*** USER'S MANUAL ***

FCC ID : UTBHLC-81XW

The Federal Communication Commission Statement

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 instruction, may cause harmful interference to radio communication. 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 of 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.**

Use only shielded cables to connect I/O devices to this equipment. You are cautioned that change or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

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 INTERFERECE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

1. This device may not cause harmful interference and
2. This device must accept any interference received, including interference that may cause undesired operation.

User Manual

IP CAMERA

WARINGS

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MISTURE.

DO NOT INSERT ANY METALLIC OBJECT THROUGH VENTILATION GRILLS.

CAUTION

	CAUTION	
	RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION TO REDUCE THE RISK OF ELECTRIC SHOCK. DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		

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THE TRADEMARKS MENTIONED IN THE MANUAL ARE LEGALLY REGISTERED TO THEIR RESPECTIVE COMPANIES.

Content

V1.7   2007/JUNE/21

I. Preface

This is a professional CCD IP camera with the web server built in. User can view real-time video via IE browser. It supports MPEG-4 & JPEG video compression which provides smooth and high video quality. The video can be stored in the SD card and playback remotely.

With user friendly interface, it is an easy-to-use IP camera which is designed for security application.

II. Product Specifications

- True Day/Night IR Cut Filter (Optional)
- MPEG4/JPEG compression
- Supports SD card for local recording
- Wireless network connection (Optional)
- 2-way audio
- Support Cell phone/PDA
- Online firmware upgrade
- Compatible with Microsoft Windows Media Player

Specifications

Hardware	
CPU	ARM 9 ,32 bit RISC
SDRAM	64MB
Flash	8MB
Image sensor	1/3" CCD
Lens Changeable	Yes, CS Mount
Support DC IRIS	Yes
I/O	2 in/ 2out
RS-485	Yes
Video Out	1
Microphone	Built-in
Audio Out	1

Power Consumption	LAN DC 12V, 450mA; WLAN DC 12V, 550mA	
Dimensions (W×H×D)	58 x 65 x 131.5 mm	
Network		
Ethernet	10/ 100 Base-T	
Network Protocol	HTTP, TCP/ IP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP	
Wireless (Optional)		
	Wireless	802.11b/g
	WEP	64/ 128 bit
System		
Video Resolution	NTSC 720x480, 704x480,352x240, 176x120	
	PAL 720x576, 704x576,352x288, 176x144	
Video adjust	Brightness, Contrast, Saturation, Hue	
CCD setting	AES, BLC, AGC, Day/ Night(Auto)	
Image snapshot	Yes	
Full screen monitoring	Yes	
Compression format	MPEG-4/ JPEG	
Video bitrate adjust	CBR, VBR	
Motion Detection	Yes, 3 different areas	
Triggered action	Mail, FTP, Save to SD card	
Pre/ Post alarm	Yes, configurable	
Security	Password protection	
Firmware upgrade	HTTP mode, can be upgraded remotely	
Simultaneous connection	Up to 10	
Audio	Yes, 2-way	
SD card management		
Recording trigger	Motion Detection, IP check, Network break down (wire only)	
Video format	AVI, JPEG	
Video playback	Yes	
Delete files	Yes	
Web browsing requirement		
OS	Windows 2000, XP, 2003, IE 6.0 or above	
Hardware	Suggested	Intel-C 2.0G, RAM 512MB, Graphic card 64MB
	Minimum	Intel-C 1.6G, RAM 256MB, Graphic card 32MB

III. Product Installation

A.   Monitor Setting

i.   Right-Click on the desktop. Select " Properties"
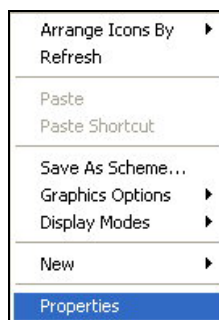
ii.   Change color quality to highest (32bit).
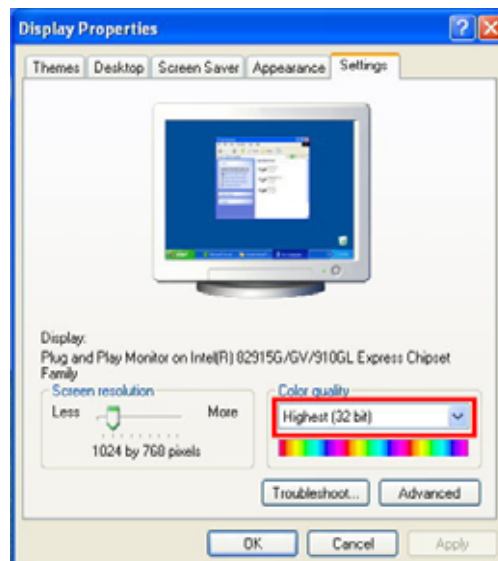
B. Hardware Installation

   i.   Connect power adaptor

   ii.   Connect IP Cam to PC or network with Ethernet cable

   iii.   Set up the network configurations according to the network environment. For further explanation, please refer to chapter VI, "Network Configuration for IP CAMERA".

C. IP Assignment

   i.   Use the software, "IP Installer" to assign the IP address of IP CAMERA. The software is in the attached software CD.

   ii.   IP installer supports two languages
       a.   IPInstallerCht.exe   Chinese version
       b.   IPInstallerEng.exe   English version

   iii.   There are 3 kinds of IP configuration.
       a.   Fixed IP (Public IP or Virtual IP)
       b.   DHCP (Dynamic IP)
       c.   Dial-up (PPPoE)

   iv.   Execute IP Installer

   v.   For Windows XP SP2 user, it may popup the following message box. Please click "Unblock".

vi.   IP Installer configuration:

vii.   IP Installer will search all IP Cameras connected on Lan. The user can click "Search Device" to search again.

viii.   Click one of the IP Camera listed on the left side. The network configuration of this IP camera will show on the right side. You may change the "name" of the IP Camera to your preference (eg: Office, warehouse). Change the parameter and click "Submit" then click "OK". It will apply the change and reboot the Device.
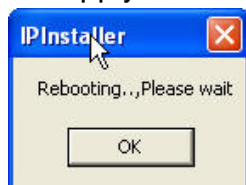
ix.   Please make sure the subnet of PC IP address and IP CAM IP address are the same.

The same Subnet:

IP CAM IP address: 192.168.1.200

PC IP address: 192.168.1.100

Different Subnets:

IP CAM IP address: 192.168.2.200

PC IP address: 192.168.1.100

To Change PC IP address:
Control Panel→Network Connections→Local Area Connection Properties→Internet Protocol (TCP/IP) →Properties
Please make sure your IP Camera and PC have the same Subnet. If not, please change IP Camera subnet or PC IP subnet accordingly.
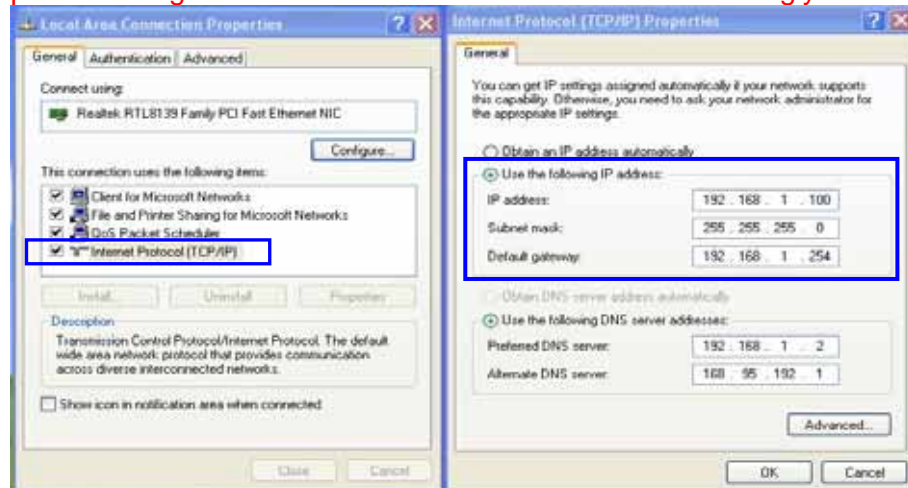
x.   A quick way to access remote monitoring is to left-click the mouse twice on a selected IP Camera listed on "Device list" of IP Installer. An IE browser will be opened.

xi.   Then, please key in the default "user name: admin" and "password: admin".

D.   Install ActiveX control:

For the first time to view the camera video via IE, it will ask you to install the ActiveX component.
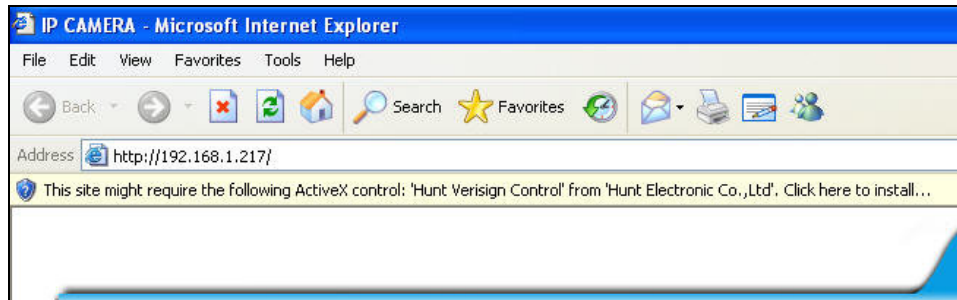
If the installation failed, please check the security setting for the IE browser.

i.   IE → Tools → Internet Options… → Security Tab → Custom Level… → Security Settings → Download unsigned ActiveX controls→ Select "Enable" or Prompt.

ii.   IE → Tools → Internet Options… → Security Tab → Custom Level… →Initialize and script ActiveX controls not marked as safe → Select "Enable" or Prompt.

1
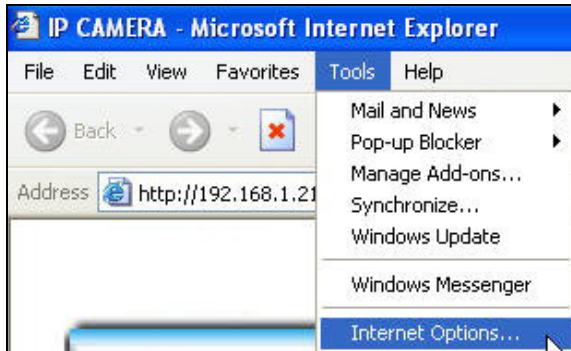
2
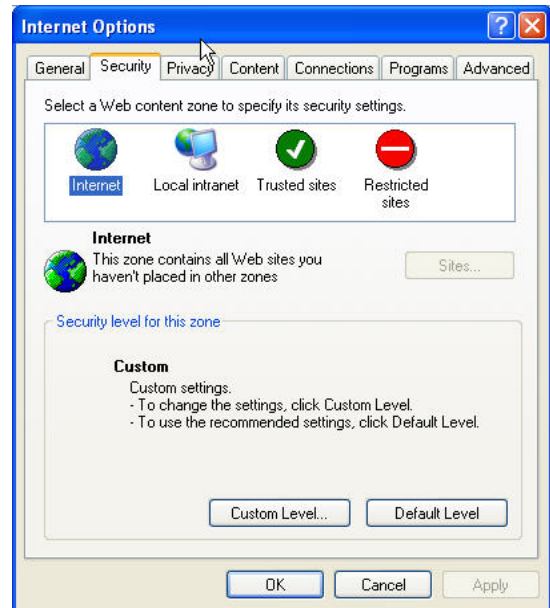
3
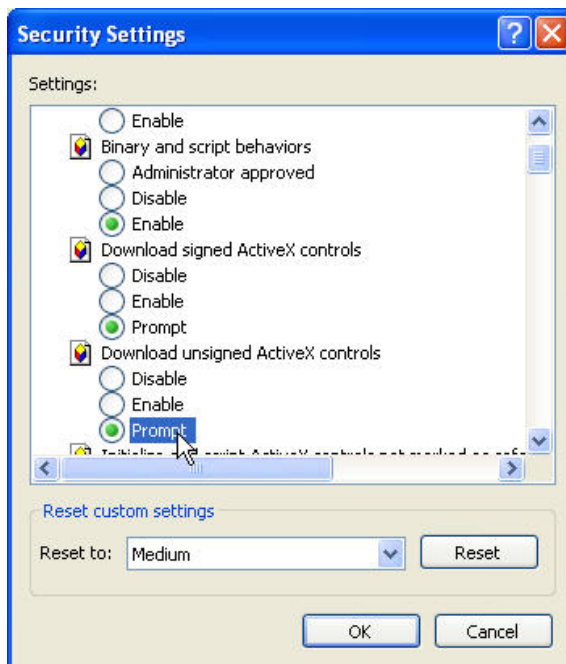
4
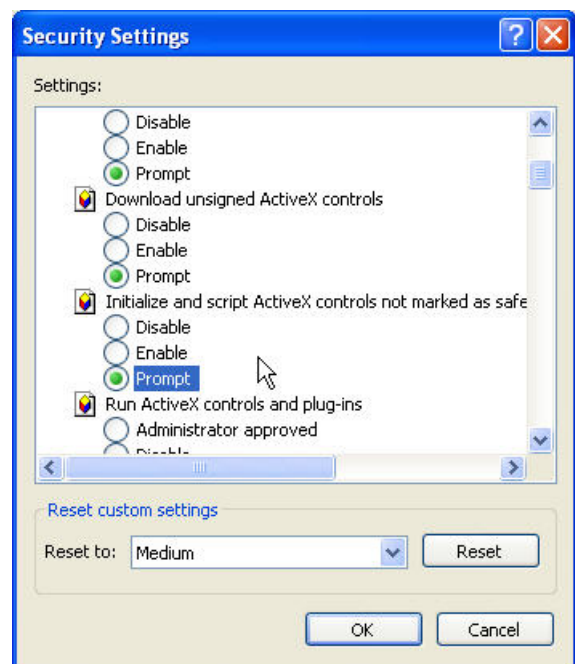
5

When popup the following dialogue box, click "Yes".
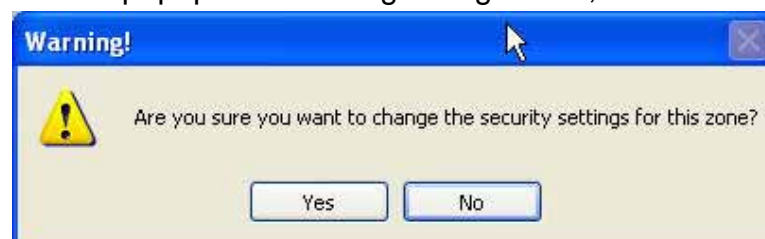
IV. Live Video

Start a IE browser, type the IP address of the IP camera in the address field. It will show the following dialogue box. Key-in the user name and password. The default user name and password are "**admin**" and "**admin**".

When connect to the IP CAMERA　The following program interface shows.

1.   Get into the administration page

2.   Video Snapshot

3. Shows how many people connect to this IP camera
4. Show system time, video resolution, and video refreshing rate
5. IP CAMERA supports 2-way audio. Click the "Chatting" check box. Then you can use microphone which connect to the PC to talk to server side, which is IP CAMERA side.
6. Control the relay which is connected to this camera.

Double-click the video, it will change to full screen mode. Press "Esc" or double-click the video again, it will change back to normal mode.

Right-Click the mouse on the video, it will show a pop-up menu.

1. Snapshot   Save a JPEG picture
2. Record Start   Record the video in the local PC. It will ask you where to save the video. To stop recording, right-click the mouse again. Select "Record Stop". The video format is AVI. Use Microsoft Media Player to play the recorded file.
3. Mute   Turn of the audio. Click again to turn on it.
4. Full Screen   Full-screen mode.

V. Configuration

Click ![wrench icon] to get into the administration page. Click ![camera icon] to go back to the live video page.

A.System

   i   System Information

       a.   Server Information: Set up the camera name, select language, and set up the camera time.

            1.   Server Name   This is the Camera name. This name will show on the IP Installer.

            2.   Select language   There are English, Traditional Chinese, and Simplified Chinese to select. When change, it will show the following dialogue box for the confirmation of changing language.

       b.   Overlay Setting: select a position where date & time showing on screen.
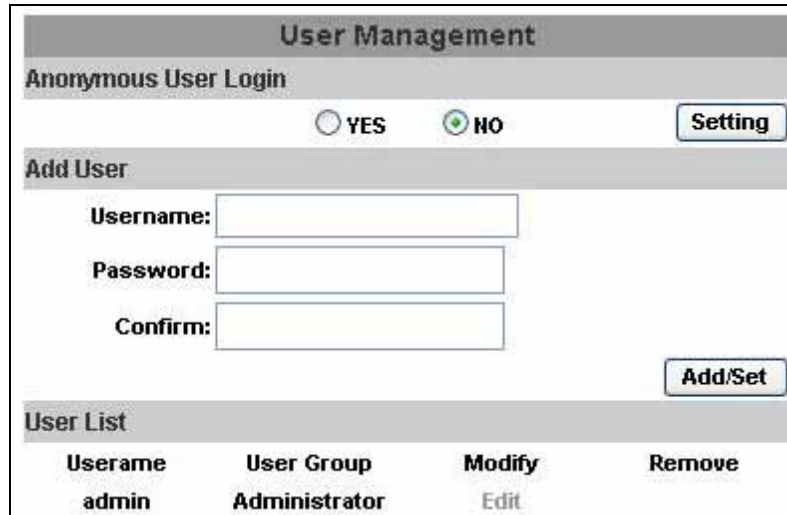
       c.   Server time setting   Select options to set up time - "NTP", "Synchronize with PC's time", "Manual", "The date and time remain the same".
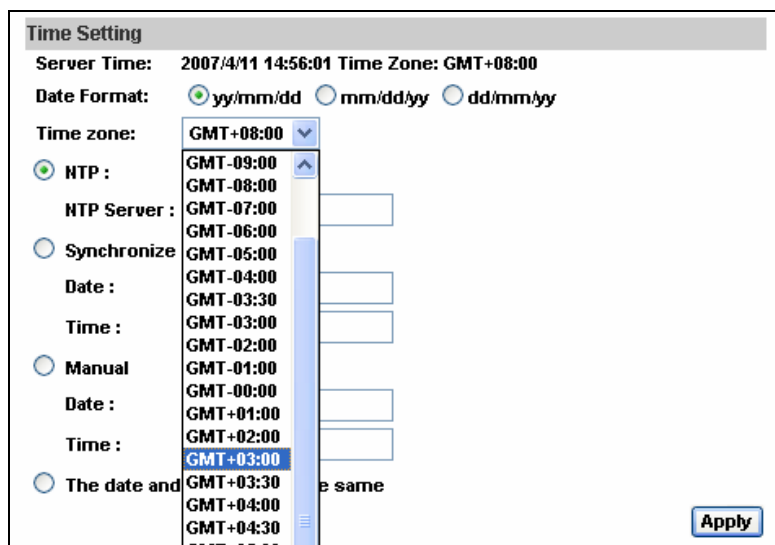
ii   User Management

IP CAMERA supports three different users, administrator, general user, and anonymous user.
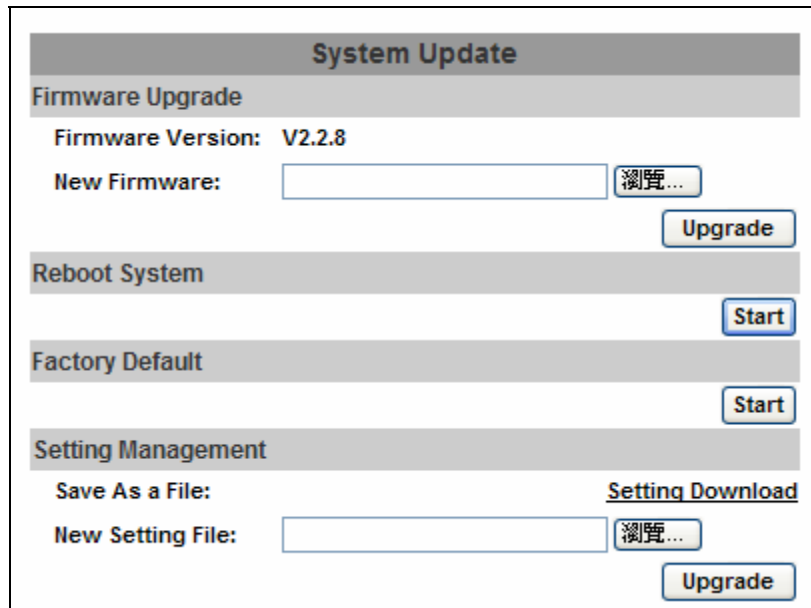
a.   Anonymous User Login

Yes   Allow anonymous login

No   Need user name & password to access this IP camera

b.   Add user

Type the user name and password, then click "Add/Set".

c.   Click "edit" or "delete" to modify the user.

iii System update

a. To update the firmware online, click "Browse…" to select the firmware. Then click "Upgrade" to proceed.

b. Reboot system   re-start the IP camera

c. Factory default   delete all the settings in this IP camera.

d. Setting Management User may download the current setting to PC, or upgrade from previous saved setting.

   1. Setting download:
Right-click the mouse button on Setting Download → Select "Save AS…" to save current IP CAM setting in PC → Select saving directory → Save

   2. Upgrade from previous setting
Browse → search previous setting → open → upgrade → Setting update confirm → click **index.html**. to return to main page

B.Network

    i   IP Setting

IP Camera supports DHCP and static IP.

    a.   DHCP   Using DHCP, IP CAMERA will get all the network parameters automatically.

    b.   Static IP   Please type in IP address, subnet mask, gateway, and DNS manually.

    c.   Port Assignment: user may need to assign different port to avoid conflict when setting up IP assignment.

    ii   PPPoE

Select "Enabled" to use PPPoE.

Key-in Username and password for the ADSL connection.

Send mail after dialed When connect to the internet, it will send a mail to a specific mail account. For the mail setting, please refer to "Mail and FTP" settings.

iii DDNS

It supports DDNS (Dynamic DNS) service.

a. DynDNS

1. Enable this service
2. Key-in the DynDNS server name, user name, and password.
3. Set up the IP Schedule update refreshing rate.
4. Click "Apply"
5. If setting up IP schedule update too frequently, the IP may be blocked. In general, schedule update every day (1440 minutes) is recommended.

b. Camddns service

1. Please enable this service
2. Key-in user name.
3. IP Schedule update is default at 5 minutes
4. Click "Apply".

c. DDNS Status
1. Updating   Information update
2. Idle   Stop service
3. DDNS registration successful, can now log by http://<username>.ddns.camddns.com   Register successfully.
4. Update Failed, the name is already registered   The user name has already been used. Please change it.
5. Update Failed, please check your internet connection   Network connection failed.
6. Update Failed, please check the account information you provide   The server, user name, and password may be wrong.

iv Wireless Setting (Wireless Network Optional)

Supports 802.11 b/g wireless connection.

Notice　Wireless network and Ethernet network use the same IP, the user has to unplug Ethernet cable, if Ethernet cable is not unplug, wireless setting can not be executed.
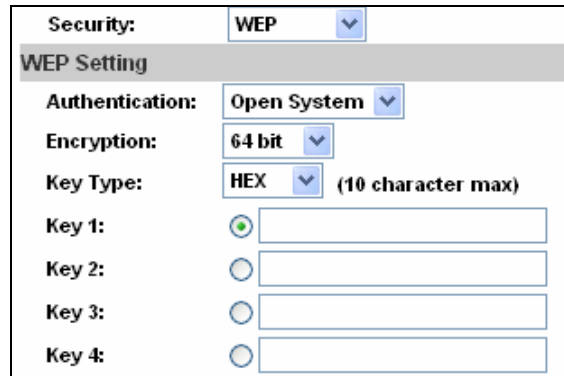

a. Status of Wireless Networks

scan all wireless services.

b. Wireless Setting

1. **Mode**　There are Infrastructure and Ad-hoc. Infrastructure is for connecting with the router. Ad-hoc is for connecting with PC. There is "Channel" to select only when user uses Ad-hoc mode.

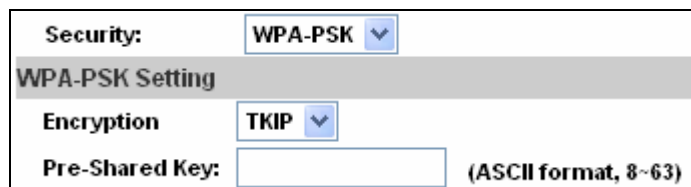e.g. If one PC's channel is 1, the other's channel has to 1, too.

2. **SSID** Based on AP setting.
3. **Channel** This is only be used when the user selects Ad-hoc mode in order to avoid conflict.
4. **Security** It supports "None", "WEP", "WPA-PSK" security encryption based on the setting of the Router.
5. **WEP**

- Authentication There are Open System and Shared Keys, it is based on different encryptions. This has to be the same as the Router's setting.
- Encryption There are 64 bits and 128 bits. This is based on Key Type based on the Router's setting.
- Key Type There are HEX and ASCII. When selecting HEX, the user only can input 0~9 characters and use A, B, C, D, E, and F.
- When selecting ASCII, the user can input any character. (Case sensitive)
- Key 1~4 Based on Key Type to input characters.

6. **WPA-PSK**

- Encryption There are TKIP and AES.
- Pre-Shared Key Allow any characters .(Case sensitive)

C.A/V Setting

i   Image Setting

Adjust "Brightness", "Contrast", "Hue", "Saturation" to get clear video.

For CCD Setting, IP CAMERA supports "Auto Electronic Shutter", "Back Light Compensation", and "Automatic Gain Control".

ii   Video Setting

    a.   Basic Mode

1. Resolution

   There are 4 resolutions to choose.
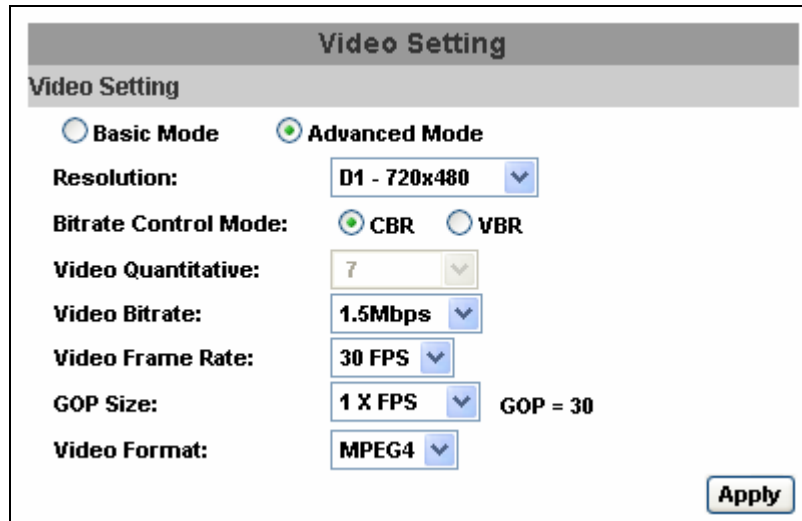
		NTSC	/	PAL
D1	–	720×480	/	720×576
4CIF	–	704×480	/	704×576
CIF	–	352×240	/	352×288
QCIF	–	176×120	/	176×144

2. Quality

   There are 5 levels to adjust, The higher the quality is, the bigger the file size is.

3. Video Format   MPEG4 or JPEG.

b.   Advanced Mode

1. Resolution

   There are 4 resolutions to choose.

		NTSC	/	PAL
D1	–	720×480	/	720×576
4CIF	–	704×480	/	704×576
CIF	–	352×240	/	352×288
QCIF	–	176×120	/	176×144

2. Bitrate Control Mode

   There are CBR   Constant Bit Rate   and VBR   Variable Bit Rate   to use.

   CBR   64Kbps~4Mbps. (the higher the CBR is, the better the video quality is)

   VBR   1~10 (Compression Rate)

3. Video Frame Rate

The video refreshing rate per second.

4. GOP

It means "Group of Pictures". The higher the GOP is, the better the quality is.
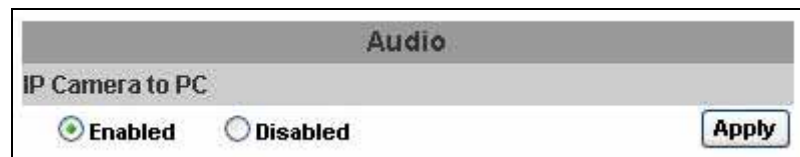
5. Video Format

There are 2 Video Format to choose

MPEG4 or JPEG.

iii   Audio

IP CAMERA supports 2-way audio. User can send audio from IP Camera Built-in mic to remote PC; User can also send audio from remote PC to IP Camera's external speaker.

a.   Audio from IP camera built-in mic to local PC: select "Enable" to start this function.

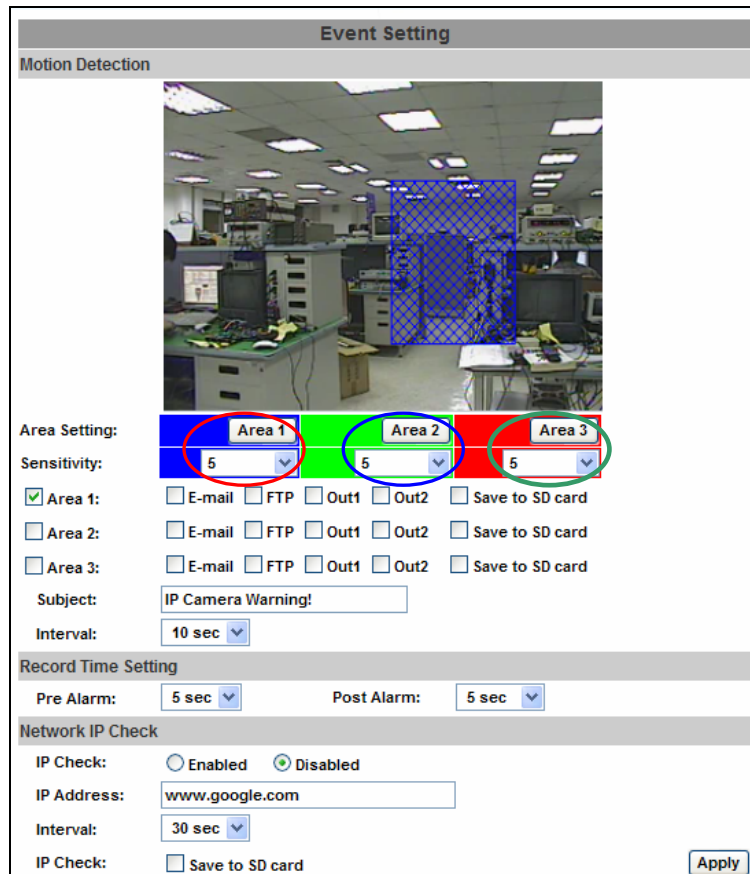b.   Audio from local PC to IP Camera: Check "chatting" in the browsing page.
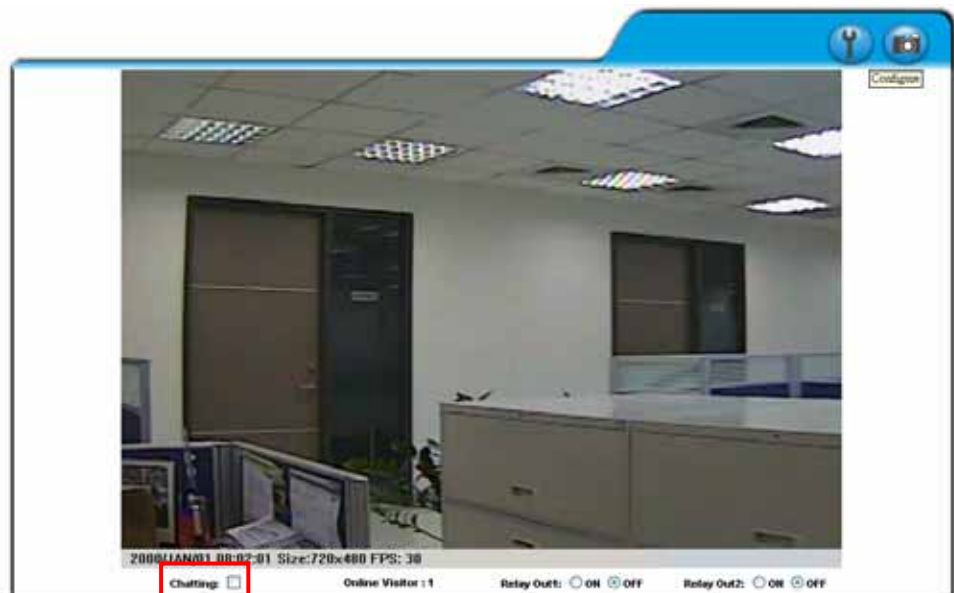
The Audio will not be smooth when enable SD card recording function simultaneously.

D.Event List

IP CAMERA provides multiple event settings.

i   Event Setting

a.   Motion Detection

IP CAMERA allows 3 areas motion detection. When motion is triggered, it can send the video to some specific mail addresses, transmit the video to remote ftp server, trigger the relay, and save video to local SD card. To set up the motion area, click "Area Setting". Using mouse to drag and draw the area. The same operation for area 2 and 3.

b.   Record Time Setting

Pre Alarm and Post Alarm setups for video start and end time when motion detected, I/O, or other devices got triggered.

c.   Network Dis-connected

When the network is down, it will save the video to local SD card. This function is only enabled in wire connection.
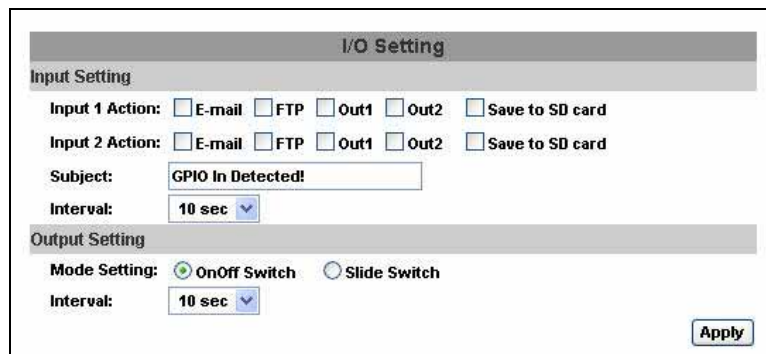
d.   Network IP check
     When the connection is down, it records the video to SD card. Make sure the video recording is continuous. To use this function, key in the IP address of the PC which has recording software installed. Enable the function of "Save to SD card", then click "Apply".
     The interval of two video files on SD card is fixed with 30 seconds.
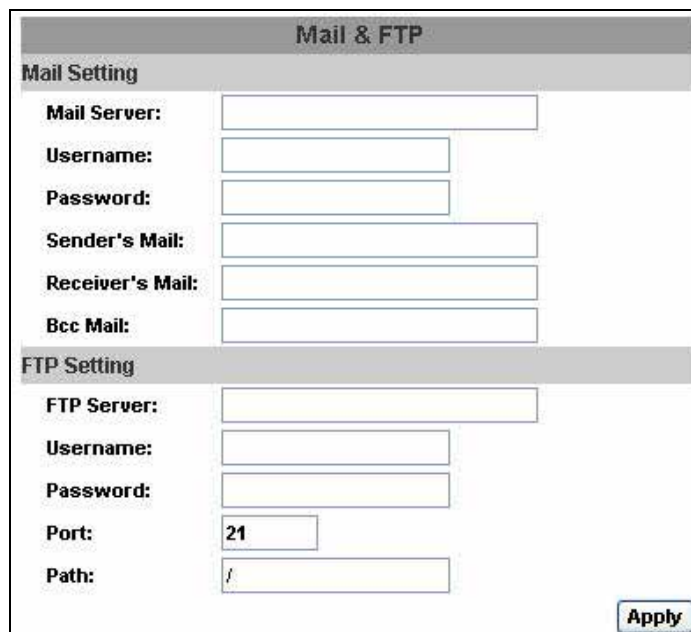
ii   I/O Setting
     IP CAMERA supports 2 input/ 2 output. When input is triggered, it can send the video to some specific mail addresses, transmit the video to remote ftp server, trigger the relay, and save video to local SD card.

iii Mail & FTP
     To send out the video via mail of ftp, please set up the configuration first.

iv   Log List

Sort by System Logs, Motion Detection Logs and I/O Logs. In addition, System Logs and I/O Logs won't lose data due to power failure.

v   SD card

Please Insert SD card before use it. Make sure pushing SD card into the slot completely.

<div style="color:red; border:1px solid red; padding:8px;">
Note   The use of the SD card will affect the operation of the IP CAMERA slightly, such as affecting the frame rate of the video.
</div>

a.   Playback:
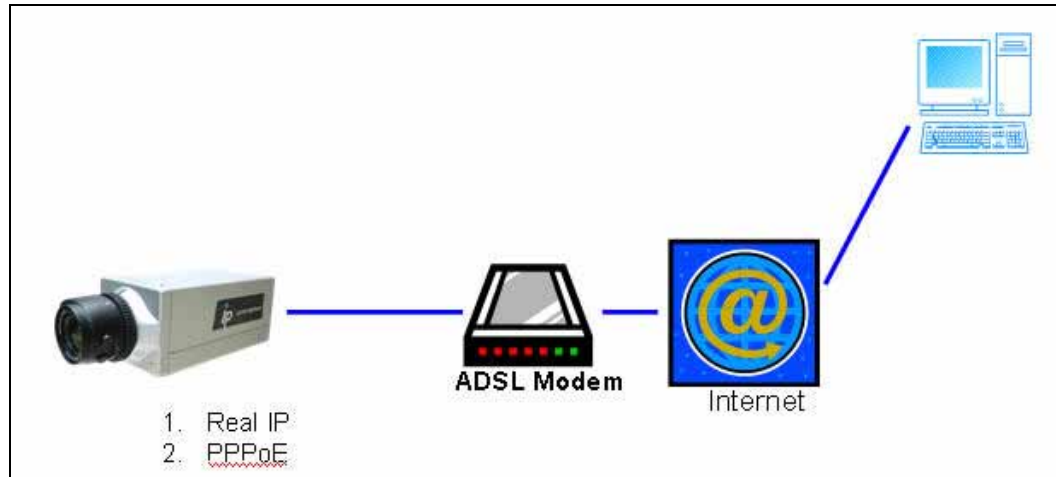

b.   It will show the capacity of the SD card. Click the date listed on this page. It will show the list of the video.

1.   The video format is AVI. Click the video to start Microsoft Media Player to play it.

2.   To delete the video, check it, then click Del. When the SD card is full, it will remove the oldest video automatically.
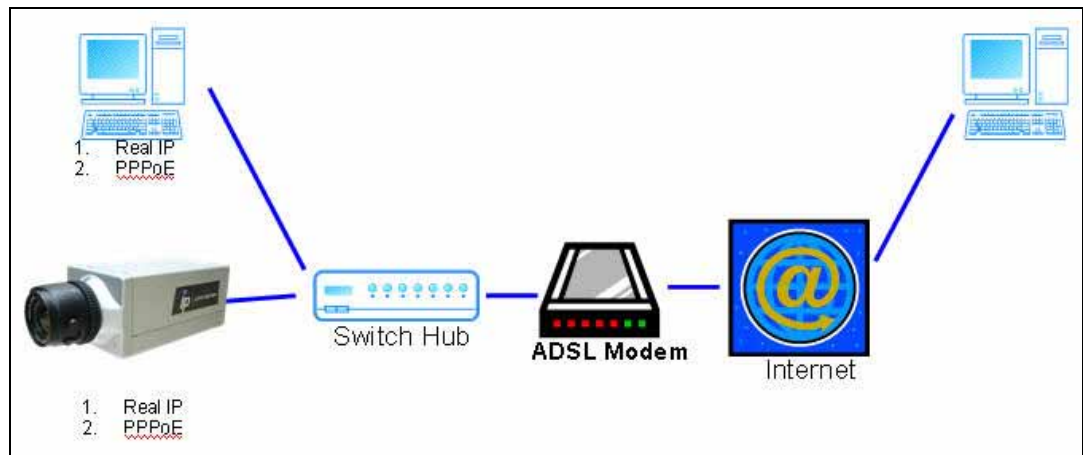
VI. Network Configuration

i   Configuration 1

a.   Internet Access   ADSL or Cable Modem

b.   IP address   One real IP or one dynamic IP

c.   Only IP CAMERA connects to the internet

d.   For fixed real IP, set up the IP into IP CAMERA. For dynamic IP, start PPPoE.

ii   Configuration 2

a.   Internet Access   ADSL or Cable Modem

b.   IP address   More than one real IP or one dynamic IP

c.   IP CAMERA and PC connect to the internet

d.   Device needed   Switch Hub

e.   For fixed real IP, set up the IP into IP CAMERA and PC. For dynamic IP, start PPPoE.

iii   Configuration 3
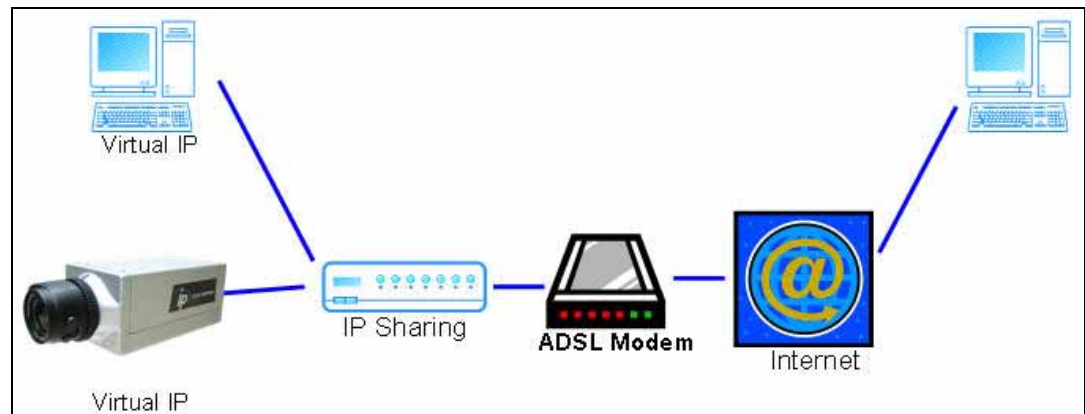

a.   Internet Access   ADSL or Cable Modem
b.   IP address   one real IP or one dynamic IP
c.   IP CAMERA and PC connect to the internet
d.   Device needed   IP sharing
e.   Use virtual IP, set up port forwarding in IP sharing.

VII. Factory Default

i   To recover the default IP address and password, please follow the following steps.

ii   Remove power, and press and hold the button in the back of IP CAMERA.

iii   Power on the camera. Don't release the button during the system booting.

iv   It will take around 30 seconds to boot the camera.

v   Release the button when camera finishes proceed.

vi   Re-login the camera using the default IP (http://192.168.1.200), and user name (admin), password (admin).

VIII. Package contents

i   IP CAMERA Network Camera

ii   Adaptor

iii   Ethernet Cable

iv   CD title (User manual, IP installation Utility)

Appendix I

SD Card Recommended

SanDisk 128M	Tracend 128M 80X
SanDisk 256M	Tracend 256M 80X
SanDisk 512M	Tracend 512M 80X
SanDisk 1G	Tracend 1G 80X
SanDisk 2G	Tracend 2G 80X
SanDisk 4G	Tracend 4G 80X