

**ASUS® V3000 Series**  
AGP&PCI Graphics Cards

**USER'S MANUAL**  
Hardware & Video Drivers

AGP-V3000  
AGP-V3000/TV  
3DP-V3000/TV  
AGP-V3000ZXTV  
AGP-V3000ZX

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Manual Revision:	<b>2.00</b>
Release Date:	<b>July 1998</b>

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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

Thank you for purchasing an ASUS V3000 Series Graphics & Video Accelerator. With the ST/nVidia RIVA 128™/128ZX™ built-in, the ASUS V3000 Series provides you with fast acceleration in both 2D/3D graphics and high quality scalable video playback, which can fully support 3D Gaming and Multimedia Applications.

## Key Benefits

- Supports professional graphics design, gaming, learning, and business applications
- Flicker free, high refresh rates reduce eye strain
- Powerful 3D rendering
- Crisp, realistic images
- Striking cinema-quality video

## Features

- Built-in ST/nVidia RIVA 128™/128ZX™ 128-bit 3D Multimedia Accelerator
- User-friendly Installation for Windows 95/98.
- Acceleration for Windows 95/98 APIs, including Direct3D, DirectDraw (+ VPE), and OpenGL-ICD
- Acceleration for Windows NT APIs, including Direct3D, DirectDraw, and OpenGL-ICD
- Massive array of floating point Geometry Processing Units
- 128-bit 2D/GUI/DirectDraw Acceleration
- Windows 95/98 Video for Windows video capture driver included
- Video Acceleration (including acceleration for MPEG-I, MPEG-II, and Indeo)
- X and Y up and down video scaling
- Excellent performance at high resolutions and color depths
- VESA VBE 3.0 Compliant

### **AGP-V3000, AGP-V3000/TV, and 3DP-V3000:**

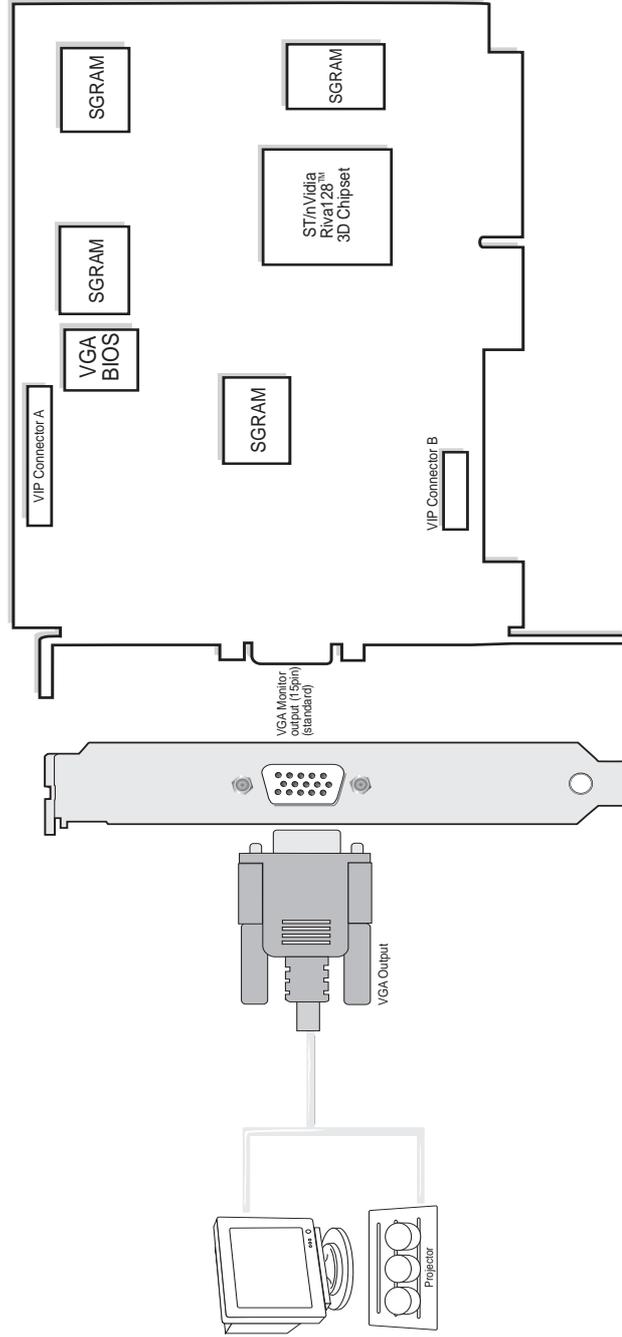
- 4MB 128-bit 100MHz SGRAM frame buffer interface with 1.6GB/s bus bandwidth
- 230MHz Palette-DAC
- AGP 1.0 or PCI 2.1 Bus Interface
- AGP 1X

### **AGP-V3000ZX and AGP-V3000ZXTV:**

- 8MB 64-bit 100MHz SDRAM frame buffer interface with 1.6GB/s bus bandwidth (for AGP-V3000ZX)
- 8MB 128-bit 100MHz SGRAM frame buffer interface with 1.6GB/s bus bandwidth (for AGP-V3000ZXTV)
- 250MHz Palette-DAC
- AGP 2.0 Bus Interface
- AGP 2X

**IMPORTANT!** External devices and ASUS Video cards both have NTSC and PAL versions. You must make sure that all your devices and the ASUS Video card are of the same type or else you will not have video capabilities.

## ASUS AGP-V3000 Layout (AGP Bus)



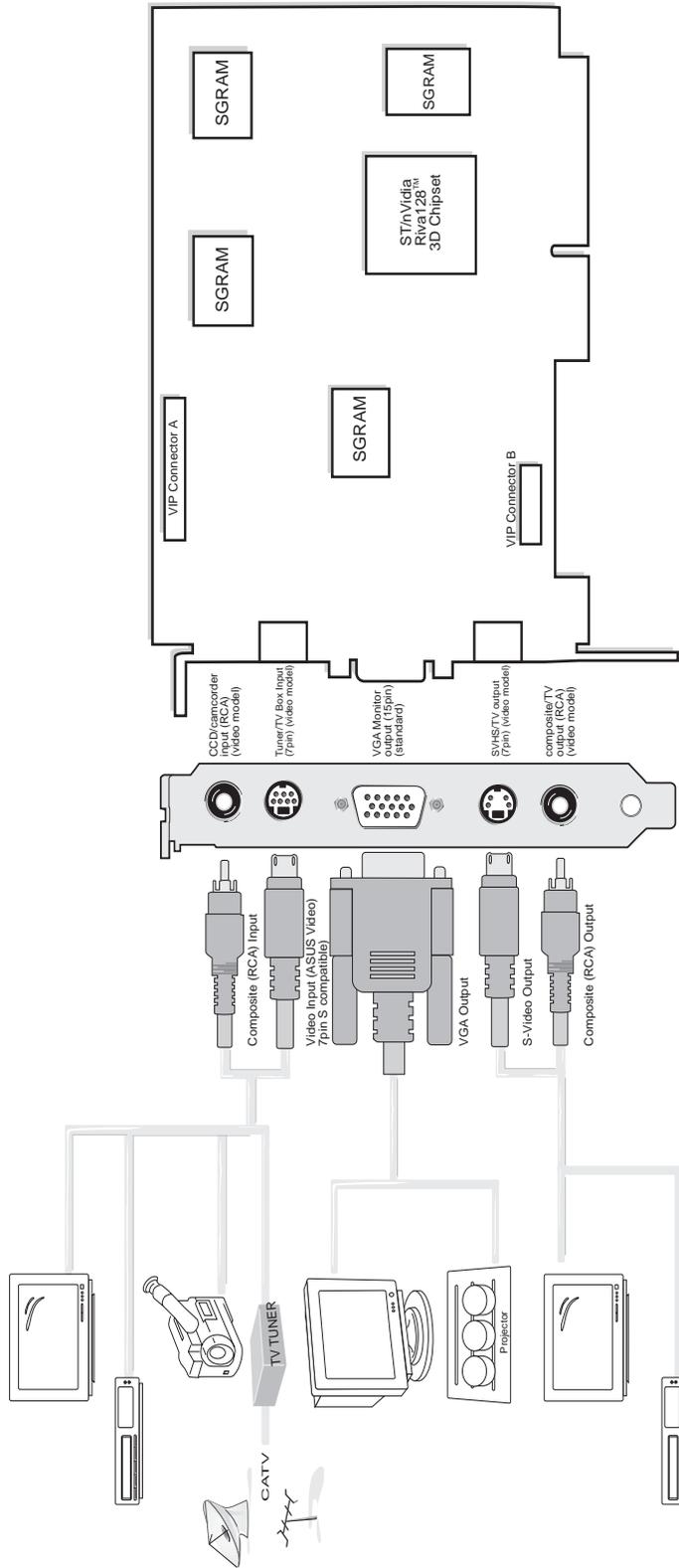
### Item Checklist

- ASUS AGP-V3000
- This User's Manual
- Manual (Adobe® Acrobat® PDF)
- ASUS V3000 Series Driver & Utility CD

**Note:** AGP-V3000 does not have video-in and TV-out connectors. The corresponding video/TV utilities will also be excluded.

# II. Hardware Installation

## ASUS AGP-V3000/TV Layout (AGP Bus)



### Item Checklist

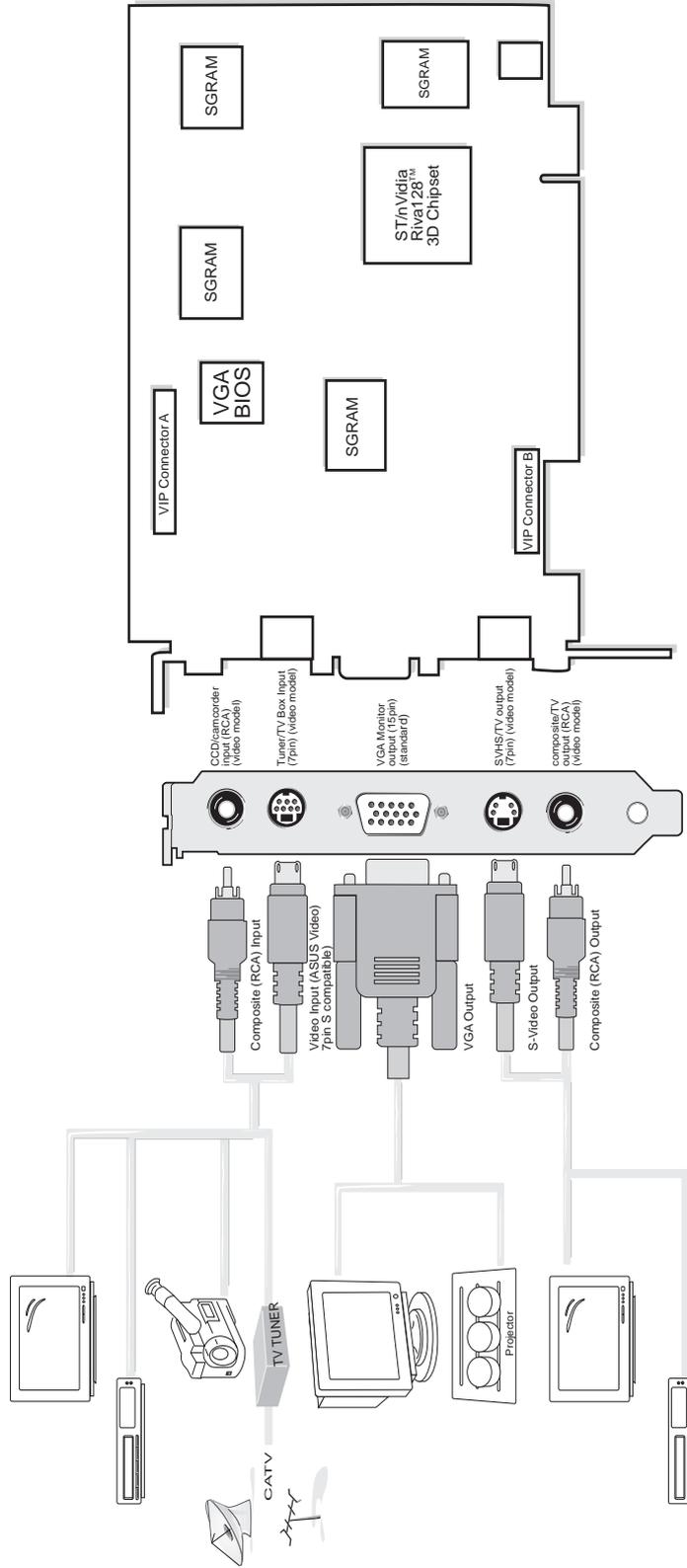
- ASUS AGP-V3000/TV (PAL or NTSC)
- Video-in and TV-out cables
- This User's Manual
- Manual (Adobe® Acrobat® PDF)
- ASUS V3000 Series Driver & Utility CD

### Notes:

- Use the same standard for all devices.
- VGA compatible devices and video displaying/recording devices cannot be connected at the same time on this card.
-  and  cannot be connected at the same time.

**II. Installation**  
AGP-V3000/TV

## ASUS 3DP-V3000/TV Layout (PCI Bus)



### Item Checklist

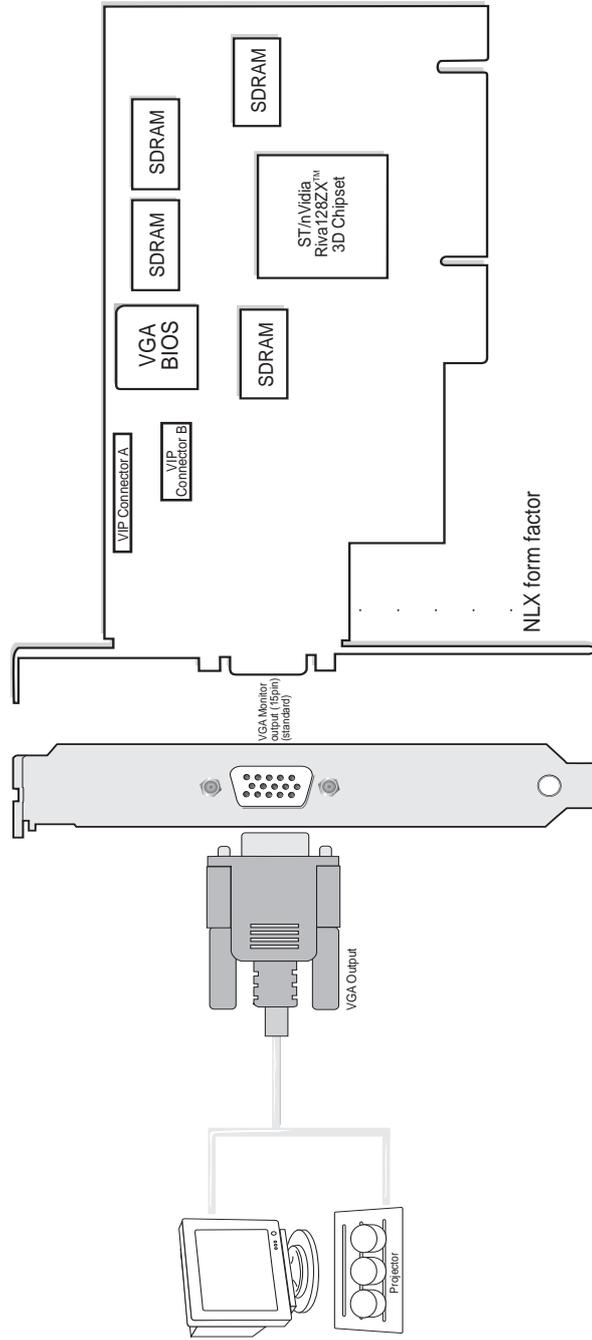
- ASUS 3DP-V3000/TV (PAL or NTSC)
- Video-in and TV-out cables
- This User's Manual
- Manual (Adobe® Acrobat® PDF)
- ASUS V3000 Series Driver & Utility CD

### Notes:

- Use the same standard for all devices.
- VGA compatible devices and video displaying/recording devices cannot be connected at the same time on this card.
-  and  cannot be connected at the same time.

## II. Hardware Installation

### ASUS AGP-V3000ZX Layout (AGP Bus)

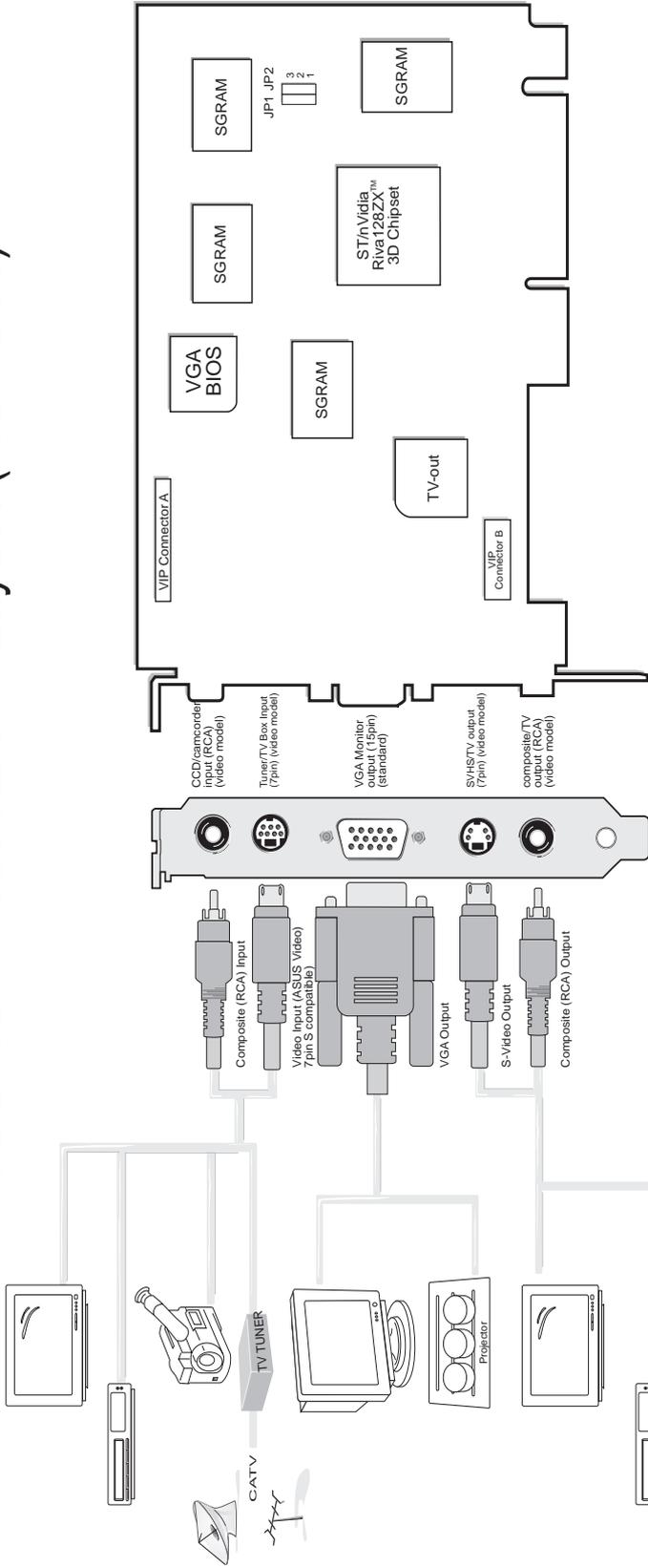


#### Item Checklist

- ASUS AGP-V3000ZX
- This User's Manual
- Manual (Adobe® Acrobat® PDF)
- ASUS V3000 Series Driver & Utility CD

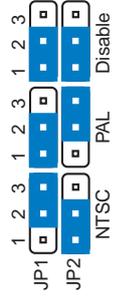
**Note:** AGP-V3000ZX does not have video-in and TV-out connectors. The corresponding video/TV utilities will also be excluded.

## ASUS AGP-V3000ZXTV Layout (AGP Bus)



### Notes:

- Use the same standard for all devices.
- VGA compatible devices and video displaying/recording devices cannot be connected at the same time on this card.
- and cannot be connected at the same time.
- Use JP1 and JP2 to select the boot up TV-out format.



### Item Checklist

- ASUS AGP-V3000ZXTV (PAL or NTSC) Video-in and TV-out cables
- This User's Manual
- Manual (Adobe® Acrobat® PDF)
- ASUS V3000 Series Driver & Utility CD

## II. Hardware Installation

**NOTE:** The ASUS AGP-V3000, AGP-V3000/TV, AGP-V3000ZX and AGP-V3000ZXTV can only be installed in motherboards with an AGP slot. The ASUS 3DP-V3000/TV can be installed in standard PCI motherboards.

**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 AGP or PCI bus 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 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. Install the ASUS V3000 Series display drivers with your current VGA card.
2. Shut down your computer and unplug all electrical cords.
3. Replace the existing VGA card with the ASUS V3000 Series graphics card.
4. Restart your computer — the ASUS V3000 Series graphics card should be automatically detected and the display drivers automatically updated.

## III. Windows 95/98

### Operating System Requirements

**IMPORTANT!** This card requires its own IRQ to work normally. If you have problems during installation, please check your BIOS setting or motherboard jumpers to make sure that “VGA INT/IRQ” has been enabled.

#### Windows 95

To take advantage of all the AGP features, you must use Windows 95 OSR2.0, install the USB upgrade and then install the VGARTD driver for the corresponding chipset on your motherboard. (see **III. Windows 95/98 “Install VGARTD”**).

**Note:** This is not necessary for the 3DP-V3000/TV.

To install Win95 OSR2.0 with USB, you must have OSR2.0 installed already. Otherwise, first install OSR2.0 and then use the USB support update (you must use the same update language of your Windows language). On the April 1997 MSDN Disc-1 “Windows 95, SDKs, and Tools”, OSR2.0 is found in “\OSR2” while the USB support update is found in “\OSR2\USBSUPP”. To determine the installed version of the operating system, look in the registry at:

HKEY\_LOCAL\_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Version  
HKEY\_LOCAL\_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\VersionNumber

OSR2.0 with USB has:

Version “Windows 95” and VersionNumber “4.03.1212” or “4.03.1214”.

#### Windows 98

Only Windows 98 **Beta3** or later supports full Direct3D and AGP features. If you are not using Beta3 or later, you must upgrade your Windows before installing the AGP display driver.

**NOTE:** Windows 98 includes VGARTD for the major chipsets but it is recommended that you install VGARTD from the V3000 Series installation CD to make sure that you have the latest version of VGARTD.

**NOTE:** This Manual assumes that your CD-ROM disc drive is drive **D:** and that MS Windows is in “**c:\windows**”. Replace either with the actual location, if necessary.

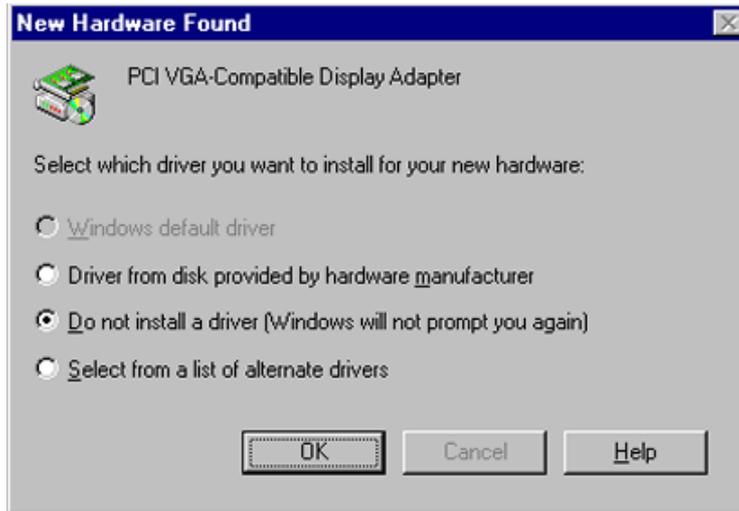
# III. Windows 95/98

## Install V3000 Series Driver (existing ASUS V3000)

Follow the steps below if you are using a V3000 Series graphics card with AGP bus or if you want to install it in Windows 98.

**Note:** “New hardware found” refers to the prompt for drivers when installing Windows 95/98 with the ASUS V3000 Series VGA card already installed. This Manual assumes that your CD-ROM disc drive is drive **D:** and that Windows 95/98 is in **C:\windows**. Replace either with the actual location, if necessary.

1. When installing Windows 95/98, a **New Hardware Found** window will appear:



Select **Do not install a driver** and go to step 3.

When installing Windows 95 OSR 2.0, the **Update Device Driver Wizard** window will appear:



This wizard will complete the installation of the Standard PCI Graphics Adapter (VGA). Click **Next >** to let Windows search for an updated driver.

**WARNING!** Only click **Next >**. The system will hang if you click **Cancel!**

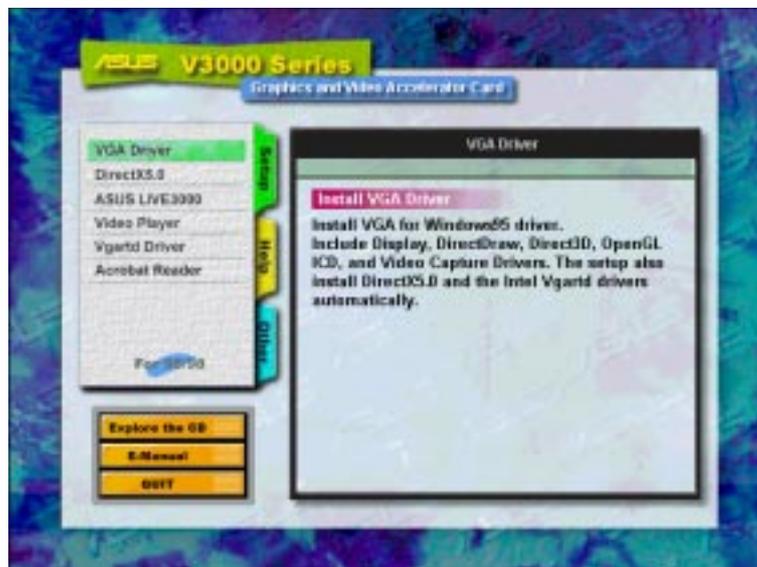
## III. Windows 95/98

2. Click **F**inish to install the VGA driver. You will then be asked for your Windows95/98 CD in order to complete the VGA driver installation.



If you do not have your CD handy, direct the installation path to your `\Windows\System` directory. Windows will prompt you to restart your windows. Choose **No**.

3. Insert 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.
4. From the **Setup** panel, click **VGA Driver** and follow the installation steps.



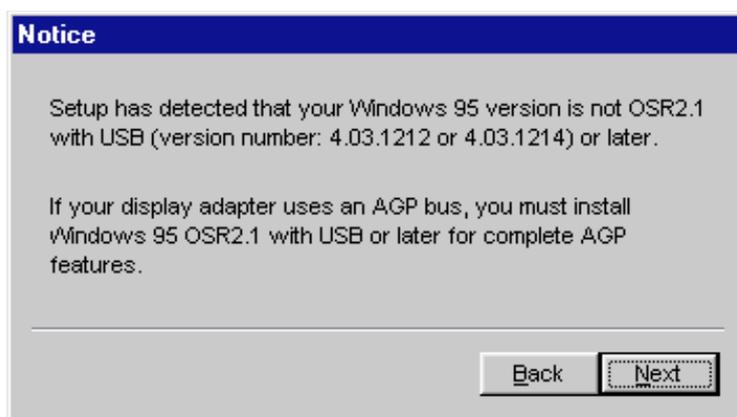
### III. Windows 95/98

5. When the **Welcome** window appears, click **Next >** to install V3000 Series display drivers on your computer.



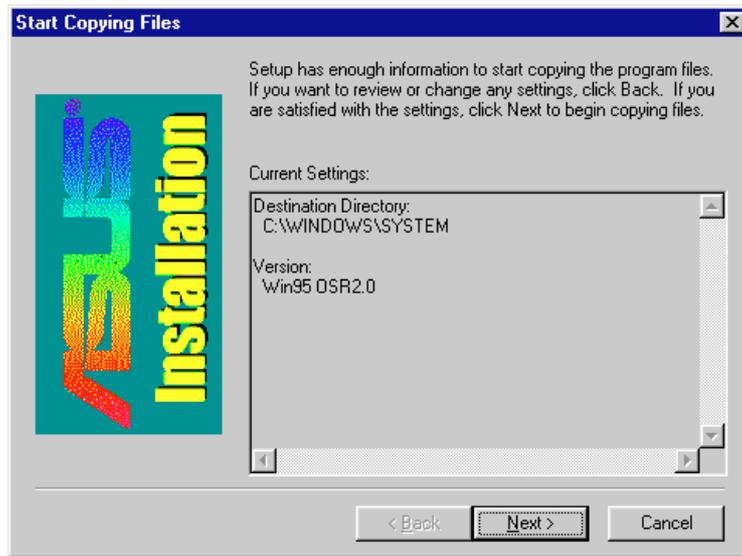
III. Windows 95/98  
Install Driver

The install program will detect whether you are using OSR2.0 with USB (OSR2.1). If not, a message will be given to exit the install program (Click **Yes**) or continue (Click **No**).

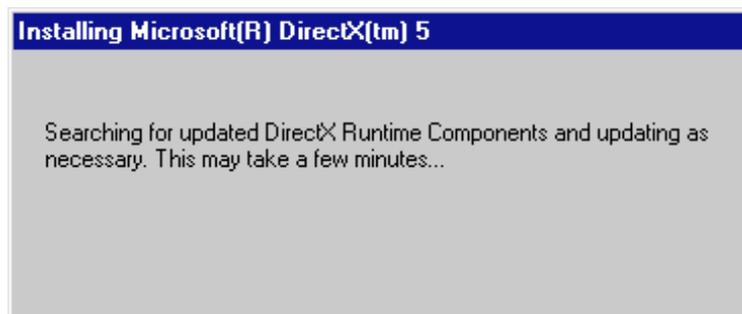


### III. Windows 95/98

6. When the **Check Setup Information** window appears, click **Next >** to begin the file transfer.



The **Installing Microsoft DirectX 5** dialog box will automatically appear because the V3000 Series display driver requires DirectX5 to have access to the advanced 3D features.



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

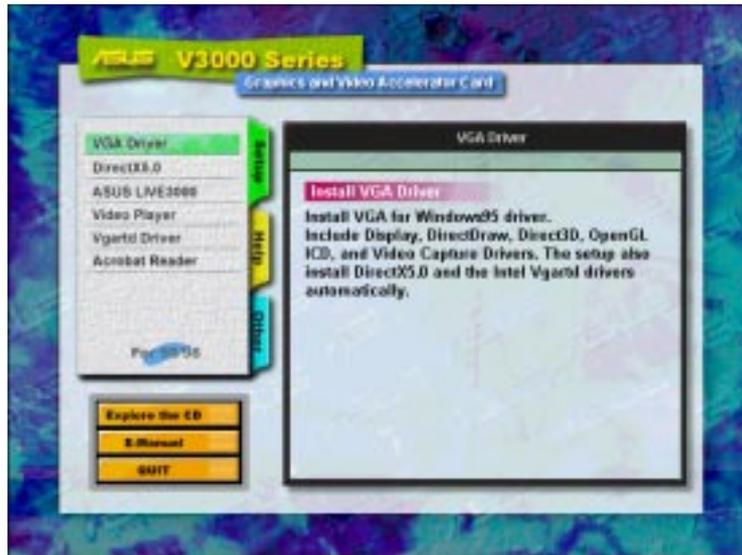
# III. Windows 95/98

## Install V3000 Series Driver (replacing other VGA card)

If you wish to replace an existing VGA card with an ASUS V3000 Series graphics card, the current display drivers must be replaced first (see **II. Hardware Installation “Systems with Existing VGA Card”**).

**Note:** The following procedure works only for Windows 95. For Windows 98 users, follow the procedures for “Install V3000 Series Driver (existing ASUS 3000)”.

1. Insert 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.



III. Windows 95/98  
Replacing Card

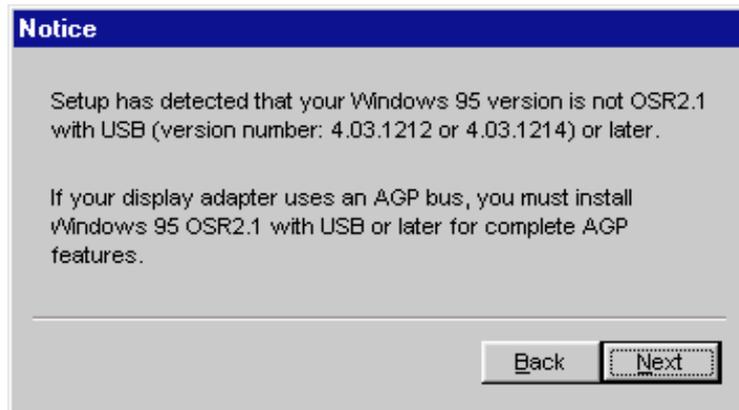
2. From the **Setup** panel, click **VGA Driver** and the **Welcome** window will appear.



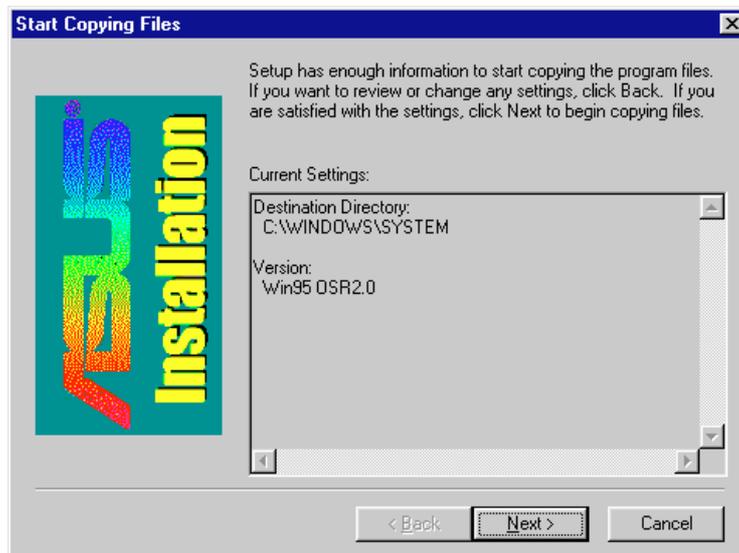
3. Click **Next >** to install the V3000 Series display drivers on your computer.

### III. Windows 95/98

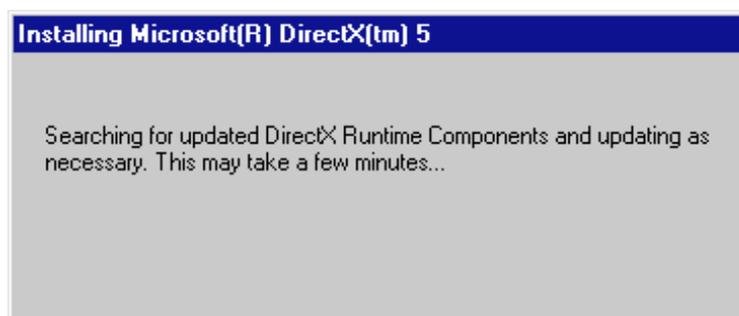
- The install program will detect whether you are using OSR2.0 with USB (OSR2.1). If not, a message will be given to exit the install program (Click **Yes**) or continue (Click **No**).



The **Installing Microsoft DirectX5** dialog box will automatically appear because the V3000 Series display driver requires DirectX5 to have access to the advanced 3D features. Click **Next >** to begin file transfer.



- The **Setup program** will then search for the updated DirectX Runtime Components and update as necessary.



- After all drivers are installed, power off your system and replace your VGA card with the ASUS V3000 Series card. Restart your computer, and the drivers should be installed automatically.

# III. Windows 95/98

## Display Properties (desktop utilities)

To run Desktop Utilities, click the right mouse button on the Windows 95/98 desktop, then choose **Properties** in the list.

### Advanced Menu

This menu provides some advanced settings for Direct3D. You can set “Texture Heap” (available only for the 3DP-V3000TV) to maximum value for those texture-greedy applications or games.

The main dialog box, titled "ASUS V3000 V2.00 Properties", has several tabs: General, Adapter, Monitor, Performance, Color Management, Hotkey, Monitor, Advanced, Color Correction, Information, and TV Out. The "Advanced" tab is selected, showing the following settings:

- Texture Heap Size (PC):** A slider set to 5 MB. A checkbox for "Enable Custom Size" is present.
- Direct3D Feature Settings:** A list of checkboxes:
  - Enable fog table capacity
  - Enable square texture only capacity
  - Enable texture 5-6-5 format
  - Enable anti-aliasing capacity
  - Enable linear/tri-linear mipmap capacity
  - Enable iterated vertex alpha capacityA "MIPMAP Levels" spinner is set to 8. A "Load Default" button is at the bottom right.
- Buttons: "Level of Detail", "Texture Address", and "OpenGL Settings".
- Buttons: "OK", "Cancel", and "Apply".

Annotations for the main dialog:

- "Allows customizing of texture buffer size" points to the Texture Heap Size slider.
- "Adjusts the size of the texture buffer in the system memory. This function will be disabled when using an AGP card." points to the same slider.
- "Enables/Disables each Direct3D component" points to the Direct3D Feature Settings checkboxes.

**Level of Detail Settings** dialog box:

- Level of Detail (LOD) Options:
  - No per-pixel mipmapping
  - Do per-pixel mipmapping only for linear mipmap nearest/linear
  - Perform most accurate LOD calculation for all mipmapping modes
- Buttons: "OK", "Cancel", "Load Default".

Annotations for Level of Detail:

- "Fastest-uses per-polygon mipmapping" points to the "No per-pixel mipmapping" option.
- "Best Quality-uses the most accurate mipmapping calculation" points to the "Perform most accurate LOD calculation for all mipmapping modes" option.

**OpenGL Settings** dialog box:

- Texture Quality/Performance Adjuster:
  - Best texture quality
  - Average performance/quality
  - Best performance
- Buttons: "OK", "Cancel", "Load Default".

**Texture Addressing Adjustment** dialog box:

- Origin of Exact Sampling Texel:
  - Upper left corner
  - Center
- Origin of Bilinear Filtering Texel:
  - Upper left corner
  - Center
- Buttons: "OK", "Cancel", "Load Default".

Annotations for Texture Addressing Adjustment:

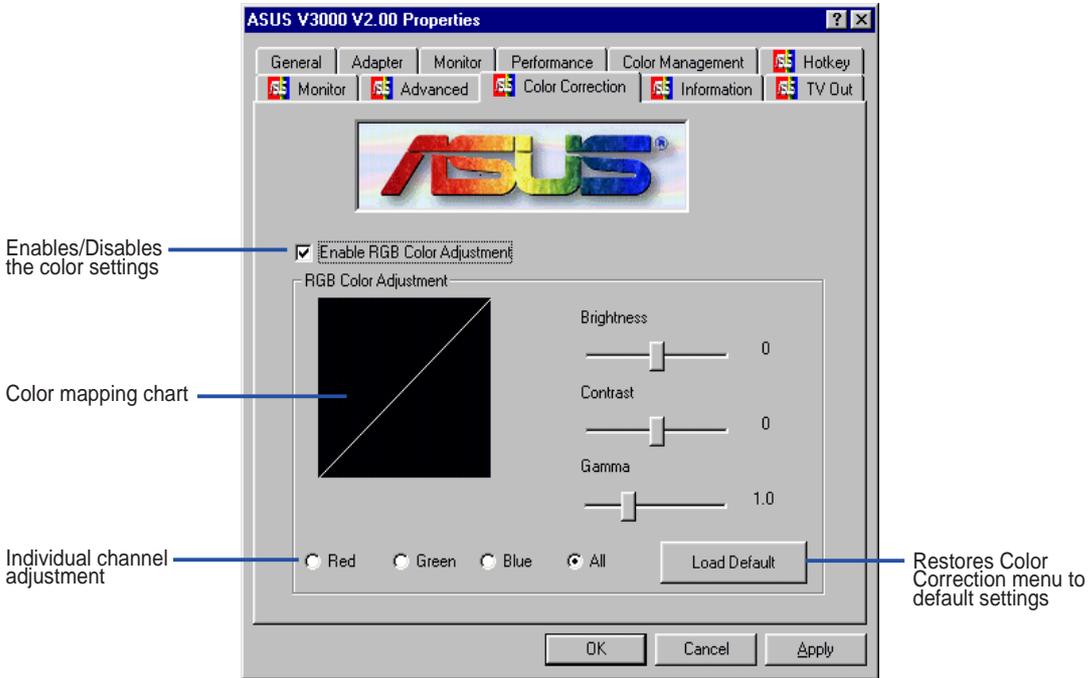
- "Origin selection for non-filtering texels" points to the "Origin of Exact Sampling Texel" section.
- "Origin selection for bilinear filtering texels" points to the "Origin of Bilinear Filtering Texel" section.

**Note:** The screen displays are provided as examples only and may not reflect the screen contents displayed on your system.

# III. Windows 95/98

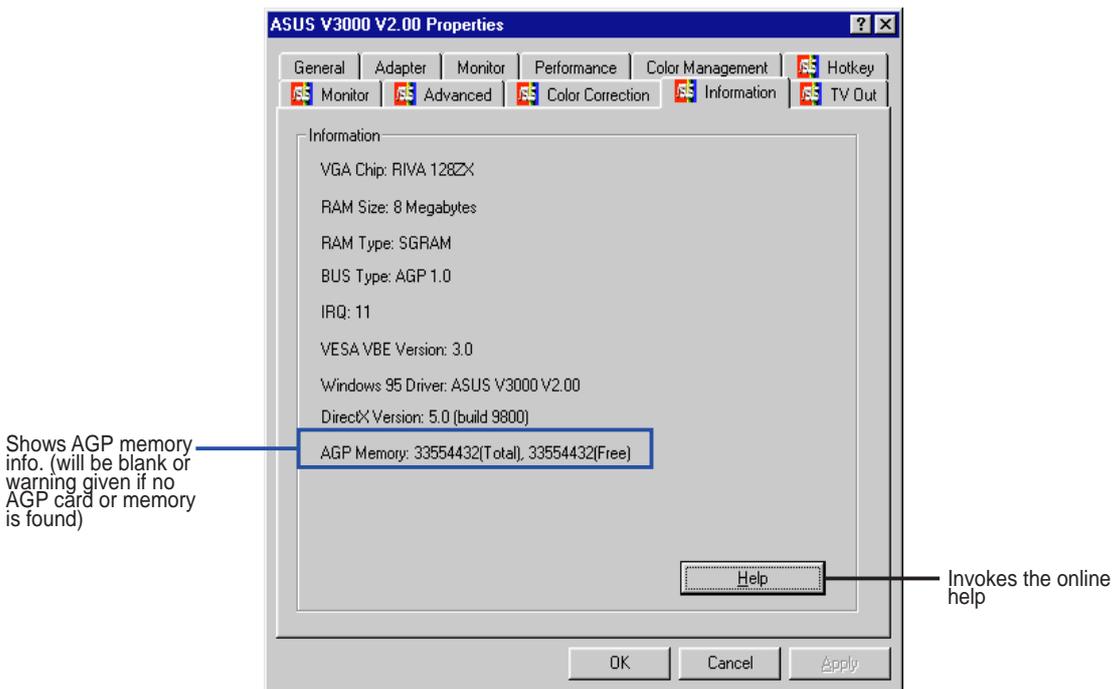
## Color Correction Menu

You can adjust the brightness, contrast, and gamma values of the screen output from the Color Correction Menu. This function is only available in 16-bit and 32-bit color depth.



## Information Menu

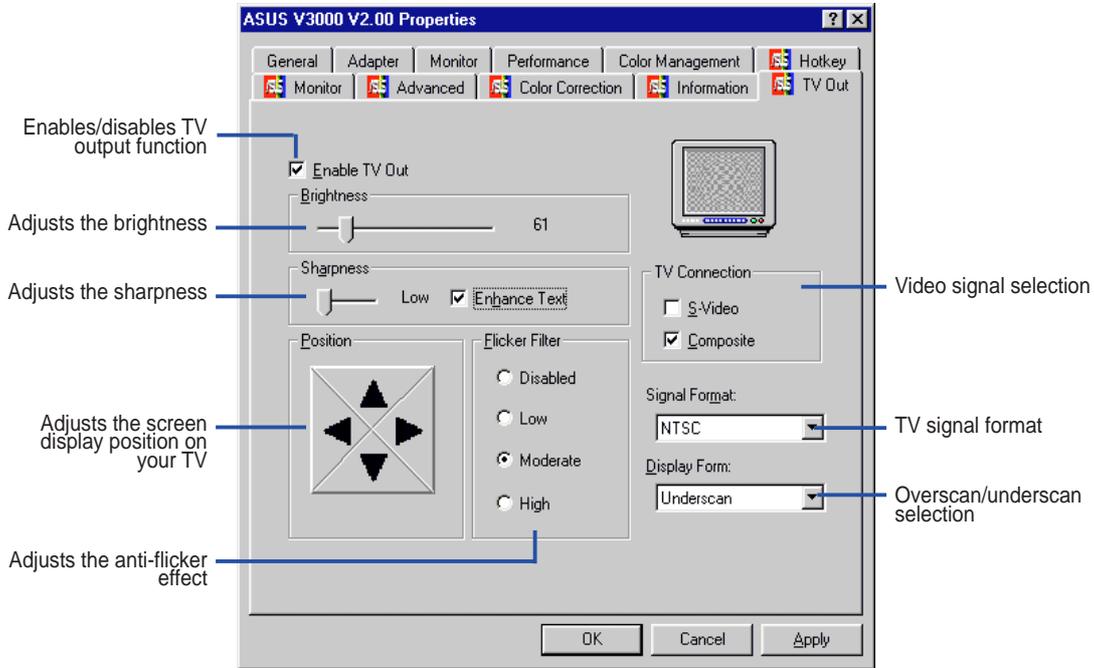
You can lists all the information about the VGA card and video configurations from the Information Menu.



# III. Windows 95/98

## TV Out Menu (AGP-V3000ZXTV only)

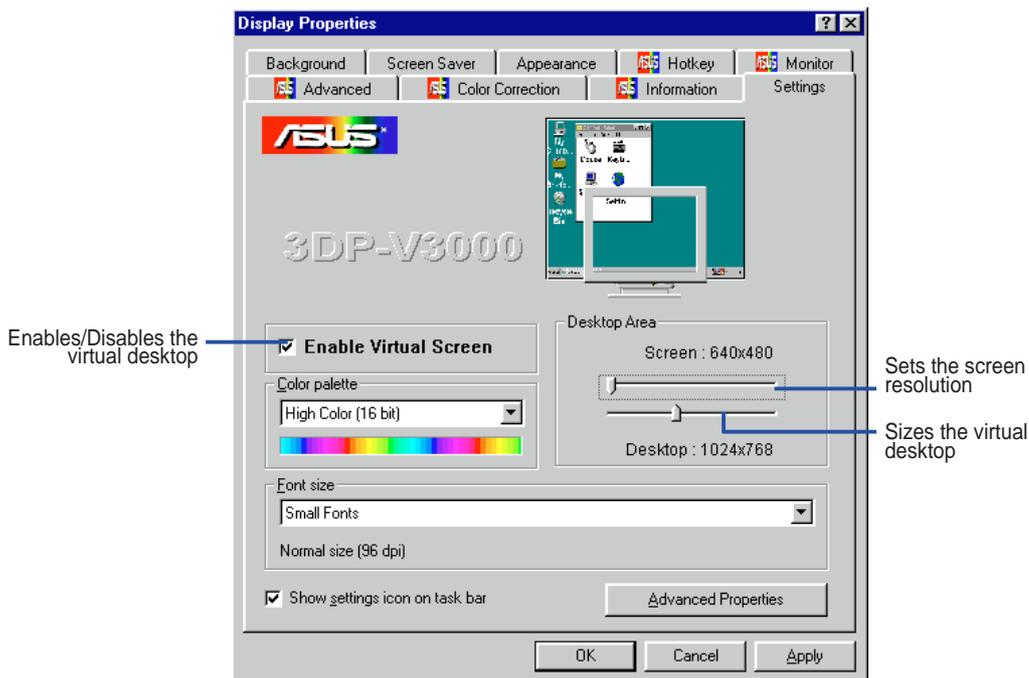
The TV Out tab will appear if your card came with an S-Video and/or Composite connector, a TV is connected to one of these connectors (S-Video provides better quality) and turned on, and you are in any one of these modes: 640x480@60Hz or 800x600@60Hz for NTSC, 640x480@50Hz or 800x600@50Hz for PAL.



**Note:** If TV output is turned on, the display refresh rate will be forced to 60Hz for NTSC and 50Hz for PAL. **Display Modes** will only be available for you to set other frame rates when you turn off TV output, close the **Properties** dialog box, and then enter it again.

## Settings Menu

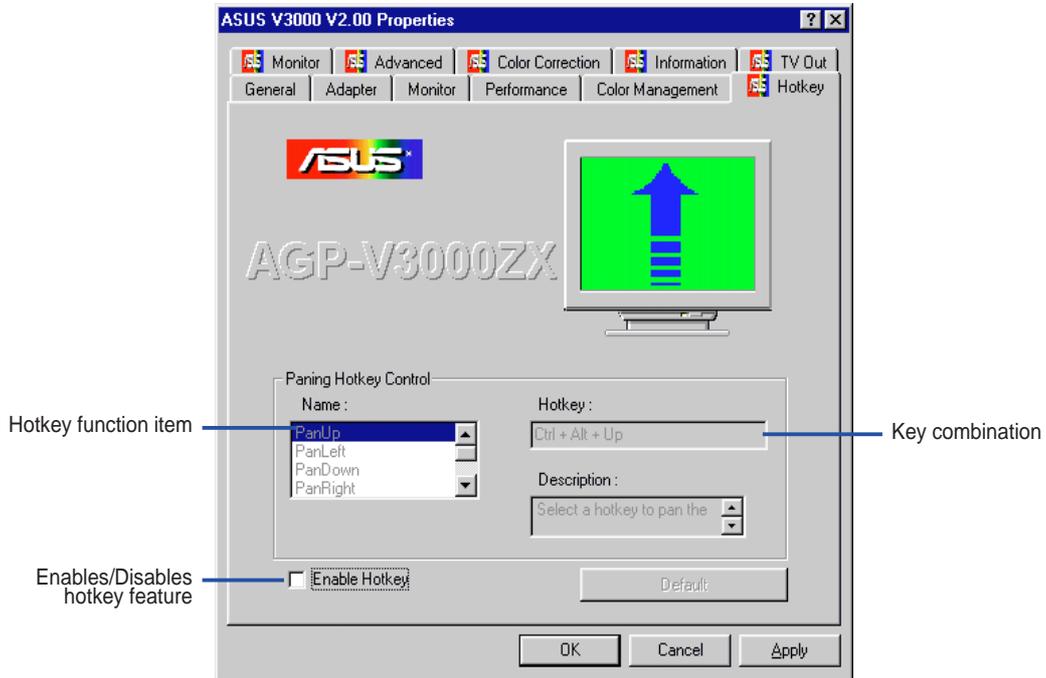
You can set the resolution, color depth, fonts, and virtual desktop from this menu.



# III. Windows 95/98

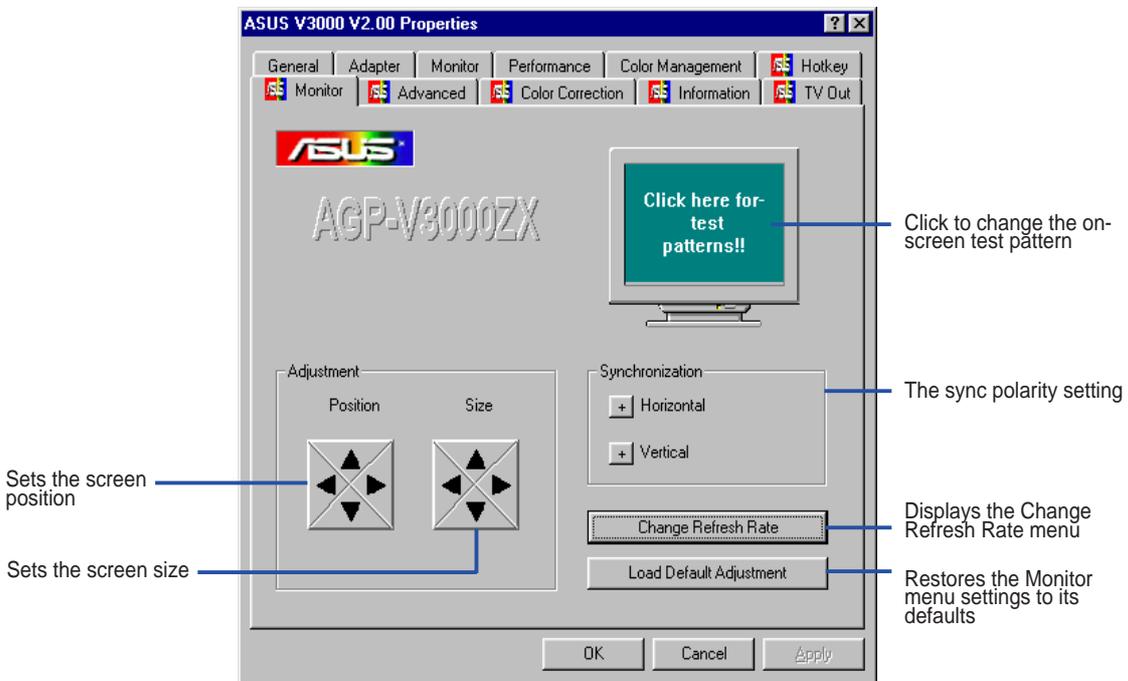
## Hotkey Menu

You can define hotkeys for the virtual screen operation from the Hotkey Menu.



## Monitor Menu

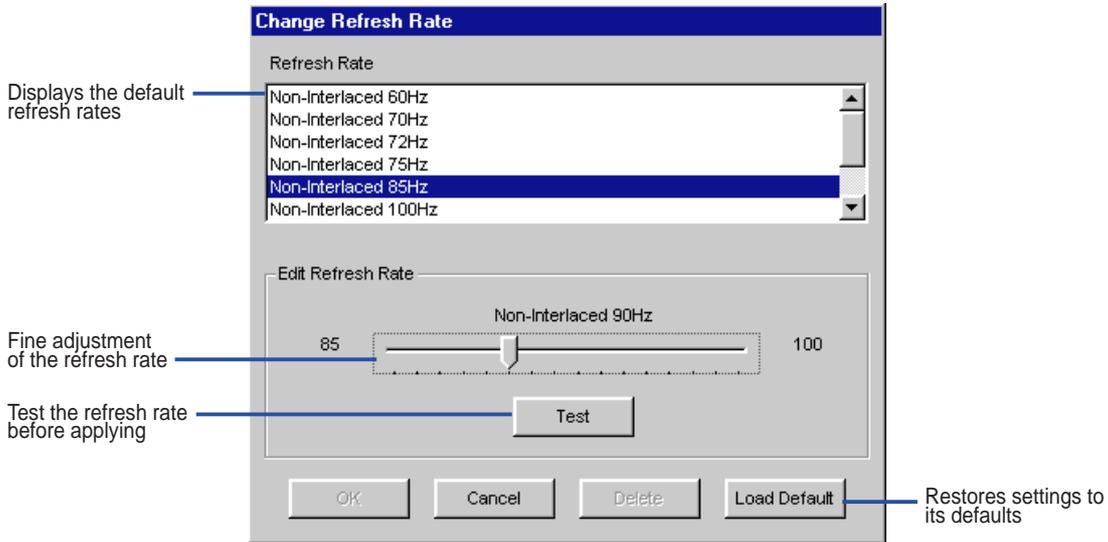
You can adjust the screen output on the monitor from the Monitor Menu.



# III. Windows 95/98

## Refresh Rate Menu

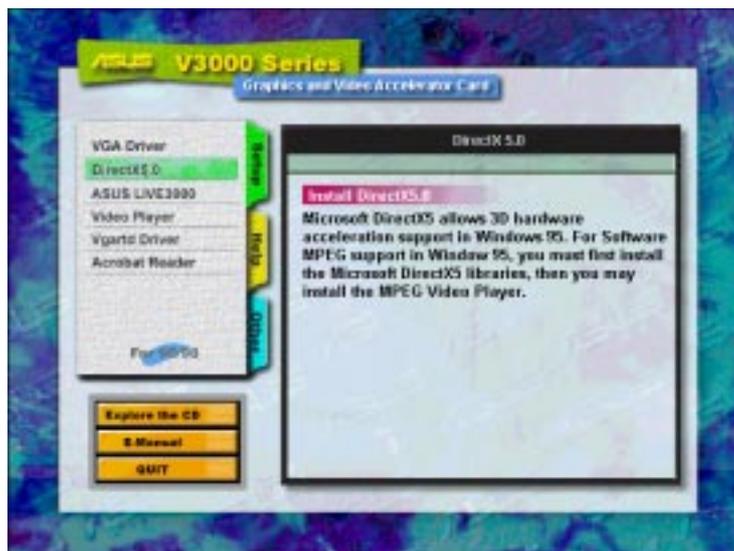
You can change the refresh rate setting for your monitor from this Menu.



## Install DirectX5

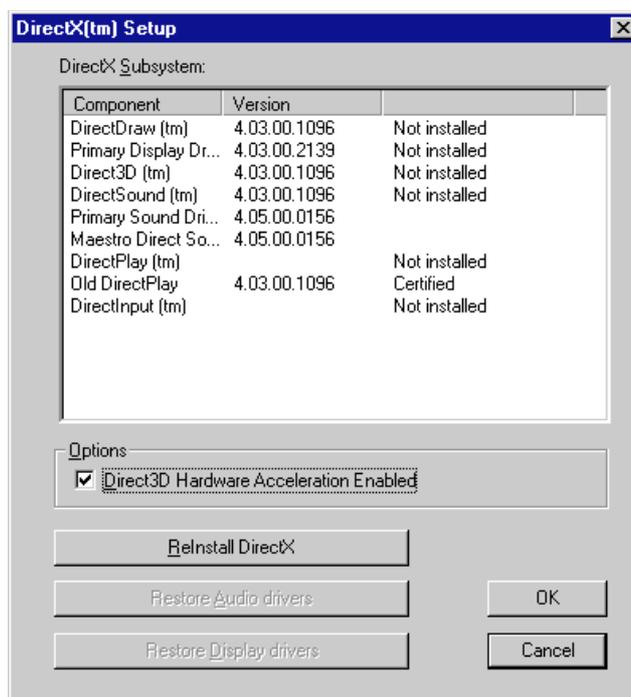
Microsoft DirectX5 allows 3D hardware acceleration support in Windows 95/98. For Software MPEG support in Windows 95/98, you must first install the **Microsoft DirectX5** libraries, and then the MPEG Video Player.

1. Insert 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.
2. From the **Setup** panel, click **DirectX5.0**.

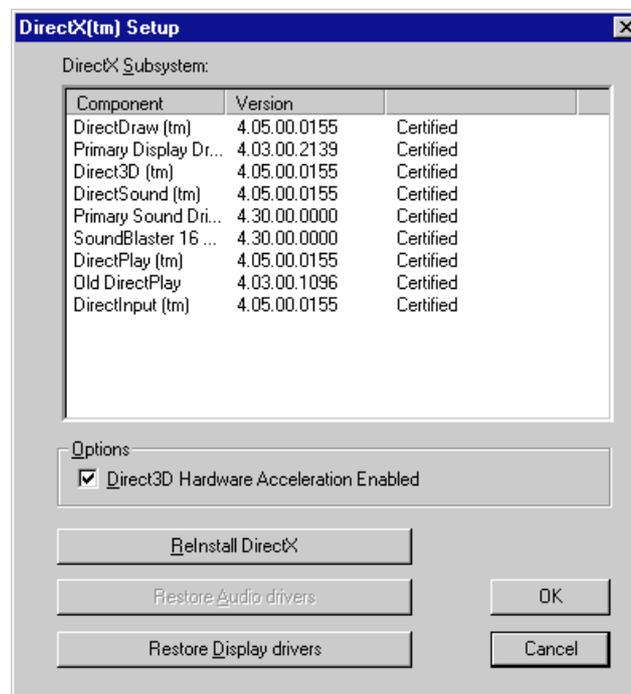


# III. Windows 95/98

The DirectX5 Setup Screen appears



3. Check **Direct 3D Hardware Acceleration Enabled** and then click the **Reinstall DirectX** button.
4. If your system already has DirectX5 installed, the screen will show “Certified” next to each component. Click either **OK** or **Cancel** to cancel the installation.

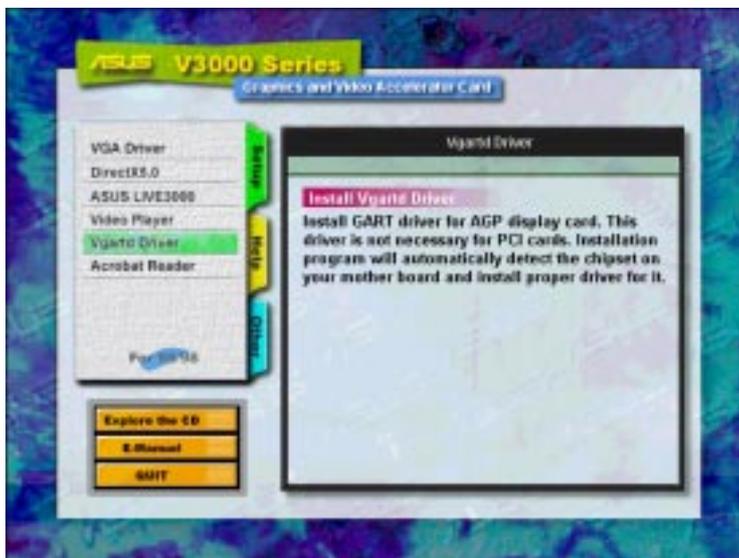


5. After reinstalling DirectX5, you will be prompted to restart your machine. Click **OK**.

### III. Windows 95/98

#### Install VGARTD (AGP only)

1. Insert 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.
2. From the **Setup** panel, click **Vgartd Driver** for AGP chipset support from Intel, SiS, VIA, and ALi. A message appears that only the AGP version requires this driver installation.



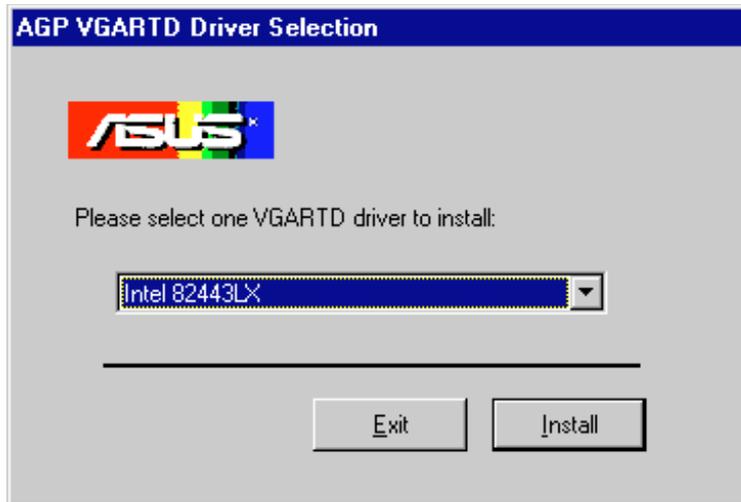
3. A driver detection screen appears to tell you which chipset is detected. Click **OK** to install the appropriate driver for your chipset.



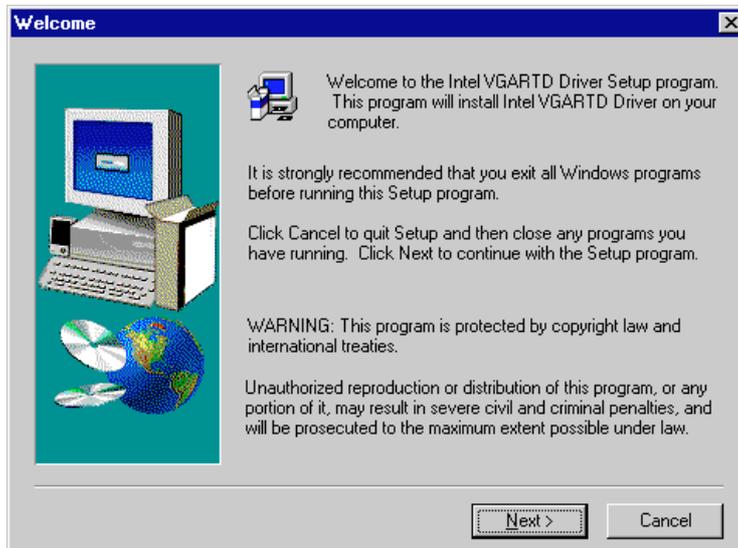
**Note:** Installation dialogs are slightly different for each chipset. Please follow the instructions to finish the VGARTD installation. The steps provided are for Intel chipsets.

### III. Windows 95/98

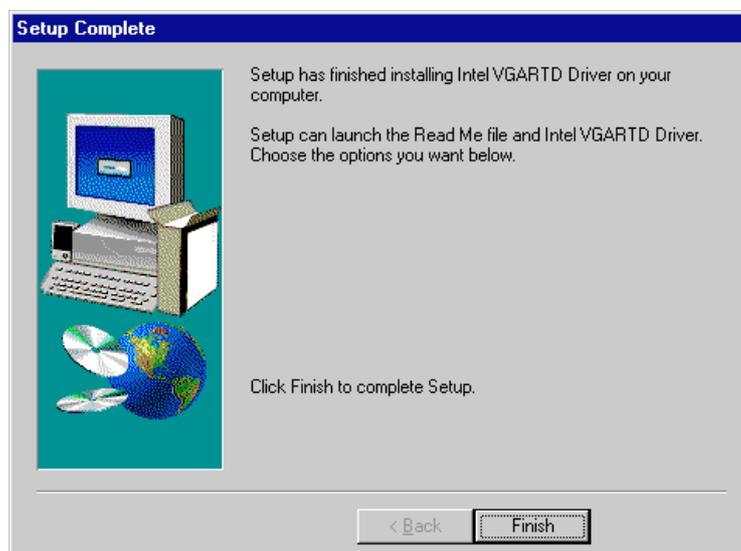
4. If you selected **No...**, on the previous screen before clicking **OK**, you will be presented with a selection of other drivers. Make your driver selection and click **Install**.



5. When the **Welcome** screen appears, click **Next** to continue.



6. Once the driver installation is finished, click **Finish**.

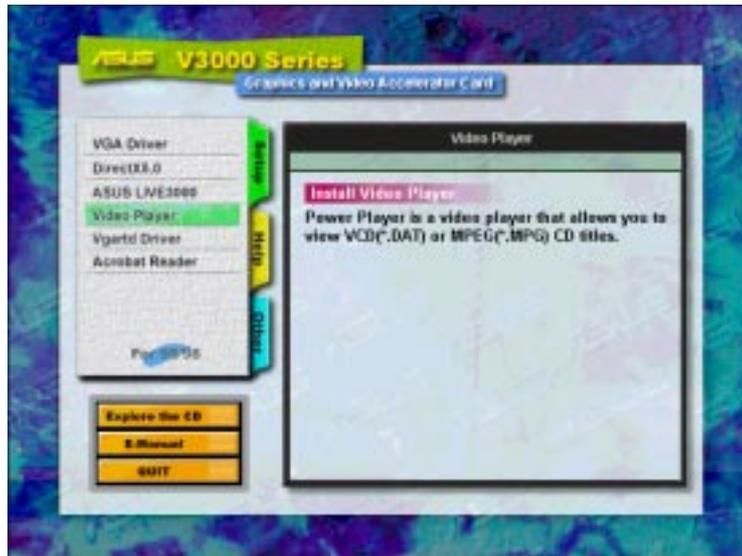


## III. Windows 95/98

### Install Video Player

Installing a video player allows you to view Video CD (\*.DAT) or MPEG (\*.MPG) CD titles. Follow the steps below to install the PowerPlayer video player.

1. 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.

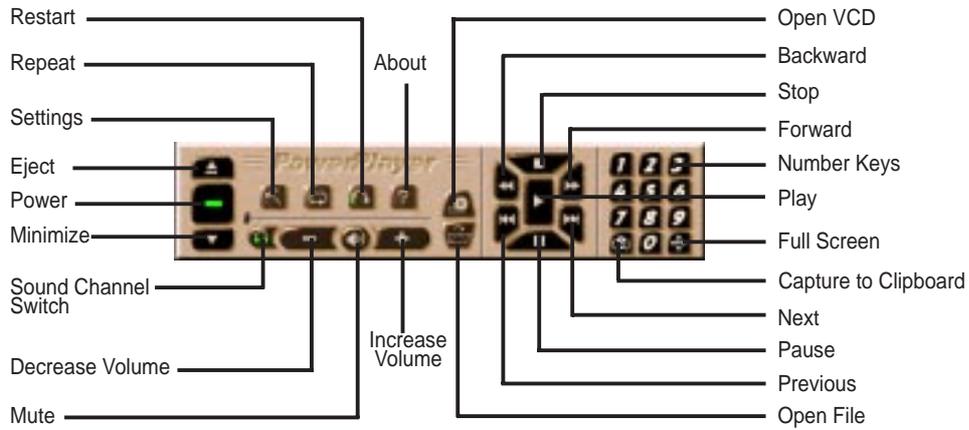


2. From the **Setup** panel, click **Video Player** and follow the self-explanatory instructions to complete the installation.



# III. Windows 95/98

Moving your cursor over the buttons will give the button name as shown.



**NOTE:** It is strongly recommended that you run PowerPlayer at 1024x768 resolution or lower. Higher resolutions result in poor quality and may cause problems.

### III. Windows 95/98

## Install ASUS LIVE3000 (for video model only)

ASUS LIVE3000 must be installed in order to use the video-in function on the V3000 Series accelerator card.

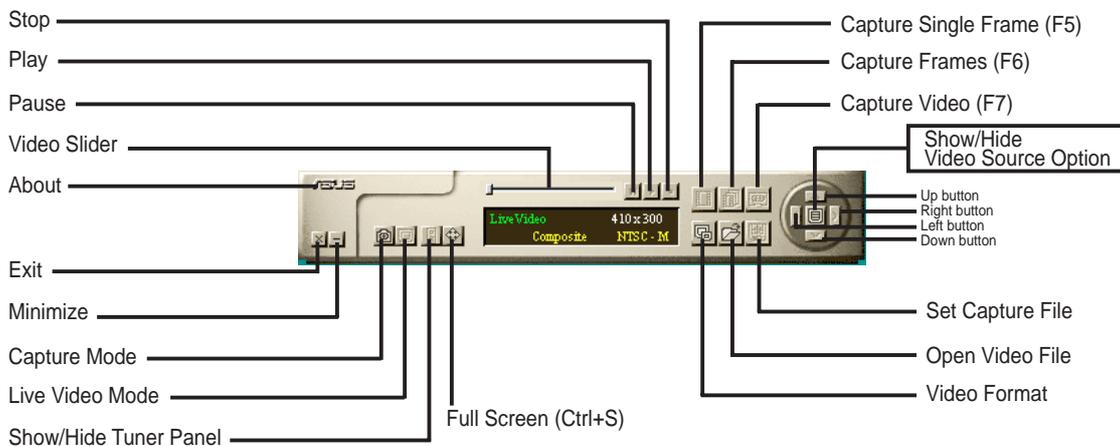
1. Reinsert your CD or double click on your CD drive icon in My Computer to bring up the autorun screen or run Setup.exe in the root directory of the CD.
2. From the **Setup** panel, click **ASUS LIVE3000** and follow the self-explanatory instructions to complete the installation.



III. Windows 95/98  
ASUS LIVE3000

After installation, you may run the program through the “Start” button-Programs-ASUS LIVE3000-LIVE3000 or remove the program using the unInstallSHIELD.

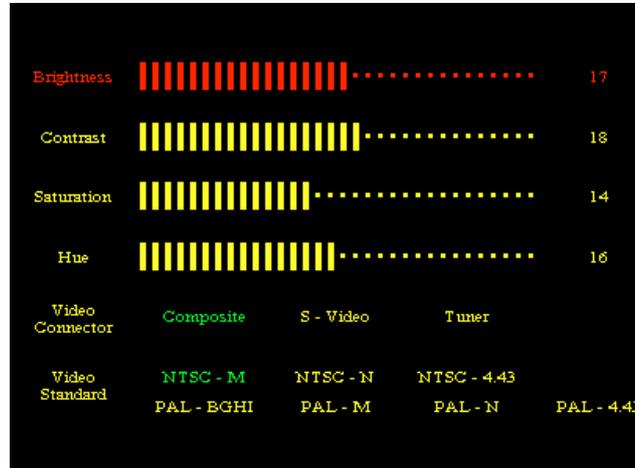
## Using ASUS LIVE3000 (for video model only)



# III. Windows 95/98

## Show/Hide Video Source Option

When first using ASUS LIVE3000, you must setup the Video Source. By clicking the **Show/Hide Video Source Option** button on the panel, you can show or hide the video source setting.



You can use the Up or Down arrow buttons on the control panel to select the Video Connector or the Video Standard. The Left and Right arrow buttons are used for making selections.

## Video Capture Driver

When you install the V3000 Series Windows 95/98 Driver, the video capture driver will automatically be installed on your system. This video capture driver follows Microsoft Video for Windows standard and can open up to a capture window size of 352x240. It can be used with some applications that use video capture as an option, such as video conference, net meeting, or digital video authoring applications.

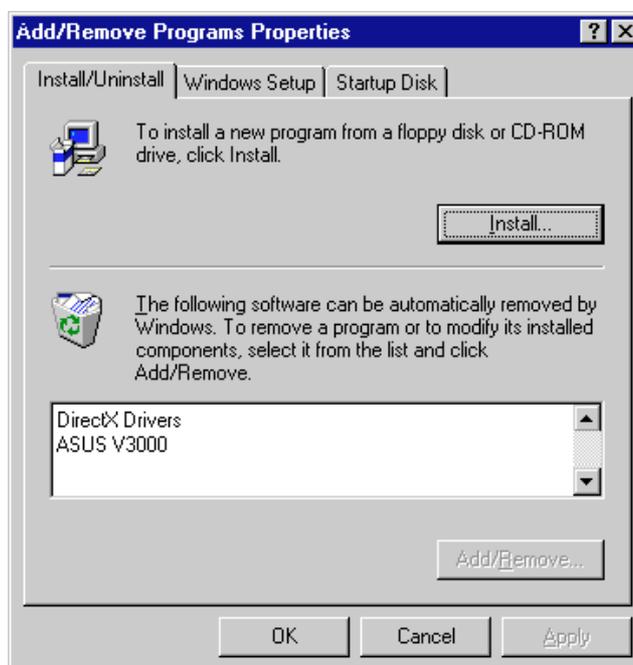
## III. Windows 95/98

### Remove V3000 Series Driver

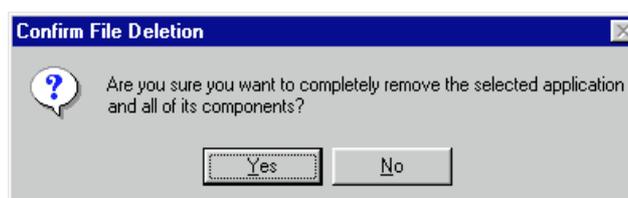
If you want to install other graphics cards or if you no longer need the V3000 Series display drivers, you can use one of the following procedures to completely uninstall the drivers from Windows 95/98 to save disk space.

#### Using Windows 95/98 Control Panel

1. Click **Start**, and then point to **Settings**.
2. Click **Control Panel**.
3. Double-click the **Add/Remove Programs** icon.
4. Click the **Install/Uninstall** tab.
5. Select ASUS VGA driver from the list.
6. Click **Add/Remove**.

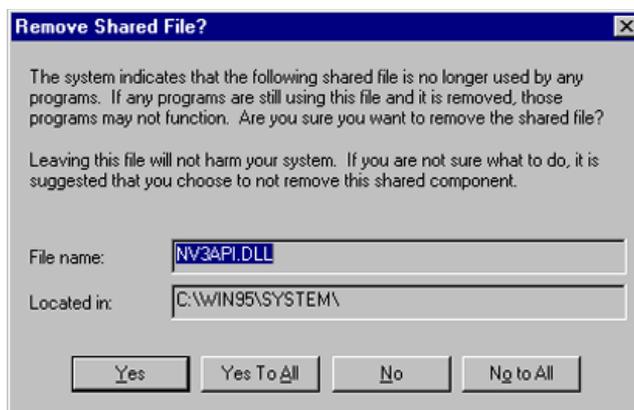


7. You will be warned that files will be deleted. Click **Yes** to continue.

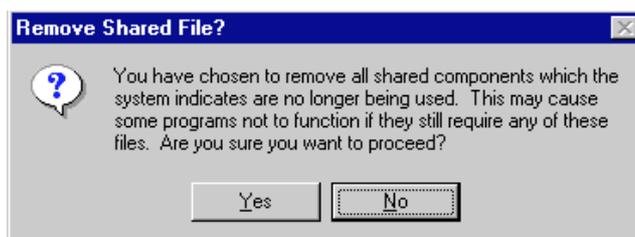


### III. Windows 95/98

8. A **Remove Shared File?** dialog box will ask for confirmation on removing some shared files. Click **Yes To All** to remove the shared files.



9. You will be warned that shared files may be used by other devices. Click **Yes** to continue.



10. This progress screen will show the components that are being uninstalled.



# IV. Microsoft Windows NT

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## Windows NT 4.0

**WARNING!** Before installing the ASUS AGP-V3000 Series display driver in Windows NT 4.0, make sure that you have installed **Windows NT 4.0 Service Pack3** (available on the Internet at [http://www.microsoft.com/isapi/support/bldqpage.idc?ProductPage=q\\_servpk](http://www.microsoft.com/isapi/support/bldqpage.idc?ProductPage=q_servpk)). Otherwise, the system will hang and will not be able to start up! This is not required for the ASUS 3DP-V3000/TV.

NOTE: For all the AGP features to be available you must be using Windows NT 5.0 (available in the future).

### *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 V3000 Series 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 V3000 Series drivers. Select your driver 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. Display Information

### Resolution Table 4MB Video Memory (AGP-V3000, AGP-V3000/TV, 3DP-V3000/TV)

Resolution	Vertical Frequency	Horizontal Frequency	Color Depth		
			8bpp = 256 colors Standard	16bpp = 65K colors High Color	32bpp = True Color
640 x 480	60Hz	31.4KHz	yes	yes	yes
	72Hz	36.1KHz	yes	yes	yes
	75Hz	37.6KHz	yes	yes	yes
	85Hz	43.0KHz	yes	yes	yes
	100Hz	50.9KHz	yes	yes	yes
	120Hz	61.8KHz	yes	yes	yes
800 x 600	60Hz	37.9KHz	yes	yes	yes
	72Hz	45.1KHz	yes	yes	yes
	75Hz	47.1KHz	yes	yes	yes
	85Hz	53.5KHz	yes	yes	yes
	100Hz	63.6KHz	yes	yes	yes
	120Hz	77.3KHz	yes	yes	yes
960 x 720	60Hz	44.8KHz	yes	yes	yes
	72Hz	54.0KHz	yes	yes	yes
	75Hz	56.4KHz	yes	yes	yes
	85Hz	64.2KHz	yes	yes	yes
	100Hz	76.4KHz	yes	yes	yes
	120Hz	92.5KHz	yes	yes	yes
1024 x 768	60Hz	48.4KHz	yes	yes	yes
	72Hz	57.6KHz	yes	yes	yes
	75Hz	60.2KHz	yes	yes	yes
	85Hz	68.7KHz	yes	yes	yes
	100Hz	81.9KHz	yes	yes	yes
	120Hz	98.8KHz	yes	yes	yes
1152 x 864	60Hz	53.6KHz	yes	yes	yes
	72Hz	64.9KHz	yes	yes	yes
	75Hz	67.7KHz	yes	yes	yes
	85Hz	77.2KHz	yes	yes	yes
	100Hz	91.4KHz	yes	yes	yes
	120Hz	110.8KHz	yes	yes	yes
1280 x 1024	60Hz	64.0KHz	yes	yes	----
	72Hz	77.0KHz	yes	yes	----
	75Hz	80.4KHz	yes	yes	----
	85Hz	91.2KHz	yes	yes	----
	100Hz	108.5KHz	yes	yes	----
	1600 x 1200	60Hz	74.9KHz	yes	yes
	72Hz	89.9KHz	yes	yes	----
	75Hz	93.8KHz	yes	yes	----
	85Hz	107.1KHz	yes	yes	----
1920 x 1080	60Hz	67.1KHz	yes	yes	----
	72Hz	81.3KHz	yes	yes	----
	75Hz	84.4KHz	yes	yes	----
	85Hz	96.2KHz	yes	yes	----
1920 x 1200	60Hz	74.6KHz	yes	----	----
	72Hz	89.9KHz	yes	----	----
	75Hz	93.9KHz	yes	----	----

## V. Display Information

### Resolution Table 8MB Video Memory (AGP-V3000ZX, AGP-V300ZXTV)

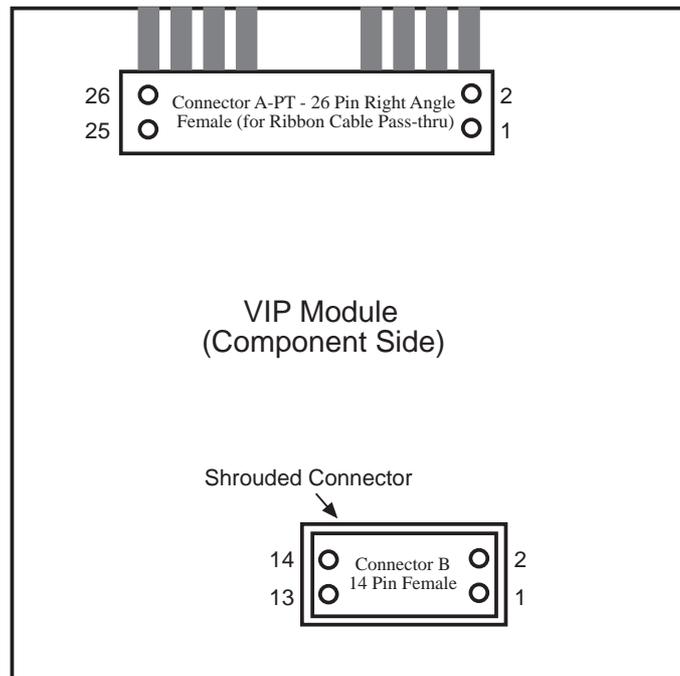
Resolution	Vertical Frequency	Horizontal Frequency	Color Depth		
			8bpp = 256 colors Standard	16bpp = 65K colors High Color	32bpp = True Color
640 x 480	60Hz	31.4KHz	yes	yes	yes
	72Hz	36.1KHz	yes	yes	yes
	75Hz	37.6KHz	yes	yes	yes
	85Hz	43.0KHz	yes	yes	yes
	100Hz	50.9KHz	yes	yes	yes
	120Hz	61.8KHz	yes	yes	yes
800 x 600	60Hz	37.9KHz	yes	yes	yes
	72Hz	45.1KHz	yes	yes	yes
	75Hz	47.1KHz	yes	yes	yes
	85Hz	53.5KHz	yes	yes	yes
	100Hz	63.6KHz	yes	yes	yes
	120Hz	77.3KHz	yes	yes	yes
960 x 720	60Hz	44.8KHz	yes	yes	yes
	72Hz	54.0KHz	yes	yes	yes
	75Hz	56.4KHz	yes	yes	yes
	85Hz	64.2KHz	yes	yes	yes
	100Hz	76.4KHz	yes	yes	yes
	120Hz	92.5KHz	yes	yes	yes
1024 x 768	60Hz	48.4KHz	yes	yes	yes
	72Hz	57.6KHz	yes	yes	yes
	75Hz	60.2KHz	yes	yes	yes
	85Hz	68.7KHz	yes	yes	yes
	100Hz	81.9KHz	yes	yes	yes
	120Hz	98.8KHz	yes	yes	yes
1152 x 864	60Hz	53.6KHz	yes	yes	yes
	72Hz	64.9KHz	yes	yes	yes
	75Hz	67.7KHz	yes	yes	yes
	85Hz	77.2KHz	yes	yes	yes
	100Hz	91.4KHz	yes	yes	yes
	120Hz	110.8KHz	yes	yes	yes
1280 x 1024	60Hz	64.0KHz	yes	yes	yes
	72Hz	77.0KHz	yes	yes	yes
	75Hz	80.4KHz	yes	yes	yes
	85Hz	91.2KHz	yes	yes	yes
	100Hz	108.5KHz	yes	yes	yes
	1600 x 1200	60Hz	74.9KHz	yes	yes
72Hz		89.9KHz	yes	yes	----
75Hz		93.8KHz	yes	yes	----
85Hz		107.1KHz	yes	yes	----
1800 x 1440		60Hz	89.5KHz	----	yes
1920 x 1080	60Hz	67.1KHz	yes	yes	----
	72Hz	81.3KHz	yes	yes	----
	75Hz	84.4KHz	yes	yes	----
	85Hz	96.2KHz	yes	yes	----
	1920 x 1200	60Hz	74.6KHz	yes	yes
72Hz		89.9KHz	yes	yes	----
75Hz		93.9KHz	yes	yes	----

# VI. Hardware Information

## VIP Connectors

VIP uses two dual row 0.1” center connectors — Connector A and Connector B. Connector A is a 26-pin connector, which is the same as the standard Feature Connector. Connector B is a 14-pin connector consisting of the power pins, ground, VRST#, and I2S. On the master side, both Connector A and Connector B are male. This applies to either the graphics adapter card or the motherboard. Slave modules will have the opposite mating connectors. Connector B on the slave side must be shrouded to prevent the danger of wrong insertion. Connector A can be configured as a standard Feature Connector, VIP, or Connector A (video) of VMI 1.4. On power up, the graphics chip (master) is configured in the standard feature connector mode. All VIP slaves must be disabled and tri-stated on power up.

## VIP Module Mechanical Specification



**NOTE:** For the AGP-V3000ZX, Connector B is female on the master side and male on the slave side.

# VI. Hardware Information

VIP CONNECTOR A					
(26 Pin Dual Row Header, 0.100 in. centers)					
Standard Feature Connector		VIP Mode	Standard Feature Connector		VIP Mode
Pin #	Signal Name	Signal Name	Pin #	Signal Name	Signal Name
1	Ground	Ground	2	P0	VID [0]
3	Ground	Ground	4	P1	VID [1]
5	Ground	Ground	6	P2	VID [2]
7	EVIDEO #	HAD [1]	8	P3	VID [3]
9	ESYNC #	HAD [0]	10	P4	VID [4]
11	EDCLK #	HCTL	12	P5	VID [5]
13	N/C	SCL	14	P6	VID [6]
15	Ground	Ground	16	P7	VID [7]
17	Ground	Ground	18	DCLK	PIXCLK
19	Ground	Ground	20	BLANK #	VIPCLK
21	Ground	Ground	22	HSYNC	N/C
23	N/C	VIRQ #	24	VSYNC	N/C
25	N/C	SDA	26	Ground	Ground

VIP CONNECTOR B					
(14 Pin Dual Row Header, 0.100 in. centers)					
Standard Feature Connector		VIP Mode	Standard Feature Connector		VIP Mode
Pin #	Signal Name	Signal Name	Pin #	Signal Name	Signal Name
1	-	+3.3V	2	-	+3.3V
3	-	+3.3V	4	-	+3.3V
5	-	Ground	6	-	Ground
7	-	+5V	8	-	+5V
9	-	+5V	10	-	VRST #
11	-	SCLK	12	-	Ground
13	-	LRCLK	14	-	PCMDATA

## VII. Troubleshooting

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### Description

*After installation and re-starting, Windows 95/98 informs me that the display setting is still incorrect.*

*My monitor is not capable of high resolution or refresh rate.*

*DirectX or the other applications report no AGP memory available.*

*LIVE3000 reports no SAA7111A EVIP detected on your card.*

*Games or applications report “No 3D acceleration hardware found.”*

### Recommended Action

- Make sure the “Assign IRQ to VGA” option is enabled in the BIOS
- Check if there is enough IRQ for VGA
- Uninstall the driver, restart, and reinstall the driver
- It depends on the display characteristics of your monitor. Consult your monitor documentation for the proper configuration.
- Windows 95 is not OSR2.1 or later.
- DirectX version is not 5.0 or later.
- You have not installed appropriate drivers for the AGP chipset. (e.g. VGARTD.VXD for Intel 440LX which ASUS installation automatically installs)
- Incorrect BIOS setting. BIOS must support at least 64MB for AGP aperture size.
- Your adapter has no video-in options.
- Your monitor has wrong DDC circuit implemented. Contact your monitor dealer for a solution.
- 3D works only in 16-bit color depth. Switch your color depth display mode to 16-bit (high color).
- Check necessary libraries such as DirectX or OpenGL