IP Camera User's Manual

(Version 1.2.1)

IP-INTB1 & IP-INTB2

Network Bullet Cameras

IP-INTD3 & IP-INTD4

Network Dome Cameras

IP-INTT5 & IP-T5

Network Traditional Cameras

Introduction

We appreciate your purchasing our IP Network Camera.

This is a Network Camera with a built-in MPEG-4 CODEC and

Streaming Server. It uses an MPEG-4 CODEC as the Video Compression method and has a built-in Streaming Server which allows you to monitor and record real time images in remote places over the Internet.

Our IP cameras support both Static IP and Dynamic IP addresses and can change their Communication Ports, allowing several Network Cameras to be installed on one IP. Our IP cameras also permits you:

- To record an Event in your own FTP server installed in a remote location.
- To search / delete / down-load / replay the recorded video.
- Support various wireless devices such as Mobile Phone, PDA to see real time Video in Wireless Internet handset.

For more information or inquiry, please contact us to ;

Home Page : www.specotech.com

Telephone : 631-957-8700

Fax : 631-957-9142

Address : 200 New Highway, Amityville, NY 11701

Appearance, function and specification may be changed without prior notification. Our company assumes no responsibility for visible or invisible loss resulted from changes in policy or products.

Important Notes

- The Network Camera may be damaged by electrical and physical shock

- Do not try to disassemble the products. Contact or consult the distributor or Head Office for after sale service. There may be no Quality Assurance for the products disassembled arbitrarily.

- Do not use these products to be connected with life related device like medical apparatus.

- Do not touch the front lens of the camera. It is one of the most important parts of the camera.

- Never allow the camera face to strong light directly. It can damage the CCD.

Contents

1. Feature

1. Feature

1.1. Package

IP/Network Camera

Software CD

Quick Install Guide

Cross LAN Cable

Accessory

Show power cable

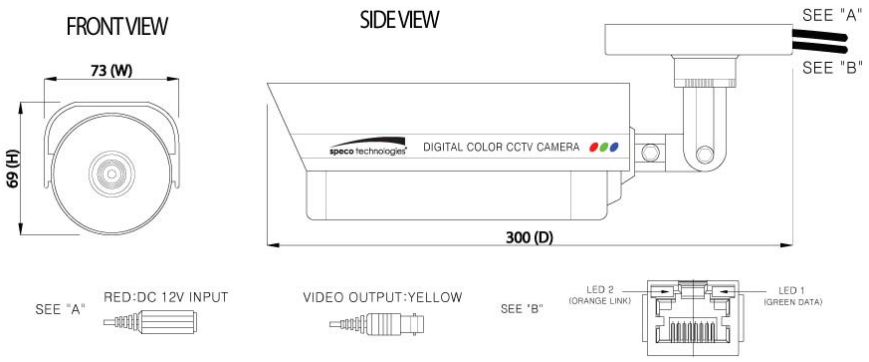
Package of Products is composed of main body of product, Software CD (NVR Program, IP Utility, Product Manual, NVR Manual) , Quick Install Guide, Cross LAN Cable, Accessory, 12V DC Adapter.

Please check before starting installation.

1.2. Dimension and Camera Features

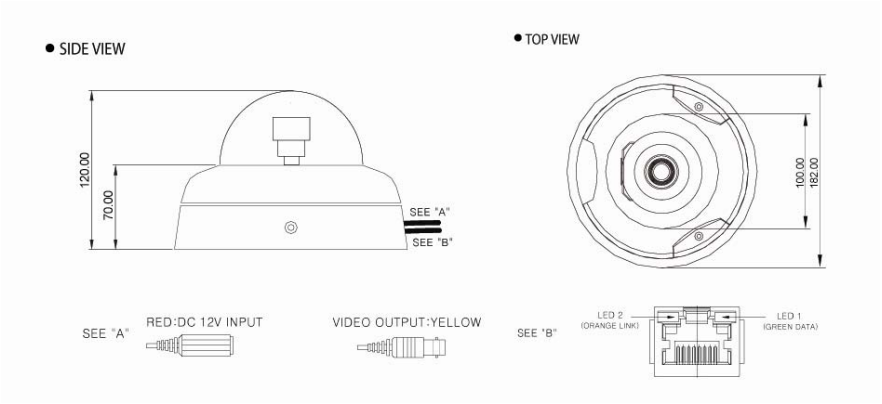
1.2.1. Dimensions

1) Bullet Camera

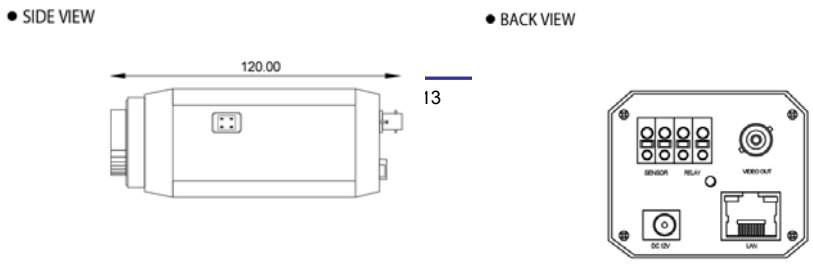


① ② ③

2) Dome Camera



3) Traditional Camera



1) Power Port: Power connection port (12 VDC)

2) VIDEO Port : Video Output Port (BNC)

3) LAN Port: LAN Connection Port (Connect with LAN Cable for Local Network or Internet Viewing)

- ✓ LINK: LED On (When the product connects with LAN Cable)
- ✓ DATA: LED On (When user connects the product to the Network)

1.2.2. Camera Feature (Not available with IP-T5)

1) SLC (Speco Light Compensation)

: When the image is in front of strong background lighting, your camera allows you to get a clear image.

2) Intensifier: 1/3 inch double density CCD and digital processor permit high quality pictures to be captured in very low light conditions.

3) High Resolution: The horizontal resolution of 540TV lines is achieved by using a SONY CCD having Double Speed 410,000 pixels.

4) Motion Detection: Video motion detection is built in to the camera.

5) OSD: Full on screen control of all critical features.

6) Reduce Noise : A DSP chip that removes image noise efficiently in low light conditions.

7) Electronic Day/Night: Allows the camera to always remain in color or to switch into B/W at night.

8) Manual/DC Lens : You can choose MANUAL or DC LENS by using this switch.

2. Install and Check Video

2. Install and Check Video

2.1. Installation

1) Connect the IP Camera to the PC by LAN cable (Crossover Cable)
2) Supply power to the camera using a 12 volt DC regulated power supply.
3) Wait approximately 2 minutes until the Link/LED light comes on.

2.2. Video Check

Basic network setting value of the camera is to be:

- ✓ IP Address: 192.168.1.7
- ✓ Subnet Mask: 255.255.255.0
- ✓ Gateway: 192.168.1.1

To connect THE CAMERA into the user's PC, change the setting value of the PC network environment.

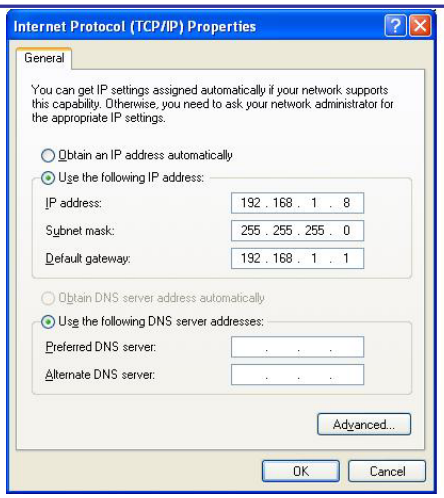


Fig. 2–1 Network Setting of User PC

1) Set IP Address, Subnet Mask and Gate-way of User's PC with 192.168.1.50, 255.255.255.0 and 192.168.1.1 as shown on [Fig. 2-1].

Fig. 2–2 Web Browser Input

2) Run Web Browser as [2-2] and input 192.168.1.7 in URL and click "Enter", then [2-3] is shown. In case [2-3] does not appear, re-set Hardware (Reset Button in Camera) to reboot and run Web Browser, input 192.168.1.7 in URL line and click "Enter" .

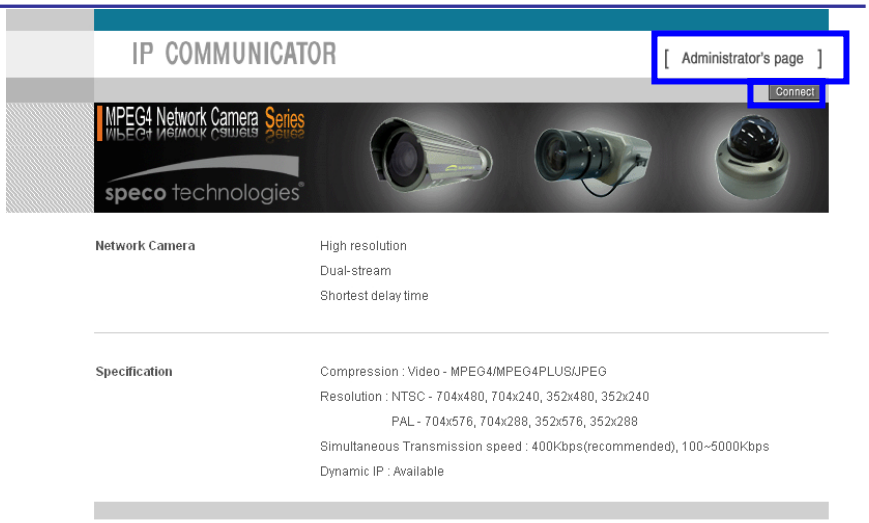


Fig. 2–3 THE CAMERA Main Page

3) Click "Connect" Button of [Fig. 2-3].

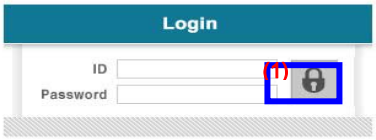


Fig. 2–4 User login

4) Input ID and Password on [Fig. 2-4] to see Video.

5) User's Authority to see Video on THE CAMERA is as follows ;

Table 2-1 User ID, Password, Rights

User ID	User Password	Rights
Guest	Guest	Monitor only
PTZ (select models only)	PTZ	Monitor, Control of P/T/Z, Control of Relay
Audio (select models only)	Audio	Monitor, Hearing
Iaudio (select models only)	Iaudio	Monitor, Bi-directional Audio
PCAudio (select models only)	PC Audio	Monitor, P/T/Z, Relay Control, Hearing (1 way Audio)
root	root	All Function

6) Above [Table 2-1] is the value set in THE CAMERA. Change the User Information in 'General Setting' after installing the camera.

7) Click (1) after input ID: root, Password :root in [2-4].

8) Message Window [2-5] appear soon, click 'Yes'.

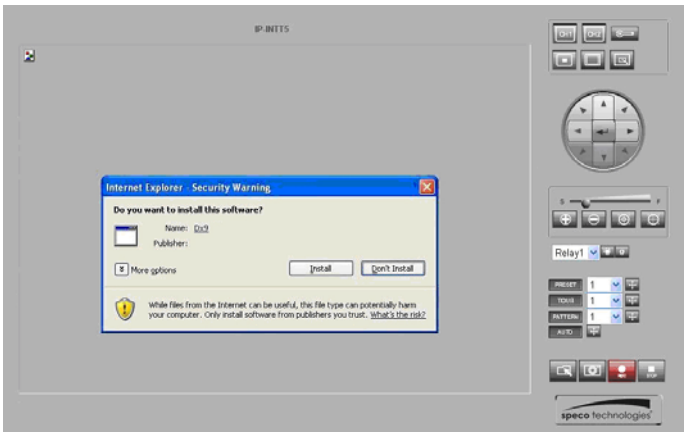


Fig. 2–5 ActiveX Download

9) Upon installation, Web Viewer [Fig. 2-6] appears and the image of the Camera can be seen.

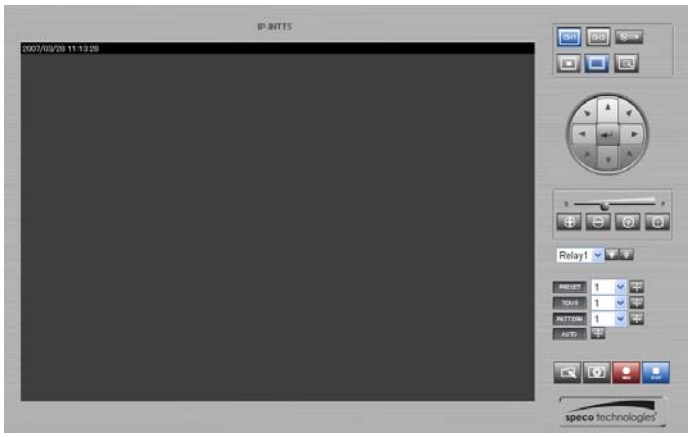


Fig. 2–6 Web Viewer

10) After checking proper operation as seen on [Pic 2-6], go onto the next Chapter (3) Basic Setting.

11) Refer to (5) Basic Use' to see the details of how to use Web Viewer.

3. Basic Setting

3. Basic Setting

3.1. Check Network and Installation Type

This Chapter is for basic setting of THE CAMERA. To install Hardware of the Network Camera, basic understanding of Networking is required. *Please refer to Chapter 6 in case knowledge of Network Environment is required.* There are 2 ways to install Hardware. One is **to install THE CAMERA without IP sharing Device** under Cable Modem or Leased Line, the other one is **to install THE CAMERA under an IP sharing Device** , which is required necessarily under PPPoE environment, and even under Leased Line or Cable Modem. The default IP Address of THE CAMERA is preset to 192.168.1.7 and Subnet Mask to 255.255.255.0 and Gateway to 192.168.1.1 in the factory. This explanation is based upon default value of the factory.

Caution 1 : Check Video before installation, on '2. Install and Video Check'.

Caution 2 : In case using IP sharing Device, only Global IP is available.

Caution 3 : THE CAMERA does not support PPPoE. IP Sharing Device is required to connect to THE CAMERA under PPPoE.

Installation without IP sharing device

-> For static IP, refer to '**Static IP Setup**'.

-> For dynamic IP, refer to ' **Dynamic IP Setup**'.

Installation with IP sharing device

-> Should set up with Static IP. Refer to 'Installation with IP Sharing Device'.

3.2. Installation without IP sharing device (Router)

3.2.1. Static IP Setup

1) After checking Video in 'Video Check', go to the next step.

2) Connect THE CAMERA to PC with LAN Cable (Crossover Cable).

3) **Cable connection and Network Setup should be same as shown in '2. Install and Video Check'.**

4) Run Web Browser and input 192.168.1.7 in URL and click 'Enter', then [Fig. 3-1] will appear.

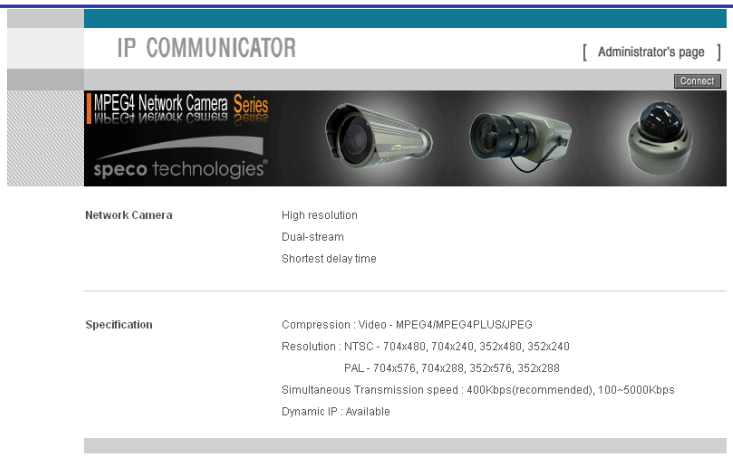


Fig. 3–1 Main Page of THE CAMERA Network Camera

5) Click 'Administrator's Page' of [Fig. 3-1], then Browser shows [3-2] Log-in Page.

Fig. 3–2 Administrator Page Log-in

6) Put 'admin' in ID and Password line, click 'Login', then [3-3] 'Administrator's Page' will be shown. (ID, Password of THE CAMERA is preset as admin/admin in Administrator's Page. Change Administrator's ID and Password in General Setting of '4. Expert Setting'

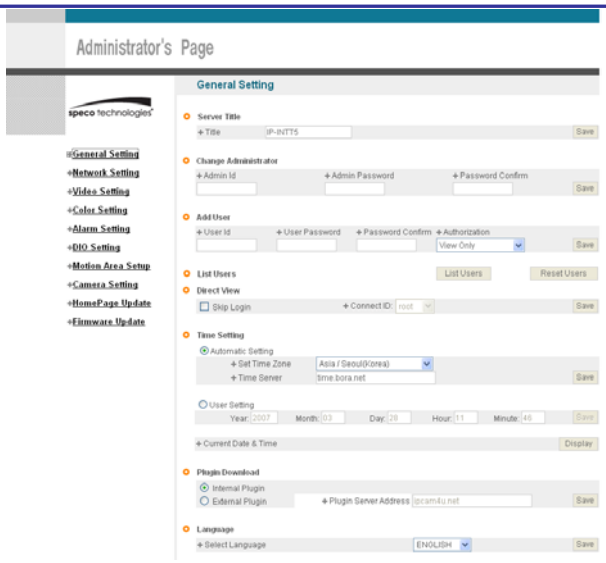


Fig. 3–3 Administrator's Page

7) Click "Network Setting' in left menu on [3-3], [3-4] appears.

8) Click 'Static IP Address' in 'IP Setting' of [3-4], and input IP Address, Subnet Mask, Default Gateway according to Network environment to connected THE CAMERA to.

9) For setting of 'DNS Server', input DNS Address to fit with Network Environment to set. Use DNS value normally set in PC.

10) DNS Address must be entered.

11) Click 'Save' Button of [3-4] to save setting value.

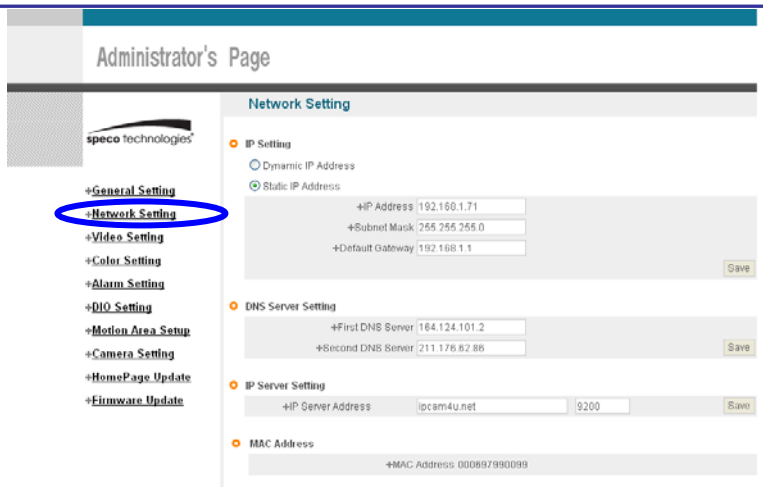
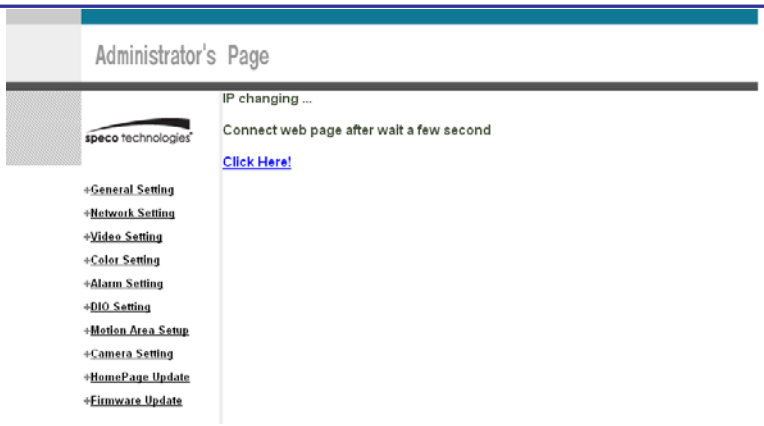


Fig. 3–4 Network Setting

12) Click 'Click Here' upon appearing of IP Change Window of [3-5].

13) IP Change loading Page appears as [3-6], the Main Page of changed address is connected. (Note: You may not find the main page of changed address under Cross Cable connection, but IP has been changed.)



Pic 3–5 IP Change

Fig. 3–6 IP Change loading Page

14) Remove LAN Cable (Cross Cable) connected between THE CAMERA and PC.

15) Connect THE CAMERA to Network with LAN Cable (Straight Cable).

16) Connect PC to Network with LAN Cable (Straight Cable)..

17) Set up IP Address, Subnet Mask and Gateway of PC according to the Network environment.

18) Check

- ✓ Run Web Browser on PC, input IP address set in THE CAMERA onto URL and

click 'Enter',

- ✓ Check if IP Setting is correct or not, referring to 'Video Check'
- ✓ If Video is seen, THE CAMERA has been correctly set up.
- ✓ If Video is not seen, check whether there may be a conflict of IP in the Network, and re-check the set value of Network environment of THE CAMERA, and Network environment of User's PC.

3.2.2. Dynamic IP Setup

- ✓ **Do not set up Dynamic IP in the camera except as a direct connection of Cable Modem supporting Dynamic IP with the camera.**
- ✓ **Reset, in case IP has not been allocated to THE CAMERA in Dynamic IP Setting, to go to Initial Value and try again.**

1) After checking Video in 'Video Check', then go to the next step.

2) Connect THE CAMERA and LAN Cable (Cross Cable)

3) **Cable Connection and Network Setting should be done same as per '2. Install and Video Check'.**

4) Go to Network Setting Page of Administrator's Page as per 4), 5), 6), 7) of 'Static IP Setup'.

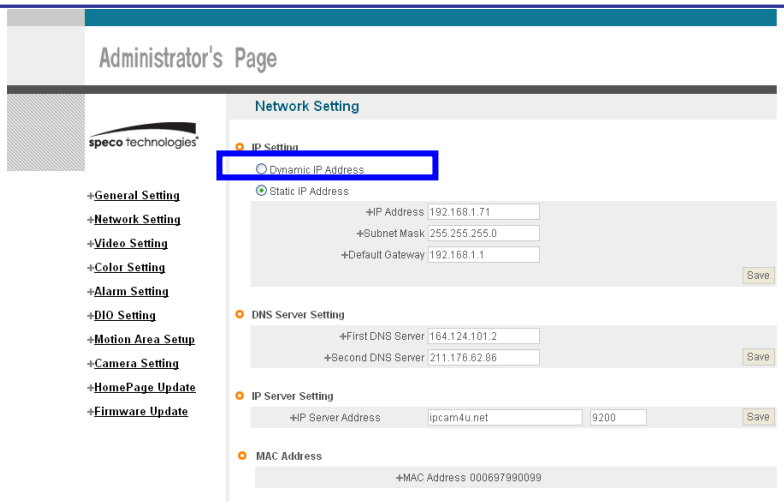


Fig. 3–7 Network Setting

5) Click on 'Dynamic IP Address' in 'IP Setting'.

6) Click 'Save' Button.

7) Upon completion of setting, close the Web Page and find IP of THE CAMERA in 'IP Utility' program provided with Proprietary Viewer (see '5. Basic Use')

8) If the IP is found, THE CAMERA has been given an IP. But in case the IP is not found, do a re-set of [2-1] to go to initial value because it has not been given an IP, then re-start the IP Setting. Once THE CAMERA has an IP, remove the LAN Cable (Crossover Cable) connected between THE CAMERA and the PC.

9) Connect THE CAMERA to the Network with LAN Cable (Straight Cable).

10) Connect PC to Network with LAN Cable (Straight Cable).

11) Set IP address of PC, Subnet Mask and Gateway properly according to the Network Environment.

12) Check

After registration of THE CAMERA in Service Server (refer to 'Use of Service Server' of ' 5. Basic Use',

connect to THE CAMERA by Domain Name (Server Name) allocated to THE CAMERA.

For example, run Web Browser and input Domain Name allocated to THE CAMERA in URL. In http://IPXXXXX.ipcam4u.net, 'IPXXXXX' is to be Name of Server registered in Service Server by user.

If the initial page is shown as [3-8], check Video of THE CAMERA referring to '2. Install and Video Check'. If Video is seen, set up is properly done.

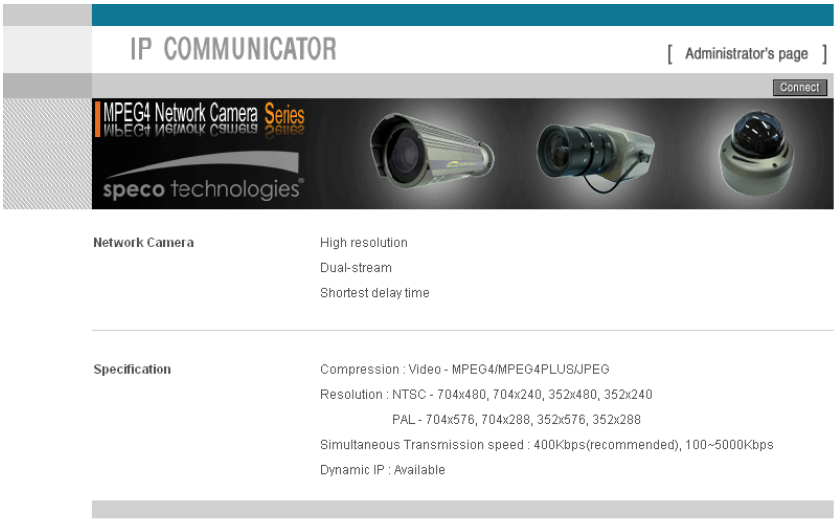


Fig. 3–8 Initial Page of THE CAMERA

3.3. Installation with IP Sharing Device (Router)

1) After checking Video in **'2. Install and Video Check'**, then go to the next step.

2) Connect THE CAMERA and PC with LAN Cable (Crossover Cable).

3) **Cable Connection and Network Setting should be done same as per '2. Install and Video**

Check'.

4) Go to Network Setting Page of Administrator's Page as per 4), 5), 6), 7) of 'Static IP Setup'.

5) Click 'Static IP Address' in 'IP Setting' of [3-9], and input IP Address, Subnet Mask, Default Gateway according to Network environment to connected THE CAMERA to.

6) For setting of 'DNS Server', input DNS Address to fit with Network Environment to set. Use DNS value normally set in PC.

7) DNS Address should be input. In case THE CAMERA is installed under IP Sharing Device, input local IP of Router in 2nd DNS Server Address.

8) Click 'Save' Button of [3-9] to save the set value.

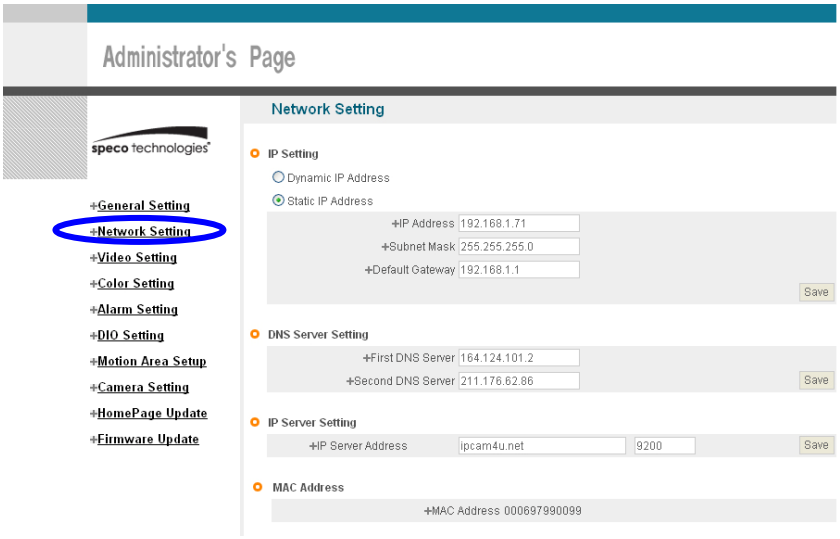


Fig. 3–9 Network Setting

9) Click 'Click Here' upon appearing of IP Change Window of [3-10].

10) IP Change loading Page appears as [3-11], the Main Page of changed address is connected. (may not find the main page of changed address under Crossover Cable

connection, but IP has been changed.)

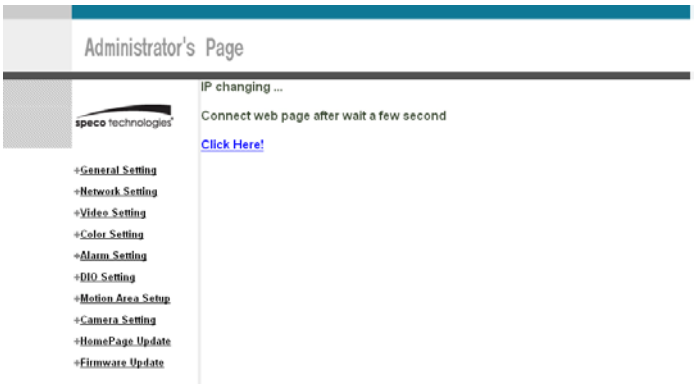


Fig. 3–10 IP Change

11) It is connected to the new IP set up, in 20 seconds after window of [3-11] appears.

12) Check Video of THE CAMERA referring to '2. Install and Video Check' as soon as it is connected to the new IP.

13) Go to Network Setting Page of Administrator's Page as per 4), 5), 6), 7) of 'Static IP Setup'.

Fig. 3–11 IP Change loading Page

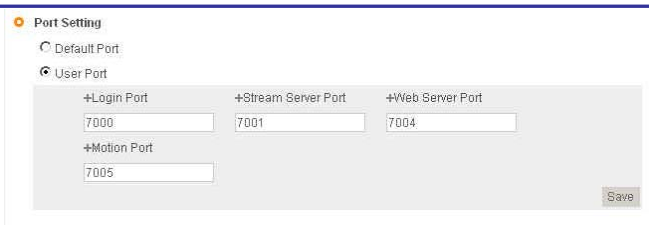


Fig. 3–12 Port Setting

14) Set Port in Port Setting Page of [3-12]. It is required to set each different Port for many THE CAMERA Network Cameras under 1 Router.

15) Click 'Save' Button to save set value.

16) Remove LAN Cable (Crossover Cable) connected between THE CAMERA and PC.

17) Connect THE CAMERA to Network with LAN Cable (Straight Cable).

18) Connect PC to Network with LAN Cable (Straight Cable).

19) Port-Forward the port designated to use THE CAMERA, in IP Sharing Device. **Refer to manual of IP Sharing Device for details.**

20) **Check 1** (local check)

Run Web Browser and input IP address of THE CAMERA in URL and click 'Enter'. If you changed Web Server Port, you must input 'http://IP Address:**Port Number**'. For example, if you set IP address of THE CAMERA to 192.168.10.88 and changed Web Server port to 81, you must input http://192.168.10.88:81.

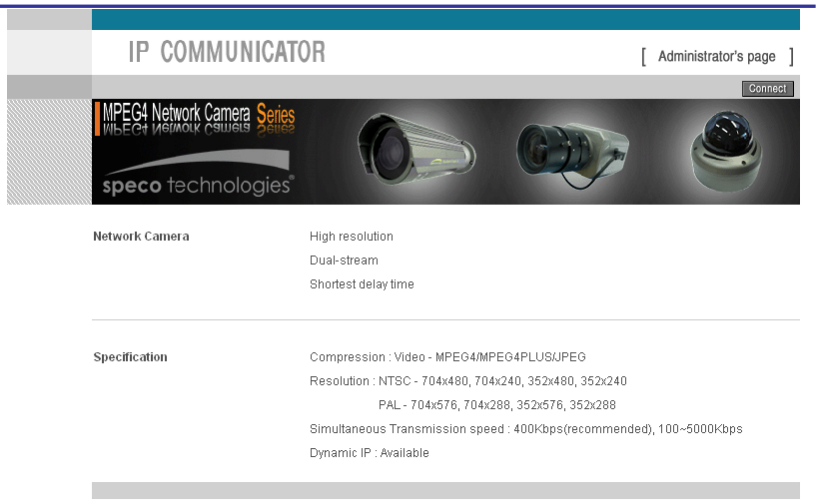


Fig. 3–13 Main Page of THE CAMERA

After [3-13] appears, check Video of THE CAMERA referring to'2. Install and Video Check'.

21) **Check 2** (Check from outside)

After registration of THE CAMERA in Service Server (refer to ''Use of Service Server' of '' 5. Basic Use',

connect to THE CAMERA by Domain Name (Server Name) allocated to THE CAMERA.

For example, run Web Browser and input Domain Name allocated to THE CAMERA in URL. In http://IPINTB1.ipcam4u.net , 'IPINTB1' is to be Name of Server registered in Service Server by user.

If the initial page is shown, check Video of THE CAMERA referring to '2. Install and Video Check'. If Video is seen, set up is properly done.

3.4. Cautions

If the firewall is used for security purpose, THE CAMERA may not work properly. In this case, open

the port of THE CAMERA, then it will work properly. The port being used by THE CAMERA can be checked

on 'Port Setting' of 'Network Setting' of 'Administrator's Page'.

Port of THE CAMERA on ex-factory is set default as follows ;

- Web Connection Port: Port 80 TCP
- Authentication and Control Port: Port 9000 TCP
- Video Streaming Port: Port 9001 TCP
- Motion Detection Control Port : Port 9005 TCP

In setting user port, do not use 1504, 1508, which port is used in THE CAMERA itself.

4. Expert Setting

4. Expert Setting

After registration of THE CAMERA in Service Server (refer to 'Use of Service Server' of '' 5. Basic Use'', connect to THE CAMERA by Domain Name (Server Name) allocated to THE CAMERA. (For example, run Web Browser and input Domain Name allocated to THE CAMERA in URL. In http://ipcam4u.net, 'THE CAMERA' is to be Name of Server registered in Service Server by user)

Click 'Administrator's Page' on Initial Page of THE CAMERA, login Page of [4-1] appears.

Put 'admin' in ID and Password line, click 'Login', then [4-2] 'Administrator's Page' will be shown. (ID, Password of THE CAMERA is preset as admin/admin in Administrator's Page. Change Administrator's ID and Password in General Setting of '4. Expert Setting'.)

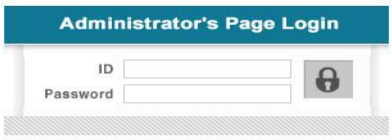


Fig. 4–1 Administrator's Page Login

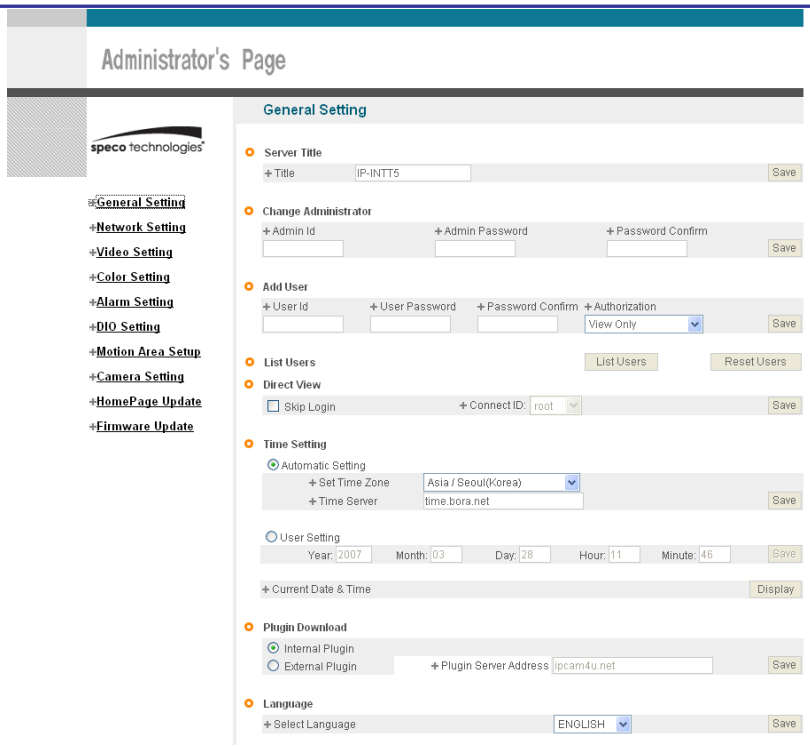


Fig. 4–2 Administrator's Page

4.1. General Setting

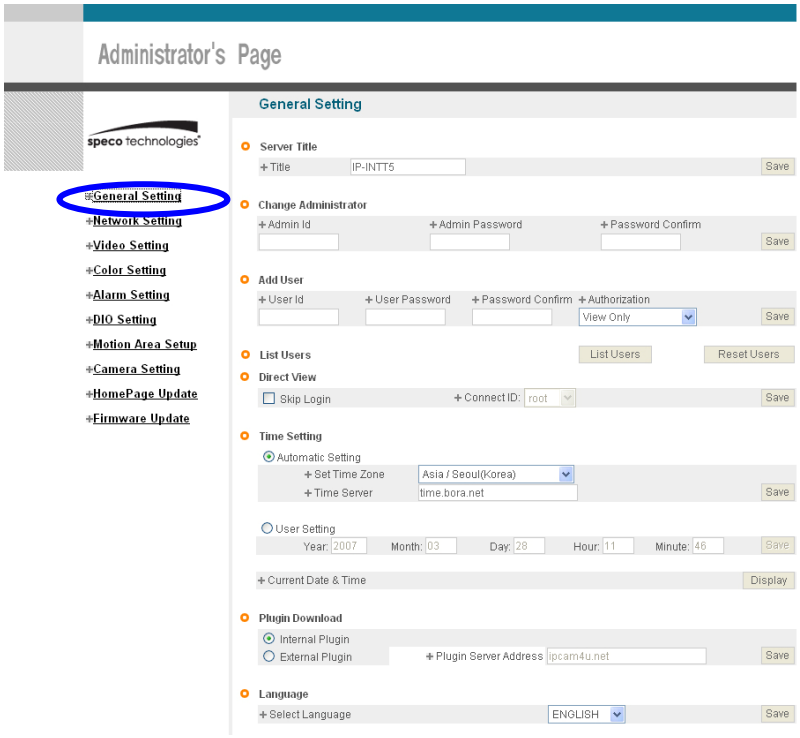


Fig. 4–3 General Setting

4.1.1. Title Setting

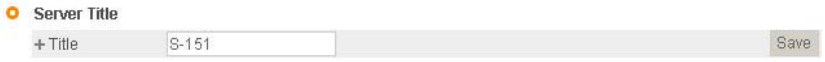


Fig. 4–4 Title Setting

Server title is to be English without space.

Click 'Save' Button to save title after input name.

4.1.2. Administrator's ID and Password Change

※ Cautions : Change Administrator's ID and Password and do not disclose the information to others.

Administrator's ID and Password should be English, within 20 characters, without space.

Click 'Save' Button to save the changed value after change Administrator's ID and Password.

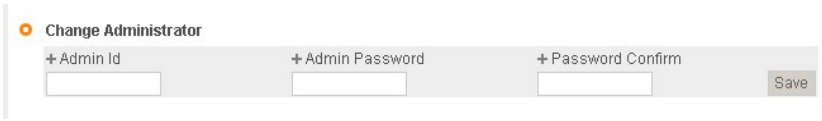


Fig. 4–5 Administrator's ID and Password Change

Remember Administrator's ID and Password. In case of forgetting Administrator's ID and Password, click the camera's 'reset' button to return to the initial value, and change Administrator's ID and Password.

4.1.3. User Registration

This is to register an account of a user who can monitor and control Video of THE CAMERA. Administrator's ID and Password should be English, within 20 characters, without space. Assign the authority to users and click 'Save' button. Maximum number of users to be registered is 100 people.

- View Only: Monitoring only.
- PTZ + Control: Monitoring, Control of P/T/Z of Camera and Relay. (select models only)
- Audio: Monitoring, and hearing Audio of Server. (select models only)
- Interactive Audio: Monitoring, Two-way Audio Communication with Camera Server (select models only)

- PTZ + Control + Audio: Monitoring, Control of P/T/Z of Camera and Relay, Hearing Audio of Camera Server. (select models only)
- All : Monitoring, Control of Camera P/T/Z and Relay, two-way Audio Communication with Camera Server, (Preset available)

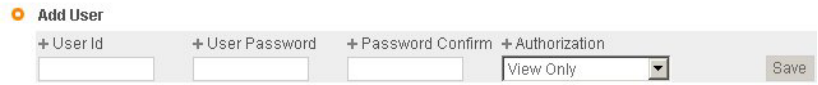


Fig. 4–6 User Registration

4.1.4. User List and Delete

Fig. 4–7 User List

User list is available on clicking 'List Users' on [4-7], to check list and delete user ID in [4-8]. User ID 'guest', 'PTZ', 'audio', 'laudio', 'PC Audio', 'root' has be pre-registered as basic user ID on ex-factory.

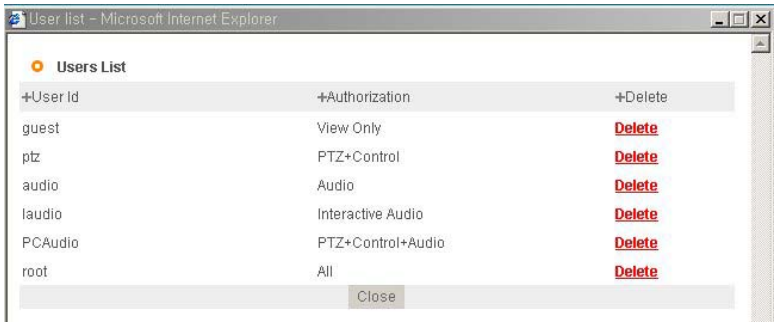


Fig. 4–8 User List

4.1.5. Skip Login (Automatic Monitoring)

Fig. 4–9 Skip Login

Tick on 'Skip Login' of [4-9], and click 'Connect ID' and save the value, then Web Viewer will appear automatically and Video of Camera can be seen upon connection to Home Page of THE CAMERA.

Save 'Connect ID' according to user authority. If you don't tick on 'Skip Login', it is available to connect to THE CAMERA Home Page but you can see Video of Camera. In this case, input user ID and Password for connection to see Video of Camera.

4.1.6. Time Zone Setting

This is to set Time zone of location where THE CAMERA is to be installed, to set up local time in case of monitoring from different time zone area. Select one of time zone in 'Set Time Zone' and save.

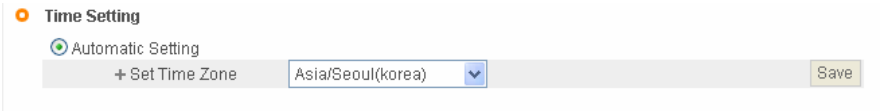


Fig. 4–10 Time Zone

Click 'Display' in [4-10] to see current time set in THE CAMERA.

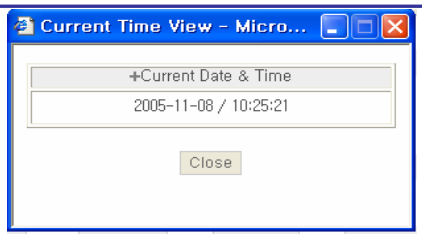


Fig. 4–11 Current Time View

In case THE CAMERA does not keep correct time, click 'Update' Button to get new time information from set time zone.

4.1.7. Set Download Route of Plug-in Type ActiveX

This is to set how to download ActiveX of Web Viewer, locally or from outer Server designated. In case setting as local download, it has a merit to use in private network without Internet. In case of setting as download from outside, it has a merit to download the updated Active X of Web Viewer automatically.

Fig. 4–12 Plug-in Download Route

4.1.8. Select Language

This is to select language to be displayed in all Web Pages such as Administrator's Page, Web Viewer and Main Page of THE CAMERA.

Fig. 4–13 Select Language

It supports both English and Japanese. Click 'Save' Button to save the set value after select the Language. Input ID and Password to connect Administrator's Page, and go to 'Home Page Update'->'Default Home Page Setting'->'Default', and change the main Page and Login Page of THE CAMERA to the selected language.

4.2. Network Setting

This is to set Network to use THE CAMERA. Set Network to fit user's network environment in '3. Basic Setting '. Change Network information to fit environment for THE CAMERA to be installed in.

4.3. Video Setting

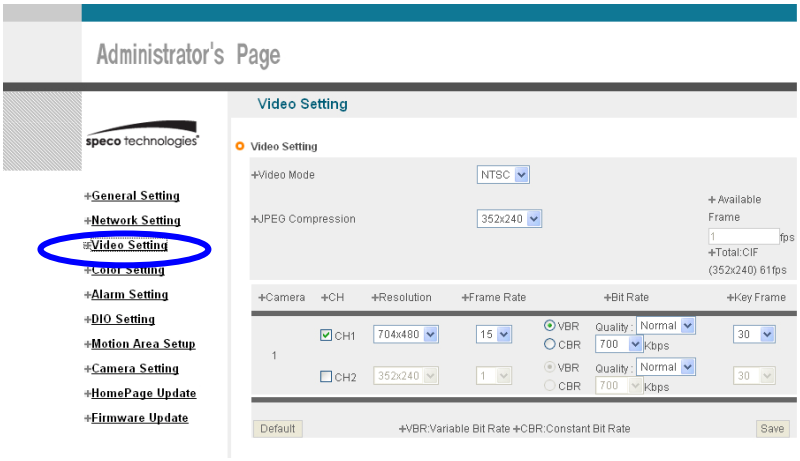


Fig. 4–14 Video Setting

4.3.1. Video Setting

Select and tick on the Channel to use, input Video format (NTSC or PAL), Compressed resolution, Bit rate, Frame rate, Key frame. Video setting can be done automatically by pressing 'High', 'Normal', 'Low' according to the Network Speed at which THE CAMERA is installed.

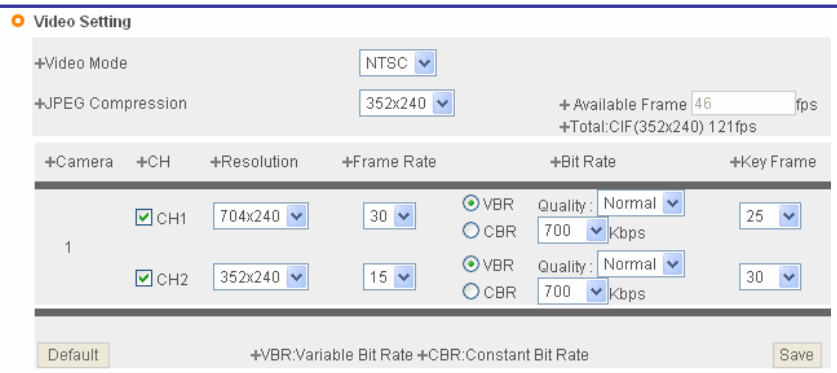


Fig. 4–15 Video Setting

To return to default of ex-factory, click 'Default' of 'Video Default Setting'

4.4. Color Setting

This is to adjust color of channel.

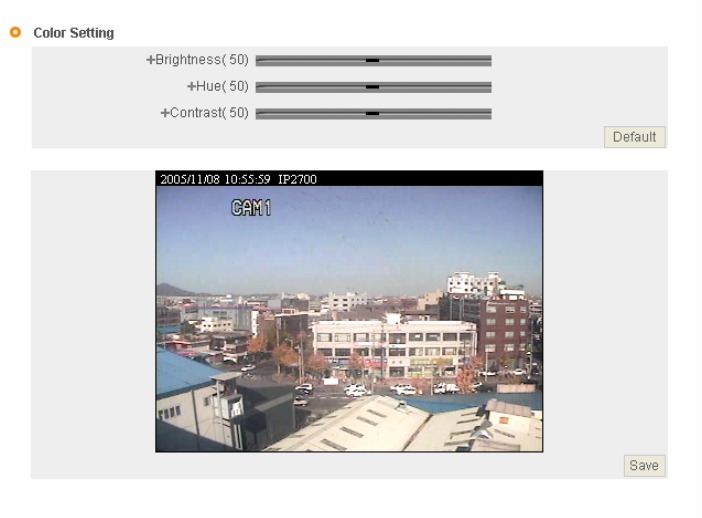


Fig. 4–17 Display Color Setting

Upon adjustment of color on [4-17], then click 'Save' to save the setting value. In case to return to default, click 'Default' to go to default. Even in this case, it is required to click 'Save' Button to save the setting value.

4.5. Alarm Setting

4.5.1. Alarm Event Setting

To get Alarm Service on THE CAMERA, go to 'Administrator's Page'→'Alarm Setting' and tick

'Enable' in 'Alarm'.

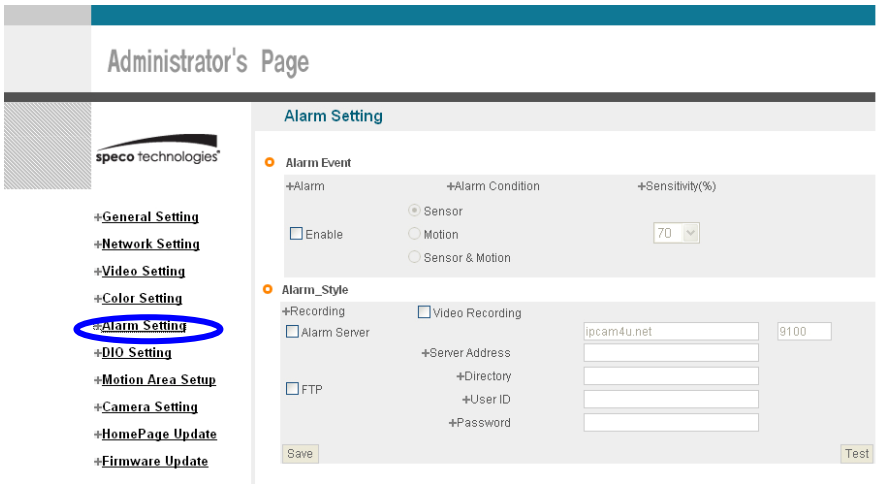


Fig. 4–18 Alarm Setting

Designate condition to drive Event in 'Alarm Condition', such as Sensor Event, Motion detection Event or Sensor + Motion detection Event, If Sensor Event is selected, make Sensor settings

Upon event situation after setting on 'Enable' in 'Alarm' of 'Alarm Event', Event is to be transmitted to user's Viewer and inform detection of Event, with flickering on screen and alarm sound. (refer to 5. Basic Use).

To use SMS Service and E-mail transmitting Event to Alarm Server, go to 'Alarm Style'-> 'Alarm Server' and input Domain Name of Alarm Server ('Alarm Server' is defaulted as **Ipcam4u.net**).

To send the recorded video to FTP Server upon alarm event, go to 'Alarm Style'-> 'FTP' and input FTP Server Address, Directory, User IP and Password, FTP Directory (mandatory). Make the user's directory in ftp root of User's FTP Server to get recorded files to be transmitted. Click 'Save' Button to save setting.

In case of setting to send Event to Alarm Server, register THE CAMERA in Service Server to use

Alarm Server (refer to ''Use of Service Server' in ' 5. Basic Use)

4.5.2. Alarm Event Test

Click 'Test' of [4-18], THE CAMERA will work as if Alarm has happened. In case selected 'Alarm Style ->'Alarm Server', Event is to be notified to Alarm Server and is to recorded into the recorded file (10 seconds before and 50 seconds after Event), and to be sent to Alarm Server.

In case selected to use user FTP Server, the recorded file (10 seconds before and 50 seconds after Event) is to be saved in FTP Server. It may take some time for Alarm Message to get to user's Mobile Phone or by E-mail, in some cases. If THE CAMERA has been registered in Service Server, it is available to check the details of Event and also change the Alarm Message of E-mail and Mobile Phone to be sent upon Event, in Alarm Server Homepage (Ipcam4u.net). Refer to 'Use of Service Server' in ' 5. Basic Use' for details.

4.6. DIO Setting (support for IP-INTT5/T5 only)

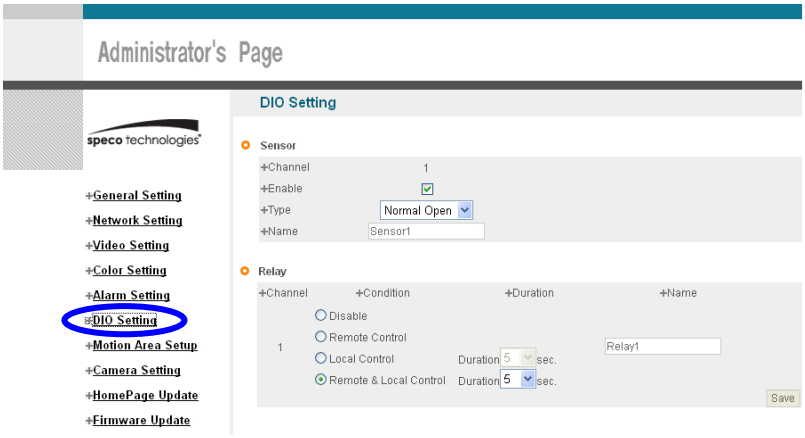


Fig. 4–19 DIO Setting

Tick on sensor to use and select type of sensor to use.

- ✓ Sensor Type : designate type of sensor, NC, NO.

Designate name of sensor to use.

4 conditions are selectable for Relay. Relay name is to be input.

- ✓ Disable: Relay is not active
- ✓ Remote Control: to control Relay through Internet using Viewer
- ✓ Local Control: Relay is on during 'Duration' time upon Event on Sensor, then is off.
- ✓ Remote & Local Control: Control Relay through Internet using Viewer. To be ON during 'Duration' time upon event on Sensor, then to be OFF.

4.7. Motion Area Setup

- ✓ (1) Motion Area Set: Press the set button. Place the mouse curser on this area and drag it out to the desired area.
- ✓ (2) Area Clear: Cancel the former area established.
- ✓ (3) Save: Please wait for 3 to 5 sec. while camera save the present setting information by itself.

4.8. Camera Setting(support for PTZ Camera)

Fig. 4-20 Camera Setting

It is available to pre-set Pan/Tilt/Zoom Cameras.

Preset Setting is available up to 20, but may be less than 20 for some model of Camera.

- ✓ (1) OSD Menu: to activate OSD Menu.
- ✓ (2) Preset No: to select the Preset Number to set up.
- ✓ (3) Preset SET: 'SET' button is to set the current coordinate as preset location with name recorded by user. In 3 seconds after pushing 'SET' button, the Preset coordinate is to be set. Don't move Camera during the time (about 3 seconds).
- ✓ (4) Preset Move: to move to the selected preset number.
- ✓ (5) Tour No: to select the Tour Number to set up.

- ✓ (6) Tour Move: to move to the selected preset number.
- ✓ (7) Pattern No: to select the Pattern Number to set up.
- ✓ (8) Pattern Move: to move to the selected Pattern number.
- ✓ (9): Adjustment of Pan/Tilt/Zoom/Speed/Focus: to move to the location to preset by adjusting Pan/Tilt/Zoom/Focus.

4.9. Homepage Update

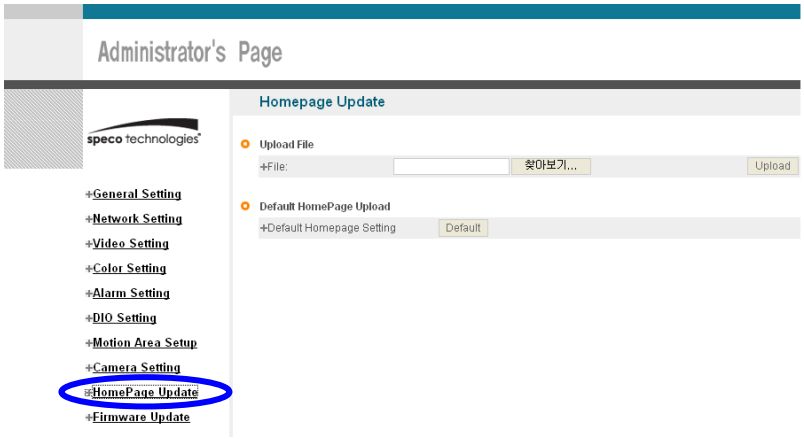


Fig. 4–21 Homepage Update

Homepage Update function is for user to upload the main page of THE CAMERA onto user's Homepage. User's Homepage is composed of 3 files, index.html, top.htm, main.htm. The file for user to use is main.htm. After making Web Page (main.htm) and save it as file name of main.htm, upload by the function of 'Homepage Update', then main.htm page is to be the 1st main page of THE CAMERA.

(Image file is not uploaded in THE CAMERA.) User Homepage can't exceed 300Kbyte.

If user wants to re-make user's homepage into Homepage provided complimentarily, click 'Default HomePage Upload'.

4.10. Firmware Update

In case firmware is upgraded in the future, Upgrade Server (http://ipcam4u.net) will automatically upgrade Firmware of THE CAMERA. Upgrade is only supported through Network. Information on latest version of THE CAMERA will be posted in Data Room of Speco Technologies Homepage. (http://www.specotech.com)

4.10.1. Remote Upgrade

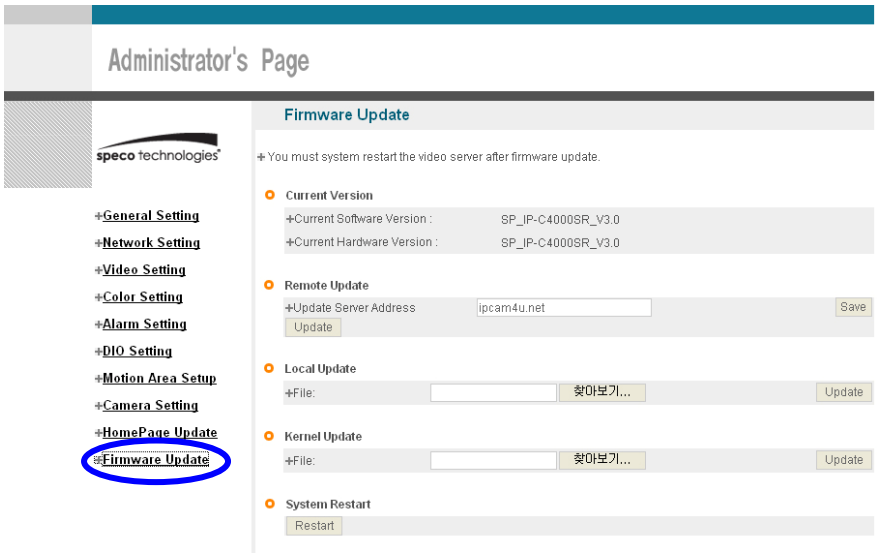


Fig. 4–22 Firmware Update

Address of 'Update Server Address' in [4-22] is set as 'ipcam4u.net'.

Check 'Current Software Version' in 'Current Version' of [4-22] and go ahead with update if current version is lower than latest version. Upon clicking 'Update' button in [4-22] 'Remote Update', [4-23] will appear.

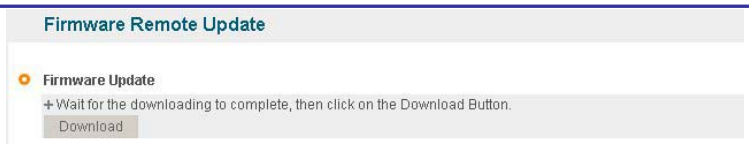


Fig. 4–23 Firmware Update

THE CAMERA will be automatically upgraded upon clicking 'Download' button of [4-23] after connecting to Upgrade Server and checking version.

Fig. 4–24 Firmware Download

'Downloading' message will be shown until completion of Update as [4-24] (it may take time according to Network situation). Upon completion of upgrade, there appears message showing upgrade result.

[4-25] is the message showing that upgrade has been correctly done. Click 'Restart' in 'System Restart' to restart System of THE CAMERA.

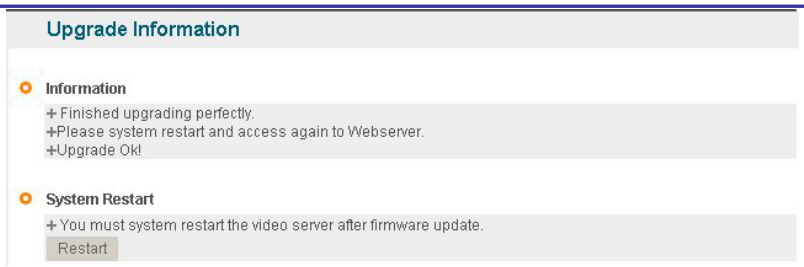


Fig. 4–25 Completion of Upgrade

If [4-26] is displayed as below, this means that THE CAMERA has been upgraded to the latest Version, there is no need to update any more.

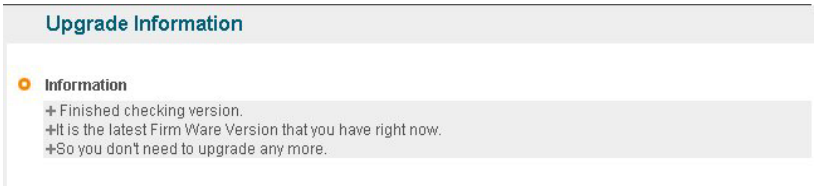


Fig. 4–26 Check of Upgrade Version

If user found [4-27], there is a error in connection to Upgrade Server, re-check Internet Connection or re-check DNS Server Address in '3. Basic Setting' and try to upgrade again. If user keep finding [4-27] or can't upgrade, contact head office of Speco Technologies

Fig. 4–27 Upgrade Server Connection Error

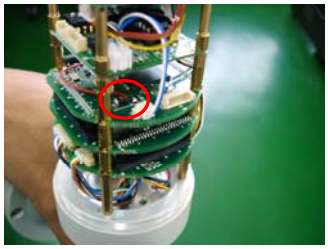
4.10.2. System Re-booting

This is the function to re-boot Inner Software of THE CAMERA. Click 'Restart' on [4-41] 'System Restart' to reboot all inner program of THE CAMERA.

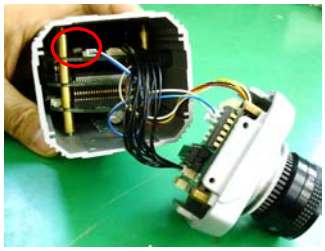
4.11. Factory Reset

4.11.1. Reset Button

Press reset button for 1sec to be operated.(Red Circle)



Bullet Camera



Traditional Camera

Dome Camera

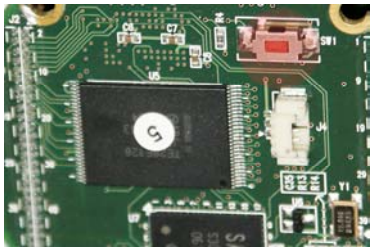


Fig. 4–28 Factory reset button

4.11.2. In reset of Factory default

- ✓ Changed to [192.168.1.7] of IP Address.

- ✓ Changed to [192.168.1.1] of Gateway.
- ✓ Changed the Server Login Port No. to "Default".
- ✓ Changed Web Admin Password to initial data.
- ✓ Initialized DNS Number.

5. Basic Use

5. Basic Use

5.1. Use of Web Viewer

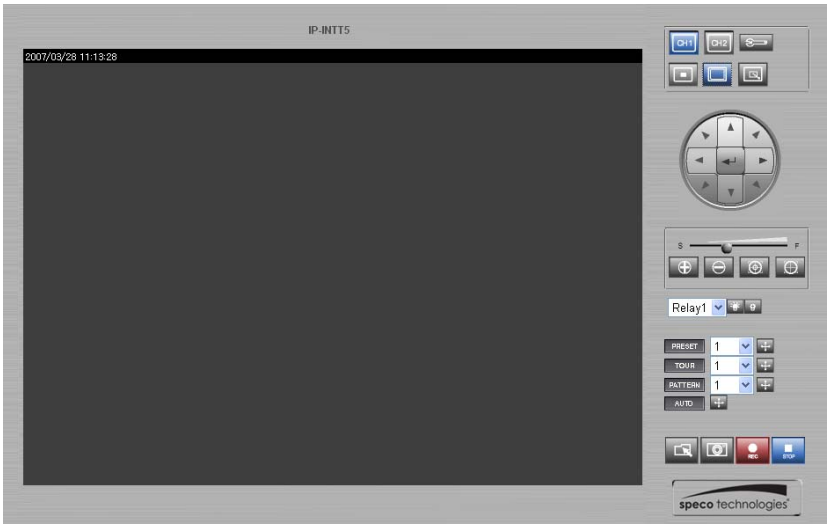
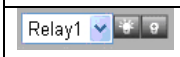


Fig. 5–1 Web Viewer

Table. 5-1 Definition of Web Viewer Button Function

	Display Screen reduced by 50%.
	Display Screen at 100%. Double-clicking mouse on enlarged screen has the same function.
	Enlarge Video of a channel to 640 x 480. Double-clicking in a selected channel has the same function.
	Enlarge Video of a channel to full screen

	Capture a selected channel into a BMP file
	Select Relay to control. Relay name is taken from the Camera Server
	Relay ON
	Relay OFF
	Select Preset to control
	Select Tour to control
	Select Pattern to control
	Move to the selected Preset/Tour/Pattern.
	Preset Tour. Move to preset location in regular sequence from No. 1 up to 200. Move to next one after 5 seconds pause on a preset location.
	Display Camera Menu functions of Intensifier Cameras
	While pressing the mouse in the direction, P/T, Camera moves. Un-pressing mouse makes Camera stop. Keep pressing on screen to a point makes the Camera move to the direction, un-pressing mouse makes Camera stop.
	Control Speed of Pan/Tilt. 'S' makes speed of P/T slow. 'F' makes speed of P/T fast. (for speed dome Cameras)
	Zoom In.
	Zoom Out.
	Focus Near
	Focus Far

Flickering on Screen and Alarm Sound	Upon detection of a motion event, the border around the associated camera picture will flash and an alarm will beep. To stop the sound, double-click on the flashing screen.

Table 5-2 Definition of Web Viewer Key Board

②	✓ 'space 'Key' ✓ Enlarge / reduce Screen
③	✓ Number Key' ✓ Preset Move Function, ✓ The Number represents the Preset Number ✓ 20 Preset is controlled by Key Board ✓ Key Board 1 ~ 0 : Preset 1 ~ Preset 10 ✓ Key Board q ~ p : Preset 11 ~ Preset 20
④	✓ 'Direction Key'

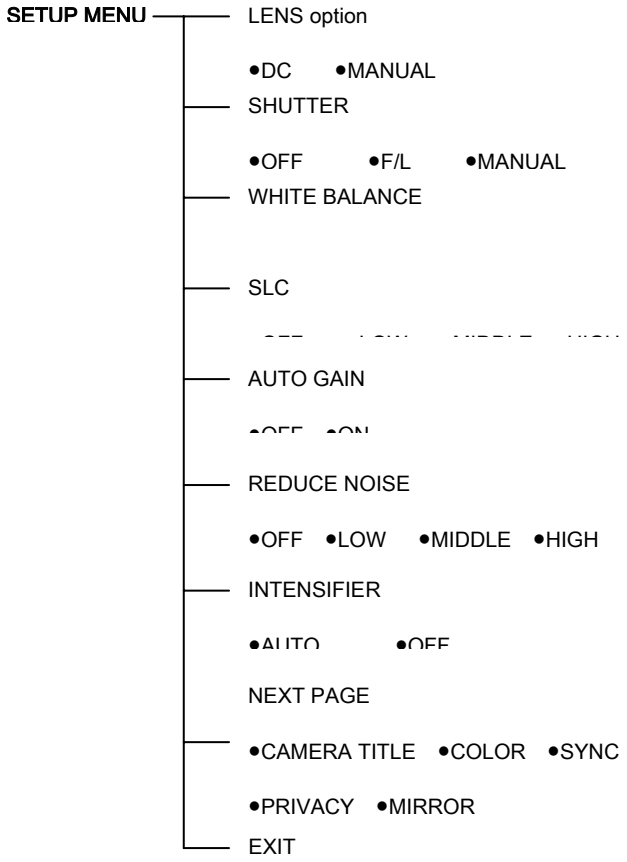
	✓ Pan/Tilt of Camera ✓ Pressing on the direction Key makes Camera move to the direction. Un-pressing stops moving.
⑤	✓ Same function as 
⑥	✓ Zoom-in, Zoom-out Function ✓ '+' is Zoom In, Pressing the key makes doing the function. Un-pressing stops the function ✓ '-' is Zoom Out, Pressing the key makes doing the function. Un-pressing stops the function.

5.2. Use of OSD (Not available with IP-T5)

The OSD menu of this camera can be controlled by Web Viewer.

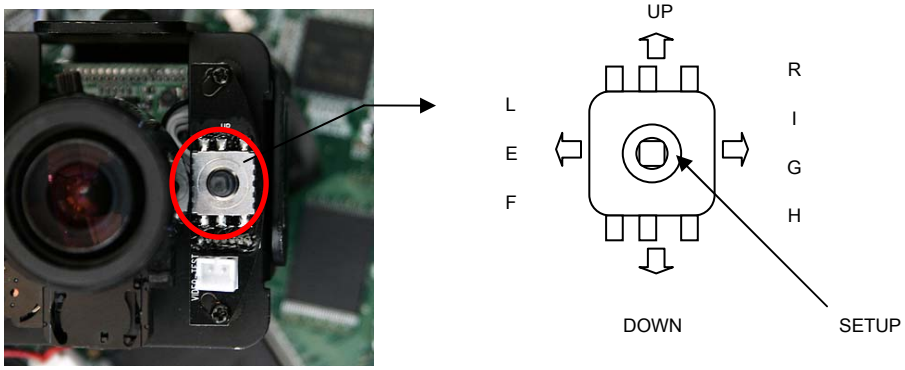
Please refer to the '1.2.2 Camera Feature' for OSD function.

5.2.1. Function

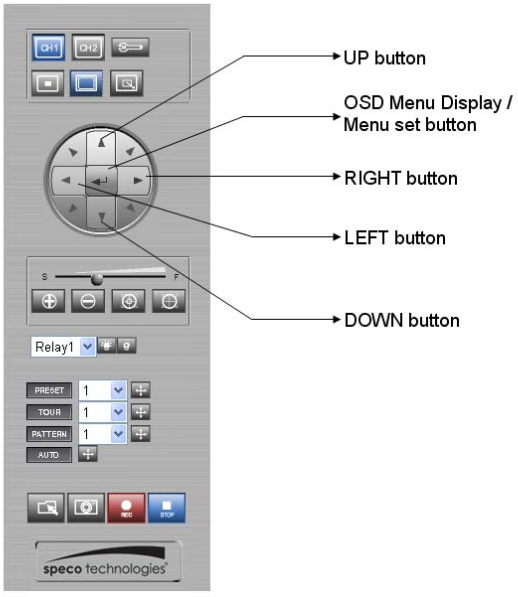


5.2.2. OSD Menu Setting

When you control the OSD by using the joystick on the camera, refer to the following (select models only)



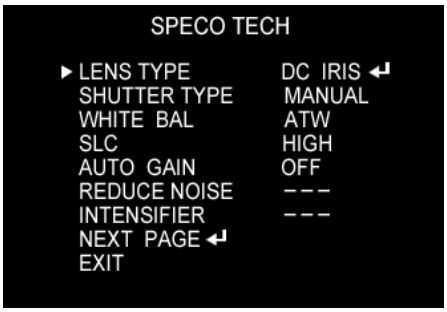
When you control by the five keys on the Webviewer GUI refer to the following



5.2.3. Operating Camera OSD Menu

1. Press the SET button to access the SETUP mode.

➡ SET UP menu is displayed on the monitor screen.



2. Select the desired feature using the UP or DOWN button.

➡ Each time you press the UP or DOWN button, the arrow indicator moves up or down.

3. Change the status of the selected feature using the LEFT or RIGHT button.

➡ If you press RIGHT or LEFT button, it appears available status. Press the button when gets desired feature.

4. When completed, move the arrow indicator to 'EXIT" and press the SET button.

● **Notes**

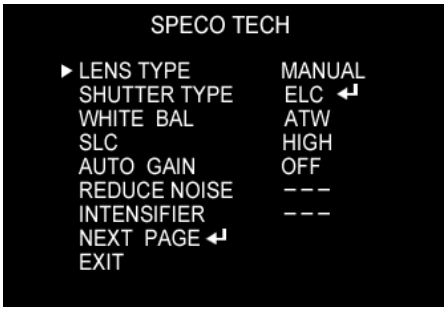
You can access submenu using SET button. For the mode with '---' you may not access submenu.

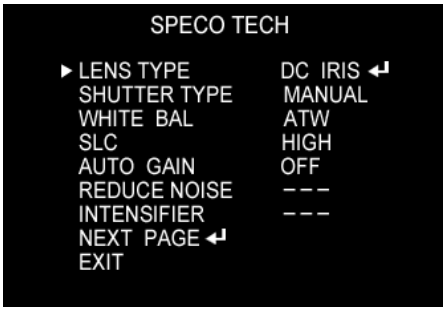
1) Setting up the LENS

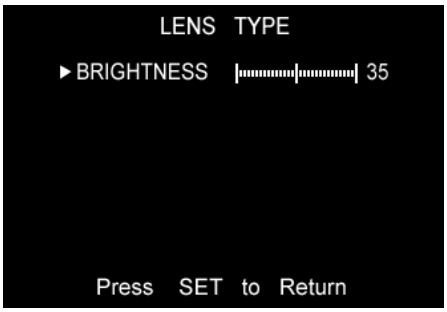
Select the lens pressing the RIGHT button.

① On the SETUP menu screen, move the arrow indicator to the lens

② Select the desired feature using the LEFT or RIGHT button.







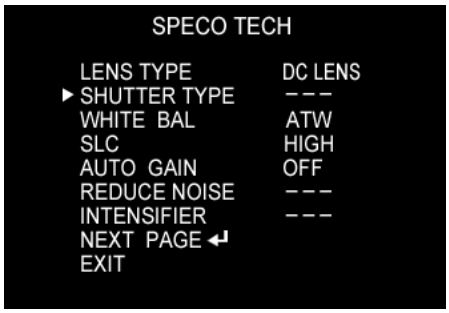
▸When DC LENS selected, press SET button to control the BRIGHTNESS.

●

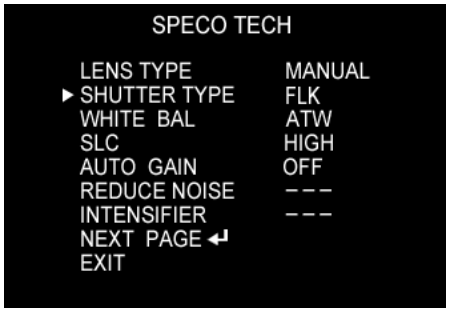
1) Shutter status and speed control

You can control brightness of the screen by the shutter speed.

① Press the SET button to display the setup menu and move the arrow indicator to 'SHUTTER' using the UP or DOWN button.



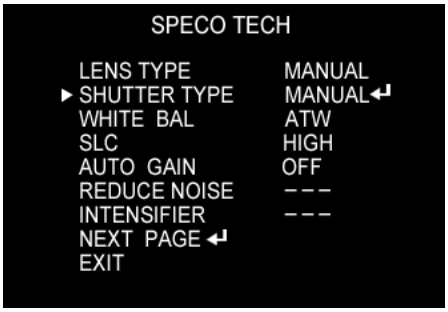
▸ OFF : Deactivation

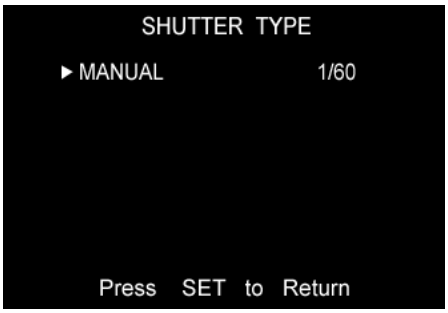


▸ FLK(1/100) : Flicker mode

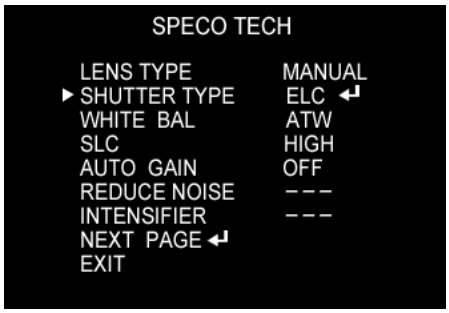
(When WDR is on, the image can flicker a little.)

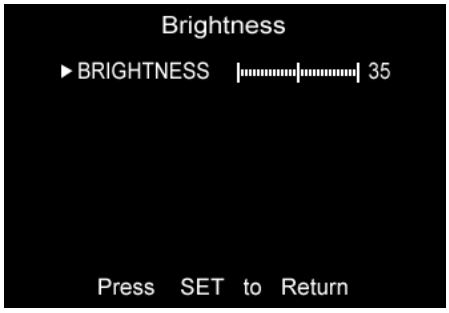
▸MANUAL : When setting shutter speed manually.
(Only for LENS mode)
You can select speed from '1/60' to





▸ESC : You can control the BRIGHTNESS.





③When completed, press 'SET'

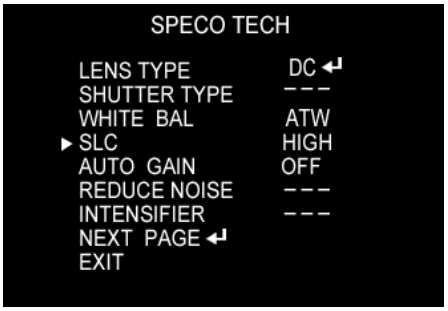
●

3) SLC (Speco Light Compensation) - BACKLIGHT
A built-in SR chip provides intelligent light level control to overcome severe Backlight conditions.

① Press the SET button to display the SETUP menu and move the arrow indicator to 'BACKLIGHT' using the UP or DOWN button.

② SET 'BACKLIGHT' to the desired mode using the LEFT or RIGHT button.

▸OFF ▸LOW ▸MIDDLE ▸HIGH




BLC


OFF

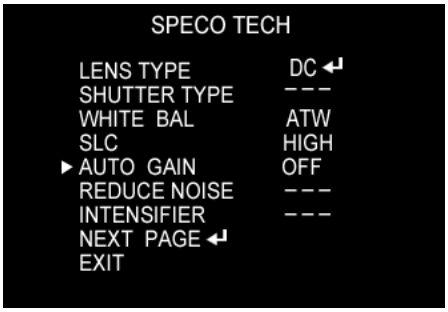
3) AUTO GAIN CONTROL (AGC)

AGC is to get bright picture. Higher GAIN level, getting brighter screen.
But you can get noise increase.

① Press the SET button to display the SETUP menu and move the arrow indicator to 'AGC' using the UP or DOWN button.

② SET 'BACKLIGHT' to the desired mode using the LEFT or RIGHT button.

▸OFF ▸ON

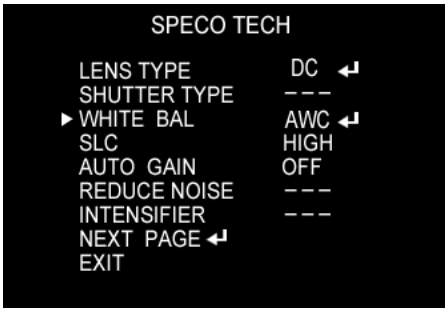


5) WHITE BALANCE (WHITE BAL.)

For color control on the screen. use 'WHITE BALANCE' function.

① Press the SET button to display the SETUP menu and move the arrow indicator to 'WHITE BALANCE' using the UP or DOWN button.

② Set 'WHITE BAL.' to the desired mode using LEFT or RIGHT button.



- ATW (Auto Tracking White Balance)
  : When color temperature is 2400~12000K, select this mode.
  (ex. A fluorescent lamp, outdoor)

- AWC (Auto White Balance Control)
  : The white balance is automatically adjusted in a specific environment.
  In order to obtain the best result, press the set button while the camera focuses on white paper. If the environment including the light source is

▸MANUAL : To fine adjust, select the Manual mode. You can increase or decrease the red or blue factor while monitoring the difference on the screen. Set to 'MANUAL' mode and press the SET button. Increase or decrease the value for RED(R-Gain) and BLUE(B-Gain), watching the color of the picture, and press the SET button when you obtain the best color.

● **Notes**

Proper White Balance may not be obtained under the following conditions in these cases select the AWC mode.

When the scene contains mostly high color temperature object, such as a blue sky or sunset.

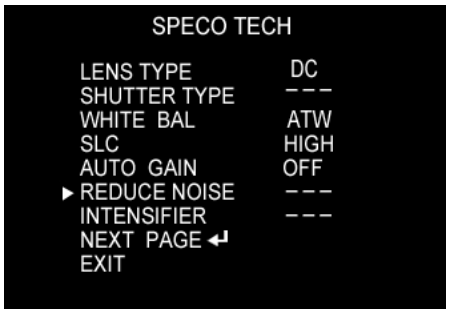
When the scene is dim.

6) Digital Noise Reduction (Dynamic Noise Reduction)

DNR is to reduce the noise on the screen.

① Press the SET button to display the SETUP menu and move the arrow indicator to 'DNR' using the UP or DOWN button.

② SET 'DNR' to the desired mode using the LEFT or RIGHT button.



▸OFF : Deactivation

▸LOW : Low reduction of the noise

▸MIDDLE : Middle reduction of the noise

▸HIGH : High reduction of the noise

● **Notes**

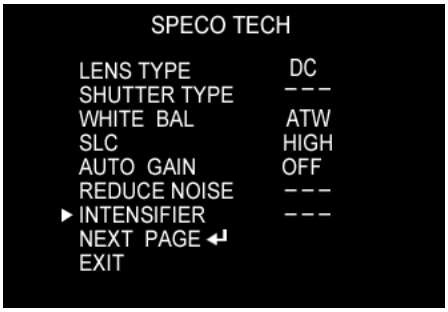
If you change the 'GAIN' menu from AGC-L to AGC-H sensitivity is increased as well as noise on the screen.

7) INTENSIFIER

Allows you to get clear images with this function under night

① Press the SET button to display the SETUP menu and move the arrow indicator to 'Intensifier' using the UP or DOWN button.

② SET 'Intensifier' to the desired mode using the LEFT or RIGHT button.



▸AUTO : When your camera is under night or low-lighting level, select this mode.

● **Notes**

If you press SETUP button at 'AUTO' menu, you can control the lowlight action maximum magnifications.(X2~X128)

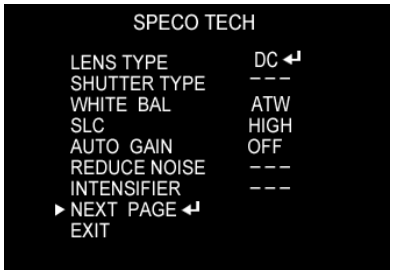
Increasing the amount of Intensification results in brighter pictures Under low light conditions, and may increase image lag.

Increasing the amount of intensification may cause image noise.

8) NEXT PAGE

① Press the SET button to display the SETUP menu and move the arrow indicator to 'Intensifier' using the UP or DOWN button.

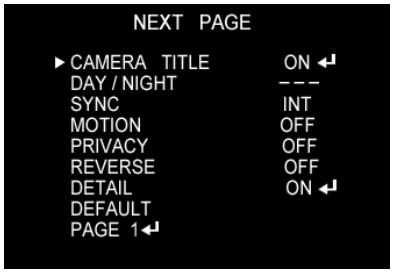
② SET 'Intensifier' to the desired mode using the LEFT or RIGHT button.



(A) CAMERA TITLE

① Press the SET button to display the SETUP menu and move the arrow indicator to 'CAMERA TITLE' using the UP or DOWN button.

② SET 'ON' using the LEFT or RIGHT button.



● **Notes**

If the CAMERA ID feature is set to 'OFF', the name will not displayed in the monitor.

③ Press SET button to access the SETUP mode.

④ You can enter up to 15 characters.

a. Move the cursor to character-enter location by using the LEFT or RIGHT button.

b. Select the desired character by using the UP or DOWN button.

c. Press SET button to confirm the blinking character. The first character is saved and the cursor in the bottom of the screen moves to the next position.

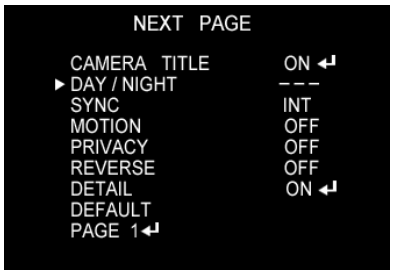
d. Repeat steps a, b and c until you create the full name you want.

● **Notes**

If the CAMERA TITLE feature is set to 'OFF', the name will not displayed in the monitor.

After erasing the character from right to left, correct the character again

B) COLOR



- ON : color mode
- OFF : B/W mode
- AUTO : generally color mode, B/W mode in low luminance.

● **Notes**

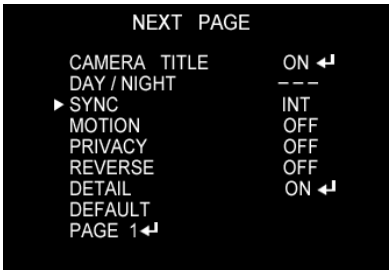
OSD Key may not work for 3 seconds when the COLOR/ BW mode is changed.

C) SYNC

Two SYNCHRONIZATION modes are available… INTERNAL and EXTERNAL LINE-LOCK. In LINE-LOCK mode, the camera syncs to the 60 Hz phase.

① Press the SET button to display the setup menu and move the arrow indicator to 'SYNC' using the UP and DOWN button.

② SET to the desired mode using the LEFT or RIGHT button.



- INT : Internal synchronization

- L/L : If you choose 'L/L', you can adjust the desired phase.
  - Press the SET button.
  - You can adjust the desired phase from 0 to 270

● **Notes**

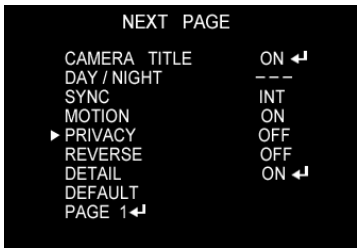
Line Lock is only available in the 24 volt AC mode of operation. In 12 volts DC, the SYNC menu is always in the 'INTERNAL' mode.

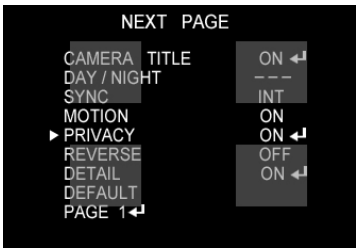
D) PRIVACY

To mask an area that you want to be private.

① Press the SET button to display the setup menu and move the arrow indicator to 'PRIVACY' using the UP and DOWN button.

② SET 'PRIVACY' to the desired mode using the LEFT or RIGHT button.





▸OFF : Deactivation

▸ON : PRIVACY mode activated

-Press the SET button.

-Move the arrow indicator to area you want to mask.

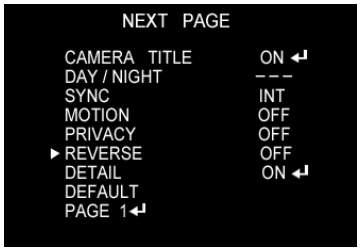
-Set 'ON' using LEFT or RIGHT button.

-Press the SET button and then set the area's bounds with the method like MOTION DET. set

E) REVERSE

① Press the SET button to display the setup menu and move the arrow indicator to 'REVERSE' using the UP and DOWN button.

② SET 'REVERSE' to the desired mode using the LEFT or RIGHT button.



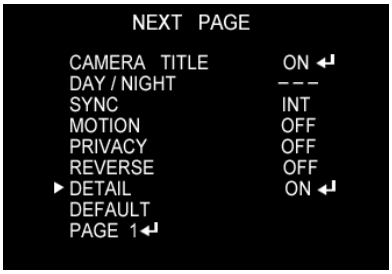
▸OFF : Deactivation

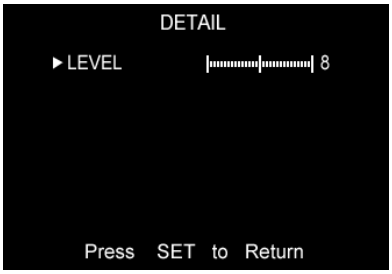
▸ON : Make a reverse turn to RIGHT or LEFT.

F) DETAIL

① Press the SET button to display the setup menu and move the arrow indicator to 'DETAIL' using the UP and DOWN button.

② SET 'DETAIL' to the desired mode using the LEFT or RIGHT button





▸OFF : Deactivation

▸ON : DETAIL control mode (level 0~31)

When the level is up, the sharpness will increase.

Control this level to get your best picture quality.

If the level is too high, you can get an unnatural image

G) DEFAULT

: Use to reset your camera to FACTORY DEFAULT SETTING.

H) PAGE1

: PAGE 1 : Save the setting of NEXT PAGE function. and then

5.3. Use of IP Setting Utility

Upon running IP Setting Utility, the following program is to be displayed.

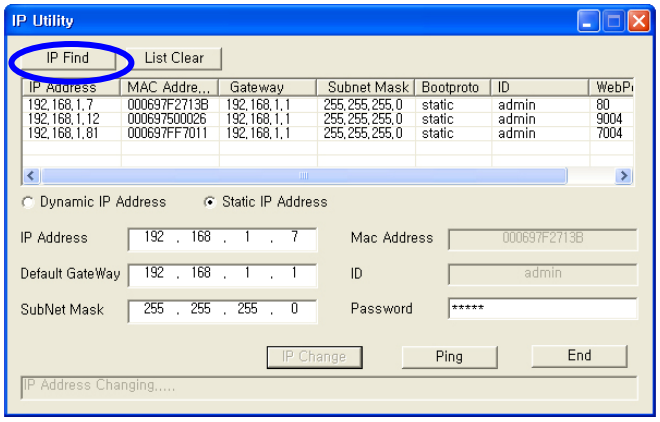


Fig. 5–2 IP Find

Click 'IP Find' Button to find IP of THE CAMERA on local Network.

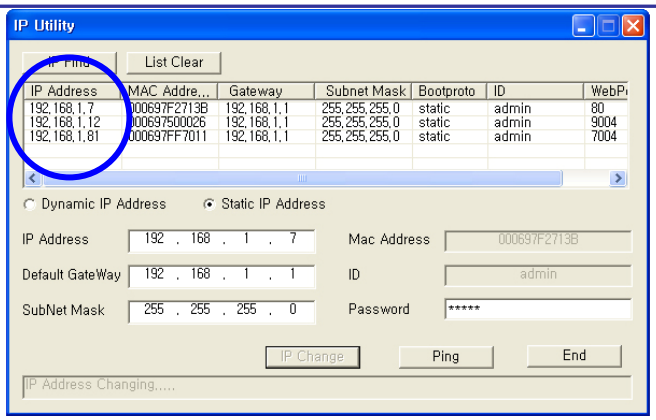


Fig. 5–3 Display IP

The following window shows list of IP along with Web Server Port Number and Model Name of THE CAMERA. Click 'IP Find' Button to find IP of THE CAMERA on local Network.

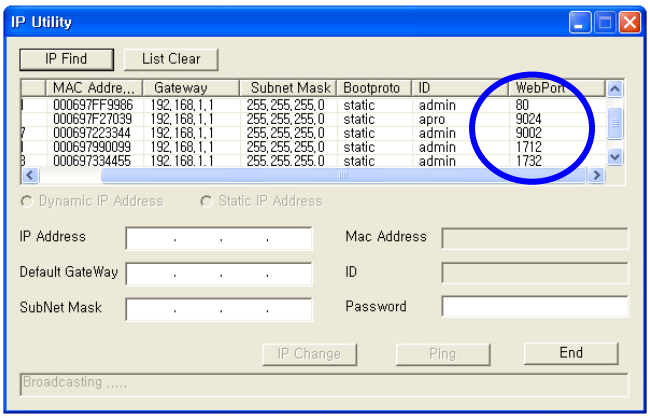


Fig. 5–4 IP Check

After finding IP, double-click IP of THE CAMERA to go to the editable Mode as follows.

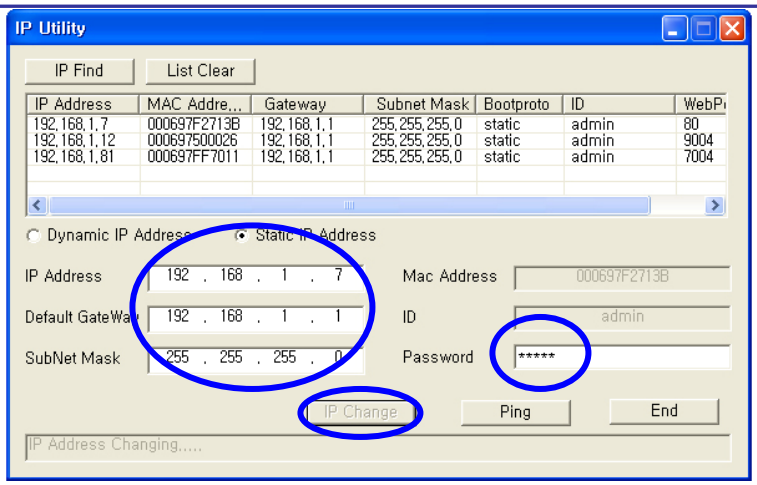


Fig. 5–5 IP Check

Input new IP Address, Default Gateway, Subnet Mask, and then input Password of THE CAMERA Administrator and click 'IP Change', to set up new IP of THE CAMERA. Upon completion of setting, find new IP and click 'Ping' to check whether setting is done, and close the program by clicking 'End' button.

5.4. Use of Service Server

Run Web Browser and input http://ipcam4u.net in URL and click 'Enter', then [5-6] will appear as follows.

Fig. 5–6 Service Server

Click the language user want to use.

5.4.1. User Registration

Fig. 5–7 User Login

Click 'Register Now' in [5-7].

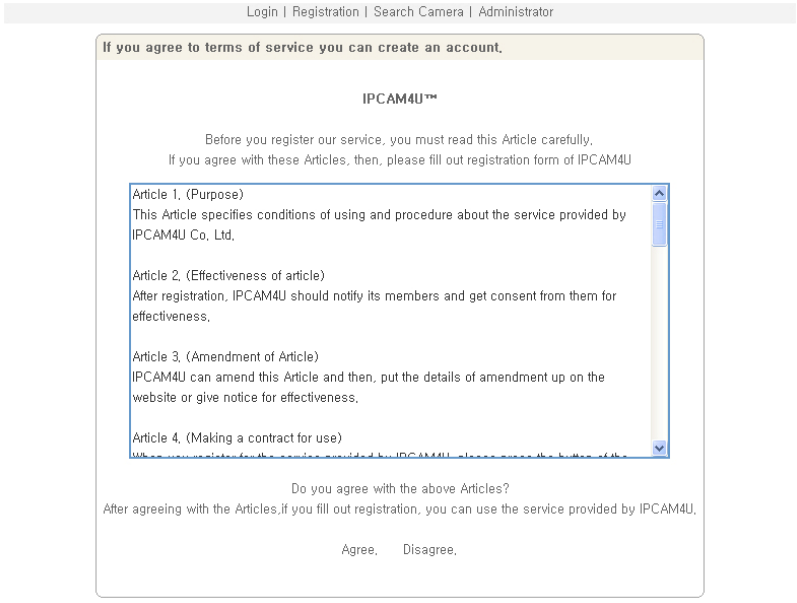


Fig. 5–8 Agreement

Read the Agreement carefully and click 'Agree' in case to agree, and go to the next page.

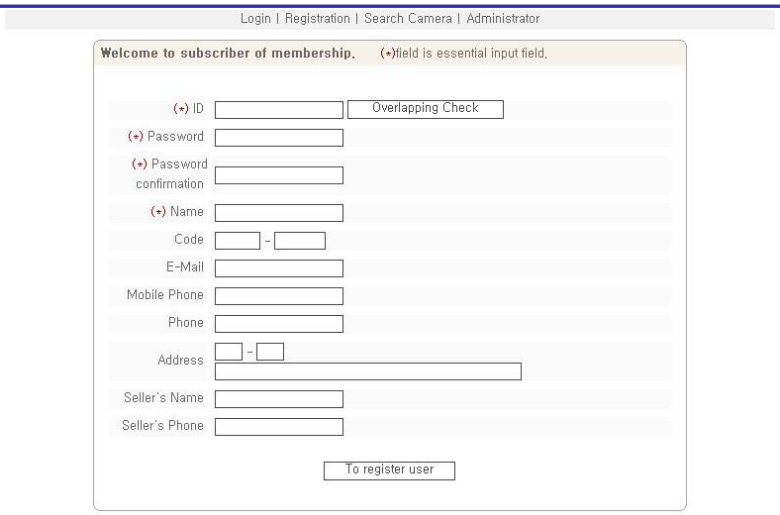


Fig. 5–9 User Registration

The part marked with (*) is mandatory. User ID is to be double-checked. Then click 'Log In'.

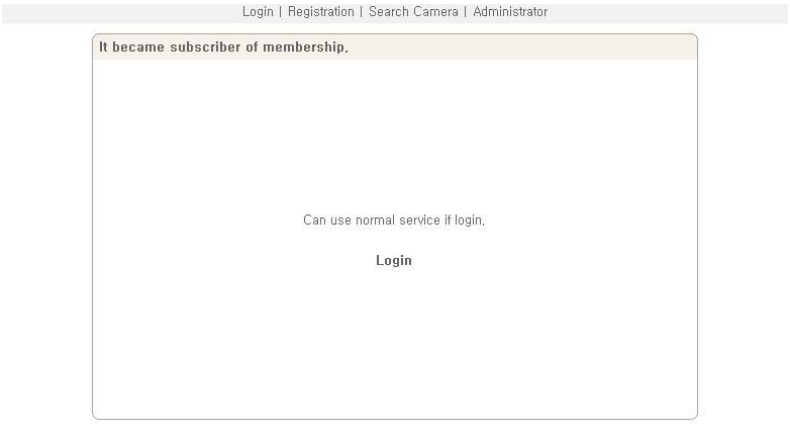


Fig. 5–10 User Registered

If [5-10] appears, User Registration has successfully completed. Click 'Log-in' and input User ID and password on [5-7] to connect to Service Server.

Fig. 5–11 Service Server Log-in Succeeded

5.4.2. Camera Registration

Click 'To register camera' in [5-11] to go to Camera Registration Page.

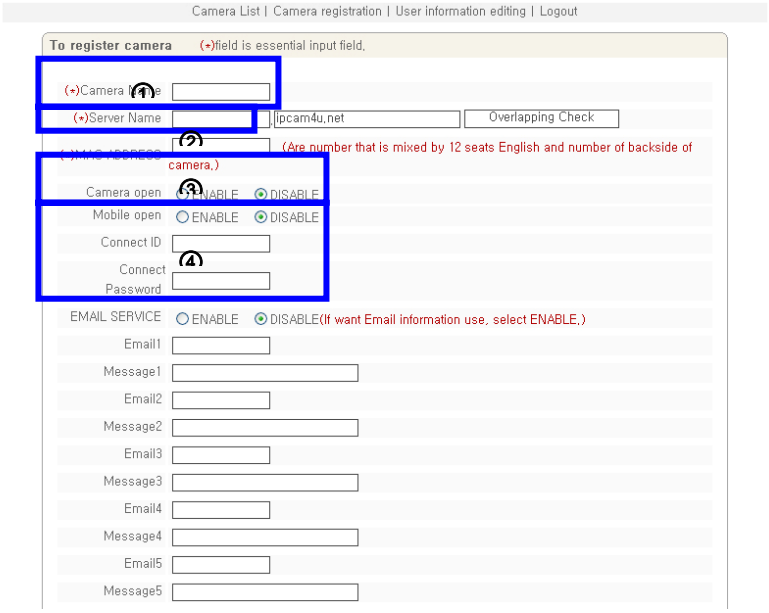


Fig. 5–12 Camera Registration

Input name of THE CAMERA in ① of [5-12], which will be applied only in Service Server.

② Server Name is to input Domain Name to connect to THE CAMERA. Make this name easy to remember because you can use it to connect to THE CAMERA by Domain Name in case not knowing IP address of THE CAMERA. Domain Name must be unique. Register after checking if it is duplicate or not.

③ is to check whether the Camera is to be open or not. ④ is for the function to connect to THE CAMERA easily by User's ID and Password registered in THE CAMERA, to monitor or control Video of THE CAMERA on Mobile Phone. (Mobile Phone Users should tick "Enable" and input connection ID and Password.)

'EMAIL SERVICE' is the function to send the set message to E-mail address set by user upon alarm on THE CAMERA in case user set the use of alarm server as Enable. (refer to 'Alarm Setting' in '4. Expert Setting'). It's available to input up to 5 Mail address and input up to 5 messages upon checking on 'ENABLE'.

Fig. 5–13 Camera Registration

'SMS SERVICE' is the function to send the set message (SMS) from Service Server to Mobile Phone number set by user upon alarm on THE CAMERA, in case setting to use Alarm Server as 'ENABLE'.

(refer to 'Alarm Setting' of '4. Expert Setting'). It's available to input up to 5 Mobile Phone to get SMS Message and input up to 5 messages upon checking on 'ENABLE'.

Cautions : Input Mobile Phone Number without '-'.

Click 'Camera Registration' to save the registered information after input of all information.

5.4.3. List of Camera

Input the registered User ID and Password to connect to Service Server on [5-7].

Fig. 5–14 Camera List

[5-14] shows the registered List of THE CAMERA. Upon clicking on 'Camera Name' registered in [5-14], [5-15] will show the Camera Information. 'Time' is the latest time for THE CAMERA to report to Service Server.

Fig. 5–15 Camera Information

On clicking 'Camera Change' on [5-14], the page of '5.3.2 Camera Registration' to change the information of Camera registered, will appear. Change the information and click 'Camera Change' to save

the new information. 'MAC' is not changeable. To change 'Server Name', double-check is required. Upon clicking 'Camera Connect' on [5-14], the main page of THE CAMERA will appear.

Upon clicking 'Alarm Log List' on [5-14], Event information transmitted to Service Server is to be displayed. Event information is to be saved up to 20. In case of full saving up to 20, it overwrite the oldest one.

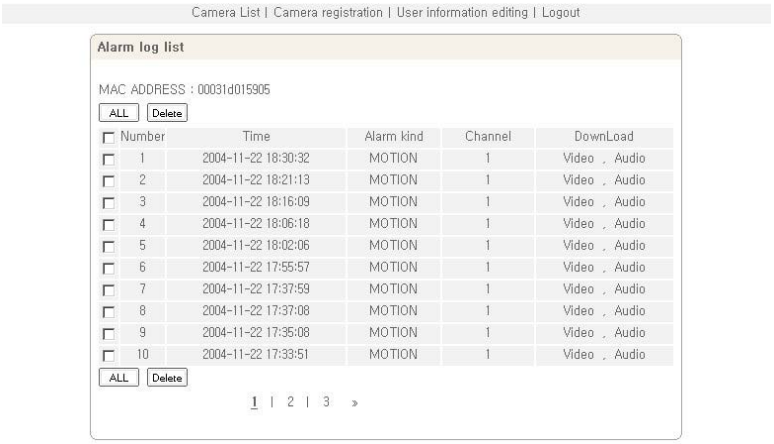


Fig. 5–16 Alarm Log List

'Alarm Log List' shows the information of a channel, alarmed time, type of Alarm. It is available to delete the log file. THE CAMERA sends the recorded files, dividing into Video file and Audio files, to Service Server

In case there is no recorded file, the message will show 'No File'. In case the file has not sent to Service Server yet, the message "Uploading" will be shown. If Video and Audio has been downloaded in "Download" of [5-16], user can download and see the recorded file. "Camera Delete" of [5-14] is to delete the Camera from the list..

5.4.4. Change of User's Information

On clicking 'User's Information editing' in upper menu of [5-14], [5-17] will appear the page to change

user's information.

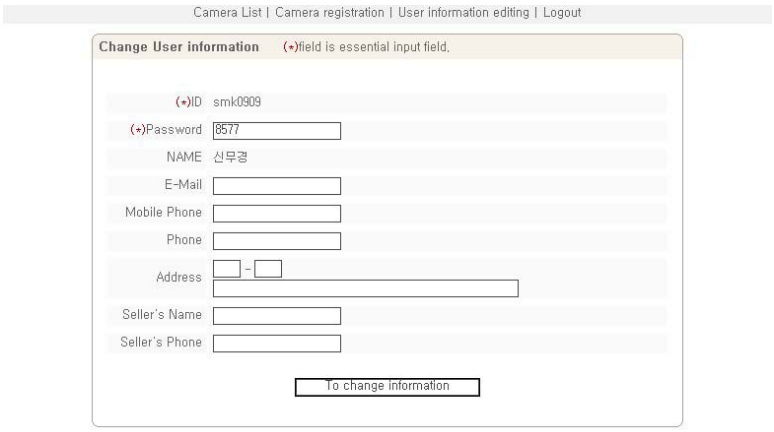


Fig. 5–17 Change User's Information

Save User's information by clicking 'To Change Information' after change user's information.

5.4.5. Search Camera

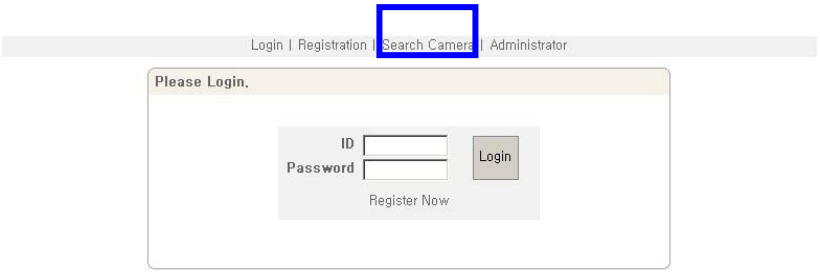


Fig. 5–18 Search Camera

'Search Camera' of [5-18] is the function to see information of THE CAMERA or connect directly to THE CAMERA without user registration in Service Server. Upon clicking 'Camera Search' on [5-18], [5-19] to search Camera will appear. 'Type' on [5-19] is to select 'Camera Connect' to connect directly to THE

CAMERA using MAC Address, and then to input MAC Address of THE CAMERA and click 'Yes', then THE CAMERA will be directly connected.

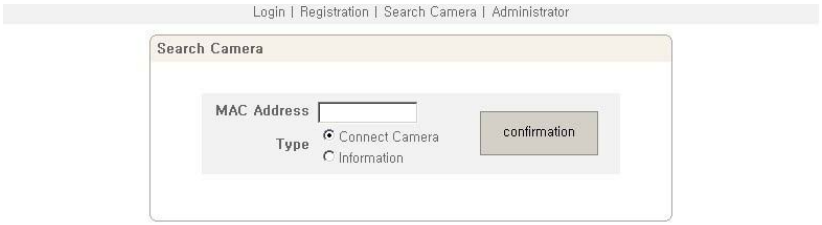


Fig. 5–19 Search Camera

If user want to see information of THE CAMERA by the Address, select 'Information' and input MAC Address of THE CAMERA to see information on, and click 'confirmation' . Then Information of THE CAMERA will be shown as [5-20].

5.5. See and Control of Still Image in Mobile or PDA

To monitor and control of Still Image of THE CAMERA on Mobile Phone, register in 'Camera Registration' of 'Use of Service Server' in '5. Basic Use'.

Model of Mobile Phone supported is WAP2.0 Phone (HTML, JPEG), PDA (Win CE).

5.5.1. WAP2.0 (HTML)

Connect to URL input line.

Input **http://ipcam4u.net/240180.htm or http://ipcam4u.net/320240.htm** and connect to Service Server.

Fig. 5–21 Input User ID

On user ID input Page [5-21], input user's ID registered in 'Use of Service Server ' of '5. Basic Use'.

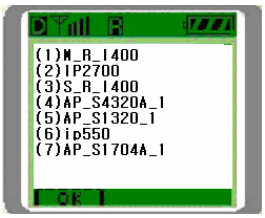


Fig. 5–22 List of Registered Products

Select one of the products (Camera or Server) registered by user on[5-22].

Fig. 5–23 Menu

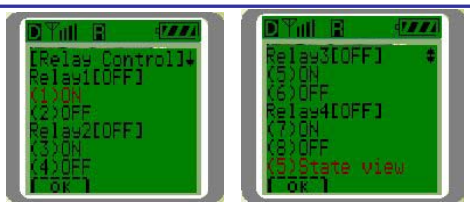
Select a item in menu of [5-23].

✓ (1) Monitoring and Control of Pan/Tilt/Zoom/Preset

Fig. 5–24 Pan/Tilt/Zoom Control

It is available to see Image and control Pant/Tilt/Zoom/5 Preset. Number Key of Mobile Phone controls Pan/Tilt/Zoom.

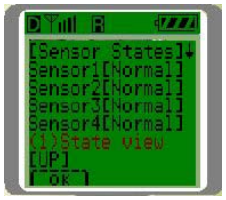
✓ (2) Relay Control (2 Relay controllable)



It is available to control up to 2 Relay. Relay Name and current status ([ON/OFF]) will be displayed.

On control of Relay, Image of controlled channel will be shown along with Relay name of the channel, ON/OFF is to be controllable. On selecting '(3) State view', current status of 4 Relays will be displayed.

✓ (3) Check Sensor Status



It shows the Sensor Name and current status ([Normal/Sensing]).

5.5.2. PDA(WinCE)

Run 'Internet Explorer' of PDA and input http://ipcam4u.net/pdah5450_eng.htm input in URL to connect to Service Server.

Fig. 5–25 PDA Log-in

On user ID Input Page [5-25], input user's ID registered in 'Use of Service Server ' of '5. Basic Use' and click 'connect' to log in.

Fig. 5–26 Products List

Select one of the products (Camera or Server) registered by user, in Products List of [5-26].

Fig. 5–27 Menu

5.6. Use of NVR Program

5.6.1. Required Specification of PC and OS

Item	Min. Requirement	Recommended Specification
CPU	Pentium IV 2.0G	Pentium IV 2.4G or higher
Main Memory	256MB	512MB or higher
O/S*	Windows 2000/XP	Windows 2000/XP
Web Browser	I.E 5.0	I.E 5.0 or later
Resolution	1,024 * 768	1,152 * 864
Network	100 Base-T Ethernet	100 Base-T Ethernet

5.6.2. Supported O/S

- ✓ Windows 2000 Professional (Korean OS, English OS, Japanese OS)
- ✓ Windows XP Professional / Windows XP Home Edition(Korean OS, English OS, Japanese OS)
- ✓ Windows 2000 Server (Korean OS, English OS, Japanese OS)

5.6.3. Refer the NVR User's Manual in the CD-ROM.

6. Network Environment

6. Network Environment

It is required to follow the recommendation of the environment where THE CAMERA will be installed or the similar environment.

6-1. Private line Environment

Usually Company, University, Research center use the leased line. They use many public IP addresses. In order to install THE CAMERA under this environment, select "Static IP Address" in 'Static IP Setting' of '3. Basic Setting' and input IP address, subnet mask and gateway. If there is DHCP server on the network, select 'Dynamic IP Address' in 'Dynamic IP' of '3. Basic Setting'. You can get all the information (IP address, subnet mask, gateway, DHCP server) from the network administrator. Sometimes, the THE CAMERA may not work properly if the user installed firewall for security purpose. In this case, open the port on the THE CAMERA, then it will work properly. You can check the current port of THE CAMERA from the "Administrator's Page"->"Network Setting"->"Port Setting" (see '3. Basic Setting'). The default port is set on ex-factory as follows :

- Web Connection Port : Port 80 TCP
- Authentication and Control Port : Port 9000 TCP
- Video Streaming Port : Port 9001 TCP
- Motion Detectin Control Port : Port 9005 TCP

6-2. Broadband (ADSL, Cable, Fiber Optic) Modem Environment

Home, store, small office use one Broadband modem (DSL, Cable Modem), and use one public IP address. In order to use several PC through one Public IP address, the user in most cases use IP sharing

device. We recommend to use a IP router (IP Sharing device) to install the THE CAMERA. There may be a case in no need of router, but most people use THE CAMERA and other PC 1set or more. When using the router, connect the router and input IP address of THE CAMERA (IP address of THE CAMERA is set as 192.168.1.7 on ex-factory) in DMZ menu. If the user cannot use the DMZ function because there is no DMZ menu in the router or some other reasons, go into port forwarding or NAT menu on the router and map the port of THE CAMERA one by one. User can check the current port setting of THE CAMERA from "Administrator's Page"->"Network Setting"->"Port Setting" (see '3. Basic Setting'). Manufacturer's setting of THE CAMERA is as follow on ex-factory : (The user can change port if necessary).

- Web Connection Port : Port 80 TCP
- Authentication and Control Port : Port 9000 TCP
- Video Streaming Port : Port 9001 TCP
- Motion Detectin Control Port : Port 9005 TCP

7. Appendix

7. Appendix

Appendix A **Basic Setting Table**

Item	Default (Basic Setting)	Remarks
Network Setting		
Static IP / Dynamic IP	Static IP	
IP Server	Enable	
IP Address	192.168.1.7	
Gateway	192.168.1.1	
Subnet Mask	255.255.255.0	
Web Connection Port	80	*. Don't register the same Port. *. Register Number with '9999' or less Some Network may not support over number 10000 port.
Authentication /Control Port	9000	
Video Streaming Port	9001	
Motion Detection Port	9005	
ID and Password		
Administrator ID /Password	admin/admin	
User ID	root/root, guest/guest	
Domain of Related Server		
IP Server	Ipcam4u.net	Domain of Server to connect to register IP
Alarm Server	Ipcam4u.net	Domain of Server to connect to send Event upon detection of Sensor or Motion.
Upgrade Server	Ipcam4u.net	Domain of Server to connect to download upgraded program
Plug-in Download Server	Ipcam4u.net	
Video Setting		

Compressed Resolution	704*480 / 352*240	704*576 / 352*288
Video Format	NTSC	PAL
Frame Rate	30fps / 1fps	25fps / 1fps
Bit Rate	VBR_High / VBR_Normal	VBR_High / VBR_Normal
Other Setting		
Time Zone	Asia/Seoul(Korea)	

*. Note : In case to reset Hardware, Network Setting, User and Administrator's ID and Password will be automatically returned to above default value.

Appendix B **Specification of Products**

B-1 IP-INTB1 / INTB2

IMAGING	Image Sensor		1/3" Sony Super HAD CCD, 410,000 pixels
	Total Pixel	NTSC	811(H)*508(V)
		PAL	795(H)*592(V)
	Effective Pixel	NTSC	768(H)*494(V)
		PAL	755(H)*582(V)
	Horizontal resolution		540 TV Lines
	Minimum Illumination		0.002 Lux(selectable limit ~ X128)
	S/N Ratio		50dB(Weight On)
	Lens (INTB1 / INTB2)		DC AUTO IRIS VF 2.8~10mm(F1.2) / 5~50mm
	Scanning System		2:1 Interlaced
	Synchronization		Internal
	Compression		MPEG4 / JPEG
	Multi-Streaming		MPEG4(2ch), JPEG(1ch)
	Gain Control		On / Off
	Electric Shutter Speed		1/60~1/200,000sec
	INTENSIFIER		Built-in(selectable Limit ~ X128)
	White Balance		ATW / AWC / Manual
	Reduce Noise		Low/ Middle/ High/ Off
	Maximum Frame Rate		121fps(352*240)
	Image Sizes		704*480 704*240 352*480 352*240
	Frame Rate		30, 15, 10, 7, 6, 5, 4, 3, 2, 1 fps(10 Steps)
CONTROL	On Screen Display(O.S.D)		Built-in
	Privacy Function		ON / OFF (4Programable Zone)
	Viewer	Web Viewer@PC	Yes

	Program	PDA Viewer@PC	Yes(option)
		Viewer@Mobile Phone	Yes(option)
		NVR@PC	Yes
	Network	Global/Private/Static/Dynamic IP	Yes
		DDNS Support	Yes
		Encryption (ID/PW/Image)	Yes
		Interface	10/100Mbps
	Concurrent Users		20
	Recording @PC	Manual	Yes
		Schedule	Yes
		Motion Detection	Yes
		Sensor event	Yes
	Event& Alarm	Sensor Trigger/Motion Detection	Yes
		Alarm Notification	SMS/E-MAIL/Alarm Sound(option)
PHYSICAL	Video Output		1.0 Vp-p 75 ohm Composite
	Dimension		69.00mm(H)*73.00mm(W)*300.00mm(L)
	Power Source		DC 12V
	Power Consumption (Max.)		6W
	Operational Temperature		-10 deg - +50 deg C RH95% MAX(14 deg F to 122 deg F)
	Weight		1.4kg
CONNECTIVITY	Video Out		1
	Sensor In/Relay Out		N/A
	Ethernet Jack		RJ45(10Base-T/100Base-TX)
	Protocols		HTTP, FTP, SMTP, TCP, IP, DHCP, ICMP, NTP, DNS, DDNS
REQUIREMENTS	Browser		Internet Explorer® Ver. 6.0+
	Operating System		Windows® 2000/XP
	Processor		Intel® Pentium® III 1GHz+(P4 2.4Ghz+ recommended)
	Memory		256MB+ (512MB+ recommended)

B-2 IP-INTD3 / INTD4

IMAGING	Image Sensor		1/3" Sony Super HAD CCD, 410,000 pixels
	Total Pixel	NTSC	811(H)*508(V)
		PAL	795(H)*592(V)
	Effective Pixel	NTSC	768(H)*494(V)
		PAL	755(H)*582(V)
	Horizontal resolution		540 TV Lines
	Minimum Illumination		0.002 Lux(selectable limit ~ X128)
	S/N Ratio		50dB(Weight On)
	Lens (INTD3 / INTD4)		DC AUTO IRIS VF 2.8~10mm(F1.2) / 5~50mm
	Scanning System		2:1 Interlaced
	Synchronization		Internal
	Compression		MPEG4 / JPEG
	Multi-Streaming		MPEG4(2ch), JPEG(1ch)
	Gain Control		On / Off
	Electric Shutter Speed		1/60~1/200,000sec
	INTENSIFIER		Built-in(selectable Limit ~ X128)
	White Balance		ATW / AWC / Manual

	Reduce Noise		Low/ Middle/ High/ Off
	Maximum Frame Rate		121fps(352*240)
	Image Sizes		704*480 704*240 352*480 352*240
	Frame Rate		30, 15, 10, 7, 6, 5, 4, 3, 2, 1 fps(10 Steps)
CONTROL	On Screen Display(O.S.D)		Built-in
	Privacy Function		ON / OFF (4Programable Zone)
	Viewer Program	Web Viewer@PC	Yes
		PDA Viewer@PC	Yes(option)
		Viewer@Mobile Phone	Yes(option)
		NVR@PC	Yes
	Network	Global/Private/Static/Dynamic IP	Yes
		DDNS Support	Yes
		Encryption (ID/PW/Image)	Yes
		Interface	10/100Mbps
	Concurrent Users		20
	Recording @PC	Manual	Yes
		Schedule	Yes
		Motion Detection	Yes
		Sensor event	Yes
	Event& Alarm	Sensor Trigger/Motion Detection	Yes
		Alarm Notification	SMS/E-MAIL/Alarm Sound(option)
PHYSICAL	Video Output		1.0 Vp-p 75 ohm Composite
	Dimension (INTD3 / INTD4)		120.00mm(H)*182.00mm(D) / 150.20mm(H)*180.00mm(D)
	Power Source		DC 12V
	Power Consumption (Max.)		6W
	Operational Temperature		-10 deg - +50 deg C RH95% MAX(14 deg F to 122 deg F)
	Weight (INTD3 / INTD4)		1.4kg / 1.5kg
CONNECTIVITY	Video Out		1
	Sensor In/Relay Out		N/A
	Ethernet Jack		RJ45(10Base-T/100Base-TX)
	Protocols		HTTP, FTP, SMTP, TCP, IP, DHCP, ICMP, NTP, DNS, DDNS
REQUIREMENTS	Browser		Internet Explorer® Ver. 6.0+
	Operating System		Windows® 2000/XP
	Processor		Intel® Pentium® III 1GHz+(P4 2.4Ghz+ recommended)
	Memory		256MB+ (512MB+ recommended)

B-3 IP-INTT5

IMAGING	Image Sensor		1/3" Sony Super HAD CCD, 410,000 pixels
	Total Pixel	NTSC	811(H)*508(V)
		PAL	795(H)*592(V)
	Effective Pixel	NTSC	768(H)*494(V)
		PAL	755(H)*582(V)

	Horizontal resolution		540 TV Lines
	Minimum Illumination		0.002 Lux(selectable limit ~ X128)
	S/N Ratio		50dB(Weight On)
	Lens		C/CS Mount Lens selectable
	Scanning System		2:1 Interlaced
	Synchronization		Internal
	Compression		MPEG4 / JPEG
	Multi-Streaming		MPEG4(2ch), JPEG(1ch)
	Gain Control		On / Off
	Electric Shutter Speed		1/60~1/200,000sec
	INTENSIFIER		Built-in(selectable Limit ~ X128)
	White Balance		ATW / AWC / Manual
	Reduce Noise		Low/ Middle/ High/ Off
	Maximum Frame Rate		121fps(352*240)
	Image Sizes		704*480 704*240 352*480 352*240
	Frame Rate		30, 15, 10, 7, 6, 5, 4, 3, 2, 1 fps(10 Steps)
CONTROL	On Screen Display(O.S.D)		Built-in
	Privacy Function		ON / OFF (4Programable Zone)
	Viewer Program	Web Viewer@PC	Yes
		PDA Viewer@PC	Yes(option)
		Viewer@Mobile Phone	Yes(option)
		NVR@PC	Yes
	Network	Global/Private/Static/Dynamic IP	Yes
		DDNS Support	Yes
		Encryption (ID/PW/Image)	Yes
		Interface	10/100Mbps
	Concurrent Users		20
	Recording @PC	Manual	Yes
		Schedule	Yes
		Motion Detection	Yes
		Sensor envent	Yes
	Event& Alarm	Sensor Trigger/Motion Detection	Yes
		Alarm Notification	SMS/E-MAIL/Alarm Sound(option)
PHYSICAL	Video Output		1.0 Vp-p 75 ohm Composite
	Dimension		55.4mm(H)*64mm(W)*120mm(L)
	Power Source		DC 12V
	Power Consumption (Max.)		6W
	Operational Temperature		-10 deg - +50 deg C RH95% MAX(14 deg F to 122 deg F)
	Weight		0.6kg
CONNECTIVITY	Video Out		1
	Sensor In/Relay Out		1/1
	Ethernet Jack		RJ45(10Base-T/100Base-TX)
	Protocols		HTTP, FTP, SMTP, TCP, IP, DHCP, ICMP, NTP, DNS, DDNS
REQUIREMENTS	Browser		Internet Explorer® Ver. 6.0+
	Operating System		Windows® 2000/XP
	Processor		Intel® Pentium® III 1GHz+(P4 2.4Ghz+ recommended)

	Memory	256MB+ (512MB+ recommended)

B-4 IP-T5

IMAGING	Image Sensor		1/3" Panasonic CCD, 410,000 pixels
	Total Pixel	NTSC	811(H)*508(V)
		PAL	795(H)*592(V)
	Effective Pixel	NTSC	768(H)*494(V)
		PAL	755(H)*582(V)
	Horizontal resolution		480 TV Lines
	Minimum Illumination		0.5 Lux
	S/N Ratio		48dB(Weight On)
	Lens		C/CS Mount Lens selectable
	Scanning System		2:1 Interlaced
	Synchronization		Internal
	Compression		MPEG4 / JPEG
	Multi-Streaming		MPEG4(2ch), JPEG(1ch)
	ELC		On / Off
	Electric Shutter Speed		1/60~1/200,000sec
	BLC		On/Off
	MIRROR		On/Off
	Maximum Frame Rate		61fps(352*240)
	Image Sizes		704*480 704*240 352*480 352*240
	Frame Rate		30, 15, 10, 7, 6, 5, 4, 3, 2, 1 fps(10 Steps)
	Viewer Program	Web Viewer@PC	Yes
		PDA Viewer@PC	Yes(option)
		Viewer@Mobile Phone	Yes(option)
		NVR@PC	Yes
	Network	Global/Private/Static/Dynamic IP	Yes
		DDNS Support	Yes
		Encryption (ID/PW/Image)	Yes
		Interface	10/100Mbps
	Concurrent Users		20
	Recording @PC	Manual	Yes
		Schedule	Yes
		Motion Detection	Yes
		Sensor event	Yes
	Event& Alarm	Sensor Trigger/Motion Detection	Yes
		Alarm Notification	SMS/E-MAIL/Alarm Sound(option)
PHYSICAL	Video Output		1.0 Vp-p 75 ohm Composite
	Dimension		55.4mm(H)*64mm(W)*120mm(L)

	Power Source	DC 12V
	Power Consumption (Max.)	6W
	Operational Temperature	-10 deg - +50 deg C RH95% MAX(14 deg F to 122 deg F)
	Weight	0.6kg
CONNECTIVITY	Video Out	1
	Sensor In/Relay Out	1/1
	Ethernet Jack	RJ45(10Base-T/100Base-TX)
	Protocols	HTTP, FTP, SMTP, TCP, IP, DHCP, ICMP, NTP, DNS, DDNS
REQUIREMENTS	Browser	Internet Explorer® Ver. 6.0+
	Operating System	Windows® 2000/XP
	Processor	Intel® Pentium® III 1GHz+(P4 2.4Ghz+ recommended)
	Memory	256MB+ (512MB+ recommended)

Appendix C **To solve problem**

C-1 Basic Check-point

C-1-1 Booting

- Check if power plug is connected correctly.

C-1-2 Network cable (LAN cable) and cable connection check

- Check if network cable is straight LAN cable. Hold each end of both side and check if same color's cable is connected to same location in RJ-45 jack or not.
- Check if network cable connects correctly with THE CAMERA.
- Check if network cable connects correctly with Hub, IP sharing device and cable modem etc.….

***. If you found a problem in the product, first check with "C-1 Basic check point" and solve the problem as following procedures:**

C-2 Troubleshooting by type

C-2-1 Cannot connect with network

- Check with 'C-1-2 Network Cable (LAN cable) and cable connection check'.
- PING Test
  - ☐ In case Camera uses Static/Public IP: input "Ping IP address" to command window of PC and check response.

- ☐ In case camera uses dynamic/public IP: In this case, user cannot find camera IP address. So, reset hardware and connect PC with THE CAMERA through cross cable and ping test by "192.168.1.7".
- ☐ In case camera uses private IP through IP sharing device: Ping-test private IP address set for THE CAMERA in PC that is connected in the local network through IP sharing device.

- If "ping test" get response, network setting for camera is done correctly.
- If ping test is okay but there is no connection, check with 'C-2-2 check port setting'..

C-2-2. Check Port Setting

- If user can't connect with camera even though 'Ping test' is okay, please check port setting by the following steps.
- THE CAMERA uses 3 ports as follow.
  - Web Connection Port : Port 80 TCP
  - Authentication and Control Port : Port 9000 TCP
  - Video Streaming Port : Port 9001 TCP
  - Motion Detection Control Port : Port 9005 TCP
- If it is not available even to connect to web, check web connect port because web connect port may be set with other number than '80'.
- In case there is problem in video monitoring even though there is no problem in Web connection, check if 'Authentication and Control Port' and 'Video Streaming Port' of THE CAMERA is set on IP sharing device (in case of using IP sharing device).
- For setting of IP sharing device Port, refer to 'IP sharing device Setting'.

C-3 In case web page can't be connected under ultrahigh speed internet line

- Some ultrahigh ISP company may block not to use Web port number 80. In this case, change to other number from web connection port setting.