CONTENTS

Chapter 1 Voodoo 3 VGA Card Specifications

1-1 General Specifications

Voodoo3 VGA Card is based on Voodoo 3 2000/3000 chipset and AGP 2x interface, delivering the perfect balance of high-end 2D/3D performance and affordability. Targeted for the mainstream PC systems, the Voodoo 3 chipset features blistering 3D acceleration, the world's fastest 2D performance and DVD acceleration – all on a single chip.

Complete compatibility with the largest installed base of enhanced 3D entertainment titles available, the Voodoo 3 is optimized for DirectX 6, Glide and OpenGL, and includes support for ultra-high resolution display on PC monitors, LCD flat panels and high-definition television sets. With unmatched performance and value, the Voodoo 3 2000/3000 is the perfect PC entertainment solution for the next generation of PC owners.

Specifications and Features of Voodoo 3 Series VGA Card:

1. Fully integrated 128-bit VGA/2D/3D/video accelerator.
2. True Multitexturing – 2 texture/clock
3. 3Dfx Voodoo compatibility
4. 2X AGP with sidebands
5. DVD Acceleration
6. Digital video output for NTSC, PAL and SECAM TV-out support
7. 4-16MB SDRAM, 128 bit wide frame buffer.
8. PC'99rev. 1.0 compliant.
9. DirectX 6, Open GL, Glide 2.x/3x support
10. 0.25 Micron, 5-layer metal CMOS technology.
11. Optimized Pentium II I/O architecture.
12. Card Dimension: 160mm x 90mm

13. **Speed Differentiation:**

Voodoo 3 2000	**Voodoo 3 3000**
250 Megatexels/sec.	366 Megatexels/sec.
300 MHz RAMDAC:	350MHz RAMDAC:
2048x1536 @ 65Hz	2048x1536 @ 75Hz
125 MHz Core Graphics Clock	183 MHz core Graphics Clock
4 million triangles/sec.	7 million triangles/sec.

1-2 System Requirements:

- CPU: Intel Pentium II or above or equivalent
- System: Win 9x, NT4.0/5.0
- Interface: AGP

Chapter 2 Features Highlight

2-1 Voodoo 3 2000: High-Speed, High-Resolution 2D/3D Accelerator

From 3Dfx Interactive, the architect of the 3D revolution, comes a new dimension of high-resolution gaming. A snap to install, the Voodoo3 2000 replaces tired, old 2D cards in just a matter of minutes. Fusing the world · fastest 2D with a dual 32-bit pipeline, the Voodoo 3-2000 pumps out over 100 billion operations per second to bring you resolutions as high as 2046x1536 and speeds of up to 60 frames per second. Generating 6 million triangles per second to bring to life 500 of the hottest titles, the Voodoo3 2000 · Patented Single pass, Single Cycle, Multi-Texturing delivers the brilliant color and amazing clarity that has made it the standard in PC entertainment.

2-2 Voodoo 3 3000: The ultimate in 3D/2D performance

Clocking in at over 100 billion operations per second, the Voodoo3 3000 pushes the limits of ultra high-resolution gaming. Delivering liquid smooth frame rates of over 60 frames per second, the Voodoo3 3000 combines the world · fastest 2D with a dual 32-bit pipeline to provide a mind-altering gaming experience. Unleashing an unrivaled 7 million triangles a second, the Voodoo3 3000's Patented Single-Pass, Single Cycle Multi-Texturing provides awesome visual effects at resolutions as high as 2046x1536. Designed to enhance the latest generation of computer hardware, the Voodoo 3-3000 provides DVD hardware acceleration to ensure a seamless 30 frame per second without frame drop. And the standard TV/S-Video jack on the Voodoo 3-3000 instantly allows you to output to a compatible TV or Monitor to create the ultimate home entertainment experience.

2-3 Video Acceleration And Interface with Voodoo 3:

- VMI video peripheral interface
- YUV 4:2:2 and YUV 4:2:0 planar support
- De-interlacing using Bob and Weave
- Separate gamma correction for video and graphics
- Auto page flipping using VBI for smooth motion video
- 30 Frames per second DVD playback with no dropped frames

2-4 3D Acceleration Highlights:

- Dual 32-bit texture rendering architecture
- True multi-texturing: 2 textures per-pixel per-clock
- Full hardware setup of triangle parameters
- Support for multi-triangle strips and fans
- Single Pass, Single-cycle Bump mapping
- Single Pass, single-cycle trilinear mip-mapping
- Alpha blending on source and destination pixels
- Per-pixel atmospheric fog with programmable for zones
- Floating point Z buffer (W buffer)
- Texture compositing for multi-texture special effects
- 8-tap anisotropic filtering
- Support for 14 texture map formats
- Texture compression through narrow-channel YAB format

2-5 2D Accelerastion Highlights:

- 128-bit Windows GUI acceleration
- Full-featured 128-bit BitBit engine: Windows GDI in hardware
- Source and destination chroma-keying for DirectDraw
- SGRAM color expansion and single-cycle block writes
- Accelerated 8, 16, 24(packed), 32-bit mode

2-6 AGP or Accelerated Graphics Port -- a new bus interface for graphics accelerators.

AGP gives graphics accelerators fast, high throughput direct access to system memory. This allows a graphics accelerator access to more memory than available locally on the graphics card. For example, to display a scene that contains 16MB of textures, a 4MB AGP graphics card could access the PC system memory for the additional 12MB required.

2-6-1 AGP delivers a peak bandwidth that is 4 times higher than the PCI bus using pipelining, sideband addressing, and more data transfers per clock.

It will also enables graphics cards to execute texture maps directly from system memory instead of forcing it to pre-load the texture data to the graphics card's local memory. AGP is based on the PCI 2.1 standard which calls for a 66MHz PCI bus speed.

The result of AGP is a much smoother frame rate and the ability to display 3D graphics and video that is many times more realistic and much a higher quality than ever before found a PC.

2-6-2 The current PCI bus supports a data transfer rate up to 132 MB/s, while AGP (at 66MHz) supports up to 533 MB/s!

AGP attains this high transfer rate due to it's ability to transfer data on both the rising and falling edges of the 66MHz clock, and through new design advances that have made data transfer modes more efficient.

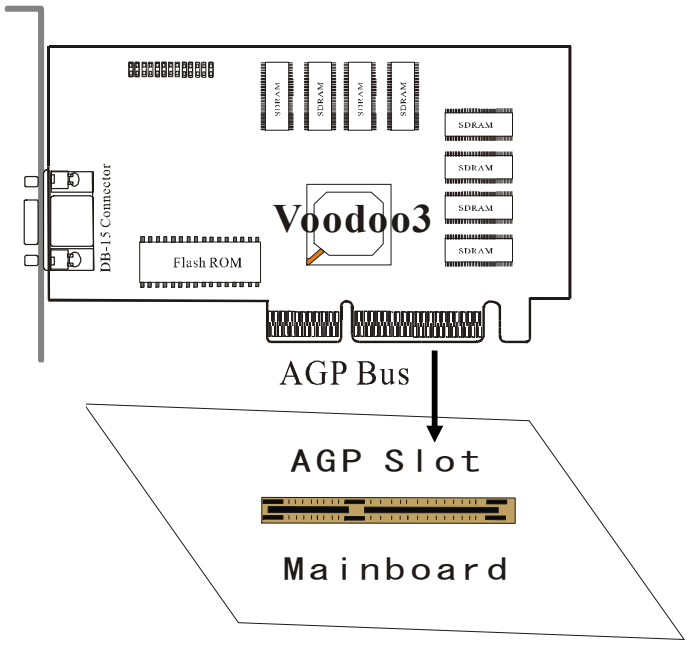
2-6-3 Direct Memory Execute (also knows as DIME) is the most important feature of AGP.

AGP graphic chips have the capability to access main memory directly for the complex operation of texture mapping. AGP provides the graphics card with two methods of directly accessing texture maps in system memory: pipelining and sideband addressing. In pipelining, AGP makes multiple requests for data during a bus or memory access. PCI makes one request, and does not make another until the data it requested has been transferred.

CHAPTER 3 INSTALLATION

3-1 Hardware Installation – To install the VGA Card

Voodoo3 VGA card is built with AGP Bus support. The AGP Slot is a 124-pin slot as shown below.



Both the AGP Edge and the AGP Slot are of foolproof design so as to assure a correct and secured connection.

3-2 Driver installation on Windows 9X:

VOODOO3 VGA Card is shipped in a package which includes a Driver & Utility CD containing Drivers for Windows 95/98, and NT 4.0/5.0

Step 1: Install your Voodoo3 card properly (See Hardware Installation Guide).

Step 2: Power on your PC.

Step 3: For first time you install Voodoo3 card, by the Plug and Play feature of Windows 95/98, Windows will find a new hardware and ask for the driver.
(If it is not the first time you install this card, just go to Step 4 .

For Windows 9X, t**here are three installation variations :**

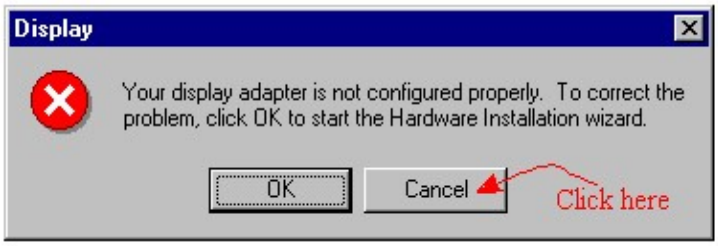
(A) for Windows 95,
(B)Windows 95 OSR2
(C) Windows 98

Yet, for these three variations, there is only one main point of installation: Get off from the Windows Auto-search and insert Manufacturer's Driver CD.

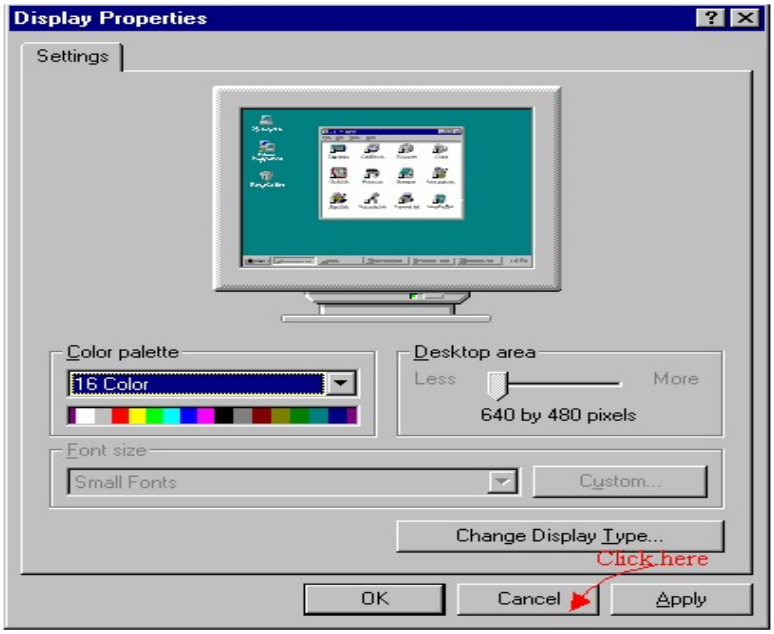
(A) For Windows 95 (Original Version):

A-1. After starting Windows, You will see a dialog appear on the screen as below:

A-2. Click **"Do not install a driver "(so as to get off and go to VOODOO3 driver setup),** then press **"OK".** After that, you will see following window:



A-3. Click "Cancel" then you will see:

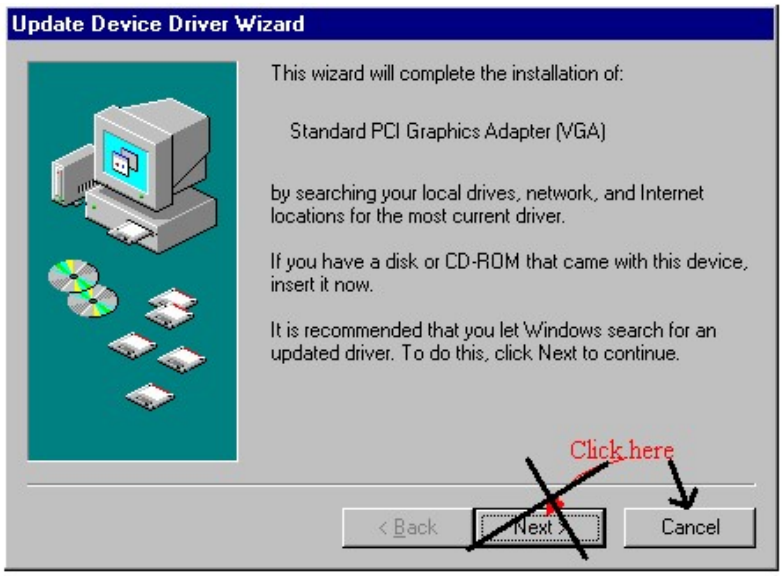


A-4. Click **"Cancel" to get off and go to Step 4 for VOODOO3 driver setup.**

(B) For Windows 95 OSR2:

B-1. After starting Windows 95 OSR2, the system will find out the just installed VOODOO3 card and ask you to update the VGA driver as in the screen below:

:



B-2. Click **" Cancel"** so as to get out and return to the "Start" menu. After returning to "start' mneu, go directly to Step-4 of this Chapter (insert the Voodoo3 Driver & Utilities CD into your CD-ROM).

(C) For Windows 98:

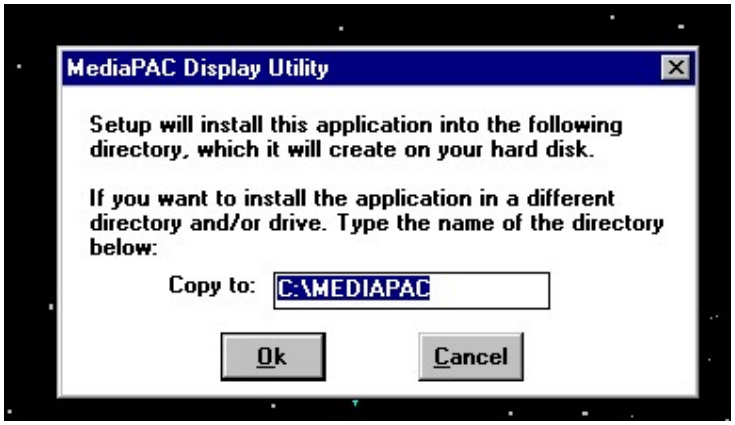
C-1 After starting Windows 98, the system will find out the just installed VOODOO3 VGA card and ask you to update the VGA driver for this new hardware :

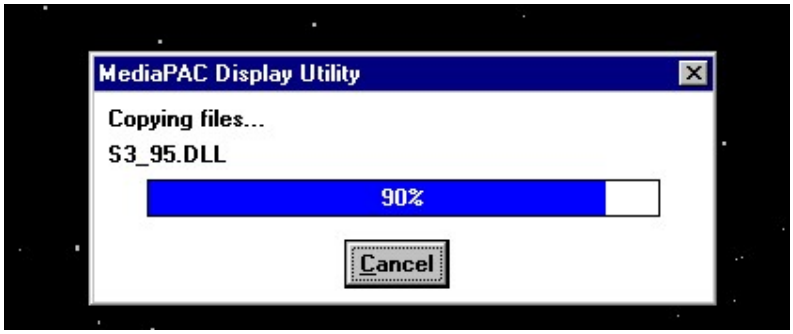
C-2. Click **" Cancel"** so as to get out and return to the "Start" menu.
After returning to "start' mneu, go directly to Step-4 of this Chapter (insert the VOODOO3 Driver & Utilities CD into your CD-ROM).

Step 4: Insert the VOODOO3 Driver and Utilities Setup CD into your CD-ROM drive. In a second or two, the "Vodoo3 Setup" screen will show up automatically.

Step 5: Click “Drivers Setup”, and the following screen will appear where you should click to “Yes” to install MediaPAC Display Control Utility:

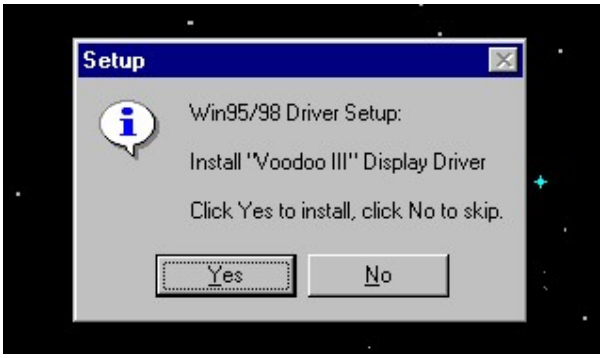
Step 6: After Clciking "Yes" you can see the following 3 screens to guide you through installation of MediaPAC Display Control Utility.



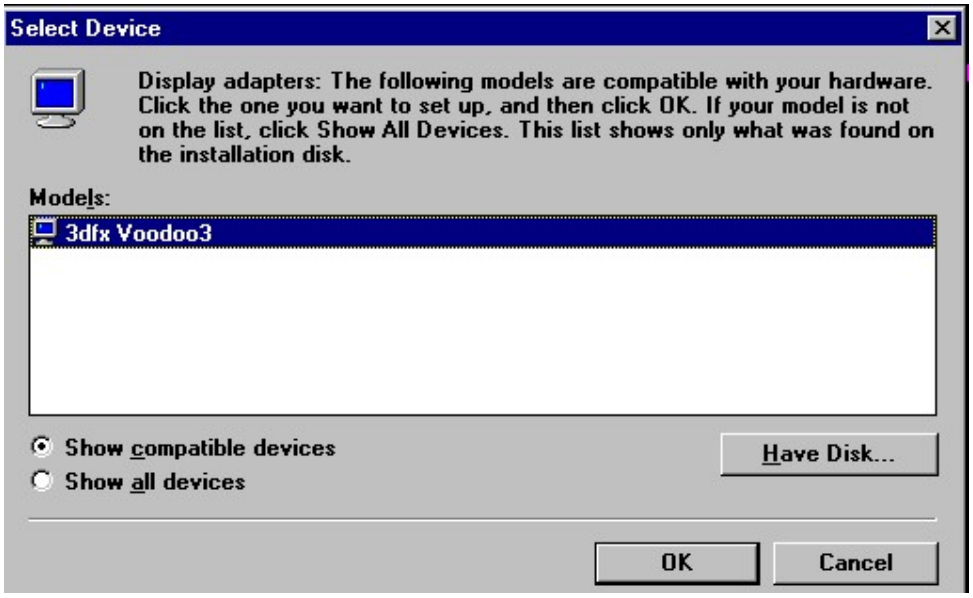


And click "OK" to go to "Voodoo III Display Driver " setup.

Step 7: After installing "Display Control Utility", in a second or two the "Install Voodoo3 display Driver" dialogue appears on screen, where you should click to "Yes" to install it with no procrastination.



Step8: After clicking "Yes", the following three screens appear in turn to guide you through the installation.



Congratulation! You have successfully installed Voodoo3 Display Driver.

Step 9: After installing "Voodoo3 Display Driver", it is also strongly recommended that you should install the useful multimedia programs already provided in the Utility CD.
Insert the Voodoo3 Utility CD into your CD-ROM and click it to enter the CD main menu. All programs provided therein are Win 95/98 compatible and can be easily set up with a few clicks. Just click and install the one you like.

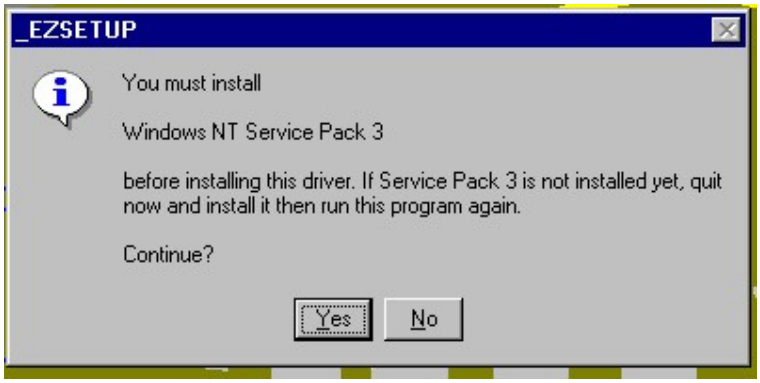
3-3 Voodoo3 Driver Installation on WIN NT 4.0/5.0

After Voodoo3 VGA Card has been properly installed to your mainboard, you could then go to Voodoo3 Driver installation on your Win NT 4.0/5.0.

Step 1 With your VGA Card installed and NT system started, insert the Voodoo3 Utilities and Driver Installation CD into the CD-ROM Drive to go to autorun setup.

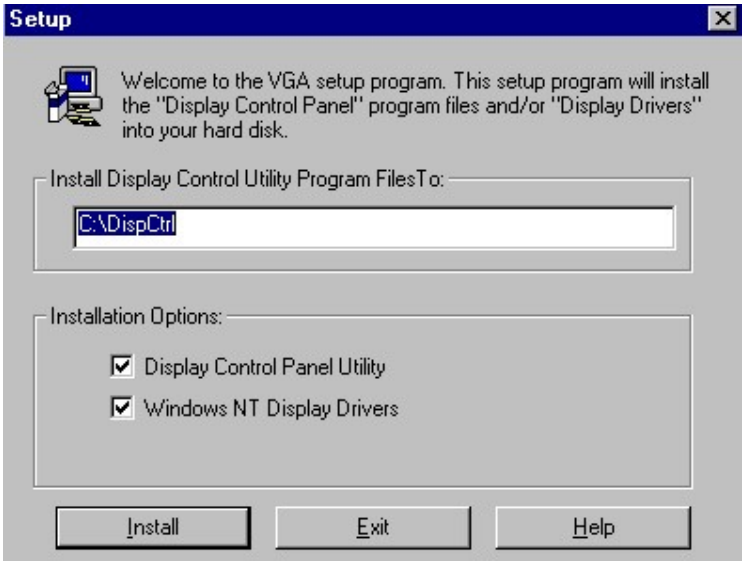
Step 2 In a second after insertion of the Utility and Driver CD, the "Quick Install Voodoo III" main menu will show up as below:

Step 3 Click "Drivers Setup" to install driver for Win NT. Instantly, a dialog box appears on screen, advising user to install Windows NT Service Pack 3 before setting up Voodoo3 driver. The dialog is a reminder. If you choose to install Voodoo3 driver right away, just click "Yes" to continue setup. You can install Service Pack later.

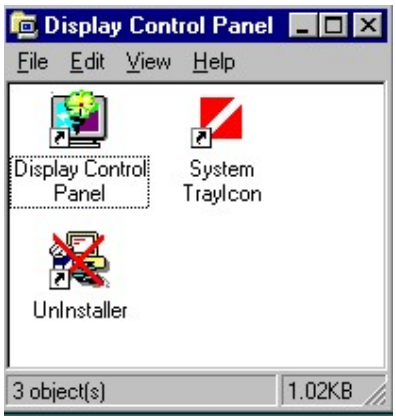


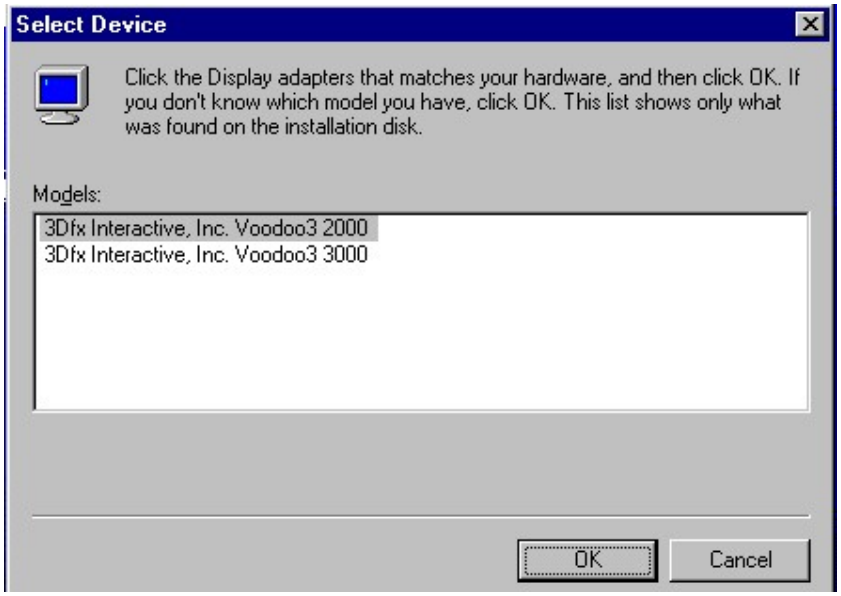
Note: Windows NT Service Pack 3/4 is a utility program containing Windows NT 4.0 system update utility and Microsoft Windows Media Player utility. It supports and updates most of the multimedia utility drivers.

Step 4 After clicking “Yes” to continue setup, you can instantly see another dialog box to lead you through the “ Display Control Panel Utility” and “Win NT display Driver” installation:

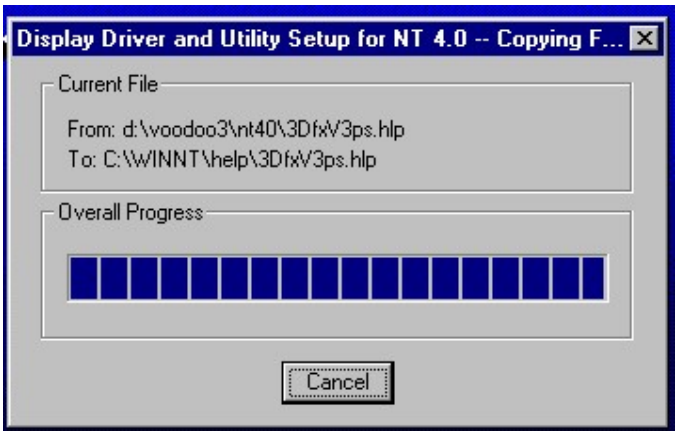


Step 5 When "Display Control Panel" installation is complete, the corresponding icons will appear for a second and the screen will then switch to the "Select Device" display. Click "OK" on the "Select device" screen to finish "Display Control Panel".

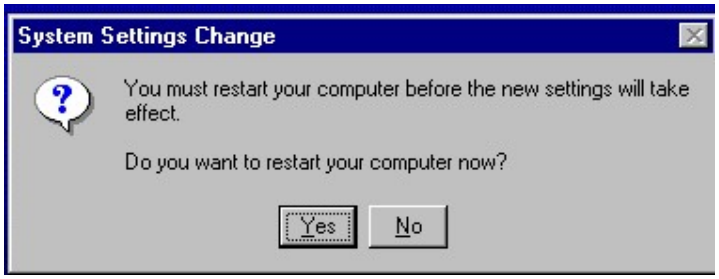




Step 6 After "Display Control Panel" installation is complete, the Setup Program will automatically start "Copying files" for Voodoo3 driver setup.



Step 7 In a second, the "copying files" finishes, and the "System Settings Change" screen will appear to remind you to restart your computer now.
Click "Yes" to let the new settings take effect.



Congratulations! You have successfully installed the Voodoo3 Driver on your Windows NT 4.0/5.0.