Trust ViCtor II

User’s Manual

version 1.0/vdo, adsp

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Introduction

Congratulations! By purchasing the Trust ViCtor II you have obtained an advanced product that will open the world of video conferencing to you. Its built-in H.324 sound hardware will enable you to use your normal modem and telephone line to obtain a quality that until recently required several ISDN connections and expensive equipment. The ViCtor II features a special sound processor that also handles the suppression of noise and echo. This results in a sound quality that makes it a world-wide first in its class.

The ViCtor II video conferencing set enables you to receive audio and video via the Internet. In addition, you can receive or send sound and images via a direct modem link. As the standard H.324 sound hardware is used, this will work even if the party on the other end of the line does not have a Trust ViCtor II set. Any other set compatible with the H.324 sound hardware specifications will also work.

Your ViCtor II package contains the following components:

1. Interface card
2. Audio cable
3. Camera (optional)
4. Camera cables (optional)
5. Driver disk
6. Program disk
7. Manuals

If any of these components are missing, please contact your dealer.

You will require a free PCI slot in your computer and the Windows 95 operating system. The ViCtor II uses the advanced capabilities of Windows 95 and will not work with DOS or Windows 3.x. You will also need a modem with a minimum data throughput capability of 14,400 bps.

Safety precautions

Switch off and disconnect your computer from the mains supply before carrying out any hardware installation work. Failure to do so may cause injury to users and damage the equipment.

Some camera models include a mains power supply. This mains supply is suitable only for use in Europe and for installation in a dry environment. Disconnect the power supply unit from the mains when you leave on holiday or when the ViCtor II will not be used for an extended period. Do NOT use any other power supply units than the one supplied with the camera and do NOT use the power supply unit for any other purpose (e.g. to power a walkman). Doing so carries the risk of fire.

Some cameras feature a power supply lead for connection to the keyboard. Use this lead only for its intended purpose and switch the computer off before connecting or disconnecting it.

Important notice

Software for transmitting and receiving sounds and images through the Internet should not be used by children without proper supervision; the contents of transmissions from other users world-wide can be unsuitable for them. The ViCtor II software requires a password to prevent unauthorised use. If you cannot remember your password, you will have to remove and reinstall the software, deleting any settings and telephone number lists, etc.

Set your software to 'Screen all incoming calls' instead of selecting ‘Auto accept’. This will require you to manually initiate every connection and will prevent unwelcome observers from seeing and hearing what goes on in your home via the Internet while ViCtor II is switched on.

Chapter 1:
Hardware installation

You will require a Phillips screwdriver and, if the cables connected to your PC are secured with screws, a small flat-bladed screwdriver.

You will have to open your PC case in order to install the ViCtor II components. Before continuing, please make a note of the cable connections before disconnecting them from the PC. You can now remove the cover from the computer.

Note
Switch off and disconnect your computer from the mains supply before carrying out any hardware installation work. Failure to do so may cause injury to users and damage to the equipment.

Find a free PCI slot, remove the cover plate facing the slot, insert the ViCtor II interface card into the slot, and secure it with the cover plate screw. PCI slots mostly use white connectors. ISA type slots, which mostly use black connectors, will not accept the ViCtor II. If you are in doubt about the correct installation procedure for expansion cards; consult your PC's manual.

Attention
In many computers, the VGA card controlling the VDU also occupies a PCI slot. This card should not be moved to another PCI slot, as this requires reinstallation of the Windows 95 drivers, which would result in the loss of your VDU settings.

You can now replace the cover of the PC case and reconnect all the cables.

Referring to Figure 1, connect the (optional) camera to the ViCtor II using the cables supplied. Make sure the yellow plug is connected to the video output of the camera and the video input of the ViCtor II. The camera receives its power supply from an adapter or through a cable connected to the keyboard, in which case you should select a cable to match your keyboard connector, which will be either a PS/2 socket or a DIN socket.

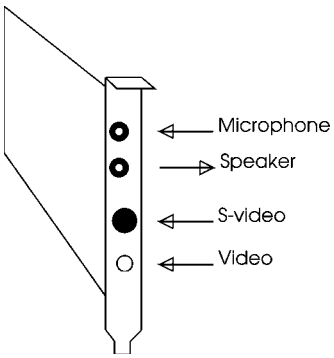

Figure 1

The ViCtor II speaker output is connected to the line input of your sound card by means of the interconnect cable. If your computer does not contain a sound card, a set of active loudspeakers or a pair of headphones may be connected directly to the output of the ViCtor II.

Chapter 2:
Software installation

The ViCtor II is fully Plug & Play compatible and will be automatically recognised by Windows 95. After booting, the computer will detect the ViCtor II and ask for the diskette containing the drivers. Insert the driver disk into drive A. After a while, the driver installation will be complete and you will be able to continue with the installation of the application programs.

Some older computers do not feature Plug & Play, so the card will not be recognised when starting up Windows 95. In that case, the ViCtor II will have to be added manually using the 'Add New Hardware' option of Windows 95. You can ask Windows to look for the card. Windows 95 will ask for the disk containing the drivers and install the drivers. Please refer to the Windows 95 help for more information.

Note
The ViCtor II will not work with DOS, OS/2, Windows 3.11 or Windows NT.

To install the ViCtor II software supplied, carry out the following steps:

1. Insert the diskette labelled 'ViCtor II application programs 1/1' into drive A.
2. With the mouse, click on 'Start'.
3. Select 'Run'.
4. In the empty dialogue box, enter 'a:\setup'.

Video conferencing is a fast-developing technology. Consequently, the software supplied with your version may require another command to start. This command, e.g. 'a:\dualsetup', will be printed on the diskette label.

When you have started the installation program, follow the on-screen instructions. For additional information, consult the comprehensive manual supplied with the software. Reply to the on-screen questions with care. Erroneous settings may cause problems later and lead to time-consuming troubleshooting procedures.

Chapter 3:
Using the hardware

The camera will probably be fitted with an ON/OFF switch and a microphone. If this is the case, switch off the camera when the ViCtor II is not in use, to extend its life.

The camera must be focused on a subject. Select the 'Capture software' or the 'Self View' option in the application program to check the focus. The camera can be focused by means of the ring on the front of the camera. Rotate the ring until you obtain the sharpest possible picture.

When speaking into the microphone, maintain a distance of 50 to 100 cm. This will improve the sound quality. If you wish, instead of the built-in camera microphone, you can connect a separate (condenser) microphone, e.g. the Trust High Sensitive Microphone, which allows you greater freedom in camera distance.

Chapter 4:
Using the software

The operation of the software is described in a separate manual. However, we include a few tips here for your convenience.

For a successful point-to-point connection with another modem the modem settings should be identical. The ViCtor II program allows you to select whether or not the modem supports the H.324 standard. If you are unable to set up a connection, reverse this setting and try again. Other programs may let you choose between a 'synchronous'/'V.80' or 'asynchronous' modem. You should preferably choose 'synchronous'/'V.80', because this setting is fully compatible with the H.324 standard. Select 'asynchronous' if the other settings will not allow your modem to work in combination with ViCtor II or if the party at the other end of the line operates in 'asynchronous' mode. Point-to-point operation will not work over bad telephone lines and slow (throughput less than 14,400 bps) modems.

You will be able to connect to the Internet only if you start your Internet connection before starting the ViCtor II and if your provider does not block the use of video conferencing. Some providers block the use of video conferencing because of the large volume of data traffic it generates.

Internet works with a telephone list containing the names of people available for connection. These lists are usually arranged according to subject. First, retrieve the list and then select a person to call from the list. If a person on the list does not answer your call, try someone else.

During peak hours, connections via the Internet can be very slow. Speech quality will suffer and the display will become even more jerky. The best thing in such cases is to try later. In the morning (at least within Europe!) the Internet seems to be a little less crowded than during the evening. If the connection seems to be faulty or seizes up altogether, the ‘Chat Box’ can be used. This is a text screen in which messages can be typed and which will work even through a slow Internet connection. Opening a ‘Chat Box’ automatically causes a similar type of screen to be opened on the other end of the connection.

The ViCtor II is compatible with Microsoft Netmeeting 2.0. This version supports transmission and reception of video and audio in addition to the normal netmeeting options such as sharing information and applications. Netmeeting can connect several people at once. Of course, the number of connections will affect the transmission speed, in particular if video is being used.

At present, the transmission and reception of speech via Netmeeting 2.0 is handled by your sound card, not by the ViCtor II! For this reason, if you are using Netmeeting, your microphone must be connected to your sound card, not to the ViCtor II. Future versions of Netmeeting may be able to use the ViCtor II sound chip, but these developments are impossible to predict. Of course, the camera will work normally in combination with the ViCtor II.

Before the ViCtor II can be used in combination with an Internet connection, your correct E-MAIL address must be entered, otherwise you will not be able to connect to other users.

Chapter 5: Maintenance

The ViCtor II requires no maintenance. Any dust on the camera can be wiped off with a soft cloth. Do not immerse the camera in liquid and do not clean it with alcohol, cellulose thinners, etc. as these will damage the camera.

Under normal circumstances, the lens will not require cleaning. Any dust on the lens can be simply blown off. If the lens requires further cleaning, use a special cleaning set. This can be obtained from any supplier of photographic equipment.

Chapter 6: Troubleshooting

6.1 Camera

You can test the camera using the 'Self View' option in the ViCtor II software. The picture should fit the frame, without any black edges, etc.

6.1.1 No picture

- Check the camera connections, making sure the sound plug is connected to the audio output, not the video output.
- Is the camera switched on? Check the setting of the ON/OFF switch, if present.
- Is the camera power supply connected?
- Has the ViCtor II driver been loaded? Select 'Start -> Settings -> Control Panel -> System -> Device Manager'. You will find the driver under 'Sound, video and game controllers'. The name of the driver is 'ViCtor-II 32x PCI'. If the driver is present and if it is not marked by an exclamation mark or crossed out, the driver should work. Refer to 6.4, Hardware problems, for further information.

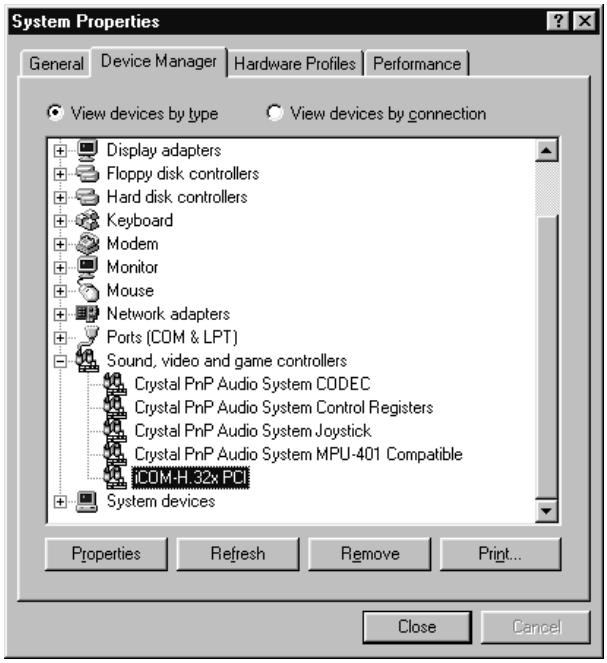

Figure 2 Windows 95 Device Manager Screen

6.1.2 Bad picture

- Picture out of focus: see focusing in chapter 3.
- Black edges to picture: the ViCtor II is set to NTSC. Check and if necessary, change the setting by selecting, under capture settings, ‘Composite’ as the video source and ‘PAL’ as the video standard. Select, for example in VDO-Phone, 'Setup -> Devices -> Source'. Do not alter the settings for the video format, this will interfere with the operation of the video conferencing section.

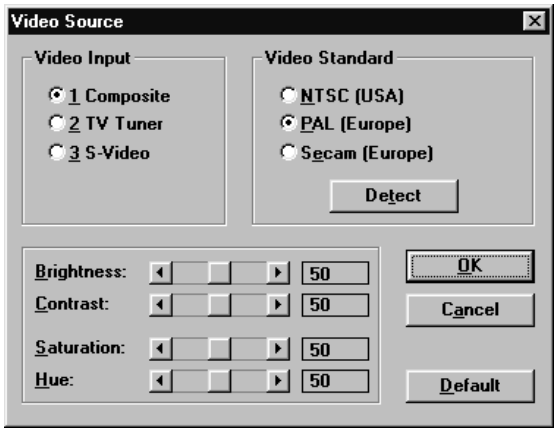

Figure 3 Video Settings

- If the 'Self-View' is OK, but the party at the other end is receiving bad or fuzzy images, try setting a lower frame rate to improve the resolution. The quality of the 'Self View' display will always exceed that of the images received. This is a result of the high compression rate required to send video data through telephone lines.

6.2 Error messages when starting the ViCtor II software

6.2.1 'Video device not found'

The program does not present the option of starting 'Self View'. This is a compound problem which is probably the result of the ViCtor II card not being recognised by the computer.

- Make sure the card is properly seated in its expansion slot.
- Make sure the driver is present. Go to 'Start -> Settings-> Control Panel -> System -> Device Manager'. You will find the driver under 'Sound, video and game controllers'. The name of the driver is 'ViCtor-II 32x PCI'. If the driver is present and if it is not marked by an exclamation mark or crossed out, the driver should work. Refer to 6.4, Hardware Problems, for further information.

- If the system operated previously, but fails after a while, make sure 'Video Format' is still set to '176 x 144' and 'type YUV 422'. Video conferencing will not work with any other format or size.
- If all else fails, remove the driver from the ‘System’ list (Remove) and repeat the ViCtor II installation procedure. This is particularly effective if the ViCtor II worked previously, but ‘suddenly’ failed after you tried out another program.
- The Plug & Play system fails. Continue with 6.4, Hardware Problems.

6.3 No connection

6.3.1 Modem does not dial and gives an error message

This is usually caused by a defective modem or a disconnected telephone line.

- If you have an Internet connection, test the modem by starting a Browser to view WWW pages. If this works, make sure the ViCtor II is set to operate in point-to-point mode via the same modem. If you can view the WWW pages, the ViCtor II should at least be able to operate via the Internet.
- If you do not have an Internet connection, check the modem by dialling a BBS or another on-line service with your communication program, e.g. Microsoft Hyperterminal which comes with Windows 95.
- Check the presence of the modem and its communication port in Windows 95 by selecting 'Start -> Settings -> Control Panel -> Modem -> Diagnostics'. Find your mode in the list and click on the relevant port. Next, select the 'More info...' button. If the modem is not listed, or if Windows 95 gives an error message under ‘More info...’, you should reinstall your modem.

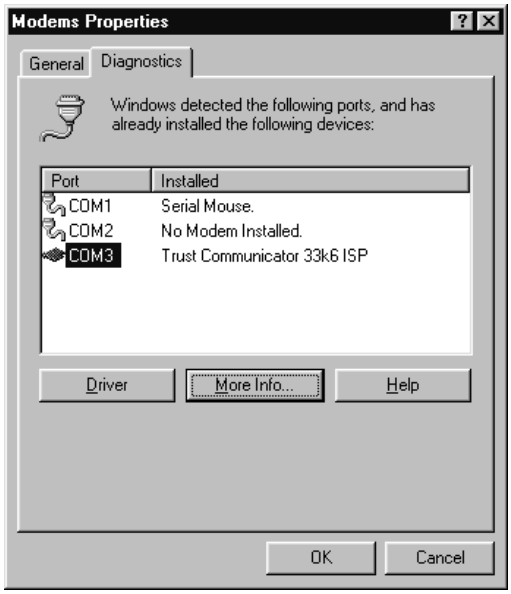

Figure 4 Checking the modem settings diagnostics

6.3.2 Modem dials and connects, but there is no picture/sound, and the connection is dropped after a while

- If you have an Internet connection: the video conferencing system of the other party is incompatible with the ViCtor II program. Dial someone else or find out which software you need to make the connection. You will probably be able to download a free demo version of this software from the Internet. On the Internet in particular, many mutually incompatible standards are in use.
- If you have a point-to-point connection: check the H.324 and modem (V.80) settings (see Chapter 2, Software Installation). The settings on either end of the line should be identical. Check the system date to make sure it is set correctly.
- If you have a bad line: redial. Try to establish a connection with a person closer by.

6.4 Hardware problems

These are rare and are usually the result of a computer which is not 100% Plug & Play compatible.

6.4.1 Card is not recognised by Windows 95

After installation of the ViCtor II card, Windows starts normally without asking for drivers.

- Check the manual of your computer to see if yours is a PnP system.
- If you have a PnP system: remove any cards not strictly required to operate the system and try again. If PnP works this time, reinstall the cards one by one until you find the offending device. Redefine the settings for this card or leave it out altogether.

  If you do not have a PnP system: start the 'New Device' wizard. Allow Windows to detect the driver and then load the driver from diskette.

Figure 5 The Windows 95 Control Panel

6.4.2 Installation with/without Plug & Play fails

- A PnP device/card with manual, ‘fixed’, settings was installed under Windows 95. Temporarily remove the drivers for this card and restart the system. If the ViCtor II now works, you should reinstall the card.
- The system contains too many PCI cards, or too few IRQ lines are available for PCI. Start the BIOS setup of your PC and assign 1 extra IRQ line to the PCI slots.
- The PCI bus is incompatible with ViCtor II. This error sometimes occurs in older 486 systems. The only remedy is to replace the main board.

6.5 Sound

Start by making sure the problem is not caused by the other party’s computer.

6.5.1 Other party hears no sound, but can be heard by you

- Check the microphone and make sure it is connected properly.
- Make sure the 'Mute' option is switched off in the software.

6.5.2 Other party hears you, but you can hear nothing

- Make sure the interconnect cable is connected to the line input of the sound card and make sure the volume control for line in and the master volume in the Windows 95 mixer are not set to 0. Try connecting active loudspeakers directly to the ViCtor II. If this produces sound, the problem is caused by the sound card’s settings.
- Make sure the other party is sending sound and does not have the software 'Mute' option set.

6.5.3 Speech unintelligible/arrives in bits and pieces

- Speak louder or softer or ask the other party to do so as well.

- Set the software 'VOX' level. Refer to the manual for instructions. This will improve intelligibility. Any sound below the VOX level will be suppressed in order to cancel background noise. However, if the VOX level is set too high, the sound of your voice will also be suppressed, which defeats the purpose.
- Turn down the loudspeaker volume to prevent echo.
- For Internet connections: does your Internet provider allow video conferencing?
- For Internet connections: the Internet is overloaded; try again later.
- The modem transmission speed is too low as a result of a bad line; redial.

6.5.4 No sound transmission/reception

- Some third-party software, e.g. 'Microsoft Netmeeting' and 'See you, See me' require a sound card to handle the processing of sound, instead of using the sound processor of the ViCtor II. In that case, connect the microphone to the sound card. The output for the sound from the ViCtor II is probably already connected to the sound card via the interconnect cable.

Appendix A:
Technical Data

A.1 Camera

System	PAL (CCIR)/St 75 Ohm, 1 Vpp
Power supply	4.5 volt/1.6 watt
Image device	320,000 pixels
Lens	f=4.0, F=1:3.8
Macro	10 mm
Min. illumin.	10 lux
Recommended	500 lux
White balance	Auto
Operating temp.	0 - 40 °C

A.2 ViCtor II

General	Fully Plug & Play compatible
	Fully compatible with H.324/H.323 video conferencing and G.72X audio compression standards
	PCI bus connector
Video section	PAL/NTSC video input
	Composite and S-VHS
	PCI 2.1 inlay capable capture & over-lay with scaling and Hi-res support
Audio section	ADSP audio chip for compression and echo cancel
	Full duplex audio Codec
	Speaker out
	Microphone connector for condensor type microphone with gain control