ASUS® V6800 Series

3D Graphics Card

USER'S MANUAL

Hardware & Video Drivers

AGP-V6800 Deluxe / 32MB

AGP-V6800 / 32MB

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Product Name:	**ASUS V6800 Series**
Manual Revision:	**1.00 E494**
Release Date:	**December1999**

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WWW: www.asuscom.de
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CONTENTS

FCC & DOC COMPLIANCE

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.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

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I. Introduction

Thank you for purchasing an ASUS AGP-V6800 Graphics and Video Accelerator. With this purchase, you join an elite squadron of graphics enthusiasts.

Powered by the NVIDIA™ GeForce256™ graphics processing unit (GPU) and featuring DDR (Double Data Rate) memory, the ASUS AGP-V6800 delivers not only cutting-edge graphics performance but also image fidelity regardless of the CPU (central processing unit) your computer system is using.

With the ASUS AGP-V6800, you will not only see but also experience dynamic, realistic 3D worlds and characters.

Highlights

- **Powered by the World's First Graphics Processing Unit (GPU)**   NVIDIA™ GeForce256™

- **Built-in 32 MB DDR Frame Buffer**   Provides more resolutions and color depths

- **4x4 Engine Integrated Transform and Lighting**   Frees up CPU bandwidth

- **256-bit QuadPipe™ Rendering**   Delivers industry's fastest graphics performance

- **AGP 4X with Fast Writes**   Maximizes overall system performance

- **High Quality Video Acceleration**   Delivers the highest video quality

- **Optimized for DirectX® 7 and OpenGL® Features**   Ensures broad application support

Available Models

ASUS AGP-V6800 Deluxe

- 32MB Frame Buffer
- VGA + Video-In + TV-Out + 3D Glasses (ASUS VR-100G Bundled Free!)

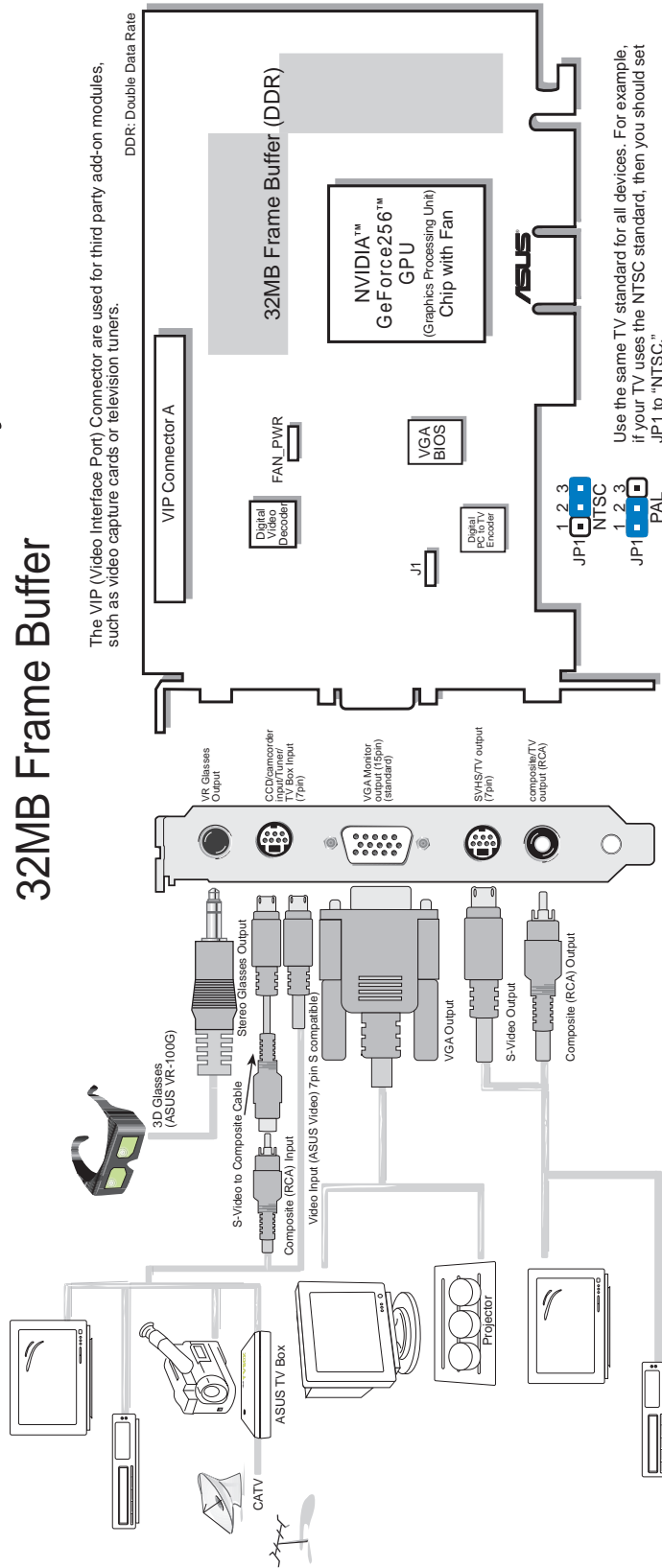### ASUS AGP-V6800

- 32MB Frame Buffer
- VGA

I. Introduction

Common Features

- AGP 4X with Fast Writes
- Peak fill rate of 480 million bilinear filtered, multi-textured pixels and more than 3.8 gigatexels per second
- Up to 15 million triangles per second at peak rates
- Four 32-bit 3D rendering pipeline
- Four texture mapped, lit pixels per clock cycle
- Transform and Lighting (T&L) Engine
- Optimized for Direct3D acceleration with complete support for DirectX 7 features, such as multi-texturing, bump mapping, light maps, reflection maps, full scene anti-aliasing, trilinear and 8-tap anisotropic filtering (better than trilinear mipmapping)
- 32-bit Z and stencil buffer
- Hardware acceleration for all Windows GDI operations
- Video acceleration for Direct Show and MPEG-1, MPEG-2, and Indeo
- Multiple video windows with hardware color space conversion and filtering (YUV 4:2:2 and 4:2:0)
- Video ports supports ITU-R 656, VESA DDC2B+ DPMS
- Integrated 350MHz RAMDAC supporting from 640x480 up to 2048x1536 in true color
- Motion compensation for MPEG-2 decoding

II. Hardware Installation

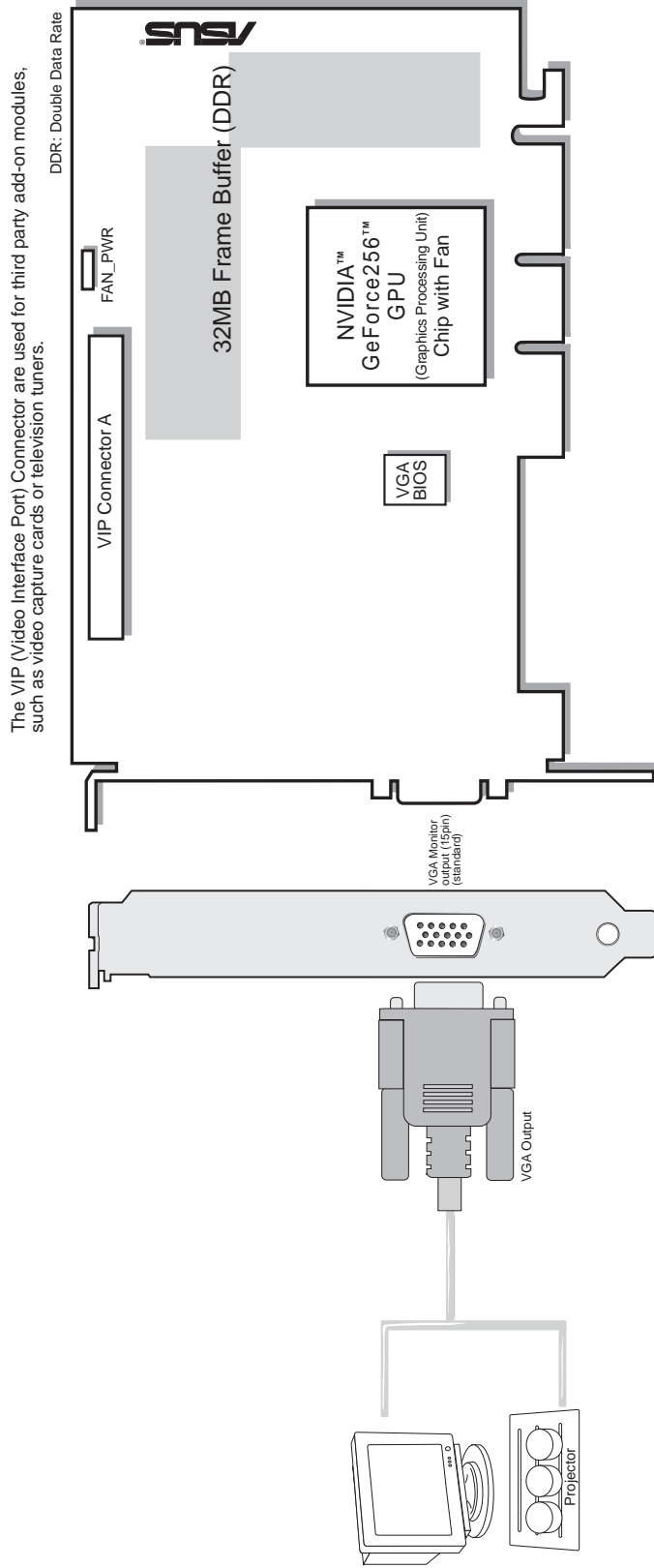## ASUS AGP-V6800 Deluxe Layout
32MB Frame Buffer

The VIP (Video Interface Port) Connector are used for third party add-on modules, such as video capture cards or television tuners.

DDR: Double Data Rate

Use the same TV standard for all devices. For example, if your TV uses the NTSC standard, then you should set JP1 to "NTSC."

NOTES
- Use the same TV standard for all devices.
- ✈ and ✈ cannot be connected at the same time.

Item Checklist

- ☑ ASUS AGP-V6800 Graphics Card (PAL or NTSC)
- ☑ ASUS VR-100G
- ☑ This User's Manual
- ☑ ASUS V6800 Series Driver & Utility CD Disc

ASUS AGP-V6800 (Pure) Layout

32MB Frame Buffer

The VIP (Video Interface Port) Connector are used for third party add-on modules, such as video capture cards or television tuners.

DDR: Double Data Rate

FAN_PWR

VIP Connector A

32MB Frame Buffer (DDR)

NVIDIA™
GeForce256™
GPU
(Graphics Processing Unit)
Chip with Fan

VGA BIOS

VGA Monitor output (15pin) (standard)

VGA Output

Projector

Item Checklist

☑ ASUS AGP-V6800 Graphics Card
☑ This User's Manual
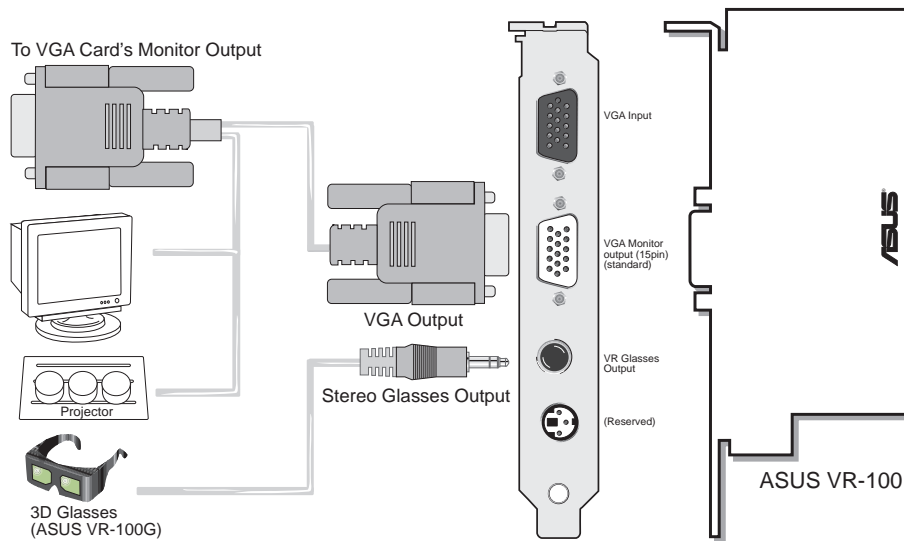☑ ASUS V6800 Series Drivers & Utilities Installation CD Disc

II. Hardware Installation

ASUS VR-100 Optional Upgrade Kit

The ASUS VR-100 Optional Upgrade Kit enables the ASUS VR-100G 3D Glasses to be used with Pure models of the V6800 Series cards. *See* your dealer for more information on the ASUS VR-100 Optional Upgrade Kit.
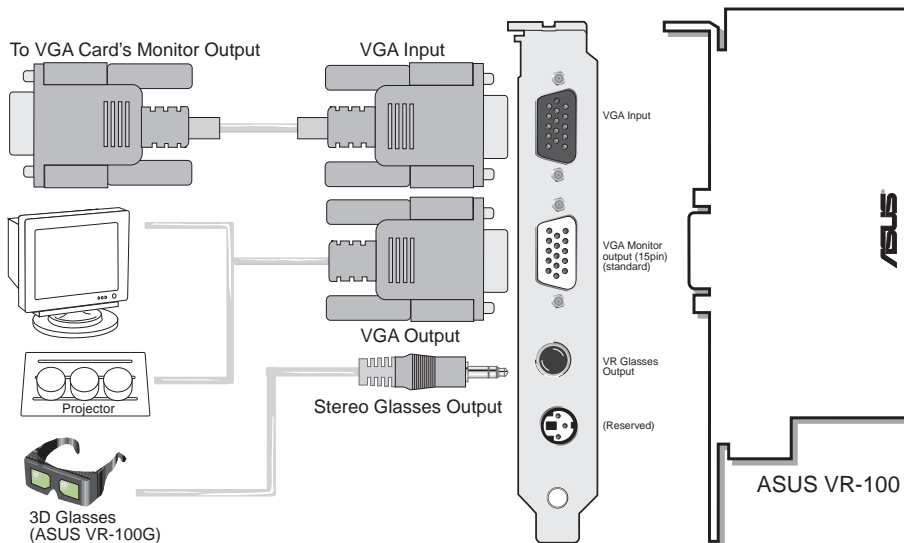
The monitor cable that came with your kit may be of the Y- or standard type. Connect your cable accordingly.

Y-Type Connection

To VGA Card's Monitor Output

VGA Input

VGA Monitor output (15pin) (standard)

VGA Output

VR Glasses Output

Stereo Glasses Output

(Reserved)

Projector

ASUS VR-100

3D Glasses (ASUS VR-100G)

When using a Y-type cable, you do not need to connect the VGA Input of the VR-100 to your VGA card's monitor output (*see* diagram above).

Standard Connection

To VGA Card's Monitor Output

VGA Input

VGA Input

VGA Monitor output (15pin) (standard)

VGA Output

VR Glasses Output

Stereo Glasses Output

(Reserved)

Projector

ASUS VR-100

3D Glasses (ASUS VR-100G)

You must anchor the ASUS VR-100's mounting bracket with a screw to a free expansion slot in your computer chassis.

II. Hardware Installation

NOTE: This graphics card series can only be installed in motherboards with an AGP slot.

Installation Procedures

New Systems

1. Unplug all electrical cords on your computer.
2. Remove the system unit cover.
3. Locate the AGP/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 .
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/PCI 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. Change your display driver to Standard VGA.
2. Shut down your computer and unplug all electrical cords.
3. Replace the existing VGA card with a V6800 series graphics card.
4. Restart your computer.
5. Install the ASUS V6800 series display driver.

III. Windows 95/98

Operating System Requirements

NOTE: This graphics card requires a motherboard with an AGP slot.

Windows 95 OSR2.0 with USB Support

Windows 95 OSR2.0 supports AGP cards, but to take advantage of all the AGP features, you must use Windows 95 OSR2.0 and install the USB upgrade and then install the VGARTD driver for the corresponding chipset on your motherboard (*see* **III. Windows 95/98 | Install GART Driver**).

To install Win95 OSR2.0 with USB support, 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

Windows 98 supports full Direct3D and AGP features. If you are still using the beta version of Windows 98 and you want to fully take advantage the Direct3D and AGP features, you must upgrade your current Windows to the release version before installing the AGP display driver.

Windows 98 includes VGARTD for the major chipsets but it is recommended that you install VGARTD from the ASUS AGP-V6800 Series CD to make sure that you have the latest version of VGARTD (*see* **III. Windows 95/98 | Install GART Driver**).

NOTES
- VGARTD stands for Virtual Graphics Address Remapping Table Driver, which is necessary to use the DIME feature of AGP. DIME means Direct Memory Execute, which is accessed *directly* by most AGP chips (when VGARTD is installed) for complex texture-mapping operations.
- For other notes or release information, see the README files in the installation CD disc.
- This Manual assumes that your CD-ROM disc drive is drive D: and that Windows is in C:\WINDOWS. Replace either with the actual location, if necessary.

Driver Setup

You can use one of three methods to install the Windows 95/98 drivers for your ASUS AGP-V6800 series graphics card.

NOTE: Method 2 and Method 3 will not install the appropriate AGP GART driver if your motherboard does not use the Intel AGPset. Installing the AGP GART driver will ensure that the AGPset's AGP functions are available. Method 2 and Method 3 will not install also the DirectX runtime libraries. DirectX must be installed so that your video player can take advantage of hardware acceleration. *See* **III. Windows 95/98 | Install GART Driver** and **III. Windows 95/98 | Install DirectX** later in this manual for the setup steps.

Method 1: ASUS Quick Setup Program

NOTE: *See* **III. Windows 95/98 | Drivers | Install Display Driver** for more information.

1. Start Windows.

2. Switch display to Windows' Standard Display Adapter (VGA) mode and then restart Windows.

3. Insert the CD installation disc into your CD-ROM drive.

4. The ASUS Windows 95/98 Install Shell appears. Click **Drivers** and then click **Install Display Driver** on the **Drivers** dialog box.

5. Follow the onscreen instructions to complete the setup.

6. When Setup has finished installing all the necessary files on your computer, it will prompt you to restart your computer. Click **Yes...** and then **Finish** to restart your computer and to complete Setup.

III. Windows 95/98

Method 2: Display Property Page

1. Start Windows.

2. Switch display to Windows' Standard Display Adapter (VGA) mode and then restart Windows.

3. Right-click the Windows desktop and click **Properties**.

4. Click the **Settings** tab and then click **Advanced**. The **Standard Display Adapter (VGA) Properties** dialog box appears.


5. Click **Change** on the **Adapter** tab. The **Update Device Driver Wizard** dialog box appears. Click **Next**, click **Display a list of all the drivers**... and then click **Next**.

6. Click **Show all hardware** and then click **Have Disk....**When the **Install From Disk** dialog box appears, type the location of the ASUS6600.INF file and then proceed to step 9. Otherwise, proceed to the next step.

7. Click **Browse** to search the CD-ROM drive. In the **Drives** box of the **Open** dialog box, select your CD-ROM drive and then click **OK**.

8. In the **Folders** box, double-click the WIN9x folder and then select ASUS6600.INF in the **File name** box.

9. Click **OK**. A list of video cards appears. Select your VGA card type for your operating system and then click **OK**.

10. The **Update Driver Warning** box appears. Click **Yes** to confirm the setting up of the ASUS enhanced display drivers and then follow the onscreen instructions to start the setup.

11. Setup will prompt you when it has finished installing all the necessary files on your computer. Click **Finish** to close Setup.

12. When you are returned to the **Standard Display Adapter (VGA) Properties** box, click **Close**. The **Display Properties** box appears. Click **Close**.

13. The system will prompt you to restart your computer. Click **Yes** to restart your computer and to complete Setup.

III. Windows 95/98

Method 3: Plug and Play

NOTE: Before proceeding with these steps, replace first your old VGA card with an ASUS AGP-V6800 series graphics card.

1. Start Windows.

2. When Windows detects your ASUS AGP-V6800 series graphics card, the **New Hardware Found** dialog box appears.
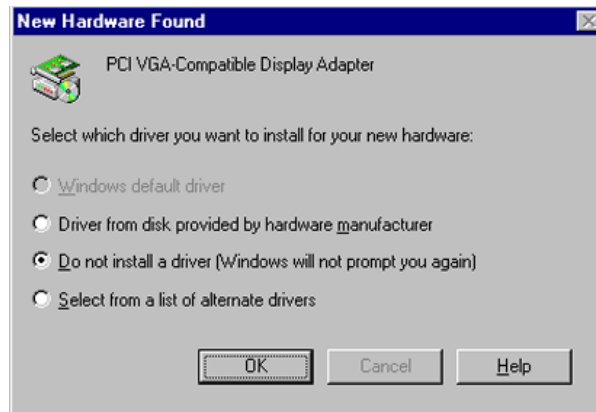
3. Click **Driver from disk provided by hardware manufacturer**.

4. When Setup prompts you for the location of the driver, type D:\WIN9x to direct Setup to the INF file and then click **Finish** to install the driver.

5. When Setup has finished installing all the necessary files on your computer, it will prompt you to restart your computer. Click **Yes** to restart your computer and to complete Setup.

Drivers

Install Display Driver

1. Insert the CD installation disc into your CD-ROM drive or double click the CD drive icon in My Computer to bring up the autorun screen or run **Setup.exe** in the root directory of your CD-ROM drive.

   Click **Drivers**.

2. The **Drivers** box appears. Click **Install Display Driver** to install all the drivers and utilities into your computer. Setup will install the drivers in the following order: Display Driver (Direct3D and OpenGL Drivers), DirectX runtime libraries, and VGART driver. Just follow the on-screen instructions to complete the installation.

If you prefer to install the drivers individually, follow the steps on the following pages.

III. Windows 95/98

Install DirectX

Microsoft DirectX allows 3D hardware acceleration support in Windows 95/98. For Software MPEG support in Windows 95/98, you must first install Microsoft DirectX, and then an MPEG-compliant video player.

1. Insert the CD installation disc into your CD-ROM drive or double click the CD drive icon in My Computer to bring up the autorun screen or run **Setup.exe** in the root directory of your CD-ROM drive.
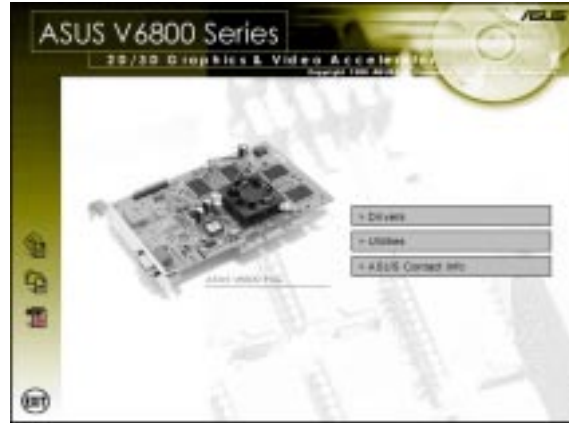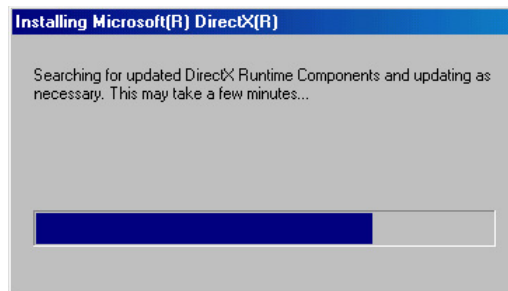
   Click **Drivers**.

2. The **Drivers** box appears. Click **Install DirectX** to select the DirectX version you want to install.

3. The installation program will automatically install the DirectX 7 runtime libraries into your system.

4. Setup will prompt when it has finished copying all the files to your computer. Click **OK** to finish the installation.

WARNING! Some games written for older DirectX versions may not work properly under DirectX 7. Make sure that your applications or games support DirectX 7 before installing the DirectX 7 runtime libraries. DirectX 7 currently cannot be uninstalled by regular means, such as outlined in **III. Windows 95/98 | Uninstall Display Driver**.

III. Windows 95/98

Install GART Driver

The AGP GART Driver is used to support AGP functionality for the chipset on your PC's motherboard. It is recommended to install the GART driver if it is newer than the one you have installed in your system. The GART driver is only necessary for an AGP graphics card.

NOTE: Installation dialogs are slightly different for each chipset. Follow the on-screen instructions to finish the GART driver installation. The succeeding steps assume that you are installing for an Intel chipset.

1. Insert the CD installation disc into your CD-ROM drive or double click the CD drive icon in My Computer to bring up the autorun screen or run **Setup.exe** in the root directory of your CD-ROM drive.
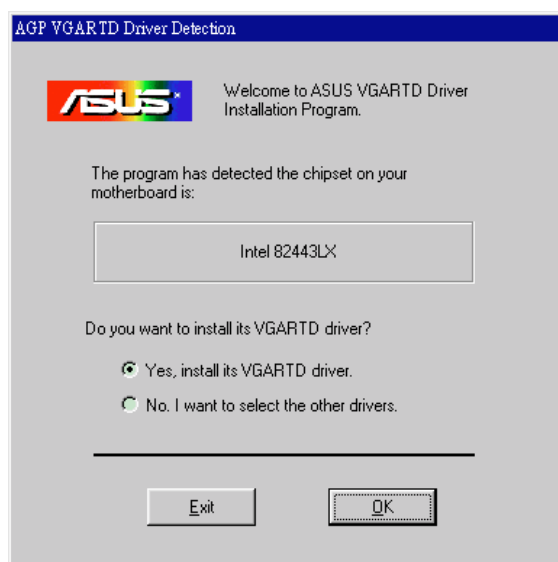
   Click **Drivers**.

2. The **Drivers** box appears. Click **Install GART Driver** to install AGP support for motherboards with Intel, AMD, VIA, SiS, or ALi chipsets.

3. The **AGP VGARTD Driver Detection** box appears with the chipset detected on your motherboard. Click **OK** to install the appropriate driver for your AGPset.

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

Please select one VGARTD driver to install:

Intel 82443LX
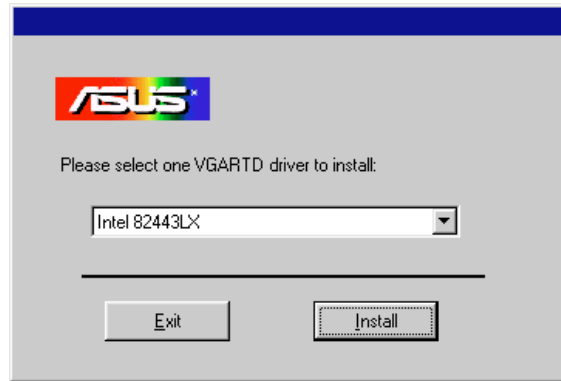
Exit   Install

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

6. Once the driver installation is fin-
   ished, click **Finish.**

III. Windows 95/98

Install ASUS TWAIN Driver

ASUS TWAIN Driver is a frame capture driver for Adobe Photoshop®, an image editing software. With this driver, you can capture still images through Photoshop using the video input port of your card (Deluxe model only).

1. Insert the CD installation disc into your CD-ROM drive or double click the CD drive icon in My Computer to bring up the autorun screen or run **Setup.exe** in the root directory of your CD-ROM drive.
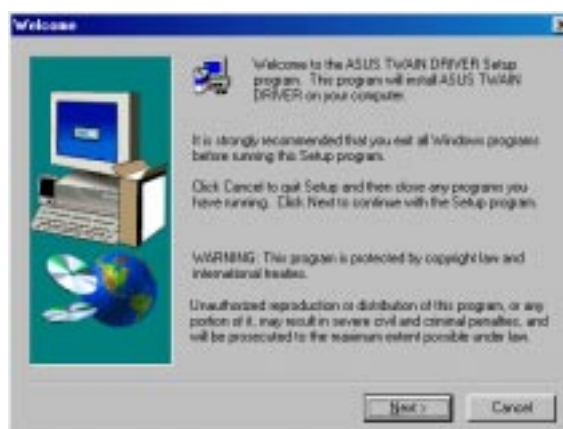
   Click **Drivers**.

2. The **Drivers** box appears. Click **Install ASUS TWAIN Driver.**.

3. When the **Welcome** box appears, click **Next** to start copying the files. Setup automatically starts copying the necessary files to the default folder.

   To complete the installation, simply follow the on-screen instructions or prompts.

Uninstall Display Driver

If you want to update your display drivers or if you no longer need the AGP-V6800 display drivers, you can use one of the following procedures to completely uninstall the drivers from Windows 95/98 to save disk space.

Using the Autorun Screen

1. Insert the CD installation disc into your CD-ROM drive or double click the CD drive icon in My Computer to bring up the autorun screen or run **Setup.exe** in the root directory of your CD-ROM drive.

   Click **Drivers**.

2. Click **Uninstall Display Driver** and follow the on-screen directions.

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. Click **ASUS V6800 Series Display Driver** from the list**.**

6. Click **Add/Remove**.

7. The system will prompt you to restart your computer. Click **Yes** to restart.
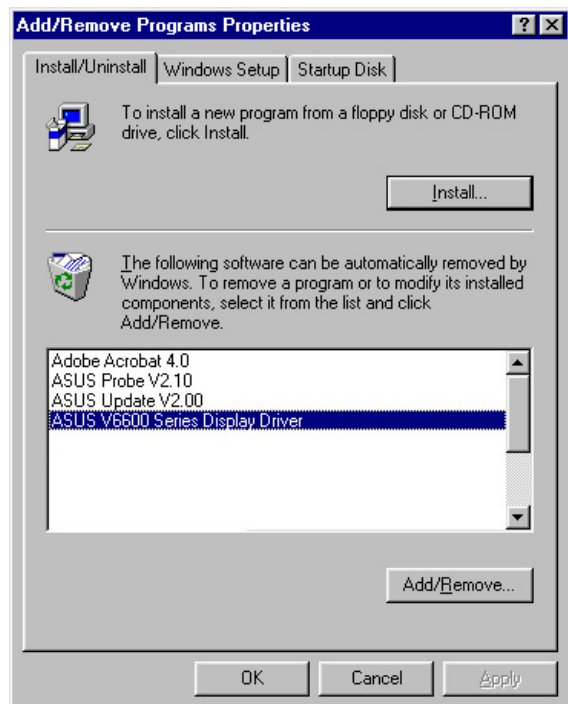
III. Windows 95/98

Run ASUS VGA Live Update

The ASUS VGA Live Update is a utility that allows you to update your VGA card's BIOS and drivers. The use of this utility assumes that you are properly connected to the Internet through an Internet Service Provider (ISP).

1. Insert the CD installation disc into your CD-ROM drive or double click the CD drive icon in My Computer to bring up the autorun screen or run **Setup.exe** in the root directory of your CD-ROM drive.

   Click **Drivers** and when the **Drivers** box appears, click **Run ASUS VGA LiveUpdate**.

2. Select an update method from the drop-down list box and then click **Next**.
   - *Update BIOS/Driver from the Internet* lets you update the BIOS or driver from the Internet. The updating (running the flash utility or the installation program) will be done automatically.
   - *Download BIOS/Driver from the Internet* lets you download the BIOS or driver to a folder in your computer.

3. After you have selected your preferred update method, you will need to select an Internet site. Choose the site that is closest to you and then click **Next** or click **Auto Select**.

   Follow any on-screen instructions or prompts to complete setup.

   If you selected *Download BIOS/ Driver from the Internet*, you will be prompted for a destination folder. Create or select an existing folder to save the file or files that you selected.

(This page was intentionally left blank.)
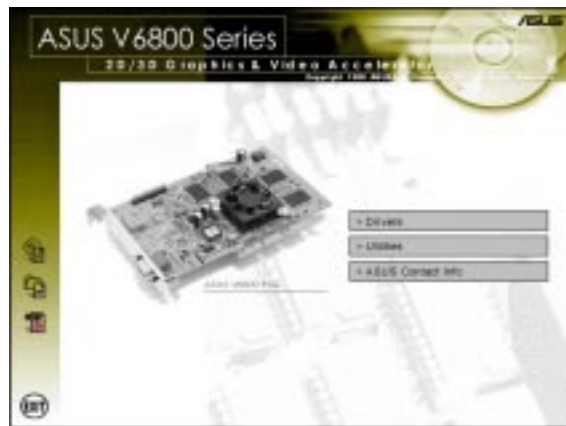
Utilities

Install ASUS Live Utility

The ASUS Live utility lets you view and capture video images from the card's video input port.

> **NOTE:** Make sure that you have an ASUS graphics card with VIDEO-IN connector before attempting to install the utility.

1. Insert the CD installation disc into your CD-ROM drive or double click the CD drive icon in My Computer to bring up the autorun screen or run **Setup.exe** in the root directory of your CD-ROM drive.

   Click **Utilities**.

2. The **Utilities** box appears. Click **Install ASUS Live Utility**.

3. When the **Welcome** box appears, click **Next** to start copying the files. Setup automatically starts copying the necessary files to the default folder.

   To complete the installation, simply follow the on-screen instructions or prompts.

III. Windows 95/98

Install Acrobat Reader

Acrobat Reader is necessary for reading the PDF copy of this manual.

1. Insert the CD installation disc into your CD-ROM drive or double click the CD drive icon in My Computer to bring up the autorun screen or run **Setup.exe** in the root directory of your CD-ROM drive.

   Click **Utilities**.

2. The **Utilities** box appears. Click **Install Acrobat Reader**.

3. When the **Acrobat Reader x.x Setup** box appears, click **Next**.

   To complete the installation, simply follow the on-screen instructions or prompts.

III. Windows 95/98

Install SmartDoctor

SmartDoctor is a utility that monitors the card's graphic chip state, alerting users about abnormal events, such as a fan malfunction or chip overheat. Likewise, the utility "cools" down the graphic chip temperature when it is idle or returns it to its maximum capability when necessary.

1. Insert the CD installation disc into your CD-ROM drive or double click the CD drive icon in My Computer to bring up the autorun screen or run **Setup.exe** in the root directory of your CD-ROM drive.

    Click **Utilities**.

2. The **Utilities** box appears. Click **Install SmartDoctor**.

    NOTE: If your graphics card is not equipped with a monitor IC, an error message warns you that monitor IC was not detected. The installation will abort. **SmartDoctor** works only with cards with a monitor IC.

3. When the **Welcome** box appears, click **Next** to start the installation.

    To complete the installation, simply follow the on-screen instructions or prompts.

III. Windows 95/98

Install VideoSecurity

VideoSecurity is a powerful video stream comparison and detection utility that helps in detecting potential errors or intrusions at a specific time interval by using a video capture device, such as a digital camera.

1. Insert the CD installation disc into your CD-ROM drive or double click the CD drive icon in My Computer to bring up the autorun screen or run **Setup.exe** in the root directory of your CD-ROM drive.
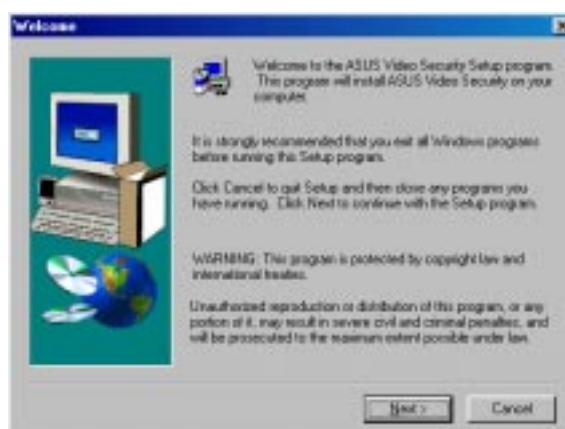
   Click **Utilities**.

2. The **Utilities** box appears. Click **Install VideoSecurity**.

3. When the **Welcome** box appears, click **Next** to start the installation.

   To complete the installation, simply follow the on-screen instructions or prompts.

III. Windows 95/98

Install ASUS Tweak Utility

The ASUS Tweak Utility lets you control the core clock speed and the memory interface speed of your graphics card.

WARNING! Use this option with caution. Using this inappropriately may damage your card and cause your system to be unstable.

1. Insert the CD installation disc into your CD-ROM drive or double click the CD drive icon in My Computer to bring up the autorun screen or run **Setup.exe** in the root directory of your CD-ROM drive.

   Click **Utilities**.

2. The **Utilities** box appears. Click **Install ASUS Tweak Utility**

3. When the **Welcome** box appears, click **Next**.

   To complete the installation, simply follow the on-screen instructions or prompts.

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Using the Utilities

ASUS TWAIN Interface

TWAIN is a cross-platform interface for acquiring images captured by scanners, digital cameras, and frame grabbers. The ASUS TWAIN Driver is currently supported only when used with Adobe Photoshop® (see www.adobe.com for details). If you already have Photoshop installed and you chose to install the ASUS TWAIN Driver, you can use Photoshop to import a still image using the ASUS TWAIN interface installed.

NOTE: The following steps assume that you are already running Photoshop and that you have already connected a compatible and working capture device, such as a web cam, to your system.

Using the ASUS TWAIN Interface for the First Time

1. From the **File** menu, click **Import** and then **Select TWAIN_32 Source** to specify the capture option.

   Select **ASUS Frame Capture Source**.

NOTE: You do not need to repeat this step for subsequent uses of the ASUS TWAIN module. If more than one TWAIN device is installed in your system and you want to switch devices, use **Select TWAIN_32 Source** command.
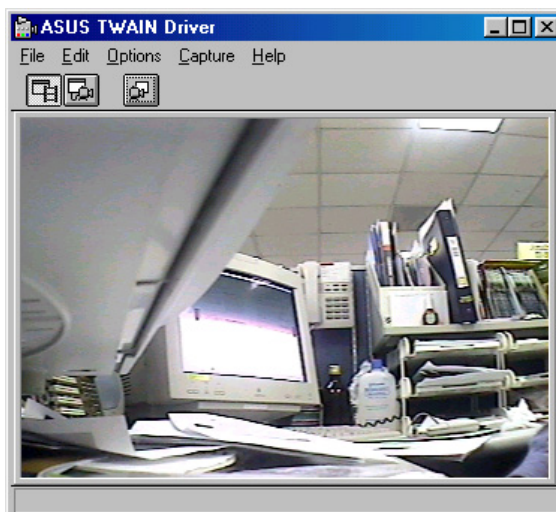
Importing an Image Using the ASUS TWAIN Interface

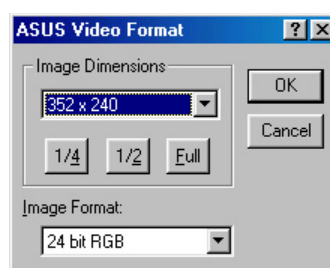1. From the **File** menu, click **Import** and then **TWAIN_32**.

2. When the ASUS TWAIN Driver util-
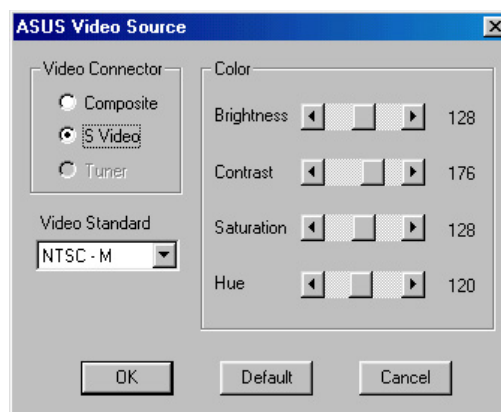ity appears, click **Options** and then
Video Format.

3. In the **Image Format** list of the
ASUS Video Format dialog box,
click **24 bit RGB**.

4. Click **Options** and then **Video For-
mat** to select your video source. If
desired or necessary, you may adjust
the **Brightness**, **Contrast**, **Satura-
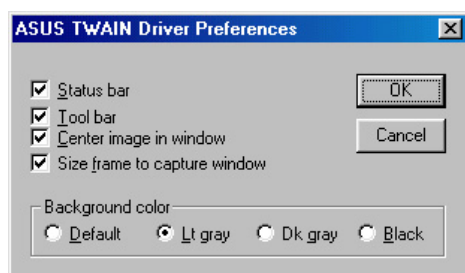tion**, and **Hue** of your image.

You are now ready to capture.

5. To capture, click the capture button 📷 or click the **Capture** menu and then
Single Frame.

Other Options

Preferences Menu: Click to adjust the
background color of your image and
other options.

🖼 **Toggle preview video:** Click button
or click the **Options** menu and then **Pre-
view** to toggle between the preview video
options. A pressed button (or a checked
Preview command) indicates that the pre-
view is on and vice-versa.

🖼 **Toggle overlay video:** Click button
or click the **Options** menu and then **Over-
lay** to toggle between the overlay video op-
tions. A pressed button (or a checked **over-
lay** command) indicates that the overlay
preview is on and vice-versa.

III. Windows 95/98

ASUS Live Utility

> **NOTE:** The ASUS Live utility can only be used with the Deluxe model.

It can be used to:

1. View images using your monitor as screen from traditional consumer devices, such as videocassette players, camcorders, digital cameras, and laser disc players through the onboard RCA or SVHS VIDEO-IN connectors.

2. Capture live motion video up to 30 frames/second (minimum system requirement: Pentium II/266).

3. Play any *.AVI file.

> **NOTE:** You should already have installed DirectX 7 or higher to use ASUS Live (*see* **III. Windows 95/98 Install DirectX**)

To run the utility, click **Start** and point to **Programs** and then **ASUS Live** and then click **ASUS Live**.

You may also run ASUS Live by clicking or right-clicking the ASUS Control Panel icon (*see* **III. Windows 95/98 ASUS Control Panel**) on the taskbar's status area to display the ASUS Control Panel, pointing to **ASUS Live Video**, and then clicking it.

To uninstall the software, click **Start** and point to **Programs** and then **ASUS Live** and then click **Uninstall**. You may also uninstall the software using the **Add/Remove Programs Properties** dialog box at the **Windows Setup** tab. *See* Windows online help for more information on removing a Windows component.

ASUS Main Panel
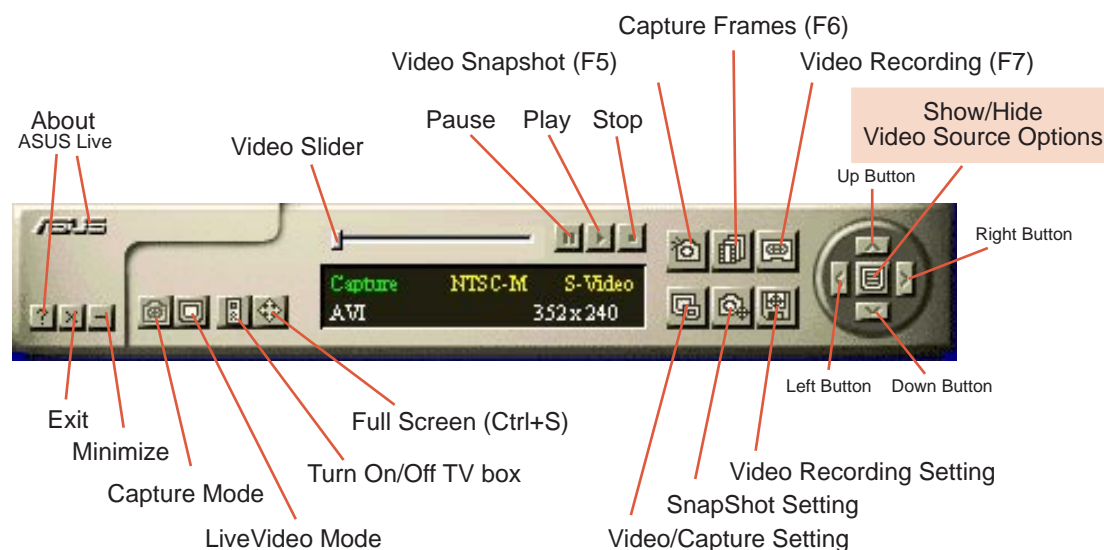
Always On Top

The **Always On Top** option is provided for users who may wish to continue watching VCD/DVD/TV programs while doing other tasks, such as when downloading files from the Internet or word process-ing. To keep your display screen al-ways on top of other programs, right-click the display screen and then click the **Always On Top** button. Position the screen where it will not interfere with your other tasks.
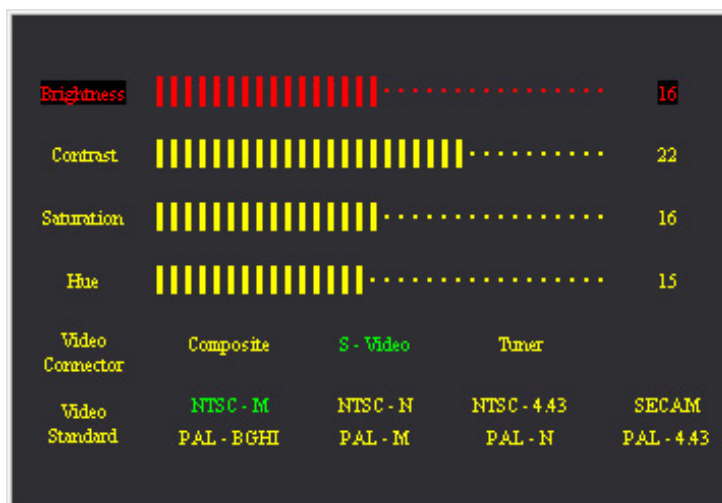

Click **Minimize** to shrink the ASUS Main Panel to the taskbar when viewing

Display screen

Show/Hide Video Source Option

When first using ASUS Live, you must set up the video source. By clicking the **Show/Hide Video Source Options** button on the ASUS Main Panel, you can show or hide the video source setup screen.

Use the Up or Down Buttons on the ASUS Main Panel or the UP and DOWN arrow keys on your keyboard to select Video Connector and then the Left and Right But-tons or the LEFT and RIGHT arrow keys to set your video connection (*Composite*, *S-Video*, or *Tuner*) or video standard (*NTSC-M*, *NTSC-N*, *NTSC-4.43*, *PAL-BGHI*, *PAL-M*, *PAL-N*, *PAL-4.43* or *SECAM*).

NOTE: Users with the PAL D/K models should select PAL-BGHI for the Video Standard.

If desired, you may adjust the Brightness, Contrast, Saturation, and Hue of your display by using the video source setup screen. Use the Up or Down Buttons on the ASUS Main Panel or the UP and DOWN arrow keys on your keyboard to select the desired option and then the Left and Right Buttons or the LEFT and RIGHT arrow keys to make the desired adjustments.

Click again the **Show/Hide Video Source Options** button on the ASUS Main Panel to exit from the video source option screen.

Video Capture

IMPORTANT: It is the intent of ASUS that this product be used in full compliance with the copyright laws of your respective and other countries and that prior permission be obtained from copyright owners whenever necessary.

When you install the Windows 95/98 Driver of your ASUS graphics card (only models with the VIDEO-IN connector), 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 704 x 480**. It can be used with some applications that use video capture as an option, such as video conferencing, net meeting, or digital video authoring applications.

IMPORTANT: You must enable the DMA transfer mode of your hard disk (EIDE HD) to get the maximum data transfer capability (**704 x 480, 30 frames/second**) during the video capture process. Otherwise, your system may become unstable.

Enabling DMA Transfer Mode

NOTE: The **How to Get Maximum Capture Performance** dialog box will tell you how to enable your hard disk's DMA transfer mode to get the best capture performance. Simply follow the on-screen instructions to enable DMA mode. Otherwise, do the following:

1. Click **Start**, point to **Settings**, and then click **Control Panel**.

2. Double-click the **System** icon. The **System Properties** dialog box appears.

3. Click the **Device Manager** tab and then click the plus sign next to **Disk drives**, and then double-click your hard disk. The hard disk's **Properties** box appears.

4. Click the **Settings** tab and then select the **DMA** check box under **Options**.
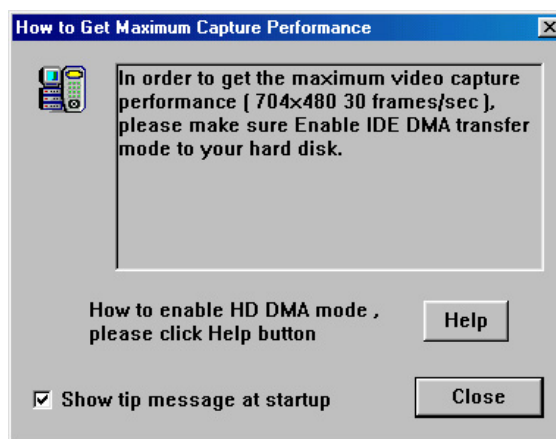
III. Windows 95/98

Capturing Images

You must be in capture mode to capture images. To do this, click the **Capture Mode** button on the ASUS Main Panel.

> **NOTE:** ASUS Live will automatically detect and warn you if the capture driver installed in your system is not compatible with ASUS Live.

Video/Capture Setting

1. Click **Video/Capture Setting** to adjust the basic video capture settings, such as **Capture Image DImension and Format**, **Capture CODEC selection**, and **Capture Audio Format and Attribute**.
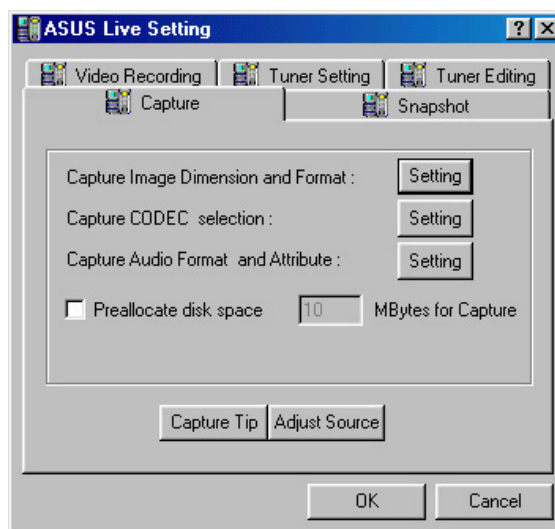
Under **Capture Image Dimension and Format**, select the **Image Dimension** and **Image Format** setting of your choice.

Under **Capture CODEC selection**, select the video compression of your choice for your captures.

Under **Capture Audio Format and Attribute**, select the **Audio Format** and **Audio Attribute** setting of your choice. This setting depends on whether you have audio set on your system.

Preallocate disk space: If you have limited space on your hard disk, you may want to limit the capture file size to a certain size. To do this, click **Preallocate disk space** and enter the desired maximum file size.

Capture Tip: See **Enabling DMA Transfer Mode**

Adjust Source: This lets you select the video connection and video standard to be used in the capture. It also lets you adjust the *Brightness*, *Contrast*, *Saturation*, and *Hue* of your images.
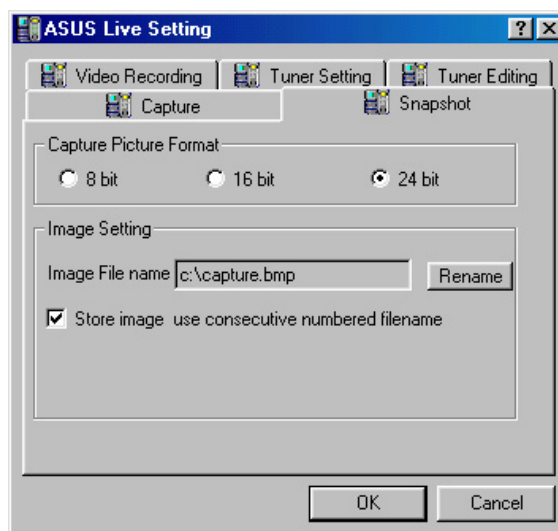
You are now ready to capture video images.

III. Windows 95/98

SnapShot Setting

1. Click **SnapShot Setting** to select your **Capture Picture Format** (*default*: 24 bit), **Image Setting** and other settings.

   Under **Image Setting**, you may set the desired **Image File name** and path (*default*: C:\CAPTURE.BMP) and for the filename to be consecutively numbered (**Store image use consecutive numbered filename**).

You are now ready to capture video images.

Video Recording Setting

1. Click **Video Recording Setting** to select the video recording settings, such as the **Frame Rate (fps)** (*default*: 30), **Maximum Capture Time** (*default*: 10 *seconds*) and **File name** and path (*default*: C:\CAPTURE.AVI).
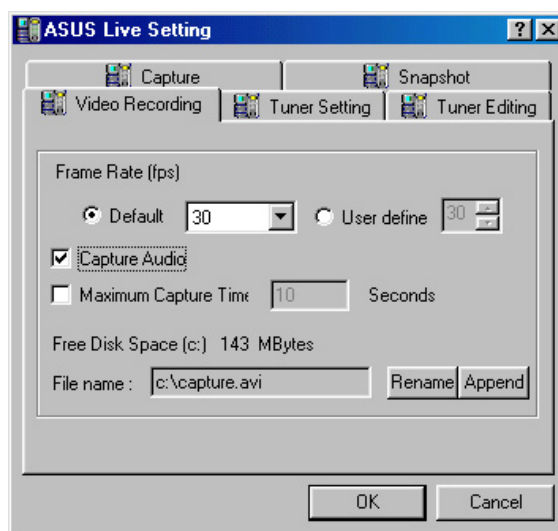
You are now ready to capture video images.

III. Windows 95/98

Video Snapshot (F5)

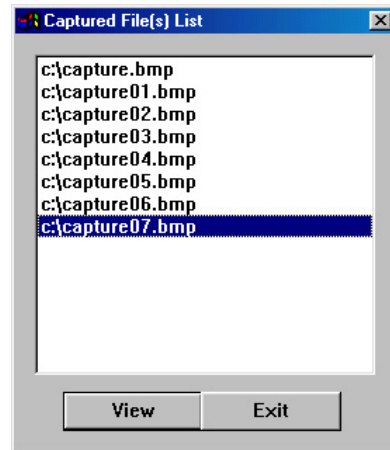**Video Snapshot** lets you capture video stream data as single images and then show these images on your desktop almost simultaneously through the image viewer you selected. It supports any plug-in picture viewers or image processing programs (*see* Step 3 in **Capturing Images**) to view the captured images.

To begin capturing, do the following:

1. Click the **Video Snapshot (F5)** button on the ASUS Main Panel or press the F5 key to capture the desired image on ASUS Live's display screen. The screen will freeze momentarily and the captured image (saved as a BMP file, using consecutive numbers) will be listed in the **Captured File(s) List** dialog box.

    You may click **View** to view a selected captured image.

2. Repeat Step 1 as necessary.

Capture Frames (F6)

Capture Frames lets you capture video stream data as consecutive images and then show these images on your desktop through your default movie player. **Capture Frames** is useful in animation.

To begin capturing, do the following:

1. Click the **Capture Frames (F6)** button on the ASUS Main Panel or press the F6 key to open the **Capture Frames** box.

2. Click **Capture** to begin capturing the desired frame or frames on ASUS Live's display screen and then click **Done** when finished. The initial frame of the captured video (saved as an AVI file) will immediately be displayed on your movie player.

3. Click the PLAY button of your player to view the captured video.

Video Recording (F7)

Video Recording lets you capture video stream data continuously and then show these images on your desktop through your default movie player.

To begin capturing, do the following:

1. Click the **Video Recording (F7)** button on the ASUS Main Panel or press the F7 key.

2. Follow the on-screen instructions to begin and then stop recording.

ASUS SmartDoctor

ASUS SmartDoctor is designed to satisfy two major goals. One is to monitor the graphic chip status, alerting users about abnormal events, such as fan malfunction or chip overheat. The other, as the name "SmartDoctor" implies, is to "cool" down the graphic chip smartly when it is not necessary for it to be kept running at full speed.

Functions
• Monitors graphic chip temperature, fan speed and voltage
• Notifies users about irregular hardware events, such as temperature overheat, fan malfunction, and out-of-safe-range voltage.
• Forcibly cools down the graphic chip when the graphic chip's temperature is over an acceptable temperature, to protect the graphic chip from overheat damage.
• Cools down the graphic chip's temperature when it is idle, and restores it to its maximum capability once needed, thus smartly extending the graphic chip's lifetime.
• Cools down the CPU's temperature (for Windows 95/98/98 Second Edition only) to lengthen CPU lifetime.
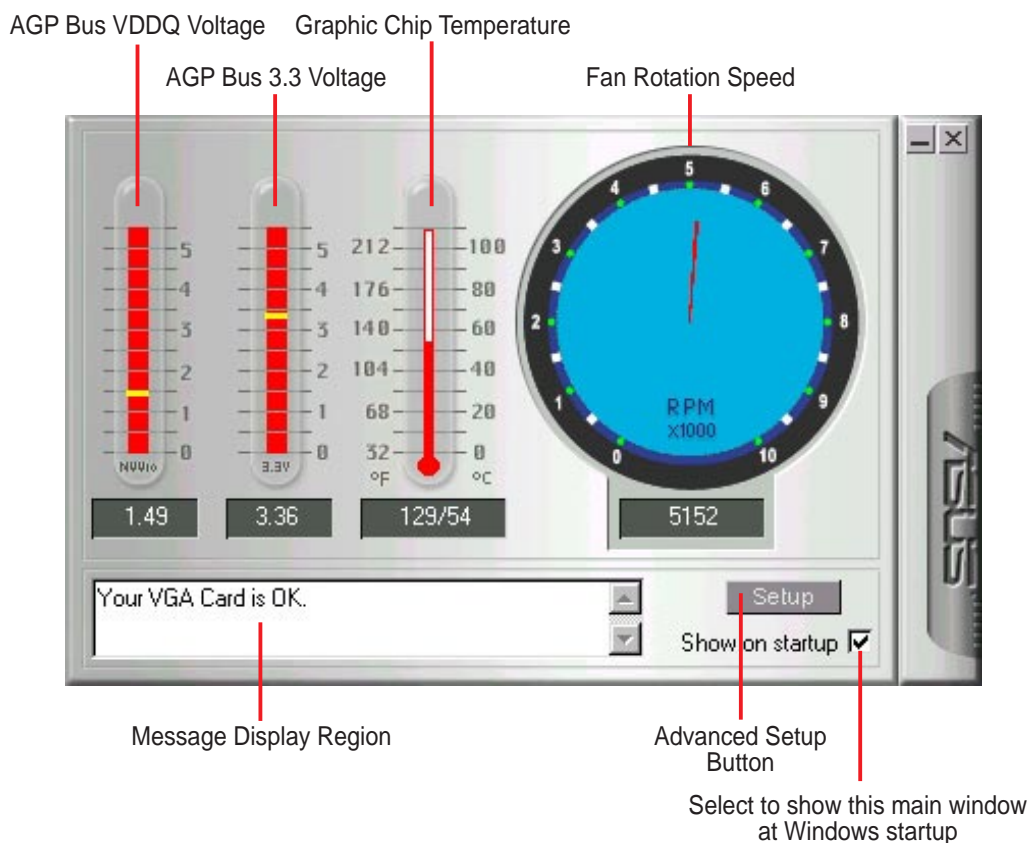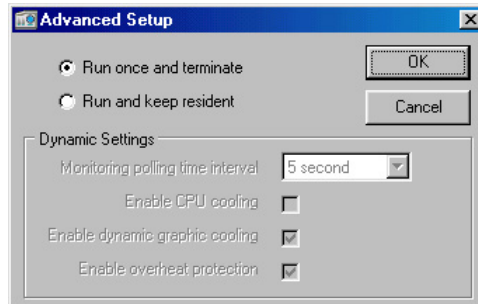

NOTE: AGP bus VDDQ Voltage and AGP bus 3.3 Voltage should be supplied steadily by your motherboard, otherwise, your system will crash.

Advanced Setup

When you click the **Setup** button, the **Advanced Setup** dialog box appears.

The default setting of SmartDoctor is **Run once and terminate**, which means that SmartDoctor will run every time Windows starts and checks the graphic card's status.

If your graphics card is working properly, SmartDoctor will just exit or terminate in 5 seconds.

If you want SmartDoctor to continue running in the background and to monitor your graphic card's status, select **Run and keep resident**.

Dynamic Settings will become available when you select **Run and keep resident**.

- **Monitoring polling time interval** lets you specify the time intervals that SmartDoctor will take to check the graphic chip. The default setting is 5 seconds. You can choose a longer time interval value. SmartDoctor, however, will be less sensitive to graphic chip condition changes.

- **Enable CPU cooling** allows you to enable or disable the CPU cooling option. Enabling CPU cooling option will cool down the CPU's temperature when SmartDoctor detects that CPU is idle. The CPU's temperature will then drop.

  NOTE: If you have already installed any CPU cooling software in your system, you should just choose only one. Running more than one CPU cooling software at the same time is redundant.

  After CPU cooling is enabled, and when you run **System Monitor** in *Programs– Accessories–System Tools* to monitor CPU usage, you will find that CPU usage has reached its maximum, that is, 100%. Do not be alarmed—this is normal.

- **Enable dynamic graphic cooling** allows you to enable or disable the dynamic graphic cooling option. Enabling the graphic cooling option will cool down the graphic chip's temperature when SmartDoctor detects that the graphic chip is idle.

- **Enable overheat protection** lets you forcibly cool down the graphic chip when temperature is over the tolerable range or value.

When you select **Run and keep resident** and then click **OK**, a dialog box appears to warn you of a possible graphic performance drop. This performance penalty is very slight and almost undetectable even under rigorous examination by bench-mark programs.

Press **OK** to set your modifications or **Cancel** to retain the original settings

Abnormal Events

When SmartDoctor senses that something is wrong with your card's graphic chip, the message display region will display a detailed description of the error or trouble. The component in question will also have a flashing red value. If you enabled over-heat protection in **Advanced Setup** dialog, SmartDoctor will cool down the graphic chip in time to protect it from possible overheat damage.
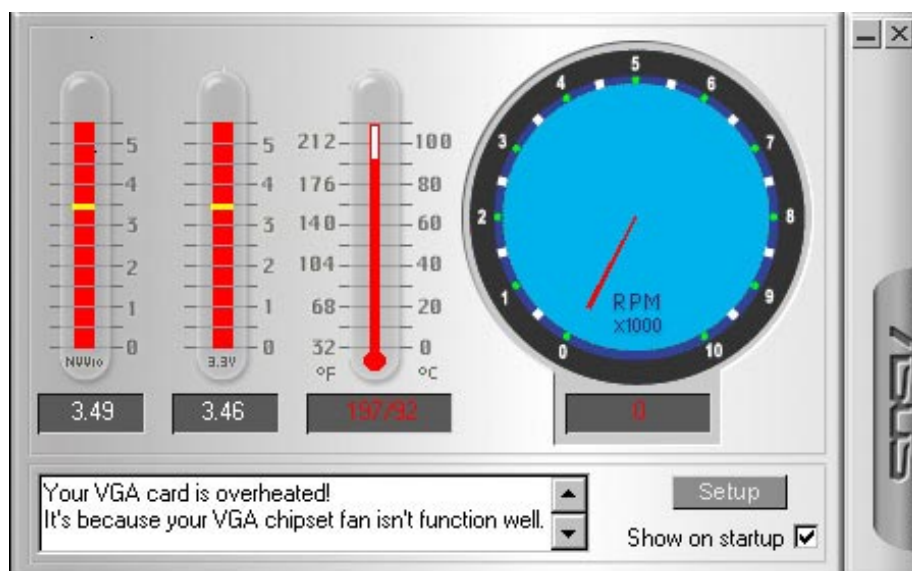
ASUS VideoSecurity

NOTE: The ASUS VideoSecurity utility can only be used with the Deluxe model.

ASUS VideoSecurity lets you detect intruders into your system and environmental changes and monitor a specified location or any incoming visitor. If VideoSecurity detects any deviation from the norm that you set, it may give an error message or not. Regardless of any messages, VideoSecurity will record:

• Any information about the monitored activity and then store these to an event log file. If you have already installed Microsoft Access 97 or later, you may use these event log data and export it as an Access database for further data management and processing.
• The last two detected snapshot image files from the video captured stream (stored as bitmap format). Any image processing or editing software can then be used to view, modify, or distribute them.

Limitations
Because of differences in hardware sensitivity, VideoSecurity may not completely detect all possible errors. Before you execute VideoSecurity, there are some limitations you have to understand so that you can appropriately use it.

• Due to changing temperatures, the captured image of some CCDs will be twisted, which may give a wrong detection.
• If the features (e.g., color, luminance) of the object are similar to that of background, the object may not be detected clearly.
• The CCD cannot capture the object smoothly and immediately when an object moves too fast.

VideoSecurity is designed for the widest environments possible and error conditions, therefore it is necessary to tune the parameters in VideoSecurity Setup Wizard to get the best detection results.

Setup Wizard
Setup Wizard guides you through setting up the VideoSecurity features.

1. To open Setup Wizard, click the **Start** button, and then point to **Programs**, **ASUS Video Security**, and then click **Setup Wizard**. The **Video Security Setup Wizard** dialog box appears.

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NOTE: The following descriptions are only for selected features of the ASUS VideoSecurity utility. For a full description of the features described in this manual and other features, refer to the ASUS VideoSecurity Online Help (HTML) format included with your support CD. You may also click the **Help** button to open the online help file.

Main Window

VideoSecurity Running Style

• **Normal Window** is the default style, that is, VideoSecurity will function as a standard Windows program.

• **Always on Top** is like a Normal Window except that the main window and control panel is shown always on top of other programs or utilities. You may right click to enable or disable this function at the main window anytime.

• **Minimize on Tray** lets you hide the main VideoSecurity window. This is useful when you don't want anyone to know you are monitoring. When this option is selected, the VideoSecurity icon will appear on the taskbar in the lower-right corner of your screen. Whenever VideoSecurity detects a problem, it will run. You may also run VideoSecurity by clicking the icon.

VideoSecurity Working Directory

The **VideoSecurity Working Directory** is the folder where the utility stores its temporary working and log files. Default is C:\VIDEOSEC. The directory is user-configurable. When VideoSecurity is ran, a sub-directory will automatically be created under the main directory, using the current date and time as the folder name, for example, "1999.11.30_12.30.20" means that VideoSecurity was started on 30 November 1999 at 12:30:20 PM.

IMPORTANT: Do not change the working folder's name while VideoSecurity is running. Otherwise, a fatal runtime error will occur.

VideoSecurity Detecting Region

Detects all visible area when watchdog function is on

Detects only the area defined by the user when watchdog function is on. Feature will take effect only when VideoSecurity runs the next time

This sets the scan rate. Default is *2 frames*/sec. The higher the scan rate, the more accurate is the detection. Higher rates, however, entails a higher CPU usage. Do not use a high rate when you plan to use VideoSecurity while using other applications.

Sensibility

Currently, only one option is available to set the image format

This is an important parameter when setting up VideoSecurity. Your environment may change often but VideoSecurity is concerned only when there is a change in the environment. Make sure that you select a suitable sensitivity for your environment.

Define Tracing Procedure

VideoSecurity not only detects errors or problems in your card but also monitors or detects an intrusion.

Use this to stop tracing or to choose the error processing method to use while tracing. This box appears when an error occurs.
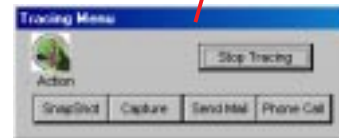
Error Processing Procedure

Stop Detecting Setting

Running ASUS VideoSecurity

Main Control Panel

Click to start
detecting

Click to open the VideoSecurity
Setting dialog box

Starts the Setup
Wizard

Lets you define a
region with which
VideoSecurity will
monitor for errors or
intrusion.

Lets you adjust the
video source
parameters, such as
Color, **Video
Connector**, and
Video Standard

Shortcut Keys

ESC   Exit VideoSecurity

F1   Open Online help

F2   Toggle VideoSecurity / Stop Watchdog function

F3   Open Setup menu

F4   Show error log box

III. Windows 95/98

ASUS Tweak Utility

> **WARNING!** Use the ASUS Tweak Utility with extreme caution and only if you are well acquainted with your display card. Using this inappropriately may damage your card, its components, and your system.

To run the ASUS Tweak Utility, click **Start** and point to **Programs**, **Asus**, **Tweaking Utilities**, and then click **Tweak**.

Timing Adjustment

Timing Adjustment lets you adjust the working frequency of the graphic engine and video memory.

Graphics Speed

Engine
Lets you adjust the working frequency of the graphic engine

Memory
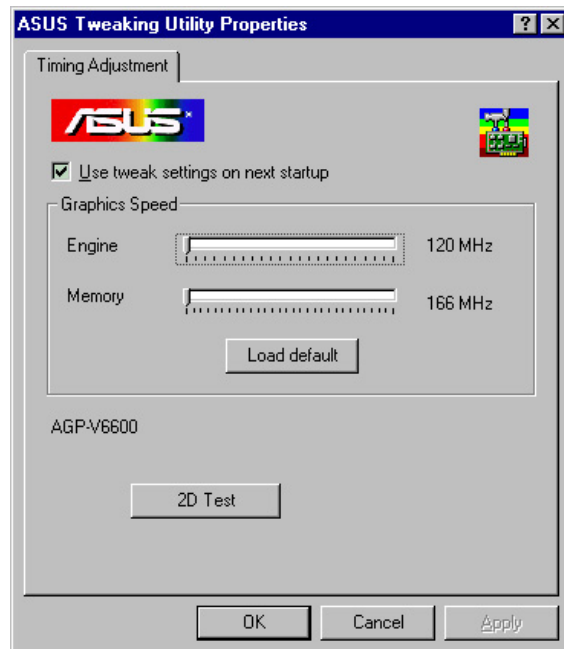Lets you adjust the working frequency of the video memory.

Default
Restores the settings to their defaults.

Test settings
Lets you test your settings.

Use tweak settings on next startup
Selecting this allows you to use your settings when Windows starts.

III. Windows 95/98

Tweak Safe Mode Recovery

Timing Adjustment (Safe Mode) lets you restore the working frequency of the graphic engine and video memory to their factory default settings. This mode is used when you encounter problems when starting or restarting Windows using your customized tweak settings.

Using Tweak Safe Mode Recovery

1. Restart Windows in safe mode. To start Windows in safe mode, hold the F8 key until the Windows Startup Menu appears. For some machines and Windows 98, you can use CTRL to bring up the Startup Menu. Enter the number for **Safe mode** and then press ENTER.

2. In Windows, click **Start** and point to **Programs**, **Asus**, **Tweaking Utilities**, and then click **Tweak Safe Mode Recovery**.

3. The **ASUS Tweak Safe Mode Properties** box appears. Click the appropriate settings.

Timing Adjustment (Safe Mode)

Select the **Clear tweak settings and use factory default** box to change back the timing adjustment settings to their factory defaults and then click **OK** to restart Windows properly.
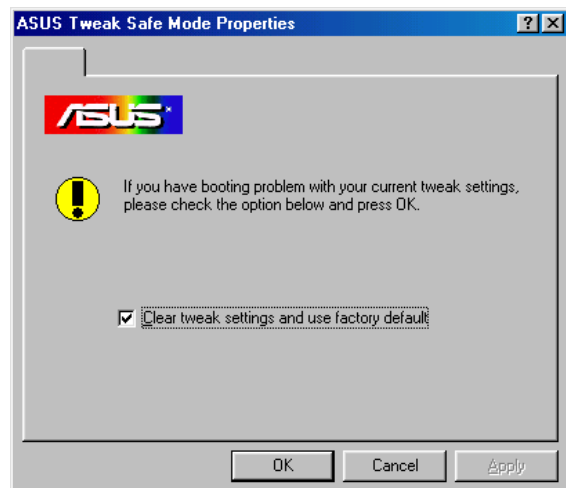
ASUS Control Panel

After installation of the display drivers, you will find an ASUS icon on the taskbar's status area. Clicking or right-clicking this icon opens the ASUS Control Panel, showing a menu composed of shortcuts of the graphics board's enhanced and other functions.

NOTE: Instead of clicking the ASUS Control Panel icon, you may right-click the Windows95/98 desktop, click **Properties**, and then click **Settings**. Under Windows98, click **Advanced** after clicking **Settings**. Click the appropriate tab to change your display settings.

ASUS Control Panel icon

Refresh Rate

Refresh Rate lets you change the refresh rate of your current screen resolution.

WARNING! Be sure that the refresh rate that you select is supported by your monitor. Selecting a refresh rate that is beyond your monitor's specification may damage it. **Press ESC to restore your original settings in case of problems.**

1. Click/right-click the ASUS Control Panel icon, point to **Refresh Rate**, and then click the desired refresh rate.
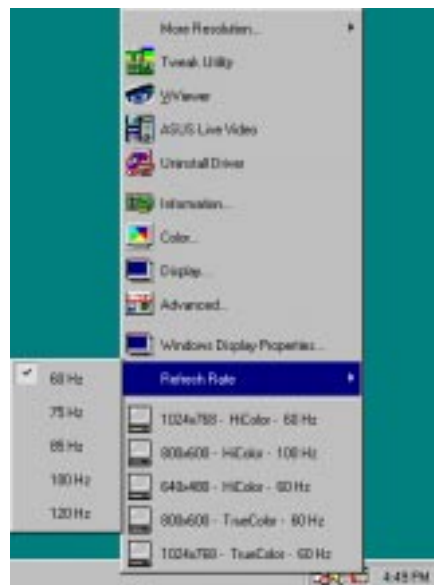
2. The system will prompt you whether you want to keep the setting you just selected. Click **OK** to keep the setting, otherwise, click **Cancel** or press ESC.
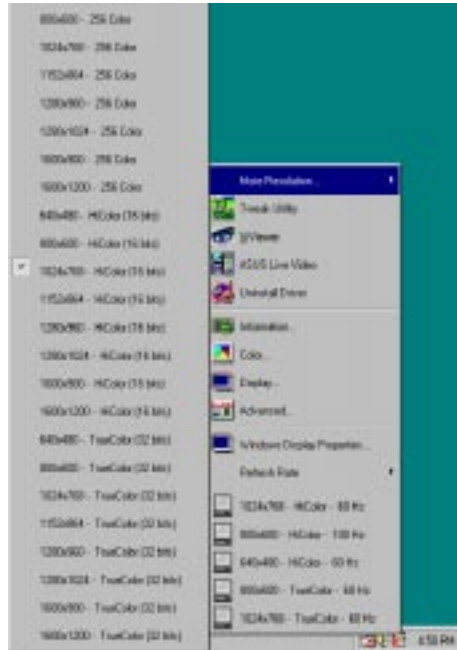
III. Windows 95/98

More Resolution

More Resolution lets you change the screen resolution of your monitor.

1. Click/right-click the ASUS Control Panel icon, point to **More Resolution**, and then click the desired screen resolution. The system will automatically set the resolution selected without restarting your computer.

WINDOWS95 USERS: You will be prompted to restart your computer if you select a screen resolution with a different color depth, for example, from 800x600 HiColor to 800x600 TrueColor. Click **OK** to restart your computer to make the change.

 ## Information

Information lists the relevant information about your card. Aside from this, it has links to the ASUSTeK COMPUTER, INC. web site for updated information about the graphics board, latest drivers, and other information.

III. Windows 95/98

 Color

Color allows you to make color adjustments, such as brightness, contrast, and gamma values for each or all of the RGB colors. These adjustments can be made for Desktop, D3D/Game, and Video. The color settings of Desktop and D3D/Game are not adjustable under 8-bit colr depth.

Desktop

Desktop lets you adjust the color of your Windows 95/98 desktop.

D3D/Game

D3D/Game lets you make your favorite color settings for D3D games.
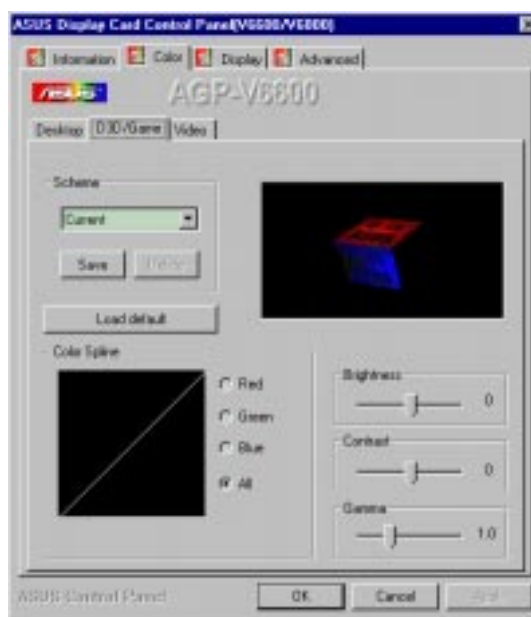
Video

Video lets you make your favorite color settings for videos.

General Functions

Brightness / Contrast / Gamma

Brightness / **Contrast** / **Gamma** sliders let you calibrate the brightness, contrast, and gamma output of your display card.

Desktop

Changes to your color settings are shown immediately on your monitor. You may change the preview picture by clicking **Load** from the **Desktop** box.

D3D/Game

Changes to your color settings are shown immediately on your monitor.

Dragging a slider to the left decreases the level and to the right increases it. The number at the right of each slider displays the brightness (value range: -128 to +128, default: 0), contrast (-30 to 30, default: 0), or gamma value (0.2 to 3.0, default: 1.0).

Brightness / Contrast / Hue / Saturation

Brightness / Contrast / Hue / **Saturation** sliders let you calibrate the brightness, contrast, hue, and saturation output of your display card.

Video

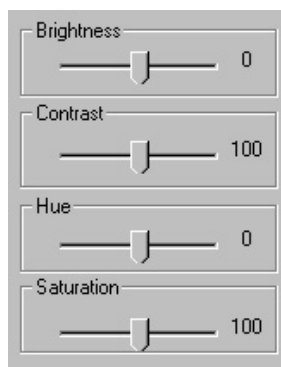Changes to your settings can be viewed on the displayed picture (shown as race horses).

Dragging a slider to the left decreases the level and to the right increases it. The number at the right of each slider displays the brightness (value range: -100 to 100, default: 0), contrast (0 to 200, default: 100), hue (-180 to 180, default: 0), or saturation value (0 to 200, default: 100).

Color Spline

Color Spline shows how each (R, G, or B) or all channels are distributed when you move the Brightness, Contrast, or Gamma slider to make your adjustments. You can adjust all channels at once (**All**) or individual channels (**R**, **G**, or **B**).
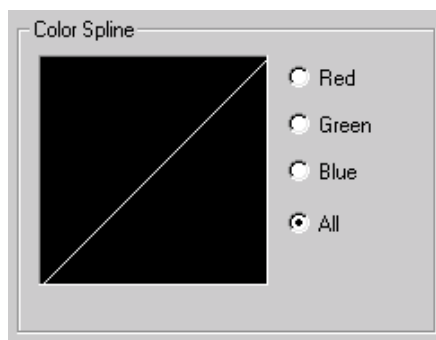
Scheme

Scheme lists schemes that you can use to change the appearance of many screen elements simultaneously. You can use existing schemes, or create and save your own scheme by saving your current settings, or delete unwanted schemes. You may want to save a scheme that you created for some special situations, such as when you want to use the same settings when playing a certain game or a movie.
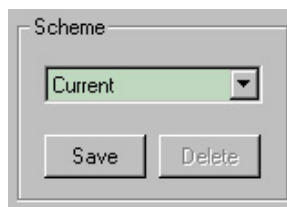
III. Windows 95/98
Color

Important Notes

D3D/Game

The color settings of **D3D/Game** take effect only when you are playing a **full-screen** DirectDraw/Direct3D game.

Video

Only one overlay is allowed at a time with the ASUS AGP-V6800. That is, when you click *Video* first and then run your favorite video player, you can only see the adjustments you made to the settings in the preview window because the video player cannot use the hardware acceleration function (overlay). On the other hand, if you run your video player first before opening *Video*, the preview window will show a warning message. The message may also appear when you click *Video* and the dialog box is on the wrong monitor in a Windows 98 multiple display environment.

Display

Display lets you make monitor adjustments, such as position, size, and refresh rate.

> **WARNING!** Adjusting position or size, especially refresh rate is a highly danger-
> ous operation. Selecting a value that is beyond your monitor's specification may
> damage it. **Press ESC to restore your original settings in case of problems.**

VGA

Adjustment
  Position sets the screen position
  Size sets the screen size

Synchronization
Adjusts the synchronization polarity settings

Change current refresh rate
Displays the **Change current refresh rate** box to
let you customize a new refresh rate.

To change the current refresh rate

1. Click **Change current refresh rate**.

2. In the **Refresh rate** list under
   Change current refresh rate, click
   the nearest default refresh rate and
   then adjust the **Edit refresh rate**
   slider to the rate you want, click **Test**
   and then click **YES** when prompted
   to add the new refresh rate into the
   list. Otherwise, the original refresh
   rate will be restored.
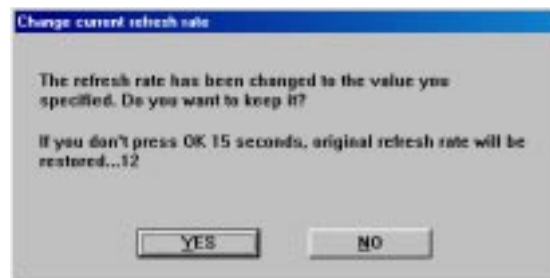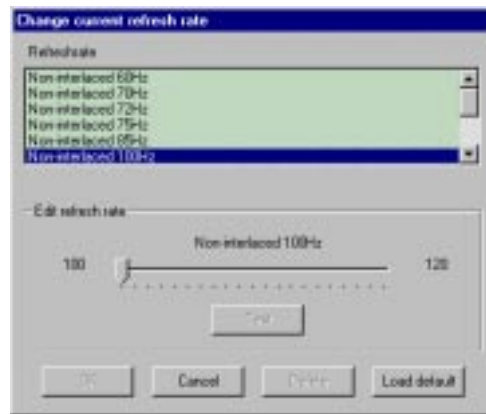
Load default
Restores the settings to their defaults.

Change refresh rate

Displays the **Change refresh rate** box to let you change the refresh rate of any screen resolution.

GDI

GDI lets you change the refresh rate of the Windows desktop.

To change the refresh rate

1. Click **Change refresh rate**.

2. In the **Refresh Rate** list under the **GDI** tab, select the refresh rate you want to use. A **Test** button appears to let you test the selected refresh rate and resolution combination. Click **YES** when prompted whether to keep the new refresh rate. Otherwise, the original refresh rate will be restored.
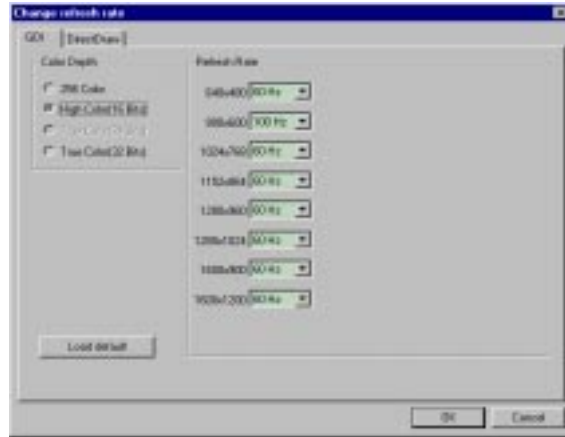
DirectDraw

DirectDraw lets you change the refresh rate of DirectDraw. It is most useful when you are playing a **full-screen** game.

To change the refresh rate

1. Click **Change refresh rate**.

2. In the **Refresh Rate** list under the **DirectDraw** tab, select the refresh rate you want to use.
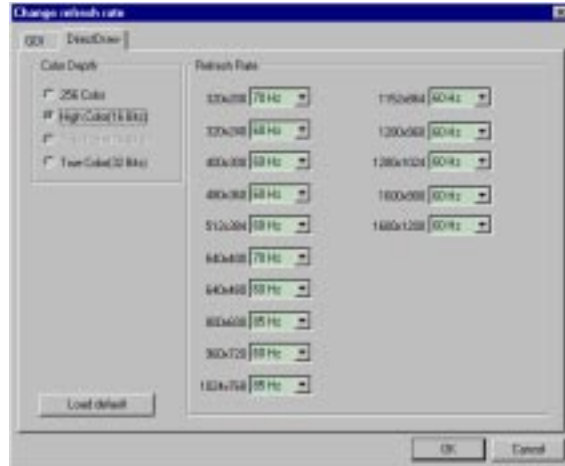
TV

NOTE: This tab is not available with the Pure model.

Position
Sets the screen position.

Standard
Sets the TV signal format, for example, PAL or NTSC.

Output type
Displays the connection status of composite and S-Video.

Scan type
Sets the scan type of the TV display.

Black Level
Sets the brightness of the TV display.

Contrast
Sets the contrast of the TV display.

Flicker Filter
Sets the anti-flicker effect.

III. Windows 95/98
Display

Advanced

Advanced provides some advanced settings for the ASUS VR-100G 3D Glasses (setting is available only with the ASUS Deluxe model or models with the ASUS VR-100 Optional Upgrade Kit) and Direct3D and OpenGL, which are software interfaces for your ASUS V6800 Series graphics cards.

3D/VR

VR Effect

Enable Stereoscopic Mode

When selected, this enables you to use the stereoscopic mode when playing games or watching 3D videos. This mode is available only with the ASUS Deluxe models or models with the ASUS VR-100 Optional Upgrade Kit.

> **NOTE:** You must quit all running DirectDraw/Direct3D applications and then restart them for this option to take effect.

Eyes

Distance between both eyes. Use this when you cannot see viewed objects clearly.

Distance

Distance between foreground objects and eyes. When set to a small value, eye fatigue may occur.

Embossment

The effect to make objects virtually pop out of the screen. When set to a too high value, eye fatigue may occur.

Background / Foreground

Background is the distance between background and eyes while **Foreground** is the distance between foreground and eyes. These two options allow you to adjust the degree of stereoscopic effect. Several current games set their Foreground to 60 and Background to 100.

Blind

Lets you discard or crop the unwanted areas of your display. Setting this to 0 will not discard any of the display area.

Load Default

Restores the settings to their defaults.

Mode

Line Interleave

Select for better compatibility with most monitors. Stereoscopic effect, however, will be poor.

Page Flipping

Select for the best stereoscopic effect. Some monitors, however, may not be able to support this mode.

Refresh Rate

To prevent eye discomfort and fatigue, high refresh rates are preferred. Some monitors, however, may not be able to support a high refresh rate. Make sure that your monitor supports a selected refresh rate, otherwise, system instability may occur.

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IMPORTANT: *Before enabling stereoscopic mode and using your stereoscopic or 3D glasses (ASUS VR-100G),* make sure that your monitor can support the selected refresh rate (interlaced mode) under the following display modes:
   16 bits: 640 x 480, 800 x 600, 960 x 720, 1024 x 768, 1152 x 864
   32 bits: 640 x 480, 800 x 600

WARNING! To prevent discomfort and eye fatigue when using your stereoscopic or 3D glasses, DO NOT try to use your 3D glasses for an extended period of time. Take frequent short breaks to give your muscles and eyes a chance to rest by taking off your 3D glasses and then looking up and focusing on distant objects.

On Screen Display

Enable OSD

When selected, this lets you to adjust onscreen the settings of your 3D glasses and display card when playing games or watching 3D videos. These settings include **Eyes**, **Distance**, **Embossment**, **Background**, **Foreground**, **Blind**, **Brightness**, **Contrast**, and **Gamma**. *See* **III. Windows 95/98 | Advanced** for a description of the 3D glasses settings and **III. Windows 95/98 | Color** for a description of the display settings.

Use the UP or DOWN arrow keys on your keyboard to select a setting that you want to change or adjust and the PLUS or MINUS keys to move or drag the slider.

To restore the settings to their defaults, press the HOME key.

To close the onscreen display, press the END key.

Hotkey

This lets you assign hot keys to enable onscreen display or OSD. To use this function, select **Enable OSD**. You may want to change the default hot key (CTRL + ALT + O) when it conflicts with hot keys of certain games, video players, or Windows programs.

To change the default hot keys

1. With your mouse cursor in the **Hotkey** box, press the hot key combination of your choice (you can only define CTRL + ALT key combinations). Hot keys automatically include CTRL+ALT. Press any valid key (you cannot use ESC, ENTER, TAB, SPACEBAR, PRINT SCREEN, or BACKSPACE) you want to add to this combination. For example, to define the hot key combination CTRL+ALT+D, press D.

NOTE: The hot keys will be available only if you selected the **Enable OSD** check box and if you have either an ASUS Deluxe model or a model with the ASUS VR-100 Optional Upgrade Kit installed.

Direct3D
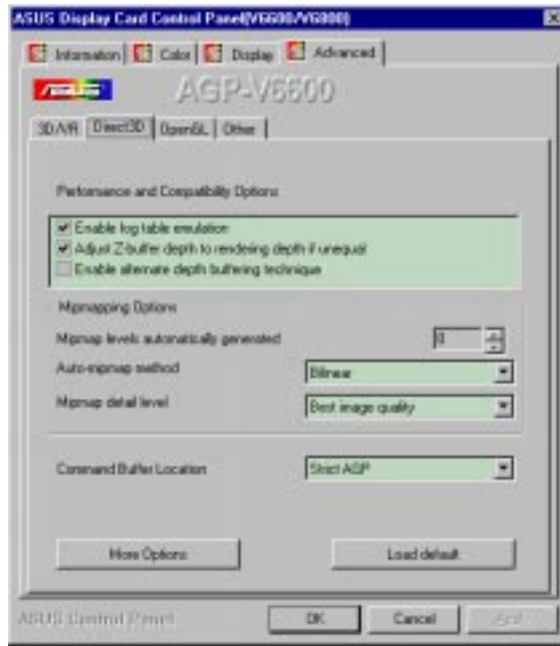
Performance and Compatibility Options
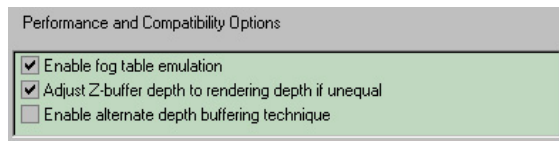
Enable fog table emulation

Some old games do not correctly query the D3D hardware capabilities and expect table fog support. Choosing this option will ensure that such games will run properly.

Adjust Z-buffer depth to rendering depth if unequal

This option forces the hardware to automatically adjust the depth of its Z-buffer to the depth that the application requests. Normally, you will want to keep this option enabled, unless your work absolutely requires a specific Z-buffer depth.

Enable alternate depth buffering technique

This option lets the hardware use a different mechanism for depth buffering in 16-bit applications. Enabling this setting can produce higher quality rendering of 3D images.

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Mipmapping Options
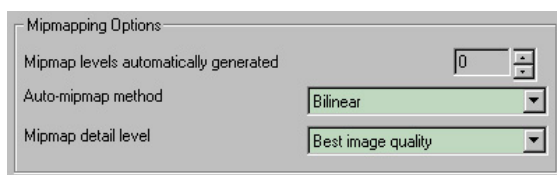
Mipmap levels automatically generated

This option lets the hardware automatically generate mipmaps to increase the efficiency of texture transfers across the bus and provide higher application performance.

Auto-mipmap method

This option lets you choose the auto-mipmap method. Choose bilinear method for a generally improved performance or anisotropic method for a generally higher quality image.

Mipmap detail level

This option lets you adjust the level of detail bias for mipmaps. A lower bias will increase the application performance.

Command Buffer Location

Command Buffer Location lets you choose the location of the command buffer. Default setting is **Strict AGP**.

Strict AGP

This option forces all the command buffer into the AGP memory. Choose for best performance.

PCI

This option forces the command buffer to be created into the PCI memory. If you are experiencing stability problems with your system (especially with some Socket 7 motherboards), choose this option for better compatibility.

PCI with reduced heap

This option forces the command buffer to be created into the PCI memory. This, however, also reduces the AGP heap size by an amount equal to the size of the command buffer. If you are experiencing stability problems with your system (especially with some Socket 7 motherboards), choose this option for best compatibility. Performance is, however, poorer using this option compared with the **PCI** option.

More Options
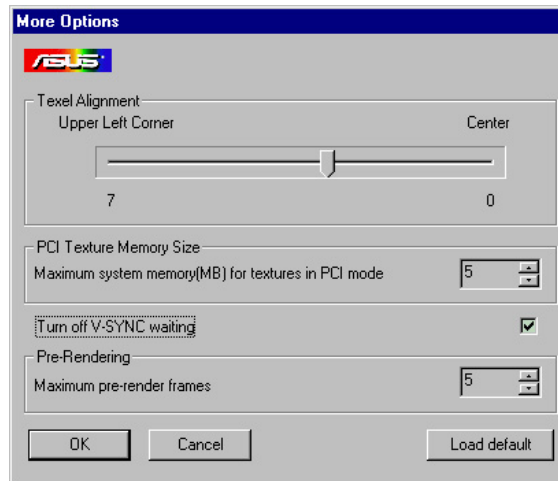
Texel Alignment

Changing these values will change where the texel origin is defined. The default values conform to the Direct3D specifications. Some software may expect the texel origin to be defined elsewhere. The image quality of such applications will improve if the texel origin is redefined.


Dragging the slider to the left positions the texel origin toward the upper left corner and to the right positions it toward the center (range: 0 to 7, default: 3).

PCI Texture Memory Size

NOTE: This setting applies only to PCI display adapters or to AGP display adapters running in PCI compatibility mode.

PCI Texture Memory Size lets you set the amount of system memory for texture storage.
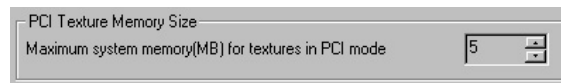
Clicking the up arrow increases the memory size while clicking the down arrow decreases the size of system memory for textures. The maximum amount of system memory for texture storage depends on the physical memory installed on your system.

Turn off V-SYNC waiting

Turn off V-SYNC waiting lets an image to be immediately rendered to the screen without waiting to be synchronized with the vertical retrace of the monitor. This option allows for frame rates higher than the refresh rate of your monitor. This may, however, produce visual artifacts and tearing, resulting in reduced image quality.

Pre-Rendering

Maximum pre-render frames allows you to limit the number of frames the CPU can prepare before they are processed by the graphics chip when vertical sync is turned off. Reduce this value if you experience, while playing games, a noticeable delay in the response of the input devices connected to your computer.

III. Windows 95/98

OpenGL

Performance and Compatibility Options
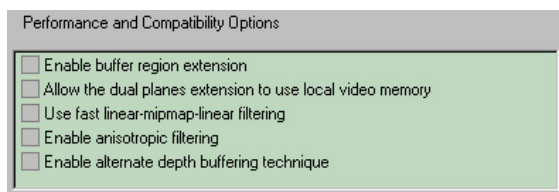
Enable buffer region extension

This option allows the drivers to use the OpenGL extension GL_KTX_buffer_region.

Allow the dual planes extension to use local video memory

This option allows the use of local video memory when the GL_KTX_buffer_region extension is enabled.

Use fast linear-mipmap-linear filtering

This option allows increased application performance at the expense of some image quality loss. In many cases, the loss of image quality may not be noticeable.

Enable anisotropic filtering

This option allows OpenGL to use anisotropic filtering for improved image quality.

Enable alternate depth buffering technique

This option lets the hardware use a different mechanis, for depth buffering in 16-bit applications. Enabling this setting produces higher quality rendering of 3D images.

III. Windows 95/98

Default color depth for textures

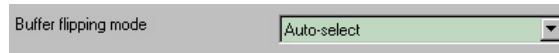| Default color depth for textures	Use desktop color depth ▾

Default color depth for textures determines whether textures of a specific color depth should be used by default in OpenGL applications. Options are **Use desktop color depth** (default), **Always use 16 bpp**, and **Always use 32 bpp**.

Buffer flipping mode

Buffer flipping mode	Auto-select ▾

Buffer flipping mode determines the buffer flipping mode for full-screen OpenGL applications. Options are **Auto-select** (default), **Use block transfer**, and **Use page flip**.

Vertical sync

Vertical sync	Always off ▾
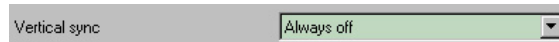
Vertical sync lets you specify how vertical sync is handled in OpenGL. Options are **Always off** (default), **Off by default**, **On by default**.

Maximum system memory (MB) for textures in PCI mode

Maximum system memory(MB) for textures in PCI mode	6 ▴▾
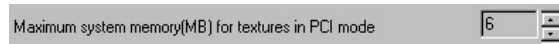
Maximum system memory (MB) for textures in PCI mode lets you set the amount of system memory for texture storage.

 NOTE: This setting applies only to PCI display adapters or to AGP display adapters running in PCI compatibility mode.

Clicking the up arrow increases the memory size while clicking the down arrow decreases the size of system memory for textures. The maximum amount of system memory for texture storage depends on the physical memory installed on your system.

III. Windows 95/98

Other

Monitor Timing
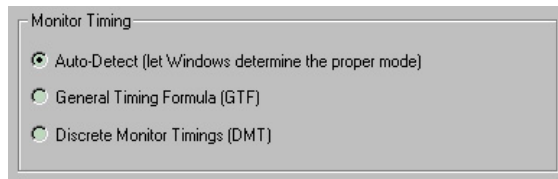
Monitor Timing lets you select the proper timing mode for your monitor.

Auto-Detect (let Windows determine the proper mode)
This option allows Windows to receive the proper timing information directly from the monitor itself. This is the default setting.

   NOTE: Some older monitors may not support this feature.

General Timing Formula (GTF)
GTF is a standard used by most new hardware.

Discrete Monitor Timings (DMT)
DMT is an older standard still in use on some hardware. Select this option if your hardware requires DMT.

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VrViewer (optional)

VrViewer lets you view stereo images, size your stereo image, set the VR effect of your 3D glasses (ASUS VR-100G), and test your 3D glasses' functionality.

To run VrViewer, click or right-click the ASUS Control Panel icon (*see* **III. Windows 95/98 ASUS Control Panel**) on the taskbar's status area to display the ASUS Control Panel, point to **VrViewer**, and then click it.

Opening or Displaying a Stereoscopic or 3D File

1. Click the **VR Effect** menu and then click **VR On** to enable stereoscopic display.
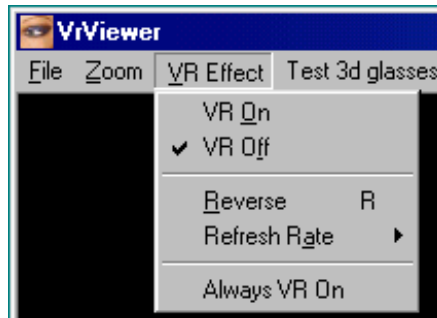
2. Click the **File** menu and then click **Open** to select a file. Select the file from the **Open** dialog box or select another folder and then click **Open**. The 3D image appears on the VrViewer main window (*see* preceding page for an opened 3D image file. Note that the 3D effect is not shown in this picture).
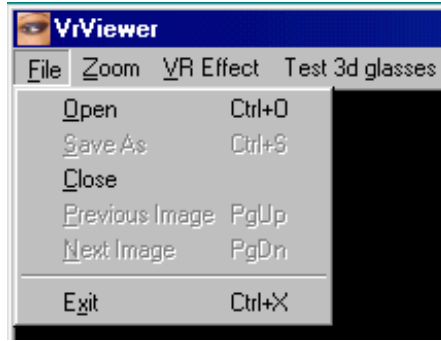
Changing the View

1. Click the **Zoom** menu and then click the desired zoom percentage.
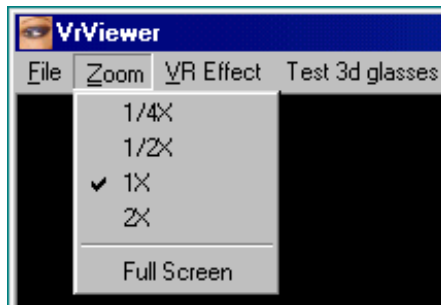
Testing the 3D Glasses

1. Click the **Test 3D glasses** and then follow the onscreen instructions.
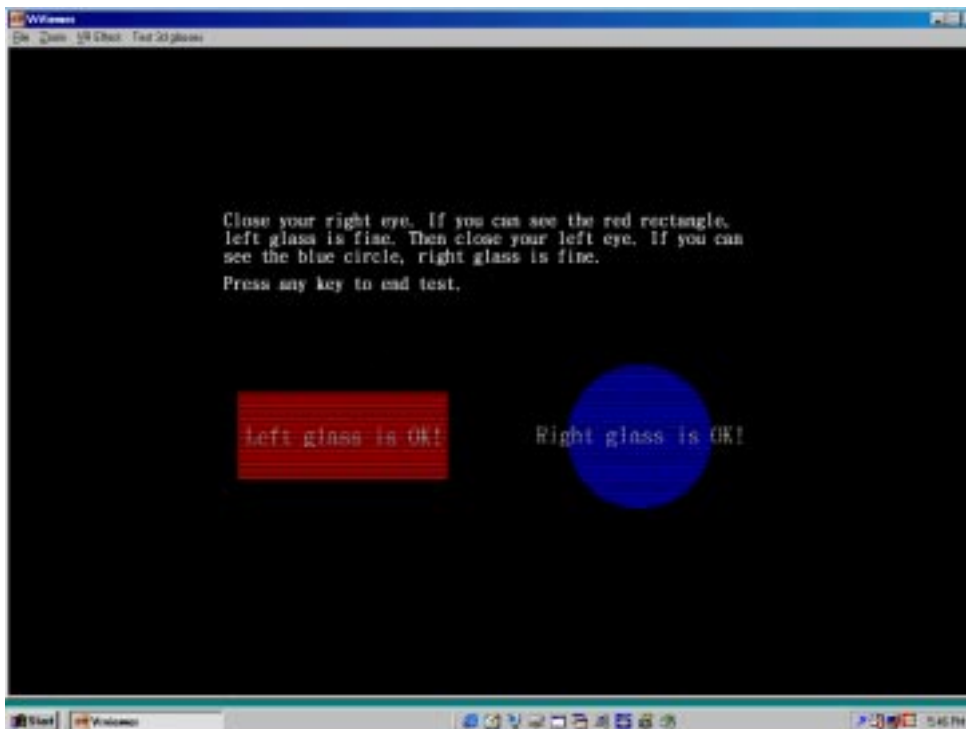
IV. Windows NT 4.0

Install Display Driver

WARNING! Before installing the display driver in Windows NT 4.0, make sure that you have installed **Windows NT 4.0 Service Pack3 or later, to take full advantage of the ASUS AGP-V6800 AGP features.** (You may download service packs at http://www.microsoft.com/ntworkstation/downloads.)

NOTE: The following steps assume your CD-ROM drive letter is D.

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 CD installation disc.
8. Type **D:\NT40** or click **Browse** to select the path of the display driver for Windows NT. Click **OK.**
9. Select **ASUS V6800** 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. Resolution Table

Resolution	Vertical Frequency	Horizontal Frequency	Color Depth		
			8bpp = 256 colors Standard	16bpp = 65K colors High Color	32bpp = 16.7M colors True Color
640 x 480	60Hz	31.5	√	√	√
	70Hz	34.9	√	√	√
	72Hz	37.9	√	√	√
	75Hz	37.5	√	√	√
	85Hz	43.3	√	√	√
	100Hz	51.0	√	√	√
	120Hz	61.8	√	√	√
	140Hz	72.9	√	√	√
	144Hz	75.2	√	√	√
	150Hz	78.7	√	√	√
	170Hz	90.3	√	√	√
	200Hz	108.0	√	√	√
	240Hz	132.9	√	√	√
800 x 600	60Hz	37.9	√	√	√
	70Hz	43.8	√	√	√
	72Hz	48.2	√	√	√
	75Hz	46.9	√	√	√
	85Hz	53.7	√	√	√
	100Hz	63.7	√	√	√
	120Hz	77.2	√	√	√
	140Hz	91.1	√	√	√
	144Hz	94.0	√	√	√
	170Hz	112.7	√	√	√
	200Hz	135.1	√	√	√
	240Hz	166.2	√	√	√
1024 x 768	60Hz	48.4	√	√	√
	70Hz	56.4	√	√	√
	72Hz	57.5	√	√	√
	75Hz	60.0	√	√	√
	85Hz	68.7	√	√	√
	100Hz	81.7	√	√	√
	120Hz	98.8	√	√	√
	140Hz	116.6	√	√	√
	144Hz	120.2	√	√	√
	150Hz	125.7	√	√	√
	170Hz	144.1	√	√	√
	200Hz	172.8	√	√	√
	240Hz	212.1	√	√	
1152 x 864	60Hz	53.7	√	√	√
	70Hz	62.9	√	√	√
	72Hz	64.9	√	√	√
	75Hz	67.5	√	√	√
	85Hz	77.1	√	√	√
	100Hz	91.3	√	√	√
	120Hz	111.2	√	√	√
	140Hz	131.3	√	√	√
	144Hz	135.2	√	√	√
	150Hz	141.4	√	√	√
	170Hz	162.9	√	√	
	200Hz	194.9	√	√	
1280 x 960	60Hz	60.0	√	√	√
	70Hz	69.9	√	√	√
	72Hz	72.1	√	√	√
	75Hz	75.2	√	√	√
	85Hz	86.0	√	√	√
	100Hz	101.7	√	√	√
	120Hz	123.5	√	√	√
	140Hz	145.1	√	√	√
	144Hz	150.5	√	√	√
	150Hz	157.2	√	√	√
	170Hz	179.8	√	√	

V. Resolution Table

Resolution	Vertical Frequency	Horizontal Frequency	Color Depth		
			8bpp = 256 colors Standard	16bpp = 65K colors High Color	32bpp = 16.7M colors True Color
1280 x 1024	60Hz 70Hz 72Hz 75Hz 85Hz 100Hz 120Hz 140Hz 144Hz 150Hz 170Hz	64.0 74.6 76.8 80.0 91.3 108.5 131.7 155.9 159.6 167.3 191.8	√ √ √ √ √ √ √ √ √ √ √	√ √ √ √ √ √ √ √ √ √ √	√ √ √ √ √ √ √ √ √ √
1600 x 900	60Hz 70Hz 72Hz 75Hz 85Hz 100Hz 120Hz 140Hz 144Hz 150Hz	55.9 65.6 67.5 70.5 80.4 95.3 115.4 136.8 140.4 146.8	√ √ √ √ √ √ √ √ √ √	√ √ √ √ √ √ √ √ √ √	√ √ √ √ √ √ √
1600 x 1200	60Hz 70Hz 72Hz 75Hz 85Hz 100Hz 120Hz	75.0 87.5 90.1 94.0 106.1 127.5 154.5	√ √ √ √ √ √ √	√ √ √ √ √ √ √	√ √ √ √ √ √
1920 x 1080	60Hz 70Hz 72Hz 75Hz 85Hz 100Hz	67.1 78.7 81.1 84.6 96.4 113.9	√ √ √ √ √ √	√ √ √ √ √ √	√ √ √ √ √
1920 x 1200	60Hz 70Hz 72Hz 75Hz 85Hz 100Hz	74.6 87.4 90.0 94.0 106.7 126.7	√ √ √ √ √ √	√ √ √ √ √ √	√ √ √ √ √
1920 x 1440	60Hz 70Hz 72Hz 75Hz 85Hz	89.4 104.9 108.5 112.5 129.4	√ √ √ √ √	√ √ √ √ √	√ √ √
2048 x 1536	60Hz 70Hz 72Hz 75Hz	95.5 111.9 115.3 121.3	√ √ √ √	√ √ √ √	√

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VI. Troubleshooting

Description	Recommended Action
After installation and re-starting, Windows 95/98 informs me that the display setting is still incorrect.	• 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.
My monitor is not capable of high resolution or refresh rate.	• It depends on the display characteristics of your monitor. Consult your monitor documentation for the proper configuration.
DirectX or the other applications report no AGP memory available.	• Windows 95 is not OSR2.1 or later. • DirectX version is not 6.0 or later. • You have not installed appropriate drivers for the AGP chipset. (e.g. VGARTD.VXD for Intel 440LX). • Incorrect BIOS setting. BIOS must support at least 64MB for AGP aperture size.
Games or applications report "No 3D acceleration hardware found."	• 3D works only in 16- or 32-bit color depth. Switch your color depth display mode to 16-bit (high color) or 32-bit (true color). • Check necessary libraries, such as DirectX or OpenGL. • Try to switch to a lower resolution.
I cannot enable AGP memory or run I-Base test.	• You may be using a motherboard with an Aladdin IV AGPset. To get the best compatibility, the display card uses AGP Bus Master mode instead of AGP execute mode for motherboards using this AGPset.
My MPEG player displays bad quality video clips.	• You must install DirectX 6 or later so that your player can take advantage of the hardware acceleration mode (DirectDraw). • Try to switch to a lower resolution, color depth, or refresh rate. Switching to a lower mode allows your player to use hardware acceleration mode. • Switch dual view mode to VGA or TV mode.
I can't use VideoSecurity with my USB CCD or IEEE 1394 CCD.	• VideoSecurity currently only supports S-Video or Composite CCDs. Any device used must be connected to an ASUS video card.
I am using Video Security and it seems my hard disk space is almost exhausted.	• This is a very important issue when you decide to use VideoSecurity with the "never stop" option. You must be aware of the free space of your hard disk—it must be enough for storing temporary files in the current working directory. If disk space is exhausted, VideoSecurity will not store any information and give you a warning message.

VI. Troubleshooting

I am using VideoSecurity and I set the password option. I have forgotten my password, though. Is there a way to recover my password?

- The only way to remove password protection is to recall the original password that you assigned. The password protection is still active even when you uninstall VideoSecurity and install a new copy. Make sure that the password that you assigned can be easily remembered. You may write down your password and store it in a safe place.