual channel (Red, Green or Blue). For example, to set the Gamma for Red, move the scroll bar up or down to adjust the Gamma value.

To test the Gamma value, select a Direct3D demo from the Image Selection pull-down menu. Click on the Test button to view the new Gamma value applied in 3D mode. To return to the Righteous 3D Display Properties screen, press the ESC key.

Test

Click on the Test button to view the Gamma Correction settings configured.

Defaults

Click on the Defaults button to restore the default settings.

Online Manual

This selection will give you access to the Righteous 3D's online user's manual.

Select the Righteous 3D's Direct3D vertical refresh rate.

Gamma Correction allows you to adjust the brightness of your Direct3D display.

Display the Direct3D demo image selected.

Saves your selections and closes this dialog box.

Closes this dialog box without saving any changes you have made.

Saves all the changes you have made without closing this dialog box.

Select a new Direct3D Gamma value.

Select a Direct3D refresh rate for Righteous 3D.

Supported Direct3D resolutions.

Click on this button to restore the default settings.

Select a demo image from the pull-down menu.

3D So Real It Must Be Righteous.

