

**ASUS® 3DexPlorer® GX2**

PCI & AGP Graphics Cards

## **USER'S MANUAL**

Hardware & Video Drivers

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# FCC & DOC COMPLIANCE

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## ***Federal Communications Commission Statement***

This device complies with FCC Rules Part 15. Operation is subject to the following two conditions:

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

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause 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:

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

**WARNING!** The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. 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.

## ***Canadian Department of Communications Statement***

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

# I. Introduction

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Thank you for purchasing the ASUS 3DexPlorer GX2 Graphics & Video Accelerator. With the S3 ViRGE/GX2 built-in, the ASUS 3DexPlorer GX2 provides you surprising acceleration in both 2D/3D graphics and quality scalable video playback, which can fully support 3D Gaming and Multimedia Applications.

## Item Checklist

- ☒ ASUS 3DexPlorer GX2
- ☒ User's Manual
- ☒ ASUS Driver & Utility CD

## Key Benefits

- Extreme 3D and video acceleration supports graphics design, gaming and video processing applications
- High-quality video playback with horizontal and vertical interpolation
- Big screen TV gameplay and presentations
- Video conferencing and video capture ready

## 3D Hardware Accelerated Capability

- Dynamic Z-Buffering and Double Buffering
- Texture modes
  - Bilinear/Trilinear Filtering
  - Mip-Mapping
  - Perspective Correction
  - Video and 3D Texturing Mapping
- Atmospheric Effects
  - Alpha Blending
  - Fog Effects
  - Specular Highlights
- Flat and Gouraud Shading

## Standard Features

- New S3 ViRGE/GX2 64-bit 2D/3D Graphics and Video Accelerator Built-in
- Performance-Oriented Design for Boosting Pentium II/Pentium Pro & MMX Acceleration
- Upgrade to 4MB Frame Buffer Supports 1280 x 1024 with True Colors
- 32-bit PCI 2.1 Interface Compliant for "Plug & Play"

# I. Introduction

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- Integrated 170MHz RAMDAC supports up to 160Hz Flicker-free Refresh Rates
- ASUS Performance Adjustment Tech. Tunes up Speed for Various Types Memory Mix
- Multi-Language User Interface & Drivers supported
- Designed for Windows 95 & Windows 3.x Logo Approval
- Easy Installation for Windows 95 & Windows 3.x through AutoRun CD-ROM
- Built-in 8-bit LPB (Local Peripheral Bus) Connector Ready for TV Tuner, Video Capture, and H/W MPEG-1 Upgrade
- Windows NT, Windows 95, Windows 3.x, and OS/2 drivers with DirectX 5 and DirectDraw support

## High Quality MPEG/VIDEO Playback

- Full-Scalable Real-Time 30 Frames/second
- Horizontal and vertical interpolation
- Brightness, hue and saturation controls

## Video-In Function

- NTSC, PAL and SECAM input format
- S-Video and composite input socket
- Video playback and capture functions allow Video-Editing or Video-Conferencing applications
- Optional TV-box allows watching TV programs

## TV-Output Function

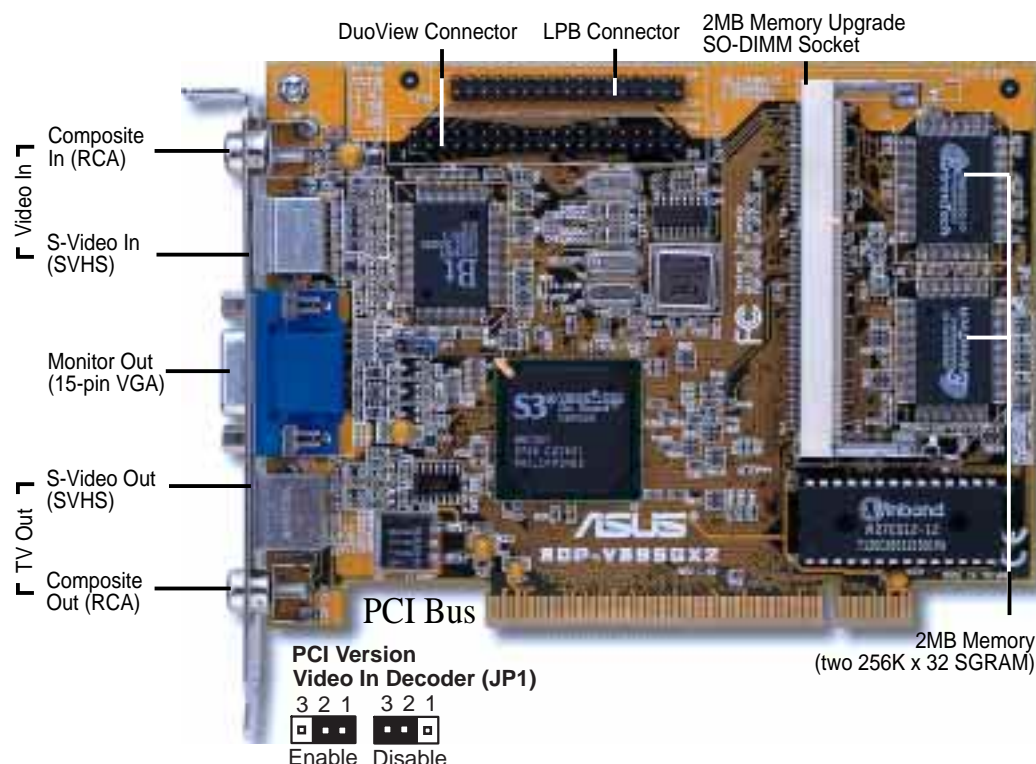
- NTSC and PAL output format
- S-Video and composite output socket
- Underscan compensation ensures high-quality full-screen output
- 3-line flicker filter ensures TV output stability
- DuoView function allows simultaneous display of two images on TV and computer monitor

**IMPORTANT:** Both the ASUS 3DexPlorer GX2 graphics cards use an internal Video Decoder in the “Enable” position. If you connect an external video capture or TV tuner card through the LPB connector and experience hardware conflicts, “Disable” the internal Video Decoder using the jumper setting on the card. The AGP version adds a TV Out Type in order to select “NTSC” or “PAL” video types depending on your local video standard.



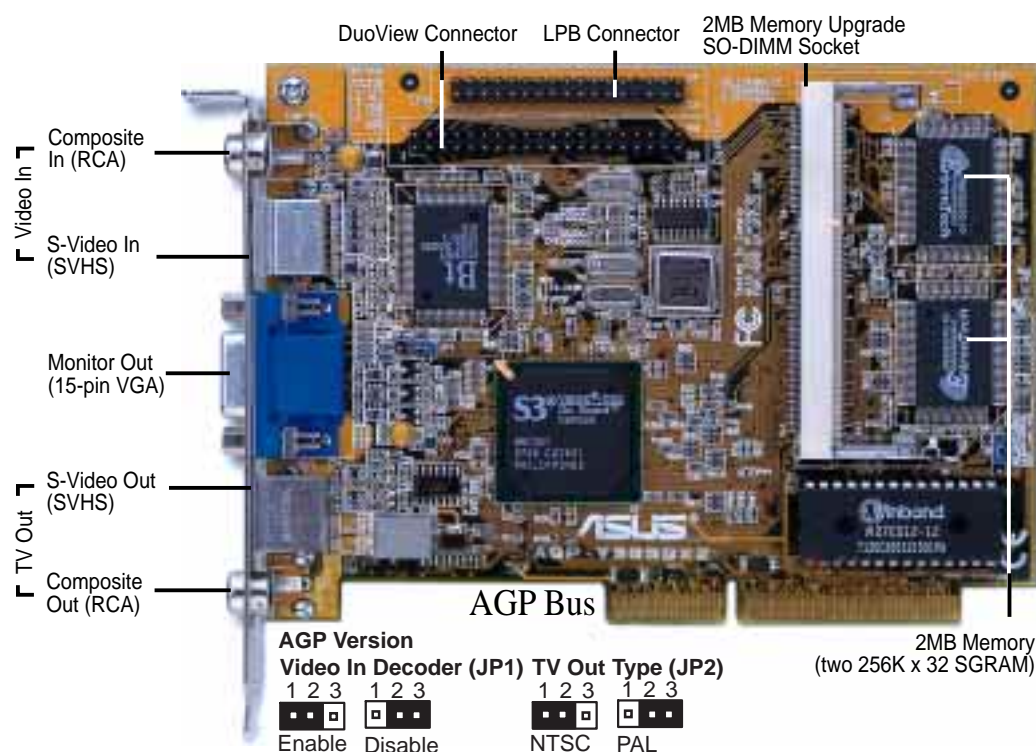
## II. Hardware Installation

### ASUS 3DexPlorer GX2 - PCI Bus Layout



II. Installation  
Layout

### ASUS 3DexPlorer GX2 - AGP Bus Layout



## II. Hardware Installation

### Memory Upgrade

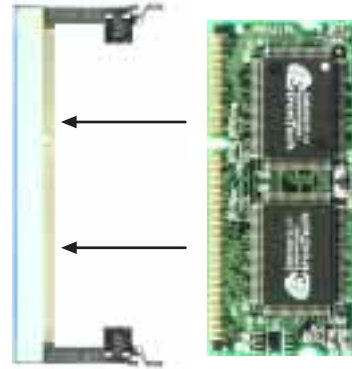
The ASUS 3DexPlorer GX2 graphics card comes with a 2MB video memory configuration. A SO-DIMM (Small-Outline, Dual-Inline Memory Module) socket is available to upgrade the video memory to 4MB. Memory size of 3MB is not supported on this product. Specifications may change without notice.

#### Memory Specifications

- Standard 2MB onboard two 256K x 32 SGRAM chips
- Upgrade to 4MB by adding two 256K x 32 SGRAM chips on SO-DIMM
- 10ns or faster (9ns, 8ns, 7ns,...) memory required

#### Memory Installation

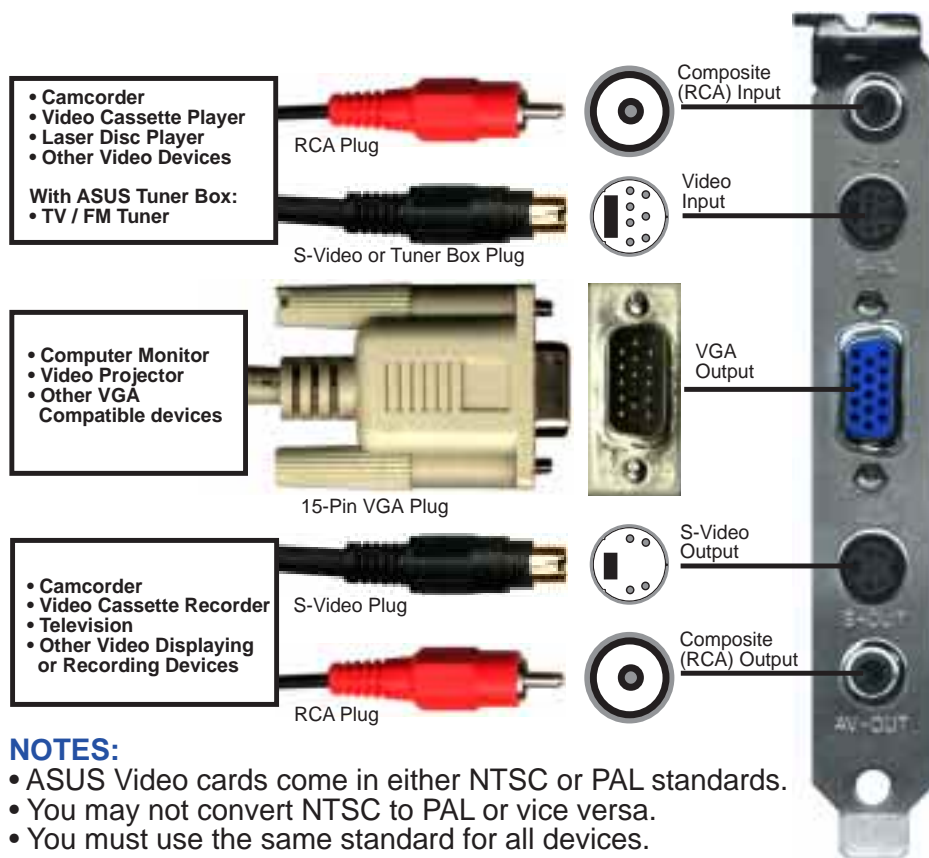
1. The memory module will fit in only one orientation as shown because the plastic safety tabs on both ends of the socket require the notched ends of the memory module.
2. Press the memory module firmly into place starting from a 45-degree angle, making sure that all the contacts are aligned with the socket.
3. With your fingertips, rock the memory module into a horizontal position so that it clicks into place. The support clips should snap.
4. To release the memory module, push both clips outward and rock the module out of the clips.



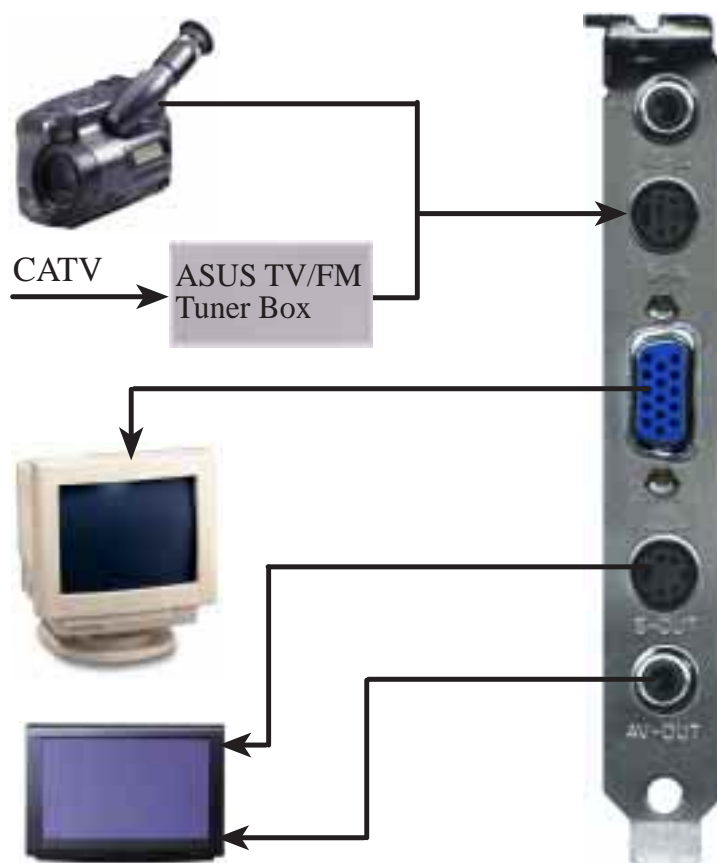
**NOTE:** For greater reliability, make sure that all video memory are of the same type and speed.

## II. Hardware Installation

### ASUS 3DexPlorer GX2 Connection Examples



II. Installation  
Connections



## II. Hardware Installation

**WARNING!** Computer boards and components contain very delicate Integrated Circuit (IC) chips. To protect the computer board and other components against damage from static electricity, you must follow some precautions.

1. Make sure that you unplug your power supply when adding or removing expansion cards or other system components. Failure to do so may cause severe damage to both your motherboard and expansion cards.
2. Keep all components such as the host adapter in its antistatic bag until you are ready to install it.
3. Use a grounded wrist strap before handling computer components. If you do not have one, touch both of your hands to a safely grounded object or to a metal object, such as the power supply case. Hold components by the edges and try not to touch the IC chips, leads, or circuitry.
4. Place components on a grounded antistatic pad or on the bag that came with the component whenever the components are separated from the system.

### Installation Procedures

#### *New Systems*

1. Unplug all electrical cords on your computer.
2. Remove the system unit cover.
3. Locate the PCI or AGP expansion slot. Make sure this slot is unobstructed.
4. Remove the corresponding expansion slot cover from the computer chassis.
5. Ground yourself to an antistatic mat or other grounded source (see **WARNING!**).
6. Pick up the board (still in its sleeve) by grasping the edge bracket with one hand and then remove the plastic sleeve.
7. Position the card directly over the PCI or AGP slot and insert one end of the board in the slot first. Firmly but gently press the bus connector on the bottom of the card down into the slot. Be sure the metal contacts on the bottom of the host adapter are securely seated in the slot.
8. Anchor the board's mounting bracket to the computer chassis using the screw from the slot cover that you set aside previously.
9. Replace the cover on the system unit.
10. Connect your analog monitor's 15-pin VGA connector to the card and fasten the retaining screws (if any).
11. Connect other cables and devices if available -You are now ready to install the software drivers and utilities.

#### *Systems with Existing VGA Card*

1. Shut down your computer and unplug all electrical cords.
2. Replace the existing VGA card with the ASUS 3DexPlorer GX2 graphics card.
3. Restart your computer — the ASUS 3DexPlorer GX2 graphics card should be automatically detected and the display drivers automatically updated.



### III. Windows 95 Driver Setup

**“New hardware found”** refers to the prompt for drivers when entering Windows 95 with a new card installed or relocated to a different slot. This User’s Manual assumes that your CD-ROM disc drive is drive **D:** and that Windows 95 is in **C:\windows**. Replace either with the actual location, if necessary.

ASUS Live Update 3.00.00

ASUS

Install ASUS Power2Go Burning Driver

Change Resolution and Color

Install DirectX 6

Install Video Player

Install Live Video

Install ASUS Power2Go Burning Driver

Read readme.txt

Browse this CD

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ASUS

3DexPloer/GX2

Welcome to the 3DexPloer/GX2 Setup program. This program will setup 3DexPloer/GX2 on your computer.

For more information about this program, click the Help button on the Setup program.

3DexPloer/GX2 Setup and this screen are programs registered under copyright ©1999 by the copyright owner.

WARNING: This program is protected by copyright law and international treaties.

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Next Cancel

Click **Next** > to continue with setup.

**NOTE:** Because Windows 95's own S3 drivers do not support the Virge/GX2 chipset, answer "No" if questions arise asking whether you want to keep existing VGA files.

# III. Windows 95

This box indicates that the **Setup program** is searching for the updated DirectX Runtime Components and updating as necessary.



Click **Finish** to restart your computer.



If the 3DexPlorer GX2 is not detected upon entering Windows 95 with the driver installed, a message will appear to allow you to delete the drivers or shut down your computer to install the 3DexPlorer GX2.



## 2. Finishing Setup

Your card and memory configuration will be detected and tested upon entering Windows 95 for the first time with the new driver installed.

Click **Ok** to start testing.



This screen tests whether the on screen memory is sufficient to display the current resolution.



This screen tests how much memory is remaining (off screen memory) for background operations.



## III. Windows 95

### 3. Video Driver Uninstallation

If you want to install other graphics cards or if you no longer need the 3DexPlorer GX2 display drivers, you can use one of the following procedures to completely uninstall the drivers from Windows 95 to save disk space.

#### 3.1 Using the Autorun Screen

Insert the ASUS 3DexPlorerGX2 installation CD.

Select **Remove 3DexPlorer GX2 Display Driver** in the ASUS Windows 95 Install Shell and follow the uninstallation steps.



#### 3.2 Using the Windows 95 Control Panel

Click **Start**, and then point to **Settings**.

Click **Control Panel**.

Double-click the **Add/Remove Programs** icon.

Click the **Install/Uninstall** tab.

Select **ASUS 3DexPlorer GX2 V1.10** (driver version) from the list.

Click **Add/Remove**.



During uninstallation, a “**Remove Shared File?**” dialog box will display asking you to remove some shared files. Click the **Yes** or **Yes To All** button to remove the shared files that are no longer used.



## III. Windows 95

### 4. DirectX5, Video Player, & Live Video Installation

Microsoft DirectX5 allows 3D hardware acceleration support in Windows 95. For Software MPEG support in Windows 95, you must first install the **Microsoft DirectX 5** libraries, then you may install the MPEG Video Player.

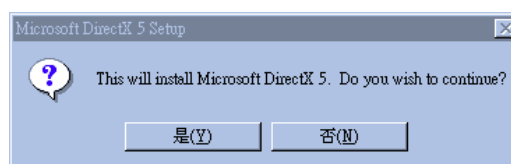
Reinsert your CD or double click on your CD drive icon in My Computer to bring up the autorun screen or run **Setup.exe** in the root directory of the CD.

Click **Install DirectX 5**



Install Microsoft DirectX 5 dialog box appears

Click the “Ok” button



After you have installed DirectX 5, you may click **Install Video Player**, and **Install Live Video**.



## III. Windows 95

### 5. PowerPlayer

PowerPlayer is a video player that allows you to view VCD (\*.DAT) or MPEG (\*.MPG) CD titles.

Reinsert your CD or double click on your CD drive icon in My Computer to bring up the autorun screen or run Setup.exe in the root directory of the CD.



Follow the self-explanatory instructions to complete the installation.



III. Windows 95  
PowerPlayer

Moving your cursor over the buttons will give the command name. If you need help, click the “?” button.



#### LIMITATIONS:

- Do not run PowerPlayer with full screen under 1280x1024 16bit high color or 1600x1200 16bit high color resolution modes, it will not function properly.
- Do not overlap other windows over PowerPlayer, it will not function properly.

# III. Windows 95

## 6. Windows 95 Display Settings

### Shell Notify Icon

After installing the ASUS 3DexPlorer GX2 Windows 95 Driver, you will see an ASUS icon on your taskbar notification area. You can “Close Enhanced Functions” or “Launch Display Properties” from this icon. If you encounter any problem, you may want to close ASUS Enhanced Functions. These functions will be enabled again next time you enter Windows.

### Changing Display Settings

To enter the Display Properties at any time, right click your mouse on the desktop and select Properties, or double click the Display icon in the Control Panel. Click the appropriate Tab as follows:

#### Settings

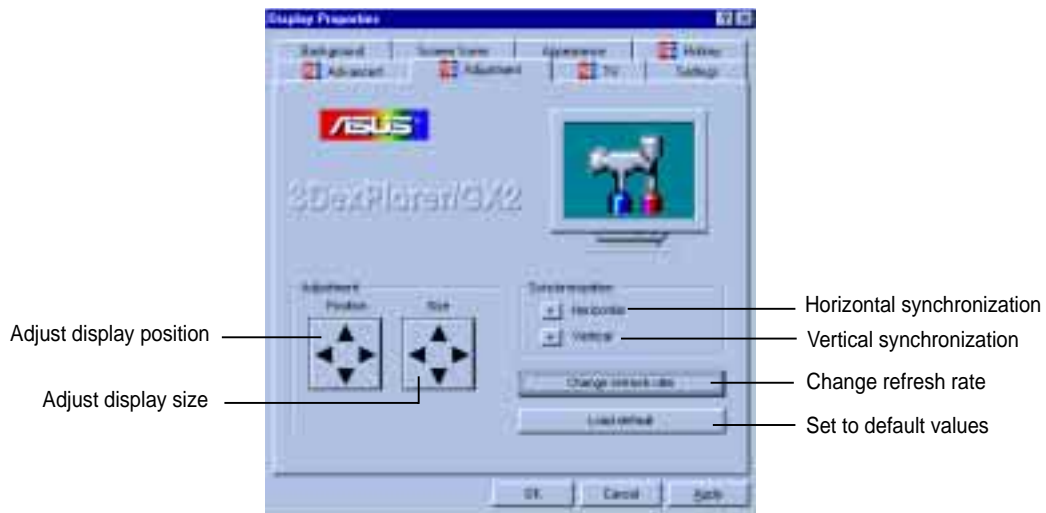
This allows you to change your display settings, adjust screen resolution and color depth, virtual desktop size, and font size. The maximum desktop and screen size selectable depends on how much memory you have. The maximum screen size selectable depends on the monitor specified.



# III. Windows 95

## Adjustment

This lets you change your monitor settings, such as display position, size, and refresh rate. While adjusting display size and position, you can press the ESC key to restore to your original settings at any time. After selecting a new refresh rate, the system will restore to the original settings in 10 seconds if you do not click the OK button.



## Change Refresh Rate

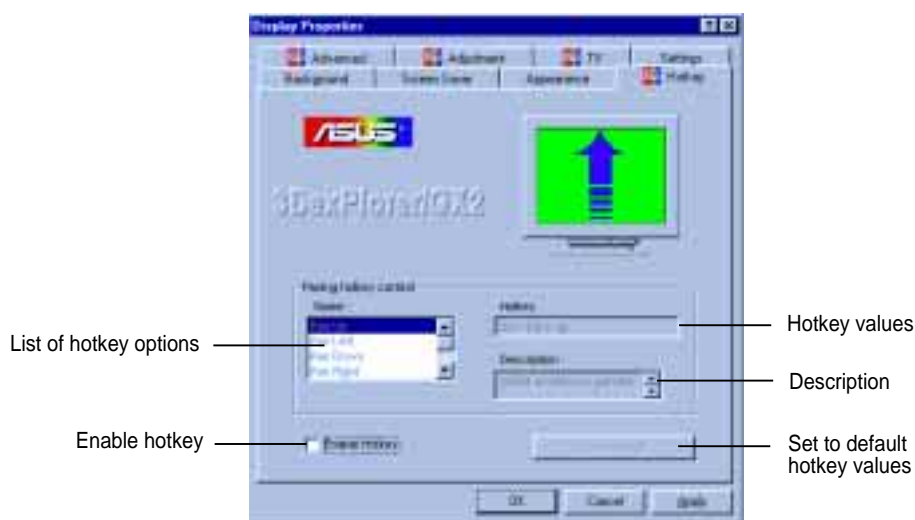
If you want to customize a new refresh rate, select a nearest default refresh rate, then adjust the slider to where you want, test it and then add it to the list.



## III. Windows 95

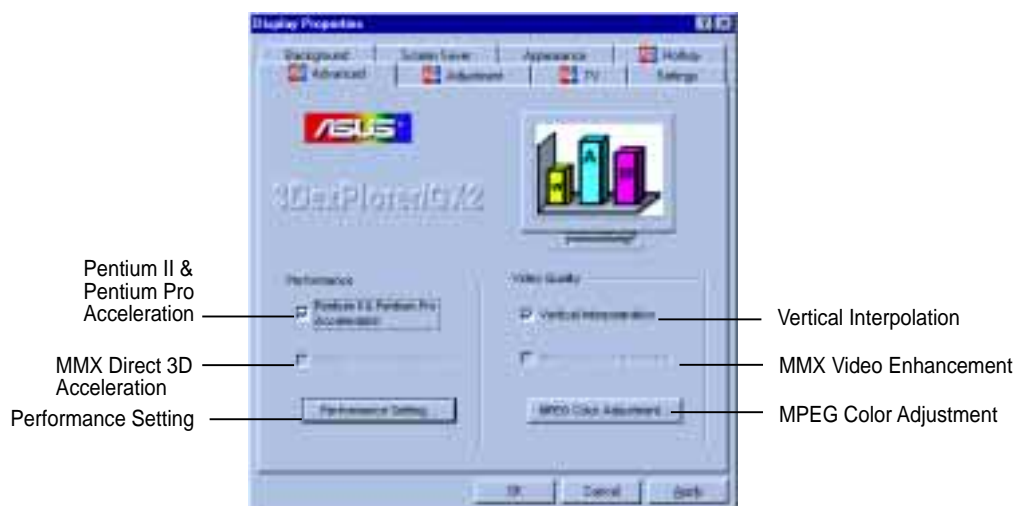
### Hotkey

This allows you to assign hotkey in the Hotkey box to move your screen up, down, left, and right, or zoom in, zoom out, and lock in the virtual desktop. Select the option from the Name box, then define the hotkey in the Value box with a single key stroke such as the Up key. (Ctrl and Alt keys are not necessary when making these settings)



### Advanced

These advanced settings allow you to achieve better performance and video quality.



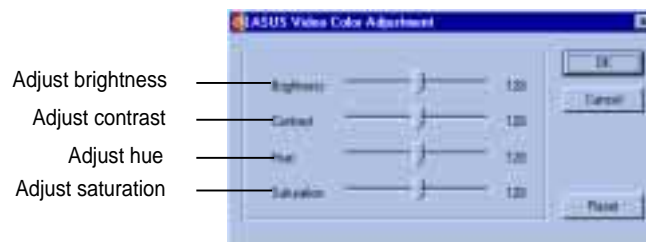
# III. Windows 95

## Vertical Interpolation

Check this function to enable vertical interpolation and enjoy smooth motion video.

## MPEG Color Adjustment

This lets you control the color of your MPEG video, such as hue, saturation, brightness & contrast for improved visual quality.



## Pentium II & Pentium Pro Acceleration

Check this function to enable Pentium II & Pentium Pro CPU acceleration.

## MMX Direct 3D Acceleration

Check this function to enable MMX Direct 3D acceleration.

## Performance Setting

You can increase the performance setting with faster memory chips.

**WARNING!** Slower memory chips may produce noise or cause your system to hang when the performance setting is too high.



## III. Windows 95

### TV

This allows you to select the output device. You can choose to display the data on PC monitor or on TV.

#### Standard

This option allows you to view computer output directly on your TV in either NTSC, PAL, or NTSC-Japan formats.

#### Output Type

ASUS video card supports TV video output in Composite and S-video form factors.

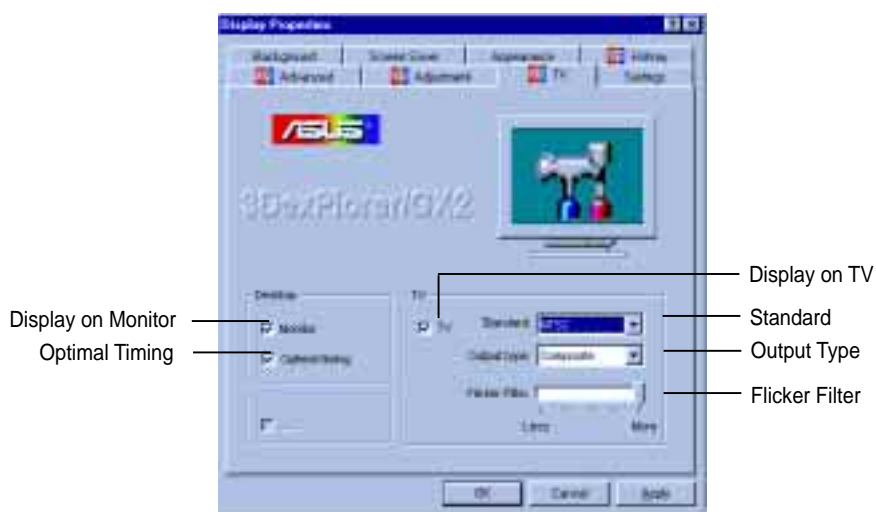
#### Flicker Filter

There are four levels of flicker filter settings which allow you to reduce the flickers to the minimum.

#### Optimal Timing

If enabled, this option allows simultaneous display of independent images on both the TV and PC monitor at separate resolutions.

**WARNING!** If watch VCD or MPEG on TV, Optimal Timing must be off.



## IV. Windows 3.x

This Manual assumes that you have already installed the ASUS 3DexPlorer GX2 graphics & video card and your CD-ROM disc drive is drive **D:** and that the Windows 3.x directory is in **C:\windows**. Replace these with the actual location, if necessary. The ASUS 3DexPlorer GX2 Video drivers for Windows 3.x can be installed under DOS mode or Windows 3.x.

### 1.1. Installation Procedures in DOS

1. Start your computer and enter DOS mode.
2. Type D: and change to the \WIN31 directory.
3. Type install and the install screen will appear.
4. Type **c:\windows** or the path to your Windows 3.x directory.
5. The installation program will install the appropriate language support into Windows.
6. When completed, keep your ASUS driver CD in your CD-ROM disc drive and launch Windows 3.x.
7. The ASUS Video installation screen will appear. You may select other items to install.





# IV. Windows 3.x

## 1.2. Installation Procedures in Windows 3.x

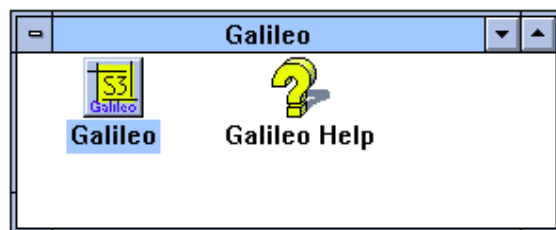
1. Start your computer in DOS mode.
2. Change to your Windows 3.x directory.
3. Type SETUP. The **System Information** screen will appear.

```
System Information
Computer:      MS-DOS System
Display:       VGA
Mouse:         Microsoft, or IBM PS/2
Keyboard:      Enhanced 101 or 102 key US and Non US keyboards
Keyboard Layout: US
Language:      US
Codepage:      English (437)
Network:       No Network Installed
```

4. Go to the **Display** section and then select **VGA**. Switch to the standard VGA mode (16 colors, 640 x 480 pixels), then start Windows by typing WIN.
5. Insert the ASUS 3DexPlorer GX2 installation CD and run **D:\setup.exe**. A list of install options will appear.



6. Click **Install Windows 3.x Display Driver** and follow the installation steps.
7. Click **Install Display Setting Program**.
8. After all drivers are installed, you will see a **Galileo** icon on your desktop. It allows you to change your display settings, adjust screen resolution & color depth, change refresh rate, and adjust font size. For additional information, click on the **Help** button.





## IV. Windows 3.x

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### 1.3. Installation of Video for Windows

For Software MPEG support in Windows 3.x, you must first install **Microsoft Video for Windows**, then you may install your own **MPEG Video Player**.

1. Start Windows 3.x.
2. Insert the ASUS 3DexPlorer GX2 Installation CD.
3. Run **D:\setup.exe**. A list of install options will appear.
4. Click **Install Video for Windows** if you have not installed Video for Windows.



## V. Microsoft Windows NT

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### Windows NT 4.0

#### *Installation Procedures*

1. Start Windows NT, switch display properties to VGA mode (16 colors, 640 x 480 pixels), then restart your computer to make the change.
2. After your computer restarts, right-click the desktop and click **Properties**.
3. Click the **Settings** tab.
4. Select **Change Display Type**.
5. Select **Adapter Type** and click **Change**.
6. Click **Have Disk**.
7. Insert the ASUS 3DexPlorer GX2 Installation CD.
8. Type **D:\NT40** (assuming your CD-ROM disc drive is in drive D) or click **Browse** to select the path of the display driver for Windows NT. Click **OK**.
9. You will see a list of ASUS 3DexPlorer GX2 drivers. Select **ASUS 3DexPlorer GX2** and then click **OK**.
10. Windows NT will once again prompt for confirmation. All appropriate files are then copied to the hard disk. When all files are copied, go back to the **Display Properties** box by clicking **Close**. Click **Apply**.
11. The **System Settings Change** dialog box is displayed. Click **Yes** to restart Windows.
12. Windows NT will restart with the default settings. The Display applet will appear to allow for mode selection.

# V. Microsoft Windows NT

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## Windows NT 3.51

After installing your graphics card, WinNT3.51 will default to the standard VGA mode (640x480, 16 colors). The procedure below describes how you install ASUS 3DexPlorer GX2 series display driver for WinNT3.51.

### *Installation Procedures*

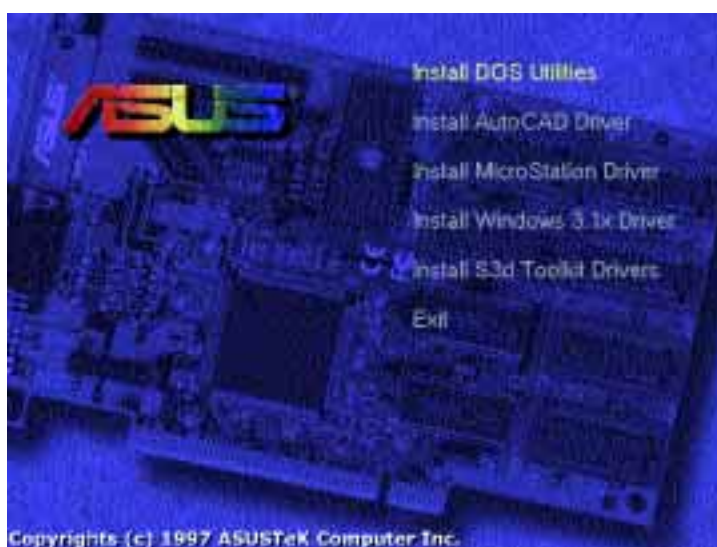
1. Start Windows NT, switch display properties to VGA mode (16 colors, 640 x 480 pixels), then restart your computer to make the change.
2. Select **Program Manager** and double-click the **Main** icon.
3. Double-click the **Control Panel** icon.
4. Double-click the **Display** icon.
5. Click **Change Display Type** button.
6. Select **Adapter Type** and click **Change**.
7. Click **Have Disk**.
8. Insert the ASUS 3DexPlorer GX2 Installation CD.
9. Type **D:\NT351** (assuming your CD-ROM disc drive is in drive D) or click **Browse** to select the path of the display driver for Windows NT. Click **OK**.
10. You will see a list of ASUS 3DexPlorer GX2 drivers. Select **ASUS 3DexPlorer GX2** and then click **OK**.
11. Windows NT will once again prompt for confirmation. All appropriate files are then copied to the hard disk. When all files are copied, go back to the **Display Properties** box by clicking **Close**. Click **Apply**.
12. The **System Settings Change** dialog box is displayed. Click **Yes** to restart Windows.
13. Windows NT will restart with the default settings. The Display applet will appear to allow for mode selection.

## VI. DOS Drivers

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### DOS Drivers Installation

1. Type D:\SETUP.EXE to install video drivers in pure DOS mode. The ASUS DOS installation shell will appear and present you with a list of install options.
2. You can choose **Install DOS Utilities**, **AutoCAD Driver**, **MicroStation Driver**, or **S3d Toolkit Drivers**. Follow the instructions to complete the installation of the drivers.



## VII. Product Information

### Resolution Table - 2MB Video Memory

Resolution & Color Depth	Vertical Frequency	Horizontal Frequency	Resolution & Color Depth	Vertical Frequency	Horizontal Frequency
640x480 256 colors	60Hz	31.3KHz	1024x768 65,536 colors	87Hz(int.)	35.6KHz
	72Hz	37.9KHz		60Hz	48.5KHz
	75Hz	37.5KHz		70Hz	56.6KHz
	85Hz	43.4KHz		75Hz	60.0KHz
	100Hz	50.8KHz		85Hz	68.6KHz
800x600 256 colors	160Hz	81.3KHz		100Hz	80.8KHz
	60Hz	38.2KHz		120Hz	96.6KHz
	72Hz	48.3KHz	640x480 16.7 million colors	60Hz	31.3KHz
	75Hz	47.0KHz		72Hz	37.9KHz
	85Hz	53.6KHz		75Hz	37.5KHz
1024x768 256 colors	100Hz	62.9KHz		85Hz	43.4KHz
	150Hz	94.2KHz		100Hz	50.7KHz
	87Hz(int.)	35.6KHz		160Hz	81.3KHz
	60Hz	48.5KHz	800x600 16.7 million colors	60Hz	38.2KHz
	70Hz	56.6KHz		72Hz	48.3KHz
1280x1024 256 colors	75Hz	60.0KHz		75Hz	47.0KHz
	85Hz	68.6KHz		85Hz	53.6KHz
	100Hz	80.8KHz		100Hz	62.9KHz
	120Hz	96.7KHz		150Hz	94.2KHz
1600x1200 256 colors	87Hz(int.)	46.5KHz	NOTE: int. = Interlaced		
	60Hz	64.0KHz			
	75Hz	80.1KHz			
	85Hz	90.4KHz			
640x480 65,536 colors	98Hz(int.)	63.9KHz			
	60Hz	80.0KHz			
	72Hz	96.2KHz			
	60Hz	31.3KHz			
	72Hz	37.9KHz			
800x600 65,536 colors	75Hz	37.5KHz			
	85Hz	43.4KHz			
	100Hz	50.8KHz			
	160Hz	81.3KHz			
	60Hz	38.2KHz			
800x600 65,536 colors	72Hz	48.3KHz			
	75Hz	47.0KHz			
	85Hz	53.6KHz			
	100Hz	62.9KHz			
	150Hz	94.2KHz			

# VII. Product Information

## Resolution Table - 4MB Video Memory

Resolution & Color Depth	Vertical Frequency	Horizontal Frequency	Resolution & Color Depth	Vertical Frequency	Horizontal Frequency
640x480 256 colors	60Hz	31.3KHz	1024x768 65,536 colors	87Hz(int.)	35.6KHz
	72Hz	37.9KHz		60Hz	48.5KHz
	75Hz	37.5KHz		70Hz	56.6KHz
	85Hz	43.4KHz		75Hz	60.0KHz
	100Hz	50.8KHz		85Hz	68.6KHz
	160Hz	81.3KHz		100Hz	80.8KHz
				120Hz	96.6KHz
800x600 256 colors	60Hz	38.2KHz	1280x1024 65,536 colors	87Hz(int.)	46.5KHz
	72Hz	48.3KHz		60Hz	65.9KHz
	75Hz	47.0KHz		72Hz	77.9KHz
	85Hz	53.6KHz		75Hz	81.1KHz
	100Hz	62.9KHz		85Hz	91.9KHz
	150Hz	94.2KHz			
1024x768 256 colors	87Hz(int.)	35.6KHz	640x480 16.7 million colors	60Hz	31.3KHz
	60Hz	48.5KHz		72Hz	37.9KHz
	70Hz	56.6KHz		75Hz	37.5KHz
	75Hz	60.0KHz		85Hz	43.4KHz
	85Hz	68.6KHz		100Hz	50.7KHz
	100Hz	80.8KHz		160Hz	81.3KHz
	120Hz	96.7KHz	800x600 16.7 million colors	60Hz	38.2KHz
1280x1024 256 colors	87Hz(int.)	46.5KHz		72Hz	48.3KHz
	60Hz	64.0KHz		75Hz	47.0KHz
	75Hz	80.1KHz		85Hz	53.6KHz
	85Hz	90.4KHz		100Hz	62.9KHz
1600x1200 256 colors	98Hz(int.)	63.9KHz		150Hz	94.2KHz
	60Hz	80.0KHz	1024x768 16.7 million colors	87Hz(int.)	35.6KHz
	72Hz	96.2KHz		60Hz	47.7KHz
640x480 65,536 colors	60Hz	31.3KHz		70Hz	55.5KHz
	72Hz	37.9KHz		75Hz	59.5KHz
	75Hz	37.5KHz		85Hz	67.4KHz
	85Hz	43.4KHz		100Hz	79.1KHz
	100Hz	50.8KHz	1280x1024 16.7 millions	60Hz	65.9KHz
	160Hz	81.3KHz		75Hz	81.1KHz
800x600 65,536 colors	60Hz	38.2KHz		85Hz	89.5KHz
	72Hz	48.3KHz		87Hz(int.)	46.5KHz
	75Hz	47.0KHz	1600x1200 65,536 color	60Hz	76.4KHz
	85Hz	53.6KHz		70Hz	85.8KHz
	100Hz	62.9KHz		102Hz(int.)	63.7KHz
	150Hz	94.2KHz			

NOTE: int. = Interlaced

## VII. Product Information

### 8-BIT Connector Definitions

The LPB (Local Peripheral Bus) Connector is an extension of the VESA feature connector. An additional 6-pin signal and 2-pin space added to the 26-pin feature connector make a 34-pin header. This allows the normal 26-pin cable used for feature connector applications to be swap out for a standard 34-pin cable to achieve LPB operation.

8-BIT Connector

Pin	Signal Description	Pin	Signal Description
1	GND	2	PA0/LPB0
3	GND	4	PA1/LPB1
5	GND	6	PA2/LPB2
7	EVIDEO/VREQ/VRDY/HS	8	PA3/LPB3
9	ESYNC/NF	10	PA4/LPB4
11	EVCLK/CREQ/CRDY/VS	12	PA5/LPB5
13	N/C	14	PA6/LPB6
15	GND	16	PA7/LPB7
17	GND	18	VCLK/LCLK
19	GND	20	BLANK/NF
21	GND	22	HSYNC/NF
23	N/C	24	VSYNC/NF
25	N/C	26	GND
27	N/C	28	N/C
29	GND	30	NF/FC CLK
31	N/C	32	NF/FC DATA
33	NF/ENABLE2	34	NF/ENABLE1

### DuoView Connector Definitions

The 3DexPlorer GX2 has an internal Video Encoder. You can connect any other compatible video encoders through the DuoView Connector.

DuoView Connector

Pin	Signal Description	Pin	Signal Description
1	YYD0	2	YYD4
3	YYD1	4	YYD5
5	YYD2	6	YYD6
7	YYD3	8	YYD7
9	GND	10	GND
11	YUD0	12	YUD4
13	YUD1	14	YUD5
15	YUD2	16	YUD6
17	YUD3	18	YUD7
19	GND	20	GND
21	YVD0	22	YVD4
23	YVD1	24	YVD5
25	YVD2	26	YVD6
27	YVD3	28	YVD7
29	GND	30	GND
31	YDCLK	32	YVSYNC
33	YODD	34	YHSYNC
35	FC DATA	36	RESET
37	FC CLOCK	38	DATAEN
39	+5V	40	+12V

## VIII. Troubleshooting (Q&A)

Description	Recommended Action
<i>After Installing the 3DexPlorer GX2 graphics card, there is no display and I cannot start my computer</i>	Some motherboard BIOS can only use cards utilizing 32KB of the BIOS memory but the 3DexPlorerGX2 requires 40KB in order to provide more functions to the card. Try upgrading your motherboard BIOS or contacting your motherboard vendor.
<i>After Installing the 3DexPlorer GX2 using the Windows 95 drivers, my computer crashes and the display becomes distorted.</i>	Windows 95 provided drivers are not compatible with the S3 Virge/GX2 chipset. You need to install the manufacturer provided drivers, but first eliminate your current problems by resetting your display using the following steps: <ol style="list-style-type: none"><li>1. Restart Windows 95 in <b>Safe Mode</b> by pressing F5 repeatedly before Windows95 starts.</li><li>2. Right click your mouse on the desktop and choose <b>Properties</b></li><li>3. Select the <b>Settings</b> tab on the Display Properties window.</li><li>4. Select <b>Change Display Type</b> (Advanced Properties in OSR2)</li><li>5. Select <b>Adapter Type</b> and Click <b>Change</b> (Change in OSR2)</li><li>6. Select <b>Show All Devices</b></li><li>7. Select <b>(Standard Display Types)</b> from the Manufacturers list.</li><li>8. Select <b>Standard Display Adapter (VGA)</b> from the Models list, and click OK</li><li>9. Follow the instructions to close the Display Properties window</li><li>10. The system will ask to restart the computer, click <b>Yes</b></li><li>11. After restarting Windows 95, refer to "Installing Drivers for Window 95" in the User's Manual to complete the 3DexPlorer GX2 driver installation.</li></ol>
<i>After installing the driver, Windows 95 does not prompt me to restart and the driver still doesn't work after I restart my computer.</i>	You may have installed similar drivers before. Try the following steps to install: <ol style="list-style-type: none"><li>1. Right-click <b>My Computer</b> on the desktop.</li><li>2. Select <b>Properties</b>. The <b>System Properties</b> dialog box appears.</li><li>3. Click the <b>Device Manager</b> tab, making sure that <b>View devices by type</b> is selected.</li><li>4. Double-click <b>Display adapters</b>. If <b>Display adapters</b> does not appear, jump to step 8 and continue.</li><li>5. The name of your card will be listed in the box. Double-click it.</li><li>6. The properties box of your card appears. Click the <b>Driver</b> tab.</li><li>7. Click <b>Change Driver...</b> and follow the installation steps.</li><li>8. Click <b>Other devices</b>. Your card should be listed.</li><li>9. Click the name of your card to bring up the properties box of your card. Select the <b>Driver</b> tab.</li><li>10. Click <b>Change Driver...</b> and follow the installation steps.</li></ol>
<i>After installing the driver and restarting, Windows 95 informs me that the display setting is still incorrect.</i>	There may be a conflict between a previous and the current display drivers. This is caused by the incomplete removal of the previous display driver. Try the following steps to remove it: <ol style="list-style-type: none"><li>1. Right-click <b>My Computer</b> on the desktop.</li><li>2. Select <b>Properties</b>. The <b>System Properties</b> dialog box appears.</li><li>3. Click the <b>Device Manager</b> tab. Be sure that <b>View devices by type</b> is selected.</li><li>4. Double-click <b>Display adapters</b>.</li><li>5. You will find two (or more) conflicting adapters.</li><li>6. Disable all previous adapters by selecting them and clicking <b>Remove</b>.</li><li>7. Close Device Manager and restart Windows 95.</li><li>8. Your display driver should work correctly this time.</li></ol>
<i>My monitor is not capable of higher resolutions or refresh rates.</i>	It depends on the display characteristics of your monitor. Consult your monitor documentation for the proper configuration or any limitations.