STEALTH VIDEO 2500
(PCI)

User Manual

Rel. 0996
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Installing the Software from Diskettes

You have received the software on CD. It is also possible that your package also includes 3.5" diskettes. This manual describes the installation from the CD as this is the most common method. If you intend to install from the diskettes, please take note of the README files on these disks and the starting instructions on the diskette labels.

Important Note

It is **imperative** that you read the README file on the CD and all the documentation supplied with your graphics board before installing it! If you fail to do so DIAMOND Multimedia cannot accept any responsibility for claims that may be caused as a consequence.
To see the README file, put the CD in your drive and change to the ...\INSTALL\GRAPHIC\STEALTH\V2500\INSTALL\ directory. Then run:
WSHOW README.ENG

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General Information

Symbols and Conventions

The following symbols and syntax conventions are used in this manual.

Warning:	This section contains a warning or important information

Note:	This section contains useful hints.

DOS commands are written in capital letters, for example:
E:
START.EXE
If not otherwise specified, all DOS commands must be confirmed with the ENTER or RETURN key.
Example: Examples e.g. for commands are indicated by this format.
Screen messages are shown in `Courier`.
Cross-references to other parts of the manual are written in *italics*.
Directory names mentioned in this manual are exemplary and written in capital letters. This document refers to your CD drive as E:. Where required, enter the drive letter that is appropriate for your system.

Package Contents

Your package should contain the following items:

- the graphics or multimedia board
- Installation Guide
- the SuperCD, including software drivers and documentation

SuperCD

Software for your Diamond product is supplied on the SuperCD. The most current utility software and drivers are available around the clock and can be downloaded from the Diamond BBS or CompuServe (GO DIAMOND). See the chapter *If You Need Help* for information on contacting Diamond.

Last-Minute Changes - README files

Our software is constantly being improved and updated. The latest information is contained in README files. You can read the README files at any time: change to the subdirectory
...\INSTALL\GRAPHIC\STEALTH\V2500\Install\
on your CD and run the following command
WSHOW README.ENG

Warranty

You have a 5-year warranty for your new graphics card. To ensure your warranty, it is necessary that you keep the invoice for the graphics card. If your graphics card is damaged, contact your local retailer first.
Your board is a complex electronic device and can only be repaired by authorized technical personnel with the required equipment. Do **not** attempt to change or repair any parts of this product. Doing so will render your warranty invalid.

Support

The following support services are available:

- Technical support (telephone, ExpertLine)
- Free software updates via BBS, Internet, or CompuServe
- Fax-back system

Further information concerning these support services can be found in the chapter *'If You Need Help'*.

FCC Notice

This device complies with Part 15 of the FCC Rules. This device also complies with CE Certification pursuant to EN55002 IEC 801-2, 1991.
Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

FCC ID: FTUPM64221M

This equipment generates and uses radio frequency energy and if not installed and used properly, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device, pursuant to Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. If this equipment does cause 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 of the following measures:

- Reorient the receiving antenna
- Relocate the computer with respect to the receiver
- Move the computer away from the receiver
- Plug the computer into a different outlet so that computer and receiver are on different branch circuits

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:
How to Identify and Resolve Radio and TV Interference Problems.
This booklet is available from the U.S. Government Printing Office, Washington DC 20402, Stock No. 004-000-00345-4.

To meet FCC requirements: "SHIELDED CABLE(S) and POWER CORDS MUST BE USED TO CONNECT THE DEVICE TO A PERSONAL COMPUTER OR OTHER CLASS B DEVICE ACCORDING TO FCC 15.838D." ANY CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER’S AUTHORITY TO OPERATE THIS EQUIPMENT.

The use of shielded speakers is also required for FCC compliance

Introduction

Your new graphics board is a high-resolution VGA, SVGA and VESA-compatible graphics and multimedia accelerator designed specifcally to speed up graphics and multimedia applications.

Graphics Board Features

- Alliance ProMotion AT-24™ 128-bit graphics processor with 170 MHz DAC
- Standard 1 MB or 2 MB EDO DRAM on-board
- TrueColor (16.7 million colors) at 800 x 600
- Maximum (non-interlaced) screen resolution of 1600 x 1200
- DDC2.0B - automatic monitor detection via software (monitor with DDC support required)
- Hardware-supported window overlapping
- DirectDraw, Direct Video and DCI support
- Up to 9 hardware-accelerated simultaneous video windows
- Driver software for the most common applications

Software for your Board

Various software drivers for standard applications as well as useful utilities are supplied with your board.

Standard Software Delivery

- Drivers for Windows® 95 with DirectDraw and DirectVideo support
- Drivers for Windows® 3.1x with DCI support and Video for Windows
- Drivers for Windows NT™ 3.5/4.0
- Drivers for OS/2™ Warp
- InControl Tools95
- Software MPEG decoder for VideoCD and video on CD-I

Additional Software
Other drivers which become available for your hardware will be available via CompuServe, Internet and the DIAMOND BBS or on subsequent releases of the SuperCD.

Troubleshooting

Your board is a complex electronic device and can only be repaired by authorized technical personnel with the required equipment. Do not attempt to change or repair any parts of this product. Doing so will render your warranty invalid.
To read the latest troubleshooting tips from the Technical Support Team, start the program START.EXE from your SuperCD and click on the option `Information about Diamond Multimedia and the company's products`. This starts an online document with information about our products and services. Click on the option `Product Support` and then select further topics as desired.

Hardware Installation

Requirements

1. IBM compatible computer (80486/Pentium) with PCI version 2.x bus system
2. One free PCI bus system expansion slot
3. Windows 3.1x, Windows® 95, Windows NT, or OS/2
4. Screwdriver

Warning! Prevent static electric damage. Static charges can cause severe damage to microcircuits, but here are some easy ways to see that it doesn't happen:

Hold the graphics card by its edges only. Don't touch edge connectors or exposed circuitry.
Leave the graphics card in the anti-static protective bag until ready to install it in your computer.
If possible, ground your body when handling the card. The metal power supply housing is generally considered the best place to ground yourself.
Do not place the graphics card on a metal surface.
Make the least possible movement to avoid building up static electricity from your clothing, carpets and furniture.

Monitor Compatibility

This board offers high performance in resolutions, refresh rates and colors. Especially the ergonomic refresh rates up to 100 Hz give absolutely flicker-free performance. The board is optimally configured to be combined with high-resolution MultiSync monitors.
Of course the board can also be connected to other VGA monitors. Please be aware of the fact that you can only get use of the full power of the graphics board if the horizontal (kHz) and vertical (Hz) refresh rates of your monitor are as high as required by the graphics board.

Example: The technical specifications of a MultiSync monitor could be as follows: max. resolution 1280 x 1024; max. horizontal frequency 50 kHz; max. vertical frequency (refresh rate) 90 Hz.
If you wish to use one of the video modes listed in the file BIOS.TXT included with this product, then all three of the above mentioned parameters may not exceed the specifications of this monitor.
In our example, the mode 1024 x 768 with a horizontal frequency of 48.5 kHz and a refresh rate of 60 Hz may be selected, whereas the next higher refresh rate of 70 Hz (at the same resolution) is not possible, as the required horizontal frequency is 56.5 kHz in this case, which exceeds the specifications of the monitor.

Warning! If you permanently operate your monitor at frequencies higher than those for which it is designed, you may damage the monitor.

Before you start to change the refresh rate, check your monitor manual for its technical data (horizontal and vertical refresh rate, possible resolutions).

Set your monitor to analog mode. You may need a new cable or a 9- to 15-pin cable adapter to use this mode.
Check your monitor owner's manual for further information.

Hardware Compatibility: the PCI Bus and the Graphics Board

The functionality of a graphics system depends mainly on two components: the graphics board and the mainboard.
If the design of the PCI mainboard is not compliant with the approved PCI specifications you could experience problems with the graphics board.

The board has been tested successfully in PCI bus mainboards with a clock rate of 100 MHz and higher.

Preparing Your Computer

Please note that the applications for which you want to install drivers have to already be configured for Standard VGA (640 x 480) on your system prior to using the software. It is a good idea to do this before removing an existing graphics adapter as not every application permits the configuration of the video mode in DOS.

Changing Your PC's Hardware Configuration

If a board other than a VGA board was previously installed, it is necessary to change the PC's hardware configuration. This is sometimes done by changing a jumper on the motherboard after removing the old board (check your motherboard or PC manual) although it is more common to change your PC's BIOS SETUP.

Exception:
If your system has an on-board EGA/VGA display adapter on the motherboard, the on-board EGA/VGA display adapter **must** be disabled before you install the new card.
Check your PC or motherboard manual for information about disabling the on-board graphics adapter.

Warning!	Simultaneously using two active VGA/EGA units in one PC will inevitably lead to system failure!

If your system doesn't have to be re-jumpered for a VGA board then first proceed with the following installation steps and then run your BIOS SETUP program and select 'VGA' (else 'IBM VGA') as your graphics board type. Check your PC manual for information on its BIOS SETUP.

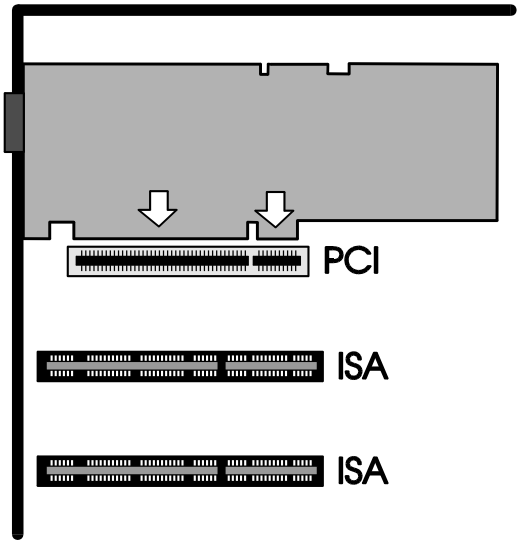
Opening the Computer Cabinet

1. Switch off your computer and all external options (printer, display, and others) and unplug all power cables from the electrical source.
2. Remove the cover mounting screws and save them for later.
3. Remove the cover of the computer.

Installing Your Board

Install your board as follows:

1. If you are replacing an existing graphics board, remove it from its expansion slot. Select a free PCI expansion slot and remove its metal slot cover. Save the screw to secure the graphics card later.
2. Hold the card by the edges and press it firmly into the expansion slot.



Installation in a PCI expansion slot

Note The following step is very important in order to ground your graphics card properly.

3. Align the slot in the mounting bracket of the card with the screw hole in the rear panel of the computer case. Use the screw you removed from the expansion slot cover or the previously installed video adapter to secure the newly installed card in place.
4. Secure ribbon cables and gently push them down and out of the way before you replace the system cover.
5. Replace the computer cover. Secure it with the screws you removed earlier.
6. Reconnect any peripheral equipment cables you may have disconnected.
7. Securely attach your monitor cable to the 15-pin VGA output connector on the board.

After Installing the Board

Please switch on your monitor before you switch on your computer. Doing it the other way around could damage your monitor.

If your system does NOT boot as it should, check again to see that you followed the installation instructions properly, or refer to the *Troubleshooting* section.

Your board has been designed to 'plug & play' without any modifications to the default switch or jumper settings. However, if it appears that the card is not performing optimally, you can change the settings. Refer to the section *Technical Details* for more information.

Note that your monitor is running in standard VGA mode and that higher refresh rates etc. are not available at this stage of the installation! To optimize the board's output signals for use with your monitor, you need to run the tuning programs described later in this manual.

Now you are ready to install the software for your new board. See the chapters that follow about installing software for the operating system you are using.

DRAM Upgrade

With the EDO DRAM upgrade from 1 MB to 2 MB, you can use additional display modes, for example, TrueColor at 800 x 600 instead of only 640 x 480. For other display modes the refresh rates will increase (e.g. from 60-75 Hz to 120 Hz for 800 x 600 HighColor). See the README file for more display modes.

If you decide to upgrade your DRAM, please contact your dealer.

Software Installation - Windows 95 / Windows NT 4.0

Installing Drivers and Utilities

In order to use your board in your PC it is necessary to install a package of basic programs, regardless of the operating system you use.

When Windows 95 detects an unknown Plug and Play device (as will occur when you start your system after installing your new board), it automatically displays the `New Hardware Found` menu. Select `Driver from disk provided by hardware manufacturer`. Click on `OK`. On the prompt for the installation disk insert your SuperCD and enter its drive letter and the \DRIVERS directory, e.g. E:\DRIVERS. Windows 95 will automatically find the correct driver. Please note that this driver installation corresponds to the minimum installation type described below. To install optional programs or to install for Windows NT 4.0, proceed as follows:

1. Put the SuperCD in drive E: and start the installation (from E:) as follows:

   Click on the `Start` button in the task bar, select the option `'Run'` and then select START.EXE from the root directory of the CD.

2. Choose `English (E)` as your language for the installation.
3. Click on the `Start Installation` button.
4. If necessary, select the hardware for which you wish to install; this is displayed in the `Product` drop-down list. The installation program usually recognizes your hardware automatically.
5. Click on the `Next` button.
6. If desired, enter a path to which the software will be installed.
7. Click on the button corresponding to the type of installation you want. If you select `Custom`, a list of software components will be displayed. Click on the check boxes to specify the components you want to install.
8. A README file will be displayed. Please read this file!
9. After you have read the README, click on `Next`.

   The basic software is now installed. Note that your applications will still be displayed in 640x480 resolution. Higher resolutions or color depths can be set with the Display Settings option of the Control Panel. Right-click on the Desktop and choose the `Properties` option and then the `Settings` tab.

   Additional possibilities for the configuration of your display and desktop under Windows95 are provided by InControl Tools95. See *InControl Tools 95 Features* for details.

Software Installation - Windows 3.1x

Installing Drivers and Utilities

In order to use your board in your PC it is necessary to install a package of basic programs, regardless of the operating system you use.

1. Put the SuperCD in drive E: and start the installation (from E:) as follows:

   Start the Program Manager, select `'File' 'Run'` then START.EXE from the CD.

2. Choose `English (E)` as your language for the installation.
3. Click on the `Start Installation` button.
4. If necessary, select the hardware for which you wish to install; this is displayed in the `Product` drop-down list. The installation program usually recognizes your hardware automatically.
5. Click on the `Next` button.
6. If desired, enter a path to which the software will be installed.
7. Click on the button corresponding to the type of installation you want. If you select `Custom`, a list of software components will be displayed. Click on the check boxes to specify the components you want to install.
8. A README file will be displayed. Please read this file!
9. After you have read the README, click on Next.
10. After the files are copied to your hard disk, a tuning utility called DSSETUP will start. At this point, your applications will still be displayed in 640x480 resolution. You can use this utility to adjust the resolution, color depth and refresh rate of your display.

Using DSSETUP

Double-click on the DIAMOND icon in the DIAMOND program group. The self-explanatory dialog box then will appear.
Configure your system keeping the specifications of your monitor in mind.

Warning! If you permanently operate your monitor at frequencies higher than those for which it is designed, you may damage the monitor.

Changes made with DSSETUP only become active after Windows has been restarted. The test button is only active for the current color depth mode. It will be deactivated if you change the settings. Restart Windows with the new settings and start DSSETUP again to reactivate the button

Software Installation - Windows NT 3.51

Installing Drivers and Utilities

In order to use your board in your PC it is necessary to install a package of basic programs, regardless of the operating system you use.

1. Put the SUPERCD in drive E:
2. Start Windows NT and login as Administrator
3. Start the installation (from E:) as follows:

   start the Program Manager, select `'File' 'Run'` and then select START.EXE from the root directory of the CD.

4. Choose `English (E)` as your language for the installation.
5. Click on the `Start Installation` button.
6. If necessary, select the hardware for which you wish to install; this is displayed in the `Product` drop-down list. The installation program usually recognizes your hardware automatically.
7. Click on the `Next` button.
8. If desired, enter a path to which the software will be installed.
9. Click on the button corresponding to the type of installation you want. If you select `Custom`, a list of software components will be displayed. Click on the check boxes to specify the components you want to install.
10. A README file will be displayed. Please read this file!
11. After you have read the README, click on `Next`.

    The basic software is now installed. Note that your applications will still be displayed in 640x480 resolution. Higher resolutions or color depths can be set with the Display Settings option of the Control Panel.

Software Installation - OS/2

Installing Drivers and Utilities

In order to use your board in your PC it is necessary to install a package of basic programs, regardless of the operating system you use.

Note: From the CD you will create installation diskettes. With these diskettes you will then actually install the software on your system.

Put the SuperCD in drive E: and start the installation (from E:) as follows:

1. Start OS/2 and execute START.EXE from the CD.
2. Choose `English (E)` as your language for the installation.
3. The main menu is displayed.
4. Click on the `Create installation floppies` button, then on `Graphic Cards`.
5. Select your hardware from the `Product` drop-down list.
6. Click on `Next`.
7. Select the `Drivers for OS/2` option.
8. The screen displays information about the number and type of diskettes required. Follow the instructions on the screen to create the installation diskettes.
9. Insert the first installation diskette into drive A:. Display and print the README file on this diskette. There you will find all necessary instructions on how to complete the software installation.

In Control Tools 95 Features

InControl Tools 95 provides a set of easy-access display and desktop utilities for Windows95 that help you maintain a picture-perfect environment for work or pleasure.

With InControl Tools 95 you can:

- Use a popup menu to instantly switch desktop and viewport resolutions and zoom in and out on your viewport (if your graphics board supports this feature).
- Center windows and message boxes to the viewport or desktop.
- Control other display-management features--screen saver, fast scroll, pan lock, even your hot keys and popup menus--with menu on/off switches.
- Adjust your system's audio volume with a handy popup slider bar.
- Add or remove items from your left- or right-button popup menus.
- The **Setup Wizard** guides you through the complete InControl Tools customization process. It runs when you install InControl Tools for the first time, but you can run it again at any time by clicking the InControl Tools tray icon and choosing the `Setup` option.

Quick start instructions

When you install InControl Tools 95, a tray icon is added to your Windows95 desktop and several new options are added to your Display Properties dialog. Many of the new features available to you are activated immediately after installing InControl Tools and restarting Windows. You can then modify or toggle any feature on or off, either through the Display Properties dialog or directly from your enhanced desktop (right button) menu.

To start using InControl Tools immediately after installation and restart:

- Click your right mouse button on the Windows desktop. Your enhanced desktop menu appears. Note that this is the same menu that normally appears when you right-click, but with several new items listed above the standard items. These new items are your InControl Tools enhancements. Check out the features and submenus to review the default settings.
- Click your left mouse button on the Windows desktop. Your popup start menu appears. Note that this is the same menu that appears when you click the Start menu. Now, however, it's also available as a "floating" popup menu.

You're now ready to use or customize all of these new features (such as adding hot key shortcuts).

Technical Details

Technical Data

Processor: Alliance ProMotion AT-24™(PCI), 170 MHz DAC
1 MB or 2 MB EDO DRAM
HighColor (65,536 colors) up to 1024x768, 85 Hz n.i.
TrueColor (16.7 million colors) up to 800x600, 75 Hz n.i.
Refresh rates up to 120 Hz
up to 33 MHz PCI 2.0 / 2.1 Bus

Memory Addresses

It is necessary to make sure that all I/O and memory addresses reserved for the graphics board are not used by other hardware devices.

Your board uses the following addresses:

I/O addresses:

Standard VGA I/O	3B0 - 3DF

Memory addresses:

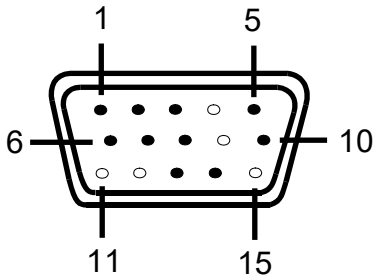
Video RAM	A000 - BFFF
Video ROM	C000 - C7FF

Video Modes

Tables containing the video modes supported by your board can be found in the file BIOS.TXT on the SuperCD. This file is installed in your new DIAMOND directory during the software installation if you selected the `Utilities` option.

VGA Output Connector

Pin	Function
1	Red
2	Green
3	Blue
4	Not used
5	Ground
6	Red Return (ground)
7	Green Return (ground)
8	Blue Return (ground)
9	Key (no pin)
10	Sync Return (ground)
11	Not used
12	Not used
13	Horizontal Sync (+)
14	Vertical Sync (-)
15	Not used



Pinning of the 15-pin Sub-D VGA Output

Troubleshooting

Problems with CD ROM Drives

If you have problems with your CD ROM drive consider the following general notes:

There are three non-compatible types of CD ROM available that comply to different standards. These standards are:

Yellowbook: Conventional CD ROM
Greenbook: Used for linear video, typically used in Philips CD-I players (384 lines)
Whitebook: Used for digital video VideoCD (352 lines).

Warning! To play **VideoCDs** with the STEALTH VIDEO 2500 you must have a Whitebook type CD ROM drive. As the VideoCD format of data is very new, some older CD ROM drives cannot read the VideoCD data. If you do have problems reading data from a VideoCD, a software update for your CD ROM drive may help.

- Use only CD's explicitly labeled 'VideoCD'.
- Check that - in AUTOEXEC.BAT - SMARTDRV.EXE is loaded *before* MSCDEX.EXE.
- Use the latest driver version for your CD ROM drive; it is possible that older driver versions cannot read the VideoCD format.
- You need about 500 KB of conventional memory to read CD's. Error messages may indicate that the CD cannot be read, or that the MCI driver does not work correctly. In this case, delete or REM out all drivers you don't need urgently from your CONFIG.SYS and AUTOEXEC.BAT file and restart your system.
- Only use CD ROM drives that support the default reading access and comply with the ISO 9000 standards.

Problems with VideoCDs

As Video CD is a new technology, many of you may be using this format for the first time. Comparable with VHS tape recordings, you can encounter similar picture problems in the VideoCD format. This section describes various symptoms and their causes.

Picture display problems can be caused by the quality of the pictures on the VideoCD. Since not all VideoCDs offer the same picture quality, the picture quality during playback won't be the same for all VideoCDs.

Macro blocking: Also known as 'blocking' or 'jagging', is caused by a lack of bits (binary digits) to store all the information and occurs during creation of the VideoCD movie. Parts of the picture for which there is insufficient information (bits) will be displayed as simple 8x8 or 16x16 blocks.

Unreal stillness: An object (such as a tree in the background) appears to absolutely motionless. This can happen during VideoCD creation, where the object is moving so slightly as for the motion to be ignored by the movie conversion process.

Digital rain: This is a collective term for several undesirable picture effects. For example, a small stationary object shows in one frame, disappears for a few frames, then reappears. This and other effects tend to be more apparent in earlier VideoCDs than in more recently created ones.

Mosquitoes: This effect can occur especially at the edges of moving objects, due to the number of bits of data concentrated about the point of movement. It can make the picture appear unsharp or unfocused.

The picture quality of American VideoCDs can vary from that of European VideoCDs. American manufacturers favor sharper images, which are more prone to the above problems. European manufacturers favor softer images, which can look more pleasing and are less prone to the above problems.

Note:
A VideoCD that is not explicitly denoted as such on its cover, does not comply with the Whitebook CD ROM standard, and is not compatible with your system. Unfortunately, VideoCD labeling is not consistent, so carefully check with the sales staff before making your purchase.

If You Need Help

Your documentation and the README files provide tips and suggestions to help you, should you encounter problems or have questions regarding the use of your Diamond product.
Additional technical support is available from the extensive information and support services offered by the Diamond Technical Support Team Europe. Further information is available from our company headquarters in the USA. Below is a brief description of our European support services and how you can take advantage of them. We also provide an overview of our worldwide information services.

In order for us to service your inquiries to the best of our ability, please be prepared to provide the following information when you contact Diamond for technical support:

- The exact designation of your Diamond Multimedia product
- The operating system you are using, as well as information about the computing environment in which you use your product
- For graphics and video cards, the card's BIOS version
- For modem products, result codes from the I3 command (if possible)
- Names and version numbers of the Diamond drivers and applications you are using
- Name and version number of the application with which you have encountered problems
- A detailed description of the problem. Please reproduce the problem several times and provide a detailed description of the necessary steps.

Diamond's Online Services: BBS, CompuServe, Internet

Among other things, you can find the following kinds of information in the Diamond BBS as well as in Diamond's CompuServe forums and Internet services:

- the most current releases of Diamond drivers and software updates,
- optional drivers and programs that aren't standard components of our products,
- tips, hints and technical information prepared and constantly updated by Diamond's support staff--you'll find these under the heading Tips & FAQ's for our Products,
- and a variety of other information.

The online services are available 24 hours every day and provide (technical) information about all aspects of our products. Please consult these sources before calling our hotline. It's quite possible that the answer to your question is already documented in our online services.

Here's where you can reach the online services of Diamond's Technical Support Team Europe:

Diamond BBS

Diamond Germany	+49 - 81 51 - 266 333	Modem, up to 28.8 kBaud
	+49 - 81 51 - 266 334	ISDN
Diamond UK	+44 - 11 89 - 44 44 15	Modem, up to 28.8 kBaud
Diamond France	+44 - 11 89 - 44 44 15	Modem, up to 28.8 kBaud
	+49 - 81 51 - 266 333	Modem, up to 28.8 kBaud
	+49 - 81 51 - 266 334	ISDN

Diamond's CompuServe Forums

GO SPEA	European forum (German language)
GO DIAMOND	US forum (English)
GO SUPRA	US forum (English), for modem products

Diamond and Internet

World Wide Web

http://www.spea.com	European WWW server (multilingual)
http://www.diamondmm.com	US WWW server (English)
http://www.supra.com	US WWW server (English), for modem products

FTP

ftp.diamondmm.com	US FTP server (English)
ftp.supra.com	US FTP server (English), for modem products

Diamond's Fax-back System

You also have access to a variety of information through our fax-back system. All you need is a touch-tone phone to select documents such as:

- technical tips, tricks and suggestions, compiled by our support staff;
- answers to frequently asked questions, and
- much more information about Diamond and its products.

Diamond Fax Info Service

The fax-back system is available 24 hours daily at the following numbers:

Diamond Germany +49 - 81 51 - 266 332
Most information is available in German and English.

Diamond UK in preparation
Diamond France in preparation

Diamond SuperCD: Driver and Software Updates on CD

Most drivers and software updates are available on the Diamond SuperCD as well as from our online services. This CD is updated at irregular intervals and can be obtained directly from Diamond.
Information on the current version of the SuperCD, including price and order details, is available via the Diamond Fax Info Service, or from our support hotline staff.

Diamond ExpertLine: Technical Support Hotline

We also offer a telephone support hotline to which you can direct questions for which you can't find answers in the documentation and README files or in the online information services. In order for us to service your inquiries to the best of our ability, please be prepared to provide the following information when you contact Diamond for technical support:

- The exact designation of your Diamond Multimedia product
- The operating system you are using, as well as information about the computing environment in which you use your product
- For graphics and video cards, the card's BIOS version
- For modem products, result codes from the I3 command (if possible)
- Names and version numbers of the Diamond drivers and applications you are using
- Name and version number of the application with which you have encountered problems
- A detailed description of the problem. Please reproduce the problem several times and provide a detailed description of the necessary steps.

You can also request information outside of our regular business hours by simply calling our support hotline's regular number from a touch-tone phone. You can access information about how to get software updates, availability of drivers and so on, or you can request that such information be faxed to you via our fax-back system.

Diamond ExpertLine - Technical Support Hotline

Here are the telephone numbers for the support hotline:

Diamond Germany	+49 - 81 51 - 26 63 30	German support
	Monday - Friday 09:00 - 12:00	
	Monday - Thursday 13:00 - 16:00	
Diamond UK	+44 - 11 89 - 44 44 44	English support
	Monday - Friday 08:30 - 17:30	
	+44 - 11 89 - 44 44 33	French support
	Monday - Friday 08:30 - 17:30	

E-mail:

Diamond Germany	via GO SPEA in CompuServe
Diamond UK	100632.1252@compuserve.com

Diamond WorldWide: Support Services in the USA

In addition to the European services described above, a number of information services are available from the support staff at Diamond in the USA. These include:

Diamond Multimedia Inc., USA

BBS	+1 - 408 - 325 - 7080	up to 2.400 Baud
	+1 - 408 - 325 - 7175	up to 14.400 Baud

CompuServe	GO DIAMOND	
America Online	DIAMOND	
Internet	http://www.diamondmm.com	World Wide Web
	ftp.diamondmm.com	FTP
Support hotline	+1 - 408 - 325 - 7100	
Tech support fax	+1 - 408 - 325 - 7171	

Diamond Communications Division USA

BBS	+1 - 541 - 967 - 2444	
CompuServe	GO SUPRA	
America Online	SupraCorp2	e-mail
FidoNet	SupraCorp	Echo-Mail
Genie	SupraTech	e-mail
Internet	supratech@supra.com	General support
	intltech@supra.com	International support
	http://www.supra.com	World Wide Web
	ftp.supra.com FTP	
Fax-back system	+1 - 541 - 967 - 0072	
Support hotline	+1 - 541 - 967 - 2490	PC
	+1 - 541 - 967 - 2491	Windows
	+1 - 541 - 967 - 2492	Macintosh
Fax	+1 - 541 - 967 - 2401	

Hardware Service

DIAMOND products are subjected to intensive tests and fulfill the highest quality standards. Nevertheless, you have the benefit of additional security with an extended guarantee for graphics boards. In the unlikely event of your needing to use your guarantee, please contact your local distributor or retailer for help and advice.

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