Appendix B - User's Manual

Please see attached document(s).

Hanaro Cam

(Model : KBHC-1)

User Manual

Kubong Information Technology Co., Ltd.
http://www.kbit.co.kr

Before Use

FCC Compliance Statement

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.

INFORMATION TO THE USER

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.

WARNING
Changes or modifications not expressly approved by the manufacturer could void the use's authority to operate the equipment.

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1. Product Specifications and Features

1) Product Features

- Monitoring abilities from any location
- High resolution image with 320,000 pixels and image sensor
- Automatic exposure and white balance adjustment
- High speed Image transmit
- Various application for security or monitoring

2) Product Specifications

Optical elements	:	320,000 pixels CMOS image sensor	
Lens	:	F2.8	
Focus	:	6.28 mm	
Exposure	:	Automatic	
White balance	:	Automatic	
Electricity consumption	:	1.3W	
Output method	:	USB	
Dimension	:	69.5 x 71.2 x 36.0 mm	
Frame speed	:		
USB Camera Mode	:	VGA(640x480)	15 frames/sec
		CIF(320x240)	30 frames/sec
		QCIF(160x120)	30 frames/sec
Hanaro Cam Mode	:	CIF(320x240)	max. 30 frames/sec
Client View Mode	:	CIF(320x240)	max. 30 frames/sec

2. Software Included and System Requirements

Software Included:

- Windows 98/2000 Driver
- Hanaro Cam POP Security Program
- Hanaro Cam Program

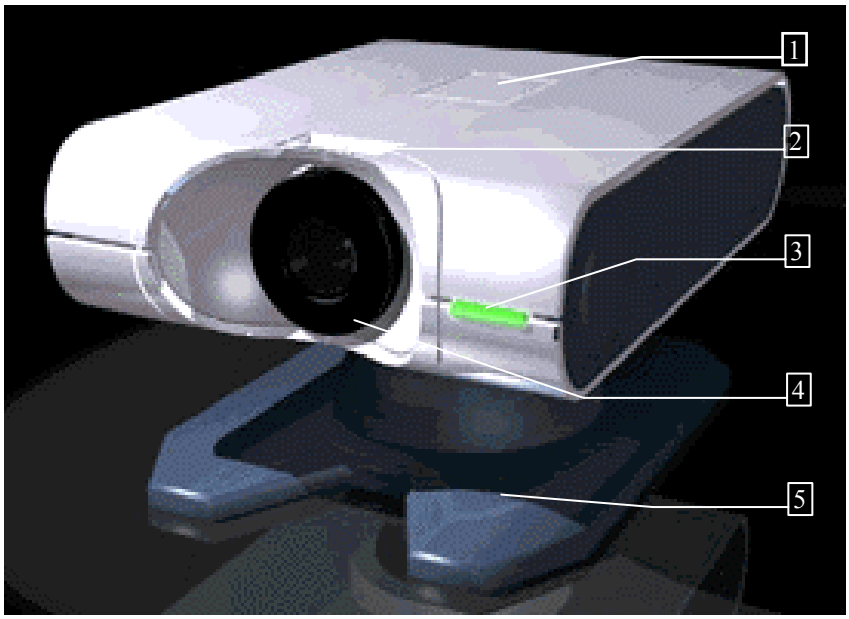
Package Included:

- Hanaro Cam Main Body
- Install CD
- Manual
- Audio Cable
- USB Cable

System Requirements:

- Pentium processor MMX 233 MHz or over
- USB port
- Minimum 64 MB memory
- CD-ROM Drive
- VGA graphic adapter with 16 bits, 640x480 resolution
- Internet connection (LAN or Modem)

3. USB Camera Specification



1) Snap shot : Press the button to capture an image and save it to your hard disk.

2) Focus volume : Use this to focus the lens.

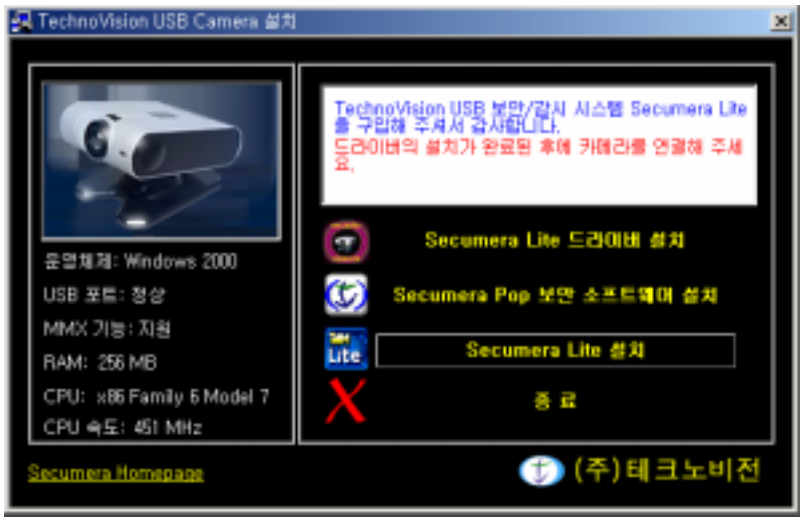
3) Indicator : You'll see a red light when camera is running.

4) Lens

5) Base

4. KBIT HANARO CAM Installation Guide

Insert the program CD in the CD-ROM Drive and you'll see the dialog box below.



First, click on "Secumera Lite OOOO OO", and driver setup will begin. This setup program will automatically detect your system and automatically install the driver to your computer. For further information, check "Chapter 5 HANARO CAM Driver Installation"

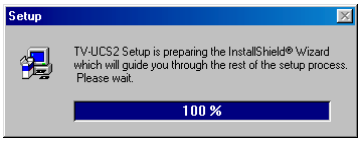
Next, Click on the "HANARO CAM Setup" to setup a server to watch images using a camera and to copy homepage files to your hard drive in order to watch camera images from other computers not in the area. For further information, please refer to "Chapter 6 HANARO CAM Setup".

Click "Exit" when you're done.

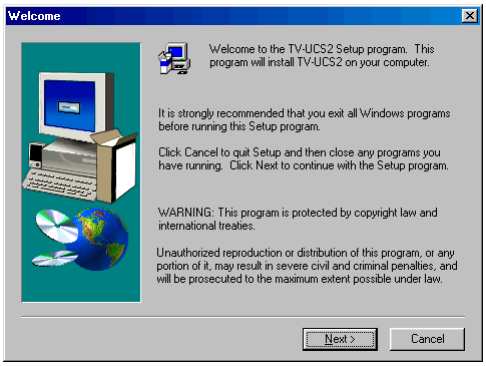
5. HANARO CAM Driver Installation

1) Windows 98/SE/ME driver installation

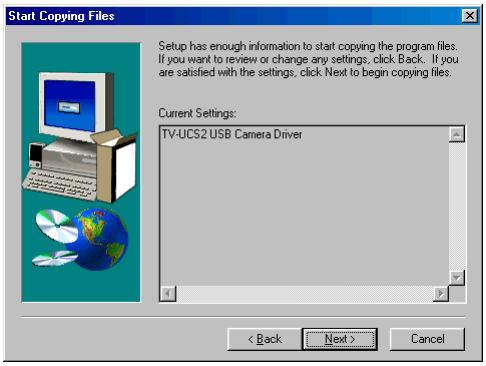
Insert the program CD and click “HANARO CAM Driver Setup” (USB port installation will begin when you have finished installing the USB driver.)



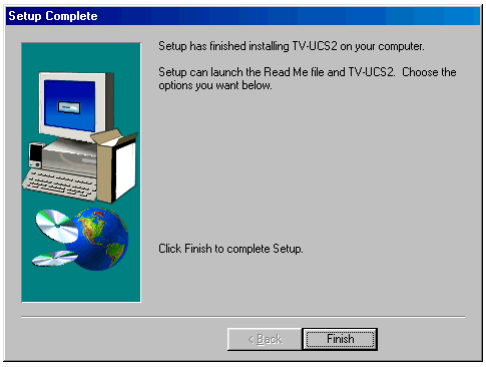
This dialog box indicates that USB driver setup has began



Click “Next”



Click “Next”

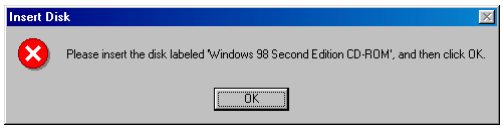


Click “Finish” to complete the setup.

The Hanaro Cam USB camera Driver installation is complete.

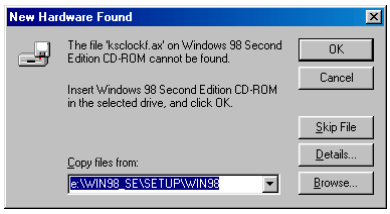
As soon as you plug your camera to the USB port, your computer will automatically detect your USB camera.

You will see this dialog box when you first install the USB camera.

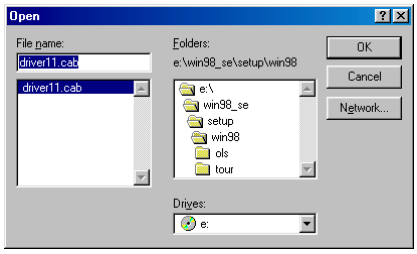


Insert Windows 98 CD into the CD-ROM drive, then it will automatically install the driver. However, if driver files can't be found in your Windows 98 CD, you will see a dialog box below. Browse and select the driver location manually, then it will automatically install the driver.

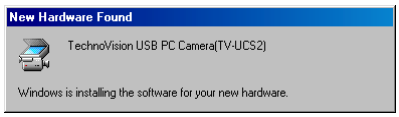
Ex)



Click on "Browse…" to search for the folder.

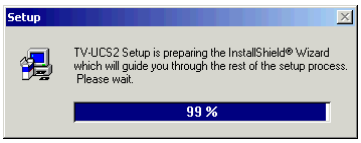


Click on "OK" to automatically install the driver.

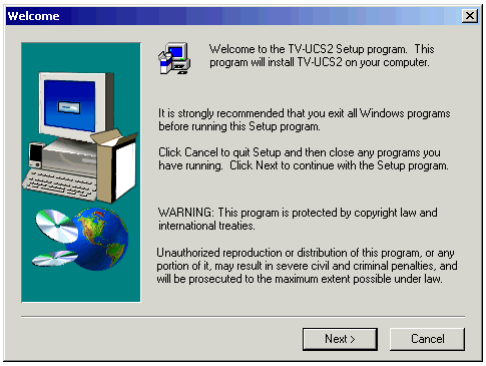


2) Windows 2000 Driver Installation

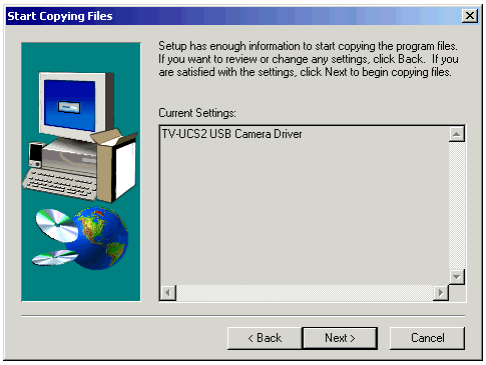
Insert the program CD into the CD-ROM drive, and then click "HANARO CAM Driver Setup".
(USB port installation will begin when you have finished installing the USB driver.)



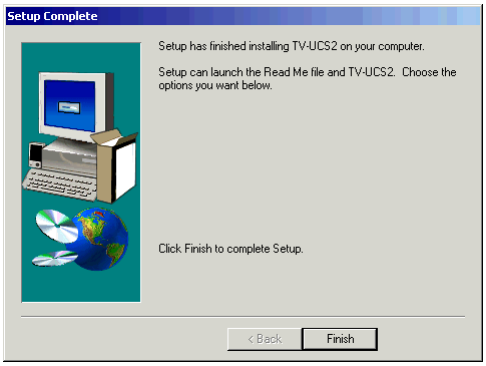
This dialog box indicates that the USB driver installation is processing.



Click "Next".



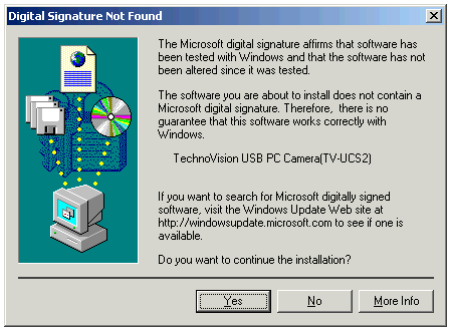
Click “Next”.

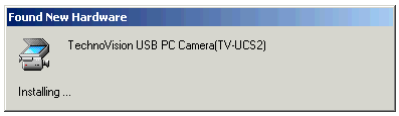


Click “Finish” to complete the setup

Plug your camera to the USB port and your computer will automatically detect your USB camera.

Click “Yes” as seen below.

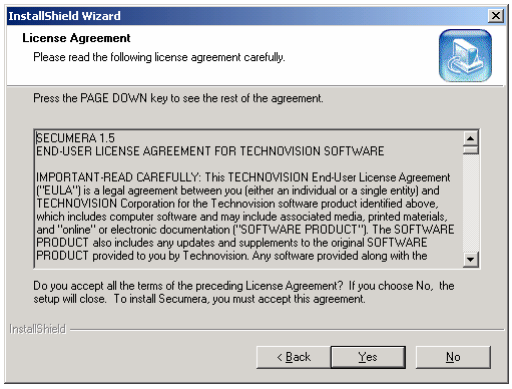




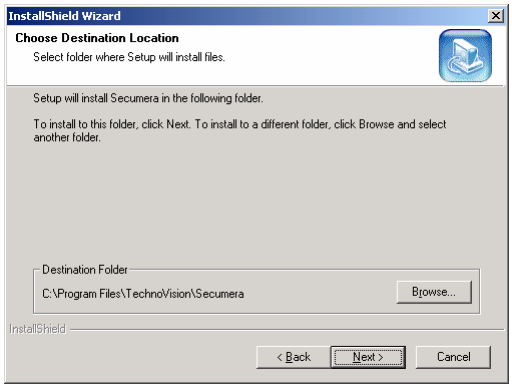
The Hanaro Cam USB camera Driver installation is complete.

6. HANARO CAM Setup

Insert the program CD into the CD-ROM drive, and then click "HANARO CAM Setup". You will see following dialog box.

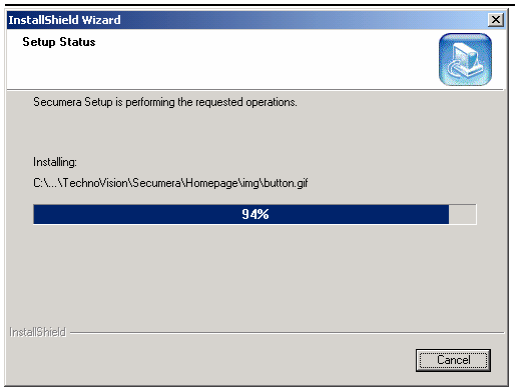


Read the License Agreement and then click "Yes"

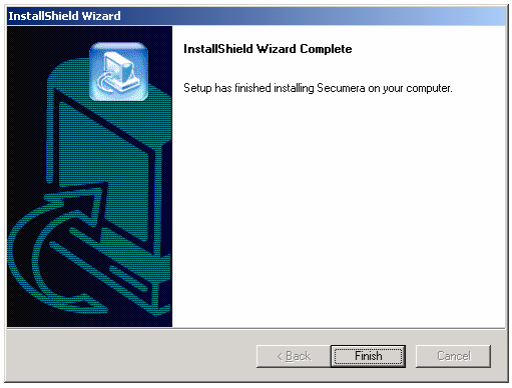


Specify the program folder. If you don't change the folder, click "Next".

You will see the following dialog box while the program is installed.



When the installation is complete, the “HANARO CAM ” is registered at [Hanaro Cam] in [start]-[programs] menu. And the HANARO CAM shortcut icon is made in desktop.



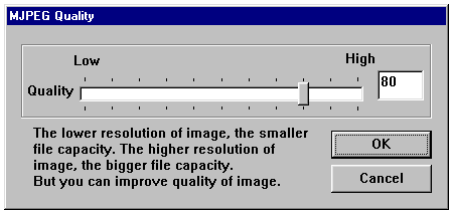
7. Hanaro Cam Server Program Instructions

Start Hanaro Cam.exe program and the first dialog box will appear.

Enter “1234” for password, then click “OK”. Later, you may change the password by clicking “Option” from the menu.

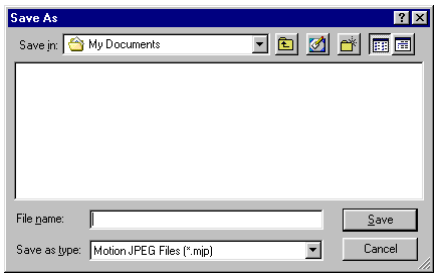
1) File Menu

There are “Image Save”, “Image Play”, and “Exit” on the File Menu. “Image Save” will save the current images. “Image Play” will play previous recorded images. “Exit” will end the program.



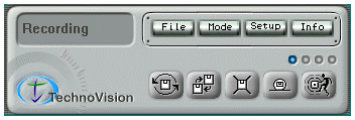
If you click on “Image Save” you will see the following dialog box.

Initial setting for quality is 80. The higher the quality setting, the more space is needed. The lower the quality setting, the less space is needed. It is best not to change the initial setting. Click “OK” when you are done.

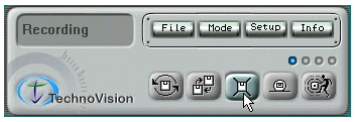


Select the folder and enter the file name, then click "Save".

You will see a light from the LED dialog box below, which indicates that it is saving the file to the folder.

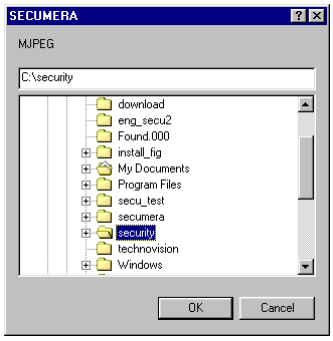


To end saving, click on the "Stop" button below:



Clicking on the "Save Mjpeg" button is a shortcut that performs the same function as "Image Save".

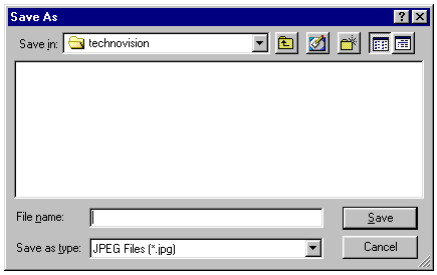
You will see the dialog box below if you click on "Image Play."



Select the folder containing the saved files that you wish to play and click on “OK.”

Select a file, then click on the play button to play your file.

If you click the "Pause" button while the file is playing, it will stop at that point. Click the "SAVE" button and you will see dialog box below.



Enter the new file name. Current frame will be saved as a jpeg file.

After you click "Save", you will return to the previous screen.

When you press the "Pause" button while you are playing a video clip, press the "Rewind" button to go back to the previous frame. Each time you press the back button, you will go back one image at a time.

When you press the "Pause" button while you are playing a video clip, press the "Fast Forward" button to go forward one frame. Each time you press the "Fast Forward" button, you will go forward one frame at a time.

The “Stop” button will stop playing the current image file.

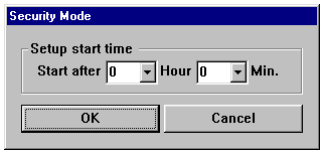
Press the “EXIT” button to end the Image Play.

Clicking the Mjpeg Play button is a shortcut and performs the same function as “Image Play” of the “File” menu.

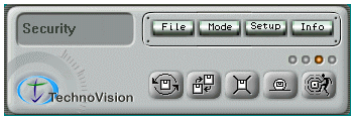
2) Security Menu

There are “Security Mode”, “Timer Recording”, “Sensitivity” and “MotionBox” sub-menus on the Security Menu.
In “Security Mode”, the program will compare a previous image to the current image. If a movement occurs, it will perform all the necessary tasks plus the settings from the “Option” menu. In “Time Recording”, you can set the specific time to record. In “Sensitivity”, you can change the standard setting for the “Security Mode”. In “MotionBox”, you can make regions to detect motion (maximum 5).

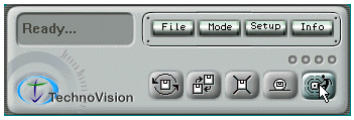
If you click on “Security Mode” you will see the following dialog box.



You can set timer for security mode.



You will see a light from the LED indicator from the dialog box, which indicates the starting of the security mode, when you click “Security Mode” from the menu.



You can also press the security mode button from the panel to start the same function described above.

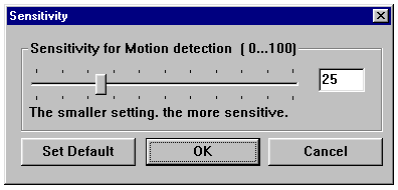
Press the “End” button to end the “Security Mode”.

You will see following dialog box, which has options to set the start and end time if you click on “Time Recording”.

Do not set the start and end time to a time before the current time. After you have set the timer, click on the start button.

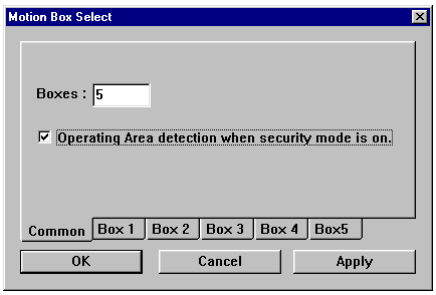
You will see a light from the LED indicator on the panel which will start recording for the times that have been set.

You will see following dialog box if you click on “Sensitivity” from the menu.

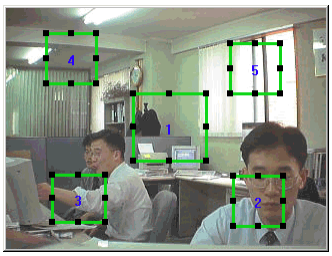


The Reaction sensitivity value setting will give you the option of how sensitive the Hanaro Cam is to brightness of light. For instance, if you set the value to 0, the Hanaro Cam will not react to any changes in brightness. If you set the value to 100, the Hanaro Cam will react to any change in brightness of light.

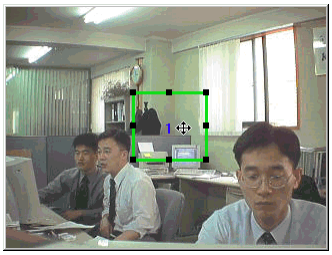
You will see following dialog box if you click on “MotionBox” from the menu.



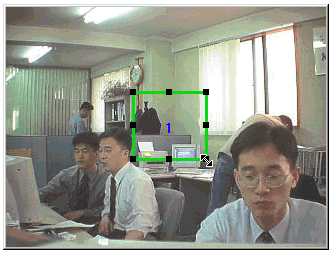
“Boxes” is number of region for motion detection. If you check “Operating Area detection when security mode is on”, motion is detected at the box regions instead of whole image while “Security Mode” is running.



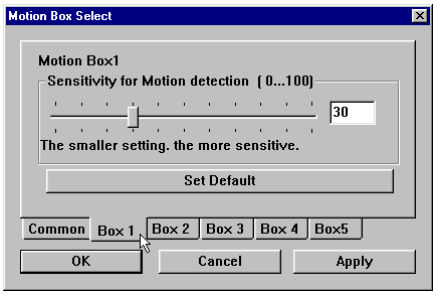
If you set five for number of boxes, you will see following picture.



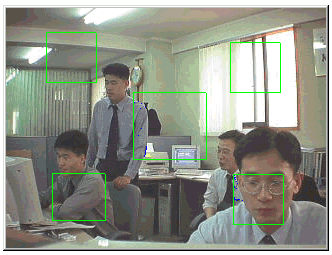
If you want to move the motion box, Drag mouse like following picture.



If you want to change box size, mouse cursor is located at edge of box and then drag mouse like following picture.



If you click on box 1 in tab, you can set sensitivity of motion box 1. Each box can have own sensitivity value. If you press “Set Default”, default value provided to program is set. After change value, press “Apply” button.

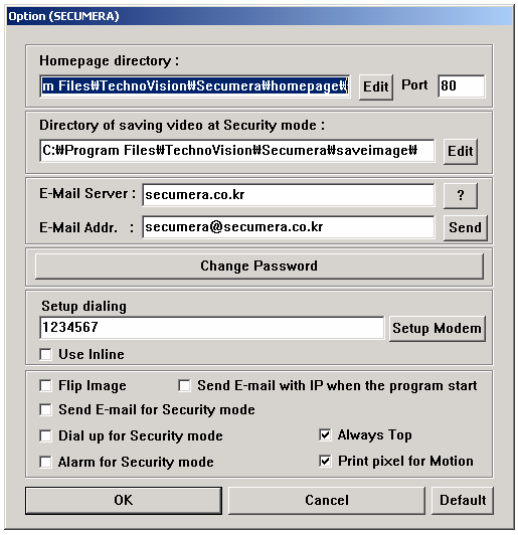


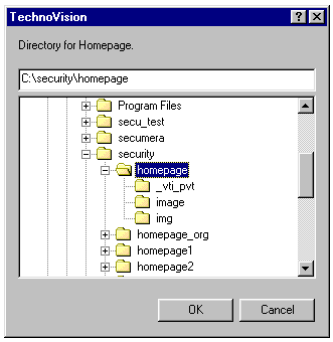
Following picture is running security mode when number of motion box is five.

3) Setup Menu

There are “Option”, and “Camera Setting” in the Setup menu.

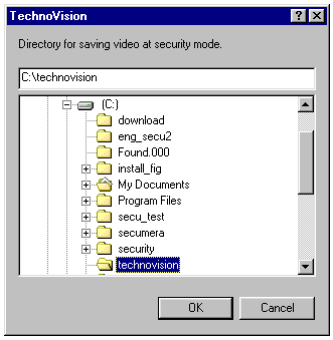
If you click “Option” from the Setup menu, you will see the following dialog box.





If you click the “Edit” button from the Homepage directory, you will see this dialog box. Select a folder to store the Homepage files. Leave at c:\Program Files\KBIT\Hanaro Cam\homepage folder if it is not a special situation to do so.

Port : Select port number for the “Hanaro Cam Internet View”. This is usually port 80, the default setting.



Click “Edit” button from directory of saving video at security mode and you will see a dialog box. This setting allows you to change the folder where the image files are saved when motion is detected at security mode.

Next, you will set up your E-mail server and E-mail address. Put your SMTP server on E-mail server box. And also put in your E-mail address. This option will use the E-mail address to receive IP and to alert you if any motion is detected.

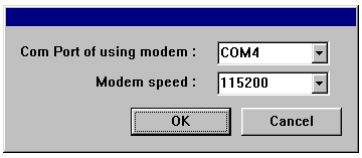
If you click “Change Password” from the Password Change Box, you will see the following dialog box.

Enter the old password, then click “OK.”

Enter the new password, then click “OK.”

Re-enter the new password to confirm your new password. You will need this password to log on to your homepage to see images.

If you click “Modem Setup”, you will see following dialog box.



You can select your modem port and modem speed, then click “OK.”

Using outside access dialing: Check this box if your modem needs to dial to access an outside line.

Reversing camera image: This option will reverse the camera images to top and bottom. For example, installing the camera to the ceiling requires this option to be able to see the camera images correctly.

Receiving IP by E-mail: This option enables you to receive IP through E-mail when the program starts. Be sure to set your E-mail server and E-mail address on the “Option” dialog box.

Receiving E-mail on security mode: When a movement is detected, the program will send an E-mail.

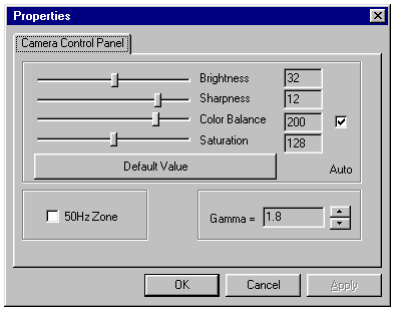
Receiving a phone call on security mode: When a movement is detected, the program will make a phone call. Be sure to set your phone number on the “Option” dialog box.

Alarm on security mode: When a movement is detected, the program sounds an alarm.

Always Top : HANARO CAM server program is always visible, even while it's running in the background.

Print pixel for motion: when motion detection is operated, moving boundary is shown.

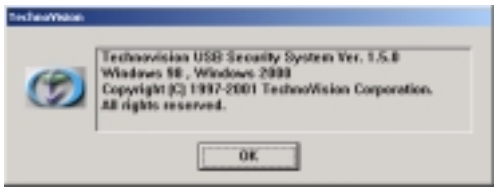
Click the "**Camera setting**" sub-menu to set the camera's brightness, contrast, color balance, and color setting.



4) View Menu

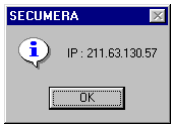
There are “KBIT”, “Help” and “IP View” submenus in the View Menu.

Click the “KBIT” submenu to see all information about program version and copyright.



Click the “Help” submenu to get further assistance.

Click the “IP View” submenu to get ip address information.

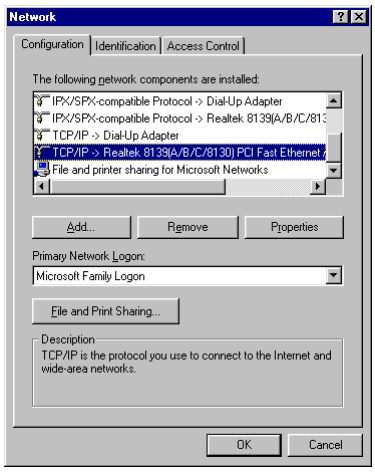


8. System Configuration

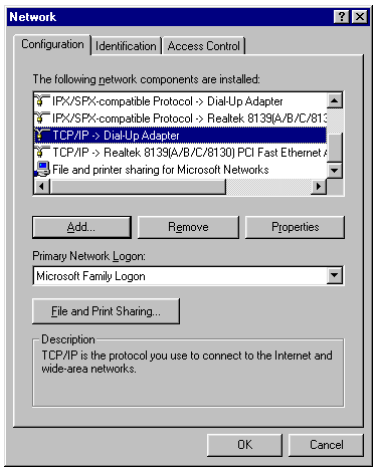
1) Network Setup

The product was designed to use LAN or Dial-Up connections to the program. You must have either LAN card (Ethernet card) or a modem installed on your computer. To check, click [Start], [Setting] and [Control Panel] and open [Network] item. For LAN connection, these should be LAN card adapter and TCP/IP protocol for LAN card adapter. For Dial-Up connection, these should be Dial-Up adapter and TCP/IP protocol for Dial-Up adapter.

(LAN card setting)



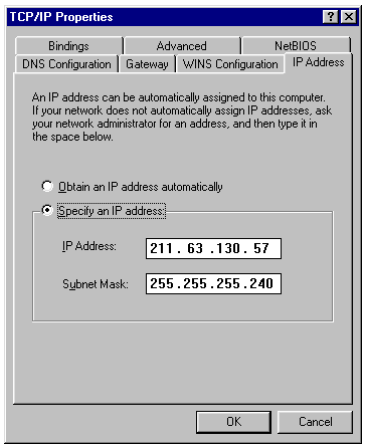
(Modem setting)



Make sure the appropriate adapters and protocols are installed properly. If necessary, reinstall the adapters and protocols.

Click on the Properties of TCP/IP for LAN card adapter and put the IP address and subnet mask. And also, complete the settings in Gateway and DNS tab. Remember the IP address to connect from outside. Consult your network administrator for the IP address.

(TCP/IP properties)



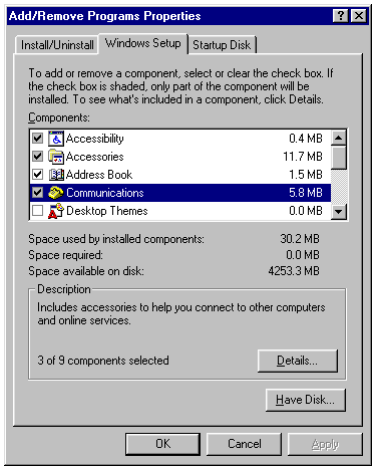
2) Dial-Up server setting (for modem user)

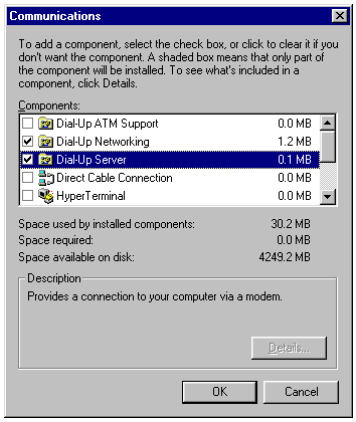
Dial-Up server is the program to respond to clients' requests to be connected. This program must be installed in clients' sites for modem users.

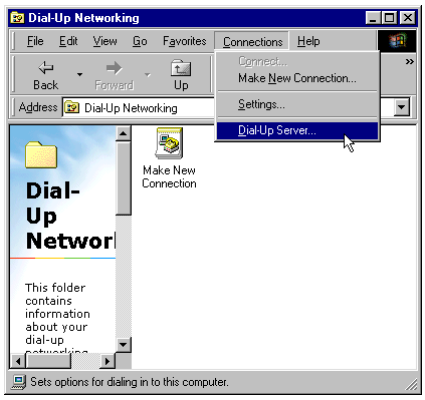
Insert the MS Windows 98 installation CD disk when the system prompts you.

You will see a Dial-Up server icon on the status bar below if you install this option.

If there is no Dial-Up server icon on the status bar, click [Start], [Settings], [Control Panel] and double click on the ADD/Remove programs icon. Click the Windows Setup tab, then double click on communications and make sure the Dial-Up Network and Dial-Up server are selected.







You will see the dialog box below if you have installed the Dial-Up server in your Windows. Select the Dial-Up Network folder, click on connections from the menu, and you will see Dial-Up server. If you do not see the Dial-Up server, re-install the Dial-Up server.

Follow the instructions below using [Dial-Up server] on the Connections Menu.

1. Double click on the Dial-Up Network folder on Windows desktop to start the setup procedure. (or click [Start], [Program], [Accessories] and [Dial-Up network] and then click on "cancel' if the Dial-Up network wizard dialog box appears. You do not need this option.)

2. Click on "Connections(C)", then click on "Dial-Up server(D)."

3. Select "Allow caller Access."

4. Click on "Change Password(W)" if you want to change the password.

5. Click on "Server Type(T)."

6. Select "PPP:Internet, Windows 95, Windows NT 3.5."

7. Click "OK" to close the dialog box.

8. Click "OK" to end the setup.

9. Running Server Program

► Running Hanaro Cam Program

► Use “Dial-Up Server” to connect to the internet.

10. Monitoring Camera from a Remote Site

► In case of modem connection from outside to modem server:

You need to enter your home PC phone number to connect to your home PC using a Dial-up Network.

Enter 192.168.55.1 in the address bar when you logon to the Internet. You will then see the homepage server.

► In case of modem connection from outside to LAN server:

You need to connect to the Internet by using any ISP (AOL, Earthlink, etc).

Next, enter your LAN server IP in the address bar if you're connected to the Internet. You will see the homepage server.

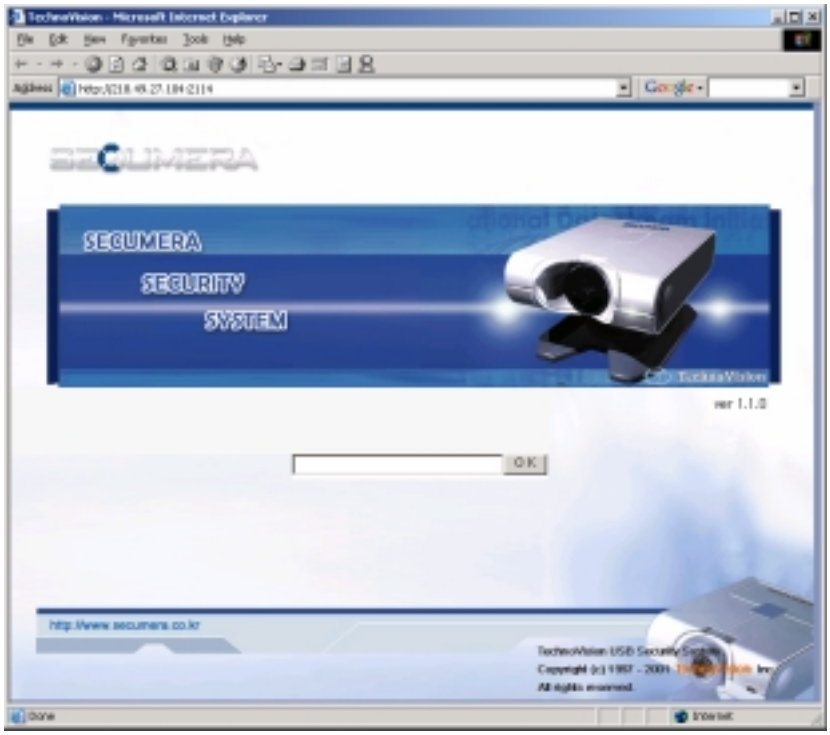
►In case of LAN connection from outside to LAN server:

Click on the web browser and enter the LAN server IP in the address bar to logon to the homepage server.

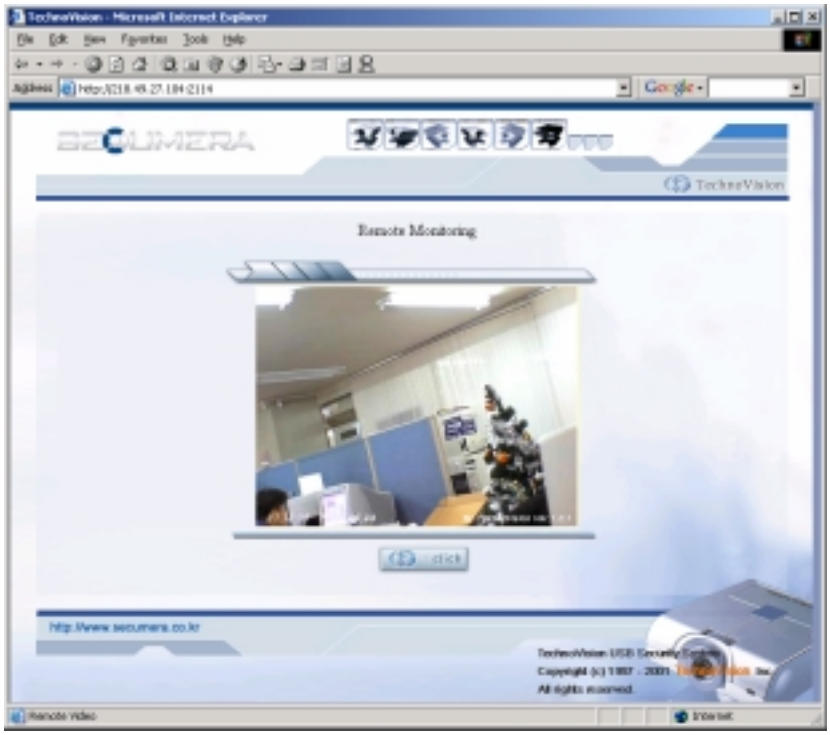
►In case of LAN connection from outside to modem server:

In this case, the system does not support this option. You will need to use a modem connection from outside of you will need to upgrade your PC to a LAN server.

Enter your IP address in the Microsoft Internet Explorer address bar and you will see the following picture:



Enter the password

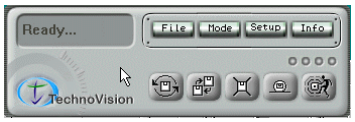


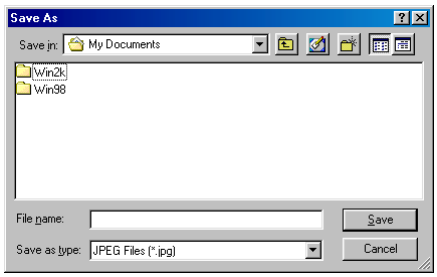
You will see your computer camera screen at remote site

If you press the “Click” button in Internet Explorer, you will see following window.

■ Tips

[Q1]: Can I minimize your Hanaro Cam server?
[A1]: Yes, double click mouse right button on any space that is not a button on the Hanaro Cam server. Just left click on the task bar or press Alt+Tab key if you want to be active again.



[Q2]: Can I change the screen size?
[A2]: Yes, you can change the screen size by clicking on any edge of the screen. The Hanaro Cam program's standard image setting is 320 X 240. It is not recommended to change the screen size larger than 320 X 240 because the quality of the image will decrease.

[Q3]: Can I capture current images?
[A3]: Yes, simply click the "snap-shot" button. You will see the dialog box below. Next, select the folder and file name to save the file as a jpeg file.