VideoLogic Apocalypse 5D for Windows 95
March 3, 1998

Contents

1. Introduction

This file contains installation instructions, late-breaking information, troubleshooting information, and notes on Apocalypse 5D.

You can print this file by clicking the File menu at the top of the window, then Print. The page setup is for US Letter sized paper, but will also print to A4 size.

2. Updates in this driver release

Introduction
This section shows the changes in each driver release, up to this one. Apocalypse 5D uses two sets of drivers: the GrafixStar - Apocalypse drivers for the 2D acceleration; and the Apocalypse 5D drivers for the 3D acceleration.

GrafixStar - Apocalypse drivers

Version 4.3.4

The following problems were fixed in v4.3.4:

- General protection faults in Lotus 123 v5.

- Horizontal black bar on desktop on certain USB motherboards.

- Incorrect mode information for 2MB card.

- AVI playback problems in 1152x864, 16-bit display modes.

- Screen corruption with the Flying Windows screen saver on Pentium MMX systems.

- Black toolbars when running CorelDraw! In 24-bit modes display modes.

- Background color corruption when running Lotus WordPro in 1024x768, 16-bit display modes.

Apocalypse 5D drivers

Version 4.1.1

The following has changed in v4.1.1:

• MS Baseball 3D flashing menus fix

• Improved z support

• Improved performance in Cyber Gladiators, Die Hard Trilogy, Forsaken, MS Flight Simulator 98, G-Police, Heavy Gear, Team 47 Goman, Terracide, Tomb Raider II (makes patch 304 obsolete), Twisted Metal 2 and Wing Commander Prophecy.

Version 4.1.0

The following has changed in v4.1.0:

• Improved z implementation.

• More translucency sorting options in the Apocalypse 5D Display Properties page.

• Improved functionality in the Display Properties page, for example, Use Last Application.

Version 4.0.2

• Added control for Dithering to the Apocalypse 5D Display Properties page.

Version 4.0.1

• New method of translucency sorting. Translucency sorting could be set to 'High Quality' 'Medium' and 'Fast sorting' on a per-application basis.

• Vertex Fog and Gouraud Specular Highlights were added to the Display Properties page.

• The Apocalypse page in Display Properties was redesigned to give access to the new 3D controls and the translucency sorting. The PowerVR HAL and bi-linear control on a per-application basis.

• 430FX chipset problems with certain graphics cards were fixed.

• Performance was increased.

3. Installing the hardware

Introduction
This section explains how to install the Apocalypse 5D hardware.

We strongly recommend that you install the card with the Apocalypse Installer on the Apocalypse CD-ROM, as described in the User Guide, as it is quicker, easier and more comprehensive than using Windows Plug and Play. If you want to use the Installer, you must install the software before installing the hardware, as described in the user guide.

If you want to install Apocalypse 5D with Plug and Play, follow the instructions below.

Before you continue

Installing the software with Windows Plug and Play
Software installation varies slightly depending upon which build of Windows 95 you are running. You should find out which version of Windows you are running **before** installing the hardware, so that you know which set of instructions to follow when installing the software using Plug and Play.

Follow the instructions below to identify which build you are running, and take a note of the build number for installing the software after installing the hardware.

1. Click the Start button, point to Settings and click Control Panel.

2. Double-click the System icon to open the System Properties Window.

3. Click the General tab. The build number is located in the System section, under the 'Microsoft Windows 95' line.

Handling Apocalypse 5D
Follow these guidelines to minimize the risk of electrostatic charges damaging the card:

•   Keep the card in its protective packaging until you are ready to install it.
•   Just before handling the card, touch the metal frame of your computer with the back of your hand to discharge any static electricity which may have built up on you or your clothes.
•   Hold the card by the adapter bracket or by its edges; do not touch the printed circuit board.
•   Do not place the card on top of your computer or on any other metal surface.
•   Make sure that the card is not accidentally touched by anyone else.
•   Handle the card with care to avoid damage to the fragile electronic components mounted on the circuit board.

Installing the hardware

Warning: Always switch off your computer before removing the cover and observe the warnings specified in the manufacturer's documentation.

1. Switch off your computer, monitor, and any hardware devices such as printers connected to your computer. Leave the power cable connected to the power outlet so that your computer is grounded.

2. Disconnect your monitor cable from your computer.

3. Remove the computer's cover. You may need to refer to the documentation supplied with your computer for instructions on how to do this.

4. Remove your existing display card or disable your built-in graphics controller. Refer to the documentation supplied with your computer for instructions on how to disable a built-in graphics controller.

5. Locate an empty PCI bus expansion slot and remove the slot cover. Keep the screw, you will need it later to secure the card.

6. Touch the bare metal chassis of your computer with the back of your hand to discharge any static that may have built up on you or your clothes.

7. Align Apocalypse 5D with the slot you have chosen. Firmly press the card into the slot. You will need to use some pressure to push the card into position, but do not use excessive force.

8. Secure Apocalypse 5D using the screw that you removed previously.

9. Replace the cover of your computer.

10. Connect the monitor cable to Apocalypse 5D. All cables connected to Apocalypse 5D should be properly shielded and comply with radio frequency interference standards.

11. Switch on your computer and your computer monitor. You are now ready to install the software.

4. Installing the software from the Apocalypse CD-ROM

Introduction
This section explains how to install the software for Apocalypse 5D using Windows Plug and Play.

Before installing the hardware, you should have found out which build of Windows you are running, as explained at the beginning of the section 'Installing the hardware'.

Follow the instructions below for the build of Windows you are running.

Software installation for Windows 95 build 4.00.950 or 4.00.950a

1. When your computer has restarted, insert the Apocalypse CD-ROM into your CD-ROM drive.

2. A window is displayed saying that Windows has found new hardware. Select Driver from Disk provided by Hardware Manufacturer, and click OK.

3. A window is displayed asking for the location of the software. Browse to the folder \apoc5d\win95\2d\ disk1 on the CD-ROM. After browsing, click OK.

4. Click OK to install the drivers.

5. When the drivers have been installed, a message is displayed asking whether you want to restart Windows. Click Yes.

6. When your computer has restarted, a window is displayed saying that Windows has found new hardware. Select Driver from Disk provided by Hardware Manufacturer, and click OK.

7. A window is displayed asking for the location of the software. Browse to the folder \apoc5d\win95\3d on the CD-ROM. After browsing, click OK

8. Click OK to install the drivers.

9. When the drivers have been installed, a message is displayed asking whether you want to restart Windows. Click Yes

10. When your computer has restarted, Apocalypse 5D is ready to use.

Software installation for Windows 95 build 4.00.950b (otherwise known as OSR2)

1. When your computer has restarted, the Update Device Driver Wizard is displayed, saying that a Standard PCI Graphics Adapter (VGA) has been detected, and asking whether you want Windows to search for the drivers. Insert the Apocalypse 5D CD-ROM into your CD-ROM drive, and click Next.

2. Windows searches for the drivers and finds Standard PCI Graphics Adapter drivers. Click Other Locations and browse to the folder \apoc5d\win95\2d\disk1 on the CD-ROM. After browsing, click OK.

3. A message is displayed saying that Windows has found the driver for GrafixStar - Apocalypse. Click Finish to install the drivers.

4. Windows prompts you to insert the disk labelled GrafixStar Windows 95 Setup disk. Click OK and browse to the folder \apoc5d\win95\2d\disk1 on the CD-ROM. After browsing click OK.

5. A message is displayed notifying you of the change to your system's settings, and asking whether you want to restart the computer. Click Yes.

6. When your computer has restarted, the Update Device Driver Wizard is displayed, saying that a PCI Multimedia Device has been detected, and asking whether you want Windows to search for the drivers. Insert the Apocalypse CD-ROM into your CD-ROM drive, and click Cancel.

7. Click the Start button, point to Settings and click Control Panel.

8. Double-click the Add New Hardware icon.

9. The Add New Hardware Wizard is displayed. Click Next.

10. You are asked if you want Windows to search for the hardware. Select No, and click Next.

11. From the list of devices, click Sound, game and video controllers, and click Next (you might have to scroll down the list to find Sound, game and video controllers).

12. Insert the Apocalypse CD-ROM into your CD-ROM drive.

13. To locate the drivers, click Have Disk, and browse to the folder \apoc5d\win95\3d on the CD-ROM. When you have browsed, click OK.

14. At the Install from Disk window, click OK.

15. At the Select Device window, click OK.

16. At the Add New Hardware Wizard, click Next.

17. Click Finish.

18. Restart your computer.

19. When your computer has restarted, a message is displayed saying that Windows has detected Apocalypse 5D.

    The System Settings Change window is displayed asking whether you want to restart your computer. Click Yes.

    When your computer has restarted, Apocalypse 5D is ready to use.

5. Upgrading the drivers from the Internet

Extracting the drivers

When you have downloaded the latest drivers from the web site, follow these steps to extract the drivers:

1. Run the downloaded .exe file. You can do this by double-clicking the file, or by clicking Start, clicking Run, then browsing to the file.

2. When prompted to extract the driver files into a folder called apoc5d on your hard disk, click Unzip to extract the driver files.

3. When all files have been extracted, click Close to exit the Winzip dialog box.

    You can now install the drivers.

Installing the drivers

Windows 95 build

Installing the drivers differs slightly depending on which build of Windows you are running.

Follow these instructions to find out which build of Windows 95 you are using, then follow the instructions for your build version:

1. Click the Start button, point to Settings and click Control Panel.

2. Double-click the System icon to open the System Properties Window.

3. Click the General tab. The build number is located in the System section, under the 'Microsoft Windows 95' line.

4. Continue for your build below

Installing the Apocalypse 5D drivers for Windows 95 build 4.00.950 or 4.00.950a

To upgrade the drivers in Windows 95 build 4.00.950 or 4.00.950a:

1. Click the Start button, point to Settings and click Control Panel.

2. From the Control Panel, double-click the System icon.

3. In the System Properties dialog box, click the Device Manager tab. A list of devices available on your computer is displayed.

4. From the list, double-click Sound, video and game controllers (you might have to scroll down the list to find Sound, game and video controllers).

5. From the Sound, video and game controllers list, double-click Apocalypse 5D.

6. In the PCI Properties dialog box, click the Driver tab.

7. From the list of driver files, click Change driver.

8.   In the Select Device dialog box, click Have Disk.

9.   In the Install from Disk dialog box, browse to the folder into which you extracted the updates. The default folder for this is c:\apoc5d. When you have browsed, click OK.

10. At the Install from Disk dialog box, click OK.

11. At the Select Device dialog box, click OK.

12. At the PCI Properties dialog box, click OK. The drivers are upgraded on your computer.

13. When the drivers are upgraded, a message is displayed asking whether you want to restart Windows. Click Yes. When your computer has restarted Apocalypse 5D is ready to use.
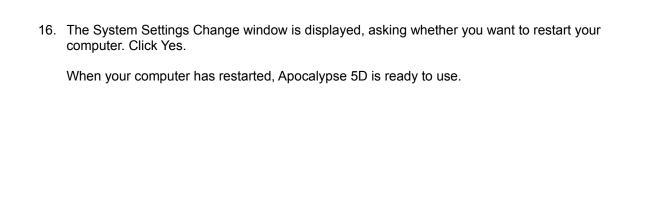
Installing the Apocalypse 5D drivers for Windows 95 build 4.00.950b (otherwise known as OSR2)

To upgrade the drivers in OSR2:

1.   Click the Start button, point to Settings and click Control Panel.

2.   From the Control Panel, double-click the System icon.

3.   In the System Properties dialog box, click the Device Manager tab. A list of devices available on your computer is displayed.

4.   From the list, double-click Sound, video and game controllers.

5.   From the Sound, video and game controllers list, double-click Apocalypse 5D.

6.   In the Apocalypse 5D dialog box, click the Driver tab.

7.   Click the Update Drivers button. This starts the Update Device Driver Wizard.

8.   Select Yes, and click Next.

9.   A window is displayed asking you to give the location of the drivers. Click Other Locations.

10. In the Select Other Locations window, browse to the folder into which you extracted the updates. The default folder for this is c:\apoc5d. When you have browsed, click OK

11. At the Select Other Location window, click OK.

     If you are already running the latest drivers, a message is displayed saying that the location you have browsed to does not contain updated drivers. Click Cancel to quit upgrading the drivers.

12. Click OK.

13. Click Finish.

14. A window is displayed asking you to insert the disk. Click OK.

15. At the Copying Files window, browse to the folder into which you extracted the updates. The default folder for this is c:\apoc5d. When you have browsed, click OK.

16. The System Settings Change window is displayed, asking whether you want to restart your computer. Click Yes.

   When your computer has restarted, Apocalypse 5D is ready to use.

6. Removing Apocalypse 5D

To remove Apocalypse 5D from your system:

1. Open the Control Panel window by clicking the Start button, pointing to Settings and clicking Control Panel.

2. Double-click the System icon to open the System Properties Window.

3. Click the Device Manager tab.

4. Double-click Display Adapters.

5. Click GrafixStar - Apocalypse, and click Remove.

6. A dialog box is displayed asking you if you want to restart Windows. Click No.

7. Double-click Sound, video and game controllers.

8. Click Apocalypse 5D, and click Remove.

9. A dialog box is displayed asking you if you want to restart Windows. Click No.

10. Shut down Windows 95.

11. Switch off your computer, monitor, and any hardware devices such as printers connected to your computer. Leave the power cable connected to the power outlet so that your computer is grounded.

12. Disconnect the monitor cable from your computer.

    Warning: Always switch off your computer before removing the cover and observe the warnings specified in the manufacturer's documentation.

13. Remove the computer's cover. You may need to refer to the documentation supplied with your computer for instructions on how to do this.

14. Remove the Apocalypse 5D card from its PCI slot.

15. Replace the cover of your computer.

16. Switch on your computer and your computer monitor.

17. Delete the following files from the disk on which you are running Windows 95:

PowerSGL files	Direct3D files	GrafixStar files
\windows\sgl.dll	\windows\system\pvrhal32.dll	\windows\system\vlgx600a.drv
\windows\sglmid5.dll	\windows\system\pvrinit.exe	\windows\system\vlgx600a.vxd
\windows\system\vsgl.vxd	\windows\system\pvrsm3d.dll	\windows\system\vl6dd32.dll
\windows\inf\apoc5d.inf		\windows\system\vlgxcpl.dll
\windows\pvrmid5.dll		\windows\system\vlregio.vxd
\windows\apoc5d.bmp		
\windows\pcx2help.hlp		
\windows\pvros.dll		

7. Hints and Tips

Introduction
This section gives late-breaking information on how to get the most out of your Apocalypse 5D.

Installing games
Some DirectX games currently on the market are supplied with DirectX 2. If the game's installation forces DirectX 2 to be installed, you should reinstall the latest version of DirectX. You can do this through the Apocalypse Installer on the Apocalypse CD-ROM.

Microid Research BIOS
Some PCs with an MR BIOS can give a much lower frame rate with Apocalypse 5D. Switching to another BIOS can greatly enhance performance.

PCI Burst
Some PC BIOSes enable you to alter the settings for 'PCI Burst'. Enabling this feature enhances Apocalypse 5D's performance.

PCI Latency
Some PC BIOSes enable you to alter the settings for 'PCI Latency'. Other typical names for this feature are:

'Latency Timer (PCI Clocks)'   A term used with AMI BIOS, usually found in the 'Advanced chipset configuration' menu.

'PCI Latency Timer'   A term used with AWARD BIOS, usually found in the 'PNP and PCI setup' menu.

Setting this to 80 PCI clocks can enhance Apocalypse 5D performance.

16-bit Color
To avoid problems with the Start menu and Windows menus containing corrupted text, or missing text, you should set your display mode to a high-color palette, of at least 65,536 colors (16-bit).

8. The GrafixStar - Apocalypse drivers

Introduction
This section describes the display modes available with overlay video acceleration, and how Apocalypse 5D interacts with DirectDraw.

Display modes with video acceleration
The Apocalypse 5D uses an intelligent graphics engine which provides true-color video playback even when the display is set to 256 colors. This means that you don't have to sacrifice speed and functionality by being in a true-color display mode; instead, you can play video clips in true-color while using a 256 or 65k color mode.

Display size	Colors	Refresh rate (Hz)
640 x 480	256	60, 72, 75, 85, 90, 100, 120, 150
800 x 600	256	56, 60, 72, 75, 85, 90, 100, 120
1024 x 768	256	60, 70, 72, 75, 80
1152 x 864	256	60
640 x 480	65,536	60, 72, 75, 85, 90, 100, 120, 150
800 x 600	65,536	56, 60, 72, 75
1024 x 768	65,536	60, 70, 72, 75, 80
640 x 480	16.7m	60, 72, 75, 85, 90, 100, 120
800 x 600	16.7m	56, 60, 72, 75

All other modes display AVI files using software only, which gives poorer quality playback

9. Troubleshooting

Introduction
This section describes problems you may encounter when running Apocalypse 5D.

Installation Problems

The PC locks up when clicking Cancel at the Update Device Driver Wizard
When you install the Apocalypse 5D card in your system, it will detect a new graphics card and display the Update Device Driver Wizard. Clicking Cancel at this point might lock up your PC. In this case, please follow the installation instructions in the user guide or in section 2 of this readme.

The Windows 95 Device Manager shows a resource conflict between Apocalypse 5D and a standard PCI-to-PCI bridge.
This happens due to a problem some versions of Windows 95 have with PCI-to-PCI bridges. Version 4.00.950b of Windows 95 shows up a resource conflict of the PCI-to-PCI bridge on the Apocalypse 5D card, even though no conflict exists. Your Apocalypse 5D card will not be affected by this conflict and it cannot be resolved by trying to change the resources.

3D Problems

The application display is corrupted.
Your graphics system may not support the required DirectX version. Reinstall DirectX. You can do this through the Apocalypse Installer on the Apocalypse CD-ROM.

If the problem persists, contact your graphics card vendor.

When running an application that uses PowerSGL or Direct3D, the system freezes restarts.
You may have installed Apocalypse 5D into a PCI bus slot that does not have bus-mastering capability.

Install the card into a slot that supports bus-mastering.

I am not given the D3D Hal option with the D3D demos.
Ensure that you have the DirectX 3 graphics drivers installed, and that your computer is in a display mode greater or equal to 16 bits per pixel (65,536 colors).

If your system received an Invalid Page Fault or a General Protection Fault, restart your system.

When running an application that uses PowerSGL the system restarts.
The display driver may not support buffer flipping. To support flipping the amount of free off-screen memory must be greater than the current on-screen memory.

The Use Hardware Accelerator option within an application is grayed out.
The application is currently set to run in a graphics resolution that cannot be accelerated by Apocalypse 5D. Setting the application's graphics mode to a lower resolution mode makes the check-box available.

Apocalypse 5D is not being recognised by the system. If you have sufficient technical knowledge, check that it is in System Properties, check the BIOS, IRQ allocations etc, otherwise contact VideoLogic through one of the points listed in the technical support section of the user guide.

Some textures within the game are corrupt.
Try creating an entry for the game on the application list in the Apocalypse 5D Display Properties page, and switching on Automatic MIP Mapping.

All game menus are displayed correctly but when playing a game, it fails to display the screen correctly.
Try creating an entry for the game on the application list in the Apocalypse 5D Display Properties page, and switching on Render Overlap.

Some textures within the game appear to have joining marks on the edges of the tiles.
Try creating an entry for the game on the application list in the Apocalypse 5D Display Properties page, and switching off the Bilinear Mode.

I have enabled bilinear filtering in an application, but the graphics still look "unfiltered".
Try creating an entry for the game on the application list in the Apocalypse 5D Display Properties page, and switching on Dithering.

2D Graphics Problems

Display sizes not supported by your monitor
Windows 95 does not restrict the generic SVGA monitor settings to a given set of display sizes, so allows any display size to be selected. If you have a standard monitor selected, there is therefore a possibility that you could select a display size that your monitor does not support.

Choose the correct monitor type, or contact your monitor supplier for more information.

Corrupt or blank display
Windows 95 does not restrict the generic SVGA monitor settings to a given set of refresh rates, so allows any refresh rate to be selected. If you have a standard monitor selected, there is therefore a possibility that you could restart your system with a refresh rate that your monitor does not support. This usually results in a corrupted or black display in Windows 95. To rectify this problem, restart Windows 95, holding down the CTRL key on your keyboard. This starts Windows 95 in the lowest possible refresh rate for the resolution selected.

QuickTime movies do not run correctly
If you experience problems when viewing QuickTime movies, run the QuickTime Control Panel from the Windows 95 Control Panel, and follow the steps below:

1.   Run the QuickTime Control Panel, click the More button and click the Video tab.

2.   From within the Optimization section, the Draw Method setting will be set to Video Hardware. Change this to Video Driver.

3.   Close the QuickTime Control Panel.

Playing AVI with MS PLUS! pack
If you are using a display mode which is capable of video acceleration and you have the Show Window Contents While Dragging option enabled, you will see the accelerated video displaced from the video window while dragging the video window around the desktop. Disable the Show Window Contents While Dragging on the PLUS page in Display Properties.

Monitor screen centering
Some advanced monitors create a display setting by detecting the horizontal line frequency, and this may change the size and positioning of the Windows 95 screen when task switching from a DOS full-screen session to a Windows 95 session. This problem occurs when the monitor is at the borderline between two settings. To remedy this, use the controls on your monitor to adjust its screen settings.

Xing 3.X
MPEG clips replayed in modes that are not video accelerated may cause Windows to become unstable. If this problem occurs, change the display mode to one that supports video acceleration.

Windows 95 Screensavers
If you are using the 'Mystify your Mind' Windows screensaver with the password option enabled, you may see additional lines appear when the password entry window is active. We recommend that you choose another screensaver if you are using password protection.

If you are using 'Curves and Colors' in 65k colors, you may see some color corruption. Select another color depth, or use another screensaver.

Installing Windows 95 with an Apocalypse 5D card
If you are installing Windows 95 for the first time from DOS, the Windows 95 auto-detection process will Plug 'n' Play Apocalypse 5D as an ET4000 Display adapter and an 'Other device: PCI VGA-Compatible

display adapter'.

Although this does not affect the Apocalypse 5D installation or performance, you may want to remove the section 'Other device'. To do this, delete both the 'Other devices' and the GrafixStar - Apocalypse entry in the 'Display adapter' section of your System control panel. After this, Windows 95 will Plug'n'Play the GrafixStar - Apocalypse drivers on the next restart, producing a single entry for the display adapter.

Adobe Type Manager
If Adobe Type Manager is installed with Windows 95, Apocalypse 5D performance may be degraded.

To maximize performance, make the following changes to your SYSTEM.INI file:

```
[Boot]
;system.drv=atmsys.drv
;atm.system.drv=system.drv
system.drv=system.drv
```

Harvard Graphics 4.0
Running Harvard Graphics 4.0 for Windows in a 24-bit color mode (16.7m colors) causes a series of errors. Use a 16-bit (65k colors) mode instead.

Dorling Kindersley
On launching 'The Ultimate Human Body' or 'The Encyclopedia of Science' in 16-bit (65k colors) and 24-bit (16.7m colors) resolutions, you may find that the window background color is incorrect.

In addition, when scrolling the window over the body in the 'The Ultimate Human Body', the main window showing the zoomed portion of the selected window may not show the complete image.

Select an 8-bit mode (256 colors) for running these applications.

cc:Mail v6.0
When using applications with cc:Mail v6 in the background, icons within Windows 95 and other active applications may be drawn incorrectly and, in extreme cases, system integrity problems may occur. This does not happen with earlier versions of cc:Mail.

ActiveMovie
When displaying accelerated overlay video with ActiveMovie in certain display modes, the video may become noisy when moving the video window around the desktop, or by resizing the video window.

Choose an alternative display mode.

Apricot MS540 system BIOS upgrade for compatibility with Apocalypse 5D
If you are running a GrafixStar 600 or or an Apocalypse 5D other advanced graphics card with an Apricot MS540 system with IBM SurePath BIOS v1.3 or Apricot 5436 BIOS 5, you get no video output, and the system does not boot:

This is fixed using Patch 237, which has been provided by Apricot Computers Limited / Mitsubishi Electric. This patch contains Flash code to upgrade the system BIOS to v5.07 for both the 5434 and the 5436. The patch can be downloaded from VideoLogic Online website at http://www.videologic.com or copied from the Apocalypse CD in the directory \APOC5D\UPDATES\SN0237\PATCH237\.

Laplink for Windows 95
When using Laplink for Windows 95 and the Client system has a GrafixStar 600 or an Apocalypse 5D installed, the Client system might lock-up when the host is connected.

This problem can be fixed by disabling bitmap caching in the graphics driver. There are two ways of disabling bitmap caching.

Disabling bitmap caching in systems with SmartTools installed
SmartTools v2.0 or later comes with a feature called SmartMAX. SmartMAX allows you to disable certain parts of the GrafixStar driver. To use SmartMAX, right-click the Windows 95 desktop and click Properties while holding down the CTRL key. In the Display Properties window click the SmartMAX tab and select the checkbox next to "Disable Bitmap Caching". Click OK and restart Windows 95.

Disabling bitmap caching in systems without SmartTools
Add the following entry to the bottom of your SYSTEM.INI file:

```
[VideoLogic SVGA]
TuningControl=27
RealizeControl=16
```

Save the changes and restart Windows 95.

Running games without SciTech Display Doctor
GX6VBE.COM, as provided by VideoLogic in Patch 252, is a DOS Terminate-Stay-Resident program (TSR) that adds UniVBE BIOS extensions to the existing GrafixStar 600 or Apocalypse 5D BIOS. When the TSR is installed, certain DOS games, such as Z or Quake should no longer require SciTech Display Doctor or UniVBE v5.x.

Patch 252 can be downloaded from VideoLogic Online website at http://www.videologic.com or copied from the Apocalypse CD in the directory \APOC5D\UPDATES\SN0252\PATCH252\.
To install Patch 252, copy GX6VBE.COM to the root directory of the hard disk on which you are running Windows, and add the following line to AUTOEXEC.BAT:

```
c:\GX6VBE.COM
```

This assumes that the hard disk is your c: drive. Substitute the letter of your disk if it is not the c: drive.

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