www.hansolel.co.kr

FCC NOTICE

This equipment has been tested and complies with the limit 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 to radio communications. However, there is no guarantee that interference will not occur in commercial 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 when switching the following measures :

Re-adjust or relocate the receiving antenna Increase the distance between the equipment and the receiver.
Connect the equipment to an outlet on a different circuit than that which the receiver is connected to.
Consult the dealer of an experienced radio / TV technician for help.

B Class Equipment

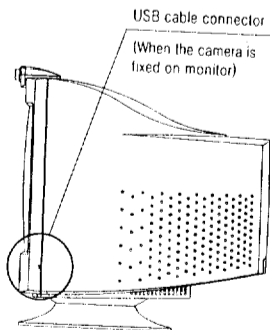This equipment is registered suitable as Electro-Magnetic emission for home usage and can be used in all areas including resident area.

Please read the manual carefully before you use the camera.

1. Part Names

Package Contents
- PC camera
- USB cable
- S/W CD
- Manual

USB cable connector
(When the camera is fixed on monitor)

Snapshot Button

Focus Dial

Operation Indicator
(Green LED)

USB cable connector   Stand
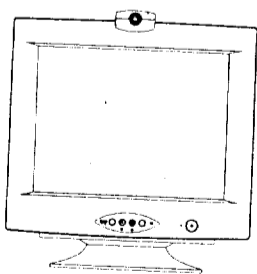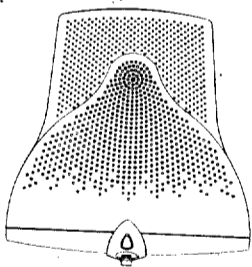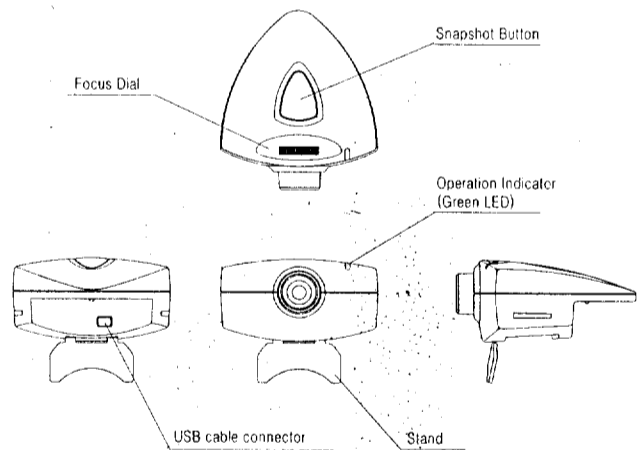
(When the camera is separated from monitor)

☻ Caution

▶ When you connect the camera to monitor, be careful not to expose this camera to severe impact, as this may cause the camera to malfuction.

2. Before you start

> **Q Note**
>
> * Install the software first before connecting the camera to PC.

(1) Make sure that all of the package contents are included.

(2) Make sure that your PC meets the minimum system requirements. It may cause malfunction of the camera during the installation process otherwise.

Minimum System Requirements

* USB support Host PC
* Pentium 200MHz (233MHz or faster recommended)
* Windows 98/SE/ME/2000
* 32MB RAM (64MB recommended)
* 100MB hard disk space available (2.0GB recommended for video capture)
* CD-ROM drive
* 800x600, 16 bit color display (1024x768, 24 bit recommended)
* Microsoft Internet Explorer for video e-mail
* LAN card or 56.6K bps modem for Video Conference
* Windows compatible sound card (full duplex sound card recommended)
* Speakers required for receiving audio

(3) Power on the PC and start Windows.

3. Installing software

> **Q Note**
>
> * Install the software first before connecting the camera to PC.

(1) Insert the software CD into your CD-ROM drive. The autoplay installation program will start automatically.

(2) Click "Monitor Install" then monitor driver will be installed automatically and come back to the installation window.

(3) After the monitor driver is installed, click "PC camera install" to install the PC camera driver . All processes are done automatically.

* It takes 5~10 seconds to load the autoplay according to PC system. If the software does not automatically load, run "Windows Explorer". And then run "Autoshell.exe" in CD-ROM disc.

(4) Once the installation is completed successfully, the window will appear as shown on the right. Clicking 「Finish」will start the installation window again.

(5) The software installation is completed click 「Exit」
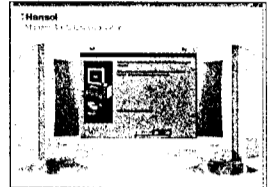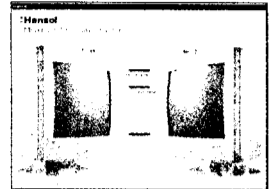
4. Installing Hardware

> **Q Note**
>
> * Install the software first before connecting the camera to PC.

(1) Plug the USB cable of camera in USB port of PC.

Monitor USB cable connector

* When the camera is separated from monitor, plug the USB cable into the connector of camera.
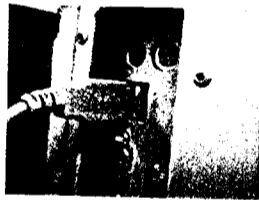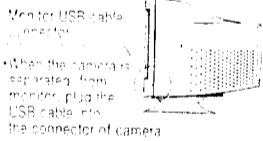
(2) Add New Hardware Wizard window will appear. Click 「Next」to continue.
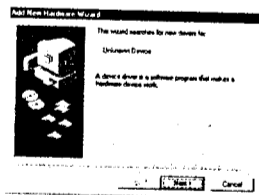
(3) Click 「Next」

(4) Mark (∨) "Specify a location" in Wizard window. And click 「Next」

(5) Click 「Next」

(6) After successful installation ,the right window will appear. Click 「Finish」,then indicator lamp of camera will be turned on. Now your camera is ready.

5. Caution for installing

> If you connect the camera to PC before software installation, installation error may occur. Therefore it is recommended that you should click 「Cancel」 during the following (1)~(4) stage and disconnect the camera from PC, and then install the software first referring to page 6~8.

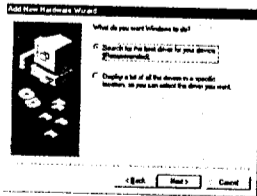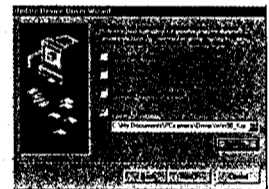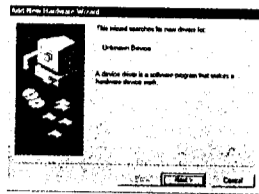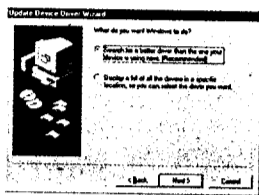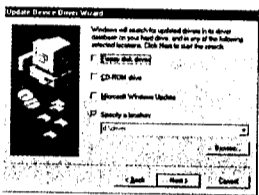(1) "Add New Hardware Wizard" window will appear. Click 「Next」 to continue.
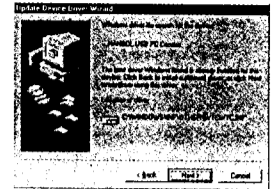
(2) Choose "Search for the best driver for your device (Recommended)". Click 「Next」

(3) a) Insert the installation CD-ROM.
b) Choose "Specify a location".
c) Click Browse... and select "Driver" and Windows version folder in the CD-ROM disc.
d) Click 「Next」

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(4) Click 「Next」

(5) Click 「Finish」 and then the indicator lamp of camera will be turned on. Install the software referring to Page 6~8.
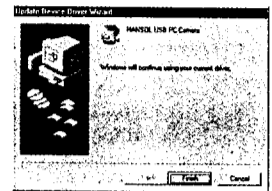
◌ Note

> In case of occurring the message 「Please insert the disk labeled "Windows 98 CD-rom", and then click OK」 during the installation, insert the Windows CD-ROM and click OK. If you don't have the Windows CD-ROM follow the next instructions.

(6) Click OK in the Insert Disk message window.

(7) Remember unfound file name in right window.

(8) a) Select 「Start」·「Find」·「File or folder」 in the task bar.
b) Type the file name at 「Named」 frame and click 「Find Now」.
c) Specify a location of the file at "Copy files from" frame in right window.
d) Click 「OK」
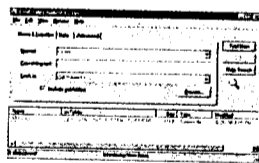
(9) If Insert Disk message window occurs again, repeat the above (6)~(8) stages.

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1. Viewer

(1) Using Viewer

> "Viewer" displays and captures still images & Video clips. You can also send the images via e-mail without complicated work.
> Click Viewer icon "HScam" to start Viewer program.
> Various functions of Viewer program are available.

Hansol USB CAMERA

1. Help
2. Minimize
3. Exit
4. Video format
5. Camera control
6. Save
7. Load
8. Gallery open
9. Track bar
10. Send e-mail
11. Image editor
12. Snap shot
13. Record
14. Rewind
15. Play
16. Pause
17. Fast forward
18. Stop
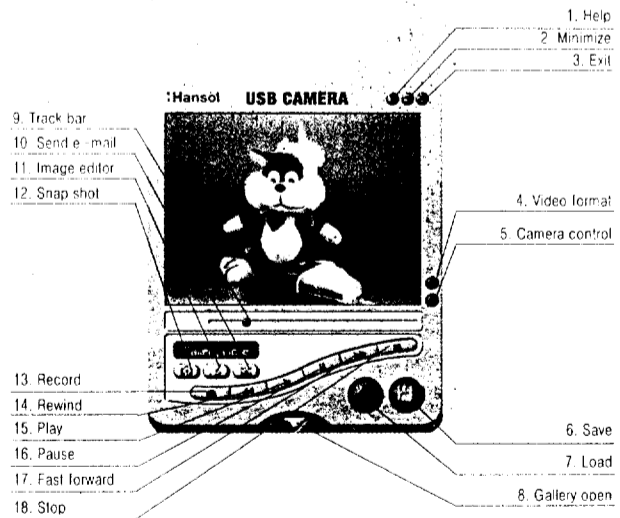
(2) Viewer Buttons

1.Help	Explains the basic features and the direction of the program.
2.Minimize	Hides viewer windows.
3.Exit	Exit Viewer program.
4.Video format	Changes size and format of the image to be captured.
5.Camera control	Controls brightness, contrast of Viewer image.
6.Save	Saves still images & video clips to file.
7.Load	Loads saved still image or video clip.
8.Gallery open	Opens gallery which saves still images & video clips temporarily
9.Track bar	Adjusts recording time(Max 60 seconds)
10.Send e-mail	Attaches still image & video clips to e-mail directly.
11.Image editor	Calls image editor with the selected image.
12.Snap shot	Captures still image.
13.Record	Records video clip for the time you set.
14.Rewind	Rewinds video clip.
15.Play	Plays recorded video clip.
16.Pause	Pauses the playing video clip.
17.Fast forward	Moves fast forward playing video clip.
18.Stop	Stops the playing video clip.

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(3) Functions

Send e-mail

Still images are formatted to JPG and video clips are compressed by MPEG-4. Since the MPEG-4 is not a basic compression codec of Windows, they may not be displayed on some systems. If the video clips doesn't work with your player, download "Windows media player" at the Microsoft's web pages.

3.Click send button after typing receiver name, subject and mail contents.
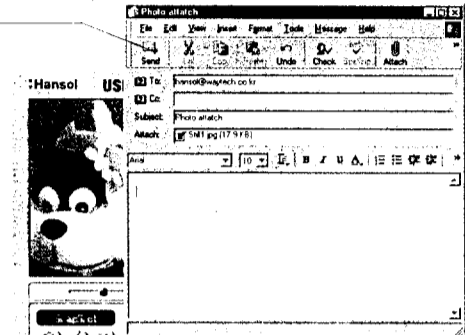
1.Click snap shot button.

2.Click send e-mail button

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Video save/load

Video clip can be saved as AVI & ASF (MPEG-4) type
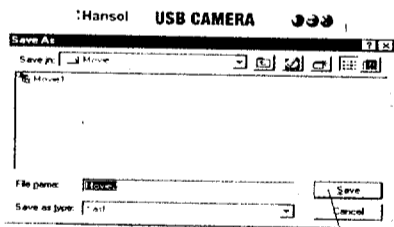
1.Adjust recording time (max 60sec)

2.Record a video
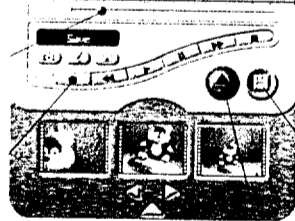
4.Type file name and click save button.

3.Click save button

5.Click load button and select a file.

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Still image save/load

Still image can be saved as BMP & JPG type.
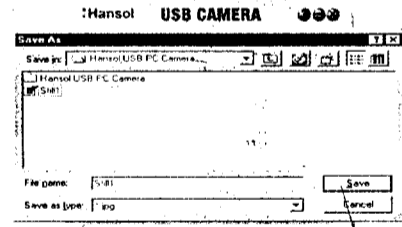
1.Capture still image

3.Type file name and click save button.

2.Click save button
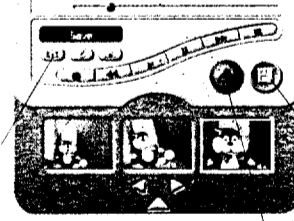
4.Click load button and select a file.

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Video format

Adjusts the display size, bit per pixel size and frame rate.
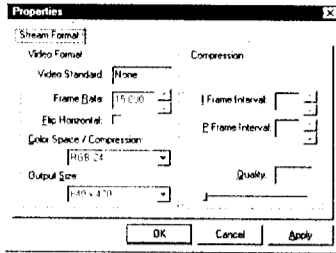
Frame Rate — Adjusts the number of displayed frames per second(fps). 640 x 480 : maximum 15fps 320 x 240 : maximum 30fps to increase transmission speed, lower the resolution to 352 x 288 or 320 x 240

Flip horizontal — Reverses the displayed image horizontally like mirrored image.

Color S/C — Adjusts the quality of display. RGB24 mode is recommended for the best resolution. However transmission speed can be down.

Output size — Adjusts the display pixel size of the viewer. The size of display doesn't change, but images can be captured with the adjusted size using the button on top of camera.

Camera control

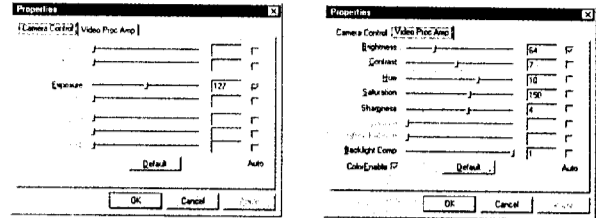Adjusts brightness, contrast, hue, saturation and sharpness.

Automatic adjustment — Adjusts brightness and exposure automatically by marking "Auto".

Color selection — Converts the display to color or black and white.

Flicker — Removes the flickering of the display.

Defaults — loads default settings

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2. Editing picture

1) Click the image editor button to connect the image to "Microsoft Imaging for windows" directly.

2) If you want to edit, you have to save the image as BMP format first. Use other image editing software such as Adobe Photoshop when you need more functions.

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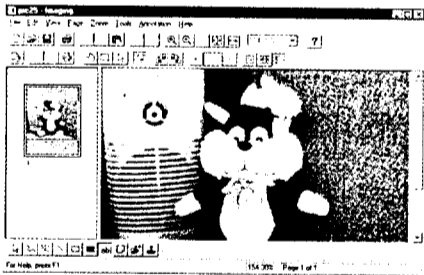
3. Video Conference

Microsoft NetMeeting is a video conference software supported by Windows.

1) Download

Windows 98 contains NetMeeting program basically. If you want latest version of NetMeeting, you can download from Microsoft's homepage.
(http://www.microsoft.com/windows/netmeeting)

2) Find other people - Directory

Microsoft Internet Directory is based on the MSN Messenger Service. You can contact your friend, coworkers, and others when they are online. You can still connect to other ILS servers on the Internet and use NetMeeting to call people listed in those directories. Other Internet directory services are located at:
(http://www.netmeet.net, http://visitalk.com)
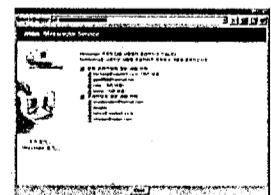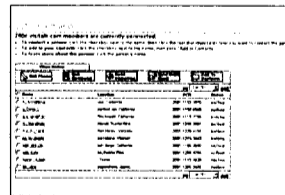
3) How to act

NetMeeting lets you hold video conference calls, send text message, collaborate on documents, and draw on an electronic white board over the internet or and intranet.
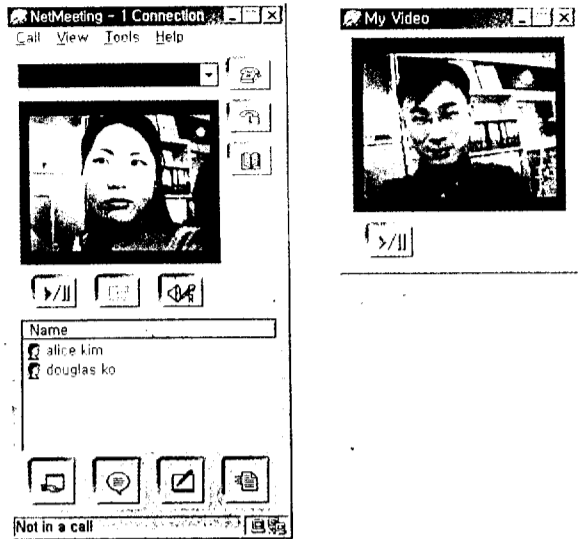
> Various features of NetMeeting.
1) Video conference.
2) Sharing white board.
3) File transfering.
4) Sharing user application.

4.Security S/W

> Security S/W provides wide range of watching functions. It takes snapshots when anybody comes near your PC. You can rewind the picture when you come back.

When you click "HScop" icon, security viewer will be appeared.

2. Click start button to begin HScop.

3. Click Stop button, when you come back.

4. View the detected images.

1. Adjust sensitivity of security function.

5. Click Start button, you can see pictures in sequence.

Q Note

You should delete captured file for your PC's hard disk space.
File location: c:\Program files\HANSOL USB PC Camera\HSCOP

Q Note

Generally, application programs, which are related with video display and record, require a lot of memories of your PC. Therefore it is recommended that you close all other programs before starting video application programs. After starting video application programs, adjust Focus Dial of camera to take good image quality.

1.Cannot install properly!

(1)Did you check your PC system first?

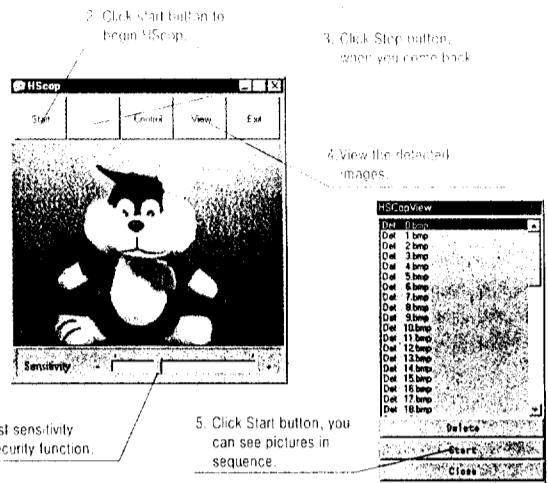Make sure that your PC meets the Minimum System Requirements described at page 5.

(2) Did you connect the camera to your PC without installing the software before!

If you cannot the camera to your PC before the soft ware installation,the installation may not work properly. In this case, uninstall camera and restart the installation process referring to page 6~8.

⊘ Uninstalling the Camera

- Select 「Start → Programs → Hansol USB PC Camera → Driver → Uninstall Driver」 in the task bar to remove driver.
- Select 「Start → Programs → Hansol USB PC Camera → Uninstall Hansol USB PC Camera」 in the task bar to finish the uninstallation.
- Disconnect the camera from PC and then reboot your PC.

(3) Does your PC recognize USB port properly?

☞ Please check whether your PC has USB port. Some PCs may not have USB port and Windows 95 does not support USB port.
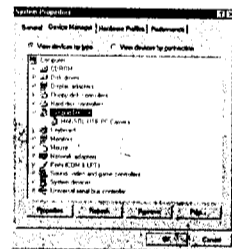
☞ To make your PC recognize USB port BIOS should be set properly. Set the USB ports enable in CMOS setup. Please refer to our PC manual from vendor.

☞ Recognition error for the USB port might occur while using the via chipset in the main board. In this case, please download patch files from viatech homepage (http://www.viatech.com) you can also copy the patch files copy the patch files CD for the main board.

(4) Cannot install yet?

☞ In Windows 98 Second Edition, there error can be caused by bugs in process of recognition of USB devices.

⚠ To solve Windows 98SE problem

Checking Windows Version: Select My Computer and press the right button on the mouse to select Properties. In the system dialogue box, you will find the Windows version.

- Installing Patch : Download all patch files for USB device (PC camera, scanner, printer) and execute them. Select 「Start → Settings → Control Panel → System → Device Manager → Universal serial bus controller → Host controller. Click Properties → Advanced Options」 and check Do not perform USB Error scan.

(5) Was there any other USB PC camera installed before?
- If there was another USB PC camera installed, please uninstall it and start with our Hansol USB PC camera. If you would like to install another USB PC camera when the Hansol USB PC camera was already installed, please uninstall our Hansol USB PC camera first. It may cause error and malfunction resulted from conflict of drivers otherwise.

(6) Is there TV Reception Board installed?
- If your PC is installed with TV Reception Board, it may cause error due to conflict of drivers. In the case,
  a) Select 「Start →Settings →Control Panel ·Multimedia ·Device· ·Video Capture Board.」
  b) Find if there is any other device besides Microsoft WDM Image Capture.
  c) Select other devices and click Properties. Then check 「Do not use this capture device」 and click OK.

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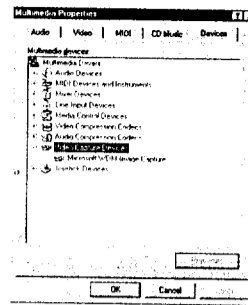
(7) Does error occur in spite of proper installation?
- First, click whether the camera is connected to USB Port of your PC correctly. If the error occurs in spite of proper installation, it is Recommended that you uninstall the camera and re-install. Please refer to <Uninstalling the camera> in page 23 and 6~8 for the re-installation.

2. No Video on the display screen!

(1) When the message says "Sorry, you have no video capture hardware"
- Make sure that the camera is connected to the USB Port in your PC. If the connection is established normally, please disconnect it and reboot your PC.
- Re-connect the camera to the PC and run the desired program.

(2) Video feedback is not available even though the program is operating normally.
- At first, check whether the other Video Application Programs are operating at the same time. If this is the case, close all the operating programs and resume. Problem may occur when your PC has multiple capturing boards installed and also when the driver for camera and other devices are interconnected. Please resolve the problem referring to the solution 1-(5) on the left.

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(3) Does PC stall while using the program?
- Since video application programs require a lot of memories, it may stall your PC. In this case, please resolve the problem referring to the following solutions.
  a) At first close all operating applications. If you cannot close any application normally, please Ctrl, Alt, Delete button of PC at once. Then click End Task of appeared window to close.
  b) Once the program is closed, disconnect the camera from the PC and reboot. Connect the camera to the PC and run the desired program.
  c) If the program cannot be resolved after following the above steps, it can be an error resulted from the conflict between the drivers. In this case, please uninstall the camera and re-install referring to page 6~8.

3. Video Conference does not work!

(1) Is Microsoft NetMeeting installed?
- Microsoft NetMeeting Ver 2.0 is provided by Windows 98. If Microsoft NetMeeting is not installed, Video Conference will not work. Therefore, install Microsoft NetMeeting first. It is available to enjoy upgraded Video Conference with NetMeeting 3.01 and download it from Microsoft homepage for free. (http://www.microsoft.com)

(2) Is there a problem with the Internet?
- Microsoft NetMeeting is influenced by the condition of the Internet. NetMeeting will not work properly in the following conditions:
  - when used with modem
  - when used with fire-proof LAN network
  - when used with direct Internet network that has private IP address.

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4. SAFETY INSTRUCTION

⚥ Warning

Please carefully read through the installation manual before you use the camera. It is necessary to read this section.

- Do not use this camera in condition of following : emitting smoke, unusually hot to touch, emitting any unusual noise, is in any other abnormal state. Use of the camera in any of the above situations may cause a fire or electric shock. Stop using the camera immediately, disconnect the camera from PC. After checking that smoke is no longer being emitted, contact your local dealer or Hansol Service Centre to request a repair. Never attempt to repair this camera by yourself as this will invalidate the guarantee and may cause you harm.

- Do not use the camera if water got into the camera. Disconnect the camera from PC, then contact your dealer or Hansol Service Centre. Do not continue to use the camera as this may cause a fire or electric shock.

- Do not use camera if any foreign objects have entered the camera. Disconnect the camera from PC. Then contact your dealer or Hansol service centre. Do not continue to use the camera as this may cause a fire or electric shock.

- If the camera has been dropped or the external case of the camera has been damaged disconnect the camera from PC. Then contact your dealer. Do not continue to use the camera as this may cause a fire or electric shock.

- Do not place the camera on an unstable or sloping surface as this may cause it to fall or tip over causing damage to the camera.

- Do not attempt to modify this camera in any way. This will invalidate your guarantee and may cause a fire or eletric shock or severe damage to the camera.

Do not insert any things, especially metallic or inflammable objects into the camera. This may cause a fire or eletric shock.

Be cautious not to expose the camera to moisture by leaving it in a damp environment such as a kitchen. Be careful not to get condensation inside the camera, for example when taking it from an air conditioned room to a warm climate. Take special care not to let water go into your camera. Water in the camera may cause a fire or electric shock.

Do not remove the external case of camera. This will invalidate your guarantee and may cause an eletric shock. Internal inspection, maintenance and repairs should be carried out by the Hansol Service Centre or the registered Hansol agent.

Do not use this camera in the bathroom. This may cause a fire or eletric shock.

Do not place this camera in damp or dusty conditions. This may cause a fire or eletric shock.

Do not take this camera into a location affected by oil fumes or steam, such as near a cooker or humidifier. This may cause a fire or eletric shock.

Do not leave this camera in places of extremely high temperatures, such as in a non-ventilated vehicle or in direct sunlight. Exposure to high components and cause a fire.

Be careful not to expose this camera to severe impact, as this may cause the camera to malfunction.

5. Product Specifications

(1) Video Image Quality

Image Sensor	1/3" CMOS
	VGA Resolution (300K pixels)
Still Image Resolution	640 X 480 pixels, 24 bit color
Video Image Resolution	VGA(640 x 480) : 15 FPS
	CIF(352 x 288) : 30FPS
	QCIF(176 x 144) : 30FPS
Video Compression	1/50 ~1/100 (MPEG-4)
Exposure	Automatic/ Manual
White Balance	Automatic/ Manual
S/N Ratio	Greater Than 48db

(2) Optics/Instrument

Lens	Manual Focus, f=6.0mm, F 2.0
Minimum Illuminance	6 lux
Viewing Angle	50
Focus Range	5cm ~ Infinity
Interface	1.8m USB Cable
Power	5V/150mA Active
Dimensions	50 X 52 X 35mm

(3) Software

VGA still image capture/Video clip recording, playing
E-mail attaching.
Twain Driver, security camera function
WDM stream class drive

Hansol Electronics