

EXHIBIT C

User Manual

PC Camera Kit

(USB)

USER'S MANUAL

Camera Installation

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Chapter 1 Introduction

1-1.

Video conferencing supports two-way video and audio communication. This means that two or more people at different locations can see and hear each other at the same time. Desktop video conferencing is a new paradigm for communications, once a connection is made, each person can see and speak into their microphone to record and transmit their voice. When the data is received at the other end, the voice stream is immediately decompressed and reproduced through the destination computer's sound card and speakers, the video is received, decompressed and displayed.

The advantage of USB camera:

It is easy to plug and play, the users don't have to set the IRQ settings, I/O address, jumpers, etc. The camera can be hot insertion, it means you can plug in or pull out the USB connector at any time.

1-2. PC Camera Applications:

- *Face to Face communicate
- *Videomail
- *Video image processing
- *Distance training & education
- *Remote customer service

1-3. The Complete PC Camera Kit Includes:

- 1) The color CMOS camera (with USB cable)
- 2) CD ROM included software and drivers
- 3) User's Manuals
- 4) Microphone (optional)

Carefully inspect for shipping damage. If any is found, immediately repack them into the original packing material and contact your dealer.

1-4. System Requirements

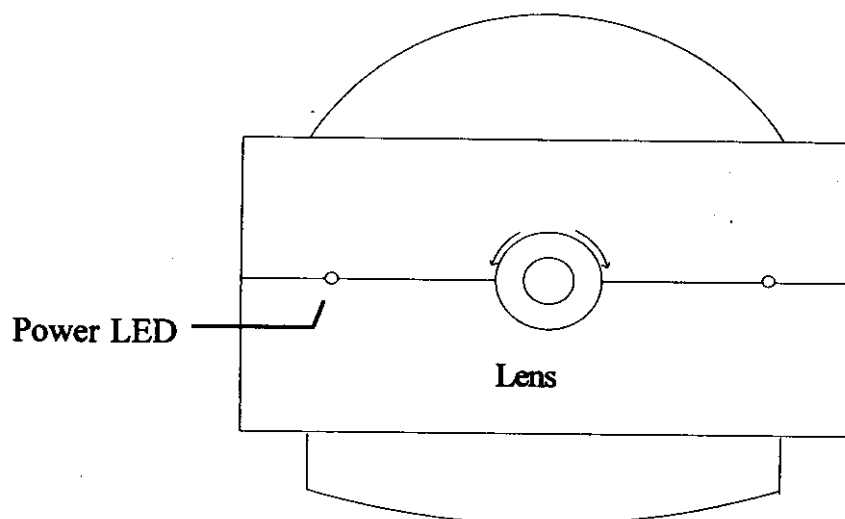
- * USB-equipped computer with Pentium processor and Windows 98
- * 16MB RAM minimum
- * Sound card
- * Microphone
- * Speakers
- * V.34 33600bps modem, ISDN link or better
- * CD ROM drive to install software

1-5 Camera Features

- * 307,200 pixels, 1/3" lens, VGA /CIF format
- * Read out - progressive /Interlace
- * Data format - YCrCb 4:2:2, RGB Original
- * 8/16 bit video data : CCIR601, CCIR656, ZV port
- * Video Timing - 525 line, 30fps
- * Wide dynamic range, anti-blooming, zero smearing
- * I2C interface
- * Electronic exposure / Gain / white balance control
- * Image enhancement - brightness, contrast, gamma, saturation, sharpness, window, ..etc.
- * Internal / external synchronization scheme
- * Frame exposure / line exposure option
- * 5 Volt operation, low power dissipation.

Image sensor:

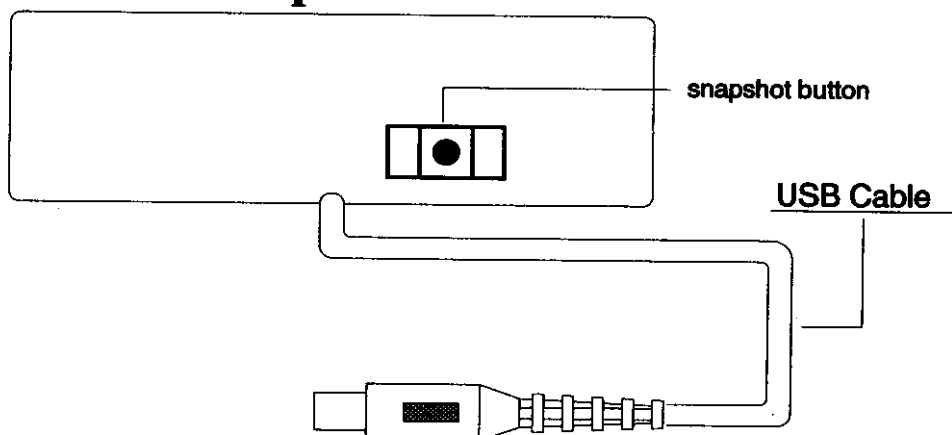
Image Format	644 * 484
Pixel Size	8.4 * 8.4 μ m
Imge Area	5.4 * 4 mm
Electronic Exposure	500 : 1
Scan Mode	progressive interlace
Gamma Correction	0.45 / 1.0
Minimum Illumination	20 l μ x @ f1.4 (3000K)
S / N Ratio	42 dB
Power Supply	5VDC, %
Power Requirements	200mW Active 100 μ W Stby
Package	48 pin LCC



Front View

The LED on the front of the camera indicates that the power is ON, and it will go off if it is in idle mode, you can get a sharp image by rotating the lens.

Rear panel of camera



When you run and video capture program, you can push snapshot button, We'll pop up a application and display captured image. (you have to install STILL image driver before using snapshot button, Or you can operate just as traditional TWAIN.

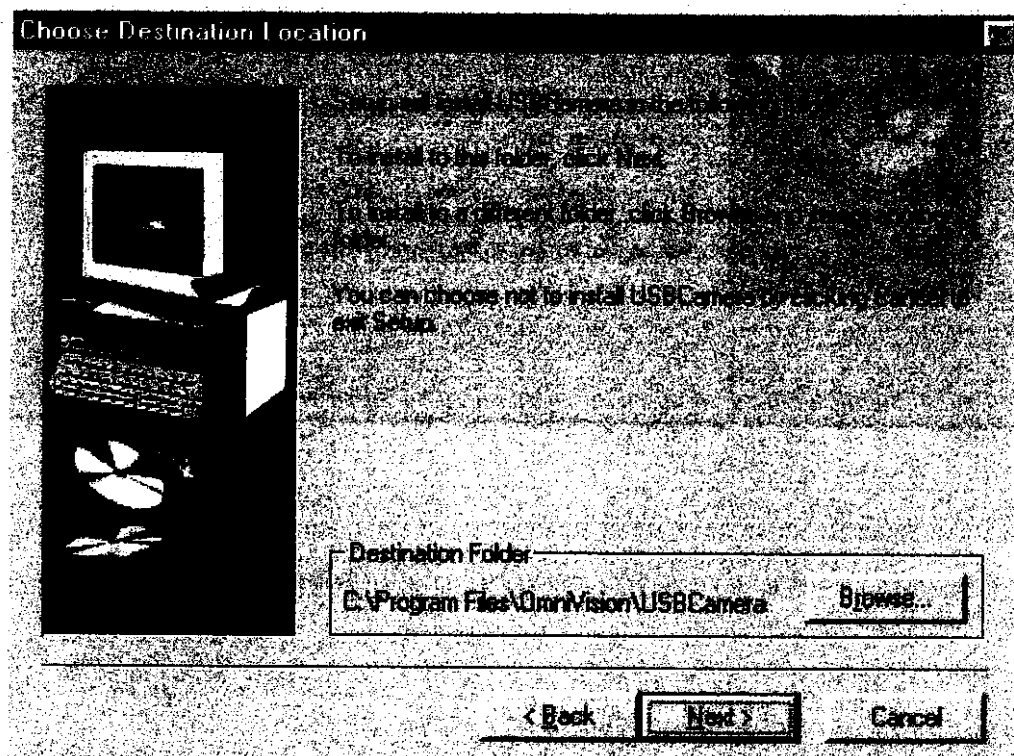
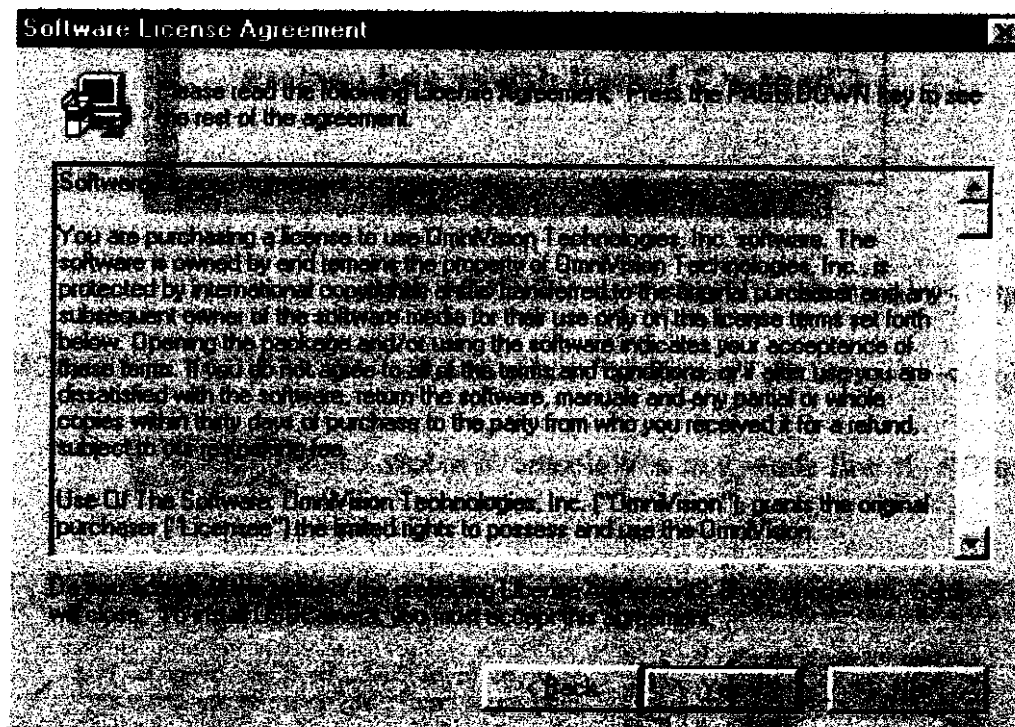
Chapter 2 Install driver and camera

<Step01> Insert the CD into your CD-ROM drive

<Step02> execute the "setup.exe" under directory "OVT/VGA" of CDROM

<Step03> It will show you a Welcome Window Click 

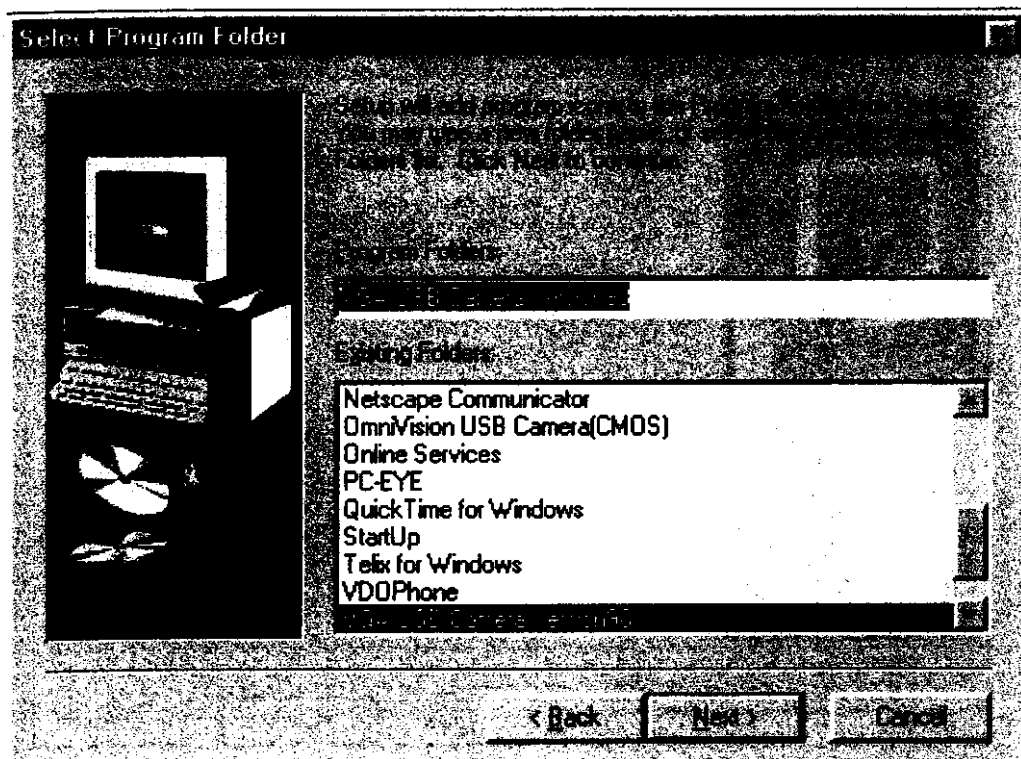




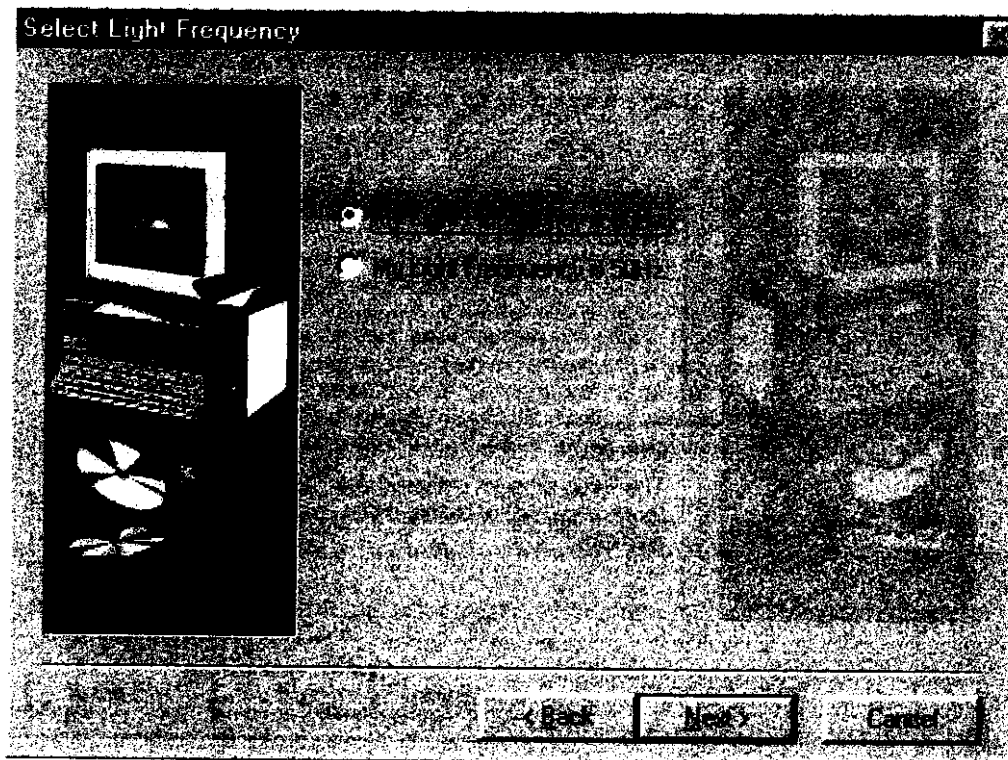
<step06> Select ov7610 driver (Don't select OV5017 or OV7110)



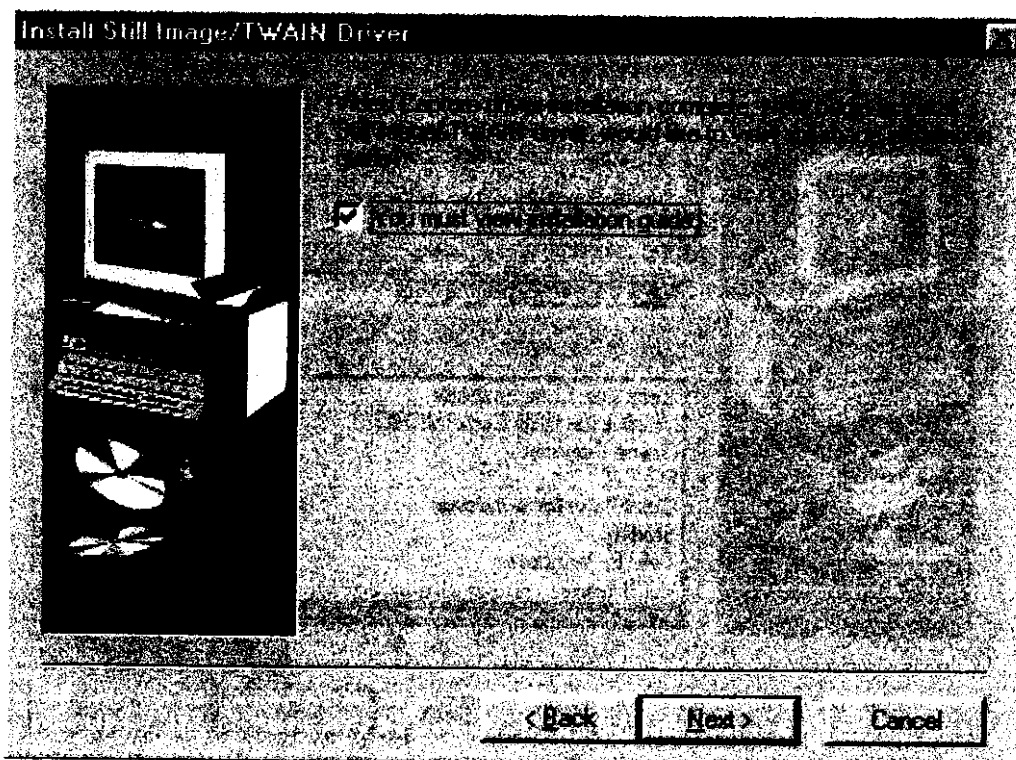
<step07> Click 



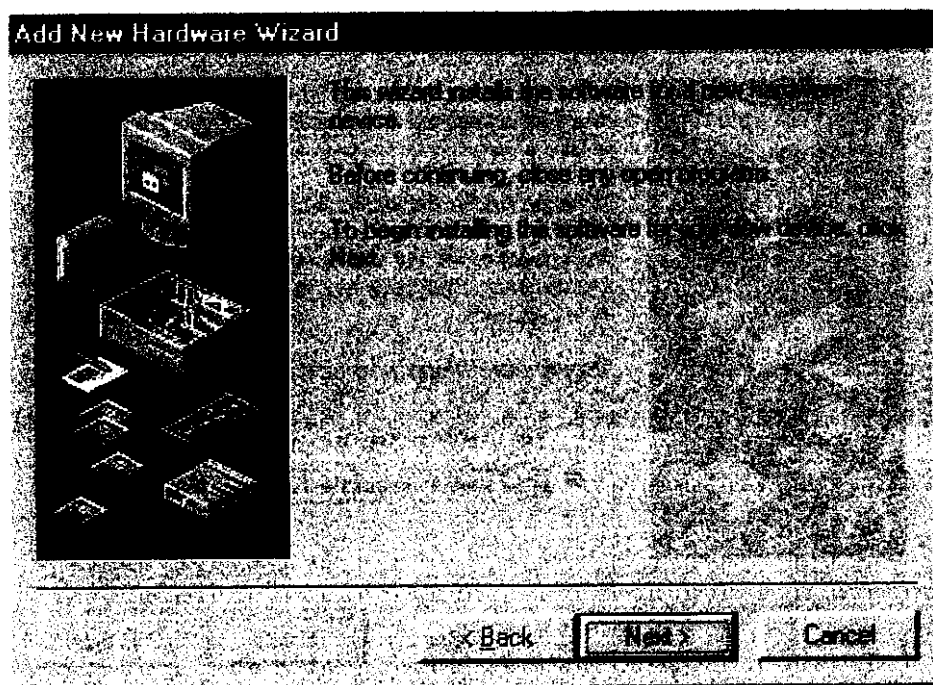
<step08> Choose 60Hz in the United States, Choose 50Hz in Europe



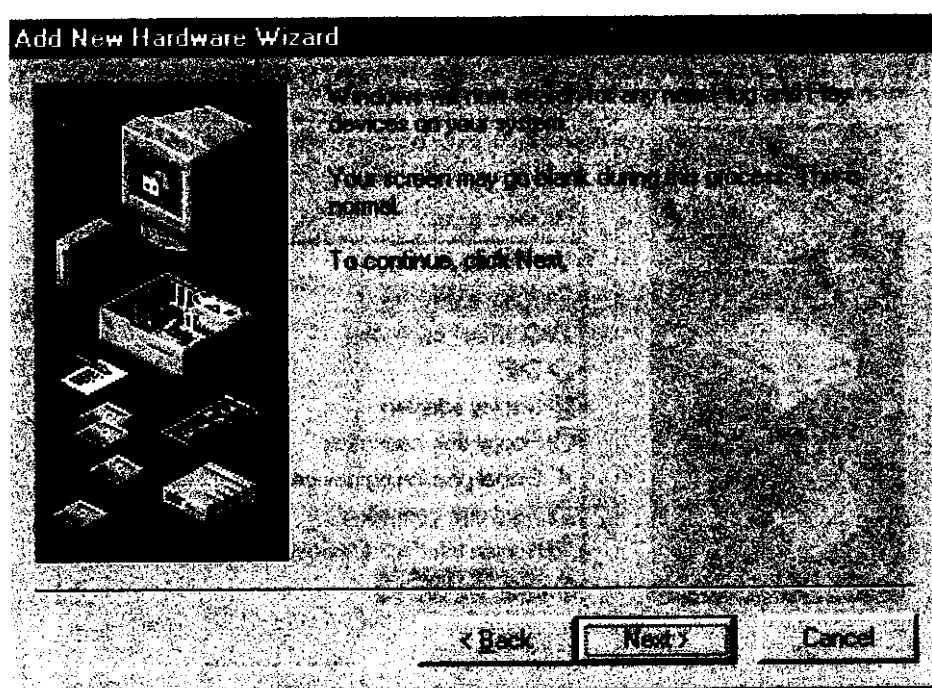
<Step09> Click 



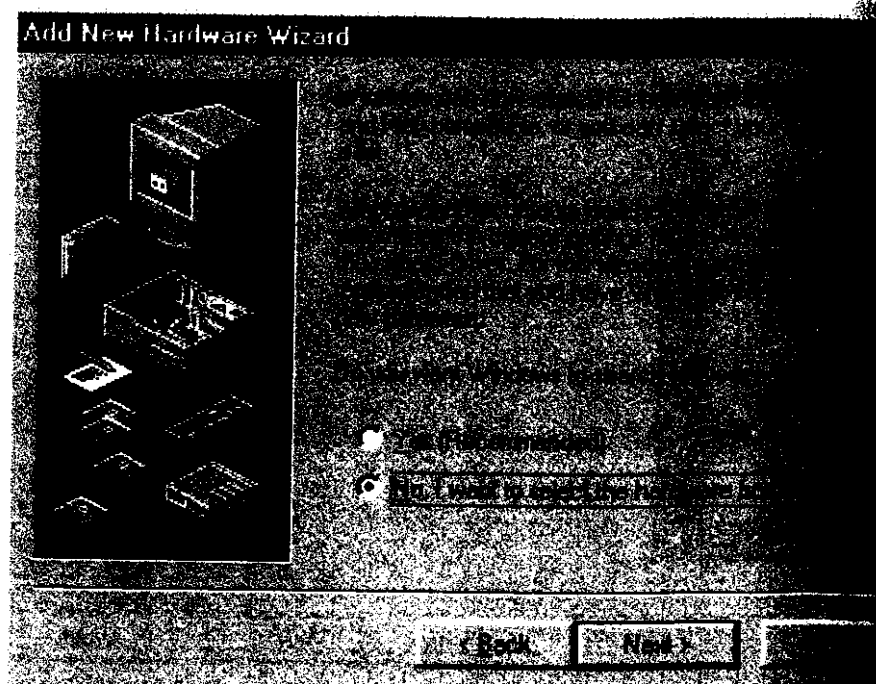
<Step10> Click **Next >**



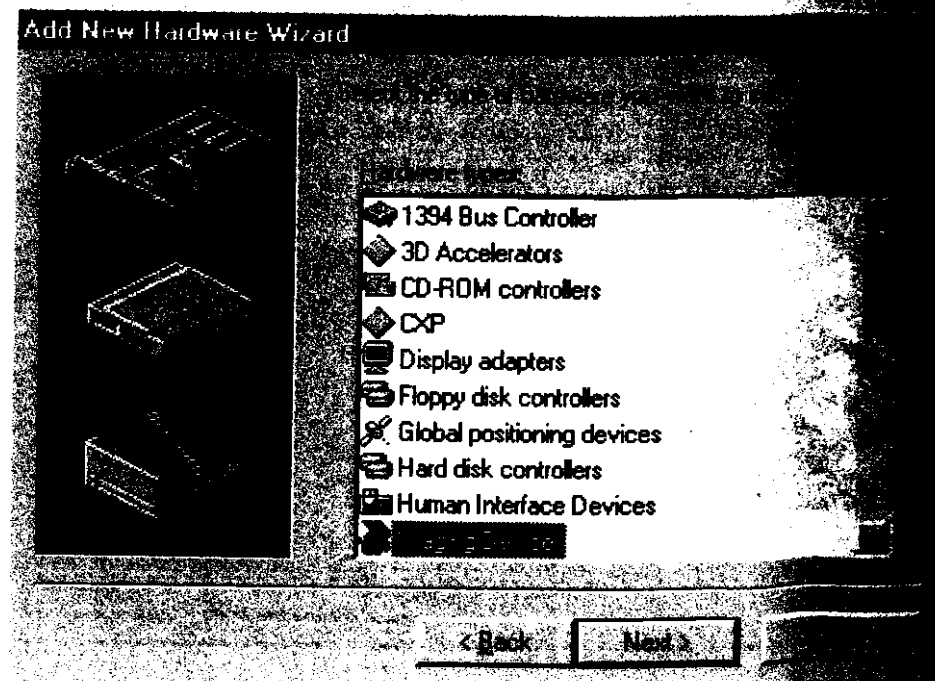
<Step11> Click **Next >**



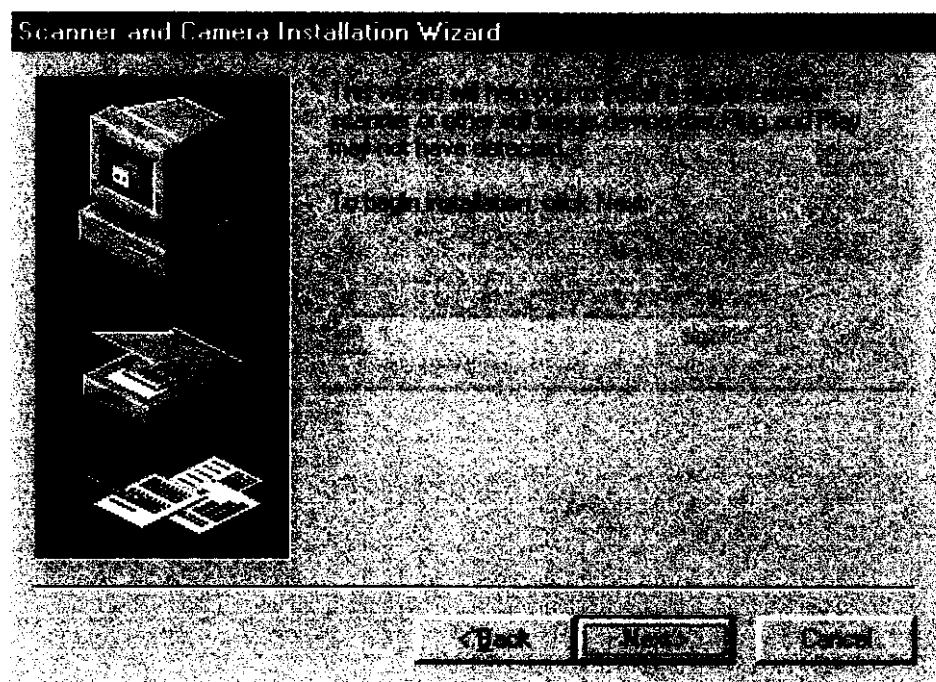
<Step12> Select "No" and Click **Next >**



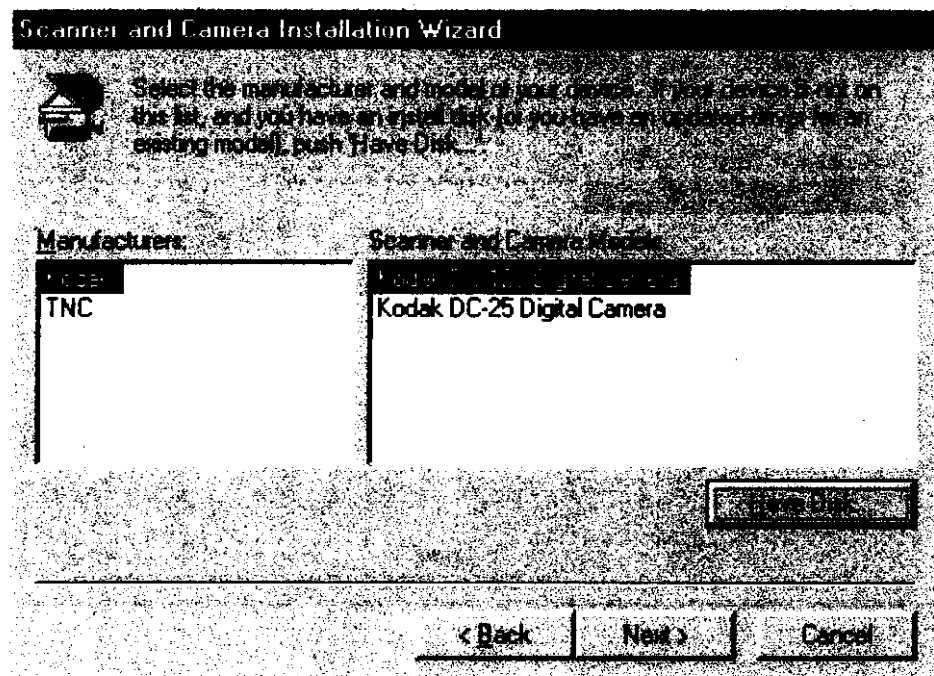
<Step13> Select "Imaging Device" and Click **Next >**



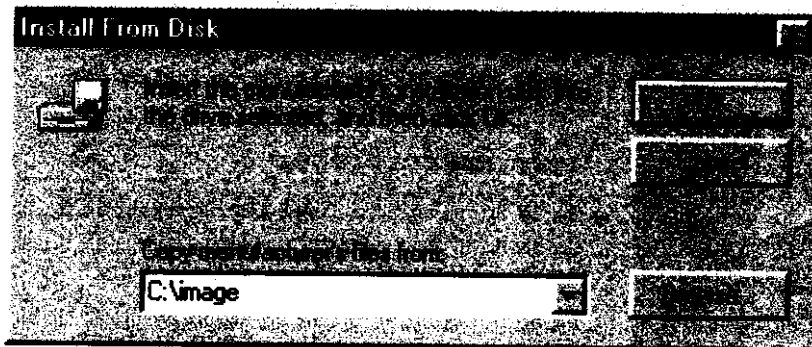
<Step14> Click 



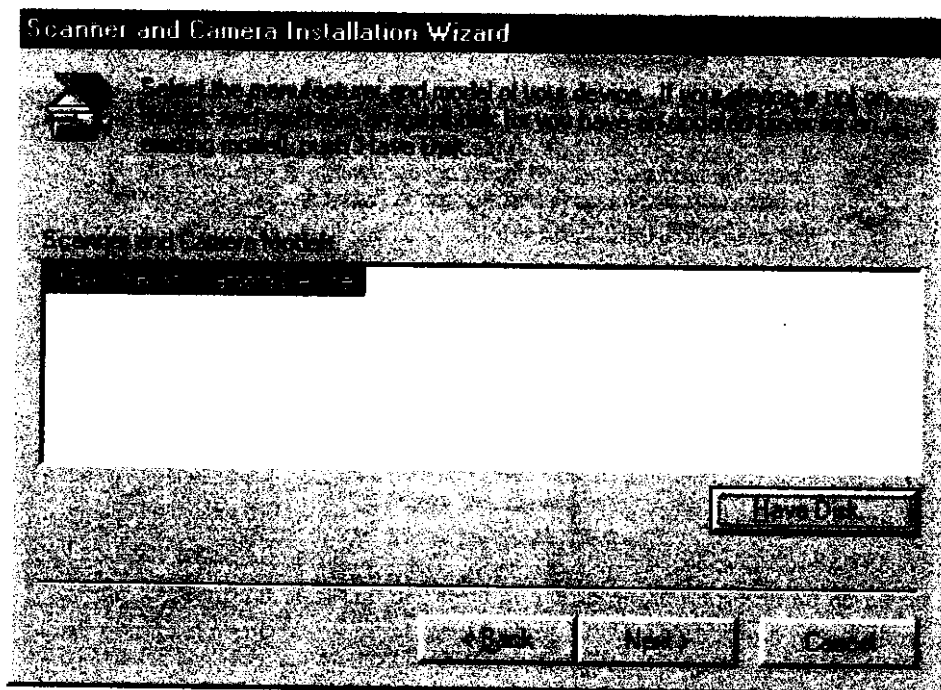
<Step15> Click 



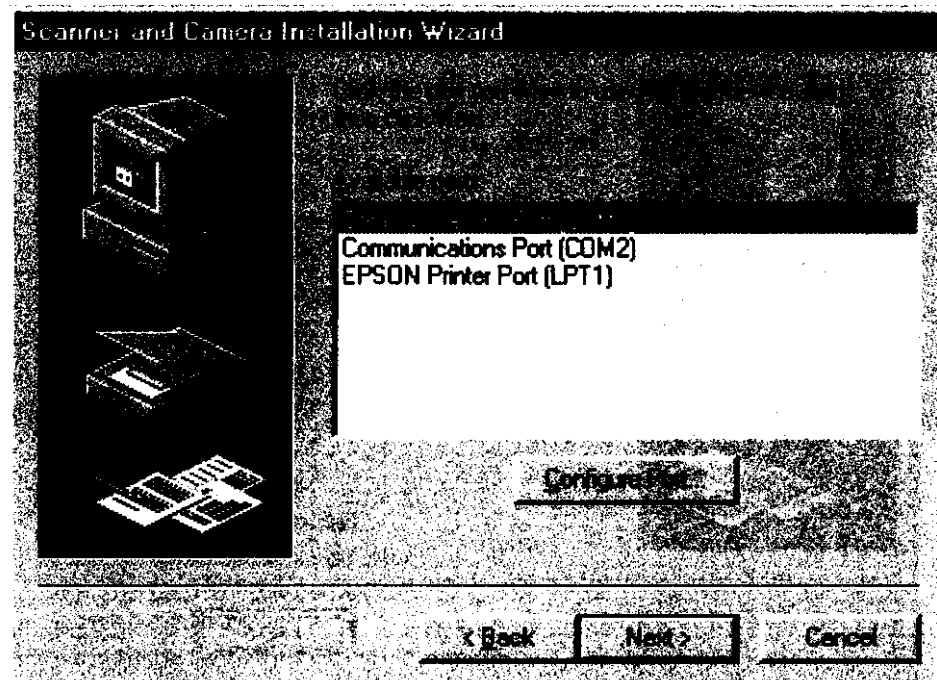
<Step16> Type "C:\image" and Click 



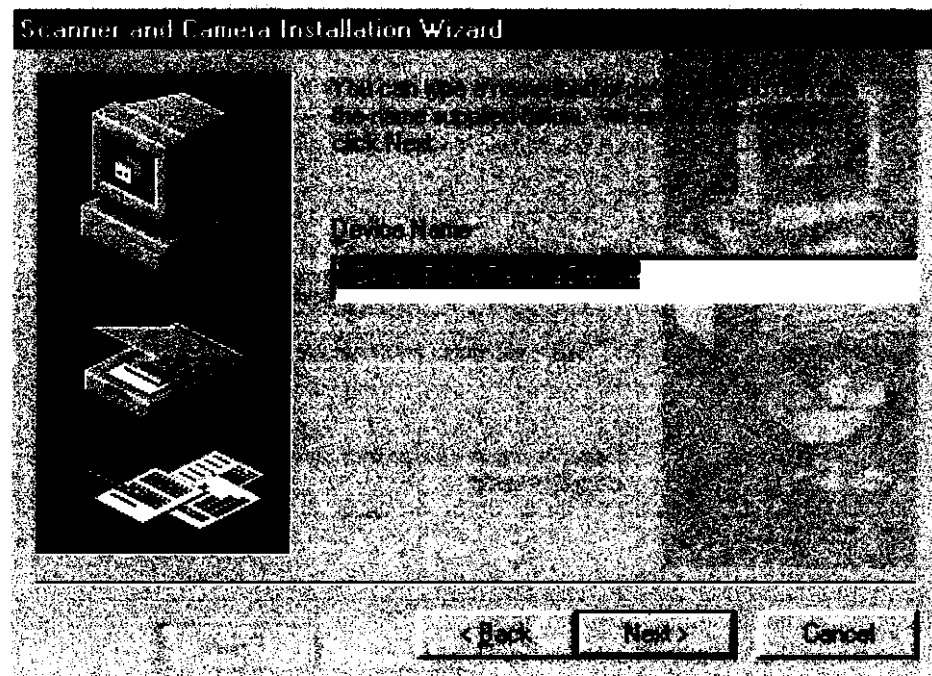
<Step17> Click 



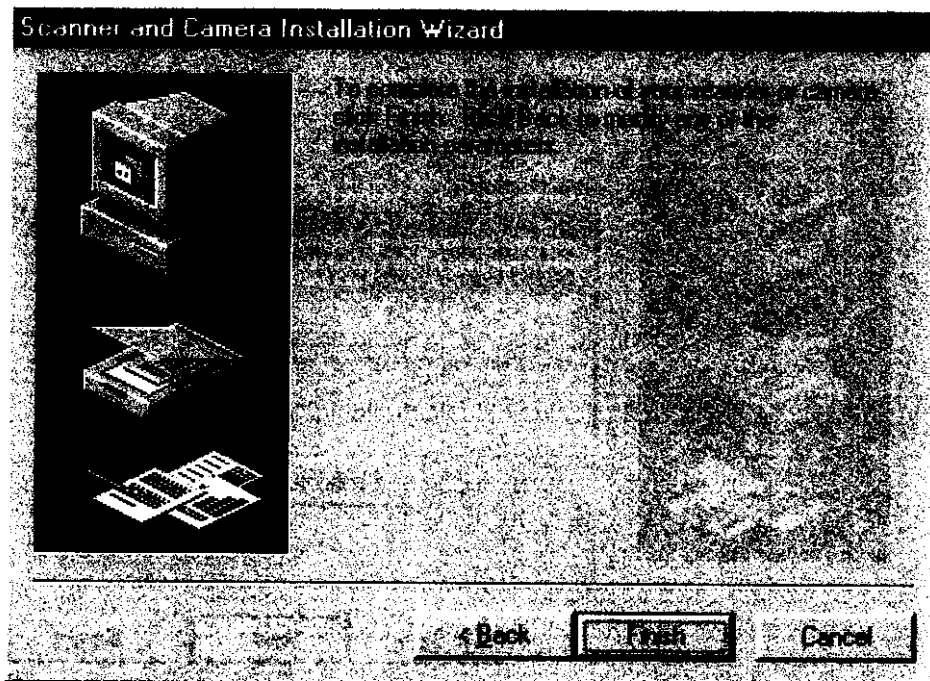
<Step18> Click 



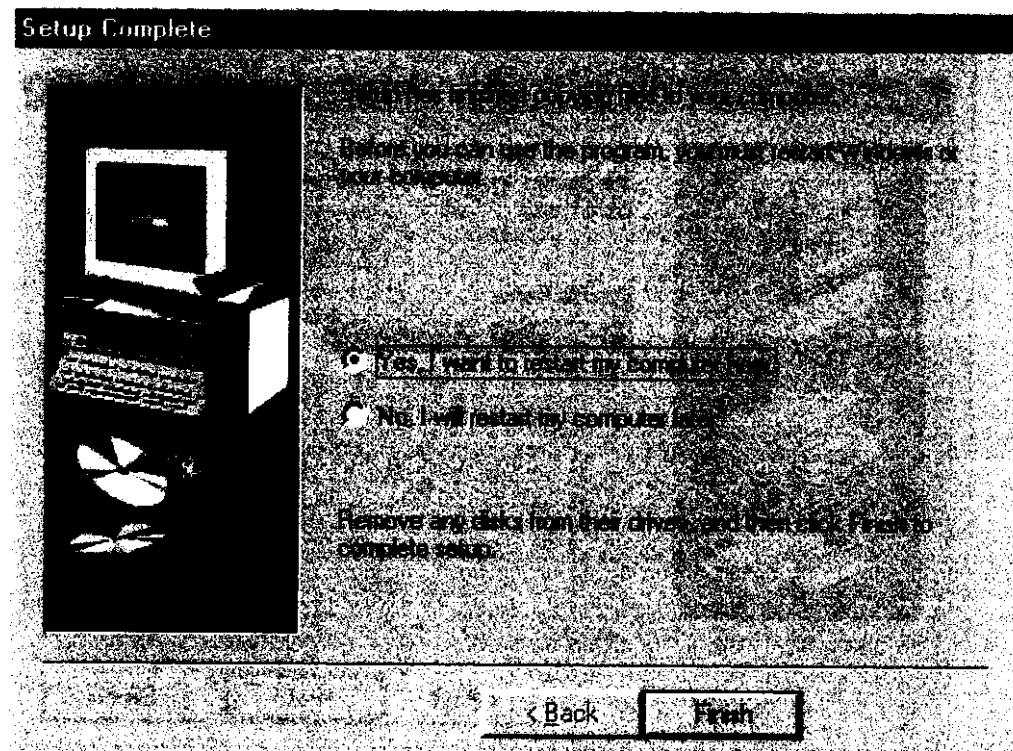
<Step19> Click 



<Step20> Click **Finish**



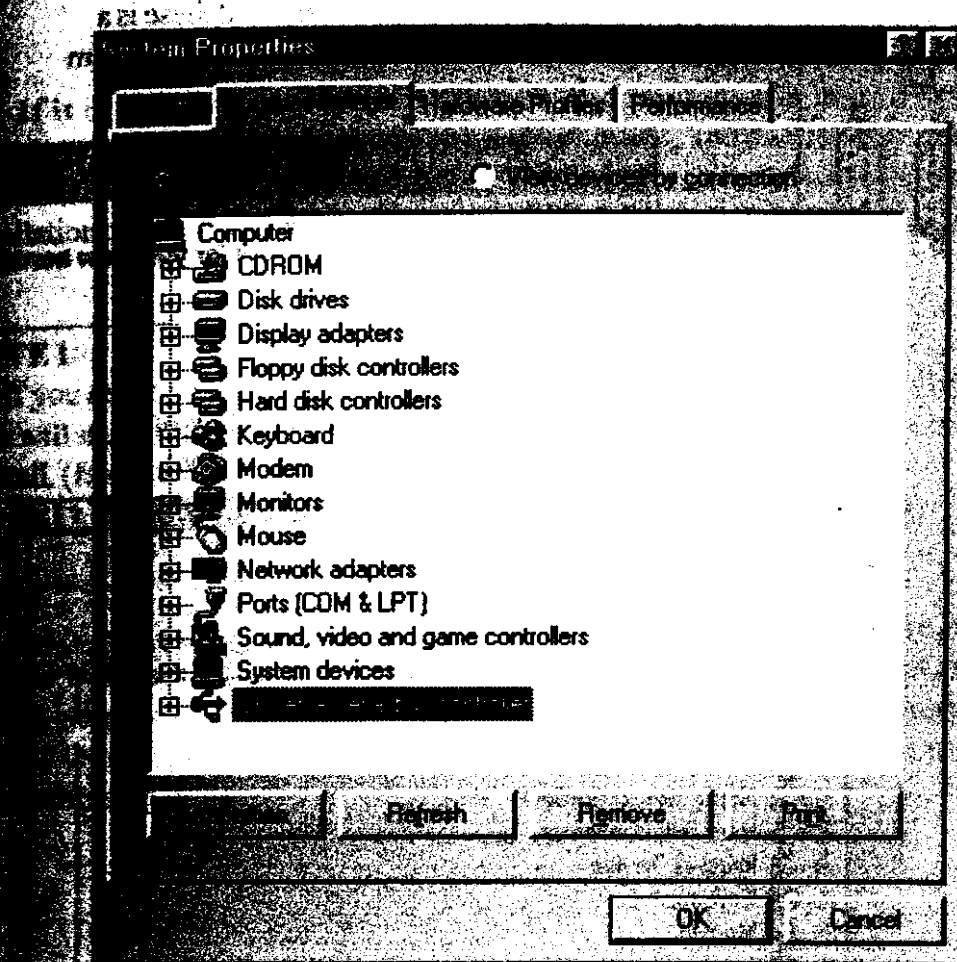
<Step21> Select "Yes" and Click **Finish** to restart the computer



➤ After rebooting, before using USB Camera, Please make sure your USB port is enabled.

To determine whether your USB port is enabled

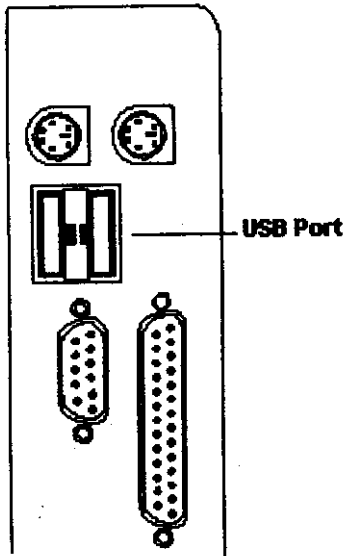
1. Right-click on **My Computer** and then click **Properties**.
2. Click on the **Device Manager** tab. If your USB port is enabled it will be listed among your computer's devices.



If your USB port is not enabled, you must run your computer's setup program to enable it.

<<NOTE>>

Confirm your computer has a USB port, shown in the diagram below



Plug in the USB camera and there is a Window displayed to tell you the system found a new hardware.

New Hardware Found

VGA USB Camera Version98

Windows is installing the software for your new hardware.

and then you can check whether USB camera work with system in "Device Manager" as shown below:

System Properties

General Device Manager Hardware Profiles Performance

View Devices by Type

- CDROM
- Disk drives
- Display adapters
- Floppy disk controllers
- Hard disk controllers
- Imaging Device
- Keyboard
- Modem
- Monitors
- Mouse
- Network adapters
- Ports (COM & LPT)
- Sound, video and game controllers
 - Wave Device for Voice Modem
 - Wave Device for Voice Modem
- System devices

Properties

Refresh

Remove

OK

Chapter 3 Install Application Software

After successful to install drivers, the next step is install software. Select "Install" under directory "PC-EYE" of CD-ROM, and it will install VDOPhone, PhotoCard, PhotoMagic, VideoPlayer ...etc (if you select them in "Installation options") all these softwares have on-line manuals.

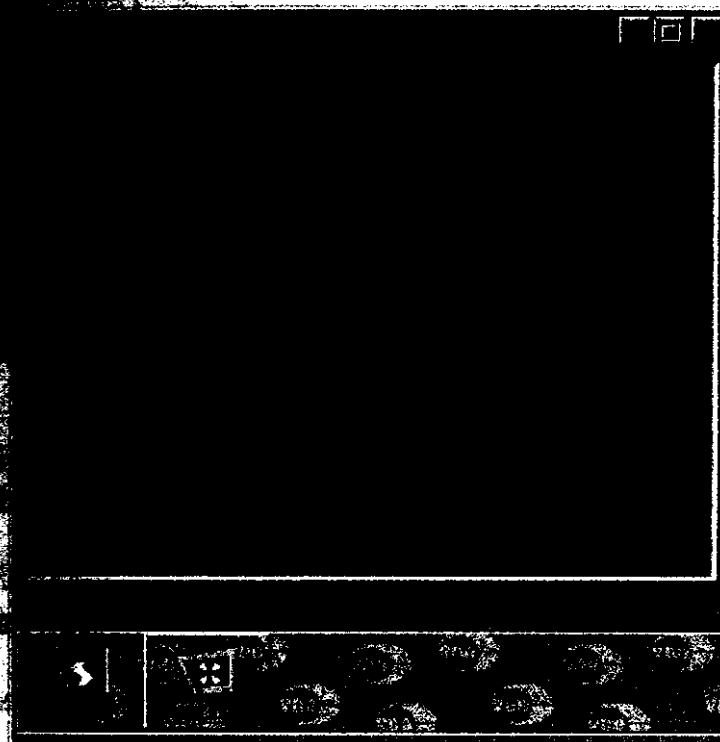
Select VDOPhone in "Installation options", after finishing install PC-EYE, to install VDOPhone 3.0, please refer to the "VDOPhone users manual" (02 of page 1)

Select NetMeeting in PC-EYE main menu, if your system had NetMeeting, then just click this icon, PC-EYE will pop up NetMeeting. If you want to install it, please run install program under directory "NetMeeting" under directory "Netmeeting" there are some subdirectories for

Chapter 4 Video Adjustments

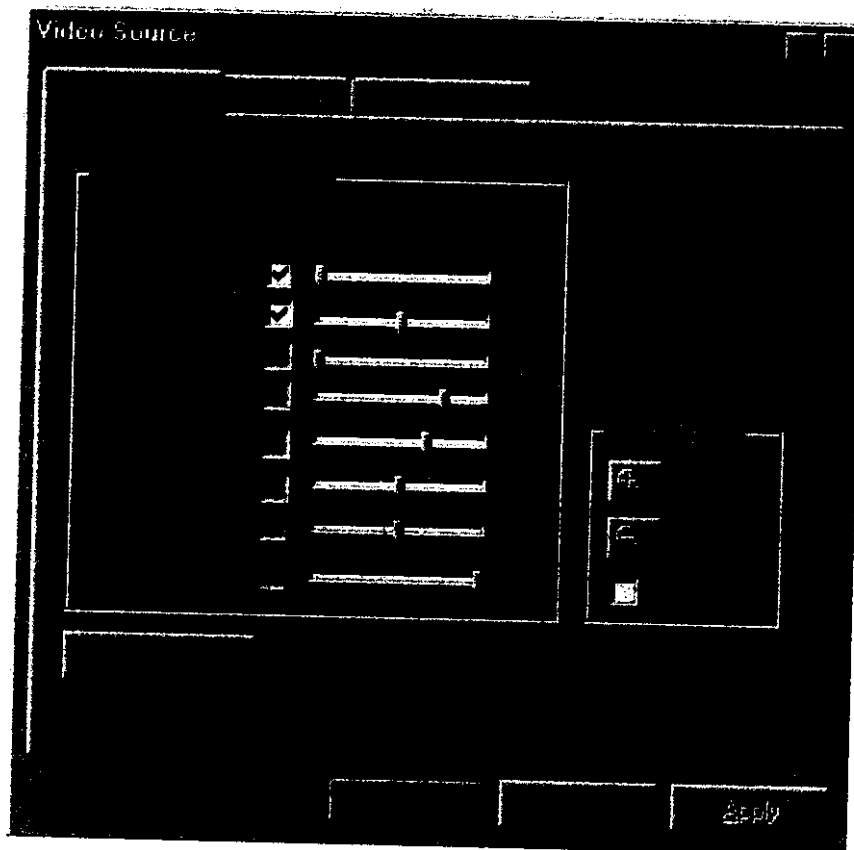
In the example of VDOPhone selfview window, you can change video format by Clicking "Format" or "Source".

If you use different video conferencing software, you also can change video format and source



<Select Source>

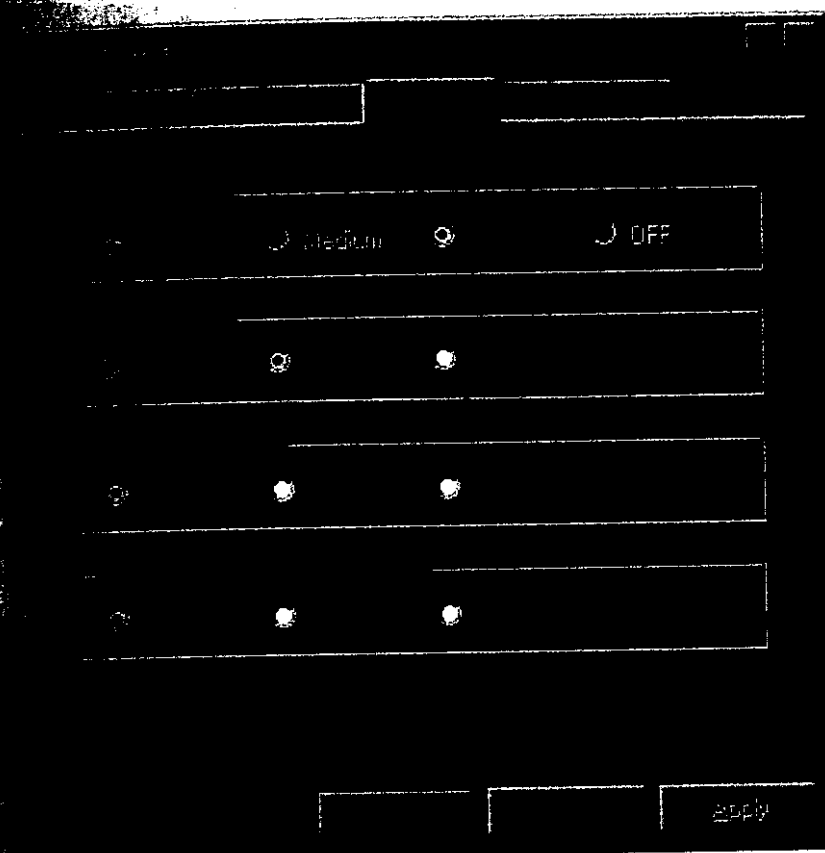
Device control : You can change Brightness, Contrast, Saturation..etc.



Most device features can be controlled by selecting check boxes and adjusting sliders. Pressing default button will bring all controls back to their default setting. Only a few properties need some special attention.

For zoom control, when it is enabled, move the cursor into the dashed rectangular and then press the left button of the mouse, you can do pan and tilt.

You can change color temperature Background light Compensation according to your environment.



High: ordinary quality.

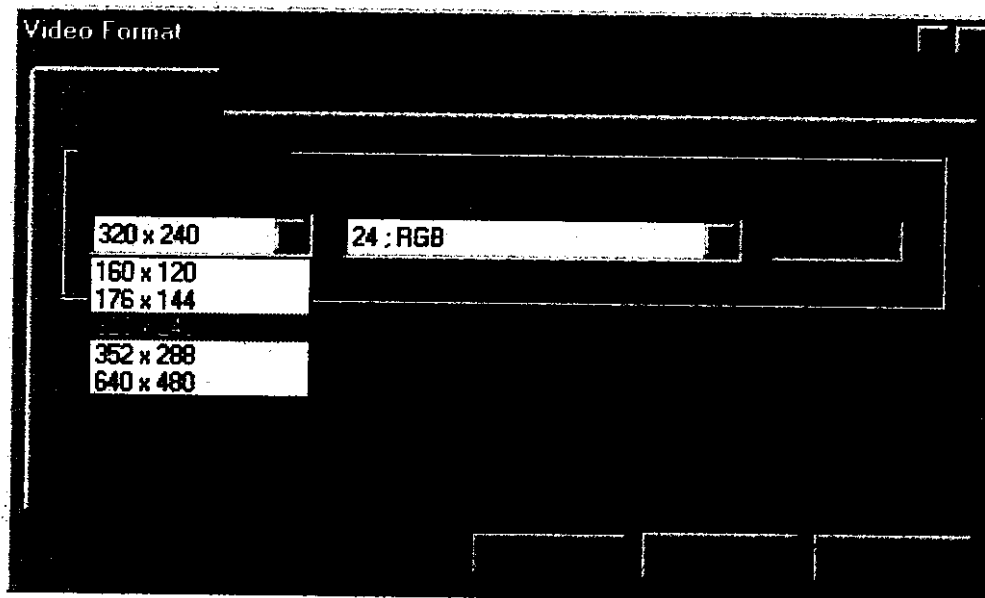
Low: good quality.

The filter control is for back light compensation. Default setting is banding filter. When it is enable, two options (50 Hz and 60 Hz) are available.

Temperature are used for image color preference setting.

Background light compensation provides extended dynamic range of the OVT camera.

Choose resolution and pixel depth.



<Note>

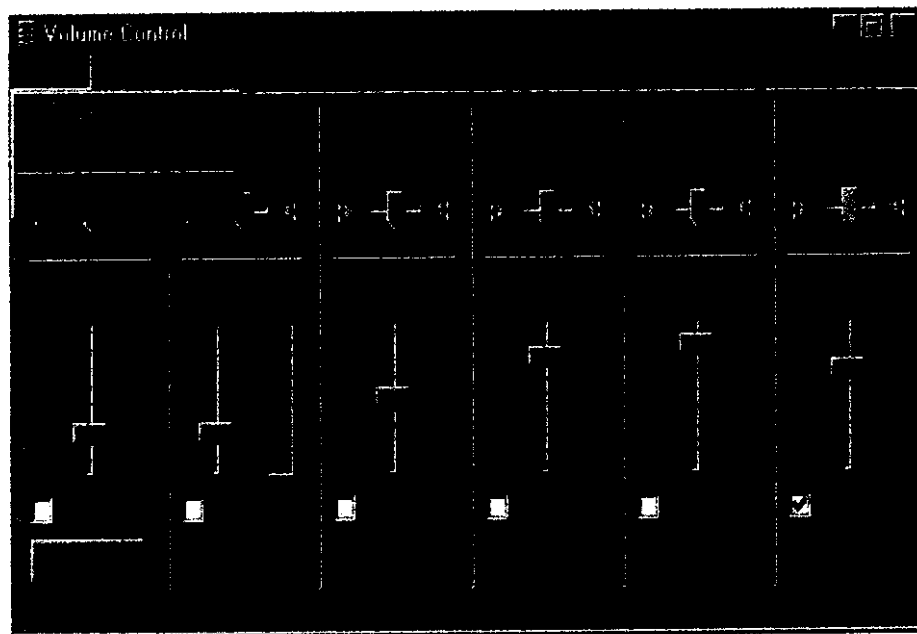
1. If your display setting is TrueColor (24bit) then you have to choose "24;RGB".
2. If your display setting is HighColor (16bit) then you have to choose "16;RGB".

Chapter 5 Microphone Setup

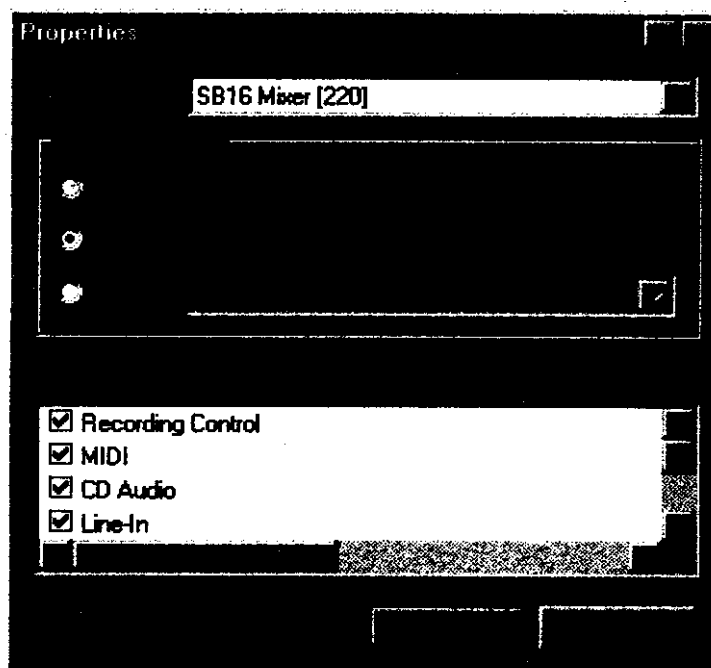
Plug in microphone into MIC jack of sound card

<Step01>

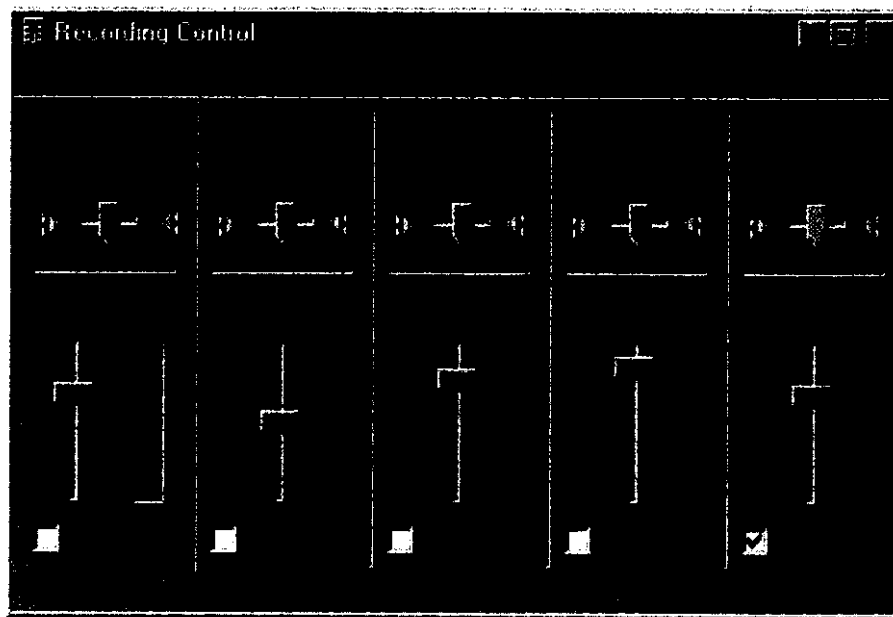
- 1) "Mute" Microphone from volume control window
- 2) Select "Properties" in options menu



<Step02> Select "Recording" item and "Recording Control" then Click 



<Step03> "Select" microphone and adjust volume and then close this window to finish microphone setup.



INFORMATION TO THE USER

This device complies with part 15 of the FCC Rules.

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.

NOTE: 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 the 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 into 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.

This booklet is available from the US government Printing Office
*Washington, DC 20402, Stock NO. 004-000-00345-4.

CAUTION: Any changes or modifications not expressly approved by the grantee of this device could void the users authority to operate the equipment.
