XtendLan

XL-ICA-661M1CP

NETWORK PAN/TILT DOME CAMERA USER MANUAL

If the product is to be put out of operation definitively, take it to a local recycling plant for a disposal which is not harmful to the environment.

Please read the instructions carefully for correct use of the product and preserve it for reference purposes. This specification is subject to change without any prior notice to improve the quality.

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Introduction

This is a megapixel network camera which uses a 1/3-inch megapixel progressive scan SONY Exview HAD CCD
Built-in MPEG4, MPEG CODEC and streaming server, the advantage of this camera allow you to monitor real time image from a remote location via internet. This camera supports both static IP and dynamic IP, and can change communication port, resulting in one IP address supporting multiple servers. It also supports CMS(Central Monitoring System), various services and features weatherproof for outdoor use without extra device.

<Caution>
Software, server and service may be charged according to change of policy or may be stopped without prior notification. 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.

Safety Cautions

*This camera may be damaged by electrical and physical shock.
Use regulated 12V DC, 1A power supply. Do not throw or drop it onto floor.
*In case the unit fails, DO NOT try to disassemble the product.
Contact or consult the distributor or an authorized technician for after-sales service.
Warranty void for the product disassembled without an authorization from the distributor or an authorized technician.
* All responsibility by using this unit is on the user.
*In case it is installed at high location, be sure to mount securely to prevent the unit from falling below

Chapter 1.

Package

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Chapter 1. Package

1.1 Camera Features

1) The built-in 3.6X optical zoom and up to 30 preset can be set.
2) Firmware upgrading and function controlling are available by network.
3) Built-in 1.3 Mega pixel 1/3" progressive Sony EXview HAD CCD.
4) This camera has Sense up function to receive the maximum availablet night.
5) Equipped with a number of convenient new functions such as OSD, Motion detection and E-zoom
6) This camera adopted PoE that supplies power in addition to data sending and receiving using LAN cable without separate power connection and it provides convenience for users at installation.
   When you connect the camera with PoE and DC adaptor, Only PoE is used.

1.2 Package

Package of Products is composed of camera, screw, user manual, software CD, cross cable(see below). Please check before starting installation. If there are any missing, please contact the shop where you purchased. The cross cable should be used only for pre-view of video before set-up and change of network information.

[Caution**]** Please see the package as follows. This manual is based on Microsoft Windows XP. So, there would be the Difference according to operating system

1.3 HOW TO INSTALL

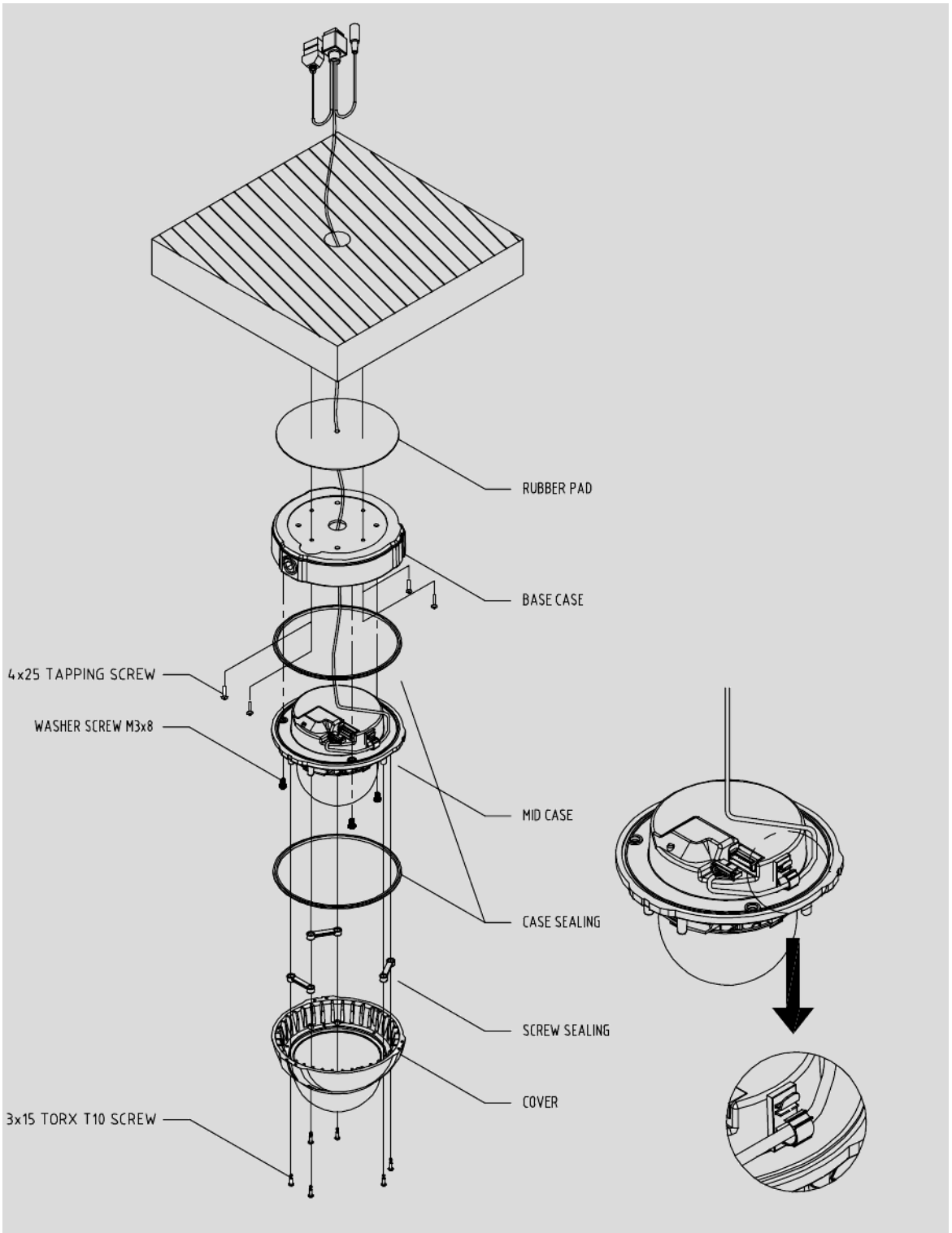
1.3.1 Camera installation

Fix the camera set with the supplied screws on ceiling mount.

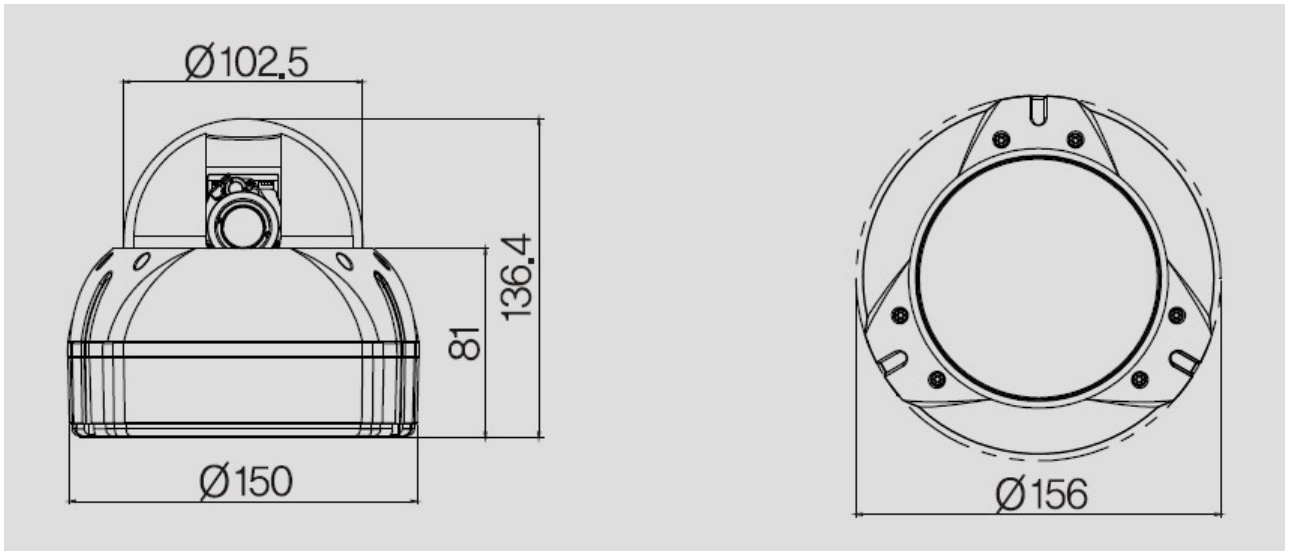
If you don't use supplied screws, the camera may fall off.

Put a sticker on the ceiling and make holes according to the spots marked on a sticker.

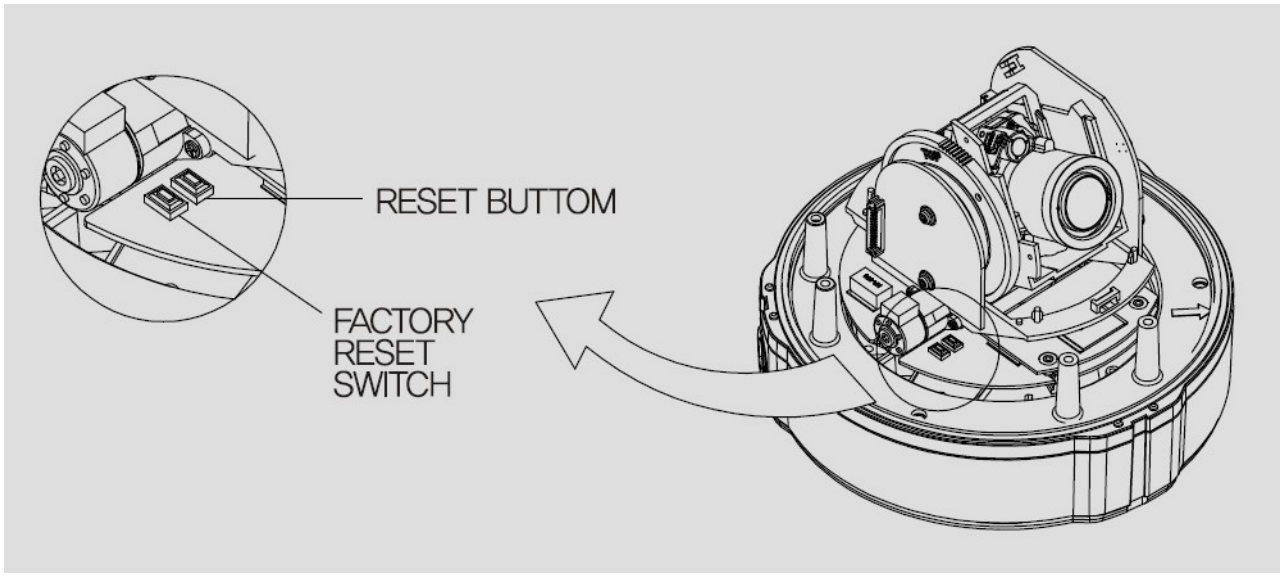
<Ceiling mount>



1.3.2 Dimension



1.3.3 Reset Button & Factory Reset switch



1.4 Specification

1.4.1 Camera Specification

Item	Specification
Type	Megapixel network PTZ dome camera
Image Sensor	1/3" SONY Progressive Scan EXview HAD CCD (1.3 Mega Pixels)
Effective pixel	1296 (H) × 966 (V)
Cell size	3.75㎛(H) x 3.75㎛(V)
Resolution	1280 x 960 / 640 x 480 / 320 x 240
TV Type	NTSC / PAL
Scanning System	Progressive Scan
Min.illumination	0.01 Lux (Sense up Auto x 4)
Alarm input/output	Input:1,output:1
Lens	Focus free zoom – Auto iris lens(f=2.8~10mm)

1.4.2 Camera Function

Item	Configuration
BLC	Off, BLC1, BLC2, BLC3
Sense up	X1 ~ X255
Brightness	Adjustable
Contrast	Adjustable
Sharpness	Adjustable
AWB	Auto, Indoor, Outdoor, Fluorescent, Manual
Saturation	Adjustable
Hue	Adjustable
Negative	Off, On
Pattern Generator	Off, On
Focus index	Display Off, On
Blemish	Dynamic Compensation
EZOOM	X1 ~ X12 Selectable

1.4.3 Network Specification

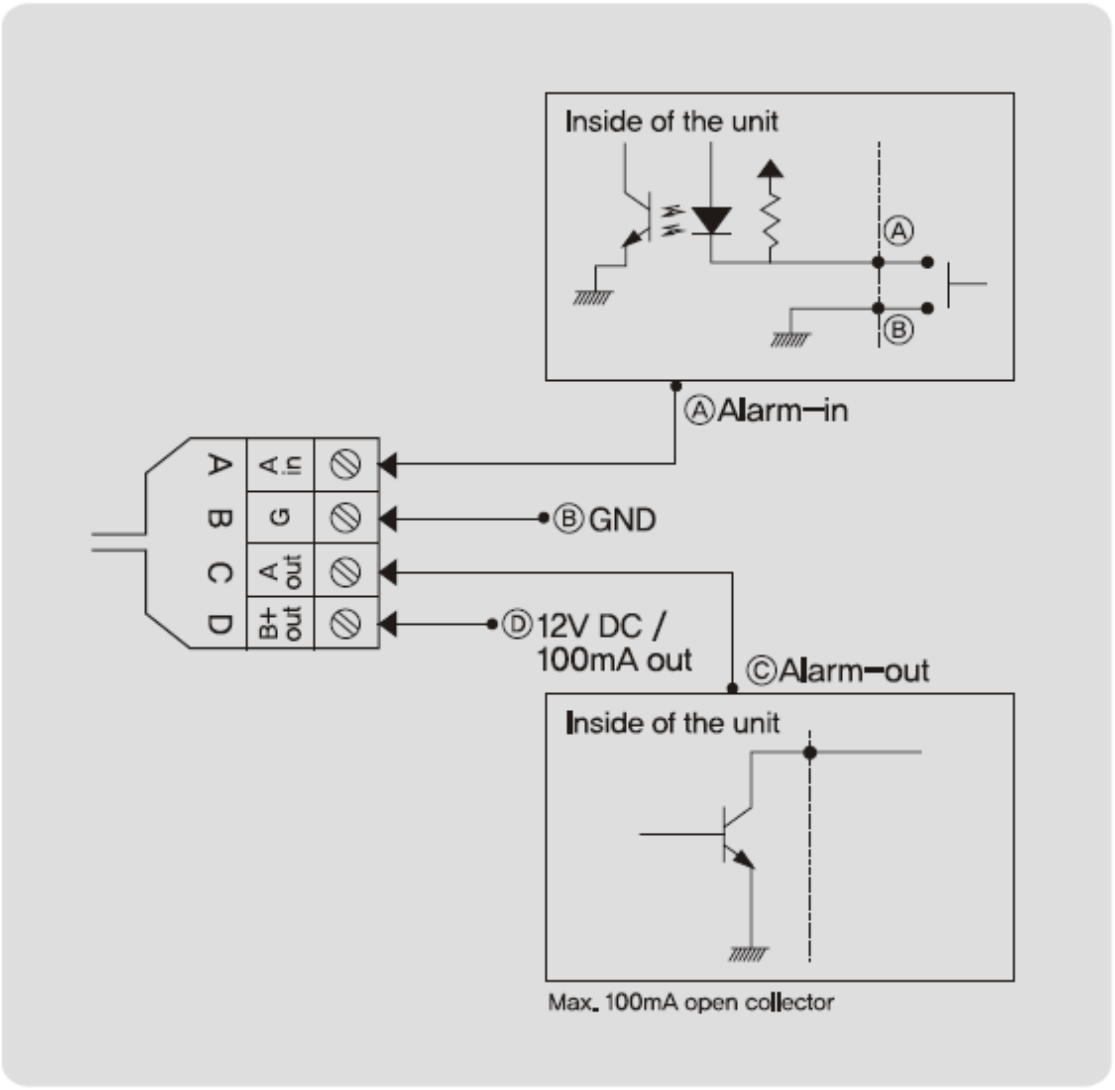
Classification	Item	Specification
Summary	OS	Embedded Linux
	Network Interface	RJ45 10/100BaseT, Ethernet
	Setting	By web browser
	Network support	Leased Line, Cable Modem, Support Dynamic IP and Static IP. ADSL usable under Router
	Supported Protocol	HTTP,FTP,TCP/IP, DHCP, ARP, DNS, ICMP, RTSP
	Security	USER AUTHENTICATION
	PC OS(Viewer)	WINDOWS XP, WINDOWS VISTA, WINDOWS 7
	Web browser	Server setting function, Web Viewer Download Page, User Homepage Upload
Image	Compression	MPEG-4, MJPEG
	Resolution	CIF(320x240)/VGA(640x480)/QVGA(1280x960)
	Compression Rate	200:1(Typical)
	Frame Rate	NTSC (MAX :CIF/VGA 30 fps, QVGA 15 fps) PAL (MAX:CIF/VGA 25 fps, QVGA 12.5 fps)
	Bit Rate	64kbps ~ 8000kbps
Function	Simultaneous Access	Max. 10 users(under 5 users recommended)
	Video Recording	Recording in client PC with CMS or FTP Server upon Alarm Event
	Motion Detection	Support
	OSD	Support
	Alarm Input/Output	Support
	Dynamic IP	Support
	IP Router	Support
	DDNS	Support

1.4.4 Electric Specification

Classification	Specification
Power Supply	Regulated 12V DC PoE(Power over Ethernet)
Current Consumption	MAX. 1A(DC 12V)
Operation Temp.	5℃ ~ 50℃
Preservation Temp.	-20℃ ~ 60℃
Dimension	Ø150X 136.4(H)mm
Weight	Approx.1.2Kg

※The specification is subject to change without any prior notice to improve the quality.

1.4.5 Alarm Input/Output



Chapter 2.

Installation and Video Check

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Chapter 2. Installation and Video Check

2.1 Installation

On the assumption that User PC and the camera are used under static IP,
and the camera is to be directly connected with User PC or Local Network,
The installation procedure is to be;

(1) Connect the camera and PC with LAN Cable(Cross cable).
(Please use the direct cable if you connect to local network)

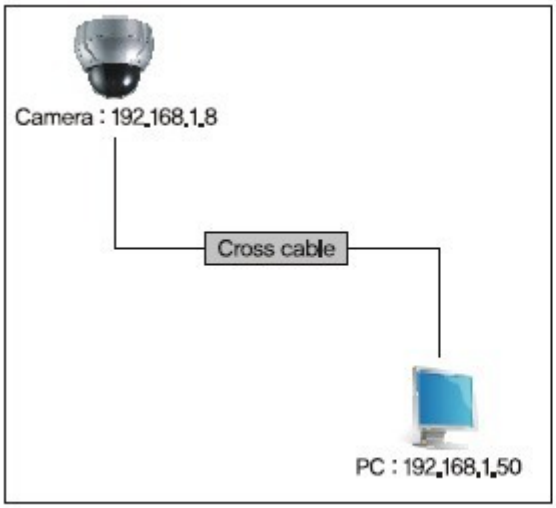
(2) Power on camera.

* Using regulated 12V DC 1A

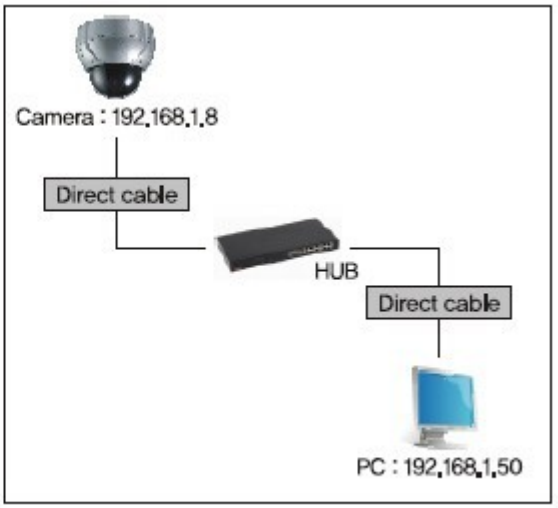
* Using PoE(Power Over Ethernet) : This camera adopted PoE that supplies power in addition to data sending and receiving using LAN cable without separate power connection and it provides convenience for users at installation.

When you connect the camera with PoE and DC adaptor, Only PoE is used.

(3) Wait about 2 minute after on camera, the system will be booted.



Cross cable connection



Direct cable connection

2.2 Video Check

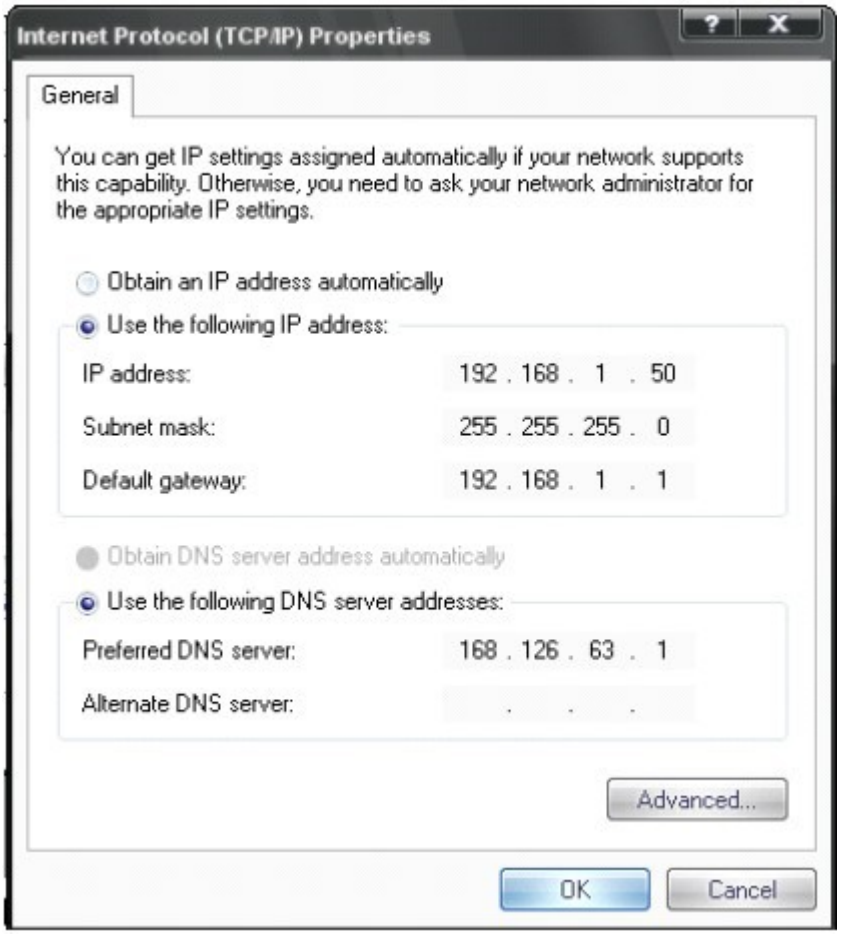
Basic network setting value of the unit is to be;

IP Address : 192.168.1.8
Subnet Mask : 255.255.255.0
Gateway : 192.168.1.1

To connect the unit in user's PC, change the setting value of PC network environment. Set IP Address, Subnet Mask and Gate-way of user's PC with 192.168.1.50 / 255.255.255.0 / 192.168.1.1 as shown on [Pic. 2-1].

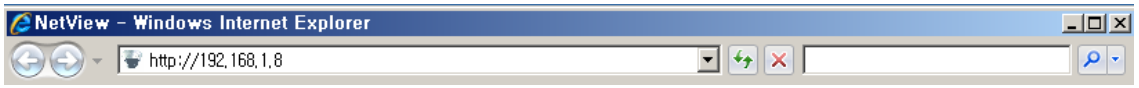
[Caution] Before changing the setting value, please memorize the previous setting value on your PC.

2.2.1 Change the setting value of PC network environment



[Pic. 2-1] Network Setting for User PC

2.2.2 Connect the camera with web browser



[Pic. 2-2] Web Browser Address Input

(1) Run web browser as shown [Pic. 2-2].

(2) Input 192.168.1.8 (default value) in URL and press "ENTER" button.

(3) And then, [Pic. 2-3] is to be shown.

[Pic. 2-3] Main Homepage

(4) In case [Pic. 2-3] does not appear, press "factory reset" button for 5sec to reset Hardware.

(5) Shown [Pic. 2-3], installation is complete

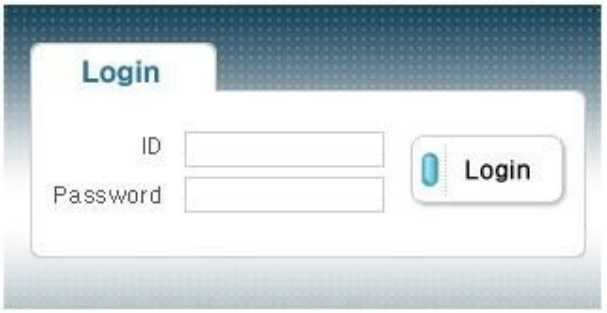
2.2.3 See the video

Click Connect button on the main page [Pic. 2-3].

2.2.4 Input ID/Password

Input ID and Password and click on Login to see the video feed

(ID : root, Password : root)



[Pic. 2-4] User Login

User's Authority to see video feed is as follow

ID	Password	Authority
guest	guest	View only
root	root	All

[Table] User ID, Password, Authority

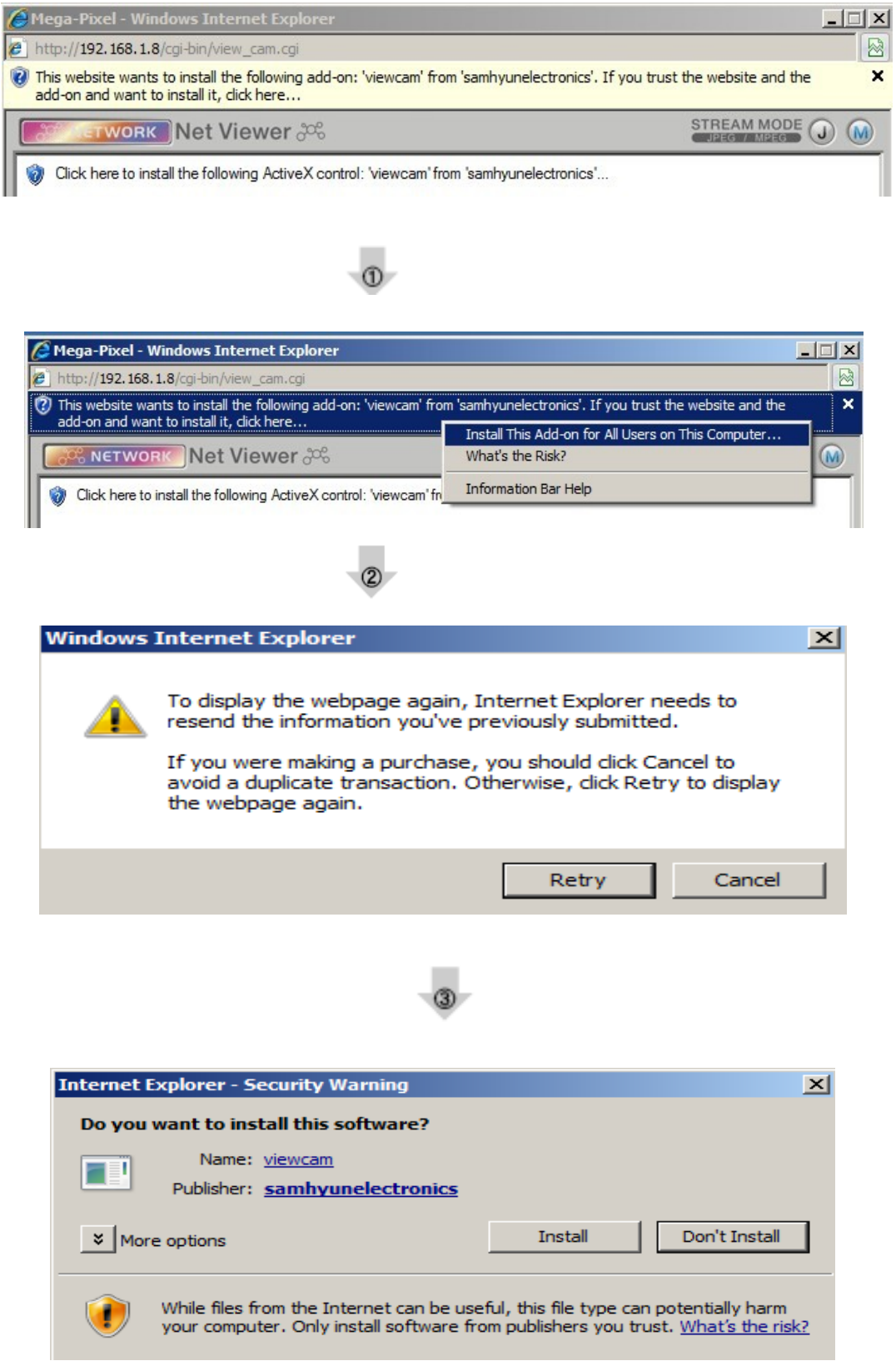
[Caution] Please change default value of ID/Password into new ones after the installation

2.2.5 Active-X auto installation

Input ID and Password and click on to see the video feed.

User's Authority to see video feed is as follow

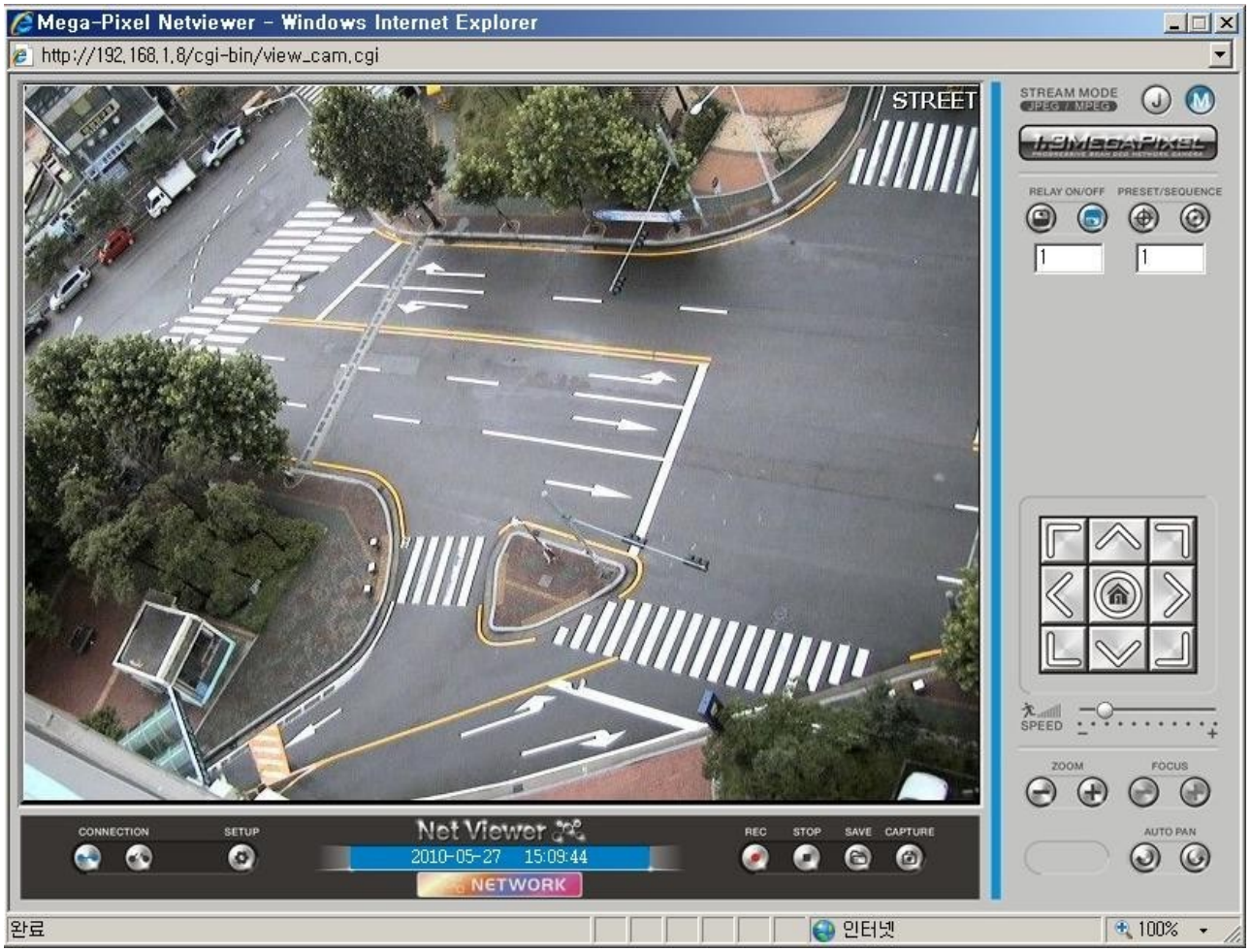
Click "install" on the security certificate to load the Active-X control. If you choose "Don't install", the web viewer would not work.



[Pic. 2–5**]** ActiveX Download

2.2.6 Complete the installation

Upon installation, Web Viewer **[**Pic. 2-6**]** appears and image of camera is to be seen.



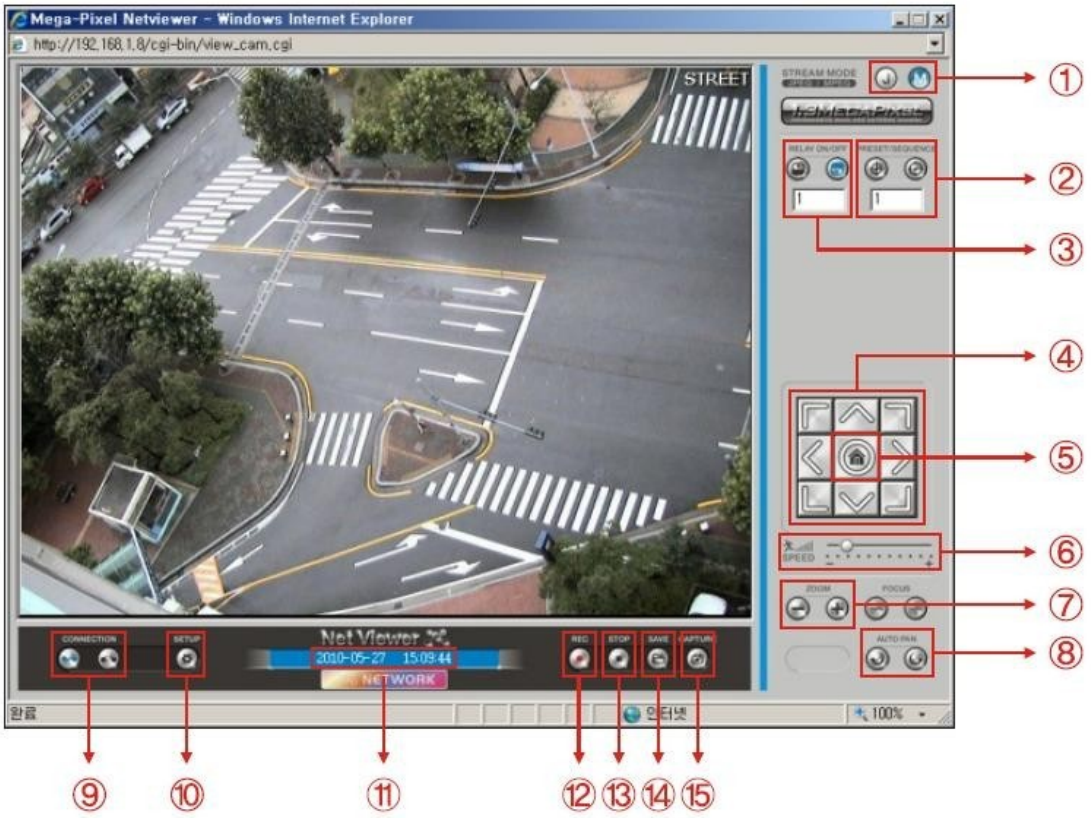
[Pic. 2-6**]** Web Viewer

Installation and check video are completed successfully.

Please change ID/PASSWORD.

2.2.8 Net Viewer description

Image of viewer size is fixed as 640 * 480.



① Selection of streams(MPEG4, MJPEG) Default value is MPEG4

② Run preset of desired preset number or sequence action

(In case of the Sequence, "Preset No" means group number.)

③ Run RELAY action of desired number

④ Press the direction key to move the camera.

⑤ Press the home button to move the Home preset

⑥ Setting camera's speed

⑦ Control the camera's zoom

⑧ Press the Auto Pan button to rotate the camera without limit.

⑨ Connect to server/ Disconnect

⑩ Go to Administrator's page

⑪ Display the current time

⑫ Start recording

⑬ Stop recording

⑭ Select location to save

⑮ Capture still image into BMP file

Chapter 3.

Network Setting

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Chapter 3. Network Setting

3.1 Check Network and Installation Type

This Chapter is for basic setting regarding Network. To install hardware, basic understanding of network is required.

[Warning**]** The setting value might be different in accordance with network environment of user's PC.
[Reference**]** Please refer to Appendix for better understanding.

There are two ways to install hardware.
1. Install the camera without IP sharing device.
2. Install the camera under IP sharing device which is required PPPoE environment

This explanation is based on upon default value of ex-factory.

IP Address : 192.168.1.8
Subnet Mask : 255.255.255.0
Gateway : 192.168.1.1

[Caution 1**]** Check video before installation, on 'Chapter 2.Installation and video check'.
[Caution 2**]** In case using IP sharing device, only global IP is available.
[Caution 3**]** This unit doesn't support PPPoE directly. So, IP sharing Device is required to connect to the camera.

<Installation without IP sharing device>
・For static IP, refer to '3.2.1 Static IP Setup'.
・For dynamic IP, refer to '3.2.2 Dynamic IP Setup'.

<Installation with IP sharing device>
・Should set up with Static IP, refer to '3.3 Installation with IP sharing device' .

3.2 Installation without IP sharing device(router)

3.2.1 Static IP Setup

(1) Connect the camera to PC with LAN cable(cross cable).

(2) Cable connection and network setup should be same as in 'Chapter 2. Installation and video check''

(3) Connect the camera to Web.

Run web browser and input http://192.168.1.8(default value) in URL and press "ENTER" button then **[**Pic. 3-1**]** will be shown.

[Pic. 3-1**]** Main Page

(4) Administration page log-in

Click Administrator's page on **[**Pic. 3-1**]**, then browser shows **[**Pic. 3-2**]** log-in Page..

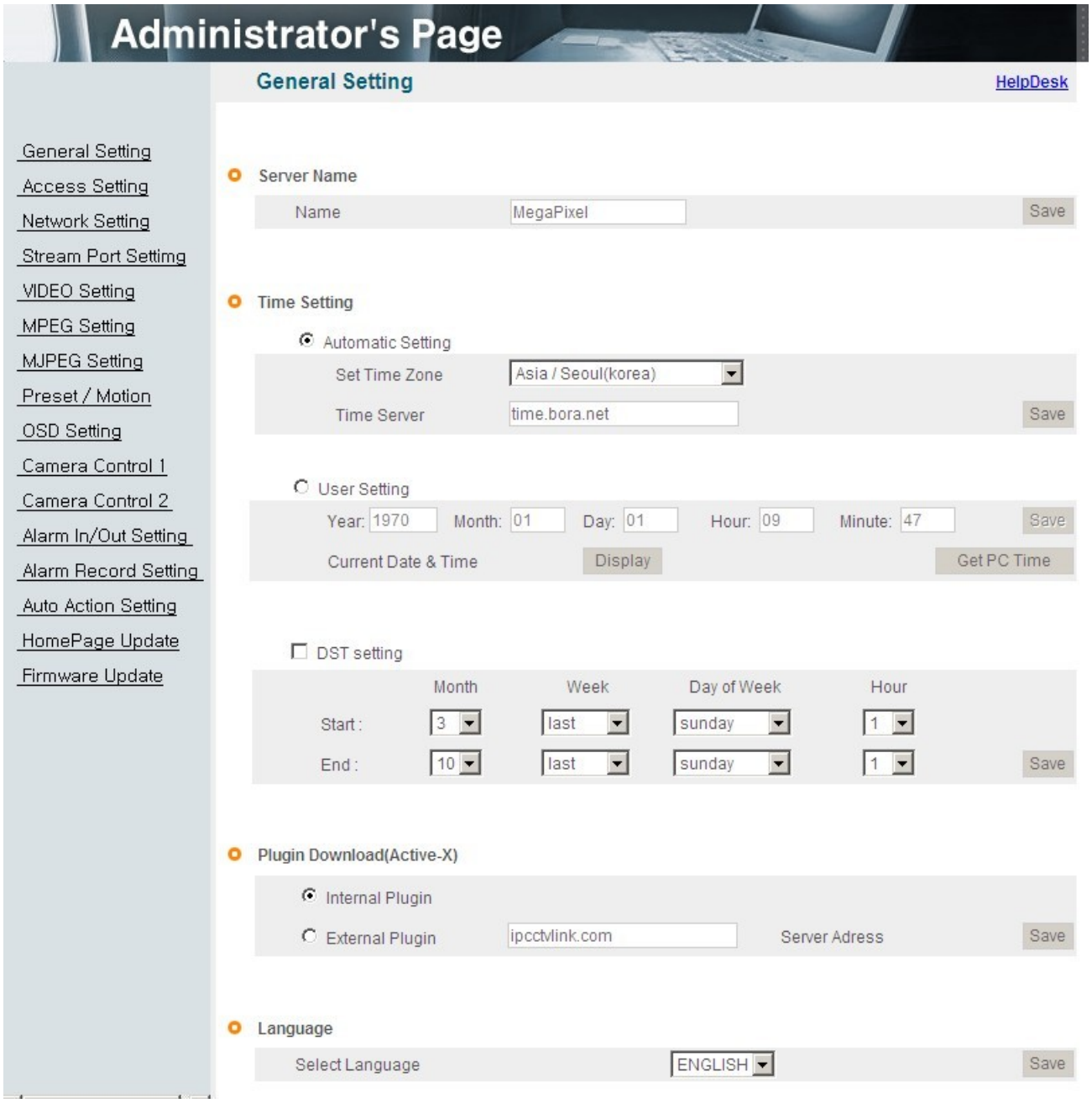
[Pic. 3-2**]** Administration page login

After inputting 'admin' in ID and Password line.

Click Login button then **[**Pic. 3-3**]** Administrator's page will be shown.

[Caution] If you logged in first in administrator mode, please change the password and ID of administrator.

Please refer to 4.2.1 Administrator's ID and password change.

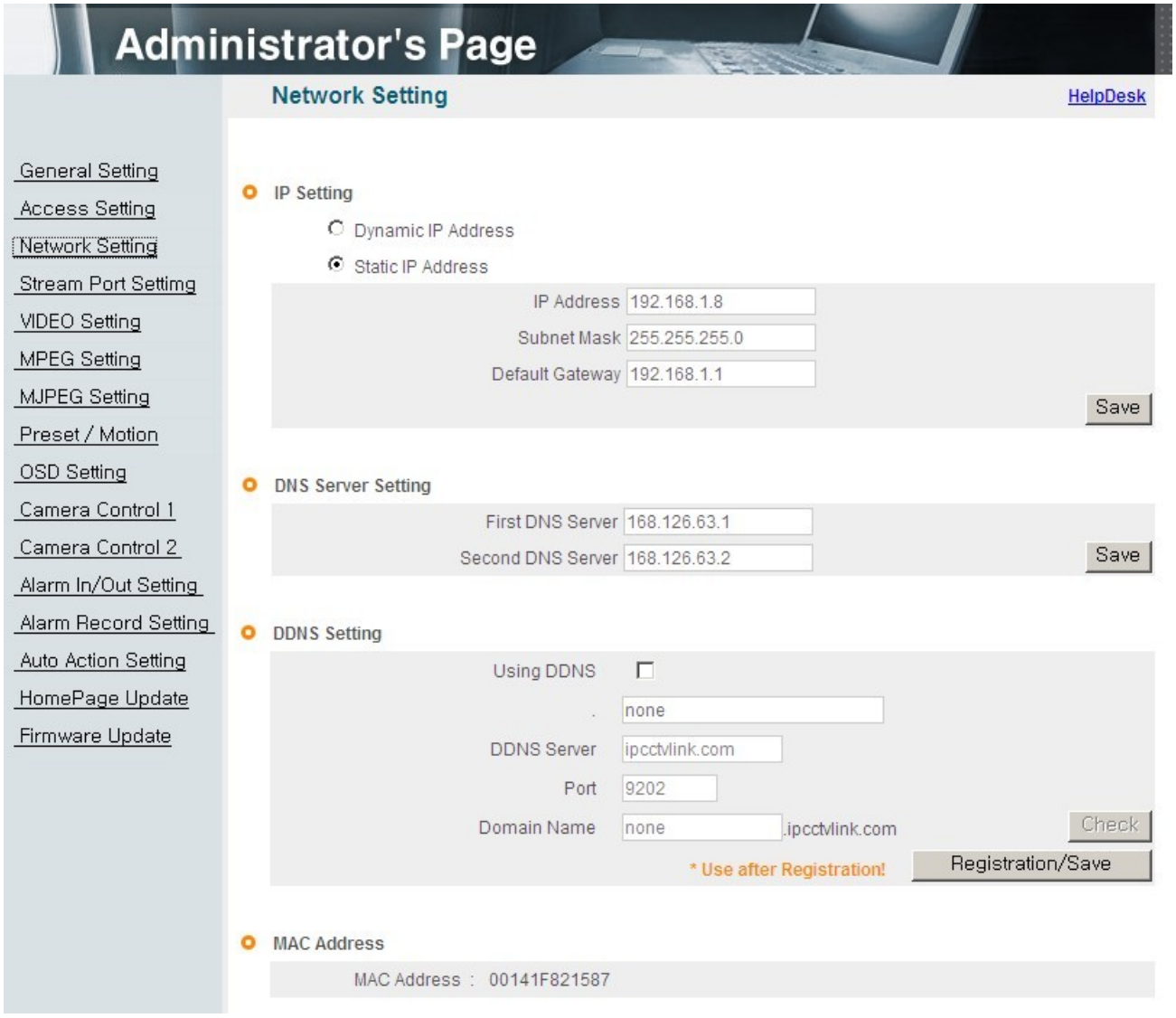


[Pic. 3-3] Administrator's Page

<Caution> If your browser block Pop-up, click right mouse button and change the option to 'always allow pop-up from this site'.

(5) Network Setting

Click 'Network Setting' on [Pic. 3-3], [Pic. 3-4] appears.



[Pic. 3-4] Network Setting

(6) DNS Server Setting

For setting of DNS server, input DNS address to fit with network environment to set(Default address is DNS address of 'KT Telecom').

Use DNS value normally set in PC. DNS address should be necessarily input. Click Save button to save setting value.

(7) IP address setting

Click 'Static IP Address' in 'IP Setting' of [Pic. 3-4], and input IP Address, Subnet Mask, Default Gateway according to network environment.

Click Save button to save setting value. Click 'Click Here' upon appearing of IP change window of [Pic. 3-5] As IP Change loading page appears as [Pic. 3-6], the main page of changed address is connected.(May not find the main page of changed address under cross cable connection, but IP has been changed.)

[Pic. 3-5] IP change

[Pic. 3-6] IP Change loading page

(8) Remove LAN Cable(cross cable) connected between the camera and PC.

(9) Connect the camera to network with LAN cable(Direct cable).

(10) Connect PC to network with LAN cable(Direct cable).

(11) Set up IP address, Subnet Mask and Gate way of PC according to network environment(Recommended to user to remember the value before changing user's PC setting).

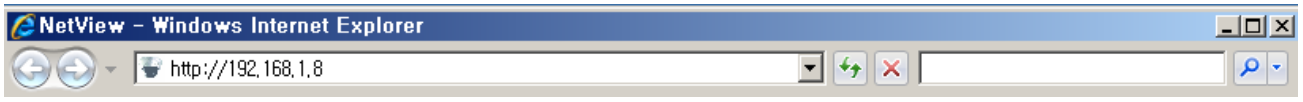
(12) Check

Run web browser on PC, input IP address set in the unit onto URL and click as **[**Pic. 3-7**]**.

When main page appears as **[**Pic. 3-1**]**, click Connect button to connect to web viewer and check if IP setting is correct or not.

(Refer to'Chapter 2. Installation and video check')

In case video is not seen, check whether there may be confliction of IP in network, and recheck the set value of network environment of the camera, and network environment of User's PC.



[Pic. 3-7**]** Connect to the unit

(13) DDNS Setting

Functions	Procedure
Using DDNS	1. Please check the checkbox for use DDNS function.
E-Mail none	2. Please enter an user e-mail address.
DDNS Server ipcctvlink.com	3. Please enter the server address. (Default address is "ipcctvlink.com")
Port 9202	4. Please enter the DDNS service port. (Default port is "9202")
Domain Name none .ipcctvlink.com	5. Please enter the user domain name.
Check	6. You should check your domain name before registration.
Registration/Save	7. Save current value.

[Reference**]** If you register on DDNS server we operate, you can use the registered domain name for connection.

3.2.2 Dynamic IP Setup

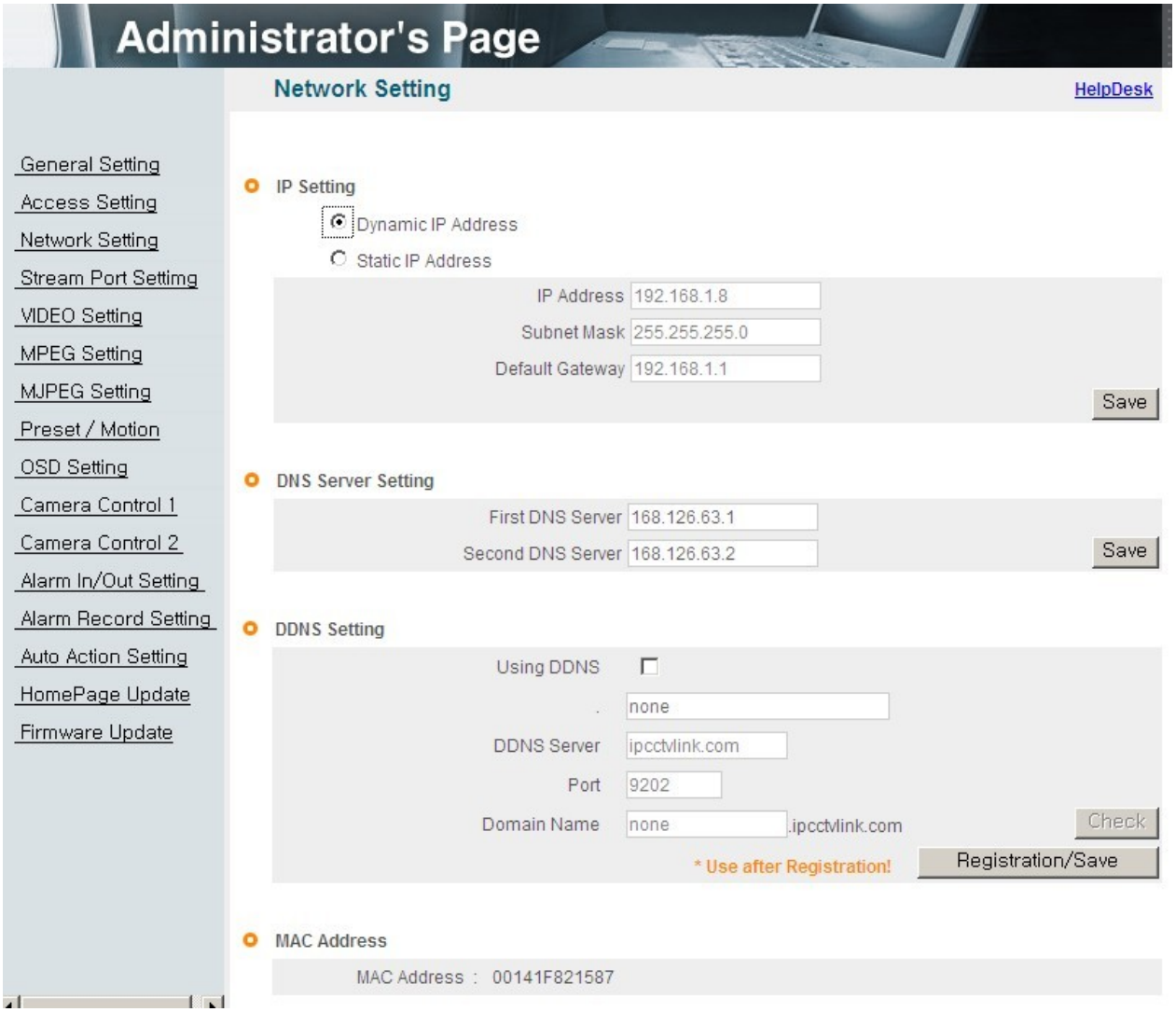
Do not set up dynamic IP in the unit except directly connecting the camera to network supporting dynamic IP. If the IP has not been allocated to the unit in dynamic IP setting, please press the 'FACTORY RESET BUTTON' for 3 sec(refer to the page of 13) then try to setup again.

(1) Connect the unit and PC with LAN cable(cross cable).

(2) Cable connection and network setting should be done same as 'Chapter 2. Installation and video check' and check video.

(3) Go to network setting page of administrator's page as per (3),(4),(5) of 'Static IP Setup'

※If you using dynamic IP you should setup the DDNS.



[Pic. 3-8] Network Setting

(4) DNS server setting

For setting of DNS Server, input DNS address to fit with network environment to set(Default address is DNS address of 'KT Telecom').

Use DNS value normally set in PC.

DNS address should be necessarily input.

Click Save button to save setting value.

(5) Dynamic IP address

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

Click Save button to save, and [Pic. 3-9] will be shown.

[Pic. 3-9] Dynamic IP Setting

(6) Remove LAN cable(cross cable) connected between the camera and PC.

(7) Connect the camera to network with lan cable(direct cable).

(8) Connect PC to Network with LAN cable(direct cable).

(9) Set up IP address, Subnet Mask and Gate way of PC according to network environment.

(10) Installation Check

If you will connect provided internet line from ISP(Internet service provider) to unit directly :

Connection of XL-ICA-661M1CP by DDNS

[Reference] Please refer to page 29 '12) DDNS setting'

ex) If you regeisted domain name is "mycam", your web site is "mycam.ipcctvlink.com"

For the regeiseter the doamin name, it takes 5minute. Please wait for a while.

If you have the DHCP server to assign an IP Address :

First close the web browser, you can find out the IP address using program of "IP Finder" in installation CD (Please refer to "5.1 Use of IP finder")

If you found the assigned IP to unit rightly, open the web browser, input IP address of the camera then press the "ENTER" key. The main page will be shown as [Pic. 3-1]

If you couldn't find the unit, it means IP has not been allocated to the unit so you have to press the 'FACTORY RESET BUTTON' for 3 sec then try to again.

If you turn off the camera and reactivating in dynamic IP environment, might be change the IP address. So if you register the IP address to DDNS server, you can use the domain name

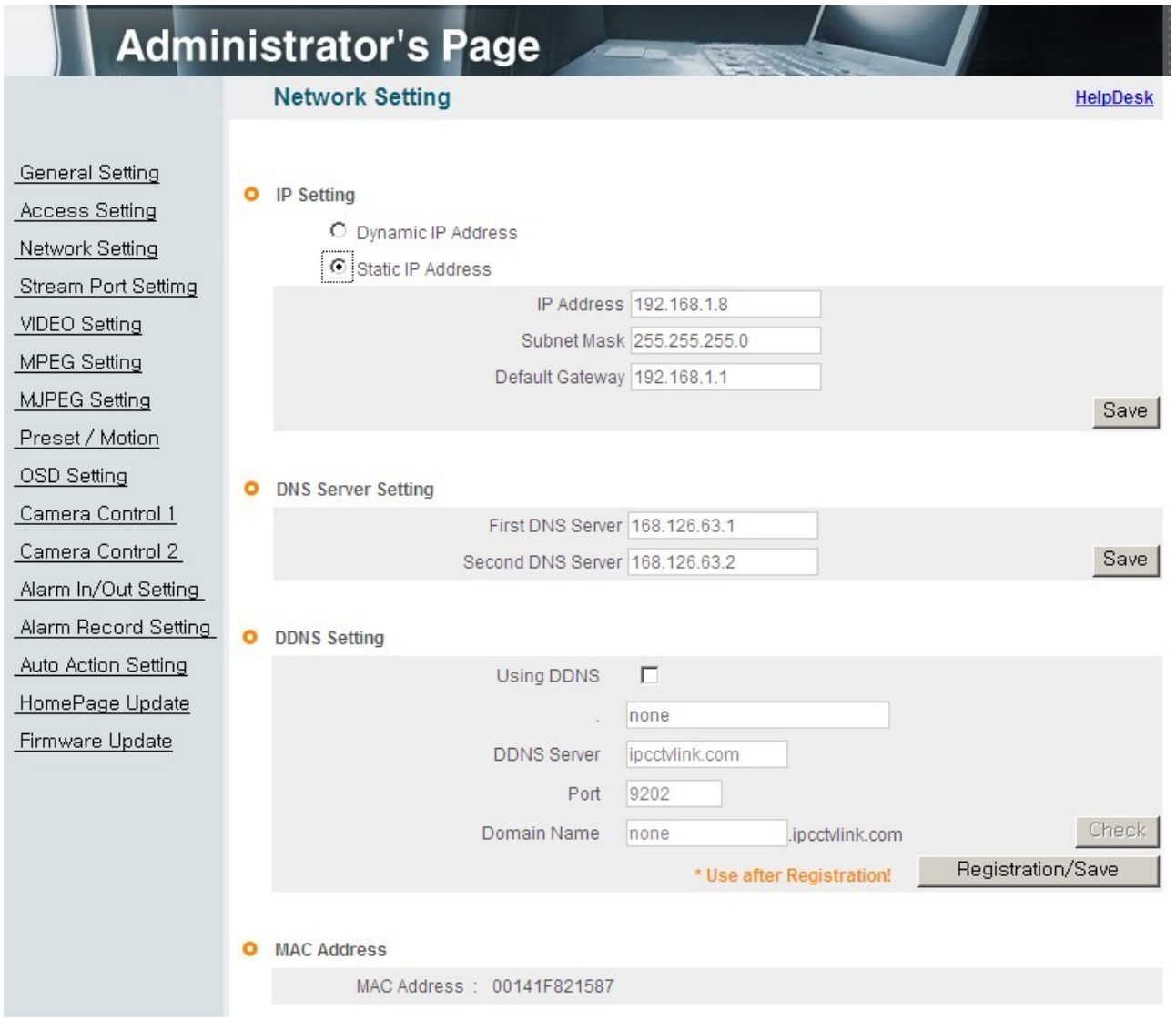
3.3 Installation with IP sharing device(router)

3.3.1 General Installation

(1) Connect the camera and PC with LAN cable(cross cable).

(2) After checking video in '2. Installation and video check', then go to the next step.

(3) Go to network setting page of Administrator's Page as per 3), 4), 5) of '3.2.1 Static IP Setup'



[Pic. 3-10] Network Setting

(4) DNS Server Setting

For setting of 'DNS server', input DNS address to fit with network environment to set.

(Default address is DNS address of 'KT Telecom')

Use DNS value normally set in PC. Click Save button to save the setting value.

(5) IP Address Setting

Click 'Static IP Address' in 'IP Setting' of [Pic. 3-10], and input IP Address, Subnet Mask, Default Gateway(Please refer to the manual of IP sharing device) and click button to save the setting value.

Click Save button to save the setting value.

When [Pic. 3-11] appears, click 'Click Here' to go to the changed main page.
(In case of connecting with cross cable, may not found the changed page but IP change has been completed)

[Pic. 3-11] IP change

(6) Connect the camera to IP sharing device with LAN cable(direct cable).
(7) Connect PC to IP sharing device with LAN cable(direct cable).

Chapter 4.

System Setting

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Chapter 4. System Setting

Click Administrator's page on main home Page, login page [Pic. 4-1] appears.

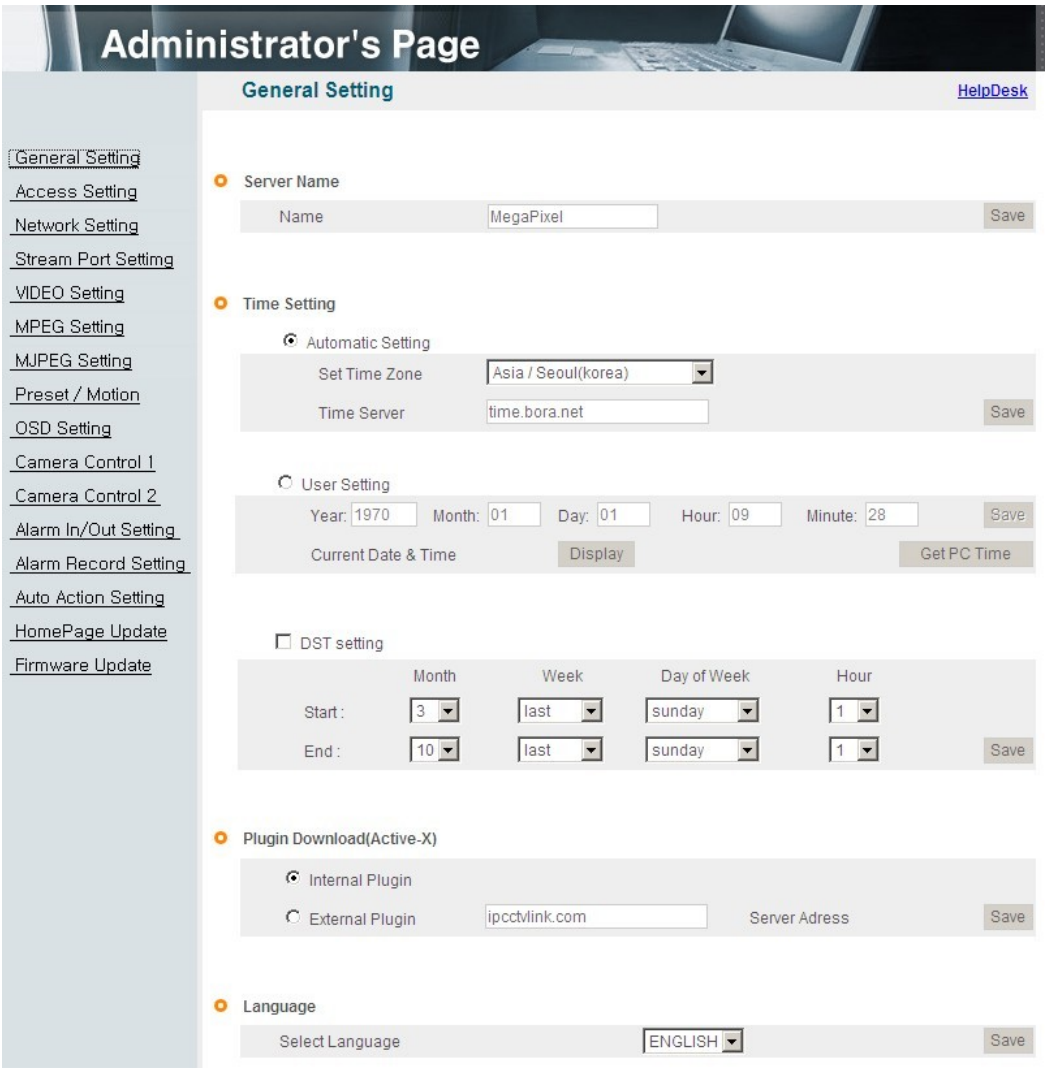
Input 'admin', 'admin' in ID and Password line, click Login then [Pic. 4-2] Administrator's page will be shown.

[Reference] ID and Password are preset as admin / admin in Administrator's Page.

<Caution> Change ID and Password of Administrator in General Setting of '4.2 Access Setting'

[Pic. 4-1] Administrator's page login

4.1 General Setting



[Pic. 4-2] General Setting

4.1.1 Title Setting

[Pic. 4-3] Title Setting

Server title would be shown on the top of the video when you see the video by the viewer. Server title is to be English without space(Max. 10 characters).

Click ' Save ' button to save title after inputting name.

4.1.2 Time setting

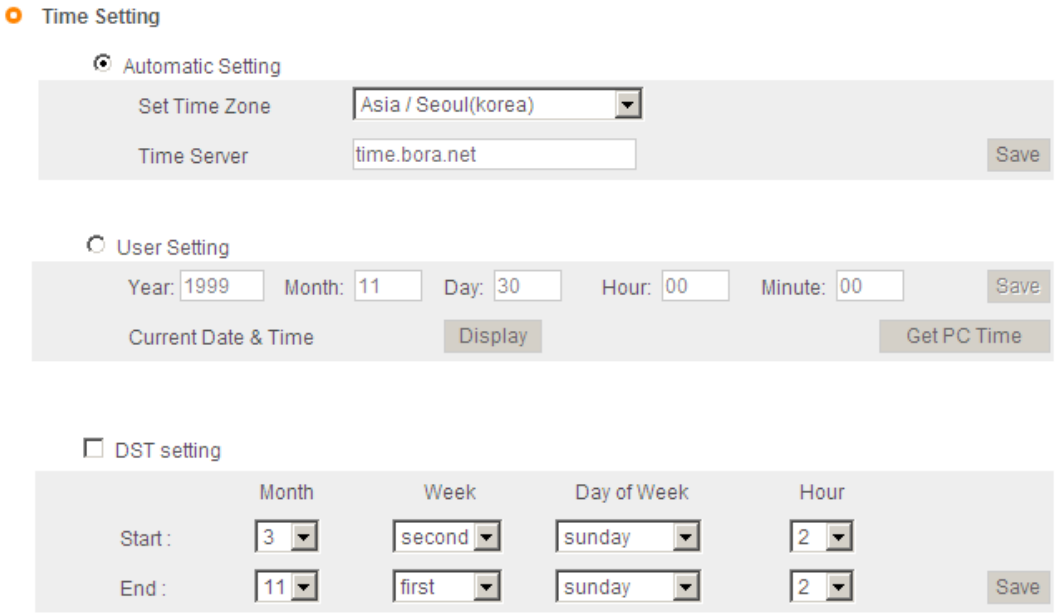
There are two ways of time setting as follow.

'Automatic Setting': This is 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

'User Setting' : This is for user to set up time directly. There can be some gaps between local and time of the unit.

'DST setting' : Set up the Daylight Saving Time. Setup the " start : month/week/day/time" and " end : month/week/day/time" after checking the ' DST setting' box, it will be shifted back one hour during setting period.

Caution: The time is changed to default time when the camera reboot.



[Pic. 4-4] Time Zone

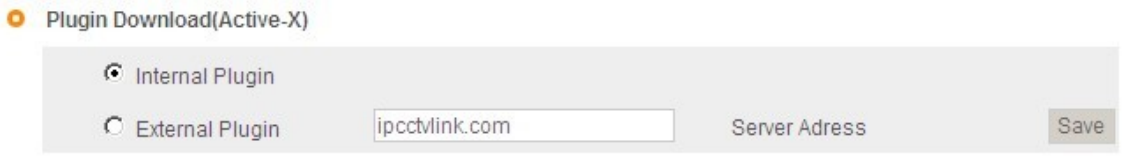
Click 'Display' to see current time set.

[Pic. 4-5] Current time view

If 'Automatic Setting' is not correct, click ' Save ' on [Pic. 4-4] again.
(Clicking ' Save ' button, it will receive new time information.)
Click 'Get PC Time' to receive time on client PC, and click ' Save ' button to save.

4.1.3 Active-X download

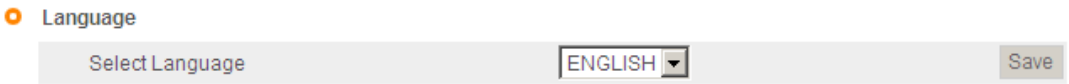
This is to set how to download Active-X of web viewer, locally or from outer server designated. In case setting as local download, it has a merit to use in private network without Internet. In case of setting as download from outside, it has a merit to download the updated Active-X of web viewer automatically.



[Pic. 4-6] Active-X plug-in download route

4.1.4 Select Language

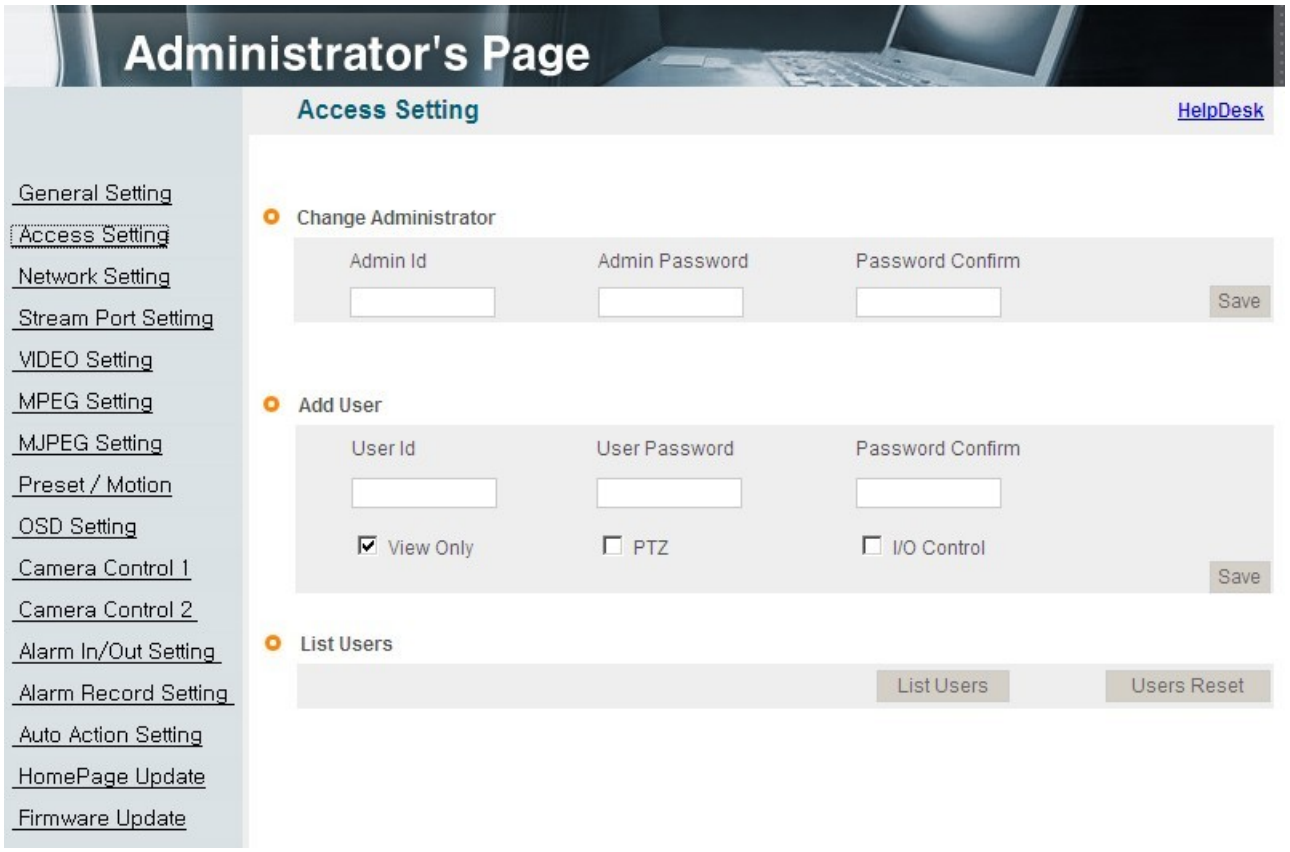
This is to select language to be displayed in all web pages such as Administrator's page, web viewer and main page.



[Pic. 4-7] Select Language

It supports both English and Korean now. Click ' Save ' button to save the set value after select the language

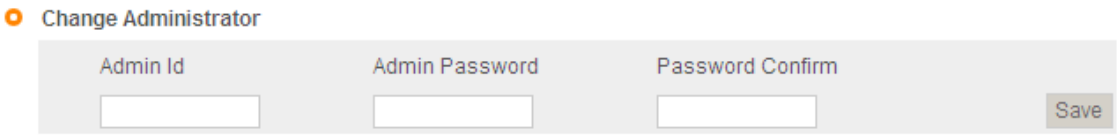
4.2 Access Setting



[Pic. 4-8**]** Access setting

4.2.1 Administrator's ID and Password Change

<Caution> Change Administrator's ID and password and do not disclose the information to others.



[Pic. 4-9**]** Administrator's ID and password change

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

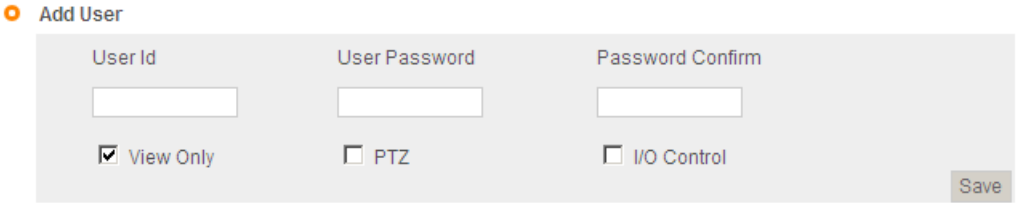
Click ' Save ' button to save the changed value after changing Administrator's ID and password. In case of forgetting Administrator's ID and password, click 'Factory Set' button for 3 sec to return to initial value, and change Administrator's ID

4.2.2 User Registration

This is to register an account of user who monitors and controls video.

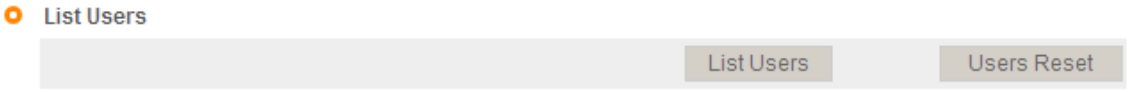
Administrator's ID and Password should be English, within 20 characters, without space. Allow the authority to users and click ' Save ' button. A maximum user to allow registration is 100 persons.

Authority	Function	Remark
View Only	Monitoring only	
PTZ	Zoom function	Not available
I/O Control	Alarm Out control	



[Pic. 4-10] User registration

4.2.3 User List

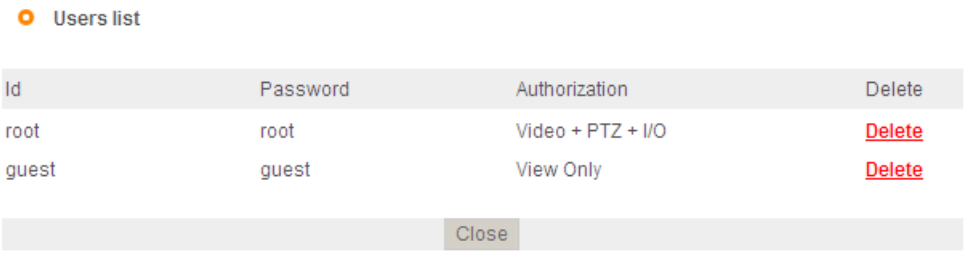


[Pic. 4-11] User list

User list is available on clicking 'List Users' to check list and delete user ID.

User ID 'guest', 'root' has be pre-registered as basic user ID on ex-factory.

In case of clicking 'Users Reset', basic user ID('guest' and 'root') will be shown without any other user lists



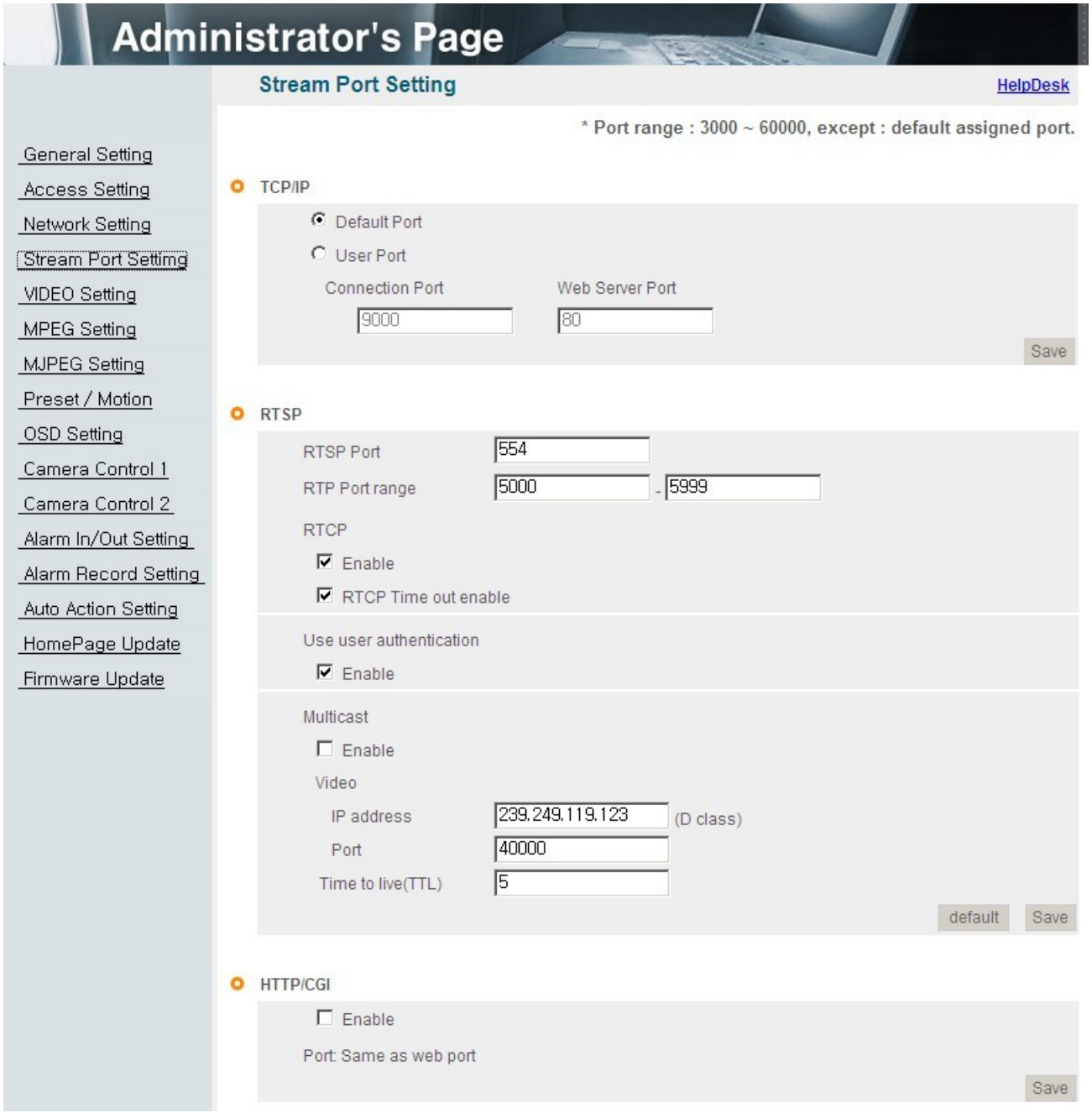
[Pic. 4-12] User list

<Caution> Delete 'root' and 'guest' and create another ID and Password

4.3 Network Setting

This is to set network. Set network to fit user's network environment in '3. Network Setting'. Change network information to fit environment for the unit to be installed in.

4.4 Stream Port Setting



4.4.1 TCP/IP Setting

User can choose default setting and user setting.

Using ports are stream port, remote control port and web port.

The remote control port is the stream port +1.

The stream port 9000, remote control port 9001, web port 80 are default value.

Click ' Save ' button to save.

<Reference> If you use several cameras through the port forwarding, you should assign different port number to each camera..

4.4.2 RTSP Settiong

This camera provides the RTSP/RTP stream transmission as well as TCP/IP stream. The function is based on VLC(http://www.videolan.org/) media player.

If duplicated port used in this function with the port used from other process, it will not be working well.

RTSP Port : Setting of RTSP port.(default port: TCP 554)

RTP Port range: Setting the port of RTCP with RTP

* The maximum and minimum have at least 3 range gap.

RTCP:

– RTCP Time out enable : If the server do not receive the RTCP from Client then RTSP session will be stopped

Use user authentication :

– Enable : To set using for user authority on RTSP session

Click ' Save ' button to save.

MULTICAST: Multicast function transfers the data to multiple users by a single streaming transfer. It loaded less traffic in the network than unicast. There should, however, be multi–casting functions in all network network equipement which is in located in between streaming server(camera) and clients.

–IP address: D Class IP address should be allocated for the multi cast.

D Class IP address is 224.0.0.1 ~ 239.255.255.254.

–Port: 40000(default port)

–Time to live(TTL): TTL is reduced one by one when it is transferred each router. When it reaches to "0" value, the router will discard the data. The TTL Value determines how far the data is delivered. Generally the value is 128.

Click ' Save ' button to save.

<Reference>Please refer to the manual regarding how to connect the stream server of RTSP

4.4.3 HTTP/CGI Setting

This function transfer the stream(JPEG/MJPEG) by using Server Push method and can use the control function by CGI calls.(EX. Port I/O control)

Good point of this function is using web port , so it is able to transfer the stream and control which is not affected by fire wall.

Click ' Save ' button to save.

4.5 Video Setting

[Pic. 4-13] Video setting

4.5.1 Video format

Display the video type (NTSC/PAL).

It was fixed at the factory and it is unchangeable.

4.5.2 Resolution

This is to select resolution(CIF/VGA/QVGA).

MPEG and JPEG have CIF resolution when you choose CIF resolution.

In case of video resolution, selecting 'VGA', it has 'VGA' resolution both in MPEG and in JPEG. Selecting QVGA, it has 'QVGA' resolution in JPEG and 'VGA' resolution in MPEG. In this case, there is no OSD and privacy zone function in JPEG

Video stream is dual codec which supports MPEG and JPEG at the same time.

[Reference]QVGA(Quadruple VGA) : 1280 X 960, VGA : 640 X 480, CIF : 320 X 240

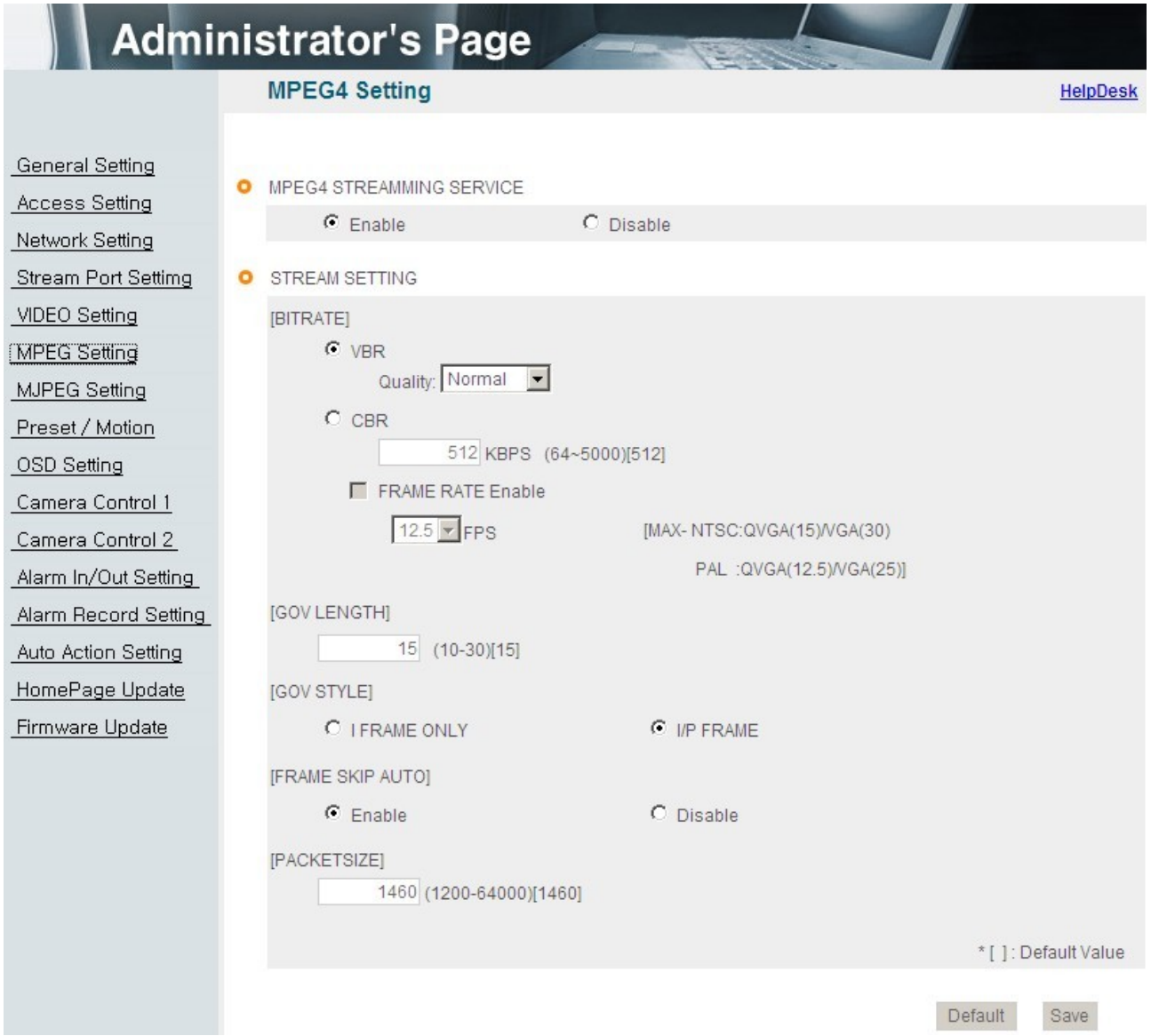
<Caution> In case of changing video format or video resolution, the program will restart, please wait for a while.

4.5.3 Video mirror function

Make a mirror image of video.(Flip, Mirror, both)

Click ' Save ' button to save.

4.6 MPEG Setting



[Pic. 4-14**]** MPEG4 Setting

4.6.1 MPEG4 stream service

Select MPEG stream service 'Enable' or 'Disable'.

4.6.2 Stream Setting

1) BITRATE

Set the bit rate of the video stream. In case of VBR(Variable BitRate), user can select the video quality among three options(Normal, High, Very High).

Bitrate is changed automatically to keep the picture quality.

In case of CBR(Constant BitRate), bit rate is fixed to keep the transmission speed.

It is selectable from 64 to 8,000 Kbps.

<Caution> When using the VBR option, it is impossible to use a setting option for the Frame rate.

[Reference**]** In case of selecting bit rate too low, there might be the blocking effect

2)GOV(Group of VOP) LENGTH

Set the length of VOP which is the length from I frame to next I frame when you select I/P frame.

3) GOV STYLE

Select the style of VOP between 'I frame only' and 'I/P frame'. Selecting 'I frame only', the volume of data will increase and cause a heavy traffic in network.

4) FRAME RATE

Set the frame rate. In case of QVGA, it has Max. 15fps in NTSC and 12.5fps in PAL. In case of VGA, it has Max. 30fps in NTSC and 25fps in PAL.

(QVGA is available on TYPE 1 only.)

5) FRAME SKIP AUTO

This function is to skip the frame automatically to keep the picture quality setting low bit rate. Inactivating this function, the picture quality will be lower to keep the frame rate.

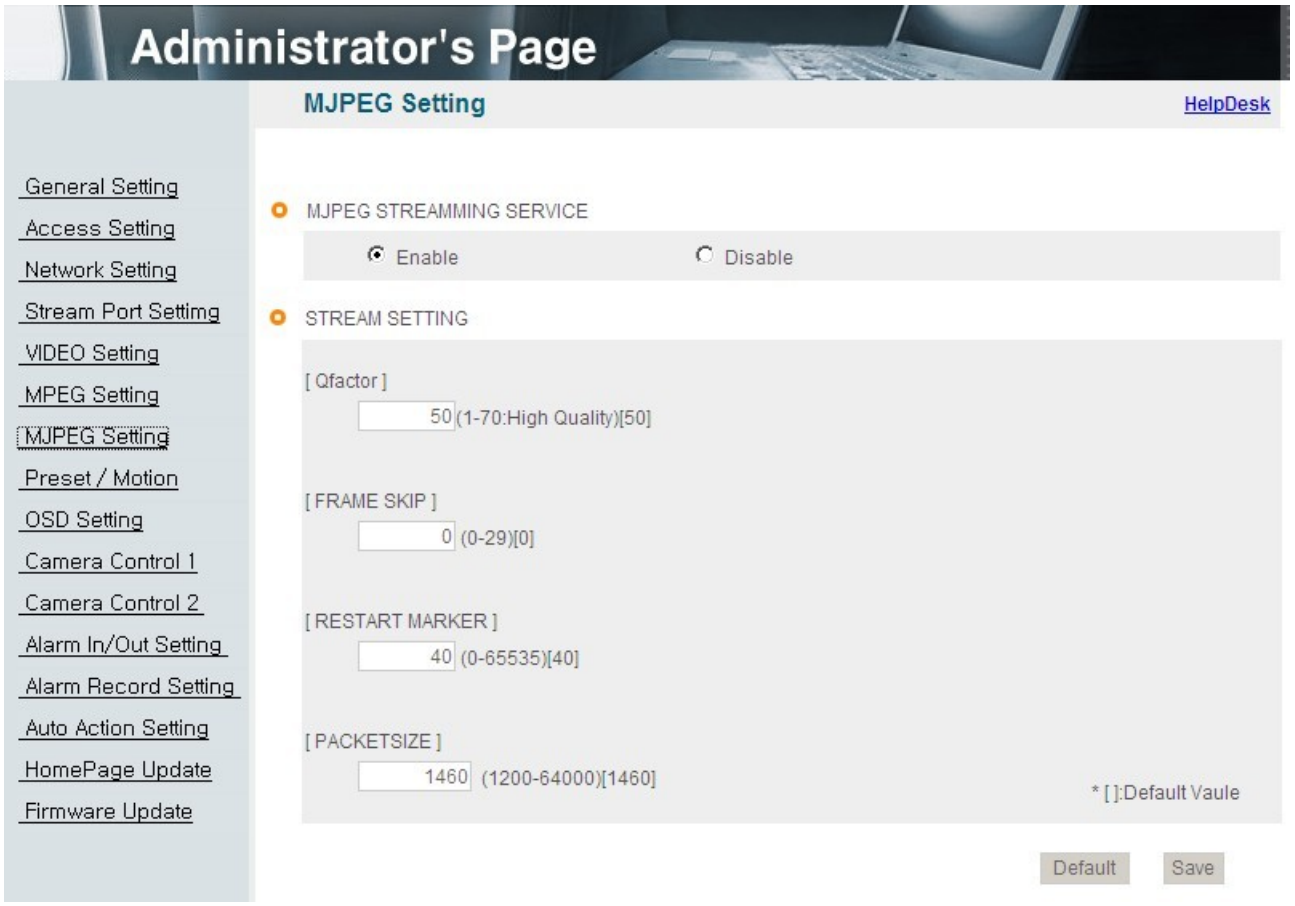
6) PACKET SIZE

Set the packet size transmitting the video data.

Click ' Save ' button to save.

<Caution> In case of changing MPEG setting, the program will restart,
Please wait for a while.

4.7 MJPEG Setting



[Pic. 4-15**]** MJPEG Setting

4.7.1 JPEG Stream Service

Select whether JPEG stream service available or not.

4.7.2 Stream Setting

1) Qfactor

Set the video picture quality in JPEG. There are from 1 to 99. Selecting 1, it supports the best picture quality but the volume of data will increase. On the contrary, selecting 99, the picture quality will be lowest but the volume of data will decrease.

Recommended value is between 30 and 50.

2) FRAME SKIP

Skip the frame by user setting.

'0' can not be skipped and from 1 to 29 can be skipped. This is to keep the volume of data from a heavy traffic in network. But in case of skipping too many frames, picture might not be natural.

Ex) 0 : Transmission frame X : Skip frame

1 : 0X0X0X0X0X ……

2 : 0XX0XX0XX0XX …

3 : 0XXX0XXX0XXX0XXX…

3) RESTART MARKER

It is to set the size of linkage in one picture of JPEG. '0' means it doesn't use the linkage and in this case, the volume of data will increase.

4) PACKET SIZE

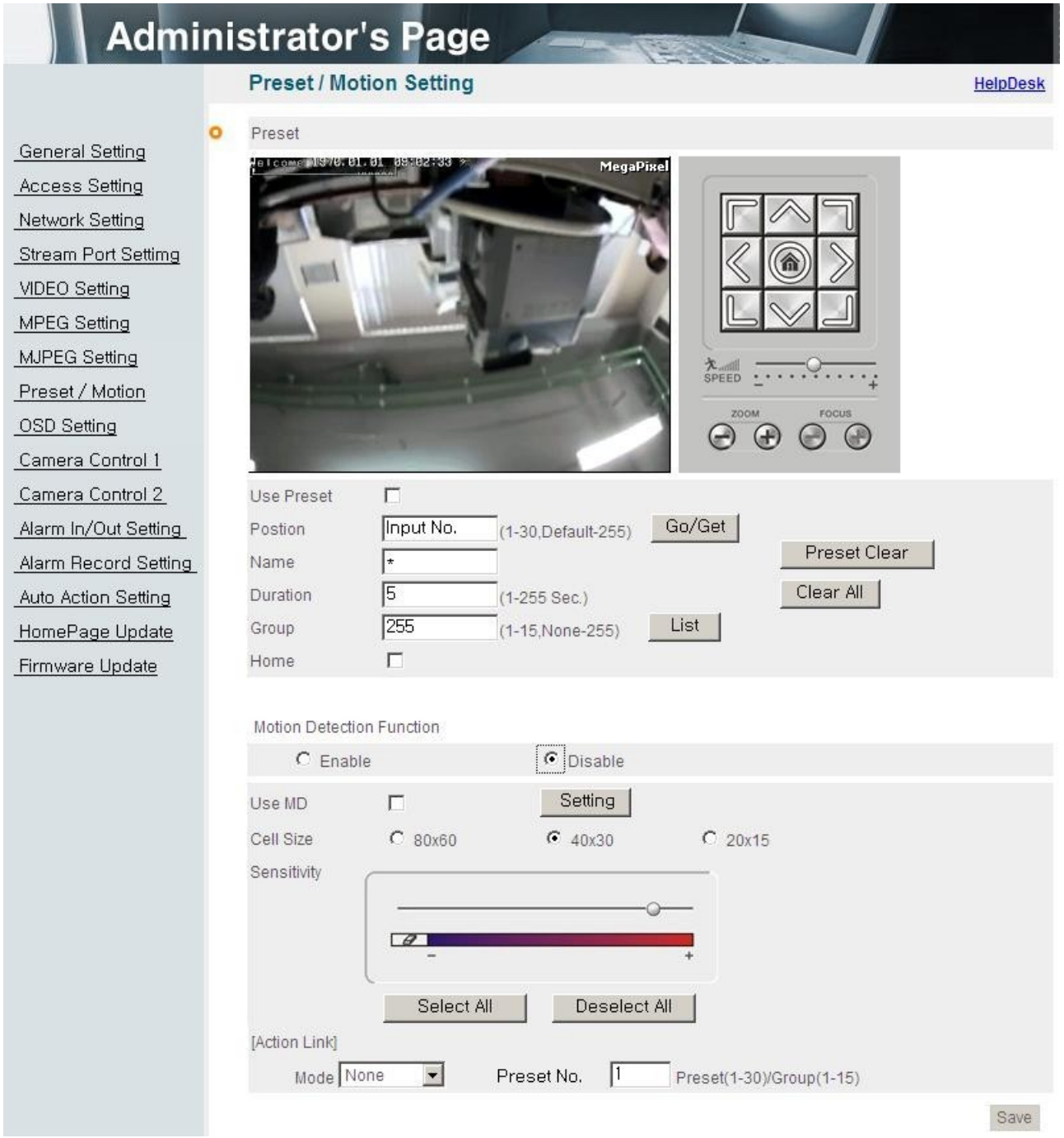
Set the packet size transmitting the video data.

Click ' Save ' button to save.

<Caution> In case of changing MPEG setting, the program will restart,

Please wait for a while.

4.8 Preset/Motion Setting



[Pic. 4-16**]** Preset/Motion detection setting

4.8.1 Preset/Motion setting

1) Use preset

checkbox defines Enable/Disable of individual preset number

If not selected, the preset will not be working and „Sequential" as well

2) Position

Input preset number you would like to set up.

This number will be used same as motion detection function.

3) Name

Set a name of preset

4) Duration

Set staying time in each position for preset when sequence is working

5) Group

Set the group number

If you want excluding it in the group, you should input "255".

6) Home

Set the preset position when you click the home button to move desired position

. Home is only one available.

4.8.2 Motion detection function

1) Enbale/Disable

Determine whether use motion detection or not.

2) Use MD

defines Enable/Disable of individual MD function of linked action

3) Cell size

Change the cell size of block when set motion detection

4) Sensitivity

This setting enables you to adjust sensitivity of each block

70~90 is recommended for normal picture quality

5) Select all/Deselect all

Press the Select all/Deselect all button to apply the block of motion detection to all of screen

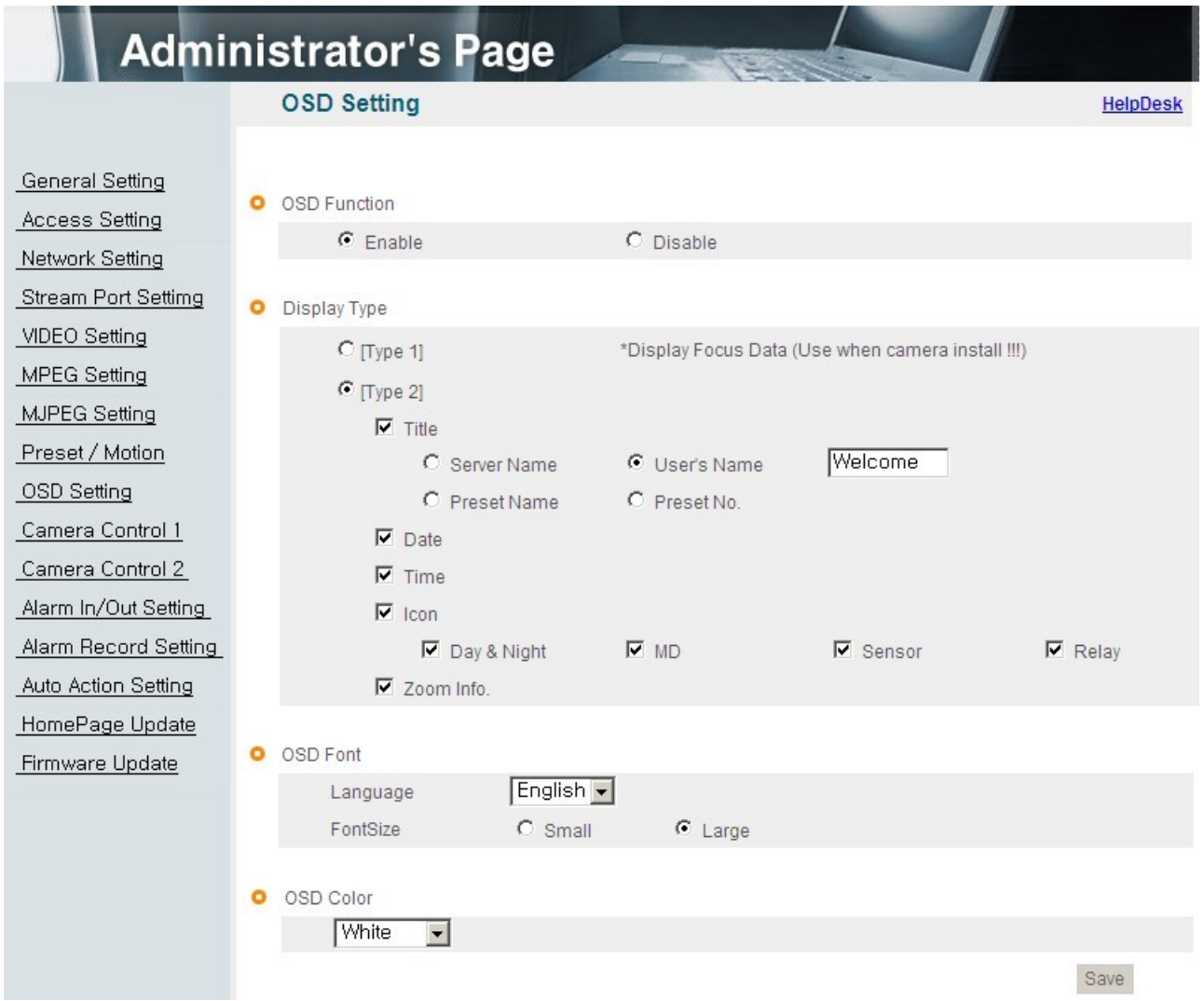
6) Action Link

You can set the function such as "None", "Preset", "Sequence" and "Auto pan"

This function will work when detected one's motion

※Motion Detection function can be affected on excessive sense-up.

4.9 OSD Setting



[Pic. 4-17**]** OSD Setting

4.9.1 OSD Function

Select OSD function 'Enable' or 'Disable'.

4.9.2 OSD Type

1) Type 1

This is to display focus data on OSD. Higher value means clearer image. Seeing this value, a user is able to adjust the focus more correctly.

2) Type 2

This is to select contents to display on OSD. There are Title, Date, Time, Zoom Info, and Icons(Day, Night, Motion, Alarm Input, Alarm Output).

4.9.3 OSD Font

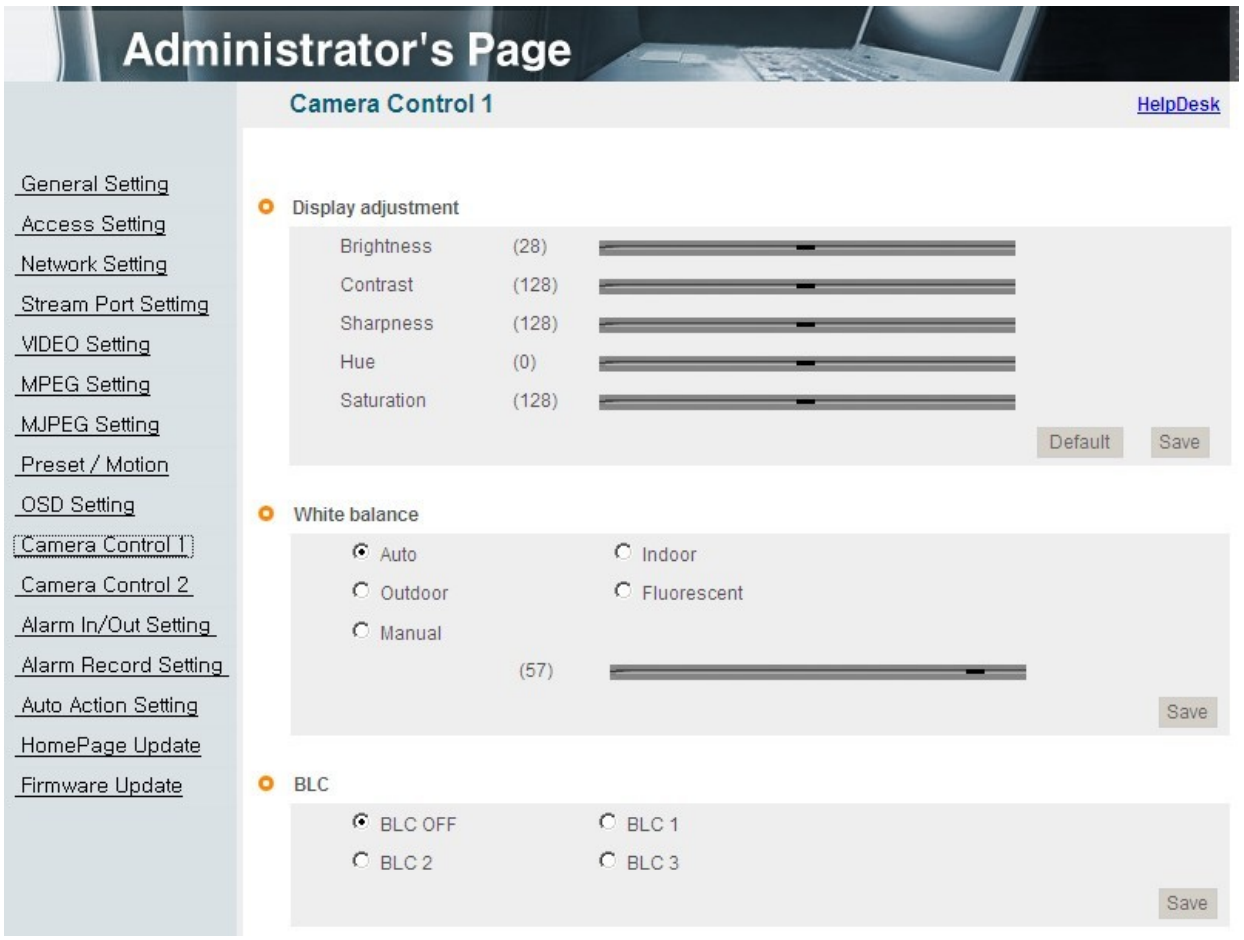
This is to select the language and font for OSD.

4.8.4 OSD Color

This is to select color for OSD.

Click ' Save ' button to save.

4.10 Camera Control 1



[Pic. 4-19**]** Camera Control 1

4.10.1 Display Adjustment

Brightness : Adjust the brightness of picture.

Contrast : Adjust the contrast of picture.

Sharpness : Adjust the sharpness of picture.

[Reference**]** As the level of sharpness increases, the screen gets sharper and the level of noise also increases.

Hue : Adjust the hue of picture.

Saturation : Adjust the saturation of picture.

Click 'Default' to initialize the value.

Click ' Save ' button to save

4.10.2 White Balance

Auto : Adjust white balance automatically.

Indoor : Adjust white balance to indoor environment(3200° K). Outdoor : Adjust white balance to outdoor environment(5600° K). Fluorescent : Adjust white balance to fluorescent environment(4000° K). Manual : Adjust white balance manually.

Click ' Save ' button to save.

4.10.3 Back Light Compensation

It is used to get the best quality picture against the back light.

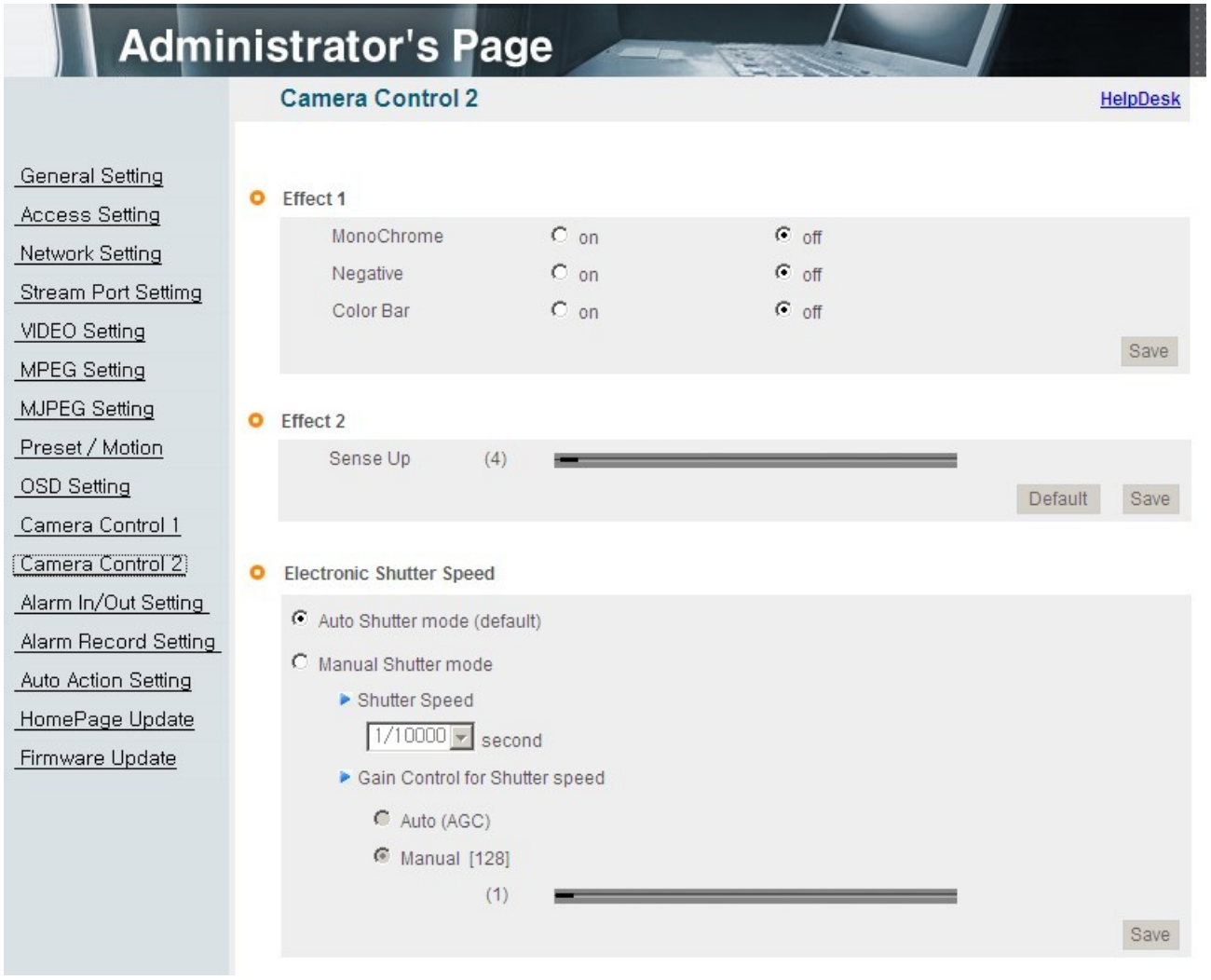
BLC OFF : Not use back light compensation function.

BLC1 : Select this function when a subject is in the middle of back light.

BLC2 : To see a shadow subject, light is controlled automatically regardless of position.

BLC3 : This is a mode when a subject is dark but bright surrounding.

4.11 Camera Control 2



[Pic. 4-20] Camera Control 2

4.11.1 Effect 1

MonoChrome : Change color picture to B/W.

Negative : Reverse the brightness and color.

Color Bar : Display color bar picture.

Click ' Save ' button to save.

4.11.2 Effect 2

This is relating to sense up function. Low shutter speed which can gather more light by increased

exposure of the light is suitable for the dark circumstances and at night. Using this mode, you can distinguish the outline and the color of the objects. But, regarding moving objects, its outline might not be clear. And excessive Sense up function might effect on motion detection.

Click ' Save ' button to save.

4.11.3 Electronic Shutter Speed

Use the Electronic Shutter Speed menu to adjust the exposure and gain

Auto Shutter mode : The camera automatically control the exposure and gain to maintain a clear picture.

Manual Shutter mode : Use can adjust desired shutter speed and > gain.

1) Shutter speed : Selectable between 1/15 to 1/10000 second.

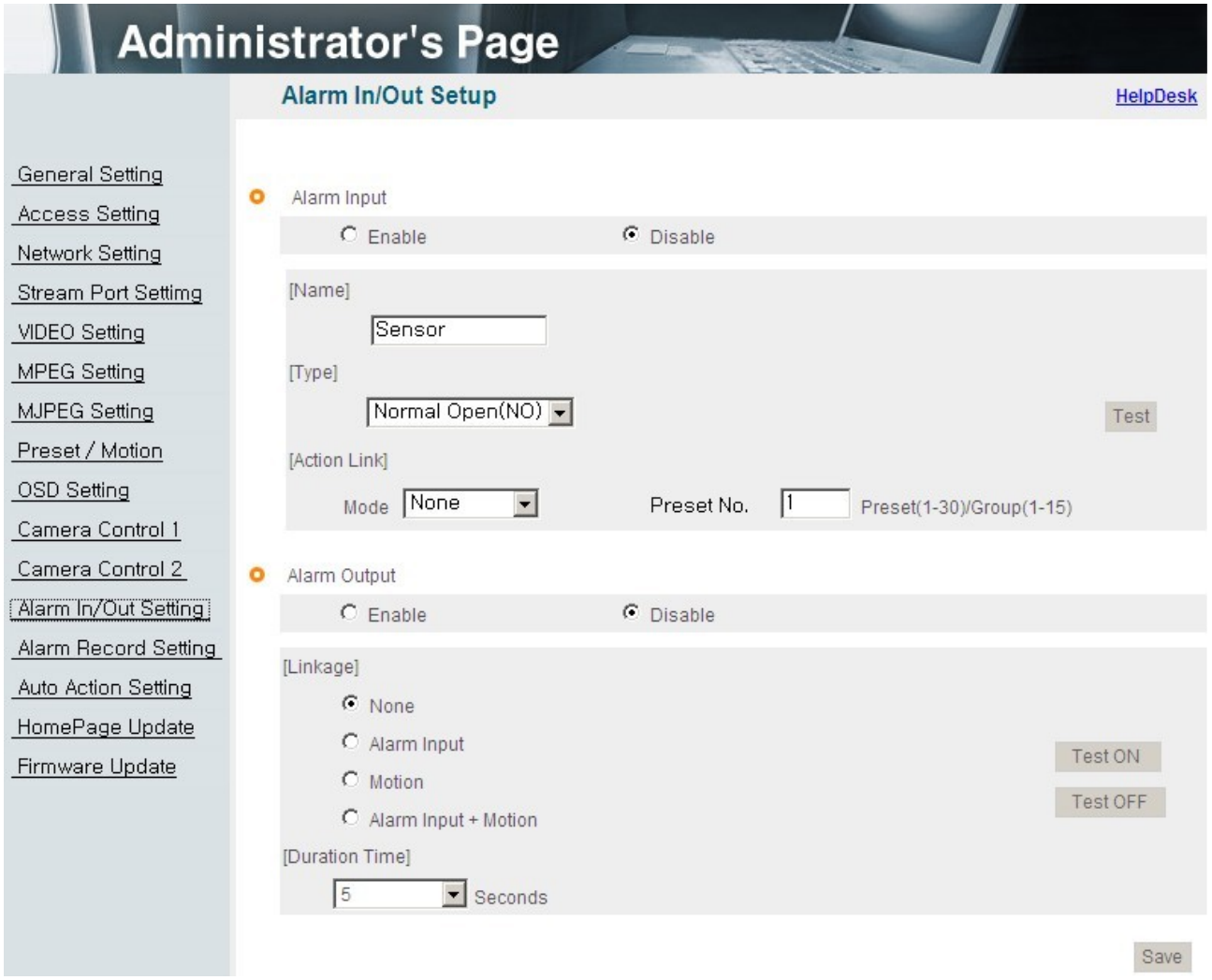
2) Gain control for shutter speed

- Auto(AGC) : The camera automatically control the gain
- Manual : Select this to tune Gain manually.

Click ' Save ' button to save.

[Caution**]** The higher the gain level, the brighter the screen – but the higher the noise.

4.12 Alarm In/Out Setting



[Pic. 4-21**]** Alarm In/Out Setting

4.12.1 Alarm In

1) Alarm Input

Select alarm input 'Enable' or 'Disable'.

2) Type

Select Normal Close(NC) or Normal Open(NO).

Circuit of N/O type is usually open, and the activation of the sensor occurs at the time of close, and N/C type works reverse way.

3) Name

Input the name of equipment for alarm input.

4) Test

Click 'Test' button to test the operation when the alarm event happens

5) Action link

You can set the function such as "None", "Preset", "Sequence" and "Auto pan".

This function will be working when detected alarm-input

(In case of the Sequence, "Preset No" means group number)

4.12.2 Alarm Out

1) Alarm Output

Select alarm output 'Enable' or 'Disable'.

2) Linkage

None : Alarm output function doesn't operate relating alarm input or motion event.

Alarm input : Alarm output function operates only by alarm input event.

Motion : Alarm output function operates only by motion event.

Alarm input + Motion : Alarm output function operates by both alarm input and motion event

3) Duration Time

Set duration time upon alarm events.

4) Test on

Alarm output is activated by compulsion and you can check the action internally.

5) Test off

Alarm action will be terminated.

Click ' Save ' button to save.

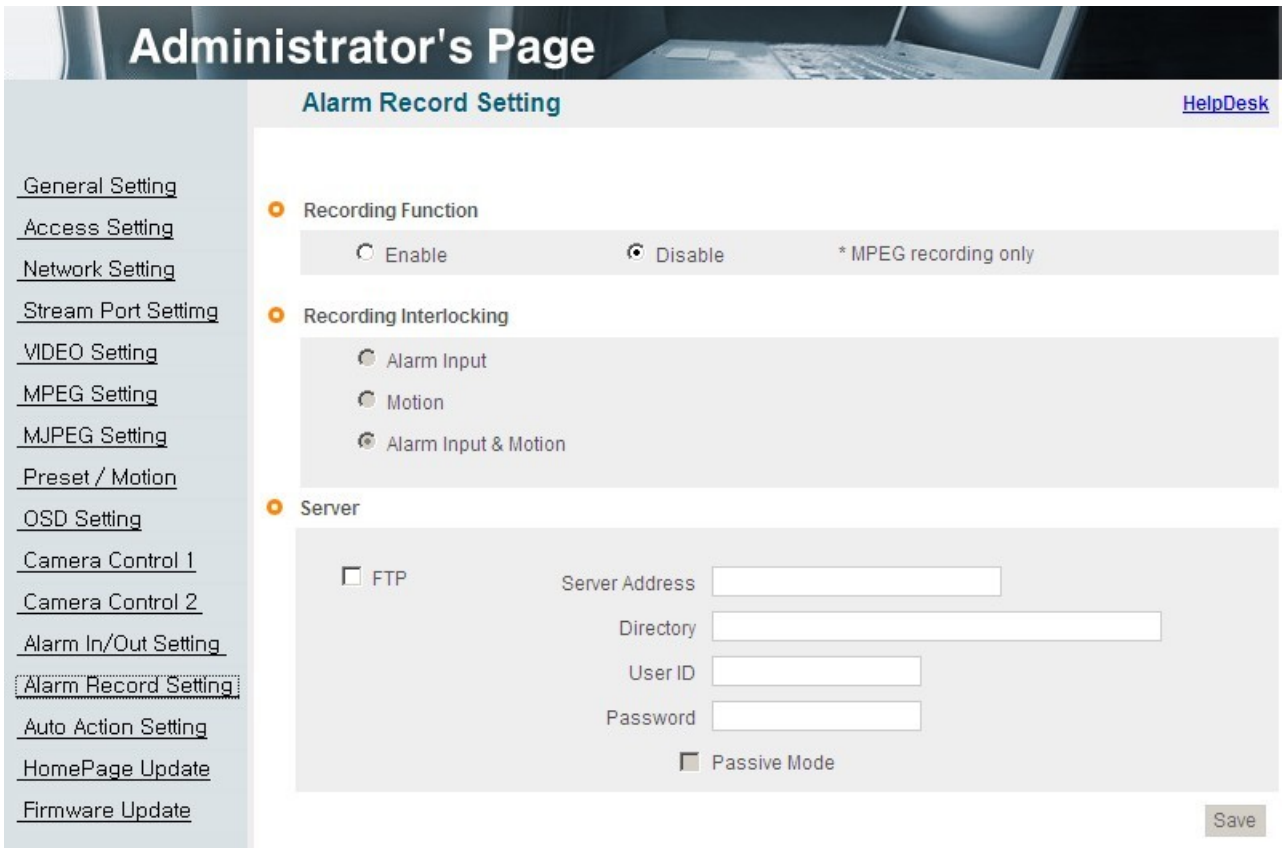
[Reference]

–Alarm input is the same meaning with sensor or sensor input.

–Alarm output is the same meaning with relay.

–Alarm event is the same meaning with alarm input or motion event.

4.13 Recording Function



[Pic. 4-22**]** Alarm Record Setting

4.13.1 Recording Function

Select recording 'Enable' or 'Disable' upon alarm events.

4.13.2 Recording Interlocking

1)Alarm Input : Record by events only upon alarm input.

2) Motion : Record by events only upon motion detection.

3) Alarm Input & Motion : Record by events upon alarm input and motion detection.

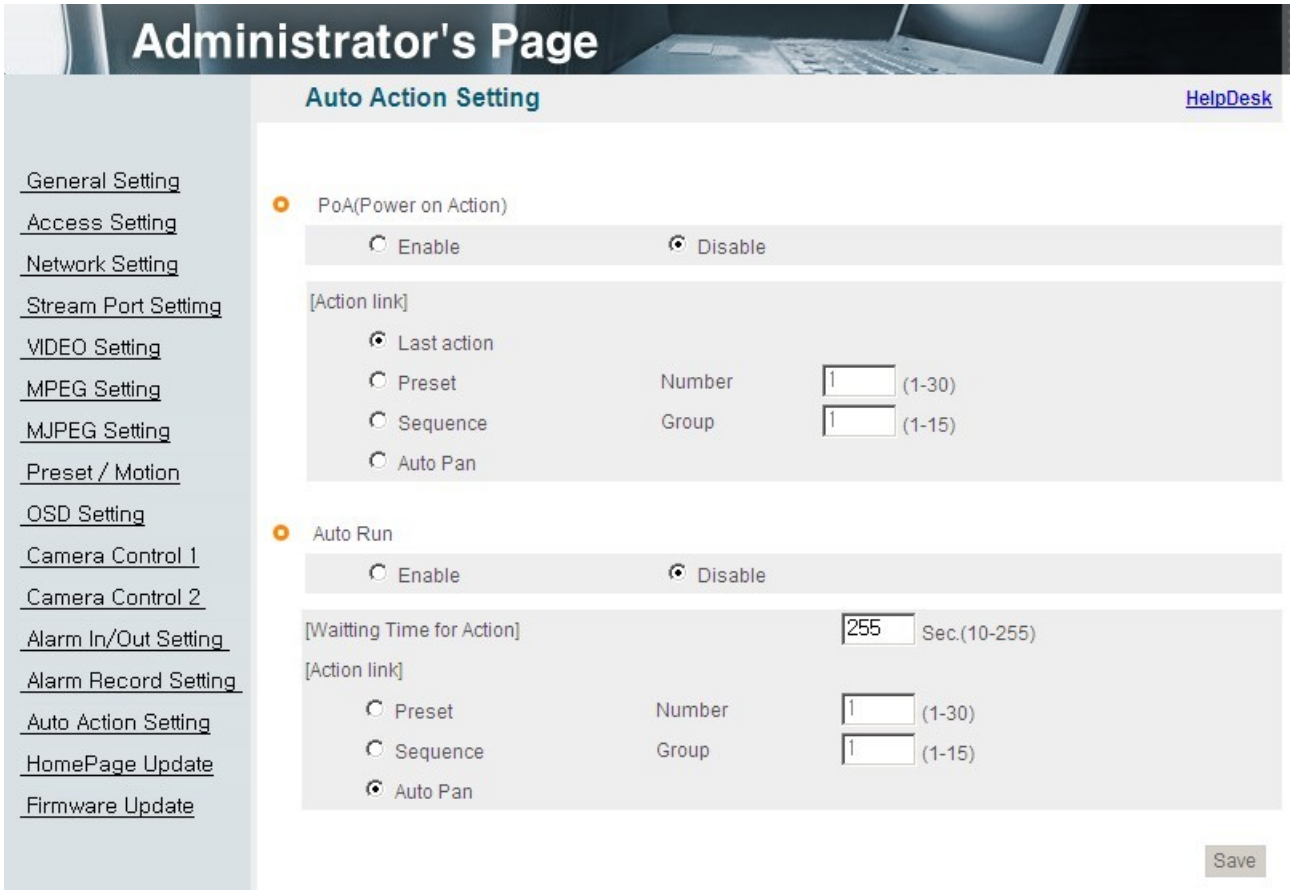
4.13.3 Server

1) FTP Server : To send the recorded video to FTP server upon alarm event,
Input FTP server address, folder name, user IP and password,
FTP folder name(mandatory).

[Reference **]** Video files recorded in FTP server can be played by supplied player, with the CMS.

Click ' Save ' button to save

4.14 Auto Action Setting



4.14.1 POA(Power on action)

Set the program to operate such as last action, Preset, Sequence, Auto Pan when the camera turns on.

4.14.2 Auto run

If there is no action, the camera will be specific action such as "Preset", "Sequence" or "Auto pan".

4.15 Homepage Update

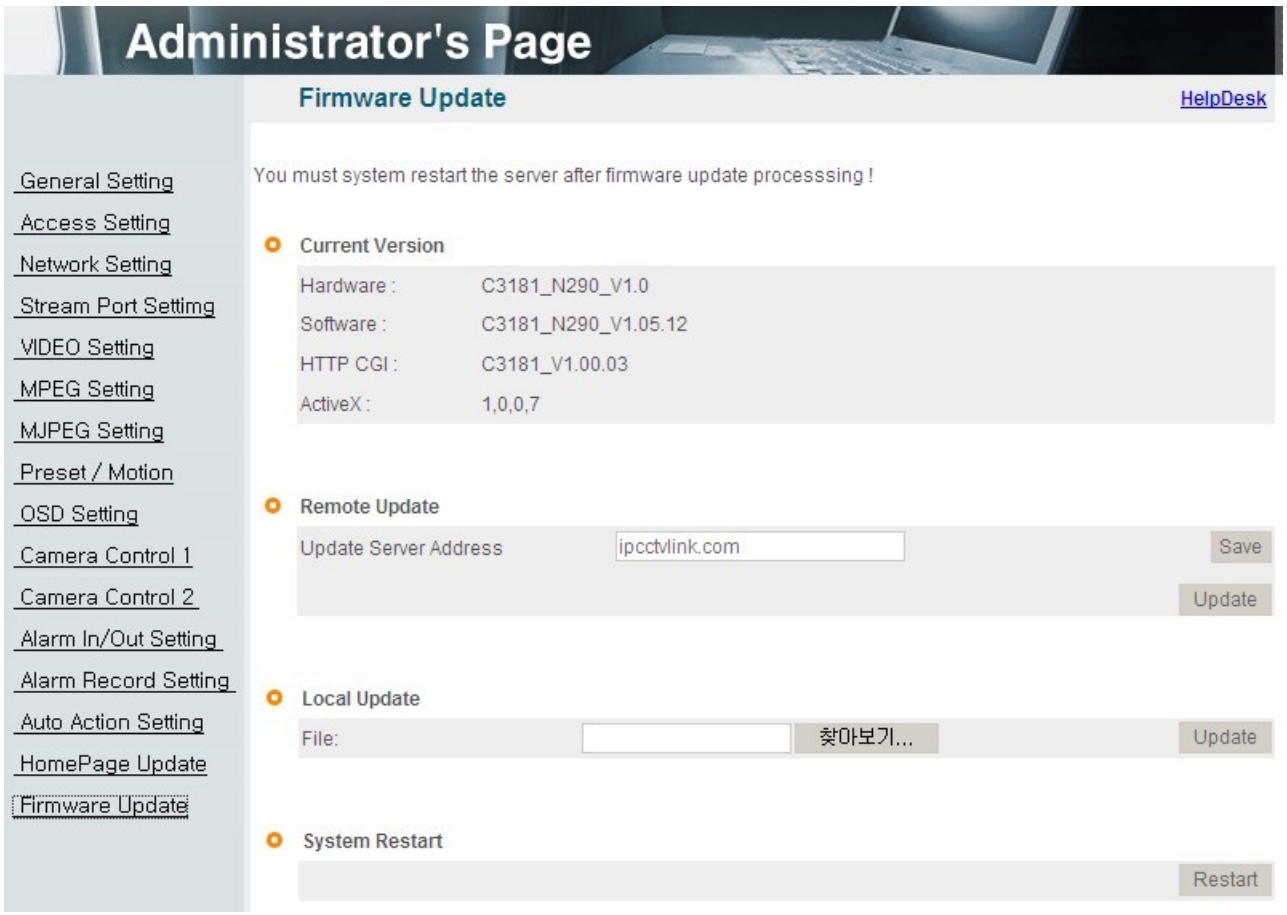
[Pic. 4-23**]** Homepage Update

Homepage update function is for user to upload the main page of the unit onto user's homepage. User's homepage is composed of 3 files as like 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). User homepage cannot exceed 300Kbyte and 800x600(Image size).

If user wants to re-make user's homepage into default, click 'Default Home Page Upload

4.16 Firmware Upgrade

In case firmware is upgraded in the near future, our upgrade server(http://ipcctvlink.com) will automatically upgrade firmware of the unit. Upgrade is only supported via internet.



[Pic. 4-24**]** Firmware Update

1) Current Version

Display current software and hardware version.

2) Remote Upgrade

Upgrade server address is "http://ipcctvlink.com" as default address.

If there is the wrong address, re-check and input the address and click ' ' button.

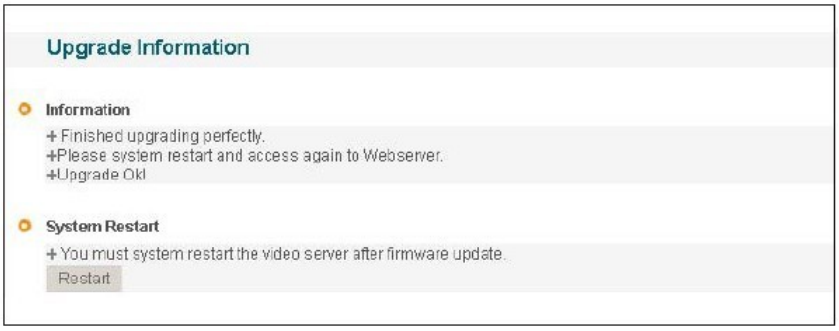
Click 'Update' on 'Remote Update' and the massage is displayed as follow.

[Pic. 4-25**]** Firmware Remote Update

This will be automatically upgraded upon clicking 'Download' button after connecting to upgrade server and checking version.

[Pic. 4-26] Firmware Download

'Downloading' message will be shown until completion of update(it may take time according to network situation). Upon completion of upgrade, there appears message showing upgrade result. Message as follow is showing that upgrade has been correctly done. Click 'Restart' in 'System Restart' to restart system.



[Pic. 4-27] Upgrade completion

If picture is displayed as follow, it means that this unit has been upgraded to the latest version, there is no need to update any more.

[Pic. 4-28] Check of upgrade version

If user found message as follow, there is an error in connection to upgrade server, re-check internet connection or DNS server address in '3. Network Setting' and try
to upgrade again. If user keep finding message as follow or cannot upgrade, contact an authorized technician.

[Pic. 4-29**]** Upgrade server connection error

3) Local Upgrade

This way is to use software file on user's PC to upgrade(Regarding procedure, refer to remote firmware upgrade.).

In case of upgrade sequence, choose new software file with "Search" button and press "Upgrade" button. Restart the camera after upgrade completion message. In case of local upgrade, it does not care firmware version.

4) System Restart

This is the function to restart the camera system.

Chapter 5.

IP Finder

5.1 Use of IP finder ·····63

Chapter 5. IP Finder

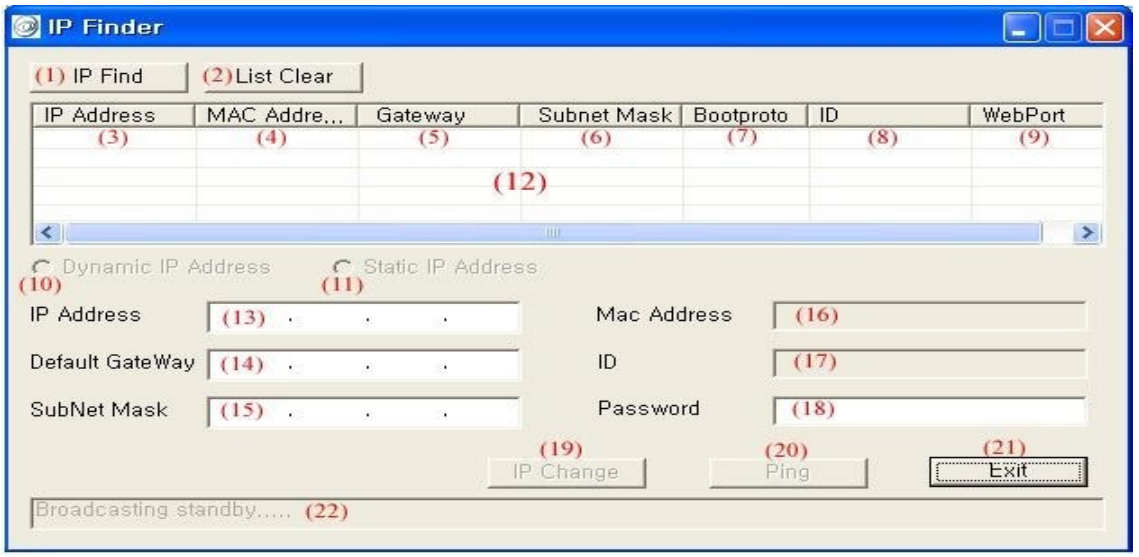
5.1 Use of IP finder

This program is the utility to find out the unit connected to local network. It is useful for the application of the unit connected by DHCP function.

It can provide you the information such as IP address, MAC, web port for easy installation and use.

5.1.1 Run IP finder program

Double click "IP Finder" file to open the program, **[**Pic. 5-1**]** will be shown.



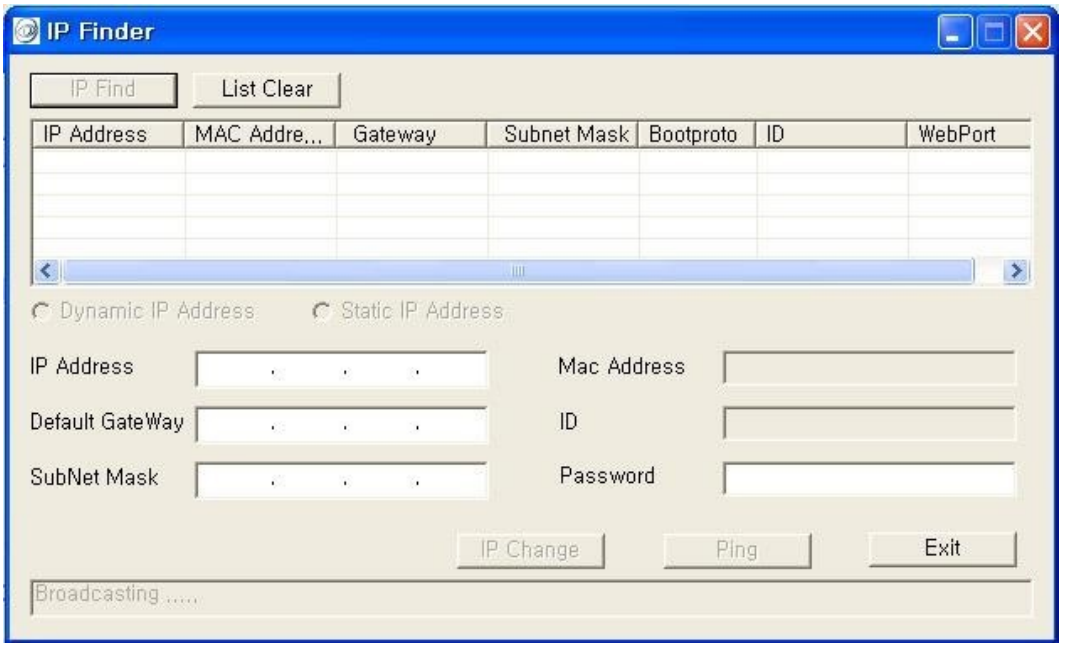
[Pic. 5-1**]** IP Finder

Description of IP finder function

NO	Description	NO	Description
1	Find IP	12	List of the unit
2	Delete the list	13	Input IP address
3	IP address of the unit	14	Input Gateway
4	MAC information of the unit	15	Input Subnet Mask
5	Gateway	16	MAC address information
6	Subnet Mask	17	Administrator ID
7	Static IP/Dynamic IP	18	Administrator password
8	Administrator ID	19	Change the information to setting values on 13,14,15
9	Port number to connect to web	20	Test of communication(Ping)
10	Set dynamic IP	21	Exit the program
11	Set static IP	22	Status of the program

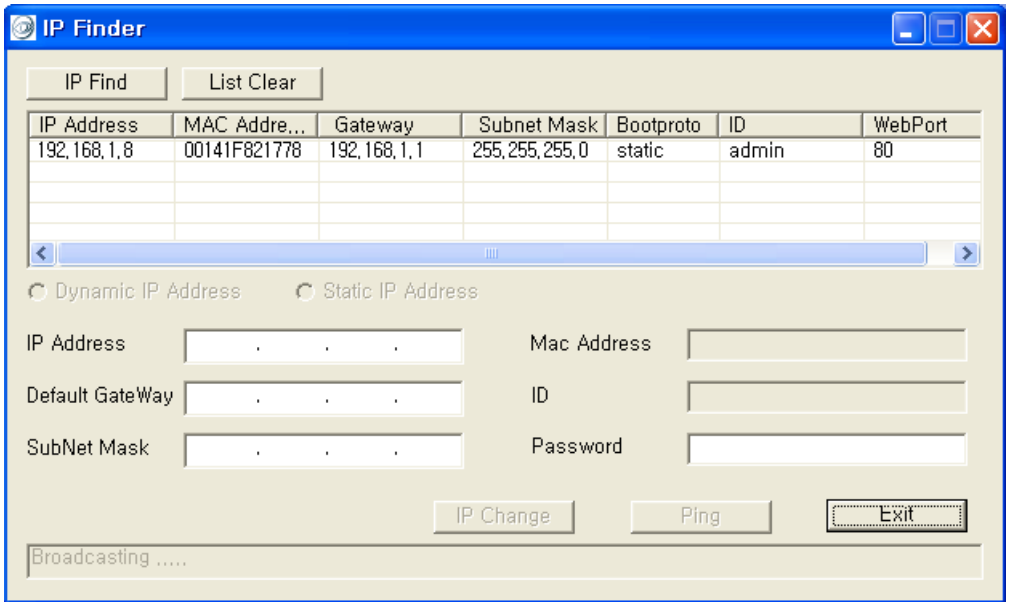
5.1.2 Find IP address

Click IP Find button to find IP address of the unit on local network.



[Pic. 5-2] IP Finding

Below picture will be shown, after IP Finding complete.

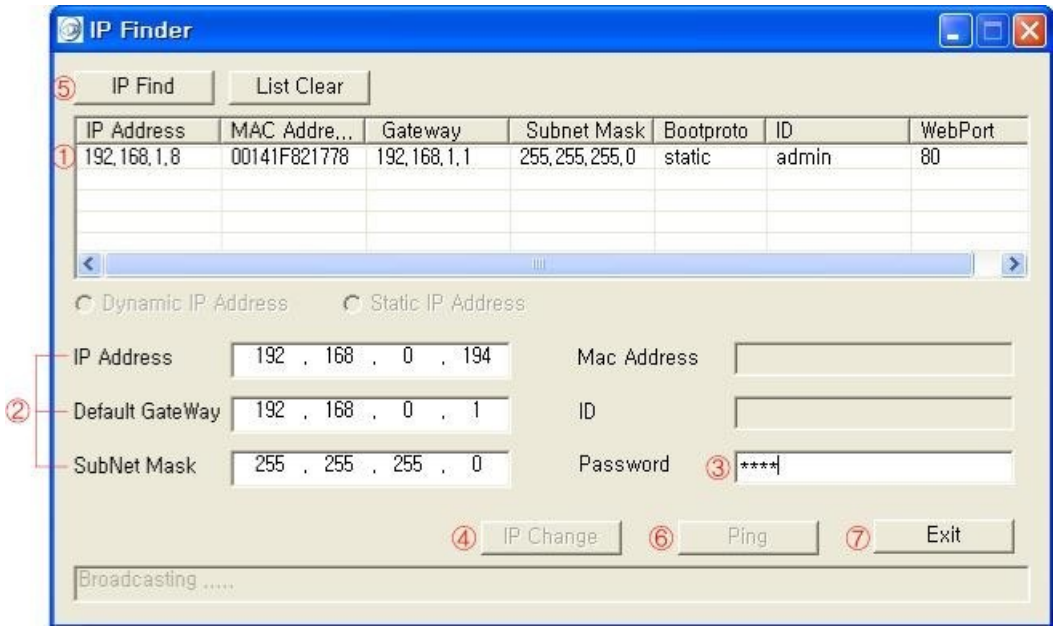


[Pic. 5-3] IP Finding completed

You can connect easily by inputting the information of IP address and web port. In addition, you can get the information of MAC address required on registration of server.

5.1.3 Change IP address

After finding IP address, if you want to change IP address, Gateway or Subnet Mask, double click IP address you want to change and **[**Pic. 5-4**]** will be shown.



[Pic. 5-4**]** Change of IP address

<Procedure>

①Double click IP address you want to change.

②Input the information you want to change.

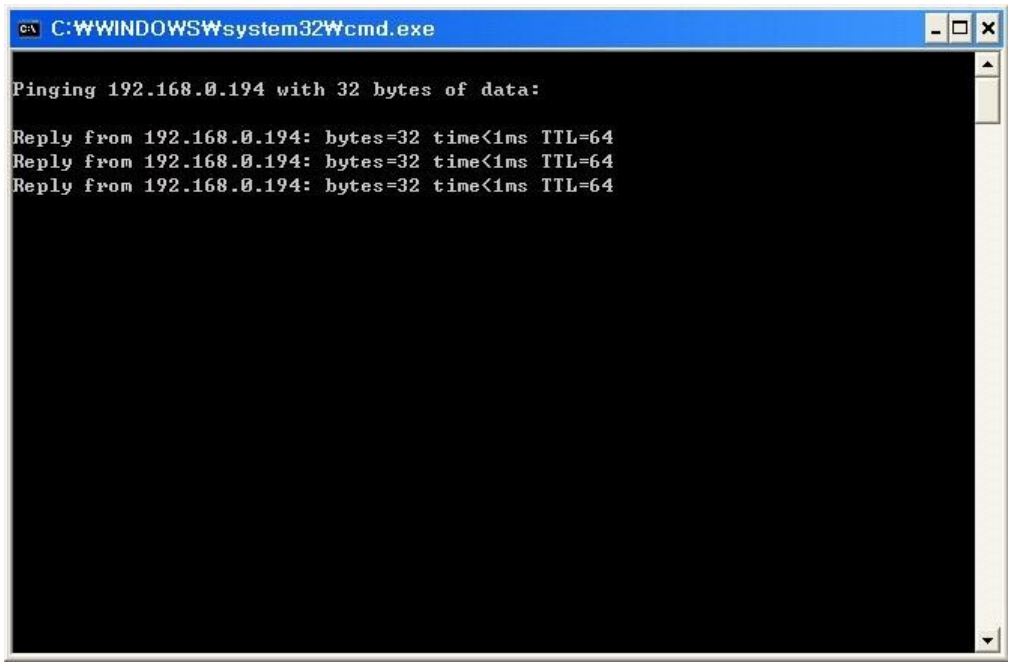
③Input Password(Password *****).

④Click IP Change button to change the information.

⑤Click IP Find button one more time to check the changed information.

⑥Double click the changed IP address and click Ping button to check.

⑦Click Exit button to exit the program.


C:₩WINDOWS₩system32₩cmd.exe
Pinging 192.168.0.194 with 32 bytes of data:
Reply from 192.168.0.194: bytes=32 time<1ms TTL=64
Reply from 192.168.0.194: bytes=32 time<1ms TTL=64
Reply from 192.168.0.194: bytes=32 time<1ms TTL=64

[Pic. 5–5**]** Ping

Chapter 6.

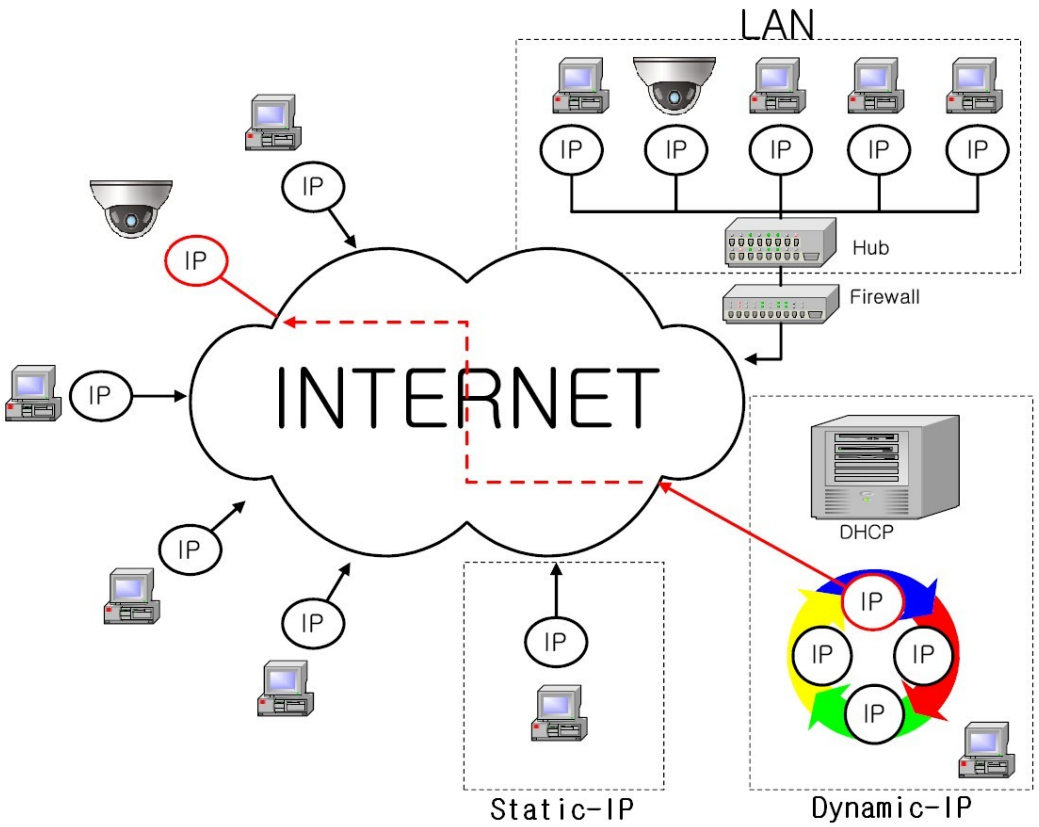
Basic Network

6.1 Public IP ·····68
6.2 Private IP·····69
6.3 Ping test ·····70

Chapter 6. Basic Network

This chapter is the basic explanation for installation.

6.1 Public IP



[Pic. 6-1]Internet environment

All hosts connected to internet have the exclusive number called IP address.
Communication among hosts is available by using it.

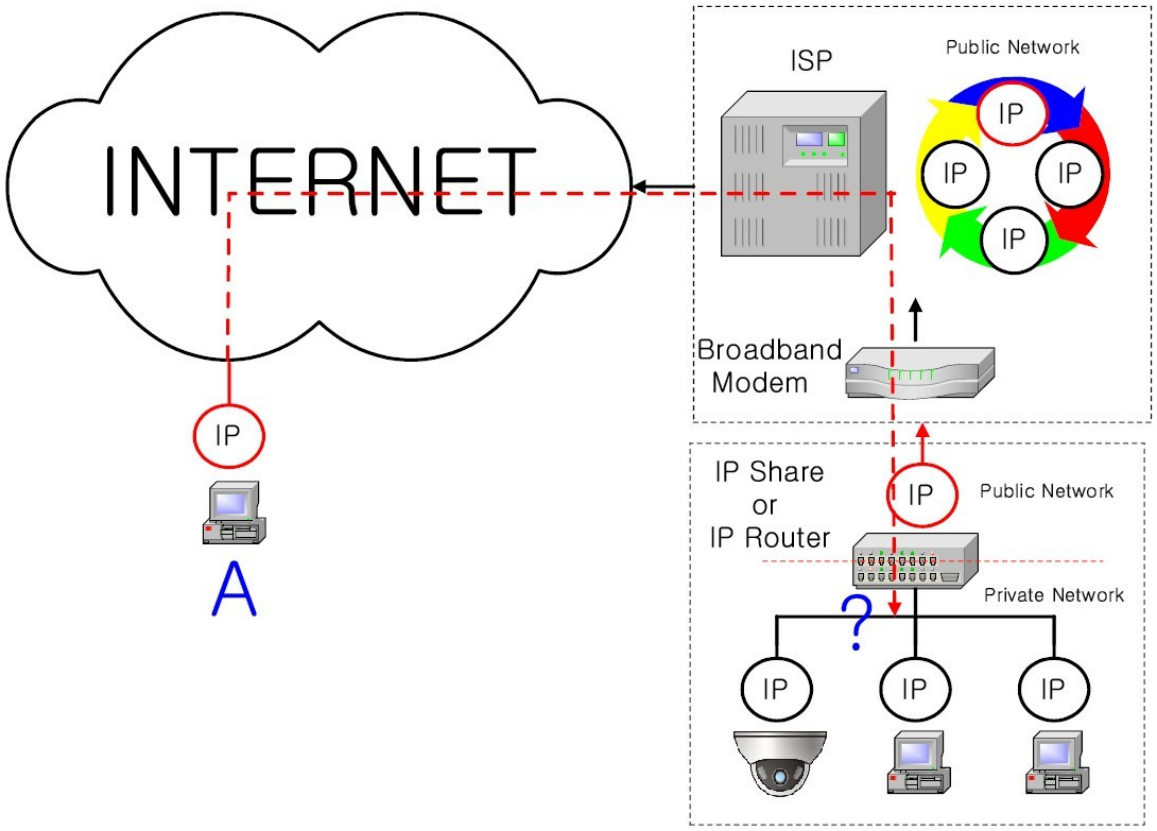
There are two ways to allocate IP address. One is fixed by the way of static IP address whenever connected to internet. And the other is assigned by a server using Dynamic Host Configuration Protocol (DHCP). It is Dynamic IP.

In case of Dynamic IP, when turn off the computer, automatically return the IP to DHCP due to using that IP in circulation.

Determined way of assigned IP by network policy so please ask to network administrator or ISP(Internet Service Provider)

In case of using Firewall, the camera might be out of working. Please ask network administrator then open the service port

6.2 Private IP



[Pic. 6-2**]**Internet connection by IP sharing device.

The most common use of these addresses is in home networks, since most Internet Service Providers (ISPs) only allocate a single IP address to each customer, but many homes have more than one networking device (for example, several computers, or a printer). That's why we recommended use IP sharing device. IP sharing device uses only one public IP. Private IP is allocated such as 192.168.xxx.xxx, and can not be used as public IP.

When using the router, connect the router and input IP address of the unit(IP address of the unit is set as 192.168.1.8 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 unit one by one.

[Reference**]** Private IP range to use private address is hereby.

CLASS A : 10.0.0.0 ~ 10.255.255.255

CLASS B : 172.16.0.0 ~ 172.31.255.255

CLASS C : 192.168.0.0 ~ 192.168.255.255

* For more detailed information, please refer to manual of IP sharing device.

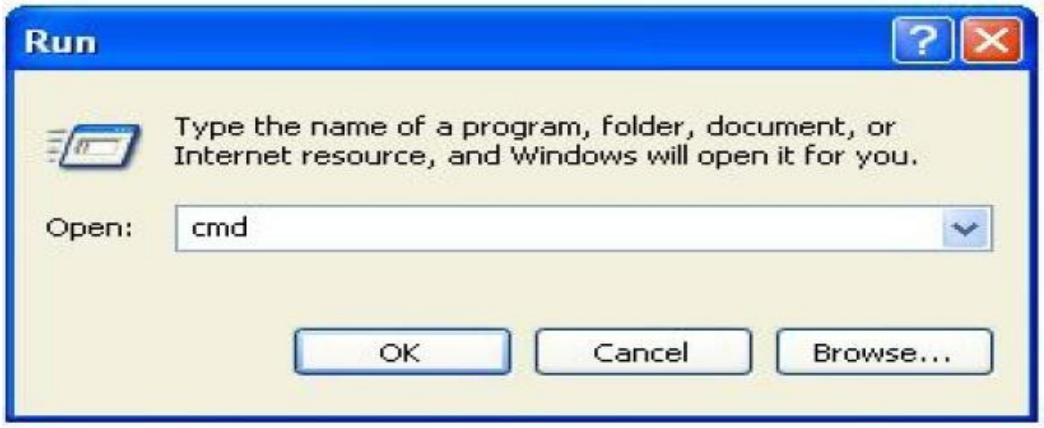
6.3 Ping test

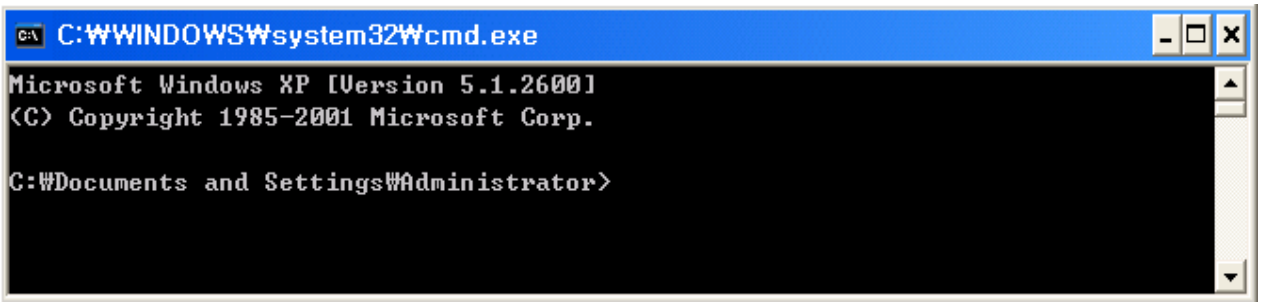
Ping is the test to check response among the devices connected with network.

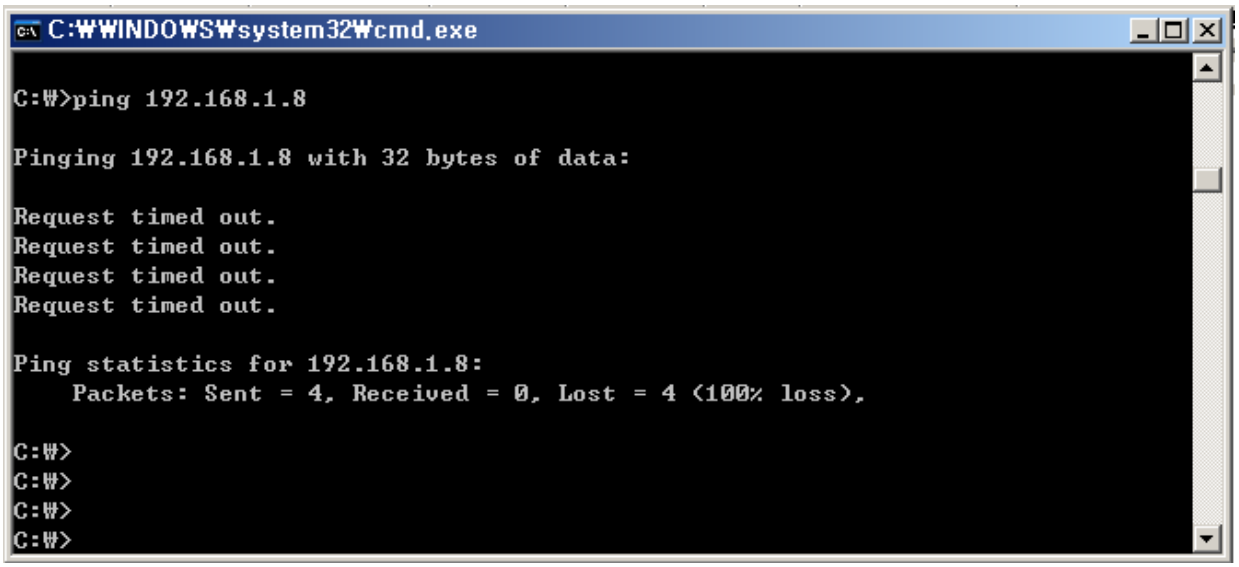
Input "Ping IP address" to command window of PC and check response.

In case of Ping failure, there is some communication problem between the devices.

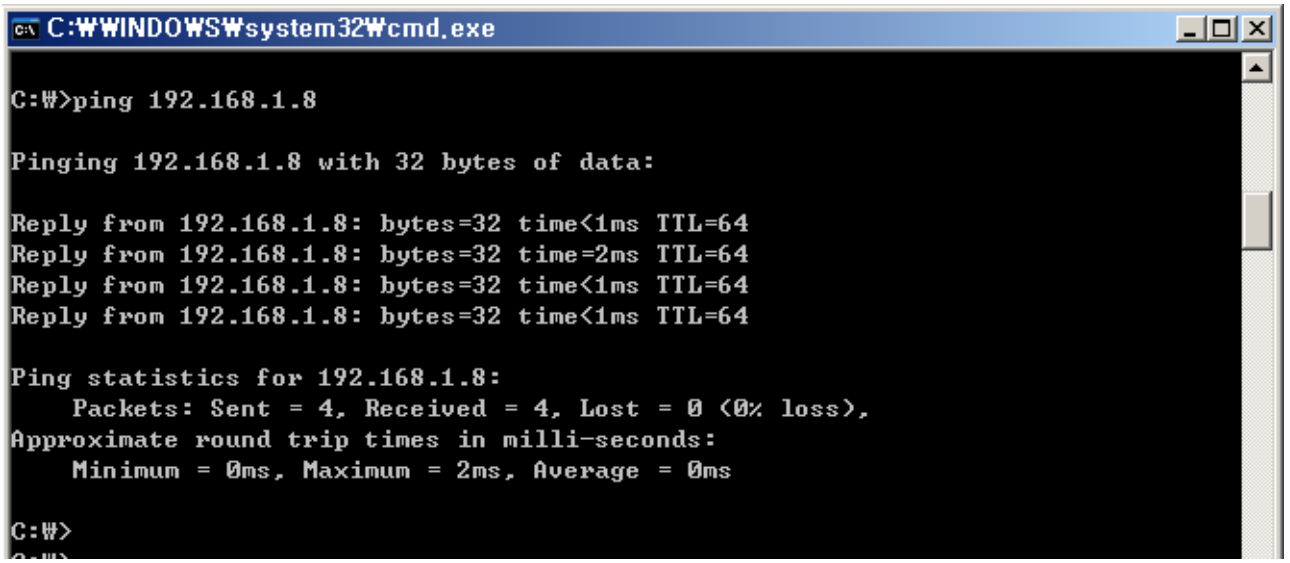
By firewall, this test can not be available.







[Ping Failure]



[Ping Success]

Chapter 7.

Appendix

7.1 Basic setting table ·····73
7.2 Troubleshooting of cable connection ·····74
7.3 Troubleshooting of network connection ·····75

Chapter 7. Appendix

7.1 Basic setting table

Item	Default(Basic setting)	Remarks
Network		
Static IP / Dynamic IP	Static IP	
IP Server	Enable	
IP address	192.168.1.8	
Gateway	192.168.1.1	
Subnet Mask	255.255.255.0	
Web Connection Port	80	・Do not duplicate the same Port. ・Use the number under 9999 of port.
Authentication Control Port Video Streaming Port	9000(n)	
Remote Control Port	9001(n+1)	Available with CMS only
ID and Password		
Administrator ID/Password	admin/admin	
User ID/Password	root/root, guest/guest	
Domain of Related Server		
DDNS Server	ipcctvlink.com	Domain of server to connect to register IP.
Alarm Server	ipcctvlink.com	Domain of server to connect to send event upon detection of sensor or motion.
Upgrade Server	ipcctvlink.com	Domain of server to connect to download upgraded program.
Plug-in Download Server	ipcctvlink.com	Active-x
Video setting		
Compressed Resolution	MPEG:VGA JPEG:QVGA	
Frame Rate	NTSC:CIF/VGA30fps,QVGA 15fps PAL:CIF/VGA25fps,QVGA 12.5fps	
Bit Rate	512kbps	
Other setting		
Time Zone	Asia/Seoul(Korea)	

[Reference**]** In case to reset hardware and network setting, ID and password of user and Administrator will be automatically returned to the above default value.

7.2. Troubleshooting of cable connection

7.2.1 Power cable connection check

Check if the power cable is connected to the camera properly.

※ Check whether the output of the adaptor is regulated 12V DC 1A(for built-in IR LED model) or 500mA(for No IR LED model)

7.2.2 Network cable(LAN Cable) connection check

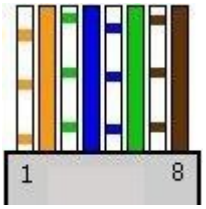
Check whether the network cable is connected correctly.

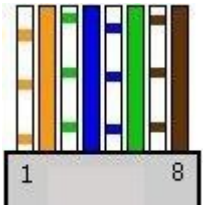
[Caution**]** Use direct LAN Cable or cross cable according to network condition. (Refer to chapter 2 Video check)

① Cable check

[Direct Cable**]**

Hold each end of both side and check if same color's cable is connected to same location in RJ45 jack or not.(Connection with IP sharing device or cable modem)

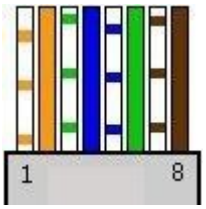
A. 

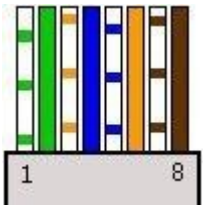
B. 

A, B, C
[1] White and Orange
[2] Orange
[3] White and Green
[4] Blue
[5] White and Blue
[6] Green
[7] White and Brown
[8] Brown

[Cross Cable**]**

Hold each end of both side and check whether 1, 2(Tx+, Tx-) and 3, 6(Rx+, Rx-) are cross or not.(Connection with PC)

C. 

D. 

D
[1] White and Green
[2] Green
[3] White and Orange
[4] Blue
[5] White and Blue
[6] Orange
[7] White and Brown
[8] Brown

7.3 Troubleshooting of network connection

7.3.1 Cannot connect with network

Check with "7.2.2 Network cable(LAN cable) and cable connection check". **[**PING Test**]**

① In case camera uses Static/Public IP : input "Ping IP address" to command window of PC and check response.

② In case camera uses dynamic/public IP : If user cannot find camera's IP address, reset hardware and connect PC with the camera through cross cable and ping test by entering "192.168.1.8".

③ In case camera uses private IP through IP sharing device : Do ping test of private IP address set for camera in PC that is connected in the local network through IP sharing device.

[Reference**]** Please refer to "PING Test of Basic Network".

If "ping test"get response, network setting for camera is done correctly.

Ping test is okay but there is no connection, check with "7.3.2 check port setting".

7.3.2 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 unit uses 3 ports as follow.

Web Connection Port : Port 80 TCP

Authentication, Control and video streaming port : Port 9000 TCP

① Not available to connect to web

If it is not available even to connect to web, check web connection port because web connection port may be set with other number is not "80".

Use IP Finder program.(Default value of web port is "80".)

[Reference**]** Web port "80" can not be available in some internet service.

In this case, go to the administrator's page and change the web port.

② Problem in video monitoring

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 unit is set on IP sharing device(Refer to the manual of IP sharing device regarding Port forwarding).

[Reference**]** It is strongly recommended to register the number under 9999 of port.

Port Number more than "10,000" can not be available in some network.

Chapter 8. Troubleshooting

Problem	Solution
Nothing appears on the screen.	Check if the power cord and line connection between the camera and monitor are connected properly.
The image on the screen is dim	Check whether the window is stained. If dirty, clean the lens with soft and clean cloth.
The image on the screen flickers	Dose the camera face to the sun directly or fluorescent light? Change the camera position.
The contrast on the screen is too weak	Adjust the contrast feature of the monitor. If the camera is exposed under too strong light, change the camera position solution.