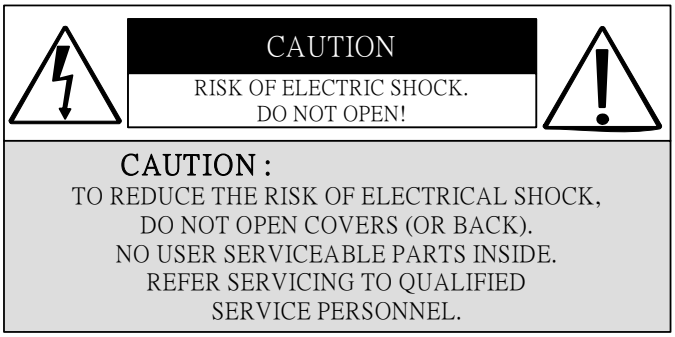
MJPEG IP CAMERA

U S E R M A N U A L

Contents

1. SAFETY PRECAUTIONS



It is advised to read the Safety Precaution Guide through carefully before operating the product, to prevent any possible danger.

⚠ **WARNING:** Alert the user to the presence of un-insulated "dangerous voltage".

⚠ **CAUTION:** Alert the user the presence of important operating and maintenance (Servicing) instructions in the literature accompanying the appliance.

The power cord is the main power connection. Therefore, constantly plug and unplug of the power cord might result in malfunction of the product.

Do not install the product in an environment where the humidity is high.
Unless the product is waterproof or weatherproof, otherwise poor image quality may occur.

Do not drop the product or subject them to physical shocks.
Except for vandal-proof or shockproof product, otherwise malfunctions may occur.

Never keep the product to direct strong light.
It can damage the product.

Do not spill liquid of any kind on the product.
If it gets wet, wipe it dry immediately. Alcohol or beverage can contain material that corrode the electronic components.

Do not expose to extreme temperatures.
Use the product at temperatures within +5° C~ +45° C.

2. INTRODUCTION

2-1 Product Introduction

World leading technology perfect for office safety, personnel home security, public environments, industry surveillance, school, and so on. Quick and simple installation, the best choice for your own ultimate protection.

Connect this well-designed IP Camera online using RJ45 Ethernet port for real-time viewing and control over standard web browser or apply the supplied AP (application program), the device will send an e-mail to notify the user when alarm has been triggered. The system supports LAN, PPPOE, and DDNS online connection method.

2-2 Applications

Security:

ATM (auto teller machine), bank, gas station, shop and parking lot.

Factory/ Office:

Factory, warehouse, remote technology support, conference room, and outdoor parking lot.

Education/ Military/ Government Organization:

Important facilities, important areas, rapid transit system, and railroad safety.

Recreation/ Activities:

Sports and news broadcast.

Home:

Elevator, doorway, community safety, and hotels.

Hospital/ Kindergarten:

Hospital and isolated ward, home for the aged, kindergarten, and baby nourishing center.

3. FEATURES

- Multiple Function
  Online using internet cable for remote control recording and playback.
- Provides Remote Control
  Enables remote video monitoring via internet. Applicable online connections: LAN, PPPoE, and DDNS.
- Alarm Trigger
  When an alarm has been triggered e-mail alert will be sent.
- Supports up to 9 IP Camera Connections
  Enables 9-split screen display monitoring.
- Supports Motorized Camera Rotation Platform Control
  Provides external connection of PTZ control protocol.
- Supports NO or NC Alarm Output
  For alarm function, connect an external sound device to the IP Camera.

4. PACKING LIST

Check to make sure all of the items shown below are included in your product package. If something is missing, contact your dealer as soon as possible.

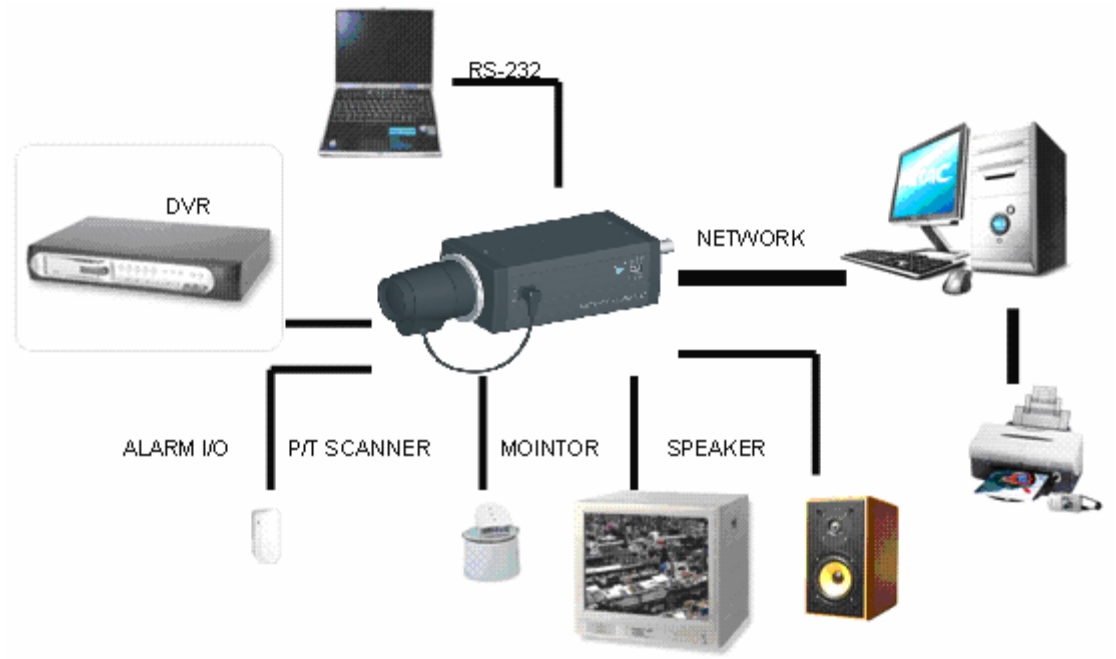
(1) IP Camera

(2) Power adapter

5. INSTALLATION

5-1 System Configuration

- Connect the camera online, transfer video image through LAN/ WAN to the PC terminal, and monitor from the IE browser.
- Connect the camera to video output device (e.g.: monitor) or video equipment (e.g.: DVR or VCR) for monitoring and recording.
- Connect RS-485 to the PTZ controller, ALARM I/O to the detection device, and AUDIO to the speaker.



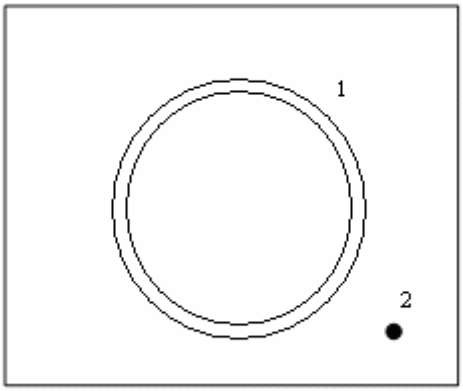
Note: Make sure that the video input source cable is properly connected, then power-on.

5-2 Suggested Computer Equipment

CPU	1G (Above)
RAM	256M (Above)
Sound Card	YES
Operating System (OS)	Microsoft Windows 2000/ XP
Monitor Resolution	1024X768 (Above)

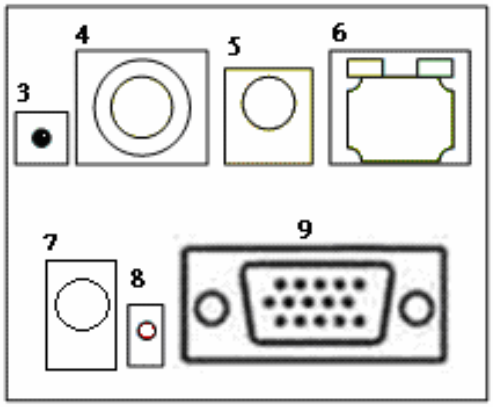
6. NAME and FUNCTION of EACH PART

6-1 Front Panel Connections



1. CCD Sensor
2. Microphone

6-2 Rear Panel Connections

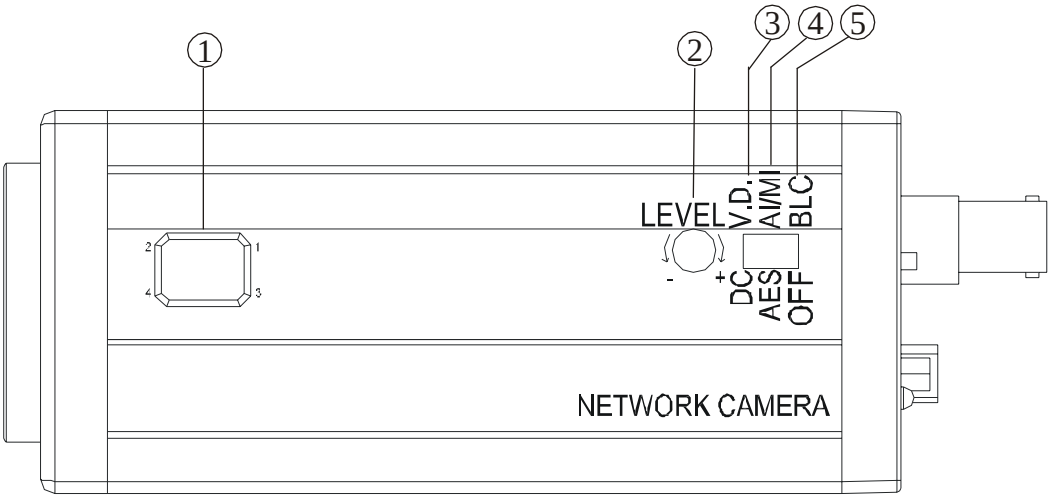


3. RESET
4. VIDEO OUT
5. AUDIO OUT
6. ETHERNET
7. POWER JACK (DC 12V)
8. POWER LED

9. Terminal Block

1	SENSOR + (ALARM IN)
2	SENSOR － (GND)
3	RELAY_NO
4	RELAY_COM
5	RELAY_NC
6	GND
7	GND
8	D+ (RS485+)
9	D- (RS485-)
10	GND
11	TXD (RS232)
12	RXD (RS232)
13	GND
14	GND
15	GND

6-3 Side Panel Connections



① Auto Iris Terminal:

1. DAMP-	1.+12
2. DAMP+	2.IRIS
3. DRIVE+	3.X
4. DRIVE-	4.GND

② LEVEL: Adjust the iris of the DC Drive lens to appropriate image.

③ DC: When using DC Drive lens, please switch to “DC”.
V.D.: When using Video Drive lens, please switch to “V.D.”.

④ AES: When using a standard lens (without iris control function), please switch to “AES”.
AI/ MI: When using Auto Iris/ Manual Iris lens control, please switch to “AI/ MI”.

⑤ BLC: When operating under a large background light environment, please switch to “BLC” to enable Back Light Compensation (BLC) function.
OFF: When operating under normal environment, please switch to “OFF” to disable Back Light Compensation (BLC) function.

7. IP CAMERA SETUP

Before installing the IP Camera, you need to first setup an IP Address, connect using cross-over connection, ADSL Modem or LAN Hub, and use IPEdit.exe to setup the IP Camera.

Note: Before using PPPoE and DDNS connection method, one must first setup an IP Address (using IPEdit.exe) to enable connection.

7-1 Connect to IP Camera

Three Methods for Connecting IP Camera:

1. LAN or Static IP Connection.
2. PPPoE Connection.
3. DDNS Connection.

7-1-1 Online Using LAN or Static IP

Please refer to 7-2 Online using DHCP Server.

7-1-2 Online Using ADSL (PPPoE)

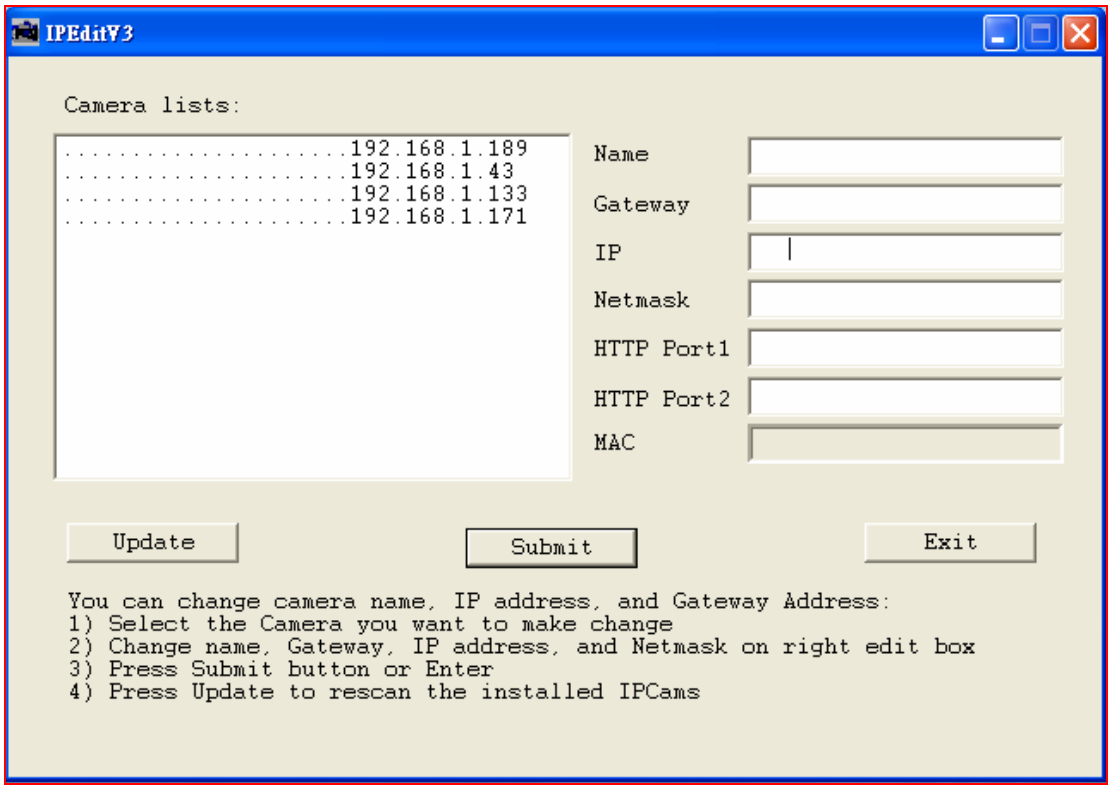
Please refer to 8-4-4 Network (PPPoE Connection Method).

7-1-3 Online Using DDNS

The DDNS service provides the “dynamic” domain name service to dynamic IP users via a cable or ADSL connection. Once you’ve decided to apply this function, please register your domain name at **http://www.dyndns.org** (this website supports register free DDNS service). Paid DNS service is applied to long-term users. For more information, please refer to “8.4.5 DDNS Setup”.

7-2 Using IPEdit with DHCP Server

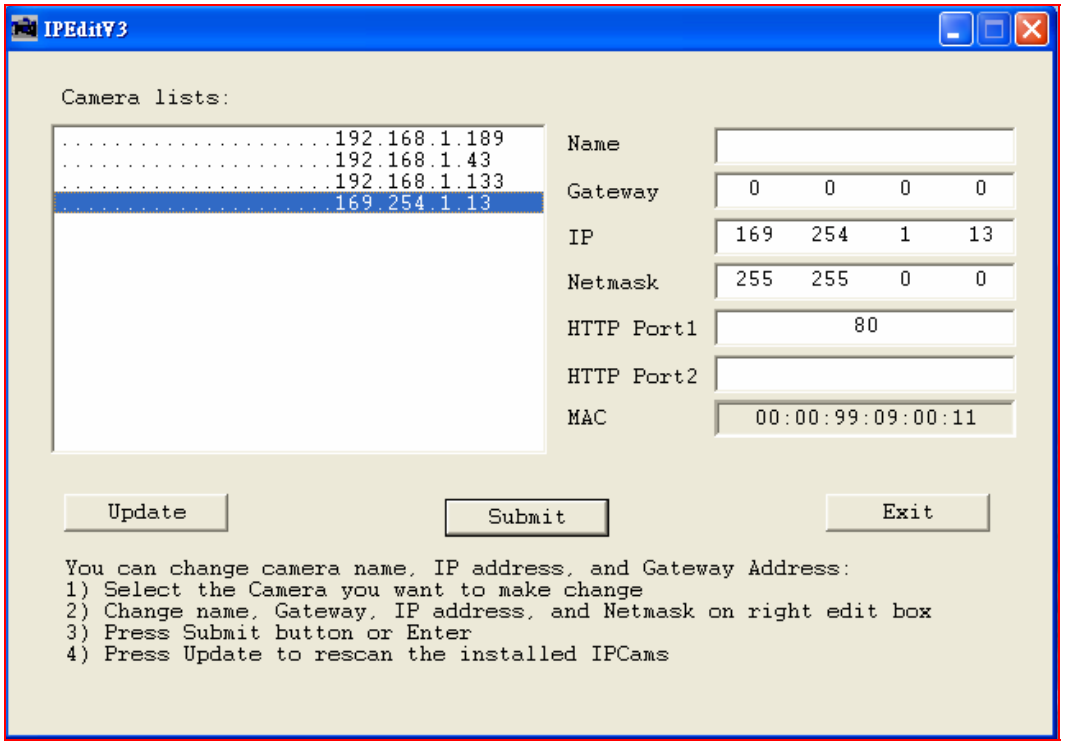
DHCP will automatically assign an IP address to the IP Camera when using DHCP connection method. Please enter the correct Gateway, IP address, and Netmask setup, when the IP Camera is without an IP address allocated by the DHCP server.



Using IPEdit with DHCP Server

7-3. Using IPEdit Without DHCP Server

1. Use IPEdit.exe to find the installed IP Camera.
2. The IP Camera without an IP Address allocated by the DHCP Server will have a default IP Address of 169.254.1.13.
3. Select the desired IP Camera on Camera List Window.
4. Click the IP Address and the configuration will be shown on the right window.
5. Please setup Gateway, IP Address, and Netmask value according to your PC network setting value (When network setting value is unknown, under DOS mode enter “IPCONFIG” to access the setting value).



Using IPEdit without DHCP Server

After the “Submit” button is clicked, the IP information of the IP Camera will be updated.

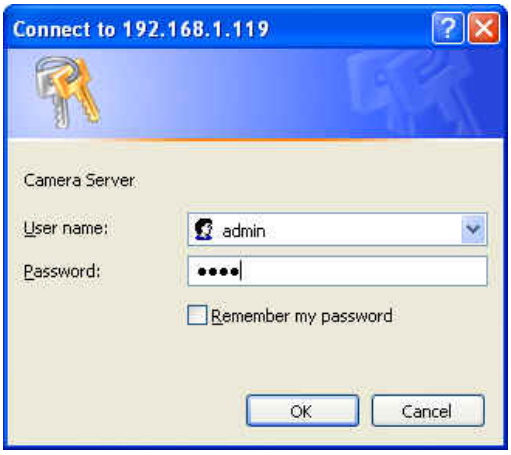
7-4 Connection

Start the Internet Explorer, enter the IP Address of the IP Camera into the Address field, such as 192.168.1.31 or click twice on IPEdit list.

Before connection, “User name” and “Password” will be requested:

Default User Name: **admin**

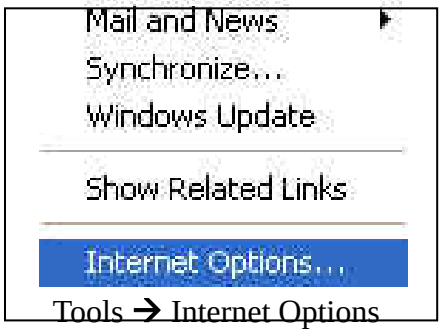
Default Password: **1234**



7.4.1 Install ActiveX

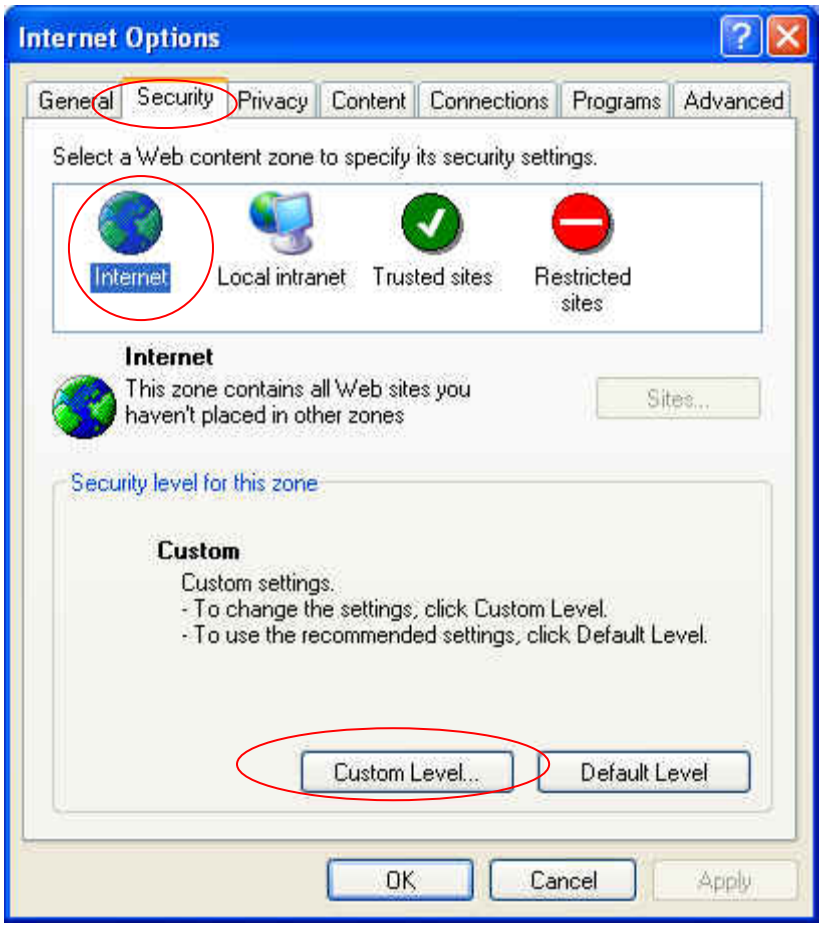
Before entering remote connection, please install ActiveX and check your browser setup by following the procedures below:

a. Open Internet Explorer under “Tools”, select “Internet Options”.

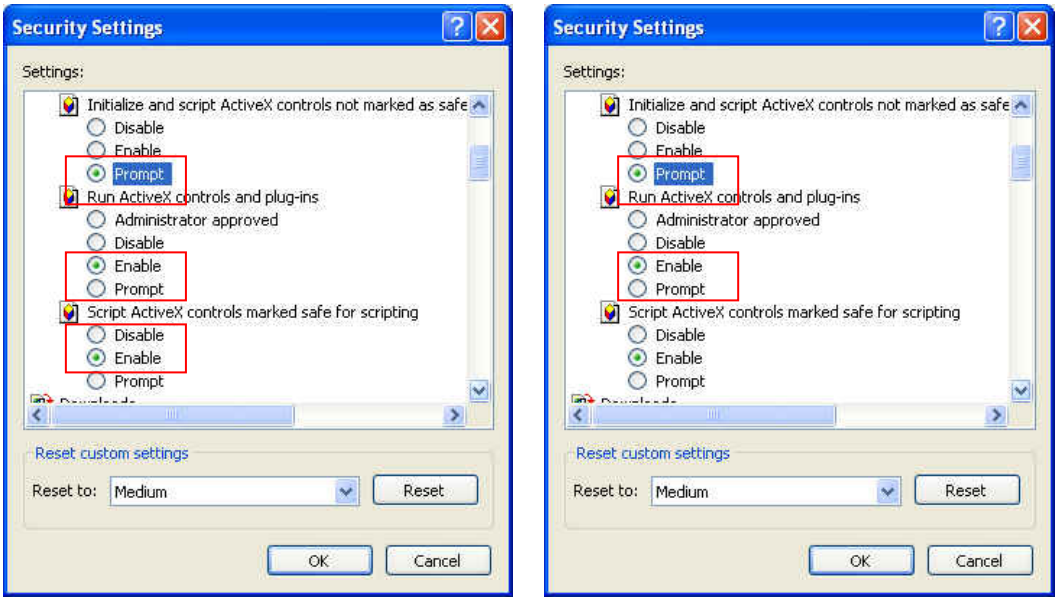


Tools → Internet Options

b. Select “Security”, and then press “Custom Level”.

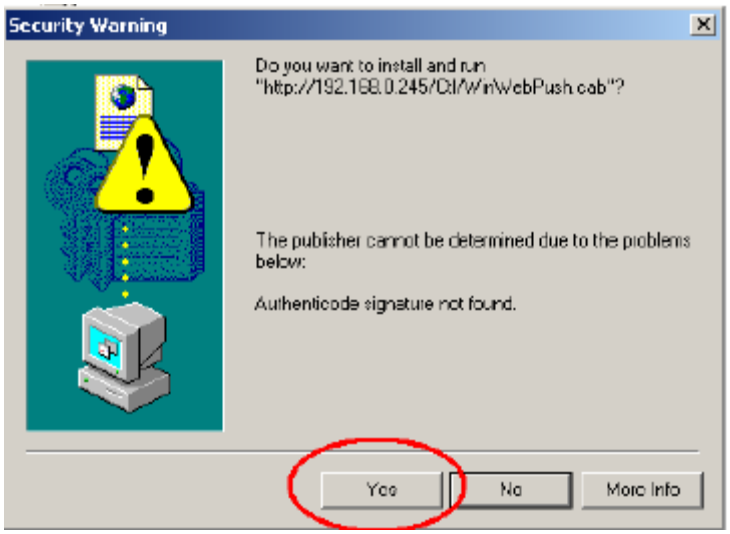


Security -> Custom Level



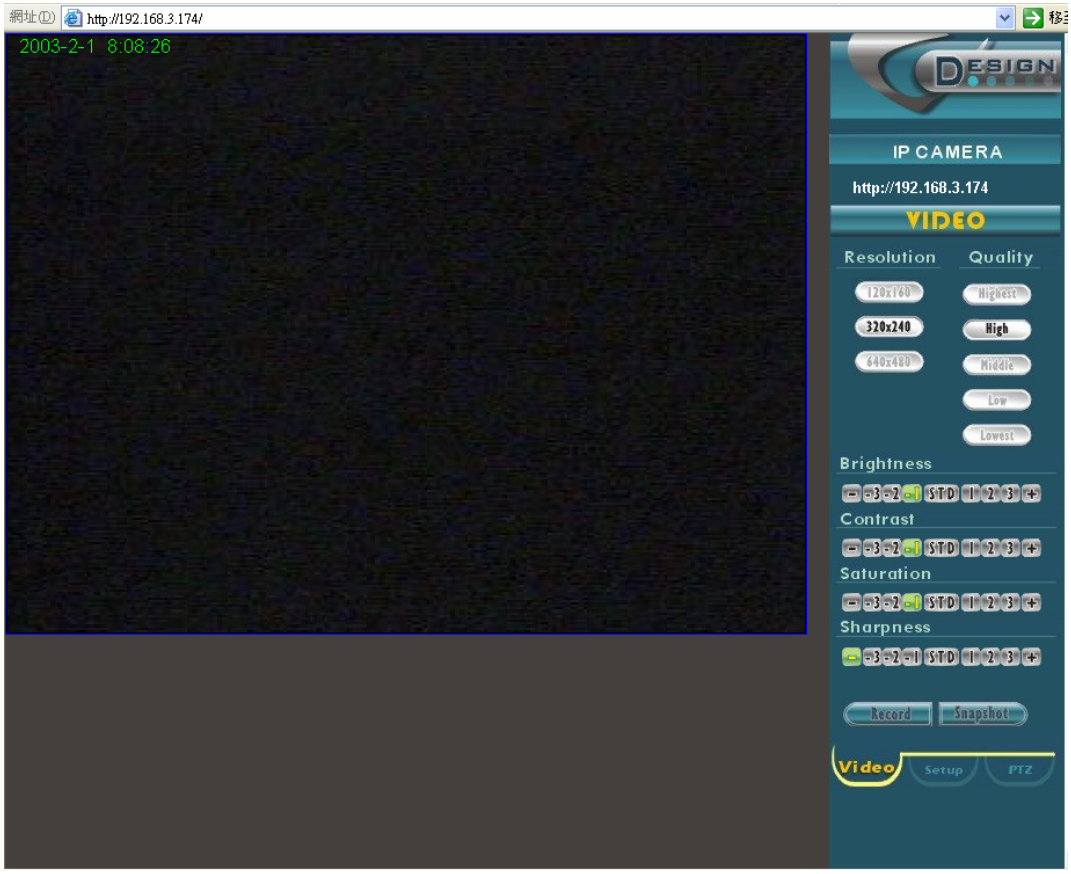
Enable ActiveX Control

The graphic below will be shown when first time installing ActiveX Mode. Please, select “Yes” to accept installation.



Download ActiveX Control

Live view will be displayed when installation is successful.

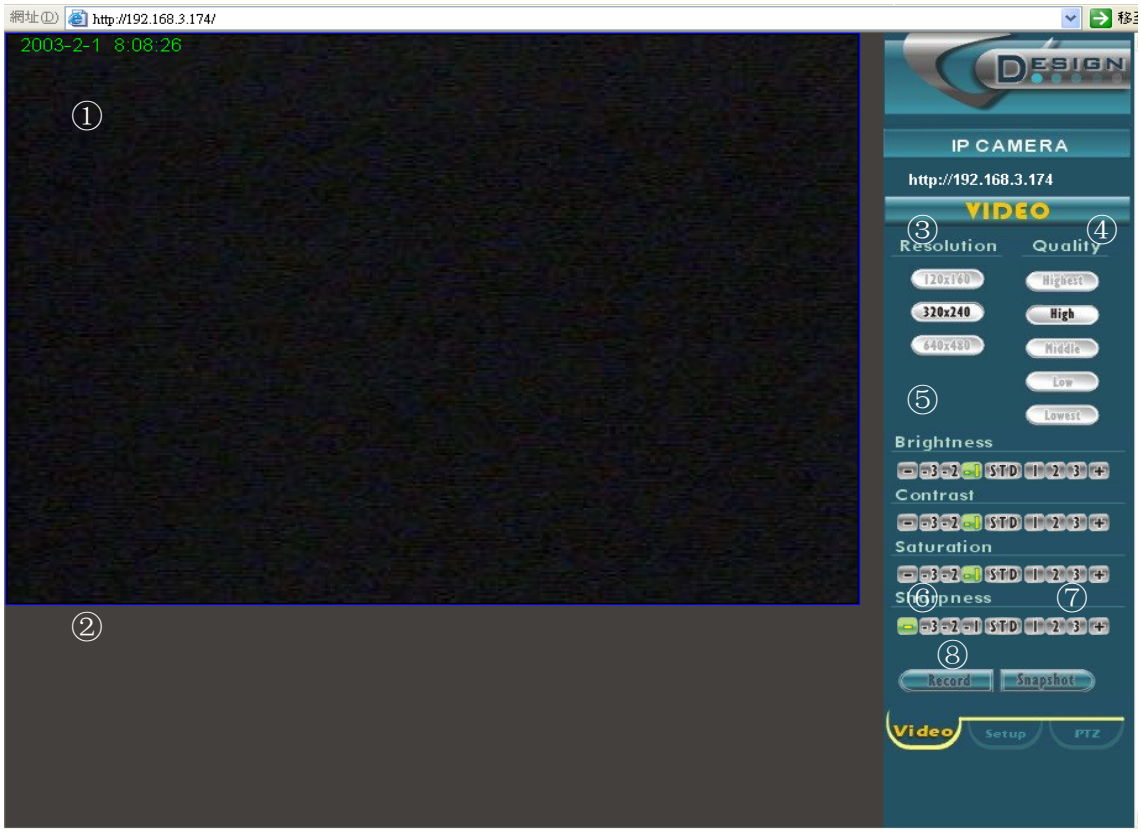


Live display under ActiveX mode

8. FUNCTION SETUP

8-1 Home Page

Best browsing resolution is 1027x768.

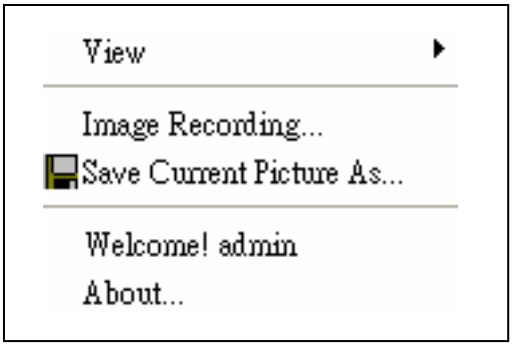


Main Page

① Live Display

Move the cursor to the image range, right click mouse to display the five functions below:

- View/ Make changes on image display
- Image Recording/ Record function setup
- Save Current Picture/ Save the current image
- Welcome! Administrator/ Display current user name
- About/ Version description



8-1-1 View

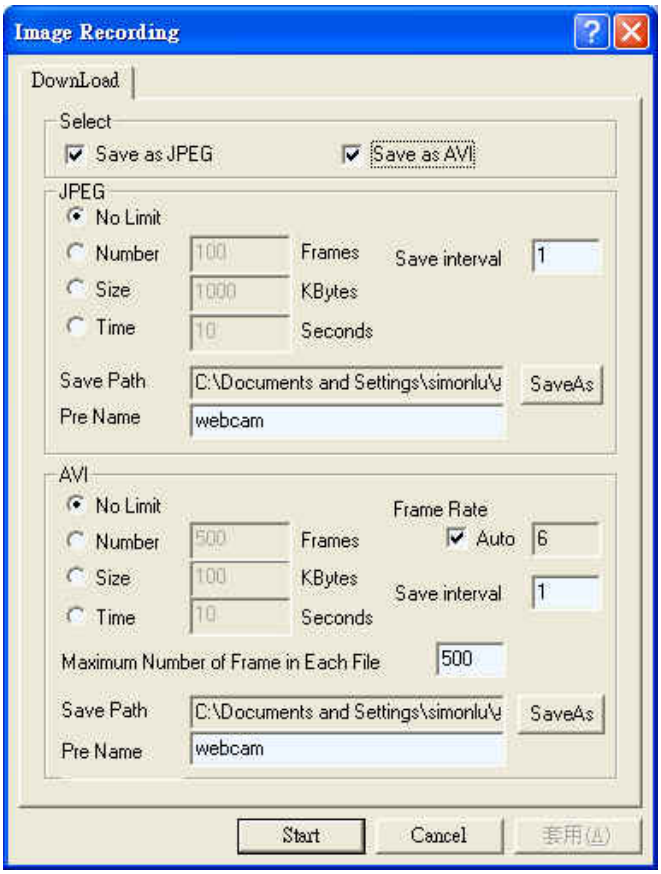
Three types of display method:

1. Resizable: Adjustable image size.
2. Actual Size: The actual image size.
3. Status Bar: Reveals current status.

8-1-2 Image Recording

Image Recording Setup Display:

1. Save as JPEG: Save as picture file
2. Save as AVI: Save as AVI animation file



8-1-2-1 Save as JPEG:

- No Limit: Unrestricted image storage (continuous).
- Number: Image storage according to “number”.
- Save interval: Image storage according to “1/10 second” (e.g.: Enter “10”, then 1 frame is stored per second. Enter “50”, then 1 frame is stored in 5 seconds).
- Size: Image storage according to “size”.
- Time: Image storage according to “time”.
- Save Path: Image storage according to “Save Path”.
- Pre Name: Image storage according to “Prefix Name”.

8-1-2-2 Save as AVI:

- No Limit: Unrestricted image storage (continuous).
- Number: Image storage according to “number”.
- Size: Image storage according to “size”.
- Frame Rate: Setup how frames per second.
- Time: Image storage according to “time”.
- Maximum Number of Frame in Each File: Image storage according to “maximum frame”.
- Save Path: Image storage according to “Save Path”.
- Pre Name: Image storage according to “Prefix Name”.
- Save Interval: Image storage according to “Save Interval”, milliseconds per unit.

② Resolution

- 176x144
- 352x288
- 704x576
- 120x160
- 320x240
- 640x480

Note: Resolution may differs according to different camera types (ex.: NTSC = 320x240, 120x160, or 640x480).

③ **Quality Setting**

Provides 5 image quality settings:

- Highest
- High
- Medium
- Low
- Lowest

④ **Brightness/ Contrast/ Saturation/ Sharpness:**

- - : Mini. Value
- STD: Pre-set Value
- + : Max. Value
- The higher values are shown to the right and descend in value as you go to the left.

⑤ **Record Setup:**

Please refer to 8-1-3 Image Recording.

⑥ **Snapshot:**

Press this button to capture one live image and press “RIGHT” button to store the image.

⑦ **Label Selection:**

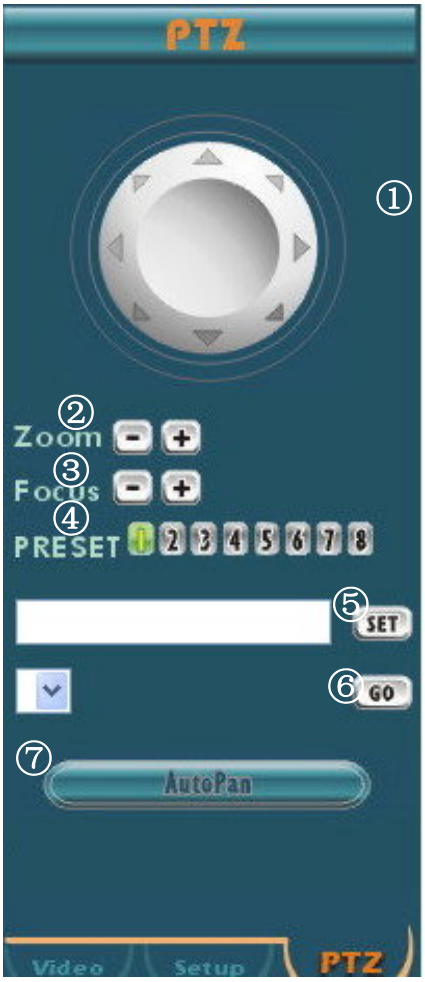
Video: Live Adjustment Selection

Setup: Advance Setup

PTZ: PTZ Control Interface

8-2 PTZ Control

Supports PTZ control of PELCO D and P, setup can be made by selecting Setup selection, enter Configuration selection, and make the necessary setup on the System page (Setup as follows: Setup=>Configuration=>System).



PTZ control adjustment.

① PTZ Control Jog: Control PTZ movement.

② Zoom: Controls the picture size (zoom-in/ zoom-out).

③ Focus: Controls the clarity of the image (Switch off the Auto Focus function, before applying this function).

④ PRESET: Select monitoring point (max. 8 points)

⑤ SET: Enter a name (Max. English Characters = 9 and Chinese Characters =4), then click “SET” button to save the setting (It auto saves under Go menu list).

⑥ GO: Under GO menu list, select the monitoring point already setup, then click “GO” to proceed.

⑦ AutoPan: Run auto-pan (need to be operated by suggested keyboard brand).

8-3 Setup

① Video Add: Enter an IP to view another IP Camera (Max. IP setup = 9).
Note: The more IP engaged on-line, the slower the live monitoring reaction.

② Remove 1: Remove selected IP Camera or camera.

③ Remove All: Remove all IP Cameras or cameras.

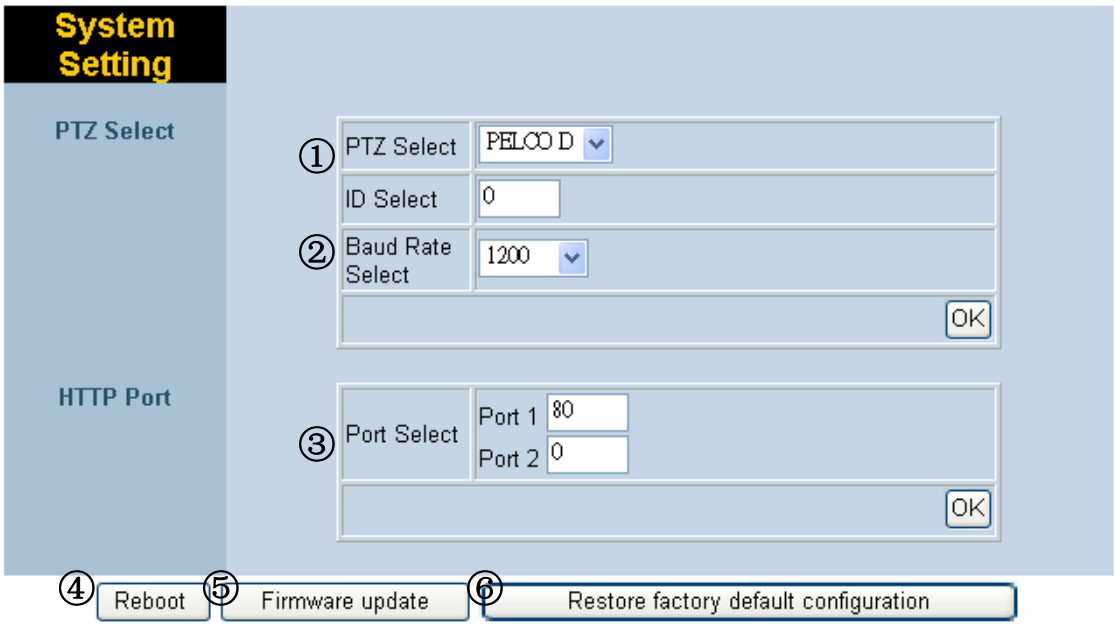
④ Configuration: Advance setup (Only effective when the identity entered is Admin).

⑤ Live Video: Return to live display.

8-4 Advanced Setup

Advanced setup is only effective when the identity entered is Admin.

8-4-1 System



① PTZ Control Select: PTZ control of PELCO D and PELCO P cameras (selectable).

② PTZ ID & Baud Rate Select: PTZ ID (D: 1~254; P: 1~32) and 8 Baud Rate selection (1200/ 2400/ 4800/ 9600/ 19200/ 38400/ 57600/ 115200).

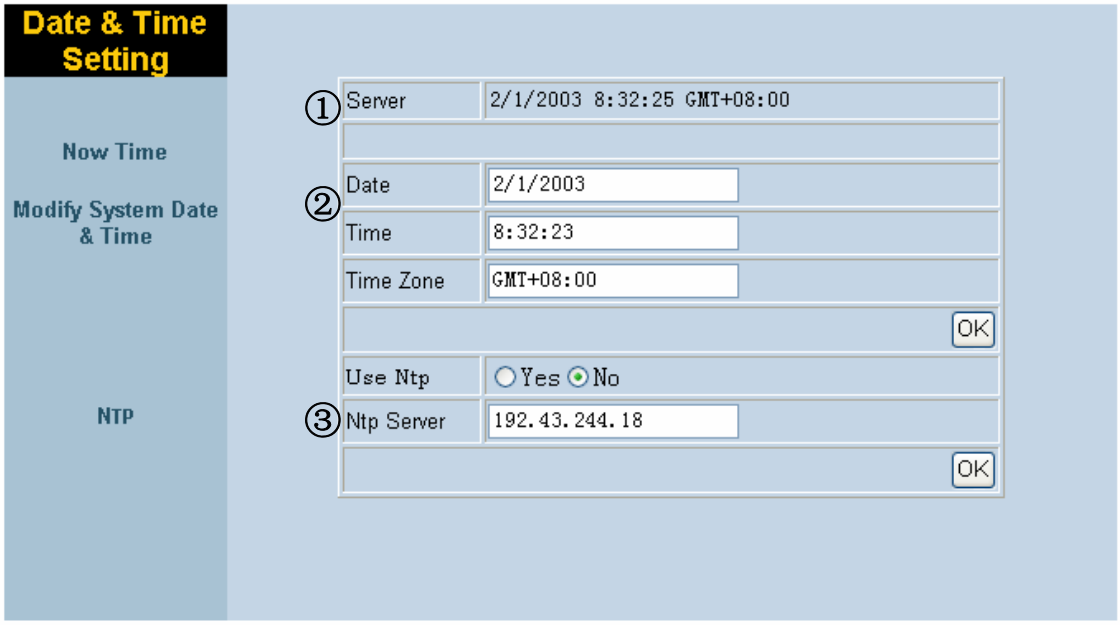
③ Port Select: IP sharing device enables switching port function, setup the port and enter http://XX.XXX.X.XX:8887 (as shown on the diagram above). Please restart the IP Camera after the setup has been completed.

④ Reboot: Restart the IP Camera.

⑤ Firmware update: Updates the firmware (Stop Recording function before operation).

⑥ Restore factory default configuration: Click "Restore factory default configuration" the button to return to factory default settings (Please restart the IP Camera after setup has been completed), or by pressing the Reset button situated on the rear panel (Refer to Pg. 8 "Rear Panel Connection") for 5 seconds then release (Stop Recording function before operation).

8-4-2 Time



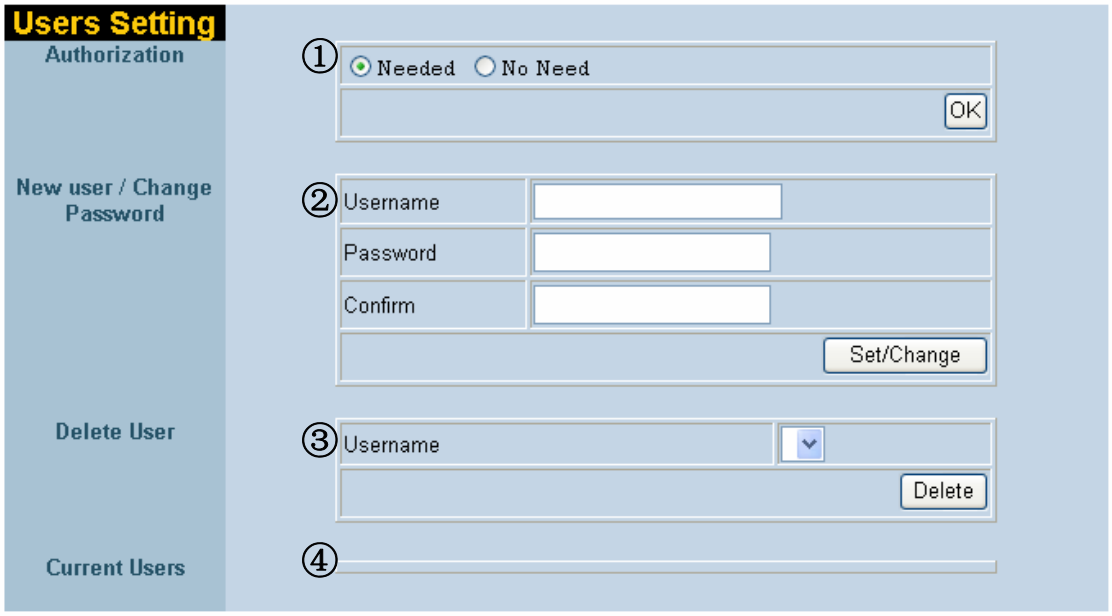
① Server: Display IP Camera time.

② Modify System Date & Time: Modify time and date manually (Without an internal clock, therefore after system restarts, the time is shown by default time).

③ NTP (Network Time Protocol): Pre-set connection: 192.43.244.18. To return to factory default, please select NO and restart the IP Camera or perform manual modification.

When time is entered incorrectly, a message informing error and an example will be displayed, as shown above (date interval separated by "/" and time interval separated by ":").

8-4-3 Users



① Authorization: User Authorization Setting “Needed/ No Need”.

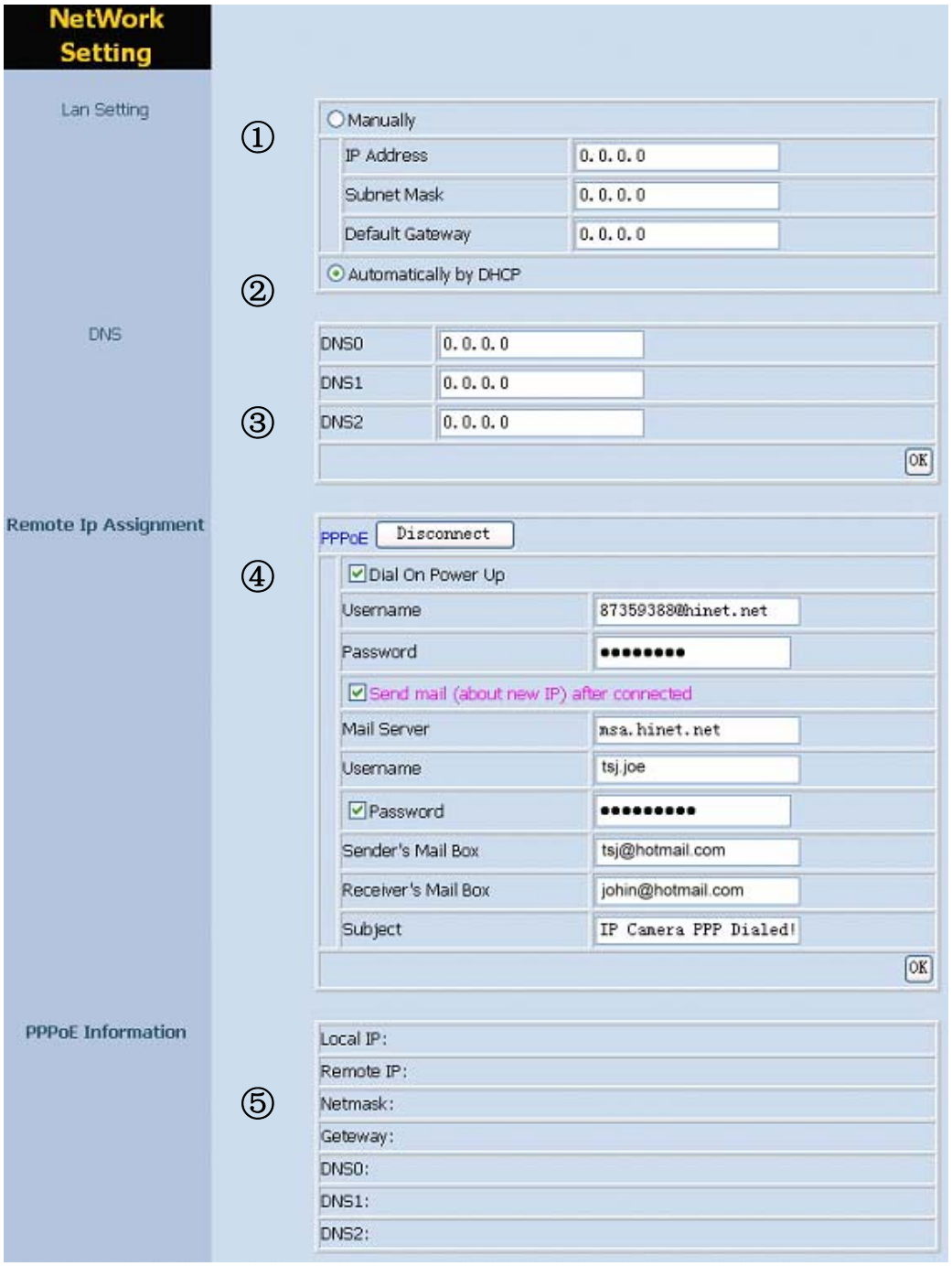
② New user/ Change Password: Add user or change password (Max. user = 30).

Note: Under max. resolution, for optimum efficiency max. user is suggested at 20.

③ Delete User: Delete user account.

④ Current Users: Currently registered users.

8-4-4 Network


NetWork Setting
Lan Setting
①
Manually
IP Address
0. 0. 0. 0
Subnet Mask
0. 0. 0. 0
Default Gateway
0. 0. 0. 0
②
Automatically by DHCP
DNS
DNS0
0. 0. 0. 0
DNS1
0. 0. 0. 0
③
DNS2
0. 0. 0. 0
OK
Remote Ip Assignment
PPPoE
Disconnect
④
Dial On Power Up
Username
87359388@hinet.net
Password
Send mail (about new IP) after connected
Mail Server
msa.hinet.net
Username
tsj.joe
Password
Sender's Mail Box
tsj@hotmail.com
Receiver's Mail Box
johin@hotmail.com
Subject
IP Camera PPP Dialed!
OK
PPPoE Information
⑤
Local IP:
Remote IP:
Netmask:
Geteway:
DNS0:
DNS1:
DNS2:

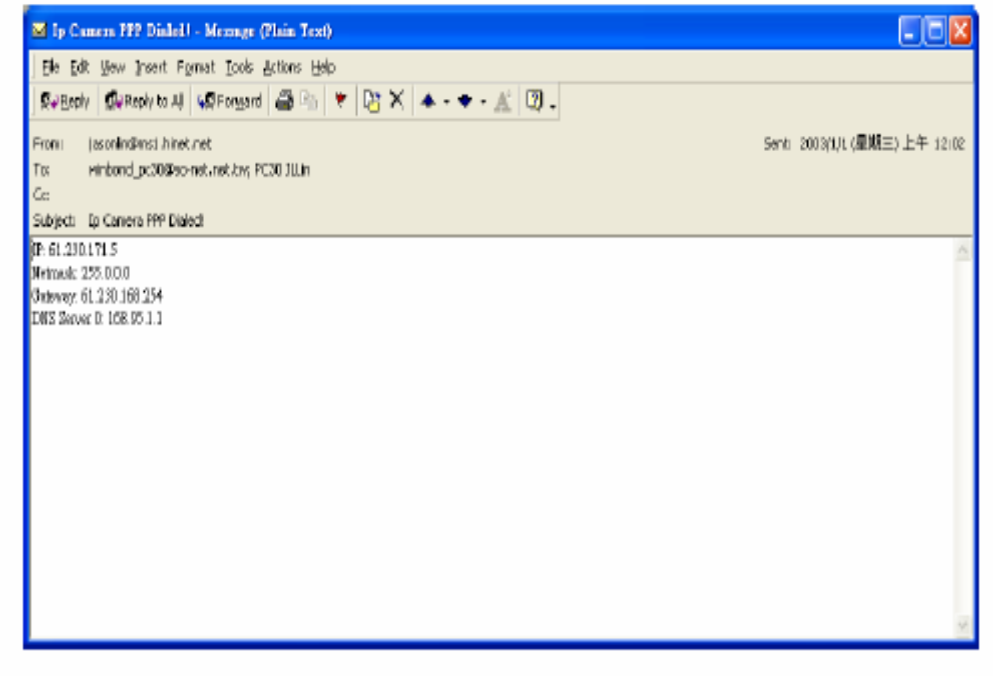
① Lan Setting: LAN IP address setting is the same as IPEdit.

② DHCP: Select item “Automatically by DHCP” to gain an IP address.

③ DNS: Fixed IP users needs to setup an IP address, please contact your local ISP dealer.

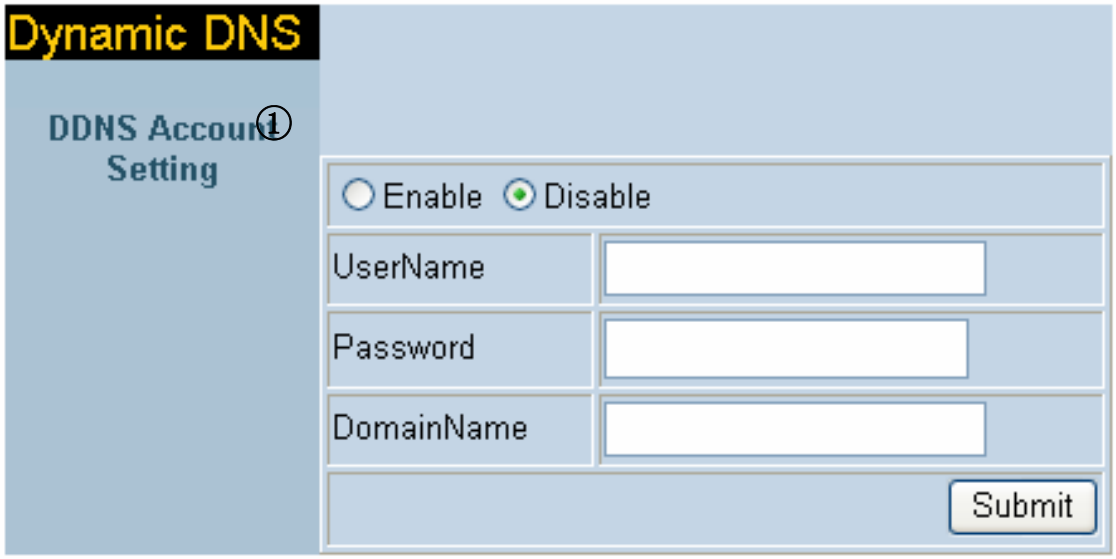
④ PPPoE: Connecting using ADSL, please contact your local ISP dealer. Select item “Send mail (about new IP) after connected”, mail will automatically be sent when connected to the ISP (as shown below).

⑤ Display PPPoE IP Information.



Note: Please reboot after setup.

8-4-5 DDNS



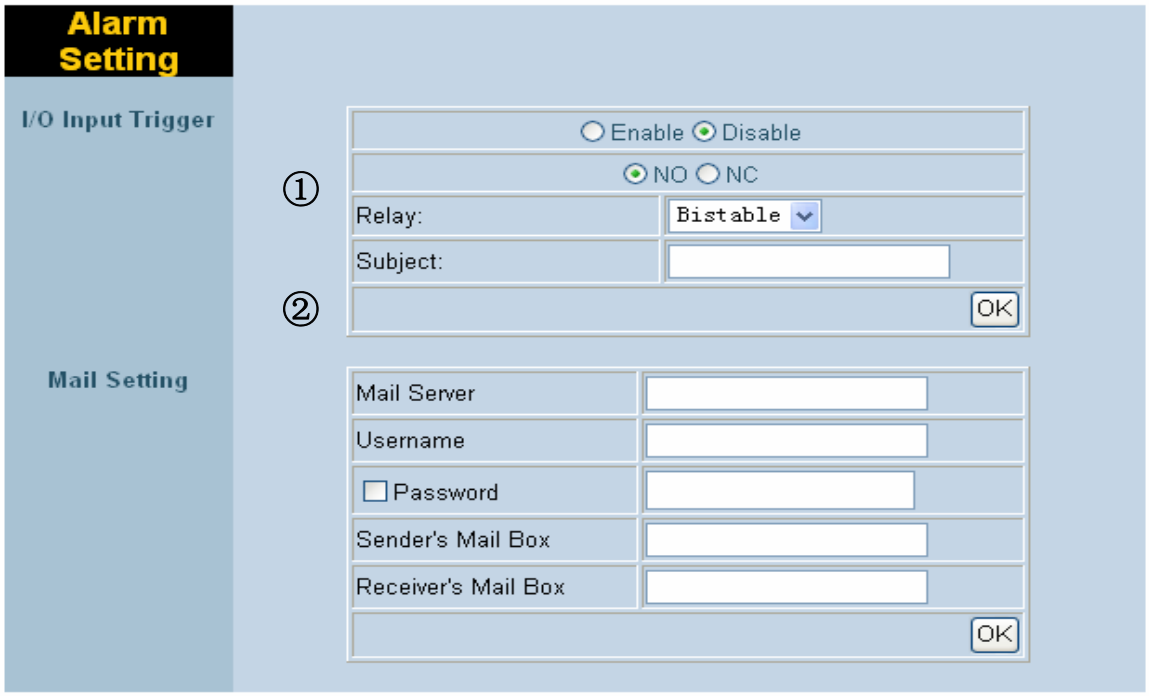
① DDNS: To apply dynamic IP address, you may register at DDNS Server: http://www.dyndns.org

To setup follow the steps below:

1. Register at DDNS Server: http://www.dyndns.org
2. Apply domain name.
3. Dial-up using ADSL Router: Click “Enable” button, then input your UserName, Password, and DomainName (Similar to registering at DDNS Server).

Note: Please reboot after setup.

8-4-6 Alarm



① I/O Input Trigger:

- Setup alarm input/ output function. Select Disable before selecting NO or NC.
- Relay supports Bistable function (/0.5S/1S/2S/5S/10S).
- Subject: Enter mail subject.

② Mail Set: Alarm will be notified by message.

9. TROUBLESHOOTING

Question	Answer
Unable to detect the IP Camera	Reconnect the internet line and make sure that it properly connected and then restart the system.
No picture and sound	Check that everything is connected properly (camera or microphone). Reconnect everything, make sure that the signal line is properly connected and then restart the system.
No images is shown on the web page	Please follow "7.4.1 Install ActiveX", setup the IE, and install ActiveX.
IPEdit unable to detect the IP Address	Please check your software, some software (e.g.: firewall or anti-virus software) may block-out IPEdit software.
No images or image lag occurs after applying ADD IP	Please confirm the IP entered or decrease the IP connection on-line.

10. SPECIFICATION

Image Sensor	Format	NTSC/ PAL
	Image Pick-up Device	1/3" Color Sony Super HAD
	Effective Picture Elemer	NTSC: 510*492, PAL: 500*582 (H*V)
	Horizontal Resolution	380 TV lines
	Minimum Illumination	0.1 LUX @ F1.2
	S/N Ratio	More than 48 dB
	Auto Electronic Shutter	NTSC:1/60s~1/100,000s, PAL:1/50s~1/110,000s ON/OFF switch-able
	Auto Iris Control	Video-Drive Lens & DC-Drive Lens both supported
	Gamma Characteristic	0.45
	Lens Mount	C or CS mount adjustable
	Auto Gain Control	Yes
	Auto White Balance	Yes
	Back Light Compensation	ON/ OFF Switchable
	Synchronous System	Negative Sync. Internal.
Video	Compression	M-JPEG
	Output	Loop Back: BNC x 1 (1.0 Vp-p./ 75 Ohms)
Audio	Input	Microphone
	Compression	AC-97
Display	Resolution	Max. 640 x 480 (NTSC), 704 x 576 (PAL)
	Frame Rate	Max. 20 fps (NTSC/PAL)
Recording	Resolution	Max. 640 x 480 (NTSC), 704 x 576 (PAL)
	Frame Rate	Max. 20 fps (NTSC/PAL)
	Quality	Highest/ High/ Middle/ Low/ Lowest
	Mode	Manual
Alarm	Input/ Output	1/ 1(NO/ NC)
	Triggered Mode	sensor input
	Action	relay output, mail send
NetWork	Ethernet	10/100BaseT Ethernet (RJ45)
	Protocol	TCP/IP, HTTP, PPPoE, DNS, DDNS, DHCP, SMTP
SerialConnectors		RS-232/ RS-485
Pan/ Tilt/ Zoom Control		Yes
Backup Device		IE
Power Adaptor		DC Adaptor 12V/ 0.5A, AC100~240V
LED Indicators		POWER LED
Weight		0.5 kg
Dimensions(mm)		66 x 52 x 110 mm (WxHxD)
Operation Temperature & Humidity		5˚C~ 45˚C, Less Than 90%

(Note: Design and specifications are subject to change without prior notice.)