



# IP Camera User's Manual

(Version 1.3.2)

IP-INTB1 & IP-INTB2 & IP-WDRB1

Network Bullet Cameras

IP-INTD3 & IP-INTD4

Network Dome Cameras

IP-INTT5 & IP-T5

Network Traditional Cameras

IP-SD10X

Speed Dome Camera

## 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](http://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

<b>1. FEATURE</b> .....	<b>8</b>
1.1. PACKAGE .....	8
1.2. DIMENSION AND CAMERA FEATURES.....	9
1.2.1. Dimensions .....	9
1.2.2. Camera Feature.....	11
<b>2. INSTALL AND CHECK VIDEO</b> .....	<b>14</b>
2.1. INSTALLATION.....	14
2.2. VIDEO CHECK .....	14
<b>3. BASIC SETTING</b> .....	<b>19</b>
3.1. CHECK NETWORK AND INSTALLATION TYPE .....	19
3.2. INSTALLATION WITHOUT IP SHARING DEVICE (ROUTER).....	20
3.2.1. Static IP Setup.....	20
3.2.2. Dynamic IP Setup .....	23
3.3. INSTALLATION WITH IP SHARING DEVICE (ROUTER) .....	25
3.4. CAUTIONS .....	29
<b>4. EXPERT SETTING</b> .....	<b>31</b>
4.1. GENERAL SETTING .....	33
4.1.1. Title Setting .....	33
4.1.2. Administrator's ID and Password Change.....	34
4.1.3. User Registration .....	34
4.1.4. User List and Delete.....	35
4.1.5. Skip Login (Automatic Monitoring) .....	35
4.1.6. Time Zone Setting.....	36
4.1.7. Set Download Route of Plug-in Type ActiveX.....	36
4.1.8. Select Language .....	37

4.2.	NETWORK SETTING .....	37
4.3.	VIDEO SETTING .....	38
4.3.1.	Video Setting .....	38
4.4.	COLOR SETTING .....	39
4.5.	ALARM SETTING .....	39
4.5.1.	Alarm Event Setting .....	39
4.5.2.	Alarm Event Test .....	41
4.6.	DIO SETTING (SUPPORT FOR IP-INTT5/T5, IP-SD10X) .....	41
4.7.	MOTION AREA SETUP .....	42
4.8.	CAMERA SETTING(SUPPORT FOR IP-SD10X) .....	43
4.9.	HOMEPAGE UPDATE .....	44
4.10.	FIRMWARE UPDATE .....	44
4.10.1.	Remote Upgrade .....	45
4.10.2.	System Re-booting .....	47
4.11.	FACTORY RESET .....	48
4.11.1.	Reset Button .....	48
4.11.2.	In reset of Factory default .....	48
<b>5.</b>	<b>BASIC USE .....</b>	<b>50</b>
5.1.	USE OF WEB VIEWER .....	50
5.2.	USE OF OSD (NOT AVAILABLE WITH IP-T5) .....	53
5.2.1.	Function .....	53
5.2.2.	OSD Menu Setting .....	56
5.2.3.	Operating Camera OSD Menu (Intensifier Cameras) .....	57
5.2.4.	Operating WDR Camera OSD Menu (IP-WDRB1) .....	77
5.2.5.	Operating Camera OSD Menu (IP-SD10X) .....	79
5.2.6.	DIP SW SETTING .....	97
5.2.7.	ID SETTING(1-ON, 0-OFF)(1→10) .....	97
5.2.8.	PROTOCOL .....	98
5.2.9.	BAUD RATE SETTING .....	98

---

5.3.	USE OF IP SETTING UTILITY.....	99
5.4.	USE OF SERVICE SERVER.....	101
5.4.1.	User Registration .....	102
5.4.2.	Camera Registration.....	104
5.4.3.	List of Camera.....	105
5.4.4.	Change of User's Information.....	107
5.4.5.	Search Camera.....	108
5.5.	SEE AND CONTROL OF STILL IMAGE IN MOBILE OR PDA .....	109
5.5.1.	WAP2.0 (HTML).....	109
5.5.2.	PDA(WinCE).....	112
5.6.	USE OF NVR PROGRAM.....	113
5.6.1.	Required Specification of PC and OS .....	113
5.6.2.	Supported O/S .....	113
5.6.3.	Refer the NVR User's Manual in the CD-ROM. ....	113
6.	NETWORK ENVIRONMENT .....	115
7.	APPENDIX.....	118

# 1. Feature

# 1. Feature

## 1.1. Package



IP/Network Camera



Software CD



Quick Install Guide



Cross LAN Cable



Accessory Pack



Power Lead Cable

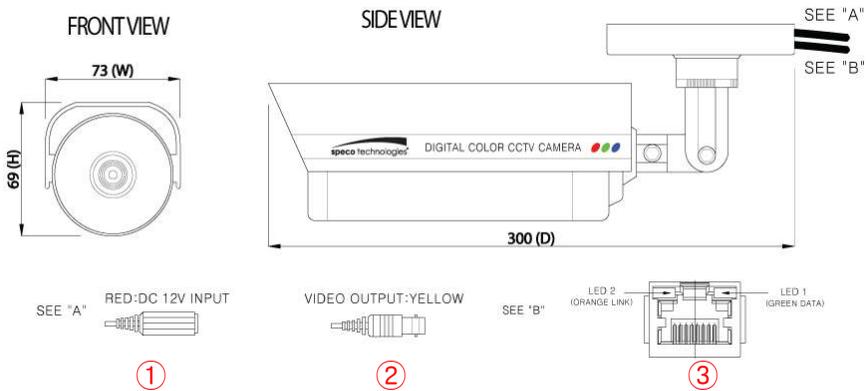
Package of Products is composed of main body of product, Software CD (NVR Program, IP Utility, Product Manual, NVR Manual) , Quick Install Guide, Cross LAN Cable, Accessory Pack, Power Lead Cable.

Please check before starting installation.

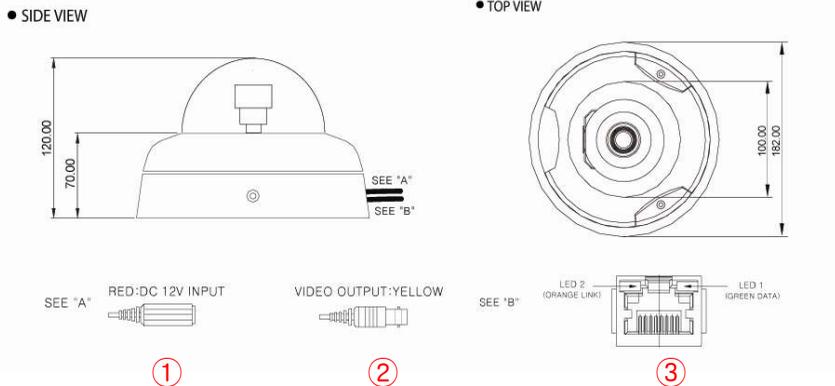
## 1.2. Dimension and Camera Features

### 1.2.1. Dimensions

#### 1) Bullet Camera

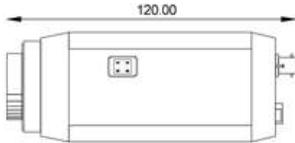


#### 2) Dome Camera

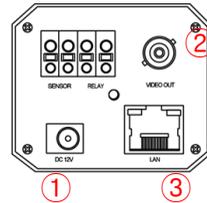


## 3) Traditional Camera

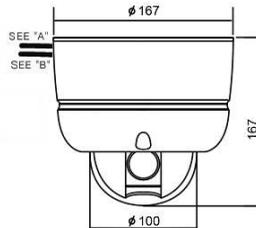
## ● SIDE VIEW



## ● BACK VIEW



## 3) Speed Dome Camera



"A" RED:DC 12V INPUT



①

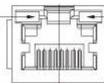
VIDEO OUTPUT:YELLOW



②

"B"

LED 2 (ORANGE LINK) LED 1 (GREEN DATA)



③

- 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

### I. Intensifier Cameras (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.

### II. Speed Dome Camera

- 1) DVD Quality Video Streaming
  - 2) MPEG4, JPEG Triple stream capability
  - 3) 100X Zoom(10X Optical Zoom with 10X digital zoom)
  - 4)  $\pm 0.02^\circ$  dome system accuracy with 1/4 micro step
  - 5) 360° Endless Rotation
  - 6) Compensation function: preset position
  - 7) Over 200°/Sec Preset Speed
  - 8) Polarity Protection of Power (DC12V)
  - 9) Filter changeable True Day/Night
  - 10) Various Surveillance Functions
  - 11) Auto Scan / 8 Group Tour / 20 Preset positions / 8 Patterns / 8 Sectors
  - 12) 2 Alarm input
  - 13) 4 Privacy Masking Zones
  - 14) High picture quality 1/4" SuperHAD CCD
  - 15) High sensitivity 0.1 lux / 0.002 lux(Sense-up x128)
-

- 16) Camera OSD control with client program
- 17) Super Day/Night Function with Power Sensor-up engine
- 18) Intelligent Pan/Tilt Controlling
- 19) High-frame rate of up to 30fps at 704x480 size image
- 20) 4 selectable image sizes – D1,Half D1,2CIF,CIF
- 21) Simultaneous access up to 20 users
- 22) Intelligent motion detection and alarm trigger function
- 23) Pre-alarm recording with ftp server
- 24) Networking security : Password protection & Encryption
- 25) Access priority setting capability
- 26) Analog composite video output for local analog viewing or recording
- 27) Supports NVR@PC, Viewer@PDA, Mobile Phone

### III. WDR Camera

- 1) High picture quality 1/3" CMOS
  - 2) High Resolution of 540TV Line
  - 3) Superior Wide Dynamic Image Quality
  - 4) Digital pixel System
  - 5) Weatherproof Design with IP66
  - 6) Single body type stand: Protect video and power line
  - 7) OSD Control
    - Auto White balance
    - Automatic gain control(max.38dB)
    - Slow shutter, agc on/off
    - Lens type control
    - Auto exposure control
  - 8) Synchronization: Internal/External selectable
  - 9) Camera ID:User writable camera title
  - 10) MPEG4,JPEG Triple stream capability
  - 11) Intelligent Motion detection and alarm trigger function
  - 12) Pre-alarm recording
  - 13) Networking security: Password protection
  - 14) Analog composite video output for local analog viewing or recording
  - 15) Supports NVR@PC, Viewer@PDA, Mobile Phone
-

## 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.

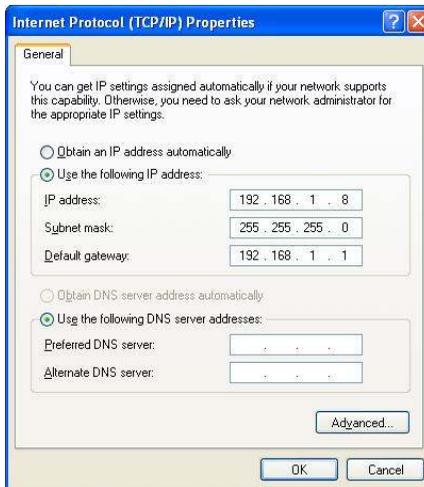


Fig. 2-1 Network Setting of User PC

- 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" .

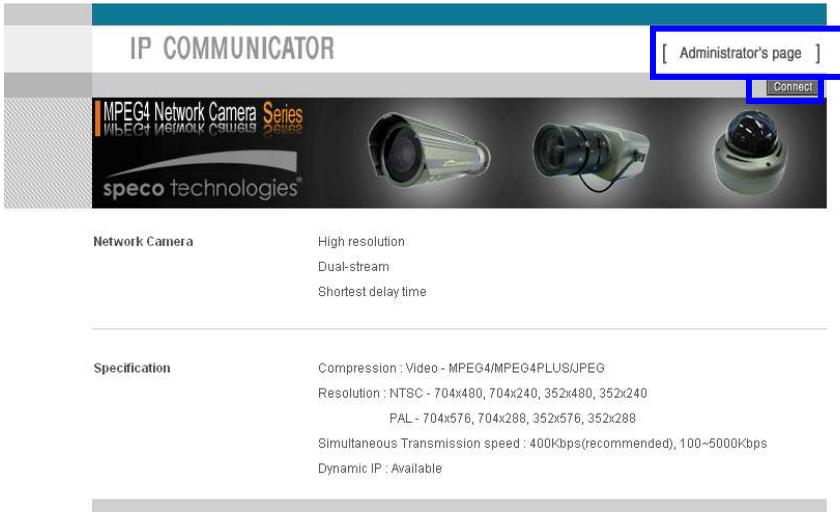


Fig. 2-3 THE CAMERA Main Page

- 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
laudio (select models only)	laudio	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.

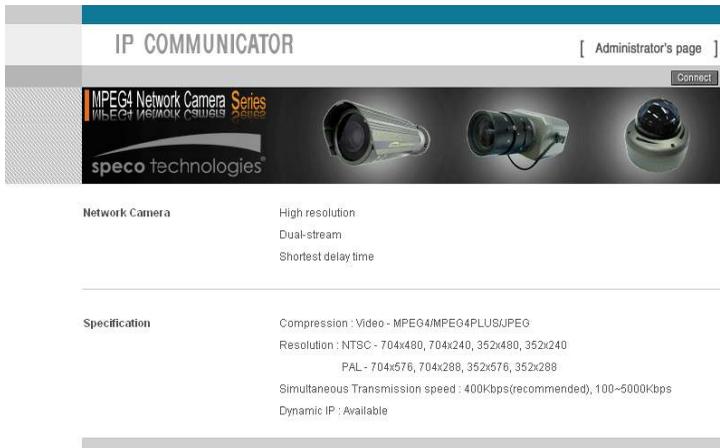


Fig. 3-1 Main Page of THE CAMERA Network Camera

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

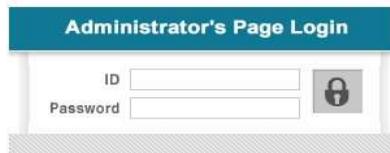


Fig. 3-2 Administrator Page Log-in

- 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.

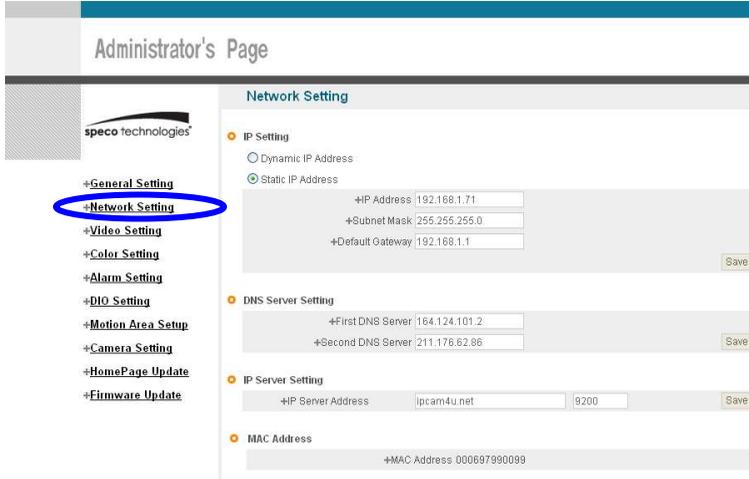
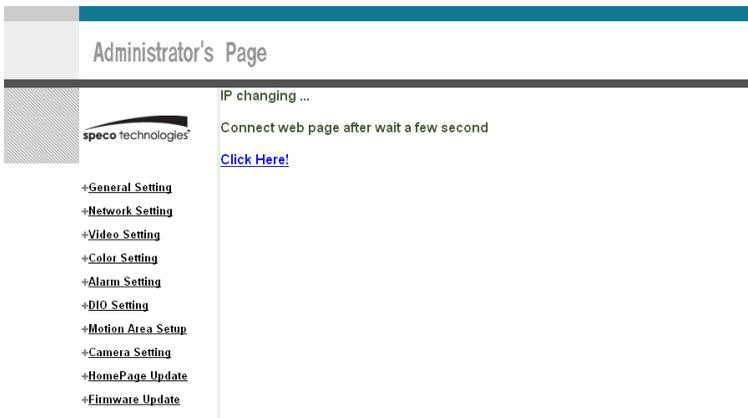


Fig. 3-4 Network Setting

- 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.

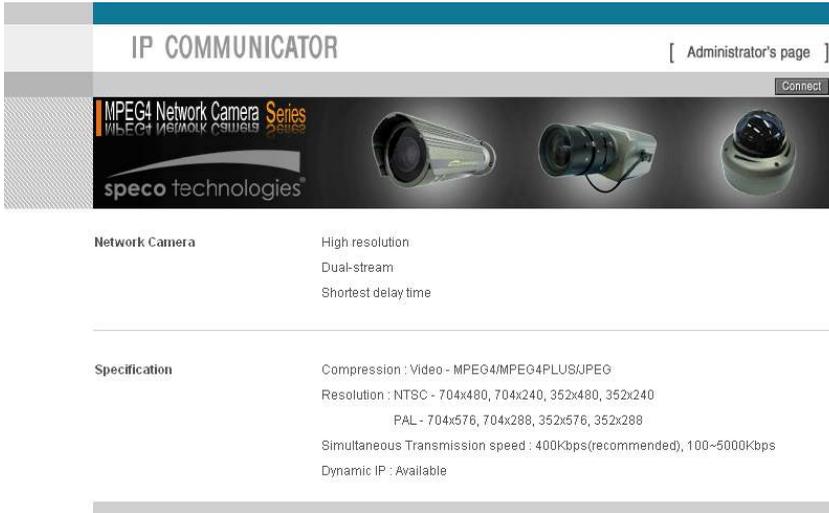
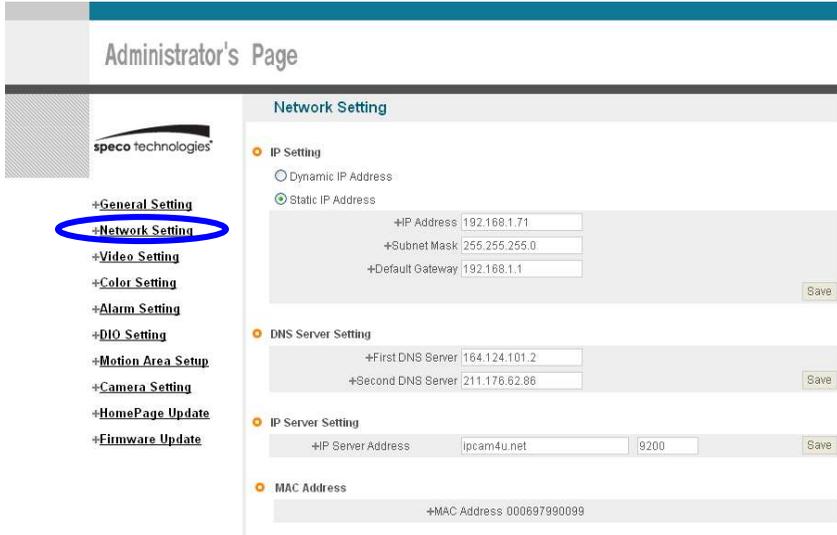


Fig. 3-8 Initial Page of THE CAMERA

### 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 2<sup>nd</sup> 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.)

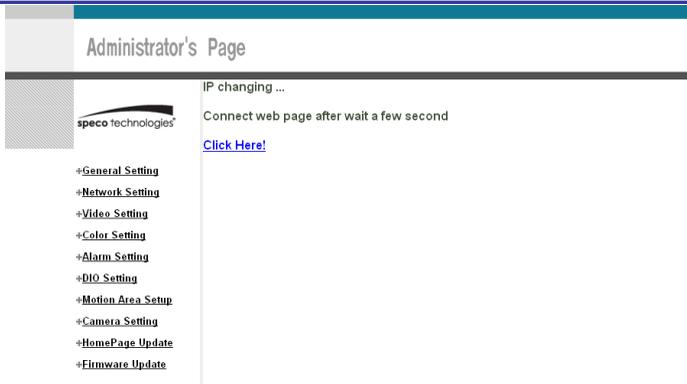


Fig. 3–10 IP Change

- 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'.



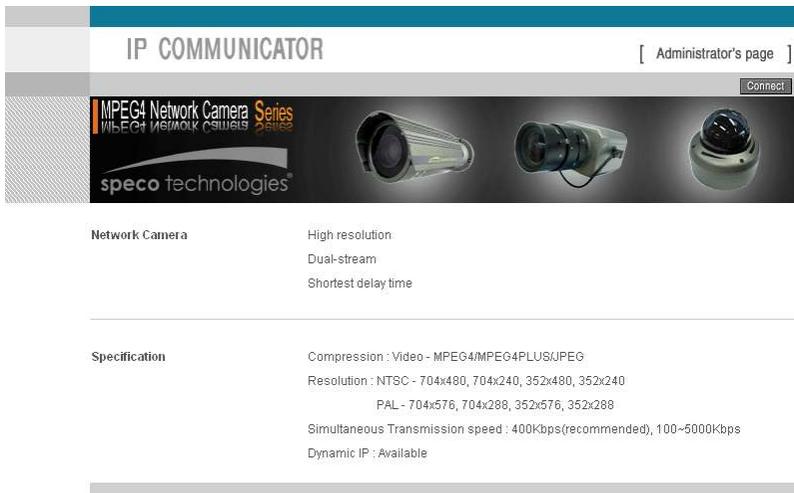
Fig. 3–11 IP Change loading Page



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'](#).)

The image shows a login form titled "Administrator's Page Login" in a blue header. Below the header, there are two input fields: "ID" and "Password". To the right of the "Password" field is a grey button with a white padlock icon, representing the "Login" button. The form is set against a light grey background with a subtle shadow effect.

Fig. 4-1 Administrator's Page Login

## Administrator's Page



- General Setting**
- Network Setting**
- Video Setting**
- Color Setting**
- Alarm Setting**
- DIO Setting**
- Motion Area Setup**
- Camera Setting**
- HomePage Update**
- Firmware Update**

### General Setting

- Server Title**

+ Title:  Save
- Change Administrator**

+ Admin Id:  + Admin Password:  + Password Confirm:  Save
- Add User**

+ User Id:  + User Password:  + Password Confirm:  + Authorization:  Save
- List Users** List Users    Reset Users
- Direct View**

Skip Login    + Connect ID:  Save
- Time Setting**

Automatic Setting

+ Set Time Zone:  Save

+ Time Server:

User Setting

Year:  Month:  Day:  Hour:  Minute:  Save

+ Current Date & Time Display
- Plugin Download**

Internal Plugin

External Plugin    + Plugin Server Address:  Save
- Language**

+ Select Language:  Save

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

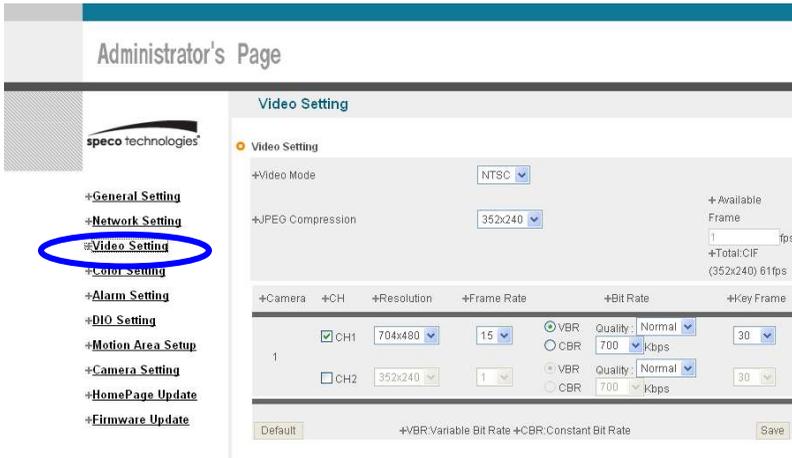


Fig. 4–14 Video Setting

#### 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.

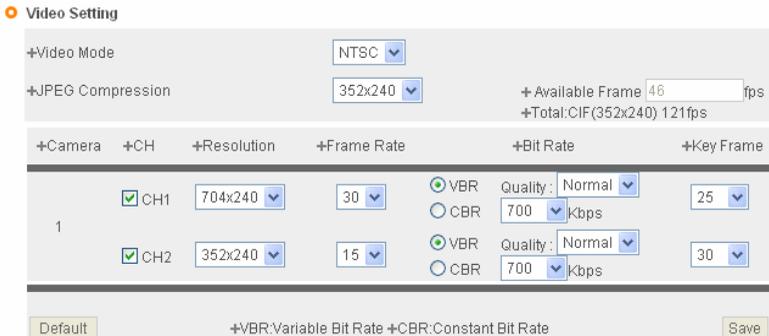


Fig. 4–15 Video Setting

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'.

The screenshot shows the 'Administrator's Page' for an IP camera. On the left is a sidebar with navigation links: '+General Setting', '+Network Setting', '+Video Setting', '+Color Setting', '+Alarm Setting' (circled in blue), '+DIO Setting', '+Motion Area Setup', '+Camera Setting', '+HomePage Update', and '+Firmware Update'. The main content area is titled 'Alarm Setting' and contains two sections:

- Alarm Event**:
  - +Alarm:  Enable
  - +Alarm Condition:
    - Sensor
    - Motion
    - Sensor & Motion
  - +Sensitivity(%): 70 (dropdown menu)
- Alarm\_Style**:
  - +Recording:  Alarm Server
  - Video Recording
  - +Server Address:  9100
  - +Directory:
  - +User ID:
  - +Password:
  - +FTP:
  - Buttons: Save, Test

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 be 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, IP-SD10X)

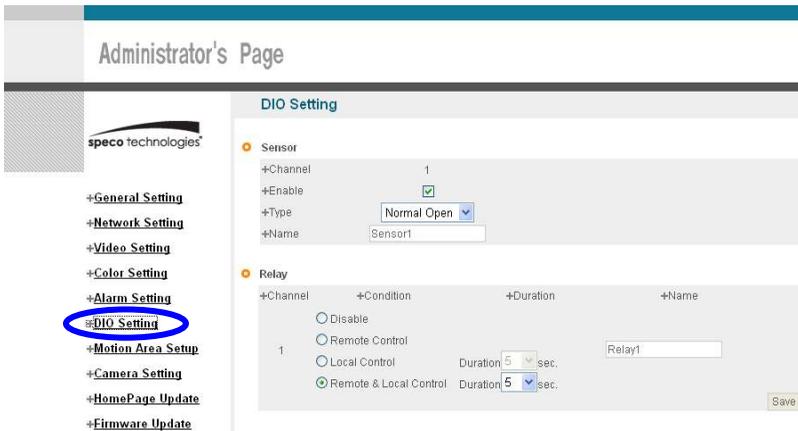


Fig. 4-19 DIO Setting

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



### Administrator's Page

- +General Setting
- +Network Setting
- +Video Setting
- +Color Setting
- +Alarm Setting
- +DIO Setting
- +Motion Area Setup
- +Camera Setting
- +HomePage Update
- +Firmware Update

Motion Setup
Motion Setup



Area 1	SET	☺
Area 2	SET	☺
Area 3	SET	☺
Area 4	SET	☺
SAVE		

↑  
↓  
←  
→

↺  
↻

Zoom:

Focus:

- ✓ (1) Motion Area Set: Press the set button. Place the mouse cursor 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.

42

## 4.8. Camera Setting(support for IP-SD10X)

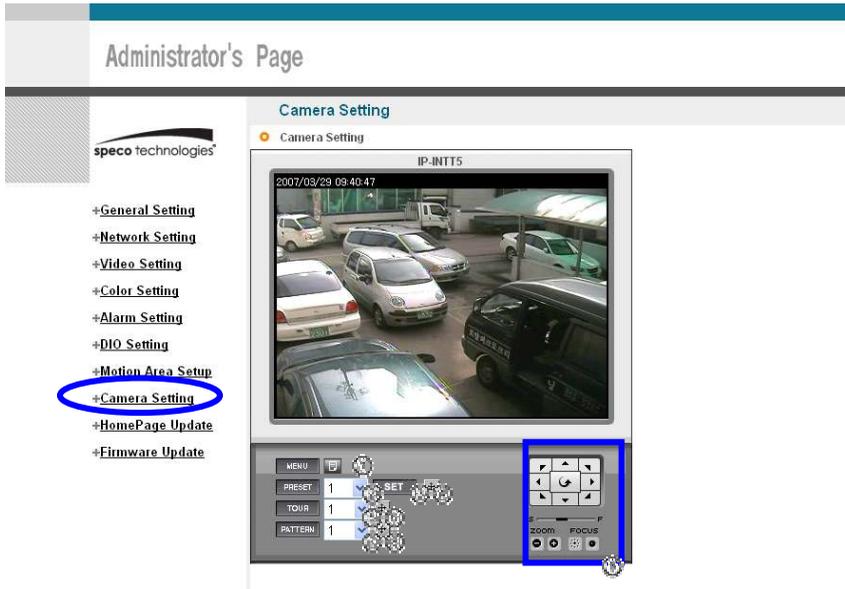


Fig. 4-20 Camera Setting

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

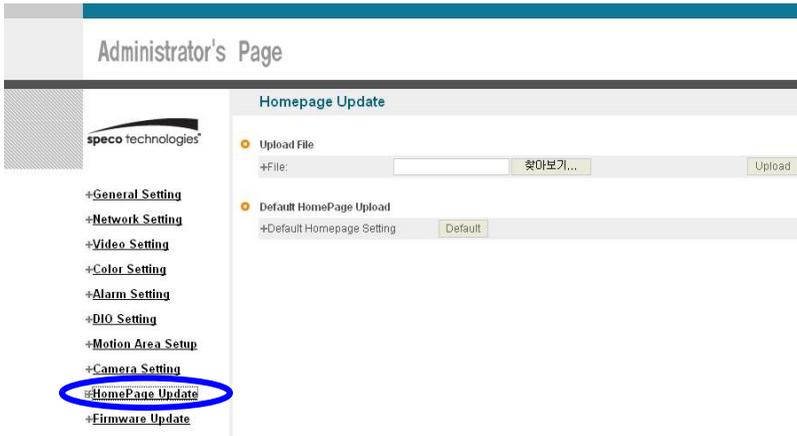


Fig. 4–21 Homepage Update

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 complimentary, 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

The screenshot displays the 'Administrator's Page' for a video server. On the left, a sidebar contains a list of settings: General Setting, Network Setting, Video Setting, Color Setting, Alarm Setting, DIO Setting, Motion Area Setup, Camera Setting, HomePage Update, and Firmware Update (which is circled in blue). The main content area is titled 'Firmware Update' and includes a warning: '+ You must system restart the video server after firmware update.' Below this, there are several sections:

- Current Version:** Shows 'Current Software Version : SP\_IP-C4000SR\_V3.0' and 'Current Hardware Version : SP\_IP-C4000SR\_V3.0'.
- Remote Update:** Features an 'Update Server Address' field containing 'ipcam4u.net' and an 'Update' button.
- Local Update:** Includes a '+File:' field, a search button '찾아보기...', and an 'Update' button.
- Kernel Update:** Similar to Local Update, with a '+File:' field, a search button '찾아보기...', and an 'Update' button.
- System Restart:** Contains a 'Restart' button.

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.

The screenshot shows a dialog box titled 'Firmware Remote Update'. It contains a section for 'Firmware Update' with the following text: '+ Wait for the downloading to complete, then click on the Download Button.' Below this text is a 'Download' button.

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**

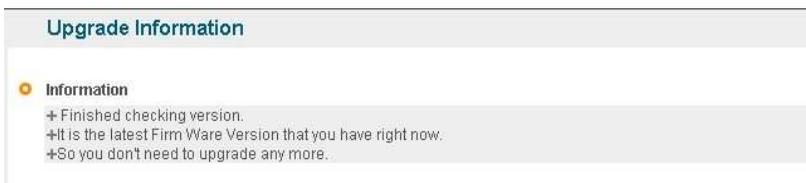
'Downloading' message will be shown until completion of Update as [4–24] (it may take time according to Network situation). Upon completion of upgrade, there appears message showing upgrade result.

[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

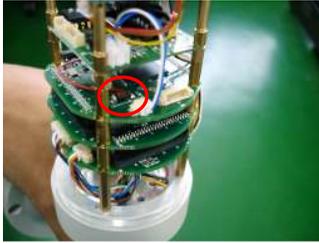
This is the function to re-boot Inner Software of THE CAMERA. Click 'Restart' on [4-41] 'System

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
<b>Flickering on Screen and Alarm Sound</b>	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	<ul style="list-style-type: none"> <li>✓ 'space 'Key'</li> <li>✓ Enlarge / reduce Screen</li> </ul>
③	<ul style="list-style-type: none"> <li>✓ Number Key'</li> <li>✓ Preset Move Function,</li> <li>✓ The Number represents the Preset Number</li> <li>✓ 20 Preset is controlled by Key Board</li> <li>✓ Key Board 1 ~ 0 : Preset 1 ~ Preset 10</li> <li>✓ Key Board q ~ p : Preset 11 ~ Preset 20</li> </ul>
④	<ul style="list-style-type: none"> <li>✓ 'Direction Key'</li> <li>✓ Pan/Tilt of Camera</li> <li>✓ Pressing on the direction Key makes Camera move to the direction. Un-pressing stops moving.</li> </ul>
⑤	<div style="display: flex; align-items: center;"> <ul style="list-style-type: none"> <li>✓ Same function as</li> </ul> </div>
⑥	<ul style="list-style-type: none"> <li>✓ Zoom-in, Zoom-out Function</li> <li>✓ '+' is Zoom In, Pressing the key makes doing the function. Un-pressing stops the function</li> <li>✓ '-' is Zoom Out, Pressing the key makes doing the function. Un-pressing stops the function.</li> </ul>

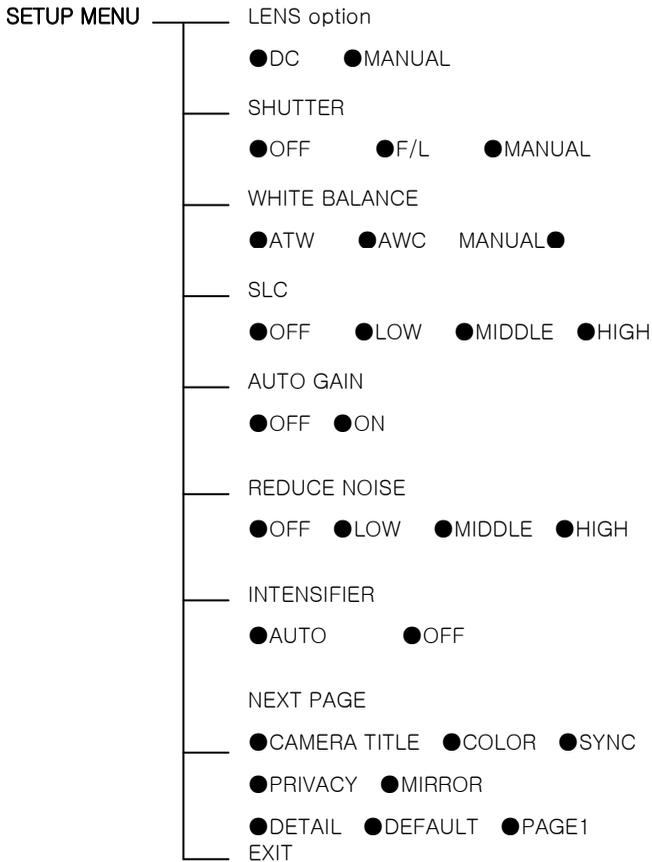
## 5.2. Use of OSD (Not available with IP-T5)

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

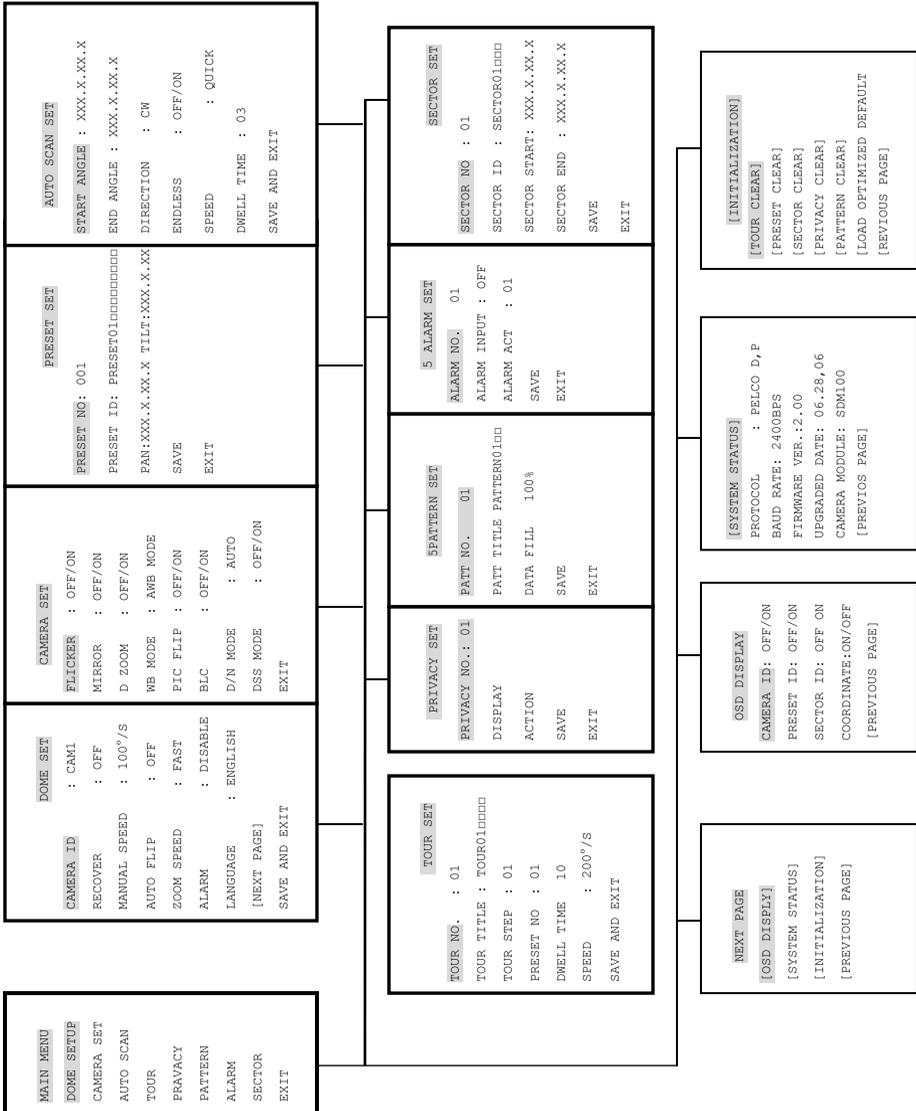
Please refer to the '[1.2.2 Camera Feature](#)' for OSD function.

### 5.2.1. Function

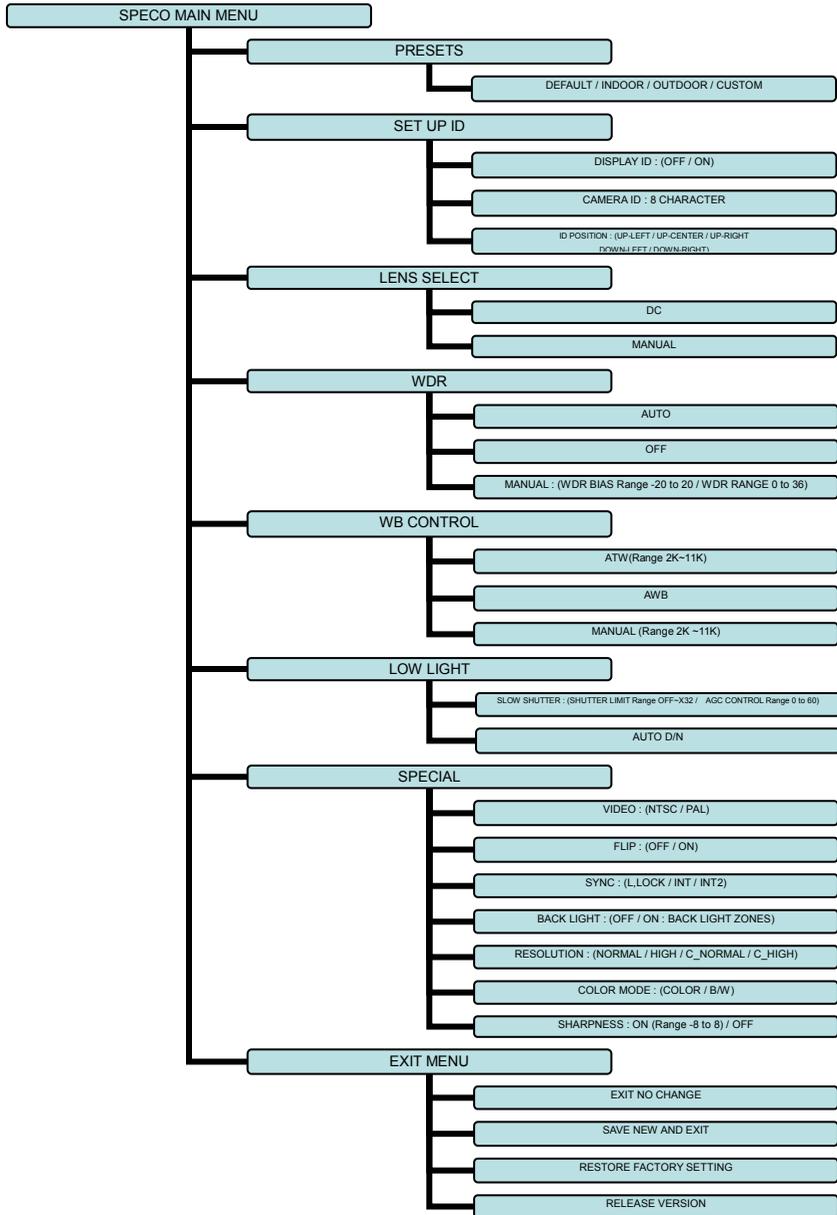
#### 1) Intensifier Cameras (Not available with IP-T5)



## 2) Speed Dome Camera (IP-SD10X)

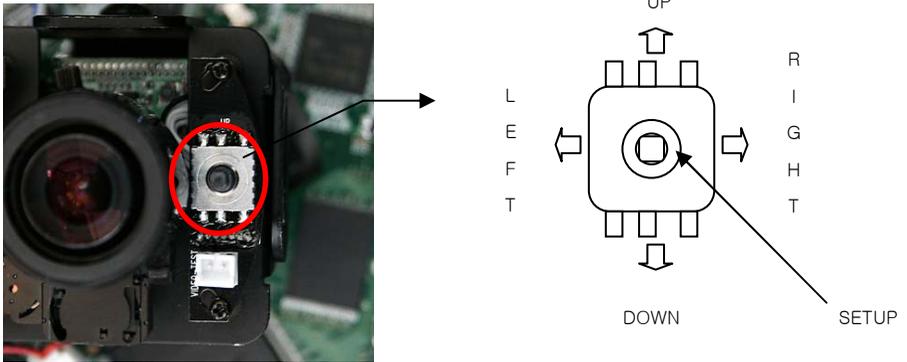


### 3) WDR Camera (IP-WDRB1)

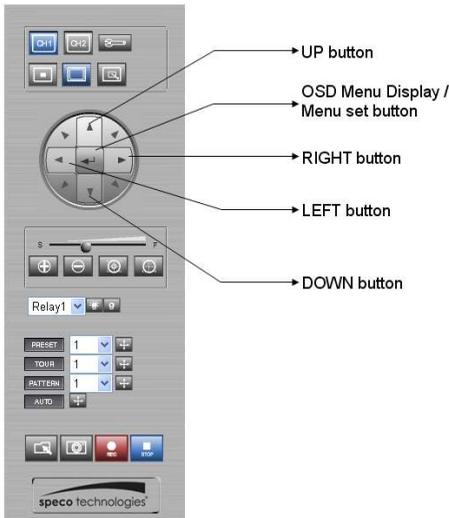


### 5.2.2. OSD Menu Setting

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



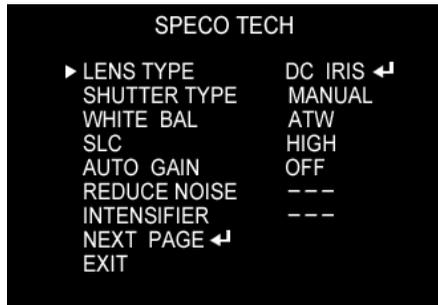
When you control by the five keys on the Webviewer GUI refer to the following



### 5.2.3. Operating Camera OSD Menu (Intensifier Cameras)

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.  
Move the arrow indicator to the desired feature item.

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.

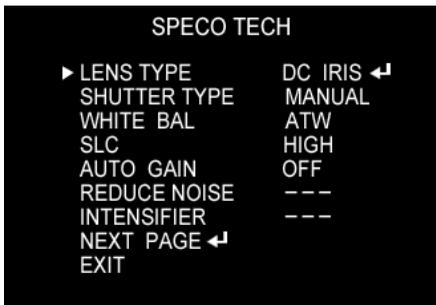
#### ● Notes

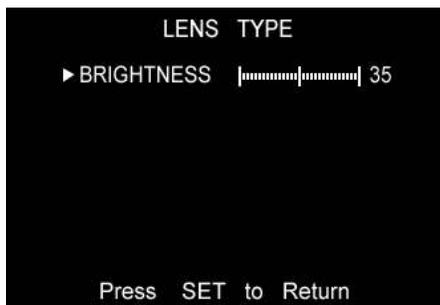
You can access submenu using SET button.  
For the mode with '---', you may not access submenu.

## 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 using the UP or DOWN button.
- ② Select the desired feature using the LEFT or RIGHT button.



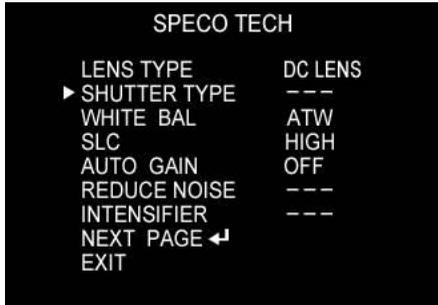


- ▶ When DC LENS selected, press SET button to control the BRIGHTNESS.

## 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.
- ② Set 'SHUTTER' to the desired mode using the LEFT or RIGHT button.



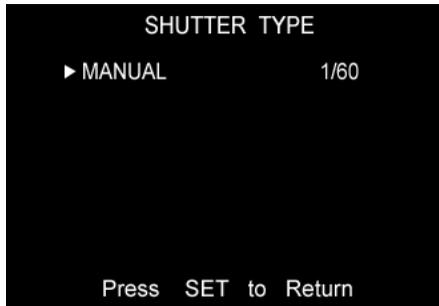
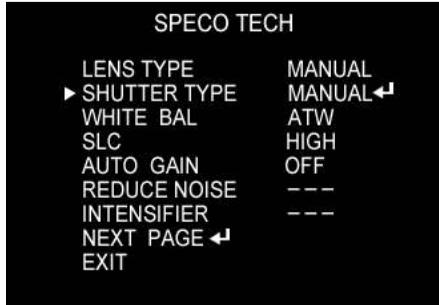
- ▶ OFF : Deactivation



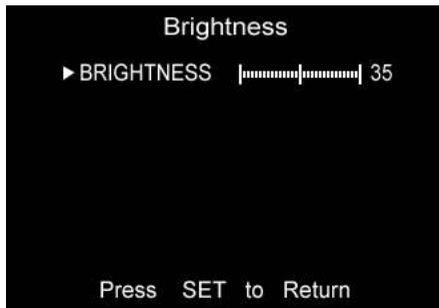
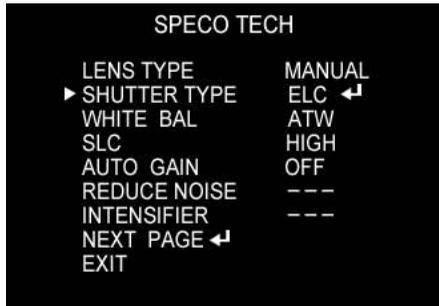
- ▶ FLK(1/100) : Flicker mode

(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 '1/200,000'sec



- ▶ 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.

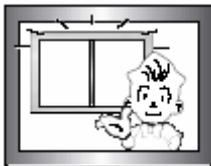
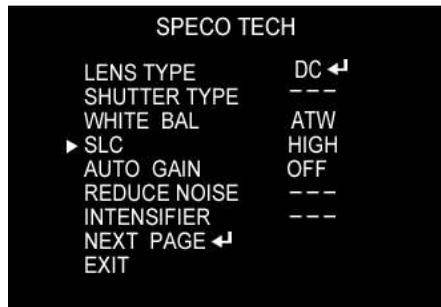
- ① Press the SET button to display the SETUP menu and move the arrow indicator to 'BACKLIGHT' using the UP or DOWN button.
- ② SET 'BACKLIGHT' to the desired mode using the LEFT or RIGHT button.

▶ OFF

▶ LOW

▶ MIDDLE

▶ HIGH



BLC



OFF

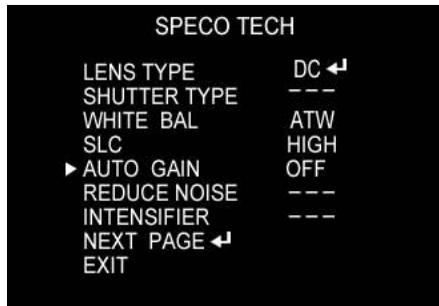
### 3) AUTO GAIN CONTROL (AGC)

**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

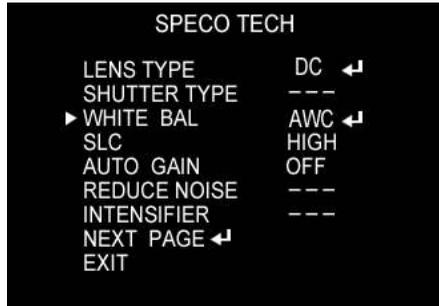
▶ ON



## 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 changed, you have to adjust the white balance again.

► **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.

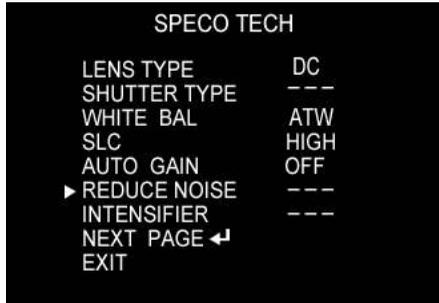
When the scene is dim.

If your camera faces fluorescent lamp directly or is installed in the place of the changing illumination.

## 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

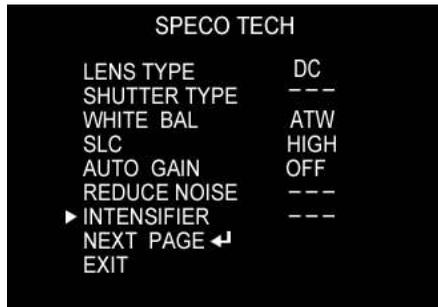
### ● Notes

If you change the 'GAIN' menu from AGC-L to AGC-H sensitivity is increased as well as noise on the screen.  
When selected 'GAIN' menu OFF, DNR will not work.

## 7) INTENSIFIER

**Allows you to get clear images with this function under night or low light conditions**

- 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

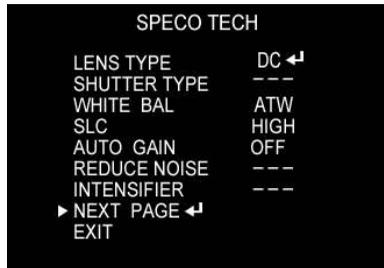
If you press SETUP button at 'AUTO' menu, you can control the lowlight action maximum magnifications.(X2~X128)

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 which is to be expected as a normal condition.

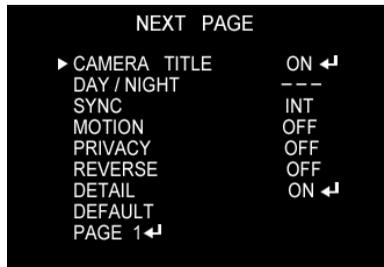
## 8) NEXT PAGE

- 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 be 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.
  - e. Select the position at which the CAMERA TITLE will be located on the screen.



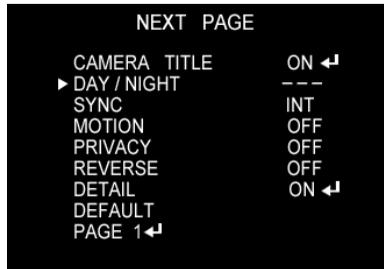
#### ● Notes

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

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

## B) COLOR

You can choose color and B/W mode electronically. (OPTION)



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

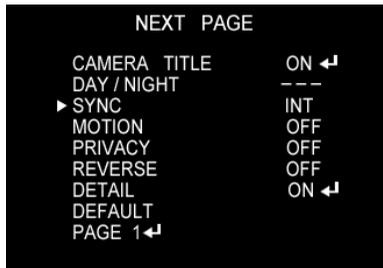
### ● Notes

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.

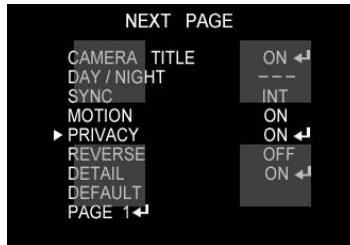
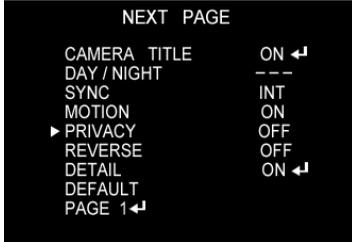
#### ● Notes

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.



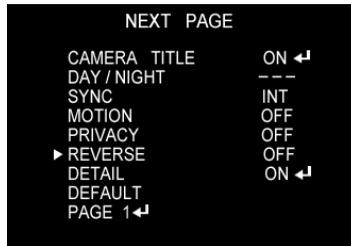
► OFF : Deactivation

► 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.

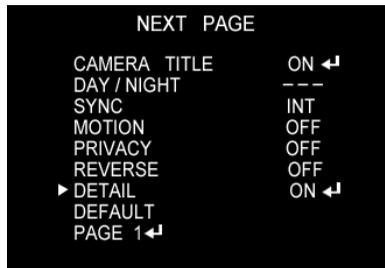


▶ OFF : Deactivation

▶ 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 with video noise.

**G) DEFAULT**

: Use to reset your camera to FACTORY DEFAULT SETTING.

**H) PAGE1**

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

## 5.2.4. Operating WDR Camera OSD Menu (IP-WDRB1)

### OSD MENU CONTROL

CENTER KEY - Used to access menu mode. Also used to confirm the setting

UP / DOWN KEY - Used to choose the desired menu selection.

LEFT / RIGHT KEY - Used to choose the desired menu feature adjustment.

### OSD MENU ENTER / EXIT

#### A. OSD MENU ENTER

- Push Center Key for 2 seconds

#### B. OSD MENU EXIT

- Press EXIT Menu from Main Menu
- If Pressing Set Key for 2 seconds from Main Menu appears.  
In this case, just press Set Key.

#### C. 'SAVE' and 'QUIT'

- Left or Right Key - Selecting Menu
- Up or Down Key - Returning to Menu

1. Press the SET key to access the main setup mode.
2. Select the desired feature using the UP or Down key.
3. Change the status of the selected feature using the LEFT or RIGHT key.

### MAIN MENU

#### A. PRESETS

- DEFAULT : Optimized for normal scenes
- INDOOR : Optimized for indoor scenes with windows and/or glass door to capture details both indoors and outdoors.
- OUTDOOR : Optimized for sunny outdoor scene to capture detail both in bright areas and shadows.
- CUSTOM : Change the value of the customer.

#### B. SETUP ID

- DISPLAY ID

- ON :The ID name will displayed in the monitor.
- OFF : The name will not displayed in the monitor.
- CAMERA ID : Enter up to 8 characteristic.
- ID POSITION : Select the screen position of the camera ID.

#### C. LENS

- DC : Use When using DC lens.
- MANUAL : Use When using Manual lens.

#### D. WDR

- WDR (Wide Dynamic Range) : You can adjust the desired WDR BIAS from -20 to 20 and WDR RANGE from 0 to 36

#### E. WB CONTROL

- ATW (Auto Tracking White Balance) : The camera automatically control the white balance in any environment.
- AWB (Auto White Balance) : The white balance is automatically adjusted in a specific environment.
- MANUAL : Users can adjust the colors by adding or reducing the WB level.  
You can adjust the desired WB level from 2K to 11K

#### F. LOW LIGHT

- SLOW SHUTTER : Control Image brightness by adjusting shutter speed  
You can adjust the desired shutter speed from off to X32
- AGC : ON (You can adjust the desired AGC level from 0 to 60dB) or OFF (Deactivate automatic gain control feature)
- AUTO D/N : AUTO DAY/NIGHT

#### G. SPECIAL

- VIDEO : NTSC or PAL SELECTION
  - FLIP : HORIZONTAL REVERSE (OFF or ON)
  - SYNC
    - INTERNAL : Internal synchronization
    - INTERNAL2 : Internal synchronization (Color Rolling Mode)
    - LINE LOCK : Phase adjustment may be necessary in multiple camera installations to prevent picture roll  
when switching between cameras
  - BACK LIGHT : BACK LIGHT ADJUST or SELECT AREA
  - RESOLUTION : Select Resolution of CCD or PIXIM
  - COLOR MODE : COLOR or B/W SELECTION
-

- 
- SHARPNESS : ON (You can adjust the desired Sharpness form -8 to 8) or OFF

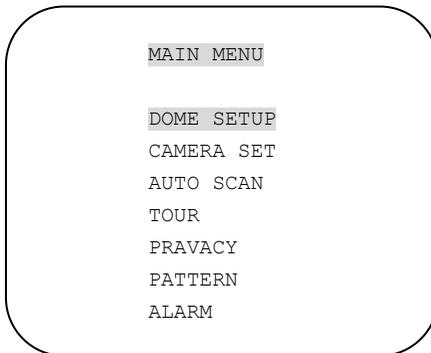
#### H. EXIT MENU

- EXIT NO CHANGES : No change
- SAVE NEW AND EXIT : Save change
- RESTORE FACTORY SETTINGS : Factory default
- RELEASE VERSION

#### I. PREVIOUS PAGE

- PREVIOUS PAGE : Return page

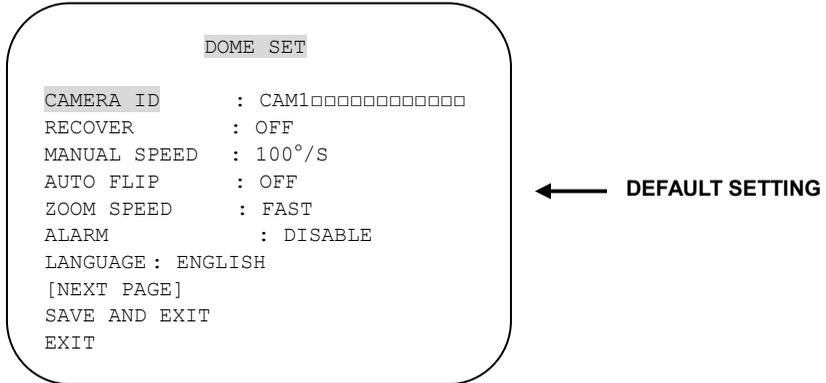
### 5.2.5. Operating Camera OSD Menu (IP-SD10X)



**\* Use the the five keys on the WebViewer GUI “up down” to move the position and “left right” to make selection**

## A. Dome Setup

To enter Dome setup, use the five keys right to move when cursor on dome setup.



### A-1. DOME SET - CAMERA ID

To set camera ID, select up to 16 characters using Five keys to the left or right. Press **ZOOM TELE** button to move to the next character from left to right direction and **ZOOM WIDE** button to move to the next character from right to left direction (Space displays when □ appears)

### A-2. DOME SET - RECOVER

This feature allows the dome to work from the last setting before you use the dome manually (Auto scan, group tour, preset, pattern or sectors) , after the set time, even power shut down and it turns on again. Recover time can be programmed from 15 second to 99 seconds. The default setting is OFF.

### A-3. DOME SET - MANUAL SPEED

Manual Speed of Pan/Tilt is selectable from 100°/sec up to 150°/sec. The default setting is 100°/sec

### A-4. DOME SET - AUTO FLIP

Auto Flip is available and the default setting is OFF. Move five keys "right or left" to

---

select ON or OFF. The default setting is OFF.

#### A-5. DOME SET – ZOOM SPEED

Zoom speeds are selectable FAST or SLOW mode. Move five keys to the right direction for selecting FAST or SLOW. The default setting is FAST.

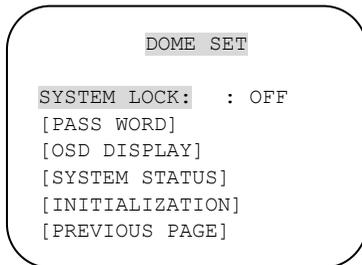
#### A-6. DOME SET – ALARM

All alarms are available after set as ENABLE Mode. Move five keys to right or left direction for selecting ENABLE/DISABLE. The default setting is DISABLE.

#### A-7. DOME SET – LANGUAGE

Multiple languages are selectable here including English, Italian and Polish. Move five keys to the right or left direction to select language. The default setting is ENGLISH.

#### A-8. DOME SET – [NEXT PAGE]



← DEFAULT SETTING

##### A-8-1. DOME SET – [NEXT PAGE] – SYSTEM LOCK

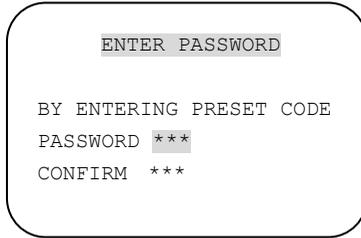
Password protection provides keeping memorized data. It cannot be adjusted by anybody without password. In order to enter [PASS WORD] page, system lock status is must set as ON. Move five keys to right or left direction to select ON. The default setting is OFF.

##### A-8-2. DOME SET – [NEXT PAGE] – [PASSWORD]

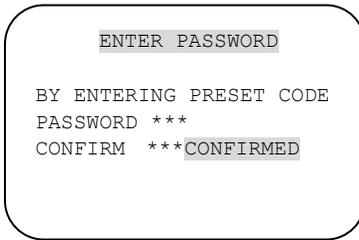
To enter this page to set a password, move five keys to the right direction. The password must be set by preset number from 001 to 255 (**Default 99**)

---

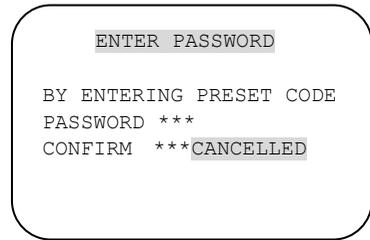
---

**5.2.1. OSD MAIN MENU TABLE (PAGE 54) The default setting is BLANK.**


Press any number from 001~255 with preset button on password blank and again it on confirm blank. Then "CONFIRMED" is displayed on the monitor and the menu will go back to the previous page automatically.



<CONFIRMED>



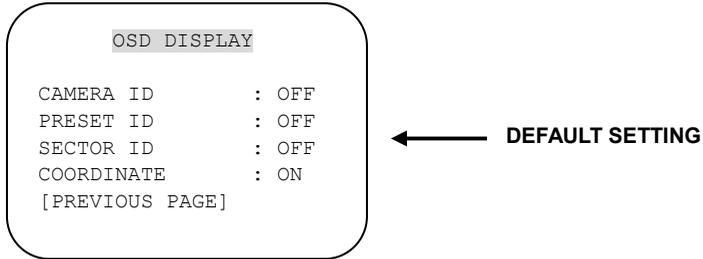
<CANCELLED>

If user presses wrong preset number between PASSWORD and CONFIRM, "CANCELLED" is displayed on the monitor and if user failed 3 times, the menu will return to the previous page automatically. \* After setting a Password, an operator must press memorized password in order to enter OSD MAIN MENU, or to change the data which is memorized originally.

\* An operator must remember the password for the operation. Manufacturer doesn't provide a memorized password.

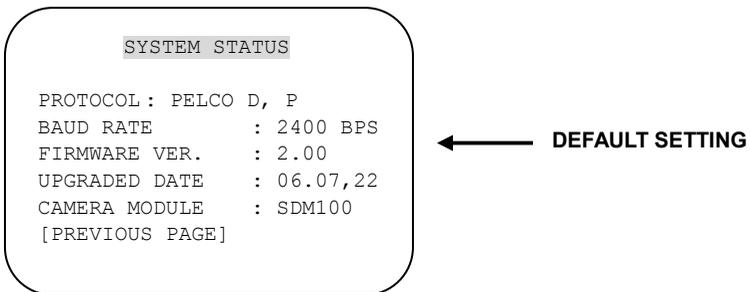
**A-8-3. DOME SET – [NEXT PAGE] – [OSD DISPLAY]**

OSD ID displayed after set ON in here and it can be hiding if selected OFF. Move five keys to the right or left direction in order to select OFF/ON when the cursor is located each item.



#### A-8-4. DOME SET – [NEXT PAGE] – [SYSTEM STATUS]

This page shows the information of this camera.



- Protocol and baud rate are shown according to the dip switch setting  
 (Refer to page 29, 30 and 31)

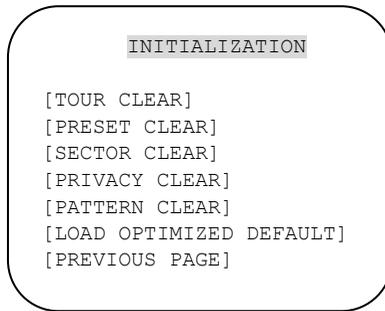
- Firmware version and upgraded date will be changed if upgraded.

- Below camera modules can be set as follows.

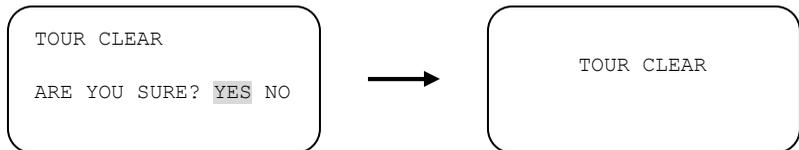
SDM100 : SAMSUNG 10X ZOOM CAMERA MODULE.  
 EN300 : OPTICAL 3X MODULE (PAN FOCUS)  
 : Board Camera ( with Fixed Lens)

#### A-8-5. DOME SET – [NEXT PAGE] – [INITIALIZATION]

To clear all memorized data for tour, preset, sector, privacy or pattern, move five keys to the right direction when the cursor is on [INITIALIZATION]

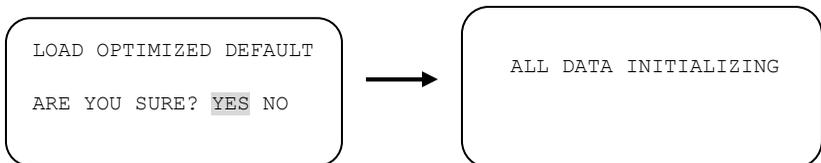


- To clear memorize any data, move five keys to the right direction when cursor is on each item.



Press **FOCUS NEAR** button when the cursor is at YES in order to clear memorized data. Then flickered each item such as tour, preset, sector and so on is displayed on the monitor about 2~3 seconds. After this process, the menu is returned to the previous page.

\* **[PRESET CLEAR], [SECTOR CLEAR], [PRIVACY CLEAR], [PATTERN CLEAR]** are same as **[TOUR CLEAR]**.



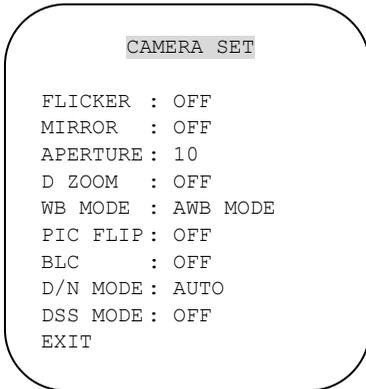
- To clear all data and wants returning to factory default, move five keys to the right direction when cursor is at [LOAD OPTIMIZED DEFAULT] to enter the above page.
- Move five keys to the right or left direction in order to select YES, press **FOCUS NEAR** button.
- Then "ALL DATA INITIALIZING" is displayed about 5~7 seconds and then the menu is returned to the previous page automatically.

**A-9. DOME SET – [NEXT PAGE] – SAVE AND EXIT**

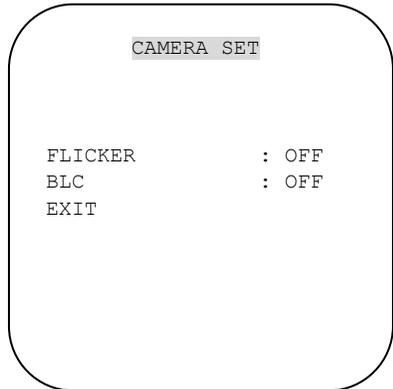
To saving the memorized data and escape this page, move five keys to the right direction when cursor is at SAVE AND EXIT.

**A-10. DOME SET – [NEXT PAGE] – EXIT**

In order not to save any data and wants to escape this page, move five keys to the right direction when cursor is at EXIT

**B. CAMERA SET**

&lt;TS-PTZ10X&gt;



&lt; TS-PTZ3X &gt;

**B-1. CAMERA SET - FLICKERLESS**

Flickerless feature is selected between 50Hz and 60Hz. The default setting is OFF (NTSC: 60Hz / PAL: 50Hz). Set flicker mode ON when power source is in discord with frequency. The default setting is OFF

**B-2. CAMERA SET - MIRROR**

This feature shows left and right exchanged picture image like mirror. The default setting is OFF.

(10X Zoom)

**B-3. CAMERA SET – APERTURE**

Aperture enhances picture details by increasing gain of the camera and sharpens the edges in the picture. The default setting is 10. (the aperture level is from 01 ~ 15)  
(10X Zoom)

**B-4. CAMERA SET – D ZOOM**

Move five keys to the right direction in order to set as ON, if Digital Zoom is necessary at install field. The default setting is OFF.  
(10X Zoom)

**B-5. CAMERA SET – WB MODE**

White balance functions have 4 modes according to the condition of exterior lighting. The default setting is AWB and it may change the mode option according to the lighting conditions as below.

AWB Mode – 3,200°K to 6, 000°K (10X Zoom)

- Indoor – up to 3,200°K
- Outdoor – up to 5,800°K
- ATW Mode - 2,000°K to 10, 000°K

**B-6. CAMERA SET – PIC FLIP**

Picture flip feature provides the top and down exchanged picture image horizontally. Move five keys to the right or left direction to select OFF/ON. The default setting is OFF.  
(10X Zoom)

**B-7. CAMERA SET – BLC (Back Light Compensation)**

The default setting is OFF and BLC modes can be OFF/ON.

OFF – Backlight compensation is not activated.

ON – Back light compensation is activated.

**B-8. CAMERA SET – D/N MODE**

ICR filter is changeable according to the lighting, AUTO – NIGHT MODE – DAY MODE. The default setting is AUTO MODE.

---

(10X Zoom)

### B-9. CAMERA SET – DSS MODE (DIGITAL SLOW SHUTTER)

If DSS turns on, digital slow shutter is working. Per second, the electronic shutter will remain open to receive some more lighting.

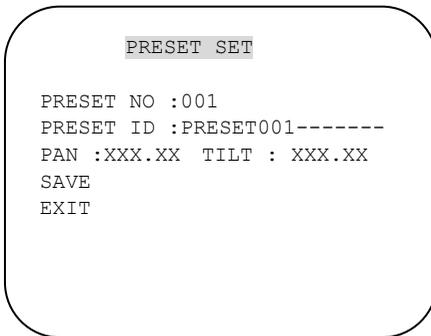
(10X Zoom)

### B-10. CAMERA SET – EXIT

To escape this page, move five keys to the right direction.

## C. PRESET SET

To enter PRESET SET, move five keys to the right direction.



← **DEFAULT SETTING**

### C-1. PRESET – PRESET NO.

Up to 165 numbers of preset positions are available. Move five keys to the right or left direction to select preset no.

### C-2. PRESET – PRESET ID

To set preset ID, select up to 16 characters using Five keys to the left or right. Press **ZOOM TELE** button moves to the next character from the left to the right direction and **ZOOM WIDE** button moves to the next character from the right to left direction

(Space displays when  appears)

**C-3. PRESET – PAN: XXX.X TILT: XX.X**

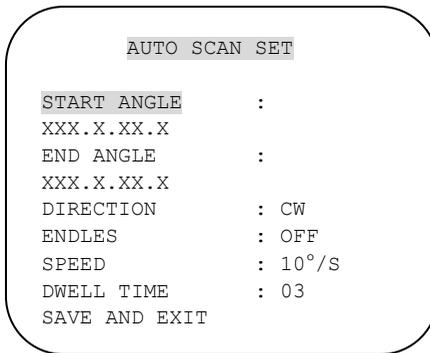
Press **FOCUS FAR** button in order to set preset position then, use the five keys to the position where memorized preset no. is needed. Then press **FOCUS FAR** button again after setting a preset location.

**C-4. PRESET – SAVE**

Move five keys to the right direction when the cursor is at SAVE and then the cursor will be located on Preset ID for the continuous preset No. setting.

**C-5. PRESET – EXIT**

To escape this page, move five keys to the right direction.

**D. AUTO SCAN SET**

← **DEFAULT SETTING**

**D-1. AUTO SCAN- START ANGLE**

To set start angle, press **FOCUS FAR** button then move five keys to the starting angle which is needed memorized. To press **FOCUS FAR** button again is to escape.

**D-2. AUTO SCAN- END ANGLE**

To set end angle, press **FOCUS FAR** button then move five keys to the starting angle which is needed memorized. To press **FOCUS FAR** button again is to escape.

**D-3. AUTO SCAN – DIRECTION**

Auto Scan directions are available with two direction as CW or CCW by five keys to the

right or left direction

CW: Clock wise direction (Default)

CCW: Count Clock Wise Direction.

**D-4. AUTO SCAN – ENDLESS**

Auto Scan can use endless rotation, move five keys to the right direction in order to select ON. Otherwise, the default setting is OFF.

**D-5. AUTO SCAN – SPEED**

User can use auto scan speed from 05°/S up to 35°/S and the default setting is 10°/S

**D-6. AUTO SCAN – DWELL TIME**

To select dwell time, move five keys to the left or right direction in order to adjust dwell time. Possible to set from 01 second to 30 seconds and the default setting is 03 seconds.

**D-7. AUTO SCAN – SAVE AND EXIT**

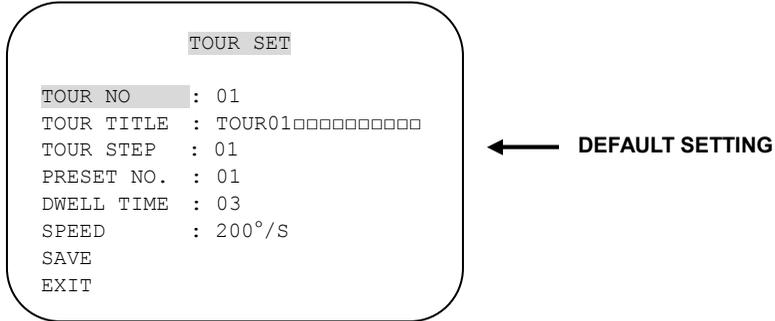
To saving the memorized data and escape this page, move five keys to the right direction when cursor is at SAVE AND EXIT.

**D-8. AUTO SCAN – EXIT**

To escape this page, move five keys to the right direction.

## E. TOUR SET

8 Programmable tours can be set and each tour is available to set up to 64 preset steps.



### E-1. TOUR SET – TOUR NO.

Max. 8 group tour no. set by the five keys are available.

### E-2. TOUR SET – TOUR TITLE

To set tour title, select up to 16 characters using Five keys to left or right. Press **ZOOM TELE** button to move the next character from the left to the right direction and **ZOOM WIDE** button to move the next character from the right to left direction (Space displays when  appears) Tour title is not displayed on the monitor, but only for the reference of user.

### E-3. TOUR SET – TOUR STEP

Each tour group consists of up to 60 preset steps with different dwell time and speed. It is possible to match any preset # for each tour step.

### E-4. TOUR SET – PRESET NO.

The decided tour step #1 ~64, it is possible to select any preset no. up to 64. The default setting is BLK

### E-5. TOUR SET – DWELL TIME

Dwell time provides up to 99 seconds from 01 second. The default setting is 03 seconds.

**E-6. TOUR SET – SPEED**

Each tour step can be set with different tour speed up to 200°/S and it is selectable from 10°/S. Move five keys to the right or left direction to select tour speed. The default setting is 200°/S.

**E-7. TOUR SET – SAVE**

To save the memorized data and escape this page, move five keys to the right direction when cursor is at SAVE

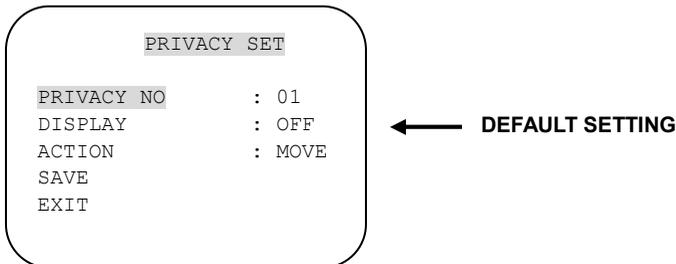
**E-8. TOUR SET – EXIT**

To escape this page, move five keys to the right direction

**F. PRIVACY SET**

Privacy function is provided by (10X Zoom) **only**.

4 Privacy masking zones are available to block out areas of security.

**F-1. PRIVACY SET – PRIVACY NO.**

Up to 4 privacy masking zones are available.

**F-2. PRIVACY SET – DISPLAY**

Move five keys to the right or left direction to set ON in order to show the selectable block in the center of the monitor. This block appears as a translucent square with blue color after set ON. The default setting is OFF.

**F-3. PRIVACY SET – ACTION(MOVE/ADJUST)**

To set the blocking area, press **FOCUS FAR** button when the MOVE MODE is appeared. Then use the five keys to the user defined area in order to set blocking area. Then press **FOCUS FAR** button again to escape from MOVE MODE.

To adjust size of blocking area, move five keys to the right or left direction when the cursor is on ACTION. After move mode changed to ADJUST MODE, press **FOCUS FAR** button in order to adjust the size of blocking area. The size of blocking area can be adjustable by using five keys up down or left right,. After adjusting size of blocking area, press **FOCUS FAR** button to escape ADJUST mode.

- ADJUST: You can change the masking size by using five keys to the left or right direction
- MOVE: You can move the masking area by using five keys to the left or right direction (Default)

#### F-4. PRIVACY SET – SAVE

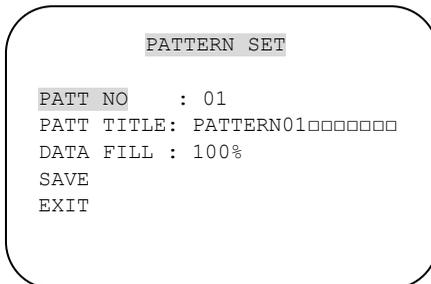
After setting the privacy masking zone, to save the data, move five keys to the right direction when the cursor is on SAVE. After saving the data, the cursor moves to PRIVACY NO.2 automatically to prepare the next privacy masking zone.

#### F-5. PRIVACY SET – EXIT

To escape this page, move five keys to the right direction

### G. PATTERN SET

8 programmable patterns are available with 16 characters of title.



← **DEFAULT SETTING**

#### G-1. PATTERN SET – PATT NO.

---

Up to 8 programmable user-defined patterns set by the five keys on the Webviewer GUI are available.

#### **G-2. PATTERN SET – PATT TITLE**

To set PATTERN TITLE, select up to 16 characters using Five keys to the left or right. Press **ZOOM TELE** button moves to the next character from the left to the right direction and **ZOOM WIDE** button moves to the next character from the right to left direction (Space displays when □ appears) Pattern title is not displayed on the monitor, but only for the reference of user.

#### **G-3. PATTERN SET – DATA FILL**

To fill the programming data, press **FOCUS FAR** button in order to start the data fill up. Filling data is programmed according to the the five keys on the Webviewer GUI movement. Press **FOCUS FAR** button again in order to escape.

#### **G-4. PATTERN SET – SAVE**

To saving the filling data, move five keys to the right direction when the cursor is on SAVE. Then the cursor moves to the PATT NO.02 in order to prepare next pattern no.

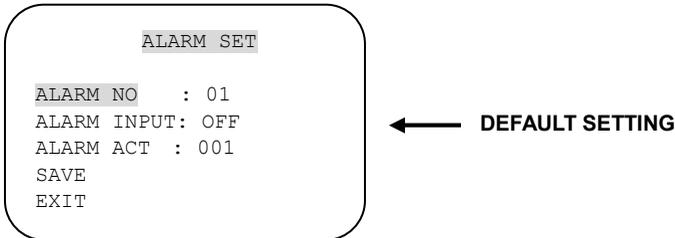
#### **G-5. PATTERN SET – EXIT**

To escape this page, move five keys to the right direction

---

## H. ALARM SET

4 Alarm inputs are available and each alarm is activating to presets, group tours or patterns.



### H-1. ALARAM SET – ALARM NO.

Up to 4 alarms are selectable by using five keys to the right direction when cursor is on ALARM NO.

### H-2. ALARAM SET – ALARM INPUT

Input alarm ways provide two different ways as NC (Normal Close) or NO (Normal Close)

The default setting is OFF

### H-3. ALARAM SET – ALARM ACT

Alarm activates various surveillance modes with Preset number up to 165, Group tour up to 8, Pattern up to 8. Move five keys to the right or left direction to select any preset number, group tour no. or pattern no.

### H-4. ALARAM SET – SAVE

After setting the alarm input ways and activation, to save the data, move five keys to the right direction when the cursor is on SAVE. After saving the data, the cursor moves to Alarm NO.2 automatically to prepare the next alarm.

### H-5. ALARAM SET – EXIT

To escape this page, move five keys to the right direction

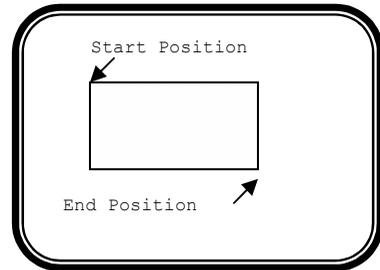
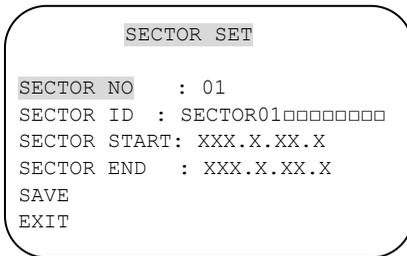
\* Before activating Alarm, user must set ALARM ENABLE at DOME SET – ALARM – ENABLE (Refer to page 15)

## I. SECTOR SET

Up to 8 programmable sectors are available with 16 characters.

This feature is useful to memory the certain location such as parking zone or so on.

When camera goes through this area, it shows the letter you memorized.



### DEFAULT SETTING

#### I-1. SECTOR SET – SECTOR NO.

Up to 8 programmable sectors set by the five keys are available.

#### I-2. SECTOR SET – SECTOR ID

set SECTOR ID, select up to 16 characters by using five keys to the left or right.

Press **ZOOM TELE** button to move to the next character from the left to the right direction and **ZOOM WIDE** button to move to the next character from the right to left direction (Space displays when □ appears)

#### I-3. SECTOR SET – SECTOR START

To set SECTOR START angle, press **FOCUS FAR** button then move five keys to the left or right direction to set the position. To press **FOCUS FAR** button again is to escape.

**I-4. SECTOR SET – SECTOR END**

To set SECTOR END angle, press **FOCUS FAR** button then move five keys to the left or right direction to set the position. To press **FOCUS FAR** button again is to escape.

**I-5. SECTOR SET – SAVE**

After setting the SECTOR position, to save the data, move five keys to the right direction when the cursor is on SAVE. After saving the data, the cursor moves to SECTOR NO.2 automatically to prepare the next SECTOR.

**I-6. SECTOR SET – EXIT**

To escape this page, move five keys to the right direction

**J. EXIT**

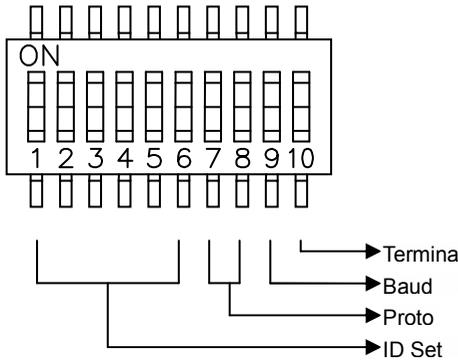
To escape OSD Main Menu, move five keys to the right or left direction then this camera is ready to operate.

### 5.2.6. DIP SW SETTING

Mini Speed Dome camera provides up to 63 camera ID and it's adjustable ID with 1<sup>st</sup>-6<sup>th</sup> of Dip switch

Open the camera case, set ID using DIP SW1.

\* Factory default: Camera ID = 1, PELCO-D



### 5.2.7. ID SETTING(1-ON, 0-OFF)(1➔10)

DIP SW	ID VALUE	DIP SW	ID VALUE	DIP SW	ID VALUE
10000XXXX	1	1110XXXX	23	10110XXXX	45
01000XXXX	2	00011XXXX	24	01110XXXX	46
11000XXXX	3	10011XXXX	25	11110XXXX	47
00100XXXX	4	01011XXXX	26	10001XXXX	48
10100XXXX	5	11011XXXX	27	10001XXXX	49
01100XXXX	6	00111XXXX	28	01001XXXX	50
11100XXXX	7	10111XXXX	29	11001XXXX	51
00010XXXX	8	01111XXXX	30	00101XXXX	52
10010XXXX	9	11111XXXX	31	10101XXXX	53
01010XXXX	10	00001XXXX	32	01101XXXX	54
11010XXXX	11	10001XXXX	33	11101XXXX	55
00110XXXX	12	01001XXXX	34	00011XXXX	56
10110XXXX	13	11001XXXX	35	10011XXXX	57
01110XXXX	14	00101XXXX	36	01011XXXX	58
11110XXXX	15	10101XXXX	37	11011XXXX	59
00010XXXX	16	01101XXXX	38	00111XXXX	60

100010XXXX	17	111001XXXX	39	101111XXXX	61
010010XXXX	18	000101XXXX	40	011111XXXX	62
110010XXXX	19	100101XXXX	41	111111XXXX	63
001010XXXX	20	010101XXXX	42		
101010XXXX	21	110101XXXX	43		
011010XXXX	22	001101XXXX	44		

### 5.2.8. PROTOCOL

7<sup>th</sup>~8<sup>th</sup> dip switches are used for Protocol Setting.

Factory Default: Pelco-D or Pelco-P ( Auto detection)

DIP SW1- 7	DIP SW1- 8	
OFF	OFF	Pelco-D or Pelco-P

### 5.2.9. BAUD RATE SETTING

The 9<sup>th</sup> Dip Switch is used for BAUD RATE setting.

DIP SW can be changeable to 2400bps, 9600bps.

Factory Default: 2400bps.

DIP SW1 9 <sup>th</sup>	BAUD RATE
OFF	2400
ON	9600

### 5.3. Use of IP Setting Utility

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

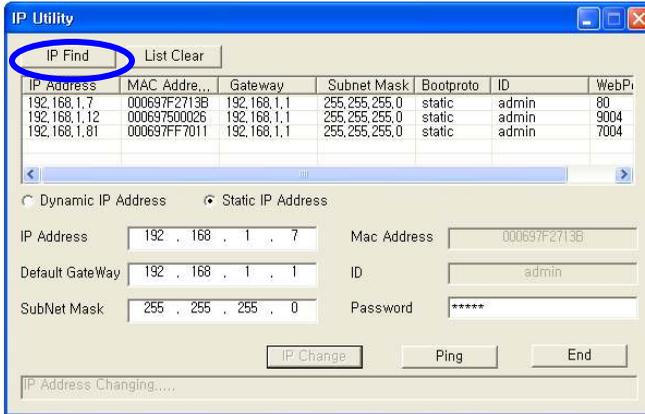


Fig. 5–2 IP Find

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

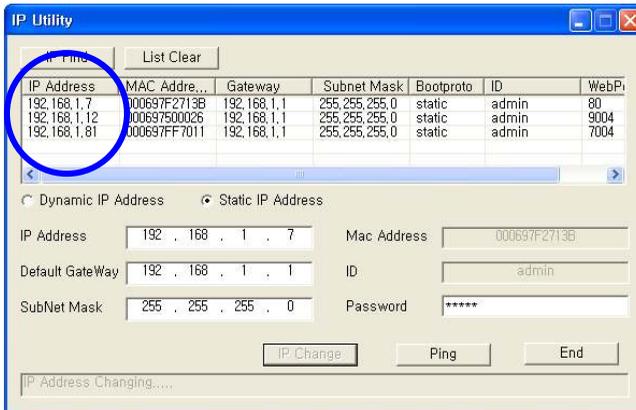


Fig. 5–3 Display IP

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.

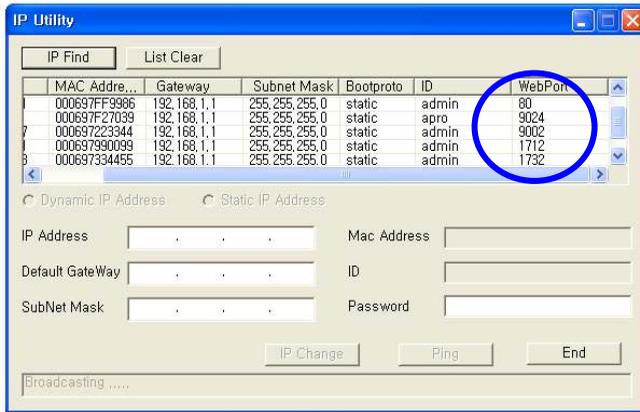


Fig. 5-4 IP Check

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

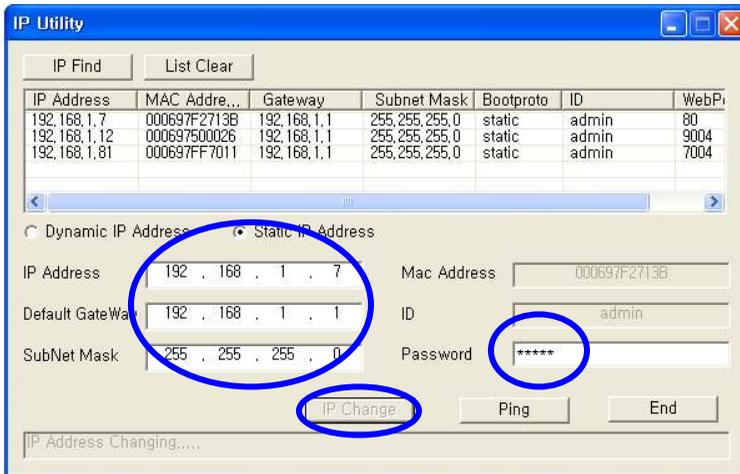


Fig. 5-5 IP Check

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.

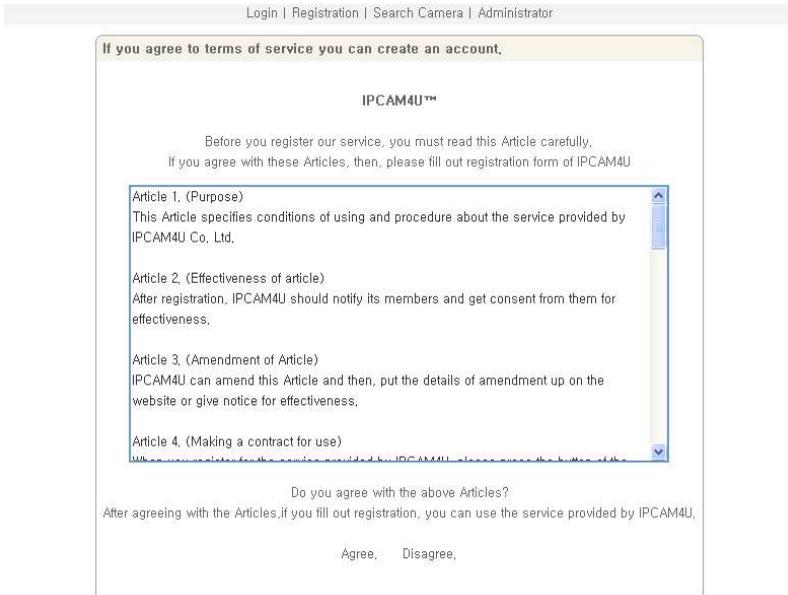
### 5.4.1. User Registration



The image shows a web interface for user login. At the top, there is a navigation bar with links: "Login | Registration | Search Camera | Administrator". Below this is a yellow header box with the text "Please Login.". The main content area is a light gray box containing two input fields labeled "ID" and "Password", a "Login" button, and a "Register Now" link.

Fig. 5-7 User Login

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



The image shows a web interface for user registration. At the top, there is a navigation bar with links: "Login | Registration | Search Camera | Administrator". Below this is a yellow header box with the text "If you agree to terms of service you can create an account.". The main content area is a light gray box containing the following text:

**IPCAM4U™**

Before you register our service, you must read this Article carefully.  
If you agree with these Articles, then, please fill out registration form of IPCAM4U

Article 1. (Purpose)  
This Article specifies conditions of using and procedure about the service provided by IPCAM4U Co, Ltd.

Article 2. (Effectiveness of article)  
After registration, IPCAM4U should notify its members and get consent from them for effectiveness.

Article 3. (Amendment of Article)  
IPCAM4U can amend this Article and then, put the details of amendment up on the website or give notice for effectiveness.

Article 4. (Making a contract for use)  
[When you click on the registration provided by IPCAM4U, please agree the terms of the](#)

Do you agree with the above Articles?  
After agreeing with the Articles,if you fill out registration, you can use the service provided by IPCAM4U.

Agree,    Disagree,

Fig. 5-8 Agreement

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

Login | Registration | Search Camera | Administrator

**Welcome to subscriber of membership.** (\*)field is essential input field.

(*) ID	<input type="text"/>	<input type="button" value="Overlapping Check"/>
(*) Password	<input type="password"/>	
(*) Password confirmation	<input type="password"/>	
(*) Name	<input type="text"/>	
Code	<input type="text"/>	- <input type="text"/>
E-Mail	<input type="text"/>	
Mobile Phone	<input type="text"/>	
Phone	<input type="text"/>	
Address	<input type="text"/>	- <input type="text"/>
Seller's Name	<input type="text"/>	
Seller's Phone	<input type="text"/>	

**Fig. 5-9 User Registration**

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

Login | Registration | Search Camera | Administrator

**It became subscriber of membership.**

Can use normal service if login.

**Login**

**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.

The screenshot shows the 'To register camera' form with the following fields and callouts:

- ① (\*)Camera Name
- ② (\*)Server Name (with a dropdown menu showing 'ipcam4u.net' and an 'Overlapping Check' button)
- ③ Camera open (radio buttons for ENABLE and DISABLE, with DISABLE selected)
- ④ Connect ID

Other fields include: (\*)MMS ADDRESS (with a note: '(Are number that is mixed by 12 seats English and number of backside of camera.)'), Mobile open (radio buttons for ENABLE and DISABLE, with DISABLE selected), Connect Password, EMAIL SERVICE (radio buttons for ENABLE and DISABLE, with DISABLE selected), and five pairs of Email and Message input fields.

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'.

The screenshot shows a web form titled "SMS SERVICE". At the top, there are two radio buttons: "ENABLE" (which is selected) and "DISABLE(If want SMS use, select ENABLE.)". Below this, there are five identical rows for configuring SMS messages. Each row consists of a label "Mobile Phone No." followed by a text input field, and a label "Message" followed by a longer text input field. At the bottom of the form, there is a button labeled "To register camera".

**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].

Camera List						To register camera
Number	Name	Editing	Connect	Alarm Log	Delete	
1	s121	Editing	Connect	View	Delete	
2	demo_s120	Editing	Connect	View	Delete	
3	S151	Editing	Connect	View	Delete	
4	s152	Editing	Connect	View	Delete	

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.

Camera Information											
MAC	IP	Login PORT				Stream PORT				WEB	TIME
		ch1	ch2	ch3	ch4	ch1	ch2	ch3	ch4		
00031D015905	218,153,98,224	9000				9001				80	2004-11-22 18:41:36

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.

**Alarm log list**

MAC ADDRESS : 00031d015905

<input type="checkbox"/>	Number	Time	Alarm kind	Channel	DownLoad
<input type="checkbox"/>	1	2004-11-22 18:30:32	MOTION	1	Video , Audio
<input type="checkbox"/>	2	2004-11-22 18:21:13	MOTION	1	Video , Audio
<input type="checkbox"/>	3	2004-11-22 18:16:09	MOTION	1	Video , Audio
<input type="checkbox"/>	4	2004-11-22 18:06:18	MOTION	1	Video , Audio
<input type="checkbox"/>	5	2004-11-22 18:02:06	MOTION	1	Video , Audio
<input type="checkbox"/>	6	2004-11-22 17:55:57	MOTION	1	Video , Audio
<input type="checkbox"/>	7	2004-11-22 17:37:59	MOTION	1	Video , Audio
<input type="checkbox"/>	8	2004-11-22 17:37:08	MOTION	1	Video , Audio
<input type="checkbox"/>	9	2004-11-22 17:35:08	MOTION	1	Video , Audio
<input type="checkbox"/>	10	2004-11-22 17:33:51	MOTION	1	Video , Audio

1 | 2 | 3 >

**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.

**Change User information** (\*)field is essential input field.

(\*)ID smk0909

(\*)Password 8577

NAME 신무경

E-Mail

Mobile Phone

Phone

Address  -

Seller's Name

Seller's Phone

To change 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

Login | Registration | Search Camera | Administrator

**Please Login.**

ID

Password

Login

Register Now

**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.

Login | Registration | Search Camera | Administrator

**Search Camera**

MAC Address

Type  Connect Camera  Information

**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].

Login | Registration | Search Camera | Administrator

**Camera Information**

MAC	IP	Login PORT				Stream PORT				WEB	TIME
		ch1	ch2	ch3	ch4	ch1	ch2	ch3	ch4		
000697001313	218.153.96.232	9000				9001				800	2004-11-09 17:44:03

## 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]).

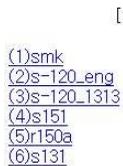
### 5.5.2. PDA(WinCE)

Run 'Internet Explorer' of PDA and input [http://ipcam4u.net/pdah5450\\_eng.htm](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].

[Menu]

[\(1\)View&PTZ\\_Control](#)  
[\(2\)Relay Control](#)  
[\(3\)State Sensor](#)  
[\[UP\]](#)  
[\[main\]](#)

**Fig. 5–27 Menu**

## 5.6. Use of NVR Program

### 5.6.1. Required Specification of PC and OS

Item	Min. Requirement	Recommended Specification
<b>CPU</b>	Pentium IV 2.0G	Pentium IV 2.4G or higher
<b>Main Memory</b>	256MB	512MB or higher
<b>O/S*</b>	Windows 2000/XP	Windows 2000/XP
<b>Web Browser</b>	I.E 5.0	I.E 5.0 or later
<b>Resolution</b>	1,024 * 768	1,152 * 864
<b>Network</b>	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
<b>Network Setting</b>		
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.
Authentication /Control Port	9000	*. Register Number with '9999' or less
Video Streaming Port	9001	Some Network may not support over number 10000 port.
Motion Detection Port	9005	
<b>ID and Password</b>		
Administrator ID /Password	admin/admin	
User ID	root/root, guest/guest	
<b>Domain of Related Server</b>		
IP Server	lpcam4u.net	Domain of Server to connect to register IP
Alarm Server	lpcam4u.net	Domain of Server to connect to send Event upon detection of Sensor or Motion.
Upgrade Server	lpcam4u.net	Domain of Server to connect to download upgraded program
Plug-in Download Server	lpcam4u.net	
<b>Video Setting</b>		
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
<b>Other Setting</b>		
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 (4Programmable 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	
Event& Alarm	Sensor event	Yes	
	Sensor Trigger/Motion Detection Alarm Notification	Yes 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 PAL	811(H)*508(V) 795(H)*592(V)
	Effective Pixel	NTSC PAL	768(H)*494(V) 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)	
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 (4Programmable 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		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 PAL	811(H)*508(V) 795(H)*592(V)
	Effective Pixel	NTSC PAL	768(H)*494(V) 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 Viewer@Mobile Phone NVR@PC	Yes(option) Yes(option) 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)

## B-5 IP-WDRB1

IMAGING	Image Sensor		1/3" Pixim ORCA CMOS(Dramatic Dynamic range sensor)
	Total Pixel	NTSC PAL	742(H)*552(V)
	Horizontal resolution		540 TV Lines
	Minimum Illumination		0.08Lux (DSS on) with F1.2 Lens
	S/N Ratio		53dB or more
	Lens		DC AUTO IRIS VF 2.8~10mm(F1.2)
	Scanning System		525 lines interlaced
	Synchronization		Internal
	Compression		MPEG4 / JPEG
	Multi-Streaming		MPEG4(2ch), JPEG(1ch)
	AGC Control		0 - 60dB
	Electric Shutter Speed		1/60~1/100,000sec
	Dynamic range		120dB(max), 102dB(typical)
	Maximum Frame Rate		121fps(352*240)
CONTROL	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)
	On Screen Display(O.S.D)		Built-in
	Iris Control		DC Lens, Manual Lens
	Viewer Program	Web Viewer@PC	Yes
		PDA Viewer@PC	Yes(option)
	Network	Viewer@Mobile Phone	Yes(option)
		NVR@PC	Yes
		Global/Private/Static/Dynamic IP	Yes
		DDNS Support	Yes
	Encryption (ID/PW/Image)	Encryption (ID/PW/Image)	Yes
		Interface	10/100Mbps
		Concurrent Users	20
	Recording @PC	Manual	Yes
Schedule		Yes	
Event& Alarm	Motion Detection	Yes	
	Sensor event	Yes	
	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		1.2kg
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-6 IP-SD10X

IMAGING	Image Sensor		1/4" Sony Super HAD CCD
	No. of Pixel		768(H) * 494(V) 380K
	Horizontal resolution		More Than 500TV Lines
	Minimum Illumination		0.7Lux (50IRE) / 0.02Lux (ICR On)
	Digital Slow Shutter		2/4/8/16/24/32/64/128/ OFF
	Lens	Optical	10x Optical Zoom(F=3.8 to 38mm)
		Digital	10x (100x with optical)
	Luminance S/N Ratio		More than 50dB
	Compression		MPEG4/JPEG
	Multi-Streaming		MPEG4(2)/JPEG(1)
	WHITE BALANCE		AWB/ATW/INDOOR/ OUTDOOR
	Function	BLC	ON / OFF
		Flikerless	ON / OFF (1/100)
	Image Sizes		704*480
704*240			
352*480			
352*240			
Maximum Frame Rate		121fps (352*240)	
Frame Rate		30, 15, 10, 7, 6, 5, 4, 3, 2, 1 fps(10 Steps)	
CONTROL	Day & Night (ICR)		Auto/ Day/ Night
	Pan	Rotation Angle	Endless 360'
		Speed	Manual Preset
	Tilt	Rotation Angle	0' ~ 90'
		Speed	Manual Preset
	System Accuracy		0.02'
	Preset Point		165 positions with a 16-character label available for each position with different speed steps
	Group Tour		Max. 8 Programmable group tours (each one consisting of up to 60 preset steps with different steps)
	Auto scan		Programmable Auto scan
	Pattern		8 Programmable Patterns (total 480 seconds)
	Privacy Zone		4 privacy zones
	Sector		8 selectable Sectors with 16 characters
	Password Protection		Yes
	Alarm Input		4 alarms OFF/NC/NO (with various programmable states)
	Alarm Actions		Activate preset, Group scanning or Patterns
	Auto Flip		ON / OFF
	OSD Menu		Multiple Languages on screen
	Communication Protocol	Web Viewer@PC	Yes
		PDA Viewer@PC	Yes
		Viewer@Mobile Phone	Yes
NVR@PC		Yes	
Network	Global/Private/Static/Dynamic IP	Yes	
	DDNS Support	Yes	
	Encryption (ID/PW/Image)	Yes	

	Interface	10/100Mbps	
	Current Users	20	
	Recording@PC	Manual	Yes
		Schedule	Yes
		Motion Detection	Yes
Sensor event		Yes	
Event & Alarm	Sensor Trigger/Motion Detection Alarm Notification	Yes SMS/E-MAIL/Alarm Sound(Optional)	
PHYSICAL	Video Output	VBS:1.0Vp-p/75 Ohm	
	Dimension	158.8φ (D) * 163.0mm(H)	
	Power Source	DC12V 1.0A	
	Power Consumption (Max.)	12W Max	
	Operational Temperature	0°C ~ 50°C	
	Weight	1.7Kg	
CONNECTIVITY	Video Out	1	
	RS485 Interface	1/1	
	Sensor In/Relay Out	2/2	
	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.